

Compact Analytical Balances

# HR-AZ/HR-A

Series

**HR-250AZ/HR-250A**  
252 g x 0.1 mg

**HR-251AZ/HR-251A**  
62 g/252 g x 0.1 mg/1 mg

**HR-150AZ/HR-150A**  
152 g x 0.1 mg

**HR-100AZ/HR-100A**  
102 g x 0.1 mg



HR-250AZ



HR-250A

Ultimate Value!



**AND**  
A&D Australasia

# Finally, Globally Proven Precision at a Fair Price

What do you expect most from a precision analytical balance? If you are like us, you will agree that accuracy and reliability come before anything else. The HR-AZ/HR-A series of compact analytical balances, behind their simple design, utilize proven A&D sensor technology that delivers superior performance to all users who wish to do superior work.

Optimizing value, the HR-AZ/HR-A series realizes the following three savings:

## 1. Saving “Time”

### *Fast Stabilization in 2 Seconds*

Our widely-recognized Compact Super Hybrid Sensor (C-SHS) technology now enables you to perform high-speed, frustration-free weighing even at a resolution of 0.1 mg.

\*1 Patent pending

### *One-Touch Automatic Calibration (HR-AZ models only)*

The built-in calibration mass lets you ensure the accuracy of your balance with just one key press.

## 2. Saving “Space”

### *Compact Footprint: 198 mm × 294 mm*

With the C-SHS, the footprint of the balance is smaller than the ISO A4 (210 mm × 297 mm) paper size, maximizing opportunities for use of an analytical balance in even the smallest of spaces.

### *Rotary Sliding Doors*

Unlike conventional analytical balances, the HR-AZ/HR-A series requires no extra space at the rear for accessing the weighing chamber, as the doors simply rotate behind the balance.

### *Removable Breeze Break*

The breeze break is easily removed using a unique clip system, allowing fast, simple cleaning and use in confined spaces like gloveboxes and controlled environment cabinets.



Rotary Sliding Doors

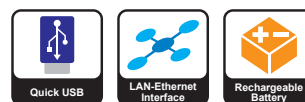
## 3. Saving “Cost”

### *Lean Design for Affordability*

The HR-AZ/HR-A design is all about “keeping it simple” without compromising quality or performance. Key features demanded by today’s market have been included, resulting in a compact, precise, and reliable analytical balance for the value-conscious user.



Optional



HR-AZ      HR-A      HR-251AZ  
HR-251A

## Superb Usability

### **Large Removable Breeze Break with Antistatic Coating**

The breeze break is treated with an antistatic agent to ensure stable weighing. It also offers a large working space and can be detached for better portability and easy cleaning of the balance.



Removable Breeze Break

### **Clear, Reverse Backlit LCD**

The contrast of the black and white display provides excellent readability even in a dimly-lit area.

### **Front-Mounted Spirit Level**

The spirit level is easily visible when adjusting the leveling feet of the balance for accurate weighing.

## Great Flexibility and Compliance

### **Twelve Weighing Units**

You can easily choose from gram, milligram, ounce, troy ounce, metric carat, momme, pennyweight, grain, counting mode, percent mode, density mode, in addition to a user-programmable unit for conversion applications like GSM calculations in paper and fabric industries (one more unit from tael, tola, or Newton can be added upon request).

### **GLP/GMP/GCP/ISO Compliant Output**

For compliance and documentation requirements, the HR-AZ/HR-A series can output the balance manufacturer, model, serial number, ID number, date and time,<sup>ii</sup> space for signature, and calibration records.

<sup>ii</sup> For HR-AZ models only. Please use the AD-8121B compact printer, which has a calendar function, to print the date and time with HR-A models.

### **Adjustable Response Characteristics and Hold Function**

From three preset combinations of weighing speed and stability (FAST, MID, or SLOW), select the one that best suits your environmental conditions (drafts and vibrations). A hold function is also available for weighing animals.

### **Statistical Calculation Function**

The balance displays and outputs statistical calculation data including number of data, sum, maximum, minimum, range (maximum–minimum), average, standard deviation, and coefficient of variation.

