A&D Weighing Solutions

Balances / Scales / Peripheral Devices

ISO 9000 CERTIFIED

A&D Company, Ltd.

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Congratulations: You’ve just picked up the right brochure.

A&D Company, Limited, Japan’s top manufacturer of electronic weighing instruments, is particularly proud of the unmatched width of our product portfolio, with innovations always aimed at providing users with high practical utility and high value for the price.

The fact is that no matter what industry you are in, whatever use you have in mind, or whatever solution you are looking for, you will likely find a product that precisely fits your requirements, within your budget!

Key Feature Index

- **Calibration with Internal Weight**
  Enables you to ensure balance accuracy with just one key press

- **Super Hybrid Sensor/Compact Super Hybrid Sensor**
  Simultaneously achieves precision, speed and stability, as well as ease of maintenance

- **Vacuum Fluorescent Display**
  Provides clear and wide-angle visibility even in a dimly-lit area

- **Liquid Crystal Display with Backlight**
  Ensures visibility in a dimly-lit area

- **Quick USB Interface**
  Transfers weighing data to a PC USB port (one way) requiring no special software installation

- **Clock and Calendar Function**
  Adds time and date information to output data

- **Counting Function with Automatic Counting Accuracy Improvement**
  Displays the number of pieces based on their individual unit weight while automatically optimizing the accuracy of the unit weight

- **Percentage Function**
  Displays the weight value as a percentage of a stored reference mass

- **Calibration with External Weight**
  Requires an external weight for calibration

- **Reverse-backlit Liquid Crystal Display**
  Provides a bright, high contrast that is extremely easy to read and less stressful on the eyes

- **LED Display**
  Provides a wide viewing angle and colorful display, allowing quick, intuitive judgments

- **Liquid Crystal Display**
  Provides a sharp-cut, energy-saving display

- **LAN-Ethernet Interface (with WinCT-Plus software)**
  Enables acquiring data from and sending commands to multiple weighing instruments

- **GLP/GMP/GCP/ISO Compliant Output**
  Outputs the manufacturer, model, serial number, ID number, space for signature, calibration records, etc., for documentation requirements

- **Data Memory Function**
  Stores weighing data, calibration results, unit masses, upper/lower limits, preset tares, etc., for easy recall or output

- **Counting Function**
  Displays the number of pieces based on their individual unit weight

- **Animal Weighing (Hold) Function**
  Helps measure and record the weight of a moving object such as an animal by averaging fluctuation

- **Vacuum Fluorescent Display**
  Provides clear and wide-angle visibility even in a dimly-lit area

- **Super Hybrid Sensor/Compact Super Hybrid Sensor**
  Simultaneously achieves precision, speed and stability, as well as ease of maintenance

- **Localization of Lighted Display**
  Ensures visibility in a dimly-lit area

- **Quick USB Interface**
  Transfers weighing data to a PC USB port (one way) requiring no special software installation

- **Clock and Calendar Function**
  Adds time and date information to output data

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- **Counting Function**
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  Helps measure and record the weight of a moving object such as an animal by averaging fluctuation
Abbreviations and Conversion Factors of Weighing Units

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Unit</th>
<th>Conversion factor (to gram)</th>
</tr>
</thead>
<tbody>
<tr>
<td>g</td>
<td>Gram</td>
<td>1 g</td>
</tr>
<tr>
<td>mg</td>
<td>Milligram</td>
<td>0.001 g</td>
</tr>
<tr>
<td>kg</td>
<td>Kilogram</td>
<td>1000 g</td>
</tr>
<tr>
<td>oz</td>
<td>Ounce (avoirdupois)</td>
<td>28.349523125 g</td>
</tr>
<tr>
<td>lb</td>
<td>Pound</td>
<td>453.59237 g</td>
</tr>
<tr>
<td>lb-oz</td>
<td>Pound-Ounce</td>
<td>1 lb = 16 oz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 oz = 28.349523125 g</td>
</tr>
<tr>
<td>ozt</td>
<td>Troy ounce</td>
<td>31.1034768 g</td>
</tr>
<tr>
<td>ct</td>
<td>Metric carat</td>
<td>0.2 g</td>
</tr>
<tr>
<td>mom</td>
<td>Momme</td>
<td>3.75 g</td>
</tr>
<tr>
<td>dwt</td>
<td>Pennyweight</td>
<td>1.55517384 g</td>
</tr>
<tr>
<td>gr</td>
<td>Grain (UK)</td>
<td>0.06479891 g</td>
</tr>
<tr>
<td>tl</td>
<td>Tael (HK general, Singapore)</td>
<td>37.7994 g</td>
</tr>
<tr>
<td></td>
<td>Tael (HK jewelry)</td>
<td>37.429 g</td>
</tr>
<tr>
<td></td>
<td>Tael (Taiwan)</td>
<td>37.5 g</td>
</tr>
<tr>
<td></td>
<td>Tael (China)</td>
<td>31.25 g</td>
</tr>
<tr>
<td>tol</td>
<td>Tola (India)</td>
<td>11.6638038 g</td>
</tr>
<tr>
<td>SG</td>
<td>Specific gravity</td>
<td>N/A</td>
</tr>
<tr>
<td>N</td>
<td>Newton</td>
<td>See below*</td>
</tr>
</tbody>
</table>

* Newton = (weight in gram) × (9.80665 m/s²) / 1000
Table of Contents

BM Series  
Micro Analytical Balances  
(Capacity: 22 g to 520 g / Resolution: 0.001 mg to 0.1 mg)  

GH Series  
Semi-Micro Analytical Balances  
(Capacity: 101 g to 250 g / Resolution: 0.01 mg to 0.1 mg)  

HR-i Series  
Semi-Micro Analytical Balances  
(Capacity: 51 g to 320 g / Resolution: 0.01 mg to 0.1 mg)  

GR Series  
Semi-Micro Analytical Balances  
(Capacity: 42 g to 310 g / Resolution: 0.01 mg to 0.1 mg)  

HR-AZ/HR-A Series  
Compact Analytical Balances  
(Capacity: 102 g to 252 g / Resolution: 0.1 mg)  

MS-70/MX-50/MF-50/ML-50  
Moisture Analyzers  
(Capacity: 71 g to 51 g / Resolution: 0.001% to 0.1%)  

AD-4212B-PT/AD-4212A-PT  
FX-300i-PT  
Pipette Accuracy Testers  

AD-1690  
Leak Tester  

GX/GF Series  
Precision Balances  
(Capacity: 210 g to 8100 g / Resolution: 0.001 g to 0.1 g)  

FZ-i/FX-i Series  
Precision Balances  
(Capacity: 122 g to 3200 g / Resolution: 0.001 g to 0.01 g)  

FZ-iWP/FX-iWP Series  
IP65 Dust & Waterproof Precision Balances  
(Capacity: 122 g to 3200 g / Resolution: 0.001 g to 0.01 g)  

EK-i/EW-i Series  
Compact Balances  
(Capacity: 120 g to 12000 g / Resolution: 0.01 g to 1 g)  

GX-K/GF-K Series  
IP65 Dust & Waterproof Precision Industrial Balances  
(Capacity: 8.1 kg to 31 kg / Resolution: 0.01 g to 0.1 g)  

GP Series  
IP65 Dust & Waterproof Precision Industrial Balances  
(Capacity: 12 kg to 101 kg / Resolution: 0.1 g to 1 g)  

MC Series  
Mass Comparators  
(Capacity: 1100 g to 101 kg / Resolution: 0.0001 g to 0.1 g)  

AD-4212A/AD-4212B Series  
Production Line Weighing Sensors  
(Capacity: 21 g to 1100 g / Resolution: 0.001 mg to 1 mg)  

AD-4212C Series  
EM-DLC  
(Capacity: 51 g to 6200 g / Resolution: 0.0001 g to 0.01 g)  

AD-1691  
Weighing Environment Analyzer  

AD-1687  
Weighing Environment Logger  

AD-1688  
Weighing Data Logger  

AD-8527  
Quick USB Adapter  

AD-8127  
Compact Printer  

AX-USB-25P/9P/DIN  
Serial/USB Converter  

AD-8526  
Serial/Ethernet Converter  

WinCT  
Windows Communication Tools (Freeware)  

WinCT-Plus  
Windows Communication Tools (Freeware)
**AD-1671**  
Anti-Vibration Table for Balances  
P.27

**AD-1672**  
Tabletop Breeze Break  
P.27

**AD-8920A**  
Remote Display  
P.27

**AD-8922A**  
Remote Controller  
P.27

**AD-1682**  
Rechargeable Battery Unit  
P.28

**AD-1683**  
Static Eliminator  
P.28

**AD-1684**  
Electrostatic Field Meter  
P.28

**AD-1653**  
Density Determination Kit for Analytical Balances  
P.28

**SW Series**  
IP69K Super Washdown Scales  
(Capacity: 6 kg to 150 kg / Resolution: 0.0005 g to 0.01 g)  
P.29

**SC/SE Series**  
IP68 Washdown Scales  
(Capacity: 30 kg to 150 kg / Resolution: 0.005 g to 0.02 g)  
P.30

**FS-i Series**  
IP65 Dust & Waterproof Checkweighing Scales  
(Capacity: 6 kg to 30 kg / Resolution: 0.0005 g to 0.02 g)  
P.31

**HV-C(P)/HW-C(P) Series**  
Multi-Functional Platform Scales  
(Capacity: 10 kg to 220 kg / Resolution: 0.001 g to 0.02 g)  
P.32

**HV-WP/HW-WP Series**  
IP65 Dust & Waterproof Platform Scales  
(Capacity: 10 kg to 220 kg / Resolution: 0.001 g to 0.02 g)  
P.33

**FG Series**  
Platform Scales  
(Capacity: 30 kg to 150 kg / Resolution: 0.002 g to 0.01 g)  
P.34

**HC-i Series**  
Counting Scales  
(Capacity: 3 kg to 30 kg / Min. unit weight: 0.005 g to 0.05 g)  
P.34

**FC-Si/FC-i Series**  
Counting Scales  
(Capacity: 500 g to 50 kg / Min. unit weight: 0.00005 g to 0.05 g)  
P.35

**HT Series**  
Compact Scales  
(Capacity: 120 g to 5100 g / Resolution: 0.01 g to 1 g)  
P.36

**SK-WP Series**  
IP65 Dust & Waterproof Compact Bench Scales  
(Capacity: 1000 g to 30 kg / Resolution: 0.5 g to 20 g)  
P.37

