Colo Science
Laboratory & Scientific Equipment

COLO.SCIENCE · TECHNICAL SPECIFICATION

SEMI-MICRO ANALYTICAL BALANCE · 0.01 MG

ANB-SEMIC

Semi-Micro Analytical Balance · Readability 0.01 mg · Capacity up to 220 g · Dual range or single range · Automatic internal calibration · Detachable display

ANB-SEMIC is a semi-micro analytical balance with an electromagnetic force restoration sensor and a readability of 0.01 mg. A new weighing pan — an open grid pan inside a ring-shaped draft shield — reduces the effect of air currents in the weighing chamber, so the reading settles faster and repeats more closely. Nine models: dual range 100 g or 200 g with a 0.01 mg fine range of 31, 51 or 81 g, and single range 100, 120 or 220 g at 0.01 mg — for sample preparation, reference standards, filter and residue weighing and pipette checks.

Readability 0.01 mg · Up to 220 g · Dual range 0.1 / 0.01 mg · Grid pan with draft ring · Automatic internal calibration · Detachable display · Antistatic glass draft shield · RS232 · USB · Pan Ø 90 mm

Document type: **Technical Specification Sheet**
Product: **ANB-SEMIC Semi-Micro Analytical Balance**
Format: Print layout · A4 landscape

ANB-SEMIC product page · Laboratory balances — overview · Weighing catalogue · Request quote



ANB-SEMIC · semi-micro analytical balance with glass draft shield and detachable display

READABILITY	REPEATABILITY
0.01 mg · dual range 0.1 / 0.01 mg	≤ ±0.015 mg (0.01 mg range)
LINEARITY	**STABILISATION TIME**
≤ ±0.03 mg (0.01 mg range)	2 s / 3 s

MODELS
9 models
Dual range 100 g · 200 g
Single range 100 · 120 · 220 g

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ANB-SEMIC · product overview

Electromagnetic force sensor, 0.01 mg resolution and a weighing pan designed against air currents

CORE TECHNOLOGY

Electromagnetic force restoration sensor — the measuring principle of analytical and semi-micro balances, for stable readings at 0.01 mg.

Grid weighing pan with ring-shaped draft shield — less surface exposed to air currents, faster and steadier readings in the fine range.

Dual range or single range: 0.1 mg over the full capacity and 0.01 mg in the fine range (31, 51 or 81 g), or 0.01 mg over 100, 120 or 220 g.

Automatic internal calibration with a selectable interval in 1 h steps — the internal weight corrects deviations caused by temperature changes; calibration also at the press of a key.

Detachable high-brightness display with clock — place the display where it is easiest to read and operate, away from the draft shield.

Glass draft shield of antistatic material with sliding doors on both sides and the top — reduces electrostatic forces on samples and containers.

Below-balance weighing for density determination and suspended samples; multi-unit weighing with customisable units.

RS232 and USB bidirectional interface — results exported to Excel, connection to PC, LIMS or printer.

PRODUCT HIGHLIGHTS



Grid pan with draft ring
Open grid pan Ø 90 mm in a ring-shaped draft shield — less influence of air currents.



Detachable display
High-brightness display with clock and direct keys: CAL, PRINT, MENU, UNIT, TARE.



Antistatic glass draft shield
Three sliding glass doors for access from the left, right and top.



RS232 · USB interface
Bidirectional data interface; results exported to Excel or sent to a printer.

WEIGHING FUNCTIONS

Basic weighing · Σ totalising

Dynamic weighing

Piece counting

Percent weighing

Density determination

Pipette calibration

SENSOR	CALIBRATION	WEIGHING PAN	INTERFACE
Electromagnetic force restoration	Automatic internal · 1 h steps	Ø 90 mm grid pan · draft ring	RS232 · USB

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ANB-SEMIC · technical parameters

Dual range 0.1 / 0.01 mg and single range 0.01 mg · values for the 0.01 mg range unless stated

TECHNICAL PARAMETERS

Capacity · dual range	100 g / 31 g · 100 g / 51 g · 100 g / 81 g 200 g / 31 g · 200 g / 51 g · 200 g / 81 g
Capacity · single range	100 g · 120 g · 220 g
Readability	Dual range: 0.1 mg / 0.01 mg Single range: 0.01 mg
Repeatability	Dual range: ±0.1 mg / ≤ ±0.015 mg Single range: ≤ ±0.015 mg
Linearity	Dual range: ±0.2 mg / ≤ ±0.03 mg Single range: ≤ ±0.03 mg
Minimum weight	Dual range: 10 mg / 1 mg Single range: 1 mg
Stabilisation time	Dual range: 2 s / 3 s · single range: 3 s
Warm-up time	30–60 min

Sensor	Electromagnetic force restoration
Calibration	Automatic internal calibration · interval selectable in 1 h steps · corrects temperature-related deviations
Weighing units	g · mg · ct · oz, customisable units
Functions	Basic and dynamic weighing, piece counting, percent weighing, density determination, Σ totalising, pipette calibration
Weighing pan	Ø 90 mm, grid pan with ring-shaped draft shield
Draft shield	Glass, antistatic, three sliding doors
Display	Detachable high-brightness display with clock
Interface	RS232 · USB, bidirectional · export to Excel
Below-balance weighing	Yes
Power supply	AC 110–240 V
Net weight	6.28 kg
Packing size	Inner carton 43 × 32 × 41.5 cm · master carton 49 × 38 × 48.5 cm

NEW WEIGHING PAN DESIGN — LESS AIR CURRENT, MORE PRECISION



At 0.01 mg the balance resolves forces far smaller than the push of air moving inside the weighing chamber. Air currents from opening the doors, convection from small temperature differences and the operator's movement act on the pan — they are the most common reason for a drifting or slowly settling reading. The ANB-SEMIC weighing pan reduces this effect where it starts: at the pan itself.

