Advanced-Level Analytical/Precision Balances

A&D Apollo

GX-A(E/WP)/GF-A(WP) Series

GF-3002A

GX-324AE

GX-1003A

ISO 9000 CERTIFIED

Taking Weighing Precision and Protection to New Heights

A&D Company, Ltd.

Discover Precision

www.aandd.jp

Simply Created for Practical Purposes

All the innovative technologies built into A&D Apollo are designed to provide functional solutions to the real world problems that users face in laboratories or in factories. Now discover what they are, and understand what precision, protection, performance and productivity really mean to you!

Smart SHS®

Smart super hybrid sensor (Smart SHS) realizing wide lineup from analytical to high-resolution, high-capacity precision models

Select a balance that best suits your purposes and budgets. You have a choice from a diverse array of models with varying readabilities and additional features.

Series	Calibration		Built-in ionizer	Dust/water proof	Readabilities and number of models available			
	Internal	External			0.0001 g	0.001 g	0.01 g	0.1 g
GX-AE	✔	✔	✔		3			
GX-A	✔	✔			3	6	5	2
GX-AWP	✔	✔		✔		3	3	1
GF-A		✔			3	7	6	2
GF-AWP		✔		✔		3	3	1

(All 0.0001 g models come standard with a large glass breeze break and all 0.001 g models with a small plastic breeze break to ensure stable weighing.)

Fast stabilization

A combination of a high-stiffness, Roberval-structure spring material and an electromagnetic force restoration mechanism simultaneously realizes fast stabilization and high resolution for efficient, precise weighing. Typical stabilization time is from 1.5 to 2 seconds for the 0.0001 g models and 1 second for the 0.001/0.01/0.1 g models.*1

*1 Excludes the 1,620 g × 0.001 g and 10,200 g × 0.01 g models, which have a typical stabilization time of 1.5 seconds.

Long-term durability and low cost of ownership

A&D's internal experiment verified that Smart SHS withstood a durability test of 10 million repeated loadings without issue. With proper usage and care, the projected functional lifetime is long. In case it is damaged, only the damaged parts, not the whole unit, need to be replaced, which minimizes cost.

Protection from static electricity (for the GX-AE series)

Built-in fanless ionizer

Measurement becomes unstable when the target object is statically charged. Adopting A&D's original Quick Ion® technology,◆ it removes such static at twice the speed of conventional ionizers (approx. 0.3 seconds*2 when the target object is within a distance of 10 cm) without causing any disturbance.

◆ Patent pending

*2 Actual values may vary due to differences in the ambient environment, shape of the target object, and amount of static charge.

Antistatic glass panes

The glass panes of the breeze break are coated with transparent evaporated metal to block static from outside (also applied to the 0.0001 g models of the GX-A/GF-A series).

External IR switch

The GX-AE series comes standard with a touchless switch to activate the ionizer for a set duration.

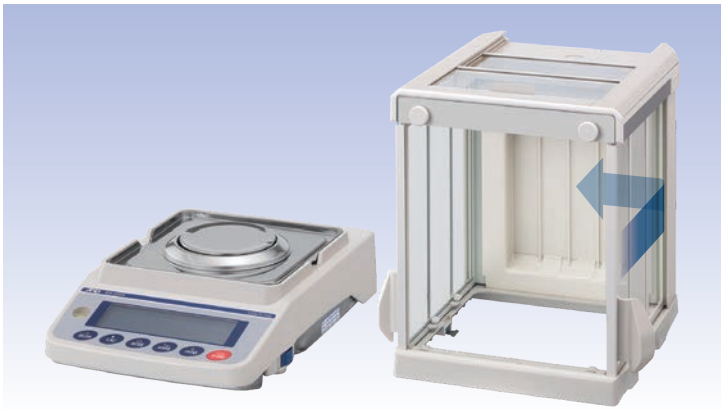
Protection from dust and water (for the GX-AWP/GF-AWP series)

The GX-AWP/GF-AWP series, which are IP65 rated, permit no ingress of dust, and can withstand water projected from any direction, as defined by the IEC/EN standard 60529. This allows for weighing of liquid or powder materials without worrying about damaging the balance due to accidental spillage.

Large, detachable breeze break with retractable doors (for all 0.0001 g models)

The breeze break provides sufficient room to fit in various kinds of containers/fixtures. It can be quickly detached for easy cleaning of the balance as well as for use in confined spaces.

The balance requires no extra space at the rear for accessing the weighing chamber, as the doors fold into the back.



Internal weight (for the GX-AE/GX-A/GX-AWP series)

Automatic self calibration (ASC)

To ensure accuracy at all times, the balance can be set to calibrate itself automatically using its internal weight either (1) in response to change in ambient temperature to prevent error due to sensitivity drift, (2) at a set interval time, or (3) at predetermined (up to three) times of the day. Internal calibration can also be performed any time with one key press.

Internal weight value correction

In cases such as where the internal weight value varies over time, it can be corrected either by loading an external reference weight or by manually inputting a correction value.