**HL-WP Series**  
IP65 Dust & Waterproof Compact Scales  
(Capacity: 300 g to 3000 g / Resolution: 0.1 g to 1 g)  
P.37

**SJ-HS Series**  
Compact Bench Scales  
(Capacity: 1000 g to 30 kg / Resolution: 0.5 g to 20 g)  
P.38

**HL-i Series**  
Compact Scales  
(Capacity: 200 g to 2000 g / Resolution: 0.1 g to 1 g)  
P.38

**HJ-150**  
Pocket Scale  
(Capacity: 150 g / Resolution: 0.1 g)  
P.38

**FZ-CT/FX-CT Series**  
Carat Balances  
(Capacity: 510 ct to 1260 ct / Resolution: 0.001 ct)  
P.39

**HT-500GD**  
Jewelry Scale  
(Capacity: 510 g / Resolution: 0.1 g)  
P.39
- Instant and smooth static elimination using a built-in fanless ionizer to ensure stable weighing
- Large working space for better operability and a wider range of applications
- Interlockable sliding doors allowing efficient operation with both hands

- Anti-static glass breeze break with a thin evaporated metal coating
- Adjustable (manual or automatic) response characteristics to help cope with the effect of drafts and vibrations
- Automatic self calibration to maintain accuracy under temperature changes
- Embedded temperature, humidity and atmospheric pressure sensors
- Multiple weighing units: g, mg, oz, ozt, ct, mom, dwt, gr, SG (either tl or tol can be added upon request)
- Density determination function and an optional density determination kit (for BM-252/200/300/500 only)
- Comes equipped with the handy AD-1688 weighing data logger
- Expert assessment of the set-up environment using AND-MEET* (please inquire at your local distributor for details)
Special pans/holder for the BM-20/22 (standard accessories)

Options & Accessories

- AD-1653 Density determination kit (for BM-252/200/300/500 only)
- AD-1671 Anti-vibration table for balances *Strongly recommended!*
- AD-1672 Tabletop breeze break *Strongly recommended!*
- BM-014 Pipette accuracy testing kit
- BM-025 Foot switch

### Model Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>BM-20</th>
<th>BM-22</th>
<th>BM-252</th>
<th>BM-200</th>
<th>BM-300</th>
<th>BM-500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>22 g</td>
<td>5.1 g / 22 g</td>
<td>250 g</td>
<td>220 g</td>
<td>320 g</td>
<td>520 g</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.001 mg</td>
<td>0.001 mg / 0.01 mg</td>
<td>0.01 mg</td>
<td>0.1 mg</td>
<td>0.1 mg</td>
<td>0.1 mg</td>
</tr>
<tr>
<td>Repeatability (g)</td>
<td>0.0025 mg (for 1 g)</td>
<td>0.004 mg (for 1 g) / 0.01 mg</td>
<td>0.03 mg (for 100 g)</td>
<td>0.1 mg</td>
<td>0.2 mg</td>
<td>0.2 mg</td>
</tr>
<tr>
<td>Linearity</td>
<td>±0.010 mg</td>
<td>±0.010 mg / ±0.02 mg</td>
<td>±0.10 mg</td>
<td>±0.2 mg</td>
<td>±0.3 mg</td>
<td>±0.5 mg</td>
</tr>
<tr>
<td>Weighing pan</td>
<td>ø25 mm</td>
<td></td>
<td></td>
<td>ø90 mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- AX-BM-031 Display covers (5 pcs)
- AX-BM-032 Microfuge tube holder (for BM-20/22 only)
- AX-BM-NEEDLESET Electrode units for the ionizer
- AX-ROUND-PAN-L Round aluminum analytical pans (ø15 mm, 0.8 ml, 100 pcs)
- AX-ROUND-PAN-M Round aluminum analytical pans (ø12 mm, 0.3 ml, 100 pcs)
- AX-ROUND-PAN-S Round aluminum analytical pans (ø8 mm, 0.05 ml, 100 pcs)

### Weighing Chamber Features

- Interlockable sliding door
  - Possible to slide a door open using the handle on the opposite side

- Neutralizing chamber
- Separation plate
- Weighing Chamber

### Other Accessories

- AX-BM-031 Display covers (5 pcs)
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- AX-ROUND-PAN-S Round aluminum analytical pans (ø8 mm, 0.05 ml, 100 pcs)
Semi-Micro Analytical Balances

GH Series

- Adjustable (manual or automatic) response characteristics to help cope with the effect of drafts and vibrations
- Automatic self calibration to maintain accuracy under temperature changes
- Anti-static glass breeze break with a thin evaporated metal coating
- Multiple weighing units: g, mg, oz, ozt, ct, mom, dwt, gr, SG (either tl or tol can be added upon request)
- Density determination function and an optional density determination kit

<table>
<thead>
<tr>
<th>Options &amp; Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD-1653</td>
</tr>
<tr>
<td>GH-02</td>
</tr>
<tr>
<td>GH-08</td>
</tr>
<tr>
<td>GLP Compliant</td>
</tr>
<tr>
<td>LAN-Ethernet Interface</td>
</tr>
<tr>
<td>Underhook</td>
</tr>
<tr>
<td>RS-232C Interface</td>
</tr>
<tr>
<td>Auto Power ON</td>
</tr>
<tr>
<td>Eco Type Approval</td>
</tr>
<tr>
<td>LCD Display</td>
</tr>
<tr>
<td>Data Memory Function</td>
</tr>
<tr>
<td>Clock &amp; Calendar</td>
</tr>
<tr>
<td>GLP Compliant</td>
</tr>
<tr>
<td>LAN-Ethernet Interface</td>
</tr>
<tr>
<td>Underhook</td>
</tr>
<tr>
<td>Quick USB</td>
</tr>
<tr>
<td>Density determination kit</td>
</tr>
<tr>
<td>Quick USB interface with cable</td>
</tr>
<tr>
<td>Ethernet interface with WinCT-Plus software</td>
</tr>
</tbody>
</table>

*GH-02 and GH-08 cannot be used at the same time.

<table>
<thead>
<tr>
<th>Model</th>
<th>GH-252</th>
<th>GH-202</th>
<th>GH-120</th>
<th>GH-200</th>
<th>GH-300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>101 g / 250 g</td>
<td>51 g / 220 g</td>
<td>120 g</td>
<td>220 g</td>
<td>320 g</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.01 mg / 0.1 mg</td>
<td>0.02 mg / 0.1 mg</td>
<td>0.1 mg</td>
<td>0.2 mg</td>
<td></td>
</tr>
<tr>
<td>Repeatability (σ)</td>
<td>±0.1 mg / ±0.2 mg</td>
<td>±0.03 mg / ±0.2 mg</td>
<td>±0.2 mg</td>
<td>±0.3 mg</td>
<td></td>
</tr>
<tr>
<td>Linearity</td>
<td>±0.1 mg / ±0.2 mg</td>
<td>±0.03 mg / ±0.2 mg</td>
<td>±0.2 mg</td>
<td>±0.3 mg</td>
<td></td>
</tr>
<tr>
<td>Weighing pan</td>
<td>ø90 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Model: GH-200
Capacity: 220 g
Resolution: 0.1 mg
Repeatability: ±0.1 mg
Linearity: ±0.2 mg
Weighing pan: ø90 mm
Semi-Micro Analytical Balances

HR-i Series

- Adjustable response characteristics to help cope with the effect of drafts and vibrations
- Anti-static glass breeze break with a thin evaporated metal coating
- Multiple weighing units: g, mg, oz, ozt, ct, mom, dwt, gr (either tl or tol can be added upon request)

<table>
<thead>
<tr>
<th>Model</th>
<th>HR-202i</th>
<th>HR-300i</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>51g / 220g</td>
<td>320 g</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.01 mg / 0.1 mg</td>
<td>0.1 mg</td>
</tr>
<tr>
<td>Repeatability (o)</td>
<td>0.02 mg / 0.1 mg</td>
<td>0.2 mg</td>
</tr>
<tr>
<td>Linearity</td>
<td>±&lt;0.03 mg / ±0.2 mg</td>
<td>±0.3 mg</td>
</tr>
<tr>
<td>Weighing pan</td>
<td>ø90 mm</td>
<td></td>
</tr>
</tbody>
</table>

Semi-Micro Analytical Balances

GR Series

- Handy lever on the front to open either side of the weighing chamber for quick and efficient access
- Small footprint of 249 mm by 330 mm to save space
- Adjustable (manual or automatic) response characteristics to help cope with the effect of drafts and vibrations
- Automatic self calibration to maintain accuracy under temperature changes
- Anti-static glass breeze break with a thin evaporated metal coating
- Multiple weighing units: g, mg, oz, ozt, ct, mom, dwt, gr, SG (either tl or tol can be added upon request)
- Density determination function and an optional density determination kit

<table>
<thead>
<tr>
<th>Model</th>
<th>GR-202</th>
<th>GR-120</th>
<th>GR-200</th>
<th>GR-300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>42 g / 210 g</td>
<td>120 g</td>
<td>210 g</td>
<td>310 g</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.01 mg / 0.1 mg</td>
<td>0.1 mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeatability (o)</td>
<td>0.02 mg / 0.1 mg</td>
<td>0.2 mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linearity</td>
<td>±0.03 mg / ±0.2 mg</td>
<td>±0.2 mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighing pan</td>
<td>ø85 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
High-speed weighing with 2-second stabilization
Removable, shatterproof breeze break with antistatic coating
Compact foot print: 198 mm × 294 mm (smaller than an A4 sheet of paper)

- Rotary sliding doors requiring no extra space at the rear
- Adjustable response characteristics to help cope with the effect of drafts and vibrations
- Multiple weighing units: g, mg, oz, ozt, ct, mom, dwt, gr, SG, and a user-programmable unit for conversion applications (either tl, tol or N can be added upon request)
- Density determination function and an optional density determination kit
- Easily visible, front-mounted spirit level for adjusting the leveling feet
Quickly removable breeze break

Allows fast, simple cleaning of the balance and use in confined spaces like glove boxes. The non-glass breeze break also makes the balance suitable for use in food/drug-related production lines.

