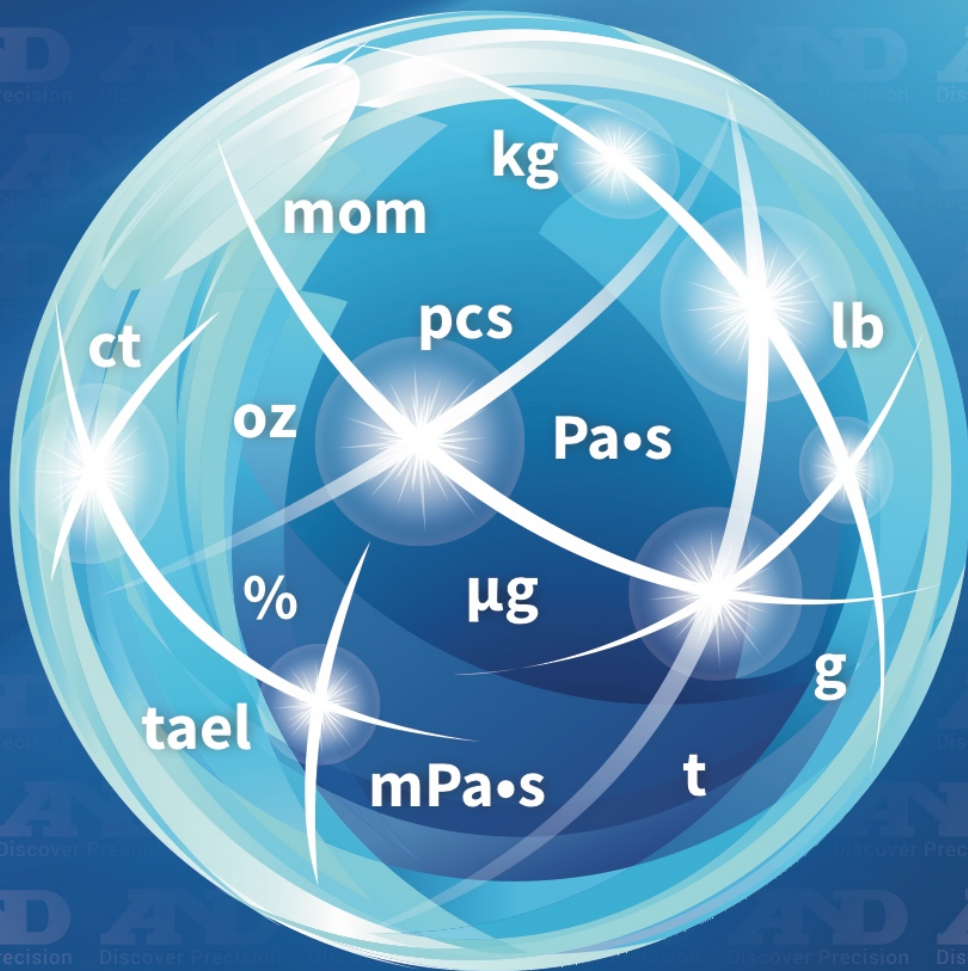




Product Catalogue



Quality, Innovation and Customer Orientation

A&D is a global manufacturer of innovative measuring, monitoring, control and test instruments. Since its founding in 1977, A&D has developed and distributed a multitude of high-quality products through constant innovation, always creating a value for users of such products.














































Warranty...

For each product, the warranty given in this catalog is: 4 years (e.g. for products with SHS sensor), 3 years or 1 year. The warranty is 1 year for all options and accessories.

Consultation...

We can help you find the best solution for your application. Give us a call.

Key feature index

 <p>Accumulation (M+) Function Sums the weighing results and displays the total value</p>	 <p>Flow Rate Display</p>	 <p>Percentage Function Displays the weight value as a percentage of a stored reference mass</p>
 <p>Animal Weighing (Hold) Function Helps measure and record the weight of a moving object such as an animal by averaging fluctuation</p>	 <p>GLP/GMP/GCP/ISO Compliant Output Outputs the manufacturer, model, serial number, ID number, space for signature, calibration records, etc., for documentation requirements</p>	 <p>Quick USB Interface Transfers weighing data to a PC USB port (one way) requiring no special software installation</p>
 <p>Auto Power ON Function Activates the weighing mode display automatically when plugged in</p>	 <p>Impact Shock Detection</p>	 <p>Rechargeable Battery Operation Works with a built-in rechargeable battery unit</p>
 <p>Auto Power OFF Function Turns off the display automatically after a period of inactivity to save power</p>	 <p>Intrinsic Safety</p>	 <p>Reverse-backlit Liquid Crystal Display Provides a bright, high contrast that is extremely easy to read and less stressful on the eyes</p>
 <p>Buzzer</p>	 <p>IP54 Dust and Waterproof</p>	 <p>RS-232C Serial Interface Outputs data to and receives commands from a PC, printer, data logger, etc.</p>
 <p>Calibration with External Weight Requires an external weight for calibration</p>	 <p>IP65 Dust and Waterproof Permits no infiltration of dust and withstands water jetting from any direction</p>	 <p>Smart Range Function Automatically switches between the precision and standard ranges, and recovers the full precision range with a press of the RE-ZERO (tare) key</p>
 <p>Calibration with Internal Weight Enables you to ensure balance accuracy with just one key press</p>	 <p>IP67 Dust and Waterproof</p>	 <p>Software Data management software available</p>
 <p>Clock and Calendar Function Adds time and date information to output data</p>	 <p>IP68 Dust and Waterproof Permits no infiltration of water while immersed to a depth of 1 meter for 24 hours</p>	 <p>Statistical Calculation Function Displays and outputs statistical calculation data including number of data, sum, max, min, range (max - min), mean, standard deviation and coefficient of variation</p>
 <p>Comparator Function Compares weight values within set limits and makes pass/fail judgments</p>	 <p>IP69K Dust and Waterproof Withstands heavy-duty washdown with high-pressure (8,000 to 10,000 kPa) and high-temperature (80 ± 5 °C) water from up close (100 to 150 mm)</p>	 <p>Super Hybrid Sensor / Compact Super Hybrid Sensor Simultaneously achieves precision, speed and stability, as well as ease of maintenance</p>
 <p>Counting Function Displays the number of pieces based on their individual unit weight</p>	 <p>LAN-Ethernet Interface (with WinCT-Plus software) Enables acquiring data from and sending commands to multiple weighing instruments</p>	 <p>Underhook Enables magnetic, hot, or contaminated materials to be changed for weighing or for density measurements</p>
 <p>Counting Function with Automatic Counting Accuracy Improvement Displays the number of pieces based on their individual unit weight while automatically optimizing the accuracy of the unit weight</p>	 <p>LED Display Provides a wide viewing angle and colorful display, allowing quick, intuitive judgments</p>	 <p>Universal Flexi Coms Function Enables editing of serial data output format or printout format</p>
 <p>Data Memory Function Stores weighing data, calibration results, unit masses, upper/lower limits, preset tares, etc., for easy recall or output</p>	 <p>Liquid Crystal Display Provides a sharp-cut, energy-saving display</p>	 <p>USB Host Interface Save weighing and calibration data directly to the USB stick.</p>
 <p>Disabling Keys</p>	 <p>Liquid Crystal Display with Backlight Ensures visibility in a dimly-lit area</p>	 <p>USB Interface Can be configured in 2 modes: - Quick USB (see icon) - bi-directional USB (requires PC driver installation)</p>
 <p>EC Type Approval Includes models that are legal for trade in the member countries of the European Union</p>	 <p>Normal Battery Operation Works with off-the-shelf battery cells</p>	 <p>User Access Control The balance can be password protected for the administrator and up to 10 operators.</p>
 <p>Electronically Controlled Load</p>	 <p>NSF Compliant Meets food protection and sanitation requirements as established by NSF International</p>	 <p>Vacuum Fluorescent Display Provides clear and wide-angle visibility even in a dimly-lit area</p>

The A&D Story

About A&D Company, Japan

Founded in Japan in 1977 by 13 engineers...

A&D (which stands for Analog & Digital) was founded in Japan in 1977 by a group of 13 engineers led by Hikaru Furukawa. The company began by manufacturing and distributing analog-to-digital converters and multimeters. In 1982 the company entered the electronic balance marketplace by acquiring a Japanese scale and balance company.

Today, although focused on our core weighing business, A&D has expanded into many new business areas all developed around our core competence of analog to digital conversion technology. Other business units include Professional and Home Healthcare, Measurement, Control and Simulation systems for among others the automotive industry. Electron Beam and D/A convertors and a diverse range of measurement instrumentation for, among other things, materials testing, non-destructive testing and noise and vibration analysis.

Since A&D was established we have adopted and implemented a global business strategy. We have developed a global network of subsidiary and distribution offices which is still growing today. At the same time strategic acquisitions have enriched our product portfolio, which is the key to further expand our global presence. A&D currently manufacture products in five countries delivering on-time supply across the globe to our regional subsidiary warehouses.