## Options and Accessories

### **Quick USB Interface (FXi-02)**

The easy-to-use USB interface requires no driver or software installation for transfer of weighing data to a PC.<sup>iii</sup>

<sup>iii</sup> Data transfer from the balance to a PC only. Please use the RS-232C (standard interface) to serial-USB converter (AX-USB-9P, optional) for two-way communication or sending GLP or statistical calculation information via USB. Portable memory devices such as weighing environment logger (AD-1687) and data logger (AD-1688) are also available.

### **LAN-Ethernet Interface with WinCT-Plus Software (FXi-08)**

You can send commands for controlling and acquiring data from multiple balances.



### **Rechargeable Battery Unit (FXi-09)**

The Ni-MH rechargeable battery pack can be fitted into the balance for use without AC power (10 hours of charging for 14 hours of operation).

### **Density Determination Kit (AD-1654)**

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

## Specifications

| Models   | HR-250AZ  | HR-251AZ  | HR-150AZ           | HR-100AZ    | HR-250A                     | HR-251A                           | HR-150A            | HR-100A               |
|--|---|---|--------------------|-------------|-----------------------------|-----------------------------------|--------------------|-----------------------|
| Weighing capacity  | 252 g   | 62 g / 252 g <sup>iv</sup>                                | 152 g              | 102 g       | 252 g                       | 62 g / 252 g <sup>iv</sup>        | 152 g              | 102 g                 |
| Minimum weighing value   | 0.1 mg  | 0.1 mg / 1 mg   | 0.1 mg             |             | 0.1 mg / 1 mg               |                                   | 0.1 mg             |                       |
| Repeatability (standard deviation)                             | 0 to 200 g: 0.1 mg  | 0.1 mg / 0.5 mg   | 0.1 mg             |             | 0 to 200 g: 0.1 mg          | 0.1 mg / 0.5 mg                   | 0.1 mg             |                       |
|  | 200 to 252 g: 0.2 mg  |   |                    |             | 200 to 252 g: 0.2 mg        |                                   |                    |                       |
| Linearity  | ±0.3 mg   | ±0.3 mg / ±1 mg   | ±0.2 mg            |             | ±0.3 mg                     | ±0.3 mg / ±1 mg                   | ±0.2 mg            |                       |
| Stabilization time (when set to FAST under a good environment) | Approx. 2 seconds <sup>v</sup>  |   |                    |             |                             |                                   |                    |                       |
| Sensitivity drift  | ±2 ppm/°C (10 to 30 °C/50 to 86 °F)   |   |                    |             |                             |                                   |                    |                       |
| Internal calibration   | Yes   |   |                    |             | No                          |                                   |                    |                       |
| Clock and calendar function                                    | Yes   |   |                    |             | No                          |                                   |                    |                       |
| Operating environment  | 5 to 40 °C (41 to 104 °F), 85% RH or less (no condensation)   |   |                    |             |                             |                                   |                    |                       |
| Display refresh rate   | 5 times/second (10 times/second can be selected)  |   |                    |             |                             |                                   |                    |                       |
| Display mode <sup>vi</sup>                                     | gram, milligram, ounce, troy ounce, metric carat, momme, pennyweight, grain, counting mode, percent mode, density mode, and a u |   |                    |             |                             |                                   |                    | ser-programmable unit |
| Counting mode  | Minimum unit mass   | 0.1 mg  | 1 mg               | 0.1 mg      |                             | 1 mg                              | 0.1 mg             |                       |
|  | Number of samples   | 10, 25, 50 or 100 pieces                                  |                    |             |                             |                                   |                    |                       |
| Percent mode   | Minimum 100% reference mass   | 10.0 mg   | 100 mg             | 10.0 mg     |                             | 100 mg                            | 10.0 mg            |                       |
|  | Minimum 100% display  | 0.01%, 0.1%, or 1% (depends on the reference mass stored) |                    |             |                             |                                   |                    |                       |
| Interface  | RS-232C   |   |                    |             |                             |                                   |                    |                       |
| Applicable calibration weight value                            | 250 g, 200 g<br>100 g, 50 g   | 250 g, 200 g<br>100 g, 50 g, 20 g                         | 150 g, 100 g, 50 g | 100 g, 50 g | 250 g, 200 g<br>100 g, 50 g | 250 g, 200 g<br>100 g, 50 g, 20 g | 150 g, 100 g, 50 g | 100 g, 50 g           |
| Weighing pan size  | Ø90 mm  |   |                    |             |                             |                                   |                    |                       |
| External dimensions  | 198 (W) × 294 (D) × 315 (H) mm  |   |                    |             |                             |                                   |                    |                       |
| Net weight   | Approx. 3.9 kg  |   |                    |             | Approx. 3.5 kg              |                                   |                    |                       |
| Power supply   | AC adapter  |   |                    |             |                             |                                   |                    |                       |
| Power consumption  | Approx. 11 VA (supplied to the AC adapter)  |   |                    |             |                             |                                   |                    |                       |

