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**AN ISO 17025
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NICOL SCALES & MEASUREMENT IS AN ISO ACCREDITED CALIBRATION
COMPANY THAT HAS PROVIDED CALIBRATION, REPAIR AND SALES OF ALL TYPES
OF WEIGHING AND MEASUREMENT PRODUCTS SINCE 1931.



The New Practum[®].

Start Weighing Right.

Benefits

- Unmatched reliability with the world-class weighing instrument
- Made in Germany
- Overload protection for years of reliability
- Supervisor Lock
- Fast and easy data transfer



Technical Specifications

| AC Adapter | |
|-----------------------------|---|
| Sartorius AC adaptor module | 6971790 with interchangeable country-specific plug-in AC adaptors |
| Primary | 100 – 240 V~, -10% +10%, 50 – 60 Hz, 0.2 A |
| Secondary | 15 V DC, ± 5%, 530 mA (max.) 8 Watt (max.): 0 to +40 °C and 15 V DC, ± 5%, 330 mA (max.) 5 Watt (max.): 0 to +50 °C |
| Other data | protection class II, in accordance with EN IEC 60950-1 up to 3000 m above sea level; IP40 as per EN IEC 60529 |

| Balance | |
|-------------------|--|
| Power supply | only via Sartorius AC adaptor module 6971790 |
| Input voltage | 12.0 ... 18.0 V DC |
| Power consumption | 2 W (typically) |

| Ambient Conditions | |
|--|---------------------|
| The specifications apply when the following ambient conditions are in place: | |
| Environment | for indoor use only |

| | |
|----------------------------------|---|
| Ambient temperature | +10 °C to +30 °C |
| Operational capacity | guaranteed between +5 °C and +45 °C |
| Storage and shipping | -10 °C to +60 °C |
| Elevation | up to 3,000 m above sea level |
| Relative humidity | 15% to 80% for temperatures up to 31 °C; non-condensing, decreasing linearly to 50% relative humidity at 40 °C and 20% at 50 °C |
| Safety of electrical equipment | in accordance with EN 61010-1 IEC 61010-1. Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements |
| Electromagnetic compatibility | in accordance with EN 61326-1 IEC 61326-1. Electrical equipment for measurement, control, and laboratory use – EMC requirements – Part 1: General requirements |
| Defined immunity to interference | Suitable for use in industrial areas |
| Interference emission | Class B (suitable for use in residential areas and areas that are connected to a low voltage network that also supplies residential buildings). The device can therefore be used in both areas. |

| Standard Equipment | |
|--------------------------------|--|
| Levelling | Glass level indicator with air bubble for centering |
| Calibration | External calibration |
| Selectable weight units | Gram, kilogram, carat, pound, ounce, troy ounce, Hong Kong tael, Singapore tael, Taiwan tael, grain, pennyweights, milligram, parts per pound, China tael, mommes, Austrian carat, tola, baht, mesghal and Newton |
| Interface | mini USB – Automatic recognition of Sartorius printer YDP40 – Direct data transfer to Microsoft® Windows programs – Programmable interval for data output – Data transfer protocols SBI, table format, text format |
| Display | Touch screen with Sartorius graphical user interface |
| Standard built-in applications | Weighing, Density, Percentage, Checkweighing, Peak Hold, Counting, Unstable Conditions |
| Languages | English, French, German, Hungarian, Italian, Polish, Portuguese, Russian, Spanish, Turkish, Chinese, Japanese, Korean |
| Protection | – Rugged, easy-to-clean housing – In-use cover – Dust cover for analytical balances |
| Password protection | Supervisor lock for protection against unintentional changes |
| Anti-theft lock | Kensington lock and lockdown capability for cable or chain |
| Underfloor weighing | Integrated |



Analytical Balances Practum®

| Model | | 224 | 124 | 64 |
|---|---------|-------------------|------|------|
| Weighing capacity | g | 220 | 120 | 60 |
| Readability | mg | 0.1 | 0.1 | 0.1 |
| Repeatability (standard deviation) | mg | 0.1 | 0.1 | 0.1 |
| Linearity deviation | mg | 0.2 | 0.2 | 0.2 |
| Sensitivity drift between +10 °C and +30 °C | ± ppm/K | 2 | 2 | 2 |
| Typical stabilization time | s | 2 | 2 | 2 |
| Weighing pan size | mm | ∅ 90 | ∅ 90 | ∅ 90 |
| Weighing chamber height | mm | 209 | 209 | 209 |
| Net weight, approx. | kg | 4.5 | 4.5 | 4.5 |
| Dimensions, D × W × H | mm | 360 × 216 × 320 | | |
| | Inch | 14.1 × 8.5 × 12.6 | | |