A&D employs some 3,500 people globally, R&D, design, manufacturing, selling and supporting our products. Our products are tailored to the needs of each local market to ensure conformity with local regulations and the industry standards for the region.

Through our global network of offices we offer our product to market through our dedicated and in many cases longstanding and loyal distribution partners. These partners offer pre and post sales product support and on-site services to the local customer base, supported of course by our own in-house service and technical support teams.

A&D adhere to standards based quality management systems to ensure both product and process quality.

A&D hold numerous patents which have been applied across the product ranges.

About A&D Instruments Ltd

Established in 1991 as a subsidiary office of A&D Company, Japan, A&D Instruments Ltd is the sales, distribution and support office for Europe. From our UK offices we support a network of dealers and distributors across Europe, primarily supporting our Scientific & Industrial Weighing & Measuring systems and Professional & Home Healthcare products. In addition to our UK head office we also have a German subsidiary office directly supporting one of our biggest single markets for weighing products. As well as supporting our dealers and distributors on-site our German sales representatives also regularly attend exhibitions across the region, all ably supported by our German speaking back office team.

As well as maintaining a fully stocked warehouse delivering short delivery times across Europe, we also offer aftersales service, technical support and maintenance training backup from our UK based technical service workshop.



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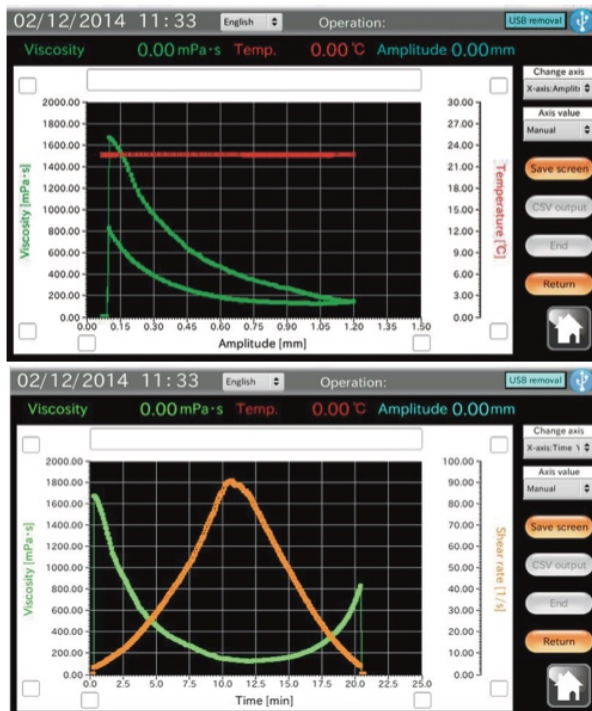
Laboratory Solutions

RV Tuning Fork Vibro Rheometer

RV-10000/A



RV-10000A



- Wide measurement range from 0.3 mPa.s - 25,000 mPa.s
- Simultaneous measurement of temperature and viscosity
- Repeatability as high as 1% of the measured value even with low viscosity sample fluids
- Quick measurement in only 20 seconds
- Low thermal capacity of the sensor plates
- Adjustable vibration amplitude to allow changing the shear rate
- Measurement of liquids in motion
- Easy calibration by the user
- The sensor plates are easy to clean
- LCD Display with 7-inch, colour touch-panel (RV-A)
- Can automatically change the amplitude of the sensor plates, and take data as programmed by the user (RV-A)
- Displays graphs of measurement data in real time
- Changes in the viscosity are shown as a function of temperature, time, and/or shear rate*
- The RVA model comes with a special controller enabling:
 - » Automatically changing the amplitude (shear rate) and capturing data in the manner set by the user
 - » Real time graphing of viscosity variation with time, temperature and shear rate
 - » Saving results (in CSV format) and graph screens (as JPEG images) in USB flash drives



* The shear rate shown by the controller is a root-mean-square value and is calculated assuming that the sample is a Newtonian fluid.

RV Tuning Fork Vibro Rheometer

RV-10000/A



Two thin sensor plates arranged like a tuning fork, and electromagnetically driven, vibrate at a frequency of 30Hz in the sample liquid.

Viscosity is then calculated based on the proportional relationship between the viscous resistance of the sample fluid and the amount of electric current required to drive and maintain the sensor plates at constant vibration amplitude.

The sensor plate amplitude of the RV-10000/A can be altered between the minimum of 0.07 mm and the maximum of 1.2 mm (peak to peak), while the frequency is kept at 30Hz, which will cause a variation in shear rate.

This allows the user to easily quantify the viscous behaviours of non-Newtonian fluids in response to different shear rates.

A temperature sensor (0 to 160 °C) located between the sensor panels enables to capture the measuring temperature at the same place during the measurement.

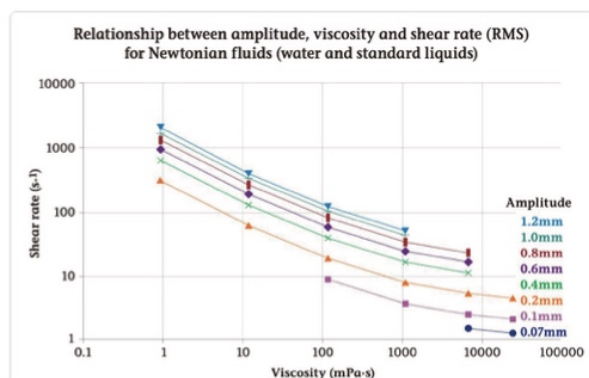
In addition, the sample may be placed in the supplied water jacket with a commercially available temperature control tank, to control the temperature (between 0 and 100 °C) of the sample fluid in order to measure the viscosity at a constant temperature or to see how the viscosity varies with changing temperature.

WinCT - Viscosity (supplied) is software for automatic transfer of the measurement data (temperature and viscosity) to allow further processing. The measurement results can be graphically displayed in real time or can be stored as a "CSV file" for future analysis.

Sensor plates (close up)

Model	Measurement Range	Units
RV-10000	0.3 – 25000 mPa·s	mPa·s, Pa·s, cP, P
RV-10000A	0.3 – 25000 mPa·s	mPa·s, Pa·s, cP, P

Options & Accessories for RV-10000 and RV-10000A	Model
Sample cup, 35-45ml, polycarbonate (pack of 10)	AX-SV-33
Sample cup, 10ml, with cover, polycarbonate (pack of 10)	AX-SV-34
Sample cup, 13ml, glass	AX-SV-35
Positioning stopper	AX-SV-36
Water jacket (1 water jacket, 4 x 10ml-cups with cover)	AX-SV-37
Storage container, 60ml, glass (pack of 10)	AX-SV-38
Storage container 120ml, polycarbonate (pack of 20)	AX-SV-39
Analog voltage output (0-1V)	AX-SV-42
5m display extension cable	AX-SV-43
Tabletop anti-vibration table	AD-1671A
Cup set:	AX-SV-54
5 x 45ml sample cup, polycarbonate	
5 x 10ml sample cup, polycarbonate, 5 x cover for 10ml sample cup	
2 x 13ml sample cup, glass, 1 x holder (stainless steel) for 13ml sample cup	
1 x Water jacket, polycarbonate	



SV Vibro Viscometers



SV-10/100

Viscosity Revolution!

Sine-wave Vibro Viscometers. Technology: The SV measures viscosity by detecting the driving current necessary to resonate two sensor plates at a constant frequency of 30 Hz and amplitude of less than 1mm.

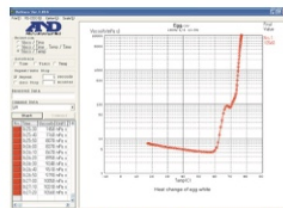
- Small sample
- Simplicity
- Repeatability
- Speed
- Wide measuring range
- Measurement of very low viscosities

Specifications	SV-10	SV-100	SV-1A
Measurement method	Sine-wave Vibro Viscometer using tuning fork vibration method (30Hz)		
Measurement range	0.3~10000 mPa.s	1000~100000 mPa.s	0.3~1000 mPa.s
Units	mPa.s, Pa.s, cP, P	Pa.s, P	mPa.s, Pa.s, cP, P
Accuracy	Repeatability of 1% of the displayed value (S.D., 20~30°C, no condensation)		
Sample size	10ml~	10ml~	2ml~
Temperature range	0~160°C / precision 0.1°C		
Display	Vacuum Fluorescent Display		
Power supply	AC adapter (approx.14VA)		

WinCT-Viscosity Software

The module RsVisco was developed for the transmission of real-time viscosity and temperature measurement results from the SV series to a PC. The results are displayed in a graph format with scaling conversion and logarithm display functions available. The user can save the measurement data as a "CSV" file and open it using RsVisco or MS-Excel. The module RsKey transfers measurements directly into an application such as MS-Excel.

RsCom sends commands and can be used for remote control of the viscometer.