Open grid pan

An open lattice instead of a solid plate: air passes through the pan instead of pressing on a closed surface.

Ring-shaped draft shield

The ring around the pan blocks air flowing across the chamber floor and calms the air in the weighing zone.

Faster stable reading

Less air movement on the pan — the reading settles quickly after the door is closed.

Better repeatability

Lower disturbance from air means lower scatter between repeated weighings of the same sample.

	Solid flat pan	ANB-SEMIC · grid pan with draft ring
Surface exposed to air	Closed plate surface	Open lattice — air passes through
Air flow around the pan	Free across the chamber floor	Shielded by the ring around the pan
After closing the door	Reading more sensitive to residual air movement	Reading settles faster and steadier
Best suited for	Routine weighing at 0.1 mg	Semi-micro weighing at 0.01 mg

ANB-SEMIC · accessories and weighing environment

Optional accessories, standard delivery and conditions for reliable 0.01 mg results

ACCESSORIES



Density determination kit

OPTIONAL

Stainless steel kit with beaker, sample holder and bridge — for solids and liquids, used with the density function.



Compact printer

OPTIONAL

Thermal printer for weighing records; connection via RS232 or USB.

Standard delivery

Balance	ANB-SEMIC with glass draft shield
Display	Detachable display with connecting cable
Weighing pan	Grid pan Ø 90 mm with ring-shaped draft shield
Cable · documents	Power cable · operation manual

WEIGHING ENVIRONMENT FOR 0.01 MG

Location	Stable, vibration-free weighing table; away from doors, windows, air conditioning outlets and direct sunlight
Temperature	Constant room temperature; avoid heat sources next to the balance
Warm-up	Keep the balance connected to power; allow 30–60 min before the first weighing
Levelling	Level the balance with the adjustable feet after every relocation
Calibration	Set the auto-calibration interval (1 h steps) to the room conditions; calibrate after warm-up and relocation
Samples	Let samples and containers reach room temperature; open only the door you need
Static	Antistatic draft shield as standard; use antistatic containers for powders and plastics

At 0.01 mg the weighing environment matters as much as the balance. COLO advises on placement and set-up with every delivery.

FINE RANGE
31 · 51 · 81 g (dual range)

MINIMUM WEIGHT
1 mg (0.01 mg range)

WARM-UP
30–60 min

CALIBRATION
Auto interval in 1 h steps

ANB-SEMIC · configuration and support

Ordering information, configuration checklist and contact

OPERATION, CONFIGURATION AND SUPPORT



ANB-SEMIC · detachable display with clock and direct keys for calibration, printing, menu, units and tare

Ordering information

ANB-SEMIC 100/31	Dual range · 100 g / 31 g · d = 0.1 mg / 0.01 mg
ANB-SEMIC 100/51	Dual range · 100 g / 51 g · d = 0.1 mg / 0.01 mg
ANB-SEMIC 100/81	Dual range · 100 g / 81 g · d = 0.1 mg / 0.01 mg
ANB-SEMIC 200/31	Dual range · 200 g / 31 g · d = 0.1 mg / 0.01 mg
ANB-SEMIC 200/51	Dual range · 200 g / 51 g · d = 0.1 mg / 0.01 mg
ANB-SEMIC 200/81	Dual range · 200 g / 81 g · d = 0.1 mg / 0.01 mg
ANB-SEMIC 100	Single range · 100 g · d = 0.01 mg
ANB-SEMIC 120	Single range · 120 g · d = 0.01 mg
ANB-SEMIC 220	Single range · 220 g · d = 0.01 mg

Configuration checklist

Sample mass and resolution: dual range when most samples are small but larger containers must also be weighed; single range for 0.01 mg over the full capacity.

Fine range: choose 31, 51 or 81 g according to the tare of the containers used for 0.01 mg work.

Methods: density determination needs the density kit; weighing records via RS232 / USB, printer as an option.

Location: weighing table and room conditions — we advise before delivery.

SALES AND SUPPORT

COLO Lab Experts
Polje ob Sotli 4, SI-3255 Buče, Slovenia

Selection guidance: send your typical sample mass, container tare and methods — we confirm the model, accessories and delivery time with the quotation.

QUICK CONTACT

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sales@colo.si

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COLO.SCIENCE · WEIGHING SUPPORT

Need help choosing the capacity, fine range or the right weighing set-up?

Send your sample type, typical sample mass, the containers you use and the number of weighings per day — we propose the model and configuration and confirm it with the quotation.

Request quotation | sales@colo.si | +386 70 713 437

Specifications are subject to change without notice. Values refer to standard laboratory conditions.