

GP

Series



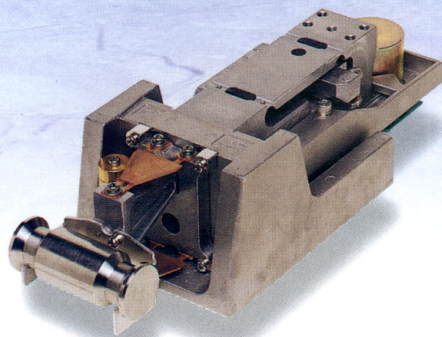
***The World's Most User-Friendly
Industrial Balances...***



AND
A&D WEIGHING

...Clearly a Better Value

A New Champ



The GP Series incorporates our enhanced weighing sensor, Double Leveraged Super Hybrid Sensor (SHS).

Building on the basic SHS features of speed and stabilization, our enhanced SHS technology brings the most accurate weighing results to industrial balances in 12kg to 101kg capacities.



Internal Calibration

The GP internal calibration with an internal mass saves time and money. External calibration requires a great deal of skill, time and an expensive external mass. With our internal calibration with internal mass, there is no downtime while the technician calibrates the balance.

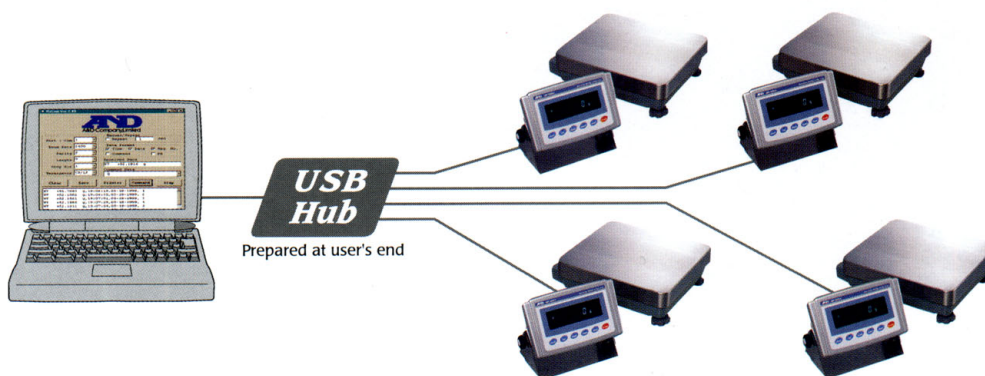
- Automatic Self Calibration – Self-calibrates automatically when the balance detects ambient temperature changes
- One Touch Automatic Calibration – Lets you calibrate the balance on demand with just the push of one button
- Calibration is essential for accuracy in weighing. For example, in high resolution balances, changes in sensitivity drift can be caused by changes in the ambient temperature. Take the GP 30kg for example, the weight might change by $\pm 0.9\text{g}$ with a change of 10°C . (Sample's weight: 30kg)
- Thanks to our Double Leveraged Super Hybrid Sensor, the GP's motor-driven internal calibration mass is equivalent to a 50kg calibration mass in terms of top loading capacity on the weighing pan. The adjusted weighing accuracy is within ± 15 digits in relation to the weighing capacity while conforming to the OIML's Class II balances definitions after using GP's internal calibration mass.

Standard WinCT

WinCT (Windows Communication Tools Software), provides easy transmission of weighing data from A&D balances to a computer using the RS-232C interface. Quickly exports data into Windows applications in a manageable format limited only by the computer's capabilities.

RS-232C Interface

Using a USB/RS-232C Converter, you can transfer data between a USB equipped PC and multiple GP balances. This also makes your GP balance hot-swappable-no need to turn the balance and computer off before disconnecting the balance.



ption in the Industrial



GP-S

with detached display unit

GP-30KS — with 31kg/0.1g capacity/resolution

GP-100KS — with 101kg/1g capacity/resolution

GP Series

with Swing Arm display type

GP-12K	(12kg/0.1g)
GP-20K	(21kg/0.1g)
GP-22K	(6.1kg/0.1g* • 21kg/1g)
GP-30K	(31kg/0.1g)
GP-40K	(41kg/0.5g)
GP-60K	(61kg/1g)
GP-100K	(101kg/1g)
GP-102K	(61kg/1g* • 101kg/10g)

* SmartRange

The GP-22K and GP-102K have the precision and standard ranges. The precision range has a higher resolution and the standard one is normal resolution. Pressing the RE-ZERO key allows weighing in the precision range, regardless to the tare value. (**SmartRange** function). **SmartRange** function enables you to weigh or add samples in the precision range without removing container and/or those objects that have been placed on the pan.