Characterization of change of state, log display - viscosity vs. temperature

- Wide measurement range: 0.3 – 10,000mPa.s for SV-10, and 1,000 – 100,000mPa.s for SV-100
- Measurement of very low viscosities (down to 1/3 of water viscosity!)
- Temperature measurement from 0 to 160° C
- Fast measurements: 1st result within 15 seconds, and refresh in real time
- Possible continuous measurements in order to characterize changes of state
- High precision with a repeatability of $\pm 1\%$ of displayed value
- Small size sample: cups of 35ml, 13ml, 10ml, and even tubes of 2ml (with SV-1A)
- Possibility to do measurements directly into your containers: beakers, product packages...
- Low mechanical impact: preservation of sample characteristics and its texture
- Negligible thermal impact
- Measurements possible on foaming samples, on foam itself, on flowing or agitated samples
- Simple operation: no configuration - just push the start button
- Easy cleaning
- WinCT-Viscosity software for data acquisition on PC, graphic display of curves, and data archiving (viscosity curves against temperature or time)
- Calibration (judgement and even adjustment) of viscosity possible by the user: 1 or 2 points
- Simplified and automated calibration (including adjustment) with pure water (SV-10)
- Temperature control of sample with water jacket option (AX-SV-37) or other methods

SV Vibro Viscometers



Standard accessories for SV-1A



Standard accessories delivered with SV-10/SV-100:

4 x 35ml-sample cup (polycarbonate), WinCT-Viscosity software, RS-232C interface and cable.

Standard accessories delivered with SV1-A:

10 x 2ml-sample tubes with lid (polycarbonate), 5 x 35ml-sample cup (polycarbonate), 10 x 2ml-sample tubes (glass), 5 x holders for 2ml-sample tubes: 3 in black and 2 transparent, 1 rack for 2ml-sample tubes, 1 water jacket (polycarbonate), for temperature control, WinCT-Viscosity software, RS-232C interface and cable, USB adapter

SV-1A: miniaturized sensor

2ml sample measurements (SV-1A)

Model	Measurement Range	Unit
SV-10	0.3 — 10000 mPa·s	mPa·s, Pa·s, cP, P
SV-100	1 — 100 Pa·s	Pa·s, P
SV-1A	0.3 — 1000 mPa·s	mPa·s, Pa·s, cP, P

Options & Accessories for SV-10, 100, 1A	Model
Sample cup, 35-45ml, polycarbonate (pack of 10)	AX-SV-33
Small sample cup, 10ml, with cover, polycarbonate (pack of 10)	AX-SV-34
Sample cup, 13ml, Glass	AX-SV-35
Positioning stopper	AX-SV-36
Water jacket (1 water jacket, 4 x 10ml-cups with cover)	AX-SV-37
Storage container, 60ml, glass (pack of 10)	AX-SV-38
Storage container, 120ml, plastic (pack of 20)	AX-SV-39
Analog voltage output (0-1V)	AX-SV-42
Extension cable (5m) between the main unit and the display	AX-SV-43
Tube holders for 2ml cups, polycarbonate (5pc: 2 transparent, 3 black)	AX-SV-56*
Rack stands for 2ml tubes (2 pcs)	AX-SV-57*
Sample tube, 2ml with lid, polycarbonate (pack of 100)	AX-SV-58*
Rack stand and 5 glass sample-cups (2ml)	AX-SV-59*

*only for SV-1A



MS-70/MX-50/MF-50/ML-50 Moisture Analyzers



Simple operation



Easy sample handling



Quick reference card

SRA Filter

A&D Innovation,
maximizing
uniform heating of
the sample

SHS Sensor

A&D Innovation,
robust, reliable
and fast weighing



ML-50

Specifications	MS-70	MX-50	MF-50	ML-50
Measurement method	400W straight halogen lamp heating system with SRA-filter and SHS weighing technology			
Max. sample weight capacity	71g		51g	
Weighing resolution	0.0001g	0.001g	0.002g	0.005g
Moisture content display	0.001%/0.01%/0.1%	0.01%/0.1%	0.05%/0.1%/1%	0.1%/1%
Accuracy over 1g	0.05%	0.10%	0.20%	0.5%
Accuracy over 5g	0.01%	0.02%	0.05%	0.1%
Heating technology	Halogen lamp (straight type, 400 Watt, 5000 hours)			
Drying temperature	30 — 200°C		50 — 200°C	
Measurement programs	Standard mode / automatic complete mode / timer mode / manual mode / quick mode			
Units	Wet base / dry base / solid content / ratio / weight			
Display type	Vacuum fluorescent			
Sample pan size	Ø 85mm			

- Fast and uniform heating with halogen lamp and uniquely designed "SRA" filter that avoids hot spots
- High repeatability with SHS technology (Super Hybrid Sensor)
- Sodium Tartrate Dihydrate for accuracy verification
- Calibration function for the heating temperature with optional MX/MF-OP-43 (for MS & MX)
- Memory function (to be able to save/recall configurations as well as measurement results)
- Five measurement programs (standard, automatic, quick, timer and manual mode)
- Four heating modes (standard, quick, step and ramp mode) (not ML)

- Large and easy to read VFD display
- Standard RS-232C interface
- Measurement of liquid or solid content



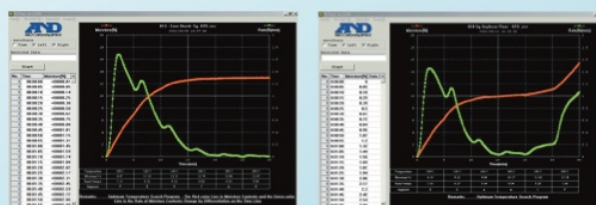
Standard functions



Moisture Analyzers

WinCT-Moisture Software

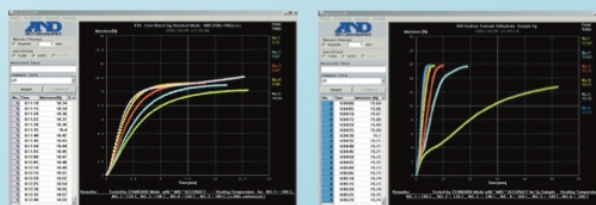
With our WinCT-Moisture software, data measured by the moisture analyzers can be easily displayed on your computer. You can animate analysis curves in real time (module RsFig), control the equipment from your PC (RsCom) and transfer measurement results directly into MS Excel or MS Word (RsKey). WinCT-Moisture allows testing of new sample types in order to determine the best measurement parameters such as heating temperature (RsTemp). This function is very useful to reduce the measurement time and to improve accuracy.



Corn starch

Soybean flour

The example shows multiple measurements by using the RS-Fig graphical software:



Corn starch

Sodium tartrate dihydrate

WinCT measurement graphs

Model	Description
MS-70	Moisture analyzer 71g × 0.1mg
MX-50	Moisture analyzer 51g × 1mg
MF-50	Moisture analyzer 51g × 2mg
ML-50	Moisture analyzer 51g × 5mg

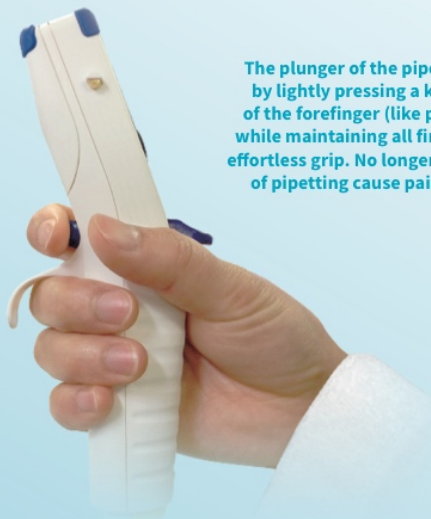
Options & Accessories	Model
Single-use sample pans (Ø 83mm, pack of 100)	MX/MF-OP-30
Re-usable sample pans (pack of 100)	MX/MF-OP-31
Glass fibre sheets Ø 70 mm (pack of 100)	MX/MF-OP-32-1
Glass fibre sheets Ø 78 mm (pack of 100)	MX/MF-OP-32-2
Sodium tartrate dihydrate (12 × 30g)	MX/MF-OP-33
Halogen lamp	MX/MF-OP-34-240V
Halogen lamp	MX/MF-OP-34-120V
Pan handle (pack of 2)	MX/MF-OP-35
Tweezers (pack of 2)	MX/MF-OP-36
Spoon (pack of 2)	MX/MF-OP-37
Transparent plastic covers (5 pcs)	MX/MF-OP-38
Dust cover	MX/MF-OP-39
RS-232C cable (9-25 pin connectors, 2 meters)	MX/MF-OP-40
WinCT-Moisture software CD	MX/MF-OP-42
Temperature calibrator (for MS-70 and MX-50)	MX/MF-OP-43

- WinCT-Moisture displays moisture rate changes over time in a real-time animated graph (RsFig)
- Measures moisture rate in shortest time with excellent accuracy
- Shows sample data summary: configuration description and measurement results
- Calculates measurement data statistics
- Saves the recorded data as a CSV file



MPA Series

Single Channel Electronic Pipettes



The plunger of the pipette is controlled by lightly pressing a key with the ball of the forefinger (like pulling a trigger), while maintaining all fingers in a natural, effortless grip. No longer will hours or days of pipetting cause pain in your thumb



Stress-minimized, pain-free operation:

Reduced physical stress due to ergonomic operation. The use of an electronic pipette requires minimal power, and keeps the strain on your hand as low as possible. The degree of fatigue compared to a manual pipette is very low.



