GP
Series

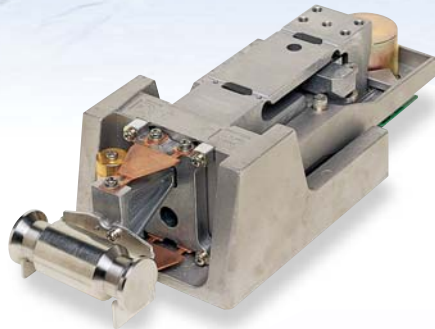**The new contender in the industrial balance field**

A&D WEIGHING

...Clearly a Better Value

The GP Series incorporates our enhanced weighing sensor, the 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 the 12kg to 101kg capacities class.

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, the balance is calibrated very quickly.

■ Automatic Self Calibration – Self-calibrates automatically when the balance detects ambient temperature changes.

■ One Touch Automatic Calibration – Allows you to calibrate the balance on demand with just the push of a 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-30K for example, the weight might change by 0.9g 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.
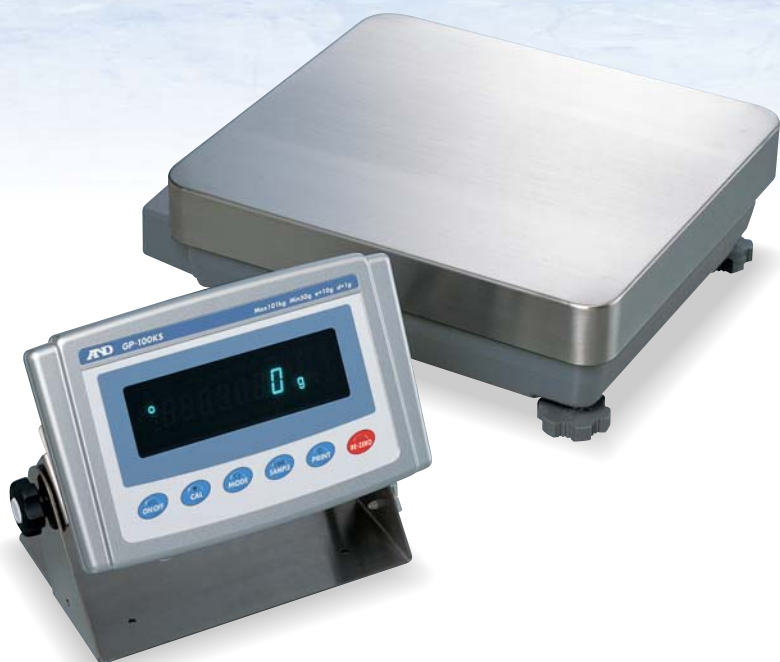
Standard WinCT

WinCT (Windows Communication Tools Software), provides easy transmission of weighing data from A&D balances to a computer using the RS-232C interface. Speed of data transfer into Windows applications in a manageable format is 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 a GP balance. This also makes your GP balance hot-swappable meaning that there is no need to turn the balance and/or computer off before disconnecting the balance.

GP-S

with detached display unit

GP-30KS —— (31kg/0.1g)
GP-32KS — (6.1kg/0.1g* · 31kg/1g)
GP-60KS — (61kg/1g)
GP-61KS — (61kg/0.1g)
GP-100KS — (101kg/1g)

SHS Super Hybrid Sensor	Super Hybrid Sensor
888 VFD Display	Vacuum Fluorescent
FDC Full Digital Calibration	Full Digital Calibration
GLP	Complies with GLP/GMP format
RS-232C STANDARD	RS-232C Serial Interface
IP65	IP-65 resistant to water & dust
COMPARATOR	HI/OK/LO Comparator
ACAI Automatic Counting Accuracy Improvement	Automatic Counting Accuracy Improvement
WinCT	Windows Communication Tools Software
OFF	Display Auto Power OFF
Internal Calibration **CAL**	Internal Calibration
DDU	Detachable Display Unit