ECL

Electronically controlled load (ECL) that enables precision management without using an external weight

ECL is A&D's patented technology of generating a minute load (0.3 to 3% of the balance capacity) by purposely altering the equilibrium state of the electromagnetic force restoration sensor. Equipped with this ECL, A&D Apollo can automatically assess its precision and provide a number of valuable indexes. The entire process takes only 1.5 minutes and can be readily included in a daily check SOP.

Automatic precision assessment (APA)

Dia-Check

Dia-Check

The balance first makes quick diagnoses on whether there is a critical failure to give users peace of mind to proceed with daily weighing routines.

Standard Deviation

Standard Deviation

Following Dia-Check, the balance goes on to perform 10 repeated measurements with ECL to calculate a standard deviation,*3 allowing users to quickly assess the balance repeatability under any given environment.

QuickMin-S

QuickMin-S

Based on the standard deviation obtained through ECL, the balance quickly indicates the minimum weight*4 by a tolerance of either 0.1% in accordance with the United States Pharmacopeia (USP) Chapter 41, or 1%, depending on the laboratory requirements.

*3 The unit of measure will be mg only.
*4 The unit of measure will be g only

Adjustable response characteristics

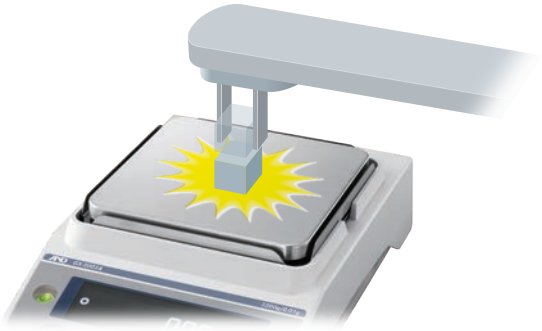
Depending on the APA results above, you can trade faster weighing speed for higher display stability*5 or vice versa by selecting one of three preset response characteristics (FAST, MID or SLOW).

*5 This is not to improve repeatability.

Use in production lines

The weight sensor of a high-precision balance will be damaged in a short period if continuously affected by loads with acceleration (impact shocks). This typically occurs in factories where materials are placed roughly by machines or thrown onto balances by operators. In addition, impact shocks can easily shift values and cause errors.

The problem is that even if you know the above, it can be difficult to judge whether the level of impact shock is significant enough to necessitate preventive or protective measures to be taken.



ISD

Impact shock detection (ISD) providing feedback to prevent damage to the weight sensor

Impact-Alert

A&D Apollo visualizes the magnitudes of impact shocks that its Smart SHS receives at four levels. Also, one beep is emitted if a Level 3 impact shock is detected, and two beeps are emitted if a Level 4 impact shock is detected (both of which should be avoided).

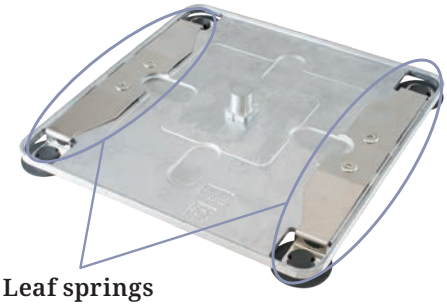
No impact shock | **Level 1** | **Level 2** | **Level 3** | **Level 4**

Shock-Log

While the power is on, up to 50 impacts of Level 3 and Level 4 will be stored in the balance with a timestamp (and log-in user information when the password lock function is used). Data will then be overwritten in order from the weakest impact. This function is especially beneficial for quality managers, as it enables them to check and show how their balances were treated during use.

Cushioning and overload protection mechanism

The two leaf springs (or one cruciform spring in the 0.0001 g models) that support the weighing pan significantly mitigate impact shocks. Meanwhile, Smart SHS is well protected against vertical and transverse static overloading. It won't break due to malfunction of the weighing system's actuator and the resulting excess load. A&D's testing demonstrated that even a human did no damage to the balance by stepping on it.

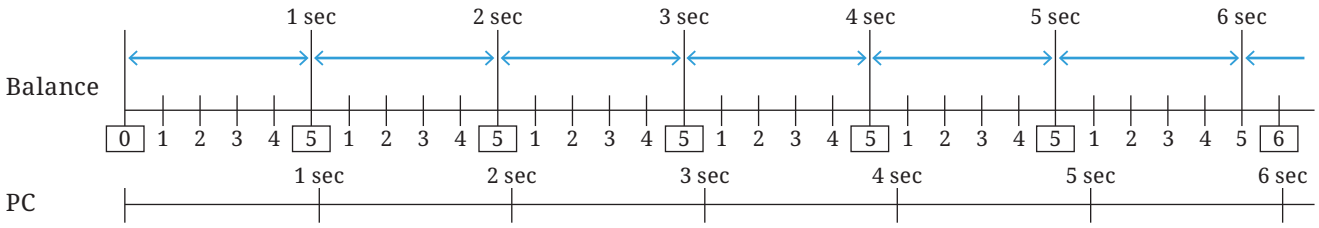


Leaf springs

Flow rate measurement

Flow rate is determined from the weight variation that occurs during a given interval. Many operators time this interval by using a stopwatch. Besides being troublesome and error-prone, this method does not allow precise recording of flow rates that vary from moment to moment because the interval used to divide the weight variation (calculation time) is too long.

