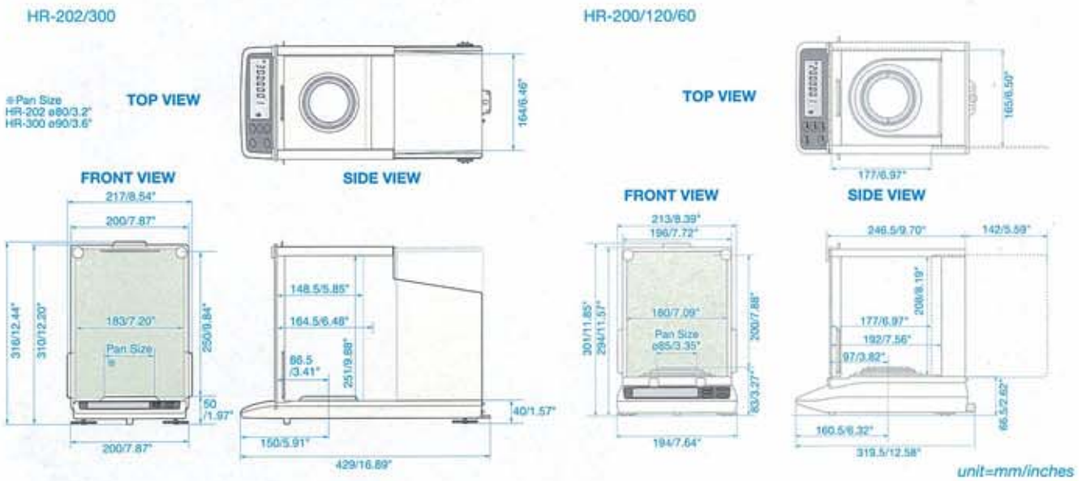
## *Physical Dimensions*




unit=mm/inches

## *Specifications*

| Capacity/Resolution | | HR-202 | HR-300 | HR-200 | HR-120 | HR-60 |
|---|---|---|---|---|---|---|
| Gram | (g) | 210×0.0001 / 42×0.00001 | 310×0.0001 | 210×0.0001 | 120×0.0001 | 60×0.0001 |
| | (mg) | 210000×0.1 / 42000×0.01 | 310000×0.1 | 210000×0.1 | 120000×0.1 | 60000×0.1 |
| Decimal Ounce | (oz) | 7.4×0.00001 / 1.4×0.000001 | 10×0.00001 | 7.4×0.000005 | 4.2×0.000005 | 2.1×0.000005 |
| Troy Ounce | (ozt) | 6.7×0.00001 / 1.3×0.000001 | 9.9×0.00001 | 6.7×0.000005 | 3.8×0.000005 | 1.9×0.000005 |
| Pennyweight | (dwt) | 135×0.0001 / 27×0.00001 | 199×0.0001 | 135×0.0001 | 77×0.0001 | 38×0.0001 |
| Carat | (ct) | 1050×0.001 / 210×0.0001 | 1550×0.001 | 1050×0.001 | 600×0.001 | 300×0.001 |
| Momme | (mom) | 56×0.0001/ 11×0.00001 | 82×0.0001 | 56×0.00005 | 32×0.00005 | 16×0.00005 |
| Grain Unit | (GN) | 3240×0.002 / 648×0.0002 | 4784×0.002 | 3240×0.002 | 1851×0.002 | 925×0.002 |
| Tola | (t) | 18×0.00001 / 3.6×0.000001 | 26×0.00001 | 18×0.00001 | 10×0.00001 | 5×0.00001 |
| Tael | (TL) | 5.5×0.00001 / 1.1×0.000001 | 8.2×0.00001 | 5.5×0.000005 | 3.1×0.000005 | 1.5×0.000005 |
| Percentage Min Div. | | 0.01%, 0.1% or 1% (auto prompt) | | | | |
| Counting Min Weight | | 0.1mg | | | | |
| Linearity | | ±0.0002/±0.00003g | ±0.0003g | ±0.0002g | | |
| Repeatability/Std. Dev. | | 0.0001/0.00002g | 0.0002g | 0.0001g | | |
| Stabilization Time | | 3.5/8 seconds(typically) | 3.5 seconds(typically) | 3 seconds (typically) | | |
| Sensitivity Drift | | ±2ppm/°C(10°C~30°C/50°F~86°F) | | | | |
| Display Refresh | | 5 times per second /10 times per second | | | | |
| Pan Size | | ø 80mm/3.2inches | ø90mm/3.6inches | ø 85mm/3.3inches | | |
| Physical Dimensions | *mm* | 217 (W)×429 (D)×316 (H) | | 213(W)×319(D)×301(H) | | |
| | *inches* | 8.5 (W)×16.9 (D)×12.4 (H) | | 8.4(W)×12.6(D)×11.9(H) | | |
| Breeze Break Dimensions | *mm* | 183 (W)×164 (D)×250 (H) | | 180(W)×192(D)×200(H) | | |
| | *inches* | 7.2 (W)×6.5 (D)×9.8 (H) | | 7.1(W)×7.5(D)×7.9(H) | | |
| Operating Temperature | | 5°C~40°C/41°F~104°F RH less than 85% | | | | |
| Weight | | Approximately 8.0kg/ 17.6 lb | | Approximately 5.7kg/ 12.5 lb | | |
| Calibration Mass (Optional) | | 100g/200g | 200g/300g | 100g/200g | 50g/100g | 50g |
| Power | | 100, 120, 220, 240 VAC (AC Adaptor) 50Hz/60Hz | | 100, 120, 220, 240 VAC (AC Adaptor) 50Hz/60Hz<br>10 hours continuous operation with rechargeable battery pack (option) | | |
| Standard Accessories | | Manual, AC Adaptor, Protective Cover | | | | |