With padding set on the four corners of the head, the pipettes of the MPA series are protected from impacts and falls.

- Automatic operation assuring accuracy for everyone at all times
- Calibration and display by either volume (µL/mL) or weight (mg)
- Multiple dispensing (MD) mode with automatic initial volume correction (pre-dispensing)
- Mixing (MIX) mode for homogenizing solutions
- Reverse operation for accurately dispensing viscous samples
- Aspirating/dispensing speeds adjustable to 5 levels
- Easy calibration (adjustment) by yourself – user CAL function
- Accurate pipetting possible with other manufacturers' tips



Accessories	Model
Tip box for the MPA-10/20/200*3	AX-BOX200A
Tip box for the MPA-1200*3	AX-BOX1200A
Tip box for the MPA-10/20/200 (without lid)*3	AX-BOX200B
Tip box for the MPA-1200 (without lid)*3	AX-BOX1200B
10 trays x 96 tips/tray for the MPA-10/20	AX-CART-10/20
10 trays x 96 tips/tray for the MPA-200	AX-CART-200
10 trays x 96 tips/tray for the MPA-1200	AX-CART-1200
Set of 36 tips for the MPA-10000	AX-BULK-10ML-A
Tip box for the MPA-10000 (36 pcs)	AX-BOXT-10ML-A
Set of 36 sterilized tips for the MPA-10000	AX-BOXT-10ML-AS
Stainless steel stand (for up to three MPAs)	AX-ST-SUS
Acrylic stand (for up to two MPAs)	AX-ST-ACR
Charging hanger	AX-HA-CHG
Charging stand for single MPA	AX-ST-CH-A1
Charging stand for four MPAs	AX-ST-CH-M4
Lithium-ion rechargeable battery	AX-BAT-MPA
Lower part assembly for the MPA-10	AX-LOW-10
Lower part assembly for the MPA-20	AX-LOW-20
Lower part assembly for the MPA-200	AX-LOW-200
Lower part assembly for the MPA-1200	AX-LOW-1200
Lower part assembly for the MPA-10000	AX-LOW-10000
Set of 3 holders for sample tubes	AX-HOLDER-SET
Pipette elbow cushion	AX-PAD-MPA

*3 tips not included

Model	Volume Range	Accuracy
MPA-10	0.5 to 10.0µL	0.1 µL
MPA-20	2.0 to 20.0µL	0.1 µL
MPA-200	10 to 200µL	1.0 µL
MPA-1200	100 to 1200µL	1.0 µL
MPA-10000	0.1 mL to 10.0mL	0.01mL

AD-4212A/B-PT, FX-300i-PT Pipette Accuracy Testers



- Compliant to ISO8655 for “gravimetric methods”
- Three models covering a wide volumetric range from 1µg to 1mg
- The innovative SHS Sensor enables very fast measuring and quick stabilisation time, and therefore increases productivity when testing pipettes
- Data evaluation and control of the balance with “WinCT-Pipette” software
- Standard liquid thermometer for precise mass-to-volume conversion
- Standard calibration weight and tweezers to maintain the balance accuracy included



Specifications	AD-4212B-PT	AD-4212A-PT	FX-300i-PT
Capacity	110g/31g/5.1g	110g	320g
Min. weighing value	0.1mg/0.01mg/1µg	0.1mg	1mg



Standard functions



AD-1690 Leak Tester

For quick screening of pipettes for air tightness!



- Quick testing in less than 5 seconds
- Leak detection by depressurization ensuring no dust enters the object being measured
- Replaceable air filter to protect the AD-1690 from dust when it intakes air
- RS-232C interface to output data to a PC or an A&D peripheral device
- Three types of attachments to cover micropipettes with capacities ranging from 2 µL to 10,000 µL



Model	Description
AD-1690	Leak-tester

Accessories	Model
Replacement tube set (adapter × 1, attachment × 3)	AD-1690-01
Replacement filter set (filter unit × 1, filter element × 10)	AD-1690-02
Carry case AD-1690	AD-1690-015

MC Mass Comparators

Precision Balance with Extended Resolution



MC-10K and auto-centering pan

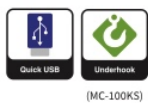
MC-6100

Model	Capacity	Resolution	Pan Size
MC-1000	1100g	0.0001g	128 × 128 mm
MC-6100	6100g	0.001g	165 × 165 mm
MC-10K	10.1kg	0.001g	270 × 210 mm
MC-30K	31kg	0.01g	270 × 210 mm
MC-100KS	101kg	0.01g	386 × 346 mm

Standard functions



Optional



- For management of masses in the OIML Class F1 or below
- Extra decimal place for monitoring fine weight changes with heavy tare weights
- Stabilizing filter to lessen errors due to drafts or vibrations
- Auto-centering pan to avoid corner-load errors and ensure higher accuracy (optional)
- Internal calibration mass for simplified calibration of the balance
- Equipped with a glass breeze break (MC-1000/6100) or simple breeze break as standard (MC-10K/30K)
- Fast stabilization of approx. 1.5 seconds
- GLP/GMP/GCP/ISO compliant output
- Large bright Vacuum Fluorescent Display
- Multiple weighing units of measurement



MC Mass Comparators



MC-100KS

MC-30K with auto-centering pan

Options & Accessories		Model
For MC-1000/6100	Auto-centering pan (MC-1000)	AX-MC1000PAN
For MC-1000/6100	Auto-centering pan (MC-6100)	AX-MC6100PAN
For MC-1000/6100	Quick USB interface with cable	GX-02
For MC-1000/6100	Comparator output with a buzzer/RS-232C/current loop*	GX-04
For MC-1000/6100	Analog output/current loop output	GX-06
For MC-1000/6100	Animal weighing pan	GX-12
For MC-1000/6100	Density determination kit (for MC-1000 only)	GX-13
For MC-10K/30K	Auto-centering pan (MC-10K/30K)	AX-MC10K/30KPAN
For MC-10K/30K	Comparator output with a buzzer/RS-232C/current loop**	GX-04K
For MC-10K/30K	Analog voltage output/current loop**	GX-06K
For MC-10K/30K	Waterproof RS-232C cable (5m)	GX-07K
For MC-10K/30K	Animal weighing pan	GXK-012
For MC-10K/30K	Carrying case	GXK-015
For MC-100KS	Comparator output with buzzer/RS-232C/current loop	GP-OP-04
For MC-100KS	Analog voltage output/current loop	GP-OP-06
For MC-100KS	5m display cable (factory fit)	GP-OP-07
For MC-100KS	Animal weighing pan	GP-OP-12
For MC-100KS	Underhook	GP-OP-21
For MC-100KS	AD-8121B printer support bracket	GP-OP-22
For all models	Weighing environment logger (temperature, humidity, pressure, vibration)	AD-1687

* GX-04 and GX-06 are factory installed options.

** GX-04K, GX-06K, and the standard RS-232C interface cannot be used at the same time. The MC-10K/30K are not IP65 compliant with these options

A&D

Discover Precision

The A&D Group has been celebrating its 40th anniversary in 2017 by adopting a new theme for the future: **Discover Precision.**

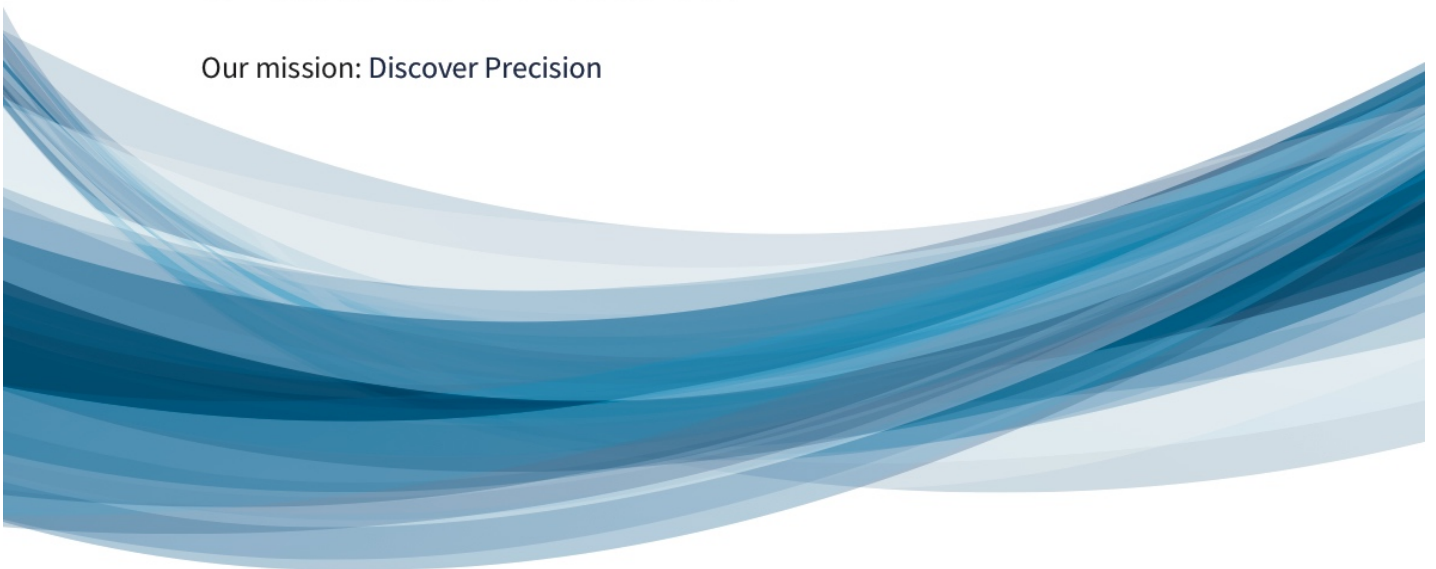
Throughout our history and as we look to the next era of growth, we will push forward to Discover new technologies and ways of doing business. We will aspire to develop more accurate measurement through our dedication to Precision, all while staying true to our principle of Honmono (authenticity).