GP Series

with Swing Arm display type

GP-12K	(12kg/0.1g)	GP-60K	(61kg/1g)
GP-20K	(21kg/0.1g)	GP-61K	(61kg/0.1g)
GP-30K	(31kg/0.1g)	GP-100K	(101kg/1g)
GP-32K	(6.1kg/0.1g* · 31kg/1g)	GP-102K	(61kg/1g* · 101kg/10g)
GP-40K	(41kg/0.5g)		

*SmartRange

The GP-32K/KS and GP-102K have both precision and standard ranges. The precision range has a higher resolution and the standard one has a normal resolution. Pressing the RE-ZERO key allows weighing in the precision range, regardless of the tare value. The **SmartRange** function enables you to weigh or add samples in the precision range without removing the container and/or those objects that have been placed on the pan.

strial Balances...

Swing Arm Display

Compliant with IP65 **IP65**
(resistant to dust, water and moisture)

Clear & Large VFD Display

888
VFD Display *Easy to see – even in the dark / Wide angle view prevents mistakes*

ANIMAL

Animal Weighing Mode allows you to quickly and accurately determine the weight of any live or unstable subject. Optional animal weighing pan (GP-12) is available.

ACAI
Automatic Counting Accuracy Improvement

Automatic Counting Accuracy Improvement (ACAI) is a novel and useful approach to ensuring the utmost in performance when counting even the smallest of items. ACAI automatically updates and refines the average piece weight used to determine the total quantity.

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

Manual Response Adjustment can be set by pressing the MODE key and response speed can be adjusted to FAST, MID or SLOW.

Percentage Function facilitates an effective and quick comparison of a sample or commodity against a known reference mass.
Simply place an object on the pan to register its weight as 100%. Place another object on the pan to compare its weight in percentage mode.

COMPARATOR

Standard Comparator Function offers increased flexibility and compatibility for a vast number of applications. You can input a target weight and weigh heavier or lighter items using either the keyboard or by placing samples on the pan. HI, OK or LO will be indicated on the display to show the comparison results.

Overall Capacity Indication is a unique and helpful feature. By indicating how much of the balance's capacity has been filled, the risk of overloading the balance is minimized.

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-8121B printer or a PC, indicating date, time, Balance ID number, serial number and calibration data.

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

RS-232C STANDARD Standard RS-232C

Bi-directional communication with a PC or direct connection 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/30K/32K/40K/30KS/32KS
• GP-21 Underhook for GP-60K/61K/100K/102K/60KS/61KS/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

Press the MODE key during usual HI, OK or LO indication to switch the display 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 then 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 and independently checks 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/30K/32K/40K/60K/61K 30KS/32KS/60KS/61KS
386mm x 346mm for GP-100K/102K/100KS

Multiple Weighing Units & Programmable Unit

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

Air Bubble Leveling

Easy to adjust the level of the balance

SmartRange

For more accurate weighing, SmartRange function is provided on the GP-32K/GP-32KS (6.1kg x 0.1g/31kg 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

Models	GP-12K	GP-20K	GP-30K GP-30KS	GP-32K GP-32KS	GP-40K	GP-60K GP-60KS	GP-61K GP-61KS	GP-100K GP-100KS	GP-102K
Weighing Capacity	12kg	21kg	31kg	31kg/6.1kg	41kg	61kg	61kg	101kg	101kg/61kg
Resolution	0.1g			1g/0.1g (Smart Range)	0.5g	1g	0.1g	1g	10g/1g (Smart Range)
Repeatability (Standard Deviation)	0.1g			0.5g/0.1g	0.5g	0.7g	0.2g	1g	5g/1g
Linearity	±0.2g			±1g/±0.2g	±1g		±0.5g	±2g	±10g/±2g
Stabilization Time	1.5 seconds (TYP at FAST mode)								
Accuracy just calibrated by internal mass	±1.0g		±1.5g	±1.0g	±1.5g	±5g	±3.0g	±10g	
Sensitivity Drift (10˚C-30˚C/50˚F-86˚F)	±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)								
Sensing Method	Super Hybrid Sensor (SHS)								
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, 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	0.5g	1g	0.1g	1g	10g
Counting Mode — Number of samples	10, 25, 50 or 100 pieces								
Percent Mode — Min. 100% reference mass	10g			100g	50g	100g	10g	100g	1000g
Percent Mode — 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)								
Recommended External Calibrating Weight	5kg 10kg	10kg 20kg	20kg 30kg	20kg 30kg	20kg 30kg 40kg	30kg 40kg 50kg 60kg	20kg 30kg 40kg 50kg 60kg	60kg 80kg 100kg	
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							386mm x 346mm	
Calibration	Motor-driven internal calibration mass with SHS								
External Dimensions	372(W)x615(D)x130(H)mm (Note: GP-30KS is 344(W)x442(D)x130(H)mm)							373(W)x615(D)x130(H)mm (Note: GP-100KS is 346(W)x443(D)x130(H)mm)	
AC Adaptor	Please confirm that the adapter is correct for the local voltage and power receptacle.								
Power Consumption	Approximately 14VA (supplied by AC adaptor)								
Net Weight	Approximately 17kg							Approximately 18kg	