Rotary sliding doors

The balance requires no extra space at the rear in order to access the weighing chamber, as the doors simply rotate behind the balance.

Density determination kit (AD-1654)

Using this kit, it is easy to calculate the density of a solid or liquid substance in density mode.

<table>
<thead>
<tr>
<th>Options &amp; Accessories</th>
<th>HR-100AZ/100A</th>
<th>HR-150AZ/150A</th>
<th>HR-250AZ/250A</th>
<th>HR-251AZ/251A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AD-1654</td>
<td>Density determi. kit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FXi-02</td>
<td>Quick USB interface with cable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FXi-08</td>
<td>Ethernet interface with WinCT-Plus software</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FXi-09</td>
<td>Built-in rechargeable battery</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Model**: HR-100AZ/100A, HR-150AZ/150A, HR-250AZ/250A, HR-251AZ/251A

**Capacity**: 102 g, 152 g, 252 g, 62 g / 252 g

**Resolution**: 0.1 mg, 0.1 mg / 1 mg

**Repeatability**: ±0.2 mg, 0 to 200 g: ±0.1 mg, 200 to 252 g: ±0.2 mg, ±0.3 mg / ±1 mg

**Linearity**: ±0.2 mg, ±0.3 mg, ±0.3 mg / ±1 mg

**Weighing pan**: φ90 mm

Optional

- Quick USB interface with cable
- Ethernet interface with WinCT-Plus software
- Built-in rechargeable battery

**Optional**: Small breeze break, Large breeze break

- FXi-31 Display covers (5 pcs)
- FXi-02, FXi-08 and FXi-09 cannot be used at the same time.

Density determination kit (AD-1654)

Using this kit, it is easy to calculate the density of a solid or liquid substance in density mode.

Density determination kit (AD-1654)

Using this kit, it is easy to calculate the density of a solid or liquid substance in density mode.
Moisture Analyzers

- Low moisture content measurement at 10 ppm (0.001\%) resolution (MS-70)
- Fast and uniform heating with halogen lamp and innovative Secondary Radiation Assist (SRA) technology
- Accuracy verification with Sodium Tartrate Dihydrate (standard with MS-70, MX-50, and MF-50)

- Calibration function for heating temperature (for MS-70 and MX-50 only)
- Five different measurement programs
- Selectable heating patterns
- Translucent window enabling progress check
- Memory function for measurement conditions
- Quick reference card provided

Secondary Radiation Assist (SRA)
The thermally conductive glass spreads the heat evenly over the sample, realizing more efficient and accurate measurement. It also protects the halogen lamp from soiling from the volatile components of samples.
Special Software “WinCT-Moisture” (Standard with MS-70 and MX-50)

- Displays moisture rate changes over time in a graph (RsFig)
- Quickly and automatically suggests the most suitable heating conditions for first-time samples (RsTemp)
- Calculates measurement data statistics
- Saves the recorded data in CSV format
- Detects other changes to the sample material in addition to moisture rate
- Includes sample data summary

### Model Comparison

<table>
<thead>
<tr>
<th>Model</th>
<th>MS-70</th>
<th>MX-50</th>
<th>MF-50</th>
<th>ML-50</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum sample weight capacity</strong></td>
<td>71 g</td>
<td>51 g</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Min. display</strong></td>
<td>0.001% / 0.01% / 0.1%</td>
<td>0.01% / 0.1%</td>
<td>0.05% / 0.1% / 1%</td>
<td>0.1% / 1%</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>0.0001 g</td>
<td>0.001 g</td>
<td>0.002 g</td>
<td>0.005 g</td>
</tr>
<tr>
<td><strong>Repeatability (μ)</strong></td>
<td>Moisture content (over 1 g) 0.05%</td>
<td>Moisture content (over 5 g) 0.01%</td>
<td>Moisture content (over 5 g) 0.02%</td>
<td>Moisture content (over 5 g) 0.05%</td>
</tr>
<tr>
<td><strong>Moisture content</strong></td>
<td>1%</td>
<td>0.1%</td>
<td>0.2%</td>
<td>0.1%</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>0.0005 g</td>
<td>0.001 g</td>
<td>0.002 g</td>
<td>0.005 g</td>
</tr>
<tr>
<td><strong>Drying temperature</strong></td>
<td>30 to 200 °C</td>
<td>50 to 200 °C</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Measurement unit</strong></td>
<td>Wet base / Dry base / Dry content / Ratio / Weight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sample pan size</strong></td>
<td>ø85 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Options & Accessories

- **AX-MX-30**: Disposable aluminum pan (100 pcs)
- **AX-MX-31**: Sample pan (100 pcs)
- **AX-MX-32-1**: Filtration glass fiber sheet (100 sheets)
- **AX-MX-32-2**: Glass fiber sheet (100 sheets)
- **AX-MX-33**: Sodium Tartrate Dihydrate (30 g × 12 pcs)
- **AX-MX-40**: Halogen lamp (AC 100 to 120 V)
- **AX-MX-41**: Halogen lamp (AC 200 to 240 V)
- **AX-MX-35**: Pan handle (2 pcs)
- **AX-MX-36**: Tweezers (2 pairs)
- **AX-MX-37**: Spoon (2 pcs)
- **AX-MX-38**: Display cover (2 pcs)
- **AX-MX-39**: RS-232C cable (25P-9P, 2 m)
- **AX-MX-40**: Calibration weight (20 g)
- **AX-MX-41**: WinCT-Moisture
- **AX-MX-43**: Temperature calibrator (for MS-70 and MX-50 only)
- **AX-USB-25P**: Serial/USB converter
Pipette Accuracy Testers

**AD-4212B-PT**
**AD-4212A-PT**
**FX-300i-PT**

- Automatic mass-to-volume conversion and accuracy judgment using the special “WinCT-Pipette” software
- Judgment by your preferred criteria – manufacturer specifications, ISO8655, or your own
- Evaporation trap to minimize errors due to evaporation
- Portable carrying case for testing easily on-site
- Printing function for GLP documentation requirements, etc.

*Not advisable with 0.001 mg resolution


<table>
<thead>
<tr>
<th>Model</th>
<th>AD-4212B-PT</th>
<th>AD-4212A-PT</th>
<th>FX-300i-PT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>5.1 g / 31 g / 110 g*</td>
<td>110 g</td>
<td>320 g</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.001 mg / 0.01 mg / 0.1 mg</td>
<td>0.1 mg</td>
<td>1 mg</td>
</tr>
<tr>
<td>Repeatability (δ)</td>
<td>0.015 mg / 0.05 mg / 0.1 mg</td>
<td>0.15 mg</td>
<td>1 mg</td>
</tr>
<tr>
<td>Linearity</td>
<td>±0.05 mg / ±0.05 mg / ±0.2 mg</td>
<td>±0.3 mg</td>
<td>±2 mg</td>
</tr>
</tbody>
</table>

*Smart range*

AD-1690

- Takes only 5 seconds to determine if a pipette has a leak
- Leak detection by depressurization (-20kPa ±20%) ensuring no contamination (e.g. dust) enters the pipette being tested
- RS-232C interface to output data to a PC, etc.

**Options & Accessories**
- AD-1690-01: Replacement tube set (adapter × 1, attachment × 4)
- AD-1690-02: Replacement filter set (filter unit × 1, filter element × 10)
- AD-1690-015: Carrying case

*Pipette is not included.*
High-speed weighing with 1-second stabilization

Adjustable response characteristics to help cope with the effect of drafts and vibrations (GX: manual or automatic / GF: manual only)

Automatic self calibration to maintain accuracy under temperature changes (GX)

Multiple weighing units: g, oz, lb, lb-oz, ozt, ct, mom, dwt, gr, SG, and a user-programmable unit for conversion applications (either tl, tol or N can be added upon request)

Density determination function (an optional density determination kit is available for the models with 0.001 g resolution)

Quick reference card provided

<table>
<thead>
<tr>
<th>Options &amp; Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>GX-02 Quick USB interface with cable</td>
</tr>
<tr>
<td>GX-04 Comparator output with a buzzer/RS-232C/Current loop output</td>
</tr>
<tr>
<td>GX-06 Analog output/Current loop output</td>
</tr>
<tr>
<td>GX-10 Glass breeze break for the pan size of 128 mm × 128 mm</td>
</tr>
</tbody>
</table>

* Only one of GX-02, GX-04, GX-06 or the standard RS-232C interface can be used.

** GX-04 and GX-06 are factory-installed options.

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity</th>
<th>Resolution</th>
<th>Weighing pan</th>
</tr>
</thead>
<tbody>
<tr>
<td>GX-200</td>
<td>210 g</td>
<td>0.001 g</td>
<td>128 × 128 mm</td>
</tr>
<tr>
<td>GF-200</td>
<td>310 g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GX-300</td>
<td>410 g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GF-400</td>
<td>610 g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GX-600</td>
<td>810 g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GF-600</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GX-800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GF-800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GX-1000</td>
<td>1100 g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GF-1000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity</th>
<th>Resolution</th>
<th>Weighing pan</th>
</tr>
</thead>
<tbody>
<tr>
<td>GF-1200</td>
<td>1210 g</td>
<td>0.1 g</td>
<td>165 × 165 mm</td>
</tr>
<tr>
<td>GX-2000</td>
<td>2100 g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GF-2000</td>
<td>3100 g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GX-3000</td>
<td>4100 g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GF-4000</td>
<td>6100 g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GX-6100</td>
<td>8100 g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GF-6000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GX-6000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GF-6000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GX-8000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GF-8000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GX-2000</td>
<td>2100 g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GF-2000</td>
<td>3100 g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GX-3000</td>
<td>4100 g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GF-4000</td>
<td>6100 g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GX-6100</td>
<td>8100 g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GF-6000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GX-6000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GF-6000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GX-8000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GF-8000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Only one of GX-02, GX-04, GX-06 or the standard RS-232C interface can be used.