Alternatively, a PC can be connected to the balance to take the weighing data and perform the calculation. This method enables measurement to be more responsive to flow rate changes by shortening the calculation time. However, due to the syncing problems that inevitably occur between the internal clocks of the balance and the PC, the timing at which the balance receives the command from the PC to send the weight value and its display refresh cycle gradually go out of alignment. In consequence, the PC intermittently produces irregular values even when the actual flow rate is constant.



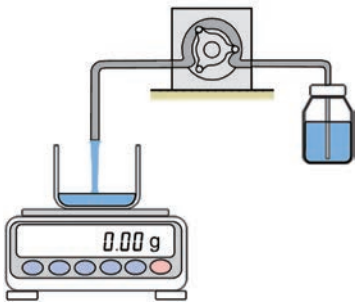
Time disparity of two different internal clocks (when the balance display refresh rate is 5 times/sec, the calculation time is 1 sec, and the balance's internal clock goes slightly ahead of the PC's)

FRD

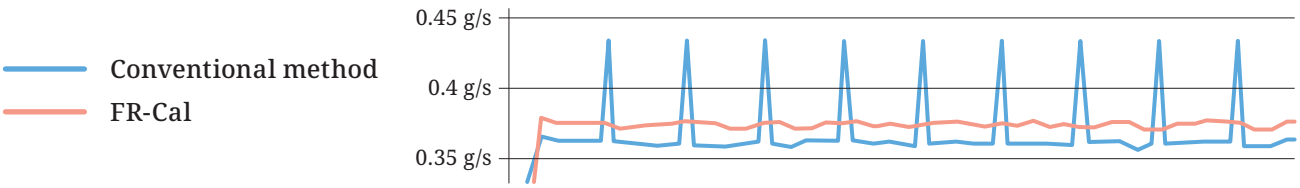
Flow rate display (FRD) for calculating flow rate with the balance itself

FR-Cal

A&D Apollo can calculate and display/output the mass flow rate (the unit of measure can be selected from g/s, g/m or g/h), or the volume flow rate (mL/s, mL/m or mL/h) by entering the density of the material,*6 by itself. Both the display refresh rate and calculation time (set either manually between 1 second and 1 hour or automatically according to the selected level of responsiveness to weight/flow rate variation♦) are regulated by the same internal clock of the balance, allowing measurements to be precisely performed without the time disparity problem described above.



✻6 Up to 10 densities can be saved to the balance.
♦ Patented



Flow rate measurement using FR-Cal as opposed to the conventional method

For graphing and monitoring of flow rate changes, a dedicated software, WinCT-FRD, is available as a free download (also refer to the section “Freeware” on P.8).

FR-Compare

The balance indicates whether the flow rate is maintained within the designated limits (either 3 levels or 5 levels). The results can be output using the optional GXA-04 interface.

User access control (UAC) and key lock to prevent misuse

The balance can be password-protected in two ways: The first way is to limit use to authorized individuals (up to 11 including one administrator—the administrator can perform all operations while other users are limited to measurements and calibration*7 only) by setting a password for each user. The second way is to set a password for just the administrator, allowing anyone else to use the balance without entering a password, but for measurements and calibration*7 only.

Moreover, upon receiving a command to disable its keys, the balance becomes operable only by sending commands from an external device such as a PC.

*7 The administrator can inhibit calibration also so that others can perform measurements only.

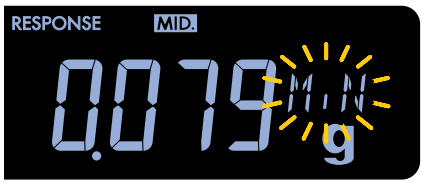
Automatic minimum weight calculation and implementation

You can enter the minimum weight into the balance by either direct key input, using the result of QuickMin-S described earlier, or having the balance calculate it from 10 repeated measurements of an actual, external weight (as with QuickMin-S, the tolerance can be set to either 0.1% pursuant to USP Chapter 41, or 1%). The stored value can always be called up to see/change or output together with a timestamp. When QuickMin-S or an external weight was used, the calculation data is also output.

Min-S Alert

To ensure that the measured sample amount meets the minimum weight requirement, the balance can display an alert until the sample amount reaches the value entered as the minimum weight.*8

*8 When g is selected as the unit of measure only



Blinking minimum weight alert

Universal Flexi Coms (UFC)

This function enables customization of printout content and layout by editing and sending commands (UFC setting commands) to the balance. Following the commands, the balance creates data to be output to either a printer capable of dump printing such as the AD-8127 compact printer or a commercially-available label printer*9 for barcode printing.

For editing and sending of UFC setting commands, a dedicated software, WinCT-UFC, is available as a free download (also refer to the section “Freeware” on P.8).

