Standard-Level Analytical Balances

HR-AZ/HR-A

Series

HR-250AZ

HR-250A

ISO 9000 CERTIFIED

Pay for What Matters—Reliable, Accurate Weighing

A&D Company, Ltd.

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Finally, Globally Proven Precision at a Fair Price

What do you expect most from an analytical balance? If you are like us, you will agree that accuracy and reliability come before anything else. The HR-AZ/HR-A series, behind their simple design, utilize proven A&D sensor technology that delivers solid 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 readability of 0.1 mg.

◆ Patented

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.

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 visibility even in a dimly-lit area.

Front-mounted spirit level

The spirit level is easy to see when adjusting the leveling feet of the balance for accurate weighing.

Great Flexibility and Compliance

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*1, space for signature, and calibration records.

*1 For the HR-AZ models only. Please use the AD-8127 compact printer, which has a calendar function, to print the date and time with the HR-A models.

User access control (UAC) with password function

The balance can be password-protected to allow only authorized individuals to use it or change its settings. It is also possible to disable any change to the balance settings including calibration or, for HR-AZ models, correction of the internal mass value.

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

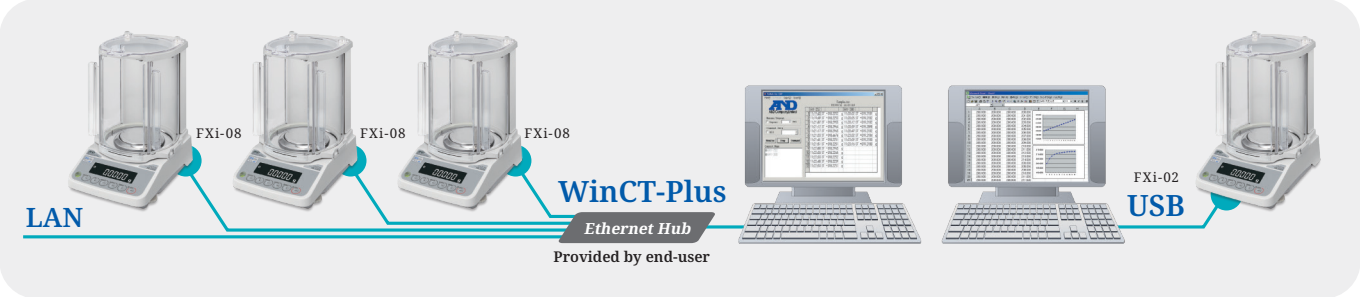
Quick USB interface (FXi-02)

The easy-to-use USB interface requires no driver or software installation for transfer of weighing data to a PC*2.

*2 Data transfer from the balance to a PC only. Please use the RS-232C standard interface with the 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.

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
Capacity		252 g	62 g / 252 g*i	152 g	102 g	252 g	62 g / 252 g*i	152 g	102 g
Readability		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 200 to 252 g: 0.2 mg	0.1 mg / 0.5 mg	0.1 mg		0 to 200 g: 0.1 mg 200 to 252 g: 0.2 mg	0.1 mg / 0.5 mg	0.1 mg	
Minimum weight*ii (typical)		140 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*iii							
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 type		Reverse backlit LCD							
Display refresh rate		5 times/second (10 times/second can be selected)							
Units of measure*iv		g (gram), mg (milligram), oz (ounce), ozt (troy ounce), ct (metric carat), mom (momme), dwt (pennyweight), gr (grain), pcs (counting mode), % (percent mode), SG (density mode), and a user-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	
	% readability	0.01%, 0.1%, or 1% (depends 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)							

*i Smart range function: The readability will switch to 1 mg automatically when the display value exceeds 62 g but returns to 0.1 mg by pressing the RE-ZERO key.
*ii Pursuant to the United States Pharmacopeia (USP), Chapter 41
*iii The factory setting is MID, whose stabilization time is approx. 3 seconds.
*iv One additional unit from tael (Singapore/HK jewelry/Taiwan/China), tola or Newton can be added upon request.

AD-1654

Options

FXi-02*v Quick USB interface with cable
FXi-08*v Ethernet interface with WinCT-Plus software
FXi-09*v Built-in rechargeable battery
FXi-10 Small breeze break
FXi-11 Large breeze break
*v 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-1684A Electrostatic field meter
AD-1687 Weighing environment logger
AD-1688 Weighing data logger
AD-1689 Tweezers for calibration weight
AD-8127 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 with cable

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