## *Options*

- OP-03 —Serial Interface (RS-232C/Current Loop)
- OP-05 —Serial Interface (Current Loop)
- OP-09 —Rechargeable Battery Pack (NiMH)
  (*Only for HR 200/120/60*)

## *Accessories*

- AD-1653 —Density Determination Kit
- AD-8121 —Multi-Function Printer
- AD-8118B —Universal Printer
- AD-8524B —Keyboard Adaptor (for IBM Compatible PC)
- AD-8918 —External Display

*Specifications are subject to change without notice.*

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*HR-ADCC-13-HO10-06203


# HR Series

## *Analytical Balances*

*Compare. . . Price · Performance · Value*
*There's none better!*

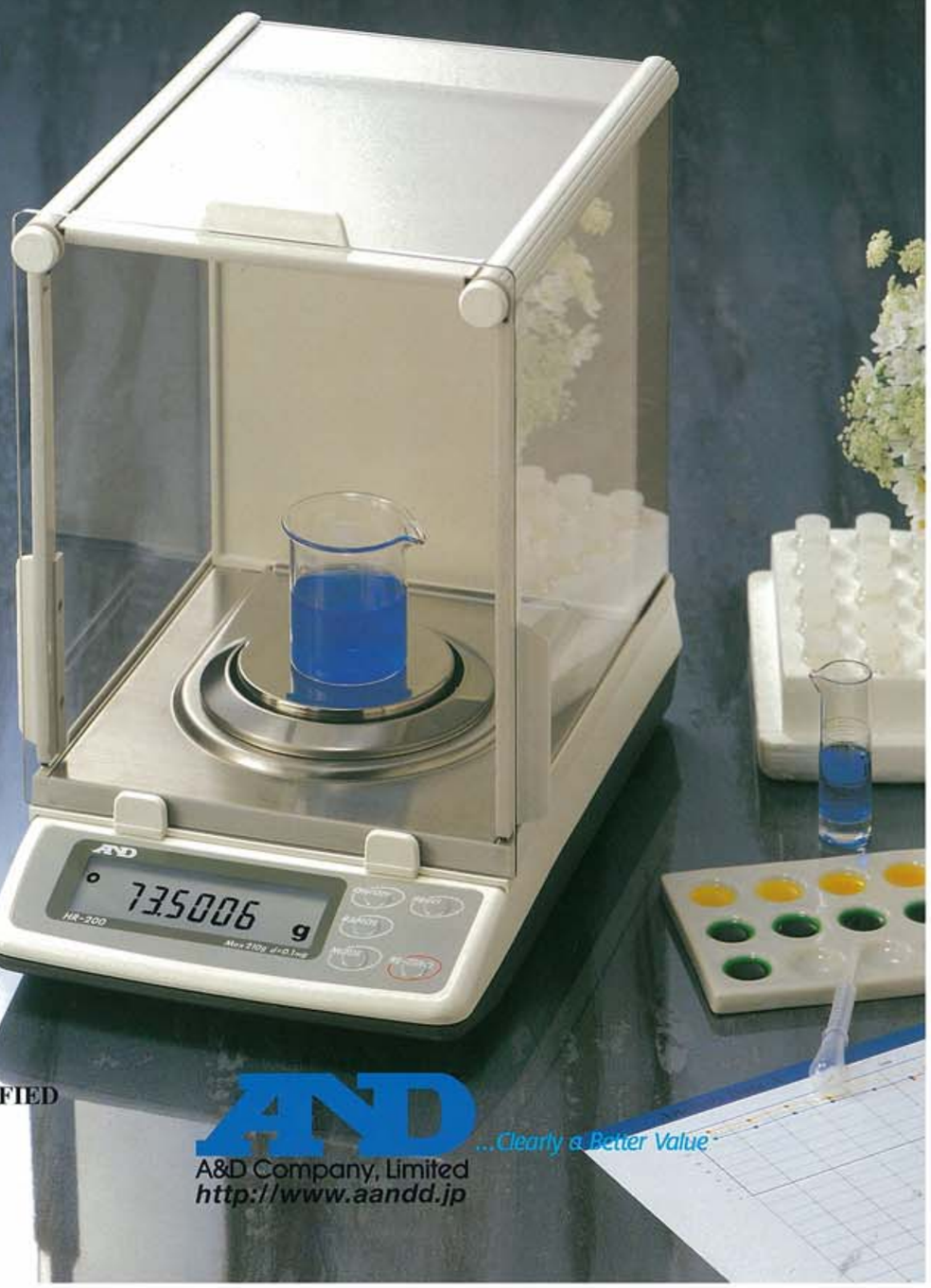
**HR-202**
*210g×0.1mg*
*42g×0.01mg*

**HR-300**
*310g×0.1mg*

**HR-200**
*210g×0.1mg*

**HR-120**
*120g×0.1mg*

**HR-60**
*60g×0.1mg*

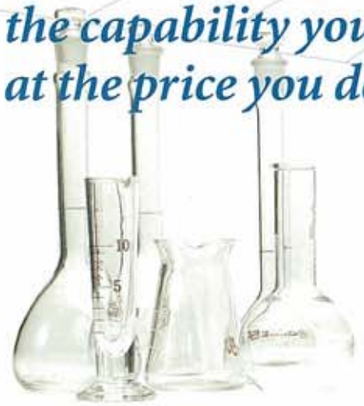



ISO 9000 CERTIFIED

...Clearly a Better Value

A&D Company, Limited
*http://www.aandd.jp*

## *Every A&D balance is designed for maximum performance. The HR series gives you the capability you need, at the price you deserve.*



### *Simple Operation*

Perform any operation with simple, clearly marked key entry.

### *Adapts to Your Environment*

**Mode Key:** Changes weighing unit and alters condition of response to immediately adapt to changing environmental conditions.
**Zero Point Calibration:** Calibrates zero independently of span.
**Selectable Calibration Mass capability:** Corrects for errors in calibration weight.
**Wide range of software parameters:** Controls reaction to environment and communications output.
**Range Key:** Disables least significant digit for better display stability in unstable areas.
**Strong Construction:** Aluminum alloy that won't chip, crack or wear out for many years of trouble free use.

### *Greatest Flexibility*

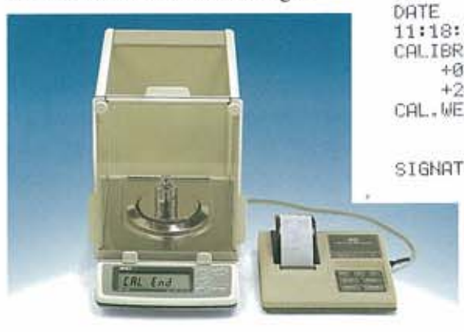