Super Hybrid Sensor



Vacuum Fluorescent



Full Digital Calibration



Complies with GLP/GMP format



RS-232C Serial Interface



IP-65 resistant to water & dust



HI/OK/LO Comparator



Automatic Counting Accuracy Improvement



Windows Communication Tools Software



Display Auto Power OFF



Internal Calibration

Balance Field

Swing Arm Display

Compliant IP-65
(resistant to dust, water and moisture)



Clear & Large VFD Display

VFD Display

Easy to see-even in the dark / Wide angle view prevents mistakes



ANIMAL



Animal Weighing

Hold Function for animal weighing



Automatic Adjustable Environment Setting

Adapts to the most suitable Environment Response Setting automatically with one-touch key operation. The response annunciator displays "FAST", "MID" and "SLOW."

COMPARATOR



Comparator Function

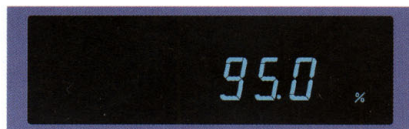
The results of the comparison are indicated by HI, OK, LO on the display.

ACA



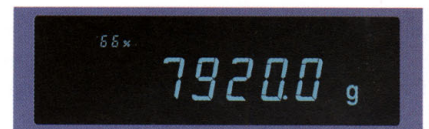
ACA Counting Function

Automatic Counting Accuracy Improvement continuously recalculates and updates the average piece weight, ensuring optimum count accuracy even with very small parts



Percentage Function

Shows the percentage to the standard sample weight. Ideal for comparative weighing and moisture loss applications.



Capacity Indicator

Shows the % to the total weight capacity on the display

IP65 IP-65 Splash Proof Keyboard, Display and Base Units

Balances protected from dust and spills up to IP65 level

GLP GLP/GMP/ISO Compliance

Allows GLP, GMP and ISO balance management by outputting the Balance ID number and data used to calibrate the balance. The data can be output to A&D's AD-8121 printer or a PC, indicating date, time, Balance ID number, serial number and calibration data.

```
MODEL      A & D  
          GP-30K  
S/N        01234567  
ID         ABCDEF6  
DATE       2001/05/15  
TIME       12:34:56  
CALIBRATED<INT.>  
SIGNATURE
```



Standard RS-232C

Bi-directional communication with a PC or connect directly to a printer

Commands

A PC can control the balance by sending commands to the balance.

- Command to query weighing data
- Command to control the balance
- Command to control the memory function
- Command to control the comparator function

ID Number

The balance ID number can be set. It is used to identify the balance when GLP is used. The ID number is memorized and maintained once it is fixed, even if the AC adaptor is removed.

Optional Underhook

Ideal for density determination and weighing magnetic substances

- GP-20 Underhook for GP-12K/20K/22K/30K/40K/30KS
- GP-21 Underhook for GP-60K/100K/102K/100KS

Density Determination of a Solid Object

The GP has a density determination mode, which is available after changing the internal parameter settings. Once the object's weight in the air, in liquid and the liquid density are input, the solid density will be calculated. It is useful to determine concrete's density.

Enlargement Indication of HI, OK, LO Symbols

With MODE key pressed during usual HI, OK or LO indication, the display is refreshed from **3.0000kg HI** to **HI kg**. The letters (HI, for example), can be enlarged.

Accumulation of Weighing Results

GP can accumulate the weighing results and display and output them.

Data Memory

Format the data memory function for:

- 200 sets of weighing data
- 100 sets of weighing data with Time & Date
- 20 sets of Tare values
- 50 sets of GLP data-Time & Date, Calibration Data, ID Number and Serial number
- 50 sets of Unit Weight for Counting mode
- 20 sets of comparator Upper & Lower Limits

Time & Date

Standard Time & Date Function complies with GLP and Interval Weighing in the Data Memory function.

Auto Self Checking

Automatically checks itself when setting the Automatic Adjustment Environment.