*9 A label printer that supports ZPL or ZPL II (ZPL and ZPL II are registered trademarks of ZIH Corp.)

GLP/GMP/GCP/ISO compliant output

The balance manufacturer, model, serial number, ID number, date + time,*10 space for signature for calibration report, calibration test report, and title & end blocks for a series of weighing results can be output.

*10 When the AD-8127 compact printer is used, it is possible to use its clock & calendar function instead of the balance's to print date + time. This allows you to prevent falsification of the timestamp using the password lock function on the printer side as you prefer.

Gross/Net/Tare output

The balance can be set so that you can perform zero and tare operations separately, and output the gross, net, and tare values.

Statistical calculation function (SCF)

Various statistical data can be calculated and displayed/output to help analyze measurement results.

Tare memory

The tare value can be saved in non-volatile memory. When this function is activated, the power-on zero/tare is turned off. Therefore, even if the power supply is interrupted during weigh-in or loss-in-weight measurement (e.g. filling), the net value displayed before the loss of power is restored once the balance is turned on again.

Data memory

A&D Apollo has a capacity to store up to 200 weighing results + 50 calibration results (all with a timestamp), and 50 unit masses to be used in counting mode for cases when no external memory device is available. The stored weighing results or calibration results can be output to a printer or PC in one batch.

Other advanced features

RS-232C and USB interfaces as standard

The USB interface can be toggled between Quick USB mode (plug-and-play with weighing data output to a PC only) and Virtual COM mode (for bi-directional communication*11) using internal settings. A USB cable (1.8 m) is provided as standard.

*11 A driver needs to be installed for PCs with a Windows version other than Windows 10. It can be downloaded from the A&D website.

Security slot

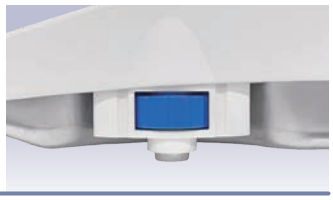
An off-the-shelf (such as Kensington) anti-theft lock can be used to prevent the balance from being lost.

Reverse backlit LCD display

The contrast of black and white provides excellent visibility even in poorly-lit areas and also prevents eye fatigue.

Bright Bubble

The large, front-mounted spirit level is easy to see with LED illumination, which blinks for 5 seconds after the display is turned on to call for attention to make sure the balance is level.



Fly-Thumbwheel

The leveling feet can be adjusted up or down smoothly using large thumbwheels set in higher position.

Freeware

WinCT-FRD

WinCT-FRD enables a PC to simultaneously display the weight and flow rate values transmitted from the balance on a two axis graph so that you can see their changes in real time. The graph can be printed out using a printer or saved as an image file, whereas the recorded data can be saved in CSV or TXT format.

WinCT-UFC

With WinCT-UFC, you can easily edit UFC setting commands on a PC and send them to a balance/scale that has a UFC function, such as A&D Apollo. All that is required is to select data (e.g. weighing result, date, time, ID number, etc.), enter text and adjust the layout while checking the preview screen, which the software automatically converts to UFC setting commands. For label printing, users can choose one of three kinds of barcodes; namely, QR code, Data Matrix code and Code 39. (QR Code is a registered trademark of Denso Wave Incorporated.)

WinCT-ParamSet

WinCT-ParamSet reads and lets you change and save the internal parameter settings of a balance all together on a PC. This is highly convenient as you can quickly check how the balance is currently set, duplicate the same settings for multiple balances, or change settings often depending on the application.

Options*12 *13

GXA-03	**2nd RS-232C interface**
GXA-04	**Comparator relay output/buzzer/external key input interface** Enables signaling check weighing results (3 or 5 levels) by buzzer and/or external comparator (traffic) lights. It also has two jacks for separately-sold foot switches.
GXA-06	**Analog (0-1/0.2-1 V) output interface**
FXi-08	**Ethernet (TCP/IP) interface**
GXA-09	**Built-in rechargeable battery (factory-installed/dealer option)** 10 hours of charging for 14 hours of operation (the remaining battery level will be indicated on the display). The balance can be used while recharging the battery.
GXA-10	**Large glass breeze break (standard for the 0.0001 g models of the GX-A/GF-A series)**
GXA-12	**Animal weighing pan (for the 0.001/0.01/0.1 g models of 320 g capacity or higher)** Use together with the animal weighing (average & hold) mode.
GXA-13	**Density determination kit for the 0.001 g models**
GXA-14	**Density determination kit for the 0.0001 g models**
GXA-17	**Large glass breeze break with built-in fanless ionizer and external IR switch (standard for the GX-AE series)**
GXA-23-PRINT	**External key input interface + the AX-SW137-PRINT foot switch**
GXA-23-REZERO	**External key input interface + the AX-SW137-REZERO foot switch**
GXA-23-PLUG	**External key input interface + the AX-T-314A-S plug**
GXA-24	**USB host interface (factory-installed/dealer option)** Accepts an off-the-shelf USB flash drive to save weighing results in CSV format.
GXA-25	**Fanless ionizer of Quick Ion® technology** Power is supplied from the balance. Activated for a set duration with an embedded IR sensor.
GXA-26	**External IR switch** For touchless operation of print or re-zero (tare).
GXA-27*14	**Bluetooth® interface**

Density determination kits
Make weighing the sample in air and in water quicker, easier and more precise. A&D Apollo can then perform a density calculation automatically.