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/32KS/60KS/61KS & GP-100KS)

GP-12: Animal Weighing Pan (288 x 360 x 317mm)

GP-20: Underhook
(For GP-12K/20K/30K/32K/40K/30KS and GP-32KS)

GP-21: Underhook
(For GP-60K/100K/102K and GP-100KS)

GP-22: AD-8121B Printer Support

Accessories

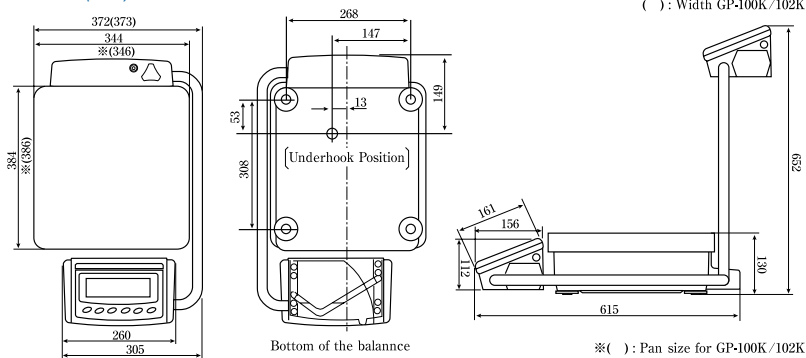AX-KO1710-200: RS-232C Cable (25P-9P)
AX-SW-128: Foot Switch

Peripherals (sold separately)

AD-1682 : Rechargeable Battery Unit
AD-8118B: Universal Printer
AD-8121B: Dot Matrix Compact Printer
AD-8526 : Ethernet Converter
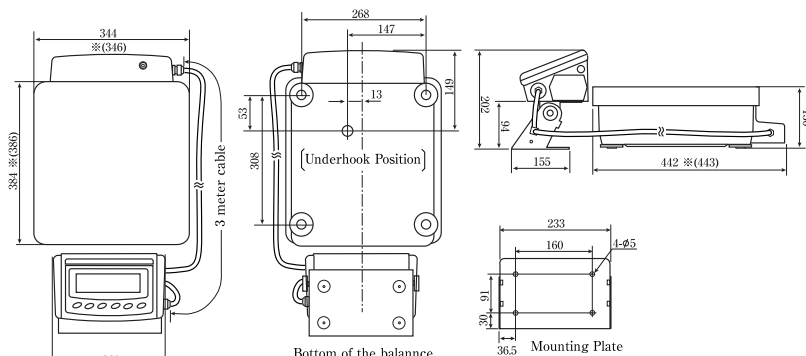AD-8920 : Remote Display
AD-8922 : Remote Controller

AD-8121B:
Dot Matrix Compact Printer

Specifications subject to change for improvement without notice.

Dimensions (mm)

( ) : Width GP-100K /102K

Bottom of the balannce

※( ) : Pan size for GP-100K /102K

Swing Arm-Display type

Detached Display type —— GP-30KS/GP-32KS/GP-60KS/GP-61KS/GP-100KS

Bottom of the balannce

Mounting Plate

Dimensions with ※( ) are for the GP-100KS