Discover Precision means that we will play a leading role in bringing precision to the world while facing the important challenges that lead us to new discoveries.

As technology and business environments evolve, so too do the needs of customers and society. A&D is not satisfied to simply provide for the present, but rather will strive to become a pioneer for discoveries of the future needs of society.

We will continue to take on new and diverse business challenges through our advanced portfolio of high precision technologies and products that help to connect the analog with the digital world.

Our mission: Discover Precision





Laboratory Weighing

BM Micro Analytical Balances



BM-20

- Easy, fanless elimination of static electricity using a built-in ionizer
- Anti-static breeze break
- Large weighing chamber for improved usability
- Built-in temperature, humidity, and atmospheric pressure sensors
- Interlockable slide doors allowing efficient operation with both hands
- Motorized calibration with an internal mass:
 - » Automatically triggered based on temperature variation
 - » Triggered by operator
- Clearly visible, white-backlit LCD
- Memory: up to 200 data sets
- AD-1688 as standard accessory: dedicated USB key to record weighing data as well as environmental parameters into MS Excel readable files
- 12 weighing units: g, mg, oz, ozt, ct, mom, dwt, GN, tael, tola, pcs (counting), %.
- Special pans/holders for BM-20/22:
 - » Small pans for sampling minute amounts
 - » Holders for PM filters
 - » Holders for micro tubes
- Optional pipette testing kit for all models
- Interfaces:
 - » RS-232C (standard)
 - » Quick USB (standard)
 - » Ethernet (optional)



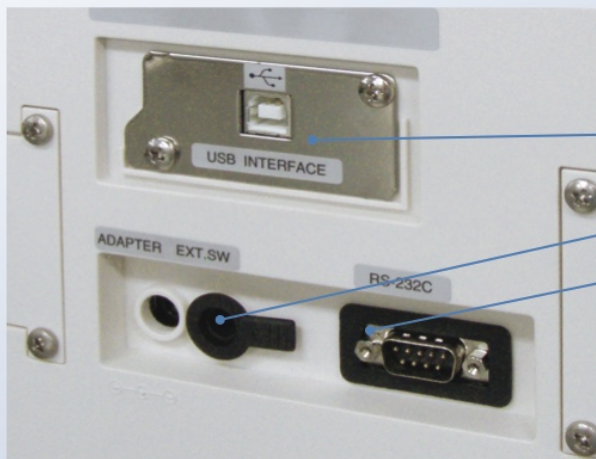
To block drafts, A&D adopted a double-ring structure around the weighing pan and two vertical shields under the separation plate. This offers more space and easier operation.

The removable separator plate enables to have one large chamber if needed.

Model	Capacity	Resolution	Pan Size
BM-20	22g	1µg	Ø 25mm
BM-22*	22g/5.1g	0.01mg/1µg	(50 and 95mm for filter pans)

*Smart range (see icon definition)
See page 19 for options and accessories

BM Micro Analytical Balances



Three interfaces are delivered as standard with the BM:

USB to PC

Digital input signal

Bidirectional RS-232C

Example of connections to various peripherals:



Special pans for weighing PM filters



Aluminium analytical pans

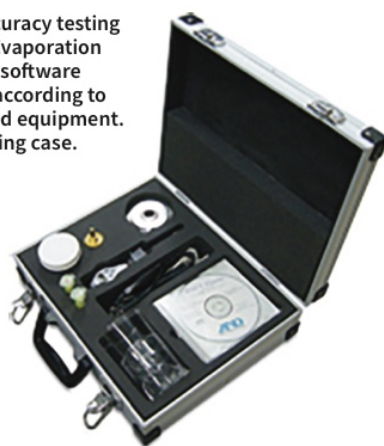


Holders for micro tubes



- WinCT Plus - LAN Ethernet network
 - » LAN-Ethernet interface (BM-08, optional) with WinCT-Plus software: You can send commands for controlling and acquiring data to multiple balances

- BM-014: Pipette accuracy testing kit (for all models): Evaporation trap, special tubes, software for pipette control according to ISO8655, and related equipment. All comes in a carrying case.



Standard functions



(BM-22)

Optional



A&D-MEET for BM

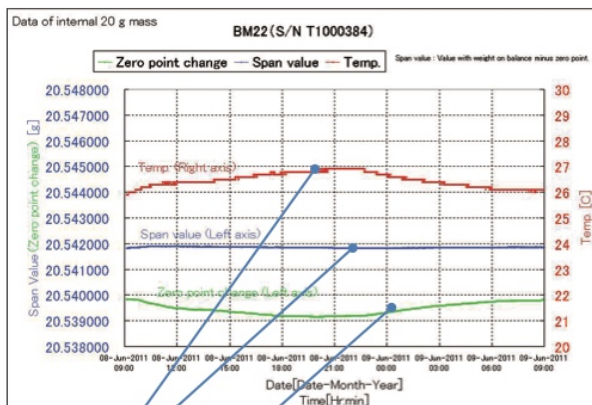
A&D Measurement Environment Evaluation Tool

The goal is to characterize, qualify, and optimize your weighing environment in order to enable accurate micro weighing.

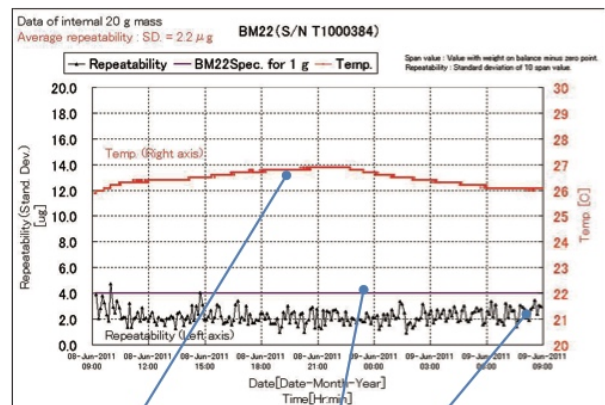
In conjunction with the AD-1688 data logger (supplied as standard) performance and environmental data can be recorded over a 24 hour period in order to characterize the weighing environment.

Saved data includes weight (utilising the internal calibration system) temperature, atmospheric pressure and humidity. Recorded data can then be emailed to A&D for analysis and reporting. An A&D representative will be able to provide an objective assessment of the weighing environment and discuss possible solutions with the end user where required.

BM has built in sensors to monitor weighing conditions:



Temperature
Span value
Zero point change



Temperature
Nominal value of standard deviation
Evolution of standard deviation over time

Examples of graphs generated/AND-MEET with AD-1688

BM Micro Analytical Balances

The BM analytical models have the same functional characteristics as the BM micro models.



Large weighing chamber (separator plate is easy to remove).