*** GX-04 and GX-06 are factory-installed options.

** GX-04 and GX-06 are factory-installed options.

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity</th>
<th>Resolution</th>
<th>Weighing pan</th>
</tr>
</thead>
<tbody>
<tr>
<td>GX-11</td>
<td>Glass breeze break for the pan size of 165 mm × 165 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GX-12</td>
<td>Animal weighing pan (not available for GX/GF-200)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GX-13</td>
<td>Density determination kit (for the pan size of 128 mm × 128 mm only)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
High-speed weighing with 1-second stabilization

- Compact foot print: 198 mm × 294 mm (smaller than an A4 sheet of paper)
- Protection mechanism against vertical and transverse overloading
- Adjustable response characteristics to help cope with the effect of drafts and vibrations
- Multiple weighing units: g, oz, lb, lb-oz, ozt, ct, mom, dwt, gr, and a user-programmable unit for conversion applications (either tl, tol or N can be added upon request)

<table>
<thead>
<tr>
<th>Model</th>
<th>FX-120i</th>
<th>FX-200i</th>
<th>FX-300i</th>
<th>FX-500i</th>
<th>FX-1200i</th>
<th>FX-2000i</th>
<th>FX-3000i</th>
<th>FX-5000i</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>122 g</td>
<td>220 g</td>
<td>320 g</td>
<td>520 g</td>
<td>1220 g</td>
<td>2200 g</td>
<td>3200 g</td>
<td>5200 g</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.001 g</td>
<td></td>
<td></td>
<td></td>
<td>0.01 g</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighing pan</td>
<td>ø130 mm</td>
<td></td>
<td></td>
<td></td>
<td>ø150 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Optional**

- Quick USB interface with cable
- Ethernet interface with WinCT-Plus software
- Built-in rechargeable battery
- Small breeze break
- Large breeze break
- Animal weighing pan (for FZ/X-1200i/2000i/3000i/5000i only)
- Carrying case
- Main unit cover (5 pcs)

*FX-02, FX-08, and FX-09 cannot be used at the same time.*
High-speed weighing with 1-second stabilization

Compact foot print: 198 mm × 294 mm (smaller than an A4 sheet of paper)

Protection mechanism against vertical and transverse overloading

Adjustable response characteristics to help cope with the effect of drafts and vibrations

Multiple weighing units: g, oz, lb, lb-oz, ozt, ct, mom, dwt, gr, and a user-programmable unit for conversion applications (either tl, tol or N can be added upon request)

### Options & Accessories

| FXi-02 | Quick USB interface with cable |
| FXi-08 | Ethernet interface with WinCT-Plus software |
| FXi-09 | Built-in rechargeable battery |
| FXi-WP-10 | Small breeze break |
| FXi-WP-11 | Large breeze break |
| AX-FXi-31 | Animal weighing pan (for FZ/X-1200iWP/2000iWP/3000iWP only) |
| AX-iWP | Carrying case |
| AX-KO2737-500 | Waterproof RS-232C cable (5 m) |

**FXi-02, FXi-08 and FXi-09 cannot be used at the same time.**

**FX-iWP/FX-iWP series are not IP65 compliant with FXi-02, FXi-08 or FXi-09.**
Compact Balances

EK-i/EW-i Series

- Hygienic and chemically resistant stainless steel (SUS304) weighing pan
- Adjustable response characteristics to help cope with the effect of drafts and vibrations
- Multiple weighing units: g, oz, lb, ozt, ct, mom, dwt, gr (either tl, tol or N can be added upon request)
- Security ring to prevent theft

### Optional

- EW-i/EK-i Series

#### For capacity of 4000 g or larger

- Hygienic and chemically resistant stainless steel (SUS304) weighing pan
- Adjustable response characteristics to help cope with the effect of drafts and vibrations
- Multiple weighing units: g, oz, lb, ozt, ct, mom, dwt, gr (either tl, tol or N can be added upon request)
- Security ring to prevent theft

#### Models

<table>
<thead>
<tr>
<th>Model</th>
<th>EK-120i</th>
<th>EK-200i</th>
<th>EK-300i</th>
<th>EK-410i</th>
<th>EK-610i</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>120 g</td>
<td>200 g</td>
<td>300 g</td>
<td>400 g</td>
<td>600 g</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.01 g</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighing pan</td>
<td>ø110 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>EK-600i</th>
<th>EK-1200i</th>
<th>EK-2000i</th>
<th>EK-3000i</th>
<th>EK-4100i</th>
<th>EK-6100i</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>600 g</td>
<td>1200 g</td>
<td>2000 g</td>
<td>3000 g</td>
<td>4000 g</td>
<td>6000 g</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.01 g</td>
<td>0.1 g</td>
<td>0.01 g</td>
<td>0.02 g</td>
<td>0.05 g</td>
<td>0.05 g</td>
</tr>
<tr>
<td>Weighing pan</td>
<td>170 × 133 mm</td>
<td>170 × 133 mm</td>
<td>170 × 133 mm</td>
<td>170 × 133 mm</td>
<td>170 × 133 mm</td>
<td>170 × 133 mm</td>
</tr>
</tbody>
</table>

**Options & Accessories**

- **EKW-04i** Comparator relay output
- **EKW-07i** Underhook (for EK-4100i/6000i/6100i/12Ki, EW-12Ki only)
- **EKW-09i** Rechargeable battery pack (Ni-MH)
- **EJ-12** Carrying case
- **AX-3005824-5S** Protective cover (5 pcs)

* EKW-04i and EKW-09i cannot be used at the same time.*
Adjustable response characteristics to help cope with the effect of drafts and vibrations (GX-K: manual or automatic / GF-K: manual only)

Automatic self calibration to maintain accuracy under temperature changes (GX-K)

Multiple weighing units: g, kg, oz, lb, lb-oz, ozt, ct, mom, dwt, gr*, SG, and a user-programmable unit for conversion applications (either tl, tol or N can be added upon request)

Density determination function

Quick reference card provided

**IP65 dust and waterproof**

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>GX-8K</td>
<td>8.1 kg</td>
<td>0.01 g</td>
</tr>
<tr>
<td>GF-8K</td>
<td>2.1 kg</td>
<td>0.01 g / 0.1 g</td>
</tr>
<tr>
<td>GX-8K2</td>
<td>10.1 kg</td>
<td>0.01 g</td>
</tr>
<tr>
<td>GF-8K2</td>
<td>2.1 kg</td>
<td>0.01 g / 0.1 g</td>
</tr>
<tr>
<td>GX-10K</td>
<td>12 kg</td>
<td>0.01 g</td>
</tr>
<tr>
<td>GF-10K</td>
<td>6 kg</td>
<td>0.01 g</td>
</tr>
<tr>
<td>GX-12K</td>
<td>21 kg</td>
<td>0.1 g</td>
</tr>
<tr>
<td>GF-12K</td>
<td>11 kg</td>
<td>0.1 g</td>
</tr>
<tr>
<td>GX-20K</td>
<td>31 kg</td>
<td>0.1 g</td>
</tr>
<tr>
<td>GF-20K</td>
<td>15 kg</td>
<td>0.1 g</td>
</tr>
<tr>
<td>GX-30K</td>
<td>6.1 kg / 31 kg</td>
<td>0.1 g / 1 g</td>
</tr>
<tr>
<td>GF-30K</td>
<td>31 kg</td>
<td>0.1 g</td>
</tr>
<tr>
<td>GX-32K</td>
<td></td>
<td>0.1 g</td>
</tr>
<tr>
<td>GF-32K</td>
<td></td>
<td>0.1 g</td>
</tr>
</tbody>
</table>

Weighing pan: 270 × 210 mm

**Options & Accessories**

- **GX-04K** Comparator output with a buzzer/RS-232C/Current loop output
- **GX-06K** Analog output/Current loop output
- **GX-07K** Waterproof RS-232C cable (25P-9P, 5 m)
- **GXK-012** Animal weighing pan
- **GXK-015** Carrying case

**AX-GXK-31** Breeze Break for GX-K/GF-K

* Only one of GX-04K, GX-06K or the standard RS-232C can be used.

**GX-K/GF-K series are not IP65 compliant with GX-04K or GX-06K.**
IP65 Dust & Waterproof Precision Industrial Balances

Adjustable swing arm display (models with detached display stand also available)

Adjustable (manual or automatic) response characteristics to help cope with the effect of drafts and vibrations

Automatic self calibration to maintain accuracy under temperature changes

Multiple weighing units: g*, kg, oz, lb, lb-oz, ozt, ct*, mom*, dwt, SG, and a user-programmable unit for conversion applications (either tl, or tol can be added upon request)

Density determination function

* g, ct, mom not available with the GP-102K.

<table>
<thead>
<tr>
<th>Model</th>
<th>GP-12K</th>
<th>GP-20K</th>
<th>GP-30K</th>
<th>GP-32K</th>
<th>GP-40K</th>
<th>GP-61K</th>
<th>GP-60K</th>
<th>GP-100K</th>
<th>GP-102K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>12 kg</td>
<td>21 kg</td>
<td>31 kg</td>
<td>6.1 kg / 31 kg</td>
<td>41 kg</td>
<td>61 kg</td>
<td>61 kg</td>
<td>101 kg</td>
<td>61 kg / 101 kg</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.1 g</td>
<td>0.1 g / 1 g</td>
<td>0.5 g</td>
<td>0.1 g</td>
<td>1 g</td>
<td>1 g / 10 g</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighing pan</td>
<td>384 × 344 mm</td>
<td>386 × 346 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Options & Accessories

- **GP-04** Comparator output with a buzzer/RS-232C
- **GP-06** Analog output/Current loop output
- **GP-07** 5-meter extension cable (for GP-30KS/32KS/61KS/60KS/100KS)
- **GP-12** Animal weighing pan
- **GP-20** Underhook (for GP-12K/20K/30K/32K/61K/60KS/100K/102K)
- **GP-21** Underhook (for GP-60K/60KS/61K/61KS/100K/100KS/102K)
- **GP-22** AD-8121B printer support

* Only one of GP-04, GP-06 or the standard RS-232C can be used.
** GP-07 is a factory-installed option.
Mass Comparators

✓ Stabilizing filter to minimize errors due to drafts or vibrations
✓ Extra decimal place that also makes it possible to monitor fine weight changes with heavy tare weights
✓ Multiple weighing units: g, kg*, oz, ozt, ct, mom, dwt, gr, SG, and a user-programmable unit for conversion applications (either tl or tol can be added upon request)
✓ Quick reference card provided

Auto-centering pan (available for MC-1000/6100/10K/30K)
The auto-centering pan realizes mass comparison with higher accuracy by correcting eccentric loadings.