Precision Balances Practum®

| Model | | 513 | 313 | 213 | 3102 | 2102 | 1102 | 612 | 412 | 6101 | 5101 | 2101 | 6100 | 5100 | |
|---|---------|-------------------|-------|-------|-------|-------|-------|-------|-------------------|-------|-------|-------|-------|-------|--|
| Weighing capacity | g | 510 | 310 | 210 | 3100 | 2100 | 1100 | 610 | 410 | 6100 | 5100 | 2100 | 6100 | 5100 | |
| Readability | mg | 1 | 1 | 1 | 10 | 10 | 10 | 10 | 10 | 100 | 100 | 100 | 1000 | 1000 | |
| Repeatability (standard deviation) | mg | 1 | 1 | 1 | 10 | 10 | 10 | 10 | 10 | 100 | 100 | 100 | 500 | 500 | |
| Linearity deviation | mg | 2 | 2 | 2 | 30 | 30 | 30 | 30 | 30 | 300 | 300 | 300 | 1000 | 1000 | |
| Sensitivity drift between +10 °C and +30 °C | ± ppm/K | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 8 | 8 | |
| Typical stabilization time | s | 1 | 1 | 1 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1 | 1 | |
| Weighing pan size | mm | ∅ 120 | ∅ 120 | ∅ 120 | ∅ 180 | ∅ 180 | ∅ 180 | ∅ 180 | ∅ 180 | ∅ 180 | ∅ 180 | ∅ 180 | ∅ 180 | ∅ 180 | |
| Weighing chamber height | mm | 209 | 209 | 209 | - | - | - | - | - | - | - | - | - | - | |
| Net weight, approx. | kg | 4.9 | 4.9 | 4.9 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | |
| Dimensions, D × W × H | mm | 360 × 216 × 320 | | | | | | | 360 × 216 × 95 | | | | | | |
| | Inch | 14.1 × 8.5 × 12.6 | | | | | | | 14.1 × 8.5 × 3.75 | | | | | | |

Optional Accessories

| Printers and Communications | |
|--|-----------|
| Standard Laboratory Printer | YDP40 |
| – Printer paper for standard laboratory printer | 69Y03287 |
| Data Cable Mini USB USB A | YCC04-D09 |
| Date Cable Mini USB RS232 9-pin | YCC03-D09 |
| Date Cable Mini USB RS232 25-pin | YCC03-D25 |
| General | |
| Battery Pack for Standard Lab Balances | YRB11Z |
| Draft shield for balances with a readability of 0.01 g 0.1 g 1 g | YDS01SQP |
| Draft shield for balances with a readability of 1 mg | YDS02SQP |
| In-use cover for balances with a readability of 0.1 mg and 1 mg | 6960SE01 |
| In-use cover for balances with a readability of 0.01 g 0.1 g 1g | 6960SE02 |
| Dust cover for analytical balances with draft shield | 6960SE03 |
| Density Determination | |
| Density kit for balances with a readability of 0.1 mg 1 mg | YDK03 |
| Density kit for balances with a readability of 0.01 g 0.1 g 1g | YDK04 |