*12 Only one of GXA-03, GXA-04, GXA-06, FXi-08, GXA-09, GXA-17, GXA-23-PRINT/REZERO/PLUG, GXA-24, GXA-25, GXA-26, or GXA-27 can be installed (meaning that GXA-03, GXA-04, GXA-06, FXi-08, GXA-09, GXA-23-PRINT/REZERO/PLUG, GXA-24, or GXA-27 cannot be installed in the GX-AE series without first removing its interface for the built-in fanless ionizer.).

*13 The GX-AWP/GF-AWP series are not IP65 with GXA-03, GXA-04, GXA-06, FXi-08, GXA-17, GXA-23-PRINT/REZERO/PLUG, GXA-24, GXA-25, or GXA-26.

*14 Please contact your local A&D representative to find out whether GXA-27 is certified for compliance with Bluetooth® communication laws in your country.

Accessories

AD-1641	Air flow logger	AD-8920A	Remote display
AD-1682	Rechargeable battery unit	AD-8922A	Remote controller
AD-1683	Static eliminator*15	AX-BM-NEEDLESET	Electrode unit for ionizer (4 pcs)
AD-1684A	Electrostatic field meter	AX-GXA-31	Main unit cover (5 pcs)
AD-1687	Weighing environment logger	AX-KO2737-500	Waterproof RS-232C cable (5 m)
AD-1688	Weighing data logger	AX-SW137-PRINT	Foot switch for print
AD-1689	Tweezers for calibration weight	AX-SW137-REZERO	Foot switch for re-zero
AD-8127	Compact printer	AX-USB-9P	RS-232C/USB converter with cable
AD-8526	RS-232C/Ethernet (TCP/IP) converter		

*15 Power needs to be supplied from an AC adapter. Recommended when A&D Apollo has another option than GXA-17 or GXA-25 installed.

Specifications

GX-AE/GX-A/GF-A (0.0001g)

Models	GX-124AE / GX-124A / GF-124A	GX-224AE / GX-224A / GF-224A	GX-324AE / GX-324A / GF-324A
Capacity	122 g	220 g	320 g
Readability	0.0001 g		
Repeatability (standard deviation)*i	0.0001 g		0.0002 g (300 g) 0.0001 g (200 g)
Minimum weight*ii (typical)	120 mg		
Linearity	±0.0002 g		±0.0003 g
Stabilization time (when set to FAST under a good environment)	Approx. 1.5 sec (100 g)	Approx. 2 sec (200 g) Approx. 1.5 sec (100 g)	Approx. 2 sec (300 g) Approx. 1.5 sec (100 g)
Sensitivity drift	±2 ppm/°C (10 to 30 °C/50 to 86 °F, when automatic self calibration is OFF)		
Operating environment	5 to 40 °C (41 to 104 °F), 85%RH or less (no condensation)		
Display refresh rate	5 times/sec, 10 times/sec or 20 times/sec		
Units of measure*iii	mg (milligram), g (gram), 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	0.0001 g		
Counting mode: Number of samples	5, 10, 25, 50 or 100 pieces		
Percent mode: Minimum 100% reference mass	0.0100 g		
Percent mode: % readability	0.01%, 0.1% or 1% (depends on the reference mass stored)		
Communication interface	RS-232C and USB		
Applicable calibration weight value	50 g 100 g	50 g 100 g 200 g	50 g 100 g 200 g 300 g
Weighing pan size	Ø90 mm		
External dimensions	259 (W) × 358 (D) × 332 (H) mm (including the large glass breeze break)		
Net weight	Approx. 7 kg		
Power supply / consumption	AC adapter / approx. 30 VA		

GX-A/GF-A (0.001g)