<table>
<thead>
<tr>
<th>Model</th>
<th>MC-1000</th>
<th>MC-6100</th>
<th>MC-10K</th>
<th>MC-30K</th>
<th>MC-100KS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>1100 g</td>
<td>6100 g</td>
<td>10.1 kg</td>
<td>31 kg</td>
<td>101 kg</td>
</tr>
<tr>
<td>Resolution</td>
<td>±0.0001 g</td>
<td>±0.001 g</td>
<td>±0.01 g</td>
<td>±0.01 g</td>
<td>±0.1 g</td>
</tr>
<tr>
<td>Repeatability (g)</td>
<td>±0.0005 g (for 1 kg)</td>
<td>±0.0004 g (for 500 g)</td>
<td>±0.004 g (for 5 kg)</td>
<td>±0.005 g (for 10 kg)</td>
<td>±0.004 g (for 5 kg)</td>
</tr>
<tr>
<td>Linearity</td>
<td>±0.003 g</td>
<td>±0.03 g</td>
<td>±0.2 g</td>
<td>±0.2 g</td>
<td>±2 g</td>
</tr>
<tr>
<td>Weighing pan</td>
<td>128 × 128 mm</td>
<td>165 × 165 mm</td>
<td>270 × 210 mm</td>
<td>386 × 346 mm</td>
<td></td>
</tr>
</tbody>
</table>

* Repeatability when the auto-centering pan or an automatic loading machine is used under good ambient conditions.

Options & Accessories

AX-MC1000PAN    Auto-centering pan (for MC-1000)
AX-MC6100PAN     Auto-centering pan (for MC-6100)
AX-MC10K/30K/6100PAN Auto-centering pan (for MC-10K/30K)

* Please refer to the GX, GX-K and GP series for options for MC-1000/6100, MC10K/30K and MC-100KS respectively.
Production Line Weighing Sensors

**AD-4212A Series**

- Protection mechanism against vertical and transverse overloading due to actuator malfunctions, etc.
- Adjustable response characteristics to help cope with the effect of drafts and vibrations
- Multiple weighing units*: g, mg, oz, ozt, ct, mom, dwt, gr, (either tl or tol can be added upon request)
- Automatic zero display after data output
- Wall/panel-mountable display unit
- Possible to create your own weighing pan
- Comparator contact output with buzzer (AD-4212A: 3 level / AD-4212B: 3 or 5 level)
- Chemically resistant stainless steel** sensor unit (AD-4212B)
- Comes with a free calibration weight (OIML Class E2 equivalent)

**Options & Accessories**

<table>
<thead>
<tr>
<th>Model</th>
<th>AD-4212A-100</th>
<th>AD-4212A-200</th>
<th>AD-4212A-600</th>
<th>AD-4212A-1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>110 g</td>
<td>210 g</td>
<td>610 g</td>
<td>1100 g</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.1 mg</td>
<td>1 mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stabilization time (approx.)*</td>
<td>0-30 g: 1.1 sec 30-110 g: 1.3 sec</td>
<td>0-30 g: 0.8 sec 30-210 g: 1.0 sec</td>
<td>0-30 g: 0.9 sec 30-610 g: 1.1 sec</td>
<td>0-30 g: 0.9 sec 30-1100 g: 1.1 sec</td>
</tr>
<tr>
<td>Weighing pan</td>
<td>50 × 50 mm</td>
<td></td>
<td></td>
<td>70 × 70 mm</td>
</tr>
</tbody>
</table>

- * A user programmable unit is also available with the AD-4212A series
- ** SUS304 for the body and SUS316 for the weighing pan

---

**Optional**

- AD-4212A-01 BCD output / external contact input
- AD-4212A-04 5-level comparator contact output (for AD-4212A)
- AD-4212A-07 Extension cable (3 m)
- AD-4212A-08 Ethernet interface with WinCT-Plus software

---

**AD-4212A-19** Stainless steel breeze break (comes as standard with AD-4212A-100 and all AD-4212B models)

**AD-4212A-20** Metal leveling foot

* Only one of AD-4212A-01, AD-4212A-04, AD-4212A-08, or the standard interface can be used.

---

*When set to FAST in a good weighing environment*
AD-4212C Series

- Direct digital data output to a panel computer, PLC, or PC via RS-232C
- High-speed data transmission of up to 50 times/second
- IP65 dust and waterproof construction
- Protection mechanism against vertical and transverse overloading due to actuator malfunctions, etc.
- Removable leveling feet for direct attachment on the mounting base
- Free WinCT-AD4212C software for easy calibration and response setting
- Comes with a free calibration weight (OIML Class E2 equivalent)
- CC-Link connection to a PLC through the optional AD-8923-CC remote controller (AD-8923-BCD for BCD output is also available)

AD-8923-CC (sold separately)
Possible to receive power directly from the connected AD-4212C (and vice versa)

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity</th>
<th>Resolution</th>
<th>Stabilization time (approx.)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD-4212C-301</td>
<td>51 g / 320 g</td>
<td>0.0001 g / 0.001 g</td>
<td>d = 0.0001 g: 1.3 sec</td>
</tr>
<tr>
<td>AD-4212C-300</td>
<td>320 g</td>
<td>0.001 g</td>
<td>0 - 30 g: 0.5 sec</td>
</tr>
<tr>
<td>AD-4212C-600</td>
<td>620 g</td>
<td>0.0001 g / 0.01 g</td>
<td>30 - 320 g: 1.0 sec</td>
</tr>
<tr>
<td>AD-4212C-3100</td>
<td>510 g / 3200 g</td>
<td>0.0001 g / 0.01 g</td>
<td>d = 0.001 g: 1.3 sec</td>
</tr>
<tr>
<td>AD-4212C-3000</td>
<td>3200 g</td>
<td>0.001 g / 0.01 g</td>
<td>0 - 300 g: 0.5 sec</td>
</tr>
<tr>
<td>AD-4212C-6000</td>
<td>6200 g</td>
<td>0.01 g</td>
<td>0 - 300 g: 0.5 sec</td>
</tr>
</tbody>
</table>

* When set to FAST in a good weighing environment

Options & Accessories
- AD-8923-BCD: Remote controller (BCD)
- AD-8923-CC: Remote controller (CC-Link)

AD-8923-CC (sold separately)
Supports daily and periodic checks of balance quality and performance

Calculates on the spot the expanded uncertainty of calibration based on seven uncertainty components

Determines the minimum weight at the actual location of measurement in accordance with United States Pharmacopeia (USP) standards

Equipped with the A&D Measurement Environment Evaluation Tool (AND-MEET)* to help improve balance repeatability

Quickly outputs the results in report format

Can be used as a separate touch-panel display for an A&D balance

* Patent pending

Simultaneously records environmental (temperature, humidity, barometric pressure, and vibration) and weighing data with time and date

Large memory capacity of 10,000 data sets

Instant data saving to a PC requiring no special software

No battery required when connected to either a balance/scale or PC

Trend graph mode to display chronological changes in graph format

Interval time setting for environmental data recording

Portable size of 127 × 90 × 36 mm (including the protective cover)

IP65 dust and waterproof (with the protective cover on)

<table>
<thead>
<tr>
<th>Sensor</th>
<th>Resolution</th>
<th>Measurement range</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>0.1 °C</td>
<td>0 to 60 °C</td>
<td>±0.5 °C (20 to 30 °C)</td>
</tr>
<tr>
<td></td>
<td>0.1 °F</td>
<td>32 to 140 °F</td>
<td>±0.9 °F (68 to 86 °F)</td>
</tr>
<tr>
<td>Humidity</td>
<td>0.1% RH</td>
<td>0 to 100% RH</td>
<td>±3% (20 to 80%)</td>
</tr>
<tr>
<td>Barometric pressure</td>
<td>0.1 hPa</td>
<td>500 to 1100 hPa</td>
<td>±4 hPa (0 to 50 °C)</td>
</tr>
<tr>
<td>Vibration</td>
<td>1 Gal</td>
<td>0 to 2000 Gal</td>
<td>±20 %, static acceleration</td>
</tr>
</tbody>
</table>
AD-1688

- Stores up to 5,000 weighing results, including time and date added by its internal clock and calendar
- Dual interface – RS-232C to an A&D balance/scale and USB to a PC
- Highly portable, pocket size of 55 × 103 × 16.5 mm
- IP65 dust and waterproof (with the casing cover on)
- Receives power supply directly from the balance/scale or PC, requiring no battery

Quick USB Adapter

- Enables plug-and-play, real-time transmission of weighing data from an A&D balance/scale RS-232C interface to a PC USB port
- Internal clock and calendar to add time and date to the weighing results
- Highly portable, pocket size of 55 × 103 × 16.5 mm
- IP65 dust and waterproof (with the casing cover on)
- Receives power supply directly from the balance/scale or PC, requiring no battery

AD-8127

- Easy setting and operation with a numeric keypad and LCD display
- Built-in calendar and clock for printing date and time at any time
- Sends re-zero and weighing data request commands to the balance/scale
- Clear and visible dot matrix printing, which also enables long-term preservation of the printed records
- Dust-free paper (AX-PP173-S) available for use in clean rooms
Serial/USB Converter

AX-USB-25P/9P/DIN

* Please select either D-Sub 25 pin, D-Sub 9 pin, or DIN depending on your balance/scale.