Interval Time Setting

Weighing intervals of 2, 5, 10, 30 seconds and 1, 2, 5, 10 minutes in the Data Memory Function.

Auto Re-Zero

Re-Zeros automatically after data output

Large Stainless Steel Weighing Pan

384mm x 344mm for GP-12K/20K/22K/30K/30KS/40K/60K
386mm x 346mm for GP-100K/100KS/102K

Multiple Weighing Units & Programmable Unit

Uses programmable or standard units of measure (g, kg, lb, OZ, ct, dwt, OZt, mom, TL, MS, tola and DS)

Air Bubble Leveling

Easily check the balance for level installation

SmartRange

For more accurate weighing, SmartRange function is provided on the GP22K (6.1kg x 0.1g/21kg x 1g) and GP-102K (61kg x 1g/101kg x 10g).

Built-In Internal Calibration Mass

The GP has a built-in internal calibration mass. Internal calibration mass is equivalent to a 50kg calibration mass in terms of top loading capacity on the weighing pan.

OFF Display Auto Power OFF

Display turns off after 10 minutes of inactivity, which can be disabled when not needed.

Auto Power ON

Plug it in and it turns ON without pressing the ON/OFF key.

Specifications

		GP-12K	GP-20K	GP-22K	GP-30K GP-30KS	GP-40K	GP-60K	GP-100K GP-100KS	GP-102K
Models									
Weighing Capacity		12kg	21kg	21kg	31kg	41kg	61kg	101kg	101kg
Resolution		0.1g		1g/0.1g (Smart Range)	0.1g	0.5g	1g		10g/1g (Smart Range)
Repeatability (Standard Deviation)		0.1g		0.5g/0.1g	0.1g	0.5g	0.7g	1g	5g/1g
Decimal ounce (oz)		423.290 x 0.005	740.755 x 0.005	740.75x0.05(0.005)	1093.495 x 0.005	1446.24 x 0.02	2151.70 x 0.05	3562.65 x 0.05	3562.5 x 0.5(0.05)
Troy ounce (ozt)		385.810 x 0.005	675.170 x 0.005	675.15x0.05(0.005)	996.673 x 0.005	1318.18 x 0.02	1961.20 x 0.05	3247.25 x 0.05	3247.0 x 0.5(0.05)
Pennyweight (dwt)		7716.2 x 0.1	13503.3 x 0.1	13503.0 x 1(0.1)	19933.5 x 0.1	26363.5 x 0.5	39224 x 1	64945 x 1	————
Carat (ct)		60000.0 x 0.5	105000.0 x 0.5	105000 x 5(0.5)	155000.0 x 0.5	205000 x 5	305000 x 5	505000 x 5	————
Momme (mom)		3200.00 x 0.05	5600.00 x 0.05	5600.00 x 0.5(0.05)	8266.65 x 0.05	10933.4 x 0.2	16266.5 x 0.5	26933.5 x 0.5	26935 x 5(0.5)
Pound (lb)		26.4555 x 0.0005	46.2970 x 0.0005	46.295x0.005(0.0005)	68.3435 x 0.0005	90.390 x 0.002	134.480 x 0.005	222.665 x 0.005	222.65x0.05(0.005)
Linearity		±0.2g		±1g/±0.2g	±0.2g	±1g		±2g	±10g/±2g
Stabilization Time		1.5 seconds (TYP at FAST mode)							
Accuracy just calibrated by internal mass		±1.0g			±1.5g		±5g	±10g	
Sensitivity Drift (10°C-30°C/50°F-86°F)		±3ppm/°C		±5ppm/°C	±3ppm/°C	±5ppm/°C	±6ppm/°C		±10ppm/°C
Operating Temperature		5°C to 40°C (41°F to 104°F), 85% RH or less (No condensation)							
Display Type		Vacuum Fluorescent Display (VFD)							
Display Refresh Rates		5 times/second or 10 times/second							
Weighing Units and Modes		g, kg, lb, L OZ, ct, dwt, OZt, mom, TL, MS, tola, DS and % and counting PCS [Weighing units g, ct, and dwt are not available on GP-102K]							
Counting Mode	Minimum unit mass	0.1g		1g	0.1g	0.5g	1g		10g
	Number of samples	10, 25, 50 or 100 pieces							
Percent Mode	Min. 100% reference mass	10g		100g	10g	50g	100g		1000g
	Min. 100% display	0.01%, 0.1%, 1% (automatically switches depening on the reference mass stored)							
Standard Interface		RS-232C Serial Interface with Windows Communication Tools (WinCT)							
Water & Dustproof Level		Complies with IP-65 (International Protect), covers the entire apparatus							
Weighing Pan		Stainless steel weighing pan (Wash down type) 384mm x 344mm (15.09 x 13.52 inches)					386mm x 346mm (15.17 x 13.60 inches)		
Calibration		Motor-driven internal calibration mass with SHS							
External Dimensions		372(W)x615(D)x130(H)mm (14.62 x 24.17 x 5.11 inches) (Note: GP-30KS is 344(W)x442(D)x130(H)mm)						373(W)x615(D)x130(H)mm (14.66 x 24.17 x 5.11 inches) (Note: GP-100KS is 346(W)x443(D)x130(H)mm)	
Power Consumption		Approximately 14VA (supplied by AC adaptor)							
Net Weight		Approximately 17kg (37.5 lb)						Approximately 18kg (39.8 lb)	