Models	GF-123A	GX-203A / GX-203AWP / GF-203A / GF-203AWP	GX-303A / GF-303A	GX-403A / GX-403AWP / GF-403A / GF-403AWP	GX-603A / GX-603AWP / GF-603A / GF-603AWP	GX-1003A / GF-1003A	GX-1603A / GF-1603A
Capacity	122 g	220 g	320 g	420 g	620 g	1100 g	1620 g
Readability	0.001 g						
Repeatability (standard deviation)*i	0.001 g						0.002 g (1600 g) 0.001 g (1000 g)
Minimum weight*ii (typical)	GX-A/GF-A: 1.4 g | GX-AWP/GF-AWP: 1.8 g						
Linearity	±0.002 g					±0.003 g	
Stabilization time (when set to FAST under a good environment)	Approx. 1 sec Approx. 0.8 sec (5 g)						Approx. 1.5 sec Approx. 0.8 sec (5 g)
Sensitivity drift	±2 ppm/°C (10 to 30 °C/50 to 86 °F, when automatic self calibration is OFF)						
Accuracy immediately after internal calibration (for the GX-A(WP) series)*iv	±0.010 g						±0.010 g (1000 g)
Operating environment	5 to 40 °C (41 to 104 °F), 85%RH or less (no condensation)						
Display refresh rate	5 times/sec, 10 times/sec or 20 times/sec						
Units of measure*iii	g (gram), oz (ounce), lb (pound), lb-oz (pound-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	0.001 g						
Counting mode: Number of samples	5, 10, 25, 50 or 100 pieces						
Percent mode: Minimum 100% reference mass	0.100 g						
Percent mode: % readability	0.01%, 0.1% or 1% (depends on the reference mass stored)						
Communication interface	RS-232C and USB						
Applicable calibration weight value	50 g 100 g	50 g 100 g 200 g	50 g 100 g 200 g 300 g	50 g 100 g (100 g interval) 400 g	50 g 100 g (100 g interval) 600 g	50 g 100 g (100 g interval) 1000 g	50 g 100 g (100 g interval) 1600 g
Weighing pan size	128 × 128 mm						
External dimensions	GX-A/GF-A: 212 (W) × 317 (D) × 171 (H) mm (including the small plastic breeze break) GX-AWP/GF-AWP: 212 (W) × 326 (D) × 171 (H) mm (including the small plastic breeze break)						
Net weight	Approx. 5 kg						
Dust and waterproof rating	IP65 (for the GX-AWP/GF-AWP series only)						
Power supply / consumption	AC adapter / approx. 30 VA						

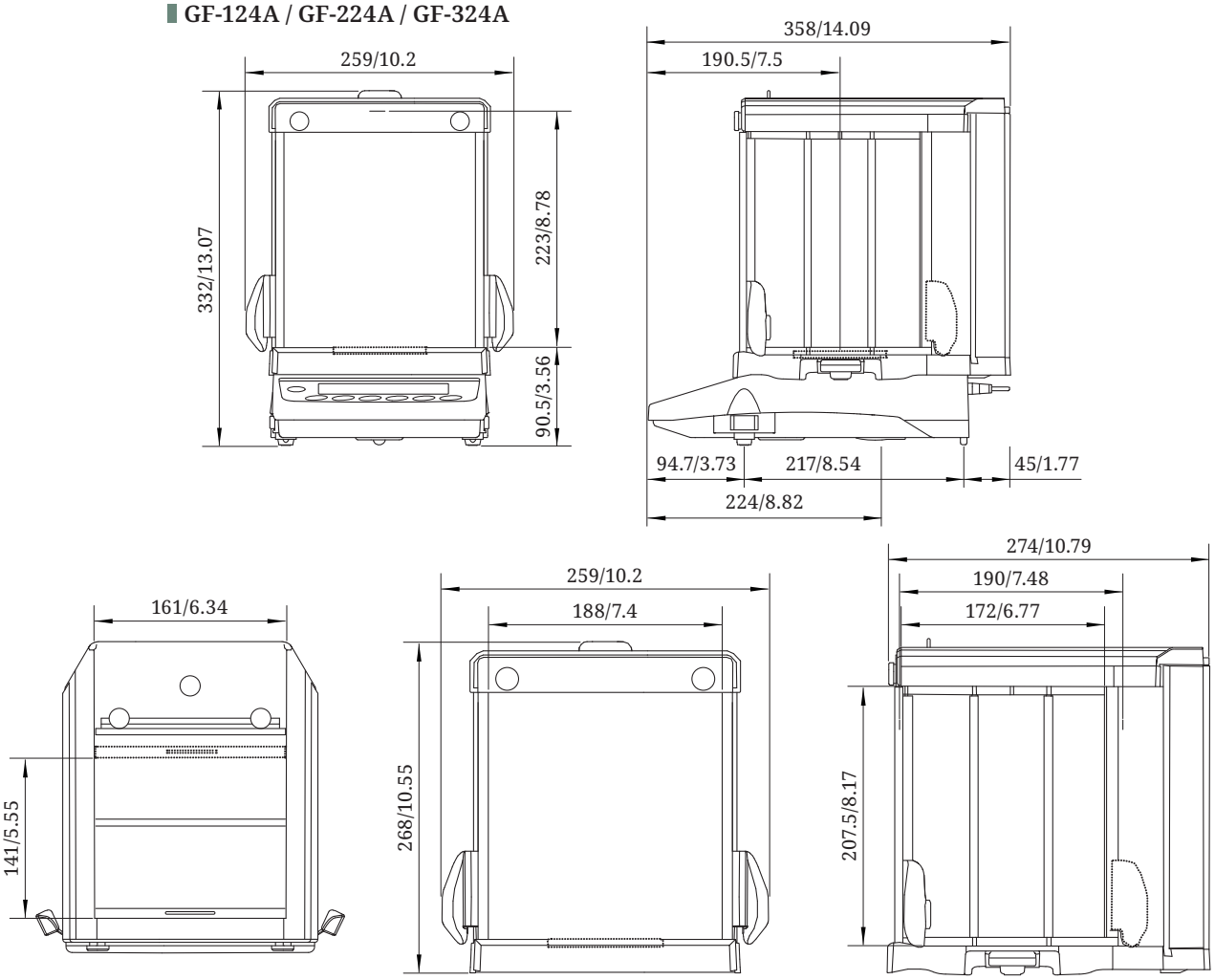
GX-A/GF-A (0.01/0.1g)