Serial/Ethernet Converter

AD-8526

- Converts the RS-232C output from a balance/scale and sends it to Ethernet
- Realizes communication between a PC and multiple balances/scales when used with an Ethernet hub
- Comes with the WinCT-Plus software on CD-ROM (also downloadable from the A&D website)

Windows Communication Tools (Freeware)

WinCT

- Receives data in a text file format from a balance/scale, plots graphs, and/or allows exporting data directly to another application (e.g. Microsoft Excel) on a PC
- Sends commands to control a balance/scale

Windows Communication Tools (Freeware)

WinCT-Plus

- Sends commands for controlling and acquiring data from multiple balances/scales

Converts the RS-232C output from a balance/scale and sends it to a PC USB port

Enables you to send commands from a PC to a balance/scale, receive GLP outputs, etc. via USB
Anti-Vibration Table for Balances

AD-1671
- Isolates a highly sensitive analytical balance from minute vibrations that seriously affect the stability of weighing
- Fits nicely inside the AD-1672 tabletop breeze break for the BM series of micro analytical balances

AD-1672
- Shields a highly sensitive analytical balance from breezes and minute temperature changes caused by air conditioning, people passing by, or operators themselves
- Consists of antistatic plastic panels to minimize the effect of static electricity on the balance

Remote Display
- Displays weighing results to others away from the balance/scale (over the counter, etc.)
- Receives power supply directly from the balance/scale

Remote Controller
- Remotely controls a balance/scale with key operations
- Also outputs weighing data to another external device such as a PC or printer via RS-232C connection

Options & Accessories
- AD-8922A-01 BCD output
- AD-8922A-04 Comparator output
- AD-8922A-05 Current loop input
- AD-8922A-06 Analog output

Tabletop Breeze Break

<table>
<thead>
<tr>
<th>Material</th>
<th>Transparent panel: Antistatic vinyl chloride Frame: Aluminum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>680 (W) × 600 (D) × 720 (H) mm</td>
</tr>
<tr>
<td>Weight</td>
<td>Approx. 10 kg</td>
</tr>
</tbody>
</table>

AD-8920A

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>128 (W) × 102 (D) × 76 (H) mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication cable</td>
<td>Approx. 1 m (optional 5 or 10-meter extension cable available)</td>
</tr>
</tbody>
</table>

AD-8922A

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>238 (W) × 112 (D) × 170 (H) mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication cable</td>
<td>Approx. 2 m</td>
</tr>
</tbody>
</table>

Material
- Natural granite

Dimensions
- 460 (W) × 400 (D) × 71 (H) mm
- 680 (W) × 600 (D) × 720 (H) mm
- 128 (W) × 102 (D) × 76 (H) mm
- 238 (W) × 112 (D) × 170 (H) mm

Weight
- Approx. 27 kg
- Approx. 40 kg
- Approx. 10 kg
- Approx. 2 kg
- Approx. 10 kg
Rechargeable Battery Unit

**AD-1682**

- Enables use of a balance/scale in the field without AC power
- Also gives you peace of mind when stable power supply is not guaranteed

<table>
<thead>
<tr>
<th>Applicable product</th>
<th>Duration of continuous operation (typical)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GX-K/GF-K, GP</td>
<td>6 hours</td>
</tr>
<tr>
<td>BM</td>
<td>7 hours</td>
</tr>
<tr>
<td>GH, GX/GE, GR, MC, HR-i, AD-1690</td>
<td>8 hours</td>
</tr>
</tbody>
</table>

**AD-1683**

- Instantly neutralizes charged objects to ensure stable weighing
- Adopts the direct-current (DC) method, which causes no breeze and is therefore ideal for fine powders
- Long life of approx. 10,000 hours
- Compact size of 112 (W) × 92 (D) × 60 (D) mm for use on either a desktop or production line

**AD-1684**

- Detects the presence of static electricity, which is often the cause of unstable weighing
- Compact (123 × 73 × 25 mm) and lightweight (approx. 170 g)

**Density Determination Kit for Analytical Balances**

**AD-1653**

- Makes it easy to calculate the density of either a solid or liquid substance
- Fits the BM-252/200/300/500, GH series and GR series*

* Please use the AD-1654 for the HR-AZ/HR-A series.

---

<table>
<thead>
<tr>
<th>Battery type</th>
<th>Nickel-Metal-Hydride (Ni-MH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charging time</td>
<td>Approx. 15 hours</td>
</tr>
<tr>
<td>Dimensions</td>
<td>96 (W) × 140 (D) × 58 (H) mm</td>
</tr>
</tbody>
</table>
IP69K Super Washdown Scales

High pressure, high temperature washdown

- Ultimate protection against the effects of condensation as well as water*
- Streamlined construction for easy cleaning of food-processing residues
- Stainless steel weighing pan, frame and load cell **
- Rugged and adjustable (0°, 30°, 60° or 90°) indicator bracket
- Touch sensitive capacitive keys to prevent damage from sharp objects
- Auto-tare function to facilitate consecutive check weighing
- Three sizes of base units, which are also available separately
- Pole stand attachable to either the short or long side of the platform

* Both IP69K and IP68 compliant
** Weighing pan and frame = SUS304 Load cell = SUS630

Options & Accessories

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity</th>
<th>Resolution (switchable)</th>
<th>Weighing pan</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW-6KS</td>
<td>6 kg</td>
<td>0.002 kg, 0.001 kg</td>
<td>250 × 250 mm</td>
</tr>
<tr>
<td>SW-15KS</td>
<td>15 kg</td>
<td>0.005 kg, 0.002 kg</td>
<td>300 × 380 mm</td>
</tr>
<tr>
<td>SW-15KM</td>
<td>15 kg</td>
<td>0.005 kg, 0.002 kg</td>
<td>300 × 380 mm</td>
</tr>
<tr>
<td>SW-30KM</td>
<td>30 kg</td>
<td>0.005 kg, 0.002 kg</td>
<td>300 × 380 mm</td>
</tr>
<tr>
<td>SW-60KM</td>
<td>60 kg</td>
<td>0.005 kg, 0.002 kg</td>
<td>300 × 380 mm</td>
</tr>
<tr>
<td>SW-150KM</td>
<td>150 kg</td>
<td>0.005 kg, 0.002 kg</td>
<td>390 × 530 mm</td>
</tr>
<tr>
<td>SW-60KL</td>
<td>60 kg</td>
<td>0.005 kg, 0.002 kg</td>
<td>390 × 530 mm</td>
</tr>
<tr>
<td>SW-150KL</td>
<td>150 kg</td>
<td>0.005 kg, 0.002 kg</td>
<td>390 × 530 mm</td>
</tr>
</tbody>
</table>

The display unit as an IP69K indicator (SW-D)

You can purchase the SW display unit (SW-D) separately and use it as an IP69K (as well as IP68) indicator with platforms (load cells) other than A&D’s.

Options & Accessories

- HC-02i: Sealed lead acid rechargeable battery (6 V, 4 Ah)
- SW-03: RS-232C connector with comparator relay output
- SW-04: RS-422/485 interface
- SW-09: Short pole stand (for SW-6KS/15KS only)
- SW-10: Long pole stand
- SW-11: Desktop/wall-mount stand

* SW-03 and SW-04 cannot be used at the same time.
** SW series is not IP69K compliant with SW-03 or SW-04.
Submersible and fit for extremely wet work environments
5,000 hours of continuous operation with 6 D alkaline batteries
High-speed weighing with 1-second stabilization
Supersized LCD display with 39 mm character height
Stainless steel weighing pan (SC: SUS304 / SE: SUS430)
Waterproof and corrosion-resistant load cell*
Battery life indicator

* Aluminum anodized and coated with epoxy resin with protective silicon over wiring

Options & Accessories

SC-E-02 Quick USB interface
SC-E-03 RS-232C + comparator relay output

SCE-02 and SCE-03 cannot be used at the same time.
SC/SE series is not IP68 compliant with SCE-02 or SCE-03.

<table>
<thead>
<tr>
<th>Model</th>
<th>SC-30KAM</th>
<th>SE-30KAM</th>
<th>SC-60KAM</th>
<th>SE-60KAM</th>
<th>SC-150KAM</th>
<th>SE-150KAM</th>
<th>SC-60KAL</th>
<th>SE-60KAL</th>
<th>SC-150KAL</th>
<th>SE-150KAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>30 kg</td>
<td>60 kg</td>
<td>150 kg</td>
<td>60 kg</td>
<td>150 kg</td>
<td>60 kg</td>
<td>150 kg</td>
<td>60 kg</td>
<td>150 kg</td>
<td></td>
</tr>
<tr>
<td>Resolution</td>
<td>0.01 kg</td>
<td>0.02 kg</td>
<td>0.05 kg</td>
<td>0.02 kg</td>
<td>0.05 kg</td>
<td>0.02 kg</td>
<td>0.02 kg</td>
<td>0.05 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(switchable)</td>
<td>0.005 kg</td>
<td>0.01 kg</td>
<td>0.02 kg</td>
<td>0.01 kg</td>
<td>0.02 kg</td>
<td>0.01 kg</td>
<td>0.02 kg</td>
<td>0.05 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighing pan</td>
<td>300 × 380 mm</td>
<td>390 × 530 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
IP65 Dust & Waterproof Checkweighing Scales

FS-i Series

- Ultra high-speed weighing with 0.5-second stabilization
- Distinct tricolor LEDs for fast and error-free comparator judgment
- Take-away checkweighing using the auto-tare function
- Washable and hygienic stainless steel (SUS304) display unit and weighing pan
- Waterproof and corrosion-resistant load cell*
- Fast data acquisition with a refresh rate of 20 times/second
- Large memory of 100 comparator settings
- 60-segment analog sweep (horizontal bar) display for intuitive filling control
- Simple operation mode to prevent accidental changes to the settings

* Aluminum anodized and coated with epoxy resin with protective silicon over wiring

Options & Accessories

HC-02i
Sealed lead acid rechargeable battery (6V, 4Ah)