BM-252

Model	Capacity	Resolution	Pan Size
BM-252	250g	0.01mg	Ø 90mm
BM-200	220g	0.1mg	Ø 90mm
BM-300	320g	0.1mg	Ø 90mm
BM-500	520g	0.1mg	Ø 90mm

Options & Accessories	Model
Ethernet interface with WinCT-Plus software*	BM-08
Pipette testing kit (all models)	BM-14
Density measurement kit (BM-252, 200, 300, 500)	AD-1653
Tabletop anti-vibration table	AD-1671
Freestanding anti-vibration table	ADI-MWT
Table top breeze break	AD-1672
Table top breeze break with inclined front panel	AD-1672A
Electrostatic field meter	AD-1684
Tweezers for calibration weight	AD-1689
Display working covers (5pcs)	AX-BM-031
Micro tube holder (for BM-20/22)	AX-BM-032
Storage cover	AX-BM-033
Micro tube holder (BM-200/300/500/252)	AX-BM-034
Ioniser electrode needles (4pcs)	AX-BM-NEEDLESET
Aluminium analytical pan (0.05ml, 8mm dia.) 100pcs	AX-PAN-S
Aluminium analytical pan (0.3ml, 12mm dia.) 100pcs	AX-PAN-M
Aluminium analytical pan (0.8ml, 15mm dia.) 100pcs	AX-PAN-L
Foot switch for re-zero	AX-SW137-REZERO
Foot switch for printing	AX-SW137-PRINT

* BM-08 and the standard Quick USB interface cannot be used at the same time



Standard functions



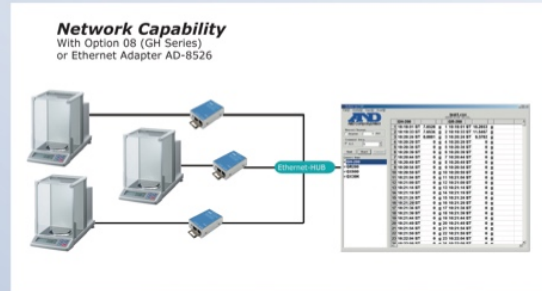
Optional



GH/HR-i Analytical Balances



HR-202i



Model	Capacity	Resolution	Verification Value	Pan Size
GH-252-EC*	250g/101g	0.1/0.01mg	1mg	Ø 90mm
GH-202-EC*	220g/51g	0.1/0.01mg	1mg	Ø 90mm
GH-300-EC	320g	0.1mg	1mg	Ø 90mm
GH-200-EC	220g	0.1mg	1mg	Ø 90mm
GH-120-EC	120g	0.1mg	1mg	Ø 90mm
HR-202i	220g/51g	0.1/0.01mg		Ø 90mm
HR-300i	320g	0.1mg		Ø 90mm

Models with "-EC" at the end are EC-type approved.
"2nd stage verification" is available as an optional service.
* Dual range

Options & Accessories	Model
Quick USB interface (GH)	GH-OP-02
Ethernet interface (GH)	GH-OP-08
RS-232C/Ethernet converter	AD-8526
Protective Cover (5 pcs) (GH/HR-i)	AX-074016035-S
Density measurement kit	AD-1653
Rechargeable, portable power supply (external)	AD-1682
Static eliminator	AD-1683
Remote controller	AD-8922A
Remote display	AD-8920A

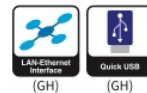
- EC Type approved (GH)
- Wide weighing range for 0.01mg resolution: 101g for GH-252-EC and 51g for HR-202i
- Antistatic glass
- One-touch automatic calibration by motor driven internal calibration mass (GH only)
- Automatic calibration when the ambient temperature changes (GH only)
- Standard RS-232C interface for printer, PC or other peripherals
- GLP, GMP and ISO compliant
- Data memory function (GH only)
- ID number for GLP output
- Auto power ON function
- Large weighing chamber of: 183mm (W) × 148.5mm (D) × 251mm (H)
- WinCT Communications software (download)



Standard functions



Optional



For 2nd stage verification (ex works) the postcode of point of use is required

GR Analytical Balances



Quick reference card

- EC Type approved
- Fully automatic self calibration with one push of the CAL key or triggered by temperature change
- Easy access door with a front lever for quick and efficient access to the weighing chamber
- Splash proof keyboard and display
- Automatic adjustable environment settings
- Multiple weighing units
- Standard RS-232C communication with PC
- Underhook weighing
- WinCT software (download)
- Large memory for weighing data
- Approx. 30% smaller footprint than other analytical balances
- GLP compliant



Model	Capacity	Resolution	Verification Value	Pan Size
GR-202-EC*	210/42g	0.1/0.01mg	1mg	Ø 85mm
GR-120-EC	120g	0.1mg	1mg	Ø 85mm
GR-200-EC	210g	0.1mg	1mg	Ø 85mm
GR-300-EC	310g	0.1mg	1mg	Ø 85mm

Models with "-EC" at the end are EC-type approved.
 "2nd stage verification" is available as an optional service.
 * Dual range

Options & Accessories	Model
Rechargeable portable power supply	AD-1682
Density measurement kit	AD-1653
Static eliminator	AD-1683
Remote controller	AD-8922A
Remote display	AD-8920
RS-232C/Ethernet converter	AD-8526

Standard functions



For 2nd stage verification (ex works) the postcode of point of use is required

HR-A/HR-AZ Analytical Balances



Large breeze break with rotary sliding doors



HR-250A

“HR-A”: external calibration,
“HR-AZ”: internal calibration



HR-250AZ

Model	Capacity	Resolution	Pan Size
HR-100A	102g	0.1mg	Ø 90mm
HR-150A	152g	0.1mg	Ø 90mm
HR-251A	62g/252g	0.1mg/1mg	Ø 90mm
HR-250A	252g	0.1mg	Ø 90mm
HR-100AZ	102g	0.1mg	Ø 90mm
HR-150AZ	152g	0.1mg	Ø 90mm
HR-251AZ	62g/252g	0.1mg/1mg	Ø 90mm
HR-250AZ	252g	0.1mg	Ø 90mm

Standard functions

Optional

- Robust construction, strong protection against dust & water
- Built-in internal calibration at the touch of a button (HR-AZ)
- Shock absorber function
- Auto power ON/OFF function
- B5 size footprint for use in narrow space
- Reverse backlit LCD display for easy to read weighing results
- SCF - Statistical calculation function
- Standard RS-232C
- Fast compact SHS sensor, response time of about 2 seconds
- Quick USB interface – no driver installation required (optional)
- LAN – Ethernet interface with WinCT-Plus software (optional)
- Easily removable large breeze break
- Built-in rechargeable NiMH battery pack (optional)



HR-A/HR-AZ Analytical Balances

Robust, Durable, Accurate



Easily removable breeze break for easy cleaning or weighing in restricted spaces e.g. glove boxes

Breeze break

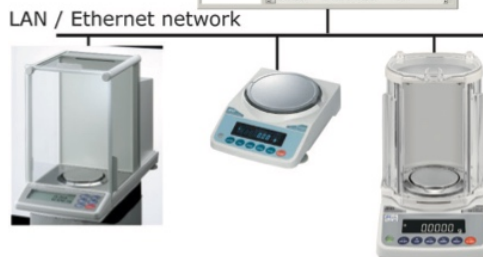
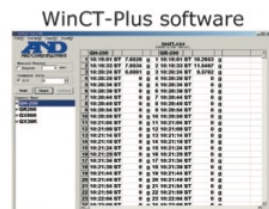
Density measurement kit



Plug & play connectivity with our Quick USB interface (optional). Direct transfer of weighing results into your applications. No driver or add-on software needed.



Ethernet interface (optional). Manage multiple balances through your LAN network



Options & Accessories	Model
Quick USB interface with cable*	FXi-OP-02
LAN Ethernet output*	FXi-OP-08
NIMH Battery pack*	FXi-OP-09
Transparent plastic covers (5 pcs)	AX-FX-31i
Density measurement kit	AD-1654

* OP-02, OP-08 and OP-09 cannot be installed at the same time.

GX-A/GF-A Premium Precision Balances



GX-1003



GF-1003

Model	Capacity	Resolution	Pan Size
GF-123A	120g	0.001g	128 × 128 mm
GF-203A	220g	0.001g	128 × 128 mm
GF-303A	320g	0.001g	128 × 128 mm
GF-403A	420g	0.001g	128 × 128 mm
GF-603A	620g	0.001g	128 × 128 mm
GF-1003A	1100g	0.001g	128 × 128 mm
GF-1603A	1620g	0.001g	128 × 128 mm
GF-1202A	1200g	0.01g	165 × 165 mm
GF-2002A	2200g	0.01g	165 × 165 mm
GF-3002A	3200g	0.01g	165 × 165 mm
GF-4002A	4200g	0.01g	165 × 165 mm
GF-6002A	6200g	0.01g	165 × 165 mm
GF-10002A	10200g	0.01g	165 × 165 mm
GF-6001A	6200g	0.1g	165 × 165 mm
GF-10001A	10200g	0.1g	165 × 165 mm

- Wide selection including high-capacity, high-resolution, internal calibration (GX-A) or external calibration (GF-A) models
- Newly developed Smart SHS weighing sensor featuring ECL technology
- APA – Auto Precision Assessment. Automatic assessment of the balance performance. Calculation and display of Standard Deviation (repeatability) at the point of use without the need for calibration weights! Can be checked daily via a key press. Works with GX-A and GF-A
- Automatic Minimum Weight Calculation and setting via APA function

- Input minimum weight automatically via APA or manually using weights
- Visual Minimum Weight alert
- UAC – User Access Control, Administrator and Operator password access
- Calibration via One-touch, Interval, pre-set times (3) or automatically in response to ambient temperature changes (GX-A)
- ISD – Impact Shock Detection, 4 level shock detection with visual and audible feedback. Maintain the performance of your investment through correct use of the balance. Ideal in automated loading applications and ideal for operator guidance
- FRD – Flow Rate Display, direct display of flow rate of a sample in g/s, g/m, g/h or volume flow rate in mL/s, mL/m, mL/h. Up to 10 sample densities can be saved to memory. Use in conjunction with the Flow Rate Comparator to keep flow rates within designated limits
- SCF – Statistical Calculation Function, display and print various statistical results on the balance display or output to a basic printer or PC
- Standard RS232 and Dual Mode USB interface. USB can be configured for 'quick' mode (connect to PC without the need for software installation) or bi-directional mode
- UFC – Universal Flexi Coms configurable data output, ideal for connection to data acquisition systems or barcode label printers etc.
- Gross/Net/Tare data output, Tare memory, Underhook, Capacity Indicator
- Large selection of options and accessories



