

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.

\*i 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



## 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, space for signature, and calibration records.

\*ii 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>

\*iii Data transfer from the balance to a PC only. Please use the RS-232C (standard interface) to serial-USB converter (AX-USB-0P, 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 200g: 0.1 mg	0.1 mg / 0.5 mg	0.1 mg		0 to 200g: 0.1 mg	0.1 mg / 0.5 mg	0.1 mg	
	200 to 252g: 0.2 mg				200 to 252g: 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, nomie, 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% referencess	100 mg	100 mg	100 mg		100 mg	100 mg	
	Minimum 100% display	0.01%, 0.1%, or 1% (depend on the reference mass stored)						
Interface	RS-232C							
Applicable calibration weight value	250 g, 200 g 100 g, 50 g	250 g, 200 g 100 g, 50 g, 20 g	150 g, 100 g, 50 g	100 g, 50 g	250 g, 200 g 100 g, 50 g	250 g, 200 g 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)							

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

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

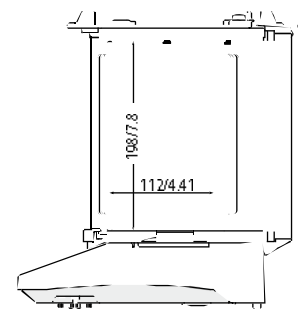
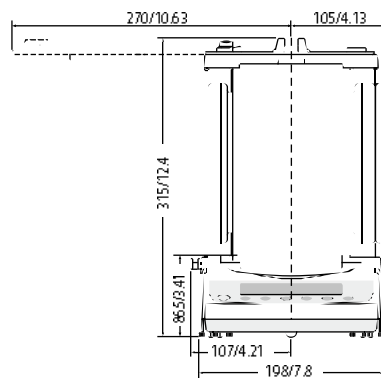
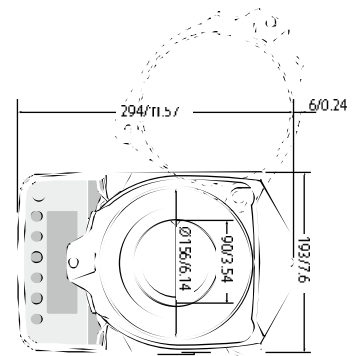
\* <sup>vi</sup> One additional unit from tael (Singapore/HK jewelry/Taiwan/China), tola or Newton can be added upon request.

## Options

- FXI-02\* Quick USB interface with cable
- FXI-08\* Ethernet interface with WinCI-Plus software
- FXI-09\* Built-in rechargeable battery

\* The FXI-02, FXI-08 and FXI-09 cannot be used at the same time

## Dimensions (mm/inches)



AD-1654

## 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

**A&D**  
A&D Australasia  
"Excellence in Measurement"

ACN 28 007 556 809

Head Office  
32 Dew Street  
THEBARTON South Australia 5031  
Telephone (08) 8301 8100  
Facsimile (08) 8352 7409

Victorian Office  
39 Bakehouse Road  
KENSINGTON Victoria 3031  
Telephone (03) 9371 1555  
Facsimile (03) 9372 1193

New South Wales Office  
Unit 4, 14 Abbott Road  
SEVEN HILLS New South Wales 2147  
Telephone (02) 9674 5466  
Facsimile (02) 9674 2544

sales@andweighing.com.au  
www.andweighing.com.au

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