FS-03i
RS-232C + comparator relay output

FS-04i
RS-422/485 + comparator relay output

FS-6Ki
6 kg
0.002 kg
0.001 kg
0.0005 kg
250 × 250 mm

FS-15Ki
15 kg
0.005 kg
0.002 kg
0.0005 kg
250 × 250 mm

FS-30Ki
30 kg
0.01 kg
0.005 kg
0.002 kg
380 × 300 mm

The display unit as an IP65 indicator for checkweighing scales (FS-D)

The FS-i display unit, or FS-D, has eight preset capacities with three selectable resolutions, and can be used with platforms other than A&D’s.
Multi-Functional Platform Scales

**HV-C(P)/HW-C(P) Series**

- Stabilization within 1 second (for the HV-C/HV-CP series)
- Bright and multi-colored 5-step LED comparator lights
- Take-away checkweighing using the auto-tare function
- Quick and easy setting using the alphanumeric keypad
- Built-in printer for creating paper-based records on the spot (for the HV-CP/HW-CP series)
- IP65 dust & waterproof base unit with a stainless steel (SUS430) pan
- Three slots for optional data communication interfaces

### Options & Accessories

<table>
<thead>
<tr>
<th>Model</th>
<th>HV-15KC</th>
<th>HV-60KC</th>
<th>HV-200KC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td>HV-15KC</td>
<td>HV-60KC</td>
<td>HV-200KC</td>
</tr>
<tr>
<td><strong>Capacity</strong></td>
<td>3 kg</td>
<td>6 kg</td>
<td>30 kg</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>0.001 kg</td>
<td>0.005 kg</td>
<td>0.02 kg</td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>HV-C series: AC adapter or 4 D batteries (1200 hours)</td>
<td>HV-C series: AC adapter</td>
<td></td>
</tr>
<tr>
<td><strong>Weighing pan</strong></td>
<td>250 × 250 mm</td>
<td>330 × 424 mm</td>
<td>390 × 530 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>HW-10KC</th>
<th>HW-100KC</th>
<th>HW-200KC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td>HW-10KC</td>
<td>HW-100KC</td>
<td>HW-200KC</td>
</tr>
<tr>
<td><strong>Capacity</strong></td>
<td>30 kg</td>
<td>60 kg</td>
<td>220 kg</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>0.001 kg</td>
<td>0.005 kg</td>
<td>0.02 kg</td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>HW-C series: AC adapter or 4 D batteries (1200 hours)</td>
<td>HW-C series: AC adapter</td>
<td></td>
</tr>
<tr>
<td><strong>Weighing pan</strong></td>
<td>250 × 250 mm</td>
<td>330 × 424 mm</td>
<td>390 × 530 mm</td>
</tr>
</tbody>
</table>

### Additional Features

- Stabilization within 1 second (for the HV-C/HV-CP series)
- Bright and multi-colored 5-step LED comparator lights
- Take-away checkweighing using the auto-tare function
- Quick and easy setting using the alphanumeric keypad
- Built-in printer for creating paper-based records on the spot (for the HV-CP/HW-CP series)
- IP65 dust & waterproof base unit with a stainless steel (SUS430) pan
- Three slots for optional data communication interfaces

- **Stabilization within 1 second (for the HV-C/HV-CP series)**
- **Bright and multi-colored 5-step LED comparator lights**
- **Take-away checkweighing using the auto-tare function**
- **Quick and easy setting using the alphanumeric keypad**
- **Built-in printer for creating paper-based records on the spot (for the HV-CP/HW-CP series)**
- **IP65 dust & waterproof base unit with a stainless steel (SUS430) pan**
- **Three slots for optional data communication interfaces**

### Data Communication Interfaces

- USB interface (for bi-directional communication, type-B)
- RS-232C interface (D-Sub 9P)
- Comparator relay output/buzzer/contact input interface
- Extension cable (5 m)*

### Dimensions

<table>
<thead>
<tr>
<th>Model</th>
<th>Width</th>
<th>Height</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>HV-15KC</td>
<td>250 mm</td>
<td>250 mm</td>
<td>300 mm</td>
</tr>
<tr>
<td>HW-15KC</td>
<td>330 mm</td>
<td>424 mm</td>
<td>390 mm</td>
</tr>
<tr>
<td>HW-10KC</td>
<td>250 mm</td>
<td>250 mm</td>
<td>300 mm</td>
</tr>
<tr>
<td>HW-60KC</td>
<td>330 mm</td>
<td>424 mm</td>
<td>390 mm</td>
</tr>
<tr>
<td>HW-100KC</td>
<td>330 mm</td>
<td>424 mm</td>
<td>390 mm</td>
</tr>
<tr>
<td>HW-200KC</td>
<td>330 mm</td>
<td>424 mm</td>
<td>390 mm</td>
</tr>
</tbody>
</table>

HVV-02CB USB interface (for bi-directional communication, type-B)
HVV-03C RS-232C interface (D-Sub 9P)
HVV-04C Comparator relay output/buzzer/contact input interface
HVV-08C Extension cable (5 m)*

*Recalibration is required after connecting the extension cable.
HV-WP/HW-WP Series

- Washable and hygienic stainless steel (SUS304) display unit and weighing pan
- Wide selection from 7 models in total
  - HV-□□□V-WP  Triple weighing ranges & VFD display
  - HW-□□□V-WP  High resolution (1/10,000) & VFD display
- Simple batch function and full/dribble batch function
- Detachable/wall-mountable display unit (optional holder is required)

<table>
<thead>
<tr>
<th>Model</th>
<th>HV-15KV-WP</th>
<th>HV-60KV-WP</th>
<th>HV-200KV-WP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>3 kg</td>
<td>6 kg</td>
<td>15 kg</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.001 kg</td>
<td>0.002 kg</td>
<td>0.005 kg</td>
</tr>
<tr>
<td>Power supply</td>
<td>AC main</td>
<td>AC main</td>
<td>AC main</td>
</tr>
<tr>
<td>Weighing pan</td>
<td>250 x 250 mm</td>
<td>330 x 424 mm</td>
<td>390 x 530 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>HW-10KV-WP</th>
<th>HW-60KV-WP</th>
<th>HW-100KV-WP</th>
<th>HW-200KV-WP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>10 kg</td>
<td>60 kg</td>
<td>100 kg</td>
<td>220 kg</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.001 kg</td>
<td>0.005 kg</td>
<td>0.01 kg</td>
<td>0.02 kg</td>
</tr>
<tr>
<td>Power supply</td>
<td>AC main</td>
<td>AC main</td>
<td>AC main</td>
<td>AC main</td>
</tr>
<tr>
<td>Weighing pan</td>
<td>250 x 250 mm</td>
<td>330 x 424 mm</td>
<td>390 x 530 mm</td>
<td>390 x 530 mm</td>
</tr>
</tbody>
</table>

**Options & Accessories**
- HVW-02G  Extension cable (5 m)
- HVW-03G  RS-232C + comparator relay output with buzzer
- HVW-04WP  RS-422/485 + comparator relay output
- HVW-13  Roller conveyer (large) for HV-200KV-WP, HW-100K/200KV-WP
- HVW-14  Roller conveyer (medium) for HV/HW-60KV-WP
- AX-043005266  Indicator holder/wall-mount kit

* Only one of HVW-03G, HVW-04WP or the standard RS-232C can be used.
Platform Scales

FG Series

- High-speed weighing with 1-second stabilization
- Display unit either on a column (FG-KAM/KAL) or attached directly to the platform (FG-KBM)
- Washable stainless steel (SUS430) weighing pan
- Two types of power supply: AC adapter or normal batteries

Options & Accessories

| FG-23 | RS-232C interface |
| FG-24 | RS-232C + comparator relay output |

* FG-23 and FG-24 cannot be used at the same time.

HC-i Series

- Beginner-friendly Unit Weight Registering Navigator
- Audible Weighing Assist (AWA) beep function
- Detachable display unit
- Washable stainless steel (SUS430) weighing pan
- Memory capacity for up to 99 items
- Simple operation mode to avoid any unwanted operational mistakes

Options & Accessories

| HC-02i | RS-232C interface |
| HC-03i | RS-232C + comparator relay output |
| HC-04i | RS-232C + comparator relay output |
| HC-08i | Extension cable (2 m) |

* HC-03i and HC-04i cannot be used at the same time.

---

### Model Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>FG-30KAM</th>
<th>FG-60KAM</th>
<th>FG-150KAM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FG-30KBM</td>
<td>FG-60KBM</td>
<td>FG-150KBM</td>
</tr>
<tr>
<td>Capacity</td>
<td>30 kg</td>
<td>60 kg</td>
<td>150 kg</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.01 kg</td>
<td>0.02 kg</td>
<td>0.05 kg</td>
</tr>
<tr>
<td></td>
<td>0.005 kg</td>
<td>0.01 kg</td>
<td>0.02 kg</td>
</tr>
<tr>
<td></td>
<td>0.002 kg</td>
<td>0.005 kg</td>
<td>0.01 kg</td>
</tr>
<tr>
<td>Weighing pan</td>
<td>300 × 380 mm</td>
<td>300 × 380 mm</td>
<td>300 × 380 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>FG-60KAL</th>
<th>FG-150KAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FG-60KBM</td>
<td>FG-150KBM</td>
</tr>
<tr>
<td>Capacity</td>
<td>60 kg</td>
<td>150 kg</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.02 kg</td>
<td>0.05 kg</td>
</tr>
<tr>
<td></td>
<td>0.01 kg</td>
<td>0.02 kg</td>
</tr>
<tr>
<td></td>
<td>0.005 kg</td>
<td>0.01 kg</td>
</tr>
<tr>
<td>Weighing pan</td>
<td>390 × 530 mm</td>
<td>390 × 530 mm</td>
</tr>
</tbody>
</table>

### Optional Accessories

- HVW-02G: Extension cable (5 m)
- AX-3007527-5S: Protective cover (5 pcs)
- Seal: HC-03i and HC-04i cannot be used at the same time.
Counting Scales

FC-Si/FC-i Series

- Beginner-friendly Unit Weight Registering Navigator
- High internal resolution (FC-Si: 1/10,000,000 / FC-i: 1/1,000,000) for extremely accurate counting
- Large memory capacity for up to 500 items
- Removable stainless steel (SUS304) weighing pan
- Simple operation mode to avoid any unwanted operational mistakes

Two scale operation
You can connect a separately-sold weighing platform to count articles that require a larger capacity than that of the FC-Si/FC-i.