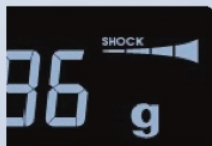
GX-A/GF-A Premium Precision Balances



Blinking minimum weight alert



No impact shock



Level 4 impact shock



Examples of display

GX-1003A and GX-A-10

Model	Capacity	Resolution	Pan Size
GX-203A	220g	0.001g	128 × 128 mm
GX-303A	320g	0.001g	128 × 128 mm
GX-403A	420g	0.001g	128 × 128 mm
GX-603A	620g	0.001g	128 × 128 mm
GX-1003A	1100g	0.001g	128 × 128 mm
GX-1603A	1620g	0.001g	128 × 128 mm
GX-2002A	2200g	0.01g	165 × 165 mm
GX-3002A	3200g	0.01g	165 × 165 mm
GX-4002A	4200g	0.01g	165 × 165 mm
GX-6002A	6200g	0.01g	165 × 165 mm
GX-10002A	10200g	0.01g	165 × 165 mm
GX-6001A	6200g	0.1g	165 × 165 mm
GX-10001A	10200g	0.1g	165 × 165 mm

Options & Accessories	Model
2nd RS-232C interface	GXA-03
Comparator relay output/buzzer/external key input	GXA-04
Analog output (0V-1V or 0.2V-1V)	GXA-06
Ethernet Interface	FX-OP-08i
Built in rechargeable battery (14 hours operation, dealer fit)	GXA-09
Large breeze break	GXA-10
Animal weighing pan (320g models and above)	GXA-12
Density determination kit (1mg models only)	GXA-13
Large breeze break with built-in fanless ionizer	GXA-17
External key input (print function)	GXA-23-PRINT
External key input (re-zero function)	GXA-23-REZERO
USB host interface (for USB flash drives and data storage, dealer fit)	GXA-24
External Fanless ionizer (IR activation, dealer fit)	GXA-25
External IR switch (Print and Tare operation)	GXA-26
Main unit cover (5pcs)	AX-GXA-31

Standard functions



Optional

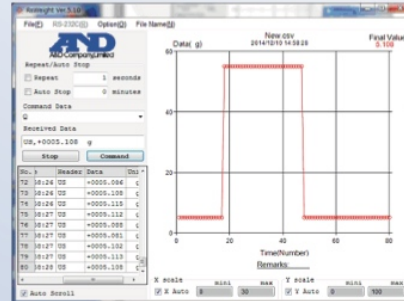


GX/GF Precision Balances

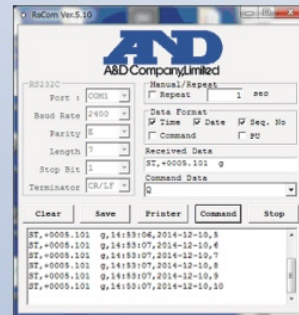
Fast Response Speed



SHS Sensor



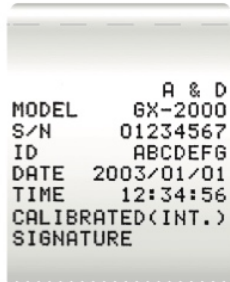
WinCT-RsWeight



WinCT-RsCom



Density measurement kit



GLP printout



Quick reference card



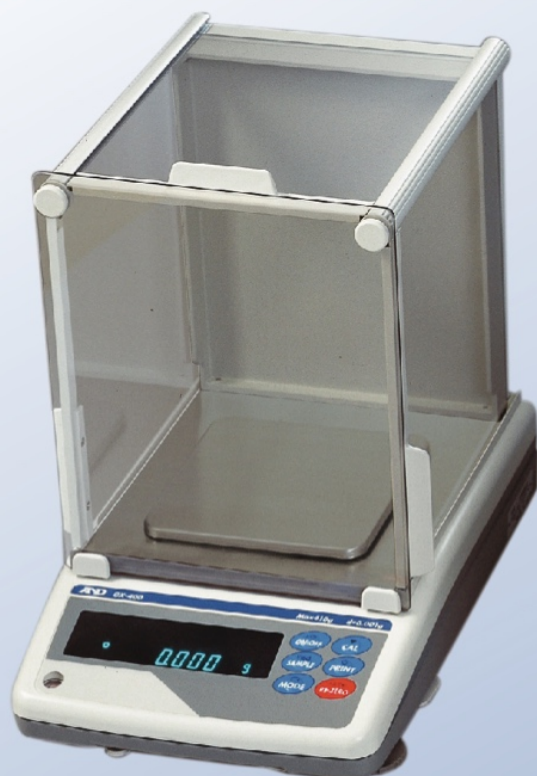
VFD display

- EC Type approved (GX)
- Date & time (GX)
- Animal weighing function
- Fast - response time just 1 second!
- Many models, including large weighing capacities for a given precision: 1,100g x 1mg, 6,100g x 0.01g, and 8,100g x 0.1g
- One-touch automatic internal calibration (GX)
- Automatic self calibration due to changes in the ambient temperature (GX)
- External calibration (GF)
- Large, bright VFD display
- Percentage, counting and comparator function
- ACAI Automatic Counting Accuracy Improvement
- Data memory function
- GLP, GMP and ISO compliant
- Standard RS-232C interface
- WinCT Communications software (download)



Model	Capacity	Resolution	Pan Size
GF-200	210g	0.001g	128 x 128mm
GF-300	310g	0.001g	128 x 128mm
GF-600	610g	0.001g	128 x 128mm
GF-800	810g	0.001g	128 x 128mm
GF-1000	1100g	0.001g	128 x 128mm
GF-1200	1210g	0.01g	165 x 165mm
GF-2000	2100g	0.01g	165 x 165mm
GF-3000	3100g	0.01g	165 x 165mm
GF-6100	6100g	0.01g	165 x 165mm
GF-6000	6100g	0.1g	165 x 165mm
GF-8000	8100g	0.1g	165 x 165mm

GX/GF Precision Balances



GX-400-EC (with optional glass breeze break)



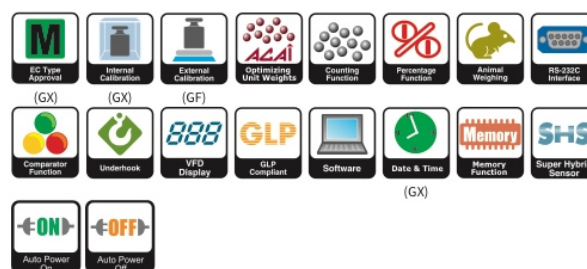
GX-600-EC (with standard breeze break)

Model	Capacity	Resolution	Verification Value	Pan Size
GX-200-EC	210g	0.001g	0.01g	128 × 128mm
GX-400-EC	410g	0.001g	0.01g	128 × 128mm
GX-600-EC	610g	0.001g	0.01g	128 × 128mm
GX-800	810g	0.001g	-	128 × 128mm
GX-1000	1100g	0.001g	-	128 × 128mm
GX-2000-EC	2100g	0.01g	0.1g	165 × 165mm
GX-4000-EC	4100g	0.01g	0.1g	165 × 165mm
GX-6100-EC	6100g	0.01g	0.1g	165 × 165mm
GX-6000-EC	6100g	0.1g	1g	165 × 165mm
GX-8000-EC	8100g	0.1g	1g	165 × 165mm

Models with "-EC" at the end are EC type approved.
2nd stage verification is available as an optional service

Options & Accessories	Model
GFX transparent plastic covers (mg models, 5 pcs)	AX-073003691-S
GFX transparent plastic covers (not mg models, 5 pcs)	AX-073003692-S
Quick USB interface	GX-OP-02
Comparator output with buzzer/RS-232C/current loop	GX-OP-04
Analog output	GX-OP-06
GFX Glass breeze break (mg models)	GX-OP-10
GFX Glass breeze break (not mg models)	GX-OP-11
Animal weighing pan	GX-OP-12
Density measurement kit	GX-OP-13
Rechargeable, portable power supply unit	AD-1682

Standard functions



Optional



For 2nd stage verification (ex works) the postcode of point of use is required

FX/FZ-i, FX/FZ-iWP Precision Balances

IP65 compliant, water/dust proof
balance with “mg” resolution &
legal for trade approval