YDP40, Standard Laboratory Printer

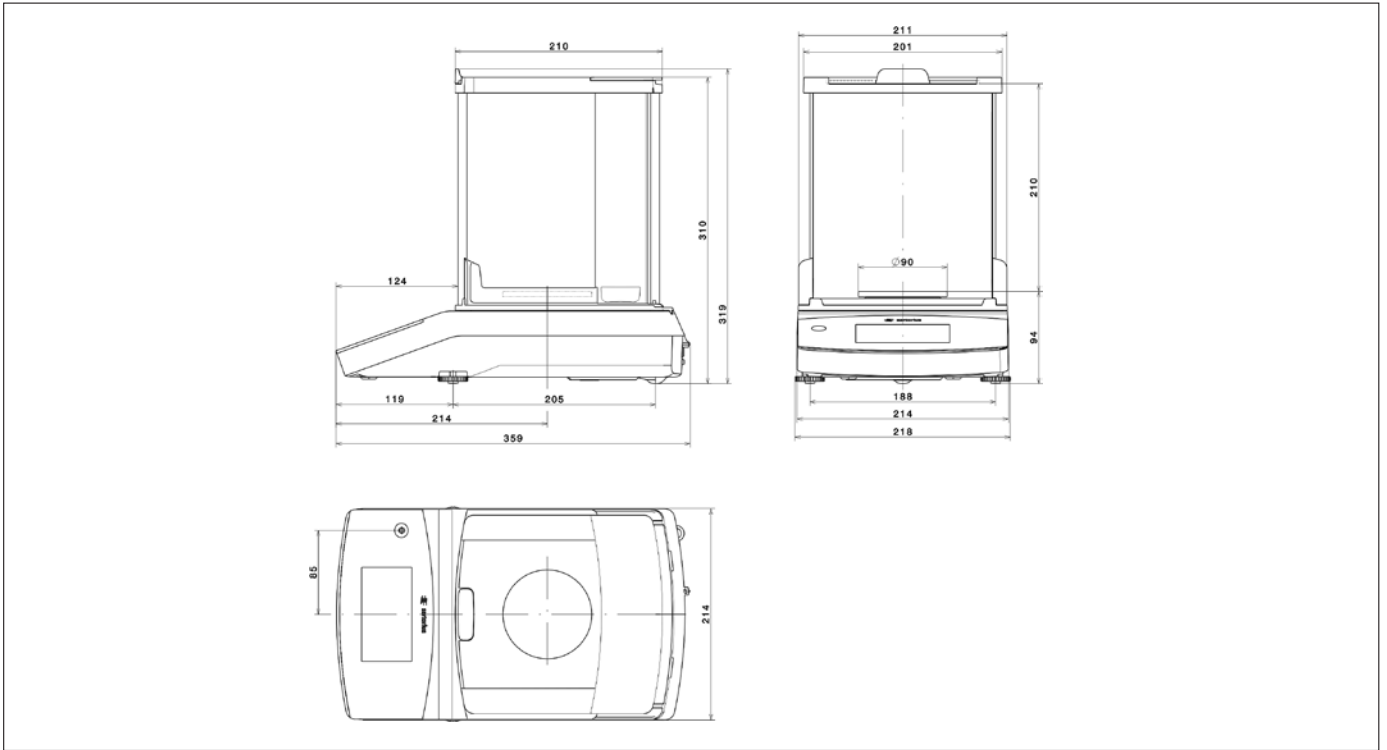
| Calibration Weights | |
|--|--------------|
| Calibration for lab balance model 224; 513 – Proof Line knob weight 200 g, OIML class E2, with DAkkS certificate | YCW522-AC-02 |
| Calibration for lab balance model 124 – Proof Line knob weight 100 g, OIML class E2, with DAkkS certificate | YCW512-AC-02 |
| Calibration for lab balance model 64 – Proof Line knob weight 50 g, OIML class E2, with DAkkS certificate | YCW452-AC-02 |
| Calibration for lab balance model 313; 213; 412 – Proof Line knob weight 200 g, OIML class F1, with DAkkS certificate | YCW523-AC-02 |
| Calibration for lab balance model 3102; 2102 – Proof Line knob weight 2 kg, OIML class F1, with DAkkS certificate | YCW623-AC-02 |
| Calibration for lab balance model 1102 – Proof Line knob weight 1 kg, OIML class F1, with DAkkS certificate | YCW613-AC-02 |
| Calibration for lab balance model 612 – Proof Line knob weight 500 g, OIML class F2, with DAkkS certificate | YCW554-AC-02 |
| Calibration for lab balance model 6101; 5101; 2101; 6100; 5100 – Proof Line knob weight 2 kg, OIML class F2, with DAkkS certificate | YCW624-AC-02 |