- Wide range of capacity/resolution models 42g/0.01mg ~310g/0.1mg
- Multiple weighing modes.
- Underhook capability for density measurement and weighing magnetic material.
- System Diagnostics provides error signals advising of : Low Battery, Overload Error, Weighing Pan Error, Power Failure Error, Stability Error, Digital Re-Zero Error, Zero-point Error and Calibration Errors.
- Digital Tare Capability: Allows manual or computer input of a tare weight. Use in wide range of tracking studies, such as daily weight gain/loss measurements in test animals, standard deviation, etc. Or the input of tare weights.
- Optional battery pack for portability and use in areas with low power problems.(Only for HR-200, 120 and 60)

## *0.01mg Semi-Micro Dual Range Weighing*

**Automatically selects ultra fine 0.01mg resolution in the 0 - 42g range .**


## *Balance ID number allows Calibration output verification*

Allows GLP or LIMS balance management by outputting the ID number and weight used to calibrate the balance, to A&D's AD-8121 printer or computer, which then can print date, time, balance ID number and calibration weight.



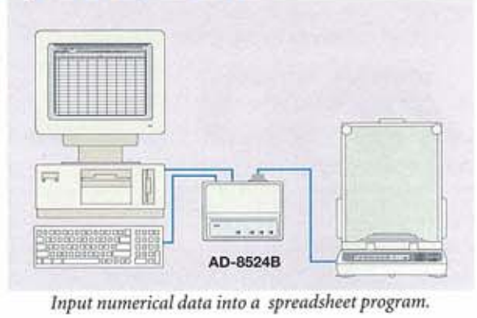

```
MODEL      HR-200
S/N     12345678
ID         1000 -A
DATE    01/01/00
11:18:30 AM
CALIBRATED
     +000.0000  g
     +200.0002  g
CAL.WEIGHT


SIGNATURE
```

***Print format for verifying the calibration***

***Optional Internal Rechargeable Battery OP-09***
*(Only for HR-200, 120 and 60 )*

***Density Determination Kit AD-1653***

***Keyboard Adaptor AD-8524B***




*Input numerical data into a spreadsheet program.*