FZ-i and FZ-iWP: internal calibration

FX-i and FX-iWP: external calibration

FZ-iWP and FX-iWP: IP65 dust & water proof



FX-3000i



FX-300iWP with
standard breeze break

Model	Capacity	Resolution	Verification Value	Pan Size
FZ-120i-EC	122g	0.001g	0.01g	Ø 130mm
FZ-120iWP-EC	122g	0.001g	0.01g	Ø 130mm
FZ-200i-EC	220g	0.001g	0.01g	Ø 130mm
FZ-200iWP-EC	220g	0.001g	0.01g	Ø 130mm
FZ-300i-EC	320g	0.001g	0.01g	Ø 130mm
FZ-300iWP-EC	320g	0.001g	0.01g	Ø 130mm
FZ-500i	520g	0.001g	-	Ø 130mm
FZ-1200i-EC	1220g	0.01g	0.1g	Ø 150mm
FZ-1200iWP-EC	1220g	0.01g	0.1g	Ø 150mm
FZ-2000i-EC	2200g	0.01g	0.1g	Ø 150mm
FZ-2000iWP-EC	2200g	0.01g	0.1g	Ø 150mm
FZ-3000i-EC	3200g	0.01g	0.1g	Ø 150mm
FZ-3000iWP-EC	3200g	0.01g	0.1g	Ø 150mm
FZ-5000i	5200g	0.01g	-	Ø 150mm
FX-120i	122g	0.001g	-	Ø 130mm
FX-120iWP	122g	0.001g	-	Ø 130mm
FX-200i	220g	0.001g	-	Ø 130mm
FX-200iWP	220g	0.001g	-	Ø 130mm
FX-300i	320g	0.001g	-	Ø 130mm
FX-300iWP	320g	0.001g	-	Ø 130mm
FX-500i	520g	0.001g	-	Ø 130mm
FX-1200i	1220g	0.01g	-	Ø 150mm
FX-1200iWP	1220g	0.01g	-	Ø 150mm
FX-2000i	2200g	0.01g	-	Ø 150mm
FX-2000iWP	2200g	0.01g	-	Ø 150mm
FX-3000i	3200g	0.01g	-	Ø 150mm
FX-3000iWP	3200g	0.01g	-	Ø 150mm
FX-5000i	5200g	0.01g	-	Ø 150mm

Models with “-EC” at the end are EC type approved.
2nd stage verification is available as an optional service

- IP65 water / dust proof (WP)
- Built-in internal calibration at the touch of a button (FZ-i and FZ-iWP)
- Shock absorber function
- Auto power ON/OFF function
- B5 size footprint for use in narrow spaces
- VFD Display for easy to read weighing results
- SCF - Statistical Calculation Function
- Standard RS-232C
- Fast compact SHS sensor, response time only 1 second
- Quick USB interface – no driver installation required (optional)
- LAN – Ethernet interface with WinCT-Plus software (optional)
- Animal weighing pan (optional)
- Large breeze break (optional)
- Small breeze break included on 1mg models
- Built-in rechargeable NiMH battery pack (optional)



For 2nd stage verification (ex works) the postcode of point of use is required

FX/FZ-i, FX/FZ-iWP Precision Balances

Robust, Durable, Accurate



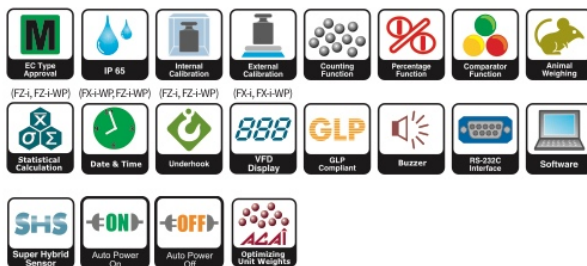
Animal weighing plate (optional)

Options & Accessories	Model
Quick USB interface with cable*	FXi-OP-02
LAN Ethernet output*	FXi-OP-08
NIMH battery pack*	FXi-OP-09
Small breeze break (not WP models)	FXi-OP-10
Small breeze break (WP models)	FXi-WP-10
Large breeze break (not WP models)	FXi-OP-11
Large breeze break (WP models)	FXi-WP-11
Animal weighing pan (0.01 models only)	FXi-OP-12
Transparent plastic covers (5 pcs)	AX-FX-31i
Carat weighing pan - silver	AX-Caratpan-WEX
Carat weighing pan - black	AX-Caratpan-BEX
Waterproof RS-232C cable (5m)	AX-KO2737-500

* OP-02, OP-08 and OP-09 cannot be installed at the same time. The connectors of optional OP-02, OP-08 and OP-09 are not IP65.

Enables the measurement of liquid or powder at 1mg resolution, eliminating any worries about damage to the balance

Standard functions



Optional



For 2nd stage verification (ex works) the postcode of point of use is required

EK-EP



Intrinsically Safe Compact Balances

Conforms to:

IECEX: Ex ia IIB T3 Ga

ATEX: II 1G Ex ia IIB T3 Ga

FM/FMc (NEC505): AEx / Ex ia IIB T3

FM/FMc (NEC500): IS / I / 1 / C, D / T3C



EK-300EP



EK-3000EP

Model	Capacity	Resolution	Pan Size
EK-300EP	300g	0.01g	Ø 110 mm
EK-3000EP	3000g	0.1g	133 × 170mm
EK-12KEP	12000g	1g	133 × 170mm

Accessories	Model
Carrying case	EJ-12

- Compact, lightweight and extremely affordable while providing excellent explosion protection
- Battery operation*1 (approx. 250 hours) for high portability, requiring no power supply from a safe area via a safety barrier
- Easy-to-read LCD display with backlight (16 mm character height)
- Auto power OFF function to save battery power
- Hygienic and chemically resistant stainless steel (SUS304) weighing pan
- Multiple weighing units: g, oz, lb, ozt, ct, mom, dwt, gr, N, in addition to SG (specific gravity)*2
- Counting mode with Automatic Counting Accuracy Improvement (ACAI) function
- Percent mode function for target weighing, checking the sample variation, etc.
- Comparator function for faster and more accurate filling, packing, sorting, etc.
- Adjustable response characteristics depending on the degree of drafts and vibrations at the location
- Security ring for wire-locking the balance to prevent theft



Standard functions



*1 Only to be used with four DURACELL AA alkaline MN1500 LR6, ENERGIZER AA E91 alkaline LR6 AM3, or Panasonic AA alkaline LR6 (XJ) 1.5V batteries.

*2 Either tl (tael) or tol (tola) can be added upon request.

EJ Compact Scales



EJ-1500



EJ-123



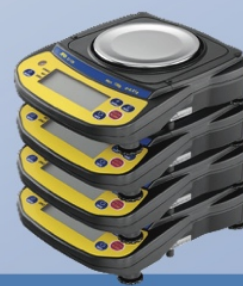
EJ-12



EJ-13
Density measurement kit



EJ-11 Breeze break
(optional for EJ-123/303)



Stackable body for easy storage
and saving space

Model	Capacity	Resolution	Pan Size
EJ-123	120g	0.001g	Ø 110mm
EJ-303	310g	0.001g	Ø 110mm
EJ-120	120g	0.01g	Ø 110mm
EJ-200	210g	0.01g	Ø 110mm
EJ-300	310g	0.01g	Ø 110mm
EJ-410	410g	0.01g	Ø 110mm
EJ-610	610g	0.01g	Ø 110mm
EJ-1202	1200g	0.01g	127 × 140mm
EJ-1500	1500g	0.1g	127 × 140mm
EJ-2000	2100g	0.1g	127 × 140mm
EJ-3000	3100g	0.1g	127 × 140mm
EJ-3002	3100g	0.01g	127 × 140mm
EJ-4100	4100g	0.1g	127 × 140mm
EJ-6100	6100g	0.1g	127 × 140mm

Options & Accessories	Model
Quick USB interface	EJ-02
RS-232C interface	EJ-03
Underhook for EJ-3000/EJ-4100/EJ-6100	EJ-07
Underhook for EJ-1500/EJ-2000	EJ-08
Breeze break (standard on EJ-123/EJ-303)	EJ-11
Carrying case (not for EJ-123,303,1202,3002)	EJ-12
Density measurement kit for models with round pans only.	EJ-13

*EJ-02 and EJ-03 cannot be used at the same time

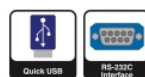
- Unique design
- External calibration
- Backlit display
- Supports multiple weighing units like counting, % weighing, comparator...
- Calculates density automatically (option EJ-13)
- Hygienic and rustproof stainless steel pan
- Security slot at the back for wire-locking to prevent theft
- Stackable body to save storage space
- Power supply: AC adapter or 4 AA size dry batteries (batteries are not included)
- Low battery indicator



Standard functions



Optional



EK/W-i Compact Balances



EW-1500i

Weighing Range
(EW-i series only)
Triple range indication

ACAI
Automatic Counting
Accuracy Improvement

HI/OK/LO
Comparator Result

Sample
Register a sample count or
100% in percentage

Print
Transmit data to printer
or computer



Multi weighing units

oz — Ounce (av) g — Gram
ozt — Troy Ounce ct — Carat
tl — Tael mom — Momme
lb — Livre (av) pcs — Pieces
GN — Grain unit % — Percent
dwt — Pennyweight

Options & Accessories	Model
Comparator/relay output with buzzer	EK/Wi-OP-04
Underhook (