Models		GF-1202A	GX-2002A / GX-2002AWP / GF-2002A / GF-2002AWP	GX-3002A / GF-3002A	GX-4002A / GX-4002AWP / GF-4002A / GF-4002AWP	GX-6002A / GX-6002AWP / GF-6002A / GF-6002AWP	GX-10002A / GF-10002A	GX-6001A / GX-6001AWP / GF-6001A / GF-6001AWP	GX-10001A / GF-10001A
Capacity		1220 g	2200 g	3200 g	4200 g	6200 g	10200 g	6200 g	10200 g
Readability		0.01 g						0.1 g	
Repeatability (standard deviation)*i		0.01 g					0.02 g (10000 g) 0.01 g (5000 g)	0.1 g	
Minimum weight*ii (typical)		GX-A/GF-A: 14 g | GX-AWP/GF-AWP: 18 g						100 g	
Linearity		±0.02 g				±0.03 g		±0.1 g	
Stabilization time (when set to FAST under a good environment)		Approx. 1 sec Approx. 0.8 sec (50 g)					Approx. 1.5 sec Approx. 0.8 sec (50 g)	Approx. 1 sec Approx. 0.8 sec (500 g)	
Sensitivity drift		±2 ppm/°C (10 to 30 °C/50 to 86 °F, when automatic self calibration is OFF)							
Accuracy immediately after internal calibration (for the GX-A(WP) series)*iv		±0.10 g		±0.15 g		±0.15 g (5000 g)		±0.5 g (5000 g)	
Operating environment		5 to 40 °C (41 to 104 °F), 85%RH or less (no condensation)							
Display refresh rate		5 times/sec, 10 times/sec or 20 times/sec							
Units of measure*iii		g (gram), oz (ounce), lb (pound), lb-oz (pound-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**	0.01 g						0.1 g	
	Number of samples	5, 10, 25, 50 or 100 pieces							
Percent mode	**Minimum 100% reference mass**	1.00 g						10.0 g	
	% readability	0.01%, 0.1% or 1% (depends on the reference mass stored)							
Communication interface		RS-232C and USB							
Applicable calibration weight value		500 g 1000 g	500 g 1000 g 2000 g	500 g 1000 g 2000 g 3000 g	500 g 1000 g (1000 g interval) 4000 g	500 g 1000 g (1000 g interval) 6000 g	500 g 1000 g (1000 g interval) 10000 g	500 g 1000 g (1000 g interval) 6000 g	500 g 1000 g (1000 g interval) 10000 g
Weighing pan size		165 × 165 mm							
External dimensions		GX-A/GF-A: 212(W) × 317(D) × 93(H) mm | GX-AWP/GF-AWP: 212 (W) × 326 (D) × 93 (H) mm							
Net weight		Approx. 5 kg							
Dust and waterproof rating		IP65 (for the GX-AWP/GF-AWP series only)							
Power supply / consumption		AC adapter / approx. 30 VA							

***i** Repeatability can worsen depending on the environmental conditions and operator skills.
***ii** Pursuant to the United States Pharmacopeia (USP), Chapter 41
***iii** One additional unit from tael (Singapore/HK jewelry/Taiwan/China), tola or Newton can be added upon request.
***iv** In a stable environment (no rapid temperature/humidity change, vibration, draft, magnetism, static, etc). The mass of the internal weight may vary with age.

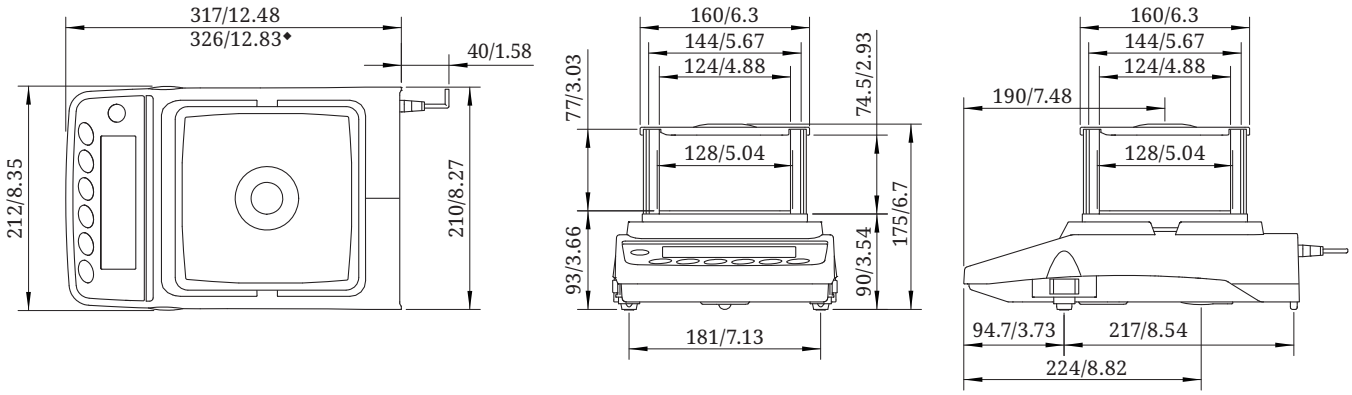
Dimensions (mm/inches)