<table>
<thead>
<tr>
<th>Model</th>
<th>FC-5000Si</th>
<th>FC-5000Si</th>
<th>FC-500i</th>
<th>FC-1000i</th>
<th>FC-2000i</th>
<th>FC-5000i</th>
<th>FC-10Ki</th>
<th>FC-20Ki</th>
<th>FC-50Ki</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min. unit weight</td>
<td>0.001 g</td>
<td>0.01 g</td>
<td>0.01 g</td>
<td>0.02 g</td>
<td>0.04 g</td>
<td>0.1 g</td>
<td>0.2 g</td>
<td>0.4 g</td>
<td>1 g</td>
</tr>
<tr>
<td>Normal mode</td>
<td>0.00005 g</td>
<td>0.0005 g</td>
<td>0.0005 g</td>
<td>0.001 g</td>
<td>0.002 g</td>
<td>0.005 g</td>
<td>0.01 g</td>
<td>0.02 g</td>
<td>0.05 g</td>
</tr>
<tr>
<td>Fine mode</td>
<td>500 g</td>
<td>5000 g</td>
<td>500 g</td>
<td>1 kg</td>
<td>2 kg</td>
<td>5 kg</td>
<td>10 kg</td>
<td>20 kg</td>
<td>50 kg</td>
</tr>
<tr>
<td>Capacity</td>
<td>0.02 g</td>
<td>0.2 g</td>
<td>0.05 g</td>
<td>0.1 g</td>
<td>0.2 g</td>
<td>0.5 g</td>
<td>1 g</td>
<td>2 g</td>
<td>5 g</td>
</tr>
<tr>
<td>Resolution</td>
<td>1,000,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. count display</td>
<td>128 × 128 mm</td>
<td>165 × 165 mm</td>
<td>205 × 152 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>300 × 280 mm</td>
</tr>
</tbody>
</table>

Options & Accessories
- FC-01i Barcode reader
- FC-02i Built-in rechargeable battery pack (Ni-MH)
- FC-03i RS-232C × 2 ch
- FC-04i RS-232C × 1 ch + comparator relay output
- FC-05i Interface for a remote scale

* FC-03i and FC-04i cannot be used at the same time.
Compact Scales

HT Series

HT-120

Name plate holder

Stackable carrying case
Takes up less space for storage

Compact Precision Scale HT-120

- Three color bars to sort scales easily
- Long battery life of approx. 450 hours (with alkaline batteries)
- Security slot in the rear of the scale to accommodate an anti-theft lock
- Multiple weighing units: g, oz, lb-oz *, ozt, tl, tol, N
- Optional stainless steel (SUS304) weighing pan

*lb-oz not available with the HT-300

Options & Accessories
Stainless steel (SUS304) pan for HT-300/500/3000/5000 (HT-10)
AC adapter

<table>
<thead>
<tr>
<th>Model</th>
<th>HT-120</th>
<th>HT-300</th>
<th>HT-500</th>
<th>HT-3000</th>
<th>HT-5000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>120 g</td>
<td>310 g</td>
<td>510 g</td>
<td>3100 g</td>
<td>5100 g</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.01 g</td>
<td>0.1 g</td>
<td>1 g</td>
<td>0.1 g</td>
<td>1 g</td>
</tr>
<tr>
<td>Weighing pan</td>
<td>ø70 mm</td>
<td>132 × 130 mm</td>
<td>132 × 130 mm</td>
<td>132 × 130 mm</td>
<td>132 × 130 mm</td>
</tr>
</tbody>
</table>
SK-WP Series

- Washable and hygienic stainless steel (SUS304) construction
- Long battery life of approx. 1200 hours (with alkaline batteries)
- Large and wide-angle LCD display with 25 mm character height

<table>
<thead>
<tr>
<th>Model</th>
<th>SK-1000WP</th>
<th>SK-2000WP</th>
<th>SK-5000WP</th>
<th>SK-5001WP</th>
<th>SK-10KWP</th>
<th>SK-20KWP</th>
<th>SK-30KWP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>1000 g</td>
<td>2000 g</td>
<td>5000 g</td>
<td>5000 g</td>
<td>10 kg</td>
<td>20 kg</td>
<td>30 kg</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.5 g</td>
<td>1 g</td>
<td>2 g</td>
<td>1 g</td>
<td>5 g</td>
<td>10 g</td>
<td>20 g</td>
</tr>
<tr>
<td>Weighing pan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>232 × 192 mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Options & Accessories

AC adapter*  * SK-WP series is not IP65 compliant with the AC adapter.

HL-WP Series

- Washable and hygienic stainless steel (SUS304) construction
- Battery life of approx. 200 hours (with alkaline batteries)
- Version with a larger pan size available (HL-3000LWP)

<table>
<thead>
<tr>
<th>Model</th>
<th>HL-300WP</th>
<th>HL-1000WP</th>
<th>HL-3000WP</th>
<th>HL-3000LWP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>300 g</td>
<td>1000 g</td>
<td>3000 g</td>
<td>3000 g</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.1 g</td>
<td>0.5 g</td>
<td>1 g</td>
<td>1 g</td>
</tr>
<tr>
<td>Weighing pan</td>
<td>128 × 128 mm</td>
<td>174 × 137 mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Options & Accessories

AC adapter*  * HL-WP series is not IP65 compliant with the AC adapter.
Compact Bench Scales

SJ-HS Series

- Hygienic and chemically-resistant stainless steel (SUS304) weighing pan
- High-speed weighing with 1-second stabilization
- Long battery life of approx. 2000 hours (with alkaline batteries)
- Multiple weighing units: g, oz, lb, lb-oz
- Two side handles for easy carrying of the scale

<table>
<thead>
<tr>
<th>Model</th>
<th>SJ-1000HS</th>
<th>SJ-2000HS</th>
<th>SJ-5000HS</th>
<th>SJ-5001HS</th>
<th>SJ-12KHS</th>
<th>SJ-20KHS</th>
<th>SJ-30KHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>1000 g</td>
<td>2000 g</td>
<td>5000 g</td>
<td>5000 g</td>
<td>12 kg</td>
<td>20 kg</td>
<td>30 kg</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.5 g</td>
<td>1 g</td>
<td>2 g</td>
<td>1 g</td>
<td>5 g</td>
<td>10 g</td>
<td>20 g</td>
</tr>
<tr>
<td>Weighing pan</td>
<td>230 × 190 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Options & Accessories
- AC adapter

Compact Scales

HL-i Series

- Compact, and storable on side or back to save space
- Long battery life of approx. 1000 hours (with alkaline batteries)
- Multiple weighing units: g, oz, tl and ct (HL-200i)
  or lb-oz (HL-2000i)
- Optional stainless steel weighing (SUS304) pan and carrying case

<table>
<thead>
<tr>
<th>Model</th>
<th>HL-200i</th>
<th>HL-2000i</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>200 g</td>
<td>2000 g</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.1 g</td>
<td>1 g</td>
</tr>
<tr>
<td>Weighing pan</td>
<td>ø130 mm</td>
<td></td>
</tr>
</tbody>
</table>

Options & Accessories
- Stainless steel (SUS304) pan (AX-043008052)
- Carrying case (AX-093008304)
- AC adapter

Pocket Scale

HJ-150

- Compact (66 × 98 mm) and lightweight (100 g including batteries)
- Protective cover that also becomes a weigh boat
- Comes with a free calibration weight

<table>
<thead>
<tr>
<th>Model</th>
<th>HJ-150</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>150 g</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.1 g</td>
</tr>
<tr>
<td>Weighing pan</td>
<td>60 × 64 mm</td>
</tr>
</tbody>
</table>
Carat Balances

FZ-CT/FX-CT Series

- High-speed weighing with 2-second stabilization
- Removable, shatterproof breeze break with antistatic coating
- Compact foot print: 198 mm × 294 mm (smaller than an A4 sheet of paper)
- Rotary sliding doors requiring no extra space at the rear
- Adjustable response characteristics to help cope with the effect of drafts and vibrations
- Multiple weighing units: ct, g, oz, lb, lb-oz, ozt, mom, dwt, gr, and a user-programmable unit for conversion applications (either tl, tol or N can be added upon request)

Options & Accessories
AX-CARATPAN-W Carat pan (silver, 2pcs)
AX-CARATPAN-B Carat pan (black, 2pcs)
* Please refer to the HR-A2/HR-A series for other options and accessories available.

Jewelry Scale

HT-500GD

- Multiple weighing units: g, oz, lb-oz, ozt, dwt, ct, tl, tol, N
- Scratch-resistant stainless steel (SUS304) weighing pan
- Long battery life of approx. 450 hours (with alkaline batteries)
- Security slot in the rear of the scale to accommodate an anti-theft lock
- Stackable carrying case that economizes space for storage

Options & Accessories
AC adapter

Model | FZ-500CT | FX-500CT | FZ-700CT | FX-700CT | FZ-1200CT | FX-1200CT
---|---|---|---|---|---|---
Capacity | 510 ct / 102 g | 760 ct / 152 g | 1260 ct / 252 g | 1260 ct / 252 g | 1260 ct / 252 g | 1260 ct / 252 g
Resolution | 0.001 ct / 0.001 g | 0.001 ct / 0.0005 g | 0.001 ct / 0.0005 g | 0.001 ct / 0.0005 g | 0.001 ct / 0.0005 g | 0.001 ct / 0.0005 g
Repeatability (σ) | ±0.002 ct / ±0.001 g | ±0.002 ct / ±0.001 g | ±0.002 ct / ±0.001 g | ±0.002 ct / ±0.001 g | ±0.002 ct / ±0.001 g | ±0.002 ct / ±0.001 g
Linearity | ø90 mm | ø90 mm | ø90 mm | ø90 mm | ø90 mm | ø90 mm

Model | HT-500GD
---|---
Capacity | 510 g
Resolution | 0.1 g
Weighing pan | 135 × 133 mm