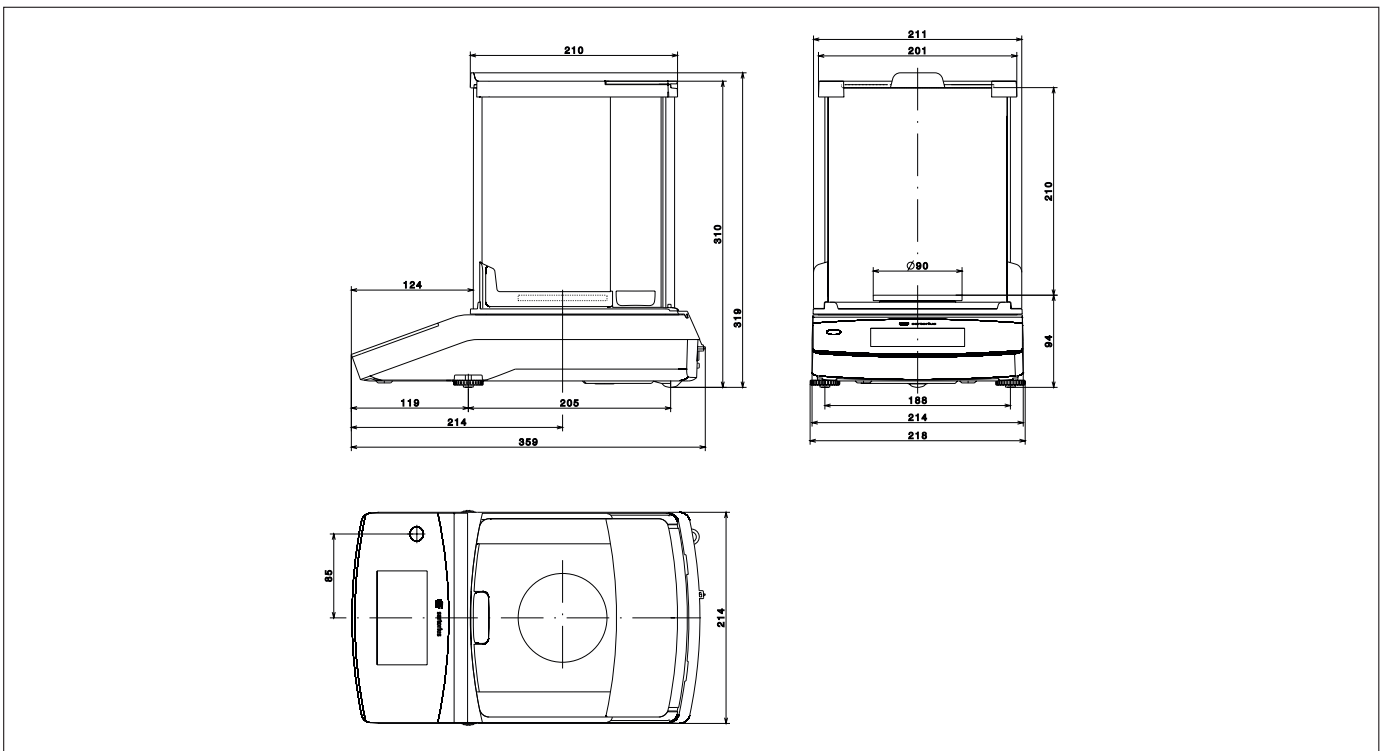
Calibration weights

Technical Drawings

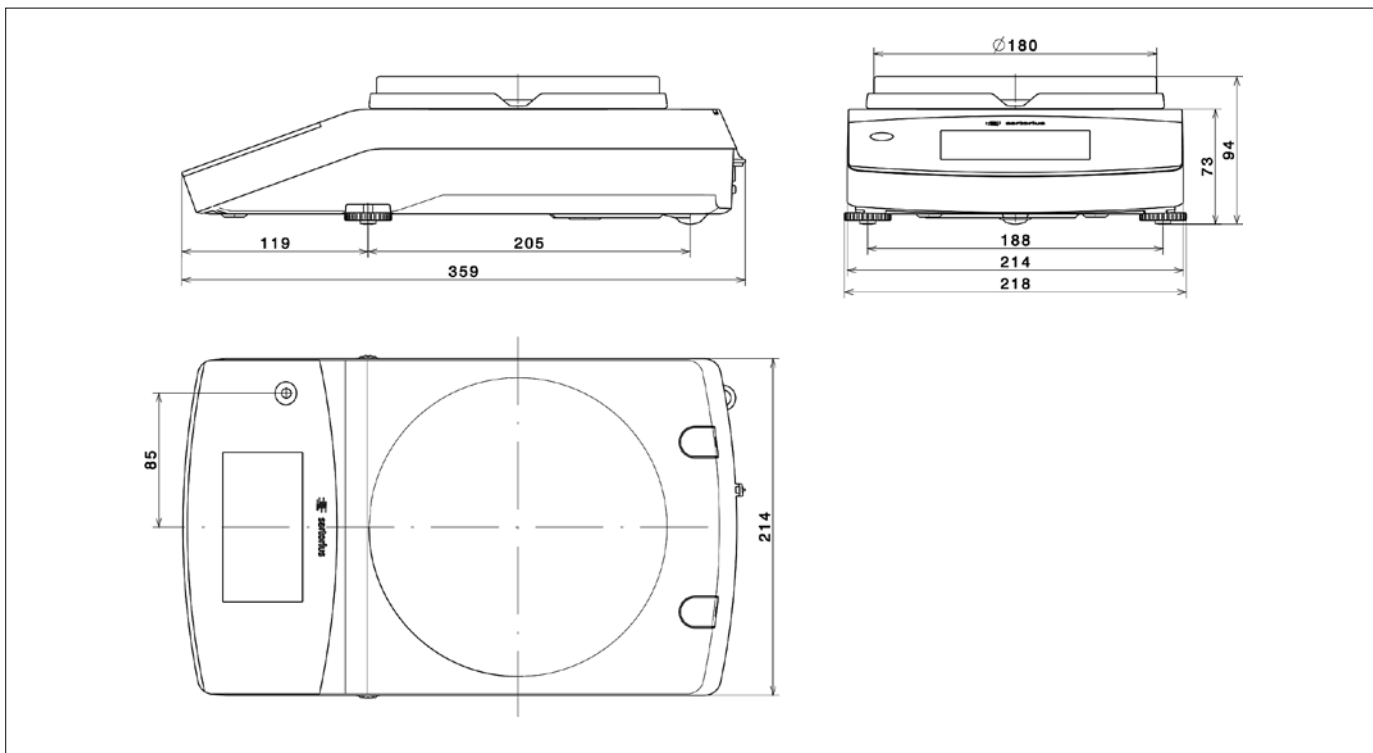
Models with a readability of 0.1 mg,
in mm