0.0001 g models
GX-124AE / GX-224AE / GX-324AE
GX-124A / GX-224A / GX-324A
GF-124A / GF-224A / GF-324A

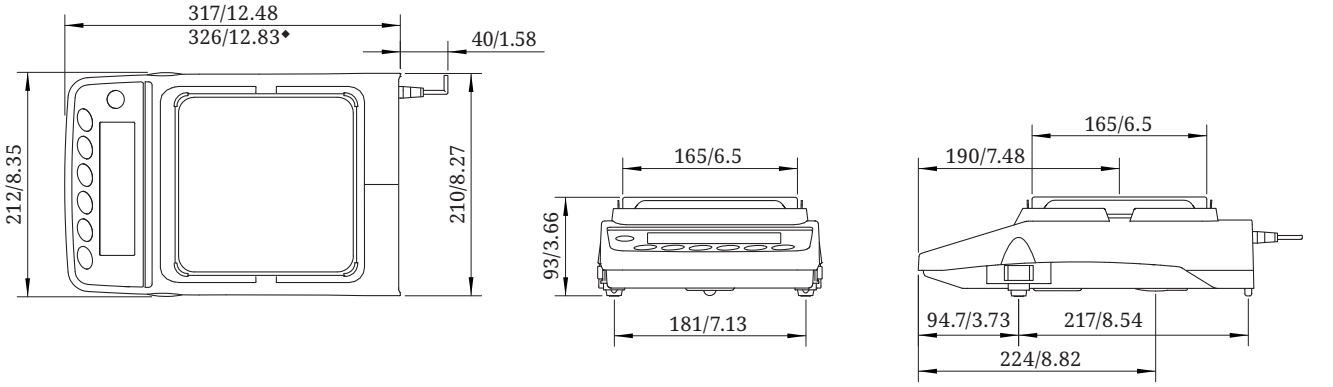


Dimensions (mm/inches)

0.001 g models GX-203A / GX-303A / GX-403A / GX-603A / GX-1003A / GX-1603A
GX-203AWP / GX-403AWP / GX-603AWP
GF-123A / GF-203A / GF-303A / GF-403A / GF-603A / GF-1003A / GF-1603A
GF-203AWP / GF-403AWP / GF-603AWP



0.01/0.1 g models GX-2002A / GX-3002A / GX-4002A / GX-6002A / GX-10002A / GX-6001A / GX-10001A
GX-2002AWP / GX-4002AWP / GX-6002AWP / GX-6001AWP
GF-1202A / GF-2002A / GF-3002A / GF-4002A / GF-6002A / GF-10002A / GF-6001A / GF-10001A
GF-2002AWP / GF-4002AWP / GF-6002AWP / GF-6001AWP



◆ With RS-232C cover (for the GX-AWP/GF-AWP series)

A&D Company, Ltd.

Discover Precision

A&D Company, Ltd.
3-23-14 Higashi-Ikebukuro, Toshima-Ku, Tokyo, 170-0013, Japan Tel: +81 3-5391-6132 Fax: +81 3-5391-1566 www.aandd.jp

A&D Engineering, Inc.
1756 Automation Parkway, San Jose, CA 95131, U.S.A. Tel: +1 408-263-5333 Fax: +1 408-263-0119

A&D Australasia Pty Ltd.
32 Dew Street, Thebarton, South Australia 5031, Australia Tel: +61 8-8301-8100 Fax: +61 8-8352-7409

A&D Instruments Ltd.
Unit 24/26 Blacklands Way, Abingdon Business Park, Abingdon, Oxfordshire, OX14 1DY, United Kingdom Tel: +44 1235-550420 Fax: +44 1235-550485
<German Sales Office>
Hamburger Straße 30, D-22926, Ahrensburg, Germany Tel: +49 4102-459230 Fax: +49 4102-459231

A&D Korea Ltd.
8F Manhattan Bldg., 33, Gukjegeumyung-ro 6-gil, Yeongdeungpo-gu, Seoul, 07331, Korea Tel: +82 2-780-4101 Fax: +82 2-782-4280

A&D Rus Co., Ltd.
Vereyskaya Str. 17, 121357, Moscow, Russia Tel: +7 495-937-33-44 Fax: +7 495-937-55-66

A&D Instruments India (P) Ltd.
509 Udyog Vihar Phase V Gurgaon-122 016, Haryana, India Tel: +91 (124) 471-5555 Fax: +91 (124) 471-5599

★GXGF-A-ADCC-06-PR7-20c005GP