Options

- GP-04: Comparator Output (Relay with Buzzer) / RS-232C / Current Loop
- GP-06: Analog/Current Loop Output
- GP-07: 5-meter connection cable(factory option)
(For GP-30KS & GP-100KS)
- GP-20: Underhook
(For GP-12K/20K/22K/30K/30KS and GP-40K)
- GP-21: Underhook
(For GP-60K/100K/100KS and GP-102K)
- GP-22: AD-8121 Printer Support

Accessories

- AX-KO1710-200: RS-232C cable (25P-9P)
- AX-SW-128: Foot Switch

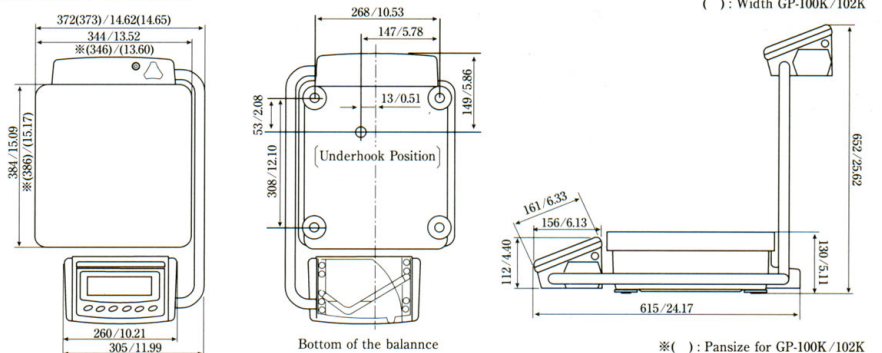
Peripherals (sold separately)

- AD-1682: Rechargeable Battery Unit
- AD-8920: Remote Display
- AD-8121A: Dot Matrix Compact Printer
- AD-8118A/B: Universal Printer



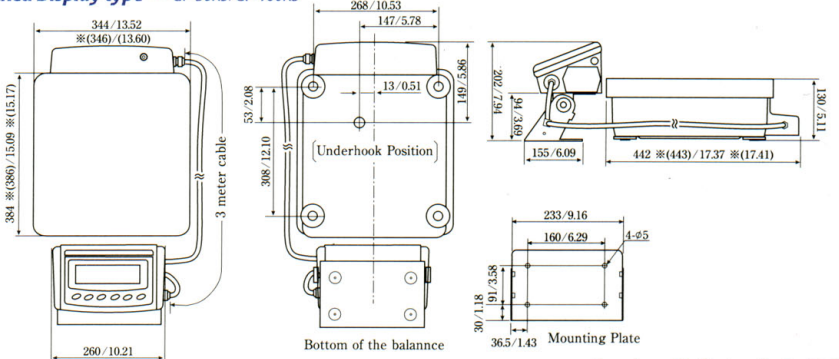
AD-1682: Rechargeable Battery Unit

Dimensions (mm/inch)



Swing Arm-Display type

Detached Display type — GP-30KS/GP-100KS



Specifications subject to change for improvement without notice.

Dimensions with () are for the GP-100KS