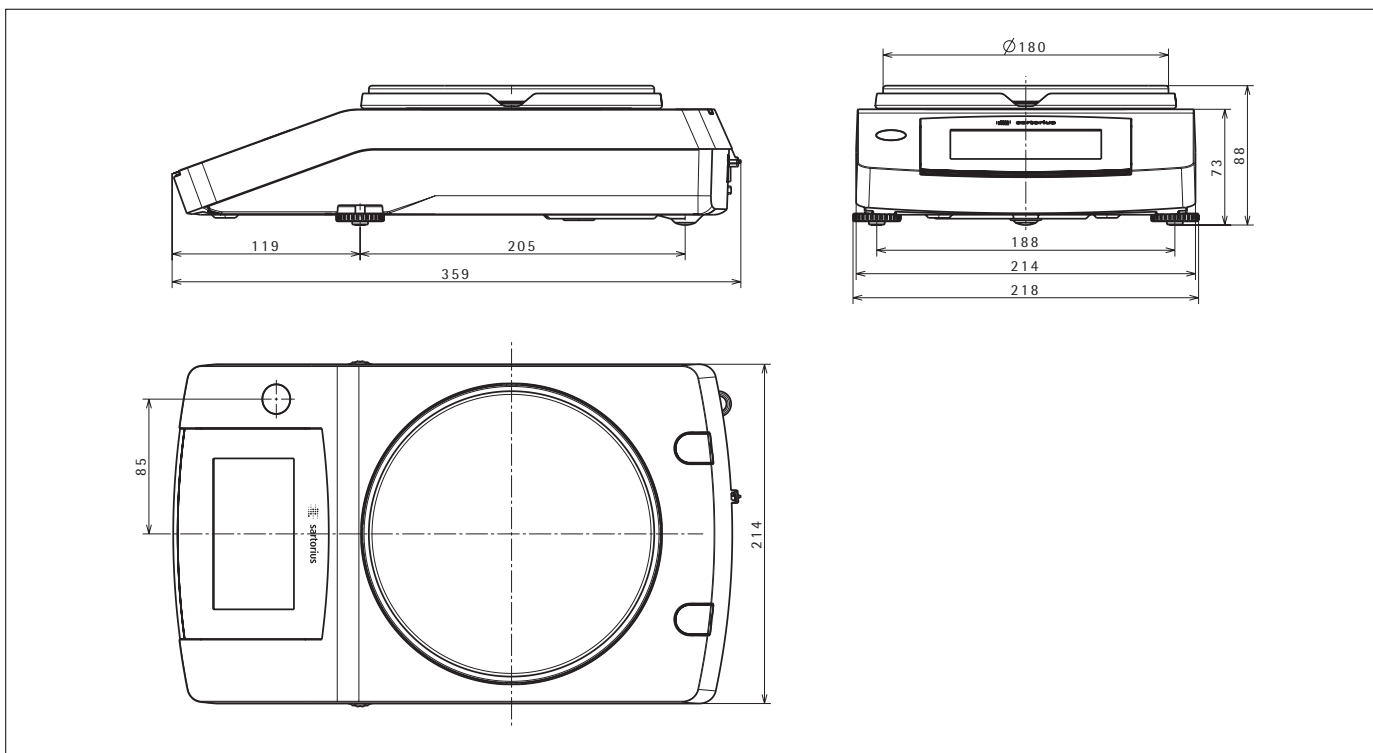
Models with a readability of 1 mg,
in mm



Models with a readability of ≥ 10 mg (exclude 3102),
in mm



Models with a readability of 10 mg and a capacity of $\geq 3,100$ g,
in mm



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