\* iv Smart range function: The minimum weighing value will switch to 1 mg automatically when the display value exceeds 62 g but returns to 0.1 mg by pressing the RE-ZERO (tare) key.

\* v The factory setting is MID, whose stabilization time is approx. 3 seconds.

\* vi One additional unit from tael (Singapore/HK jewelry/Taiwan/China), tola or Newton can be added upon request.

## Options

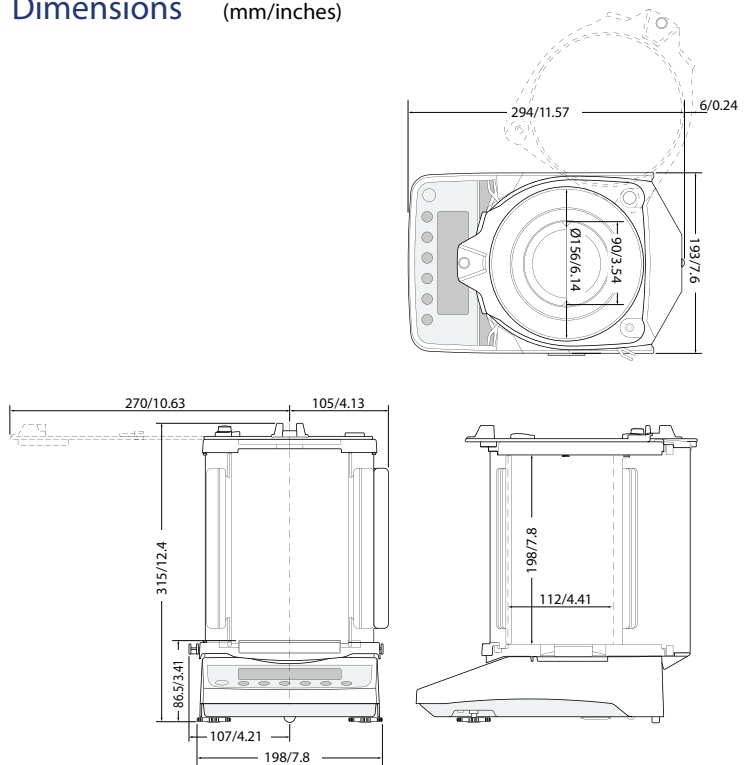
- FXi-02\* Quick USB interface with cable
  - FXi-08\* Ethernet interface with WinCT-Plus software
  - FXi-09\* Built-in rechargeable battery
- \* The FXi-02, FXi-08 and FXi-09 cannot be used at the same time

## Accessories

- AD-1654 Density determination kit
- AD-1671 Anti-vibration table for balances
- AD-1672 Tabletop breeze break
- AD-1683 Static eliminator
- AD-1684 Electrostatic field meter
- AD-1687 Weighing environment logger
- AD-1688 Weighing data logger
- AD-1689 Tweezers for calibration weight
- AD-8121B Compact printer
- AD-8526 Serial/Ethernet converter
- AD-8527 Quick USB adapter
- AD-8920A Remote display
- AD-8922A Remote controller
- AX-FXi-31 Main unit cover (5 pcs)
- AX-USB-9P Serial/USB converter



## Dimensions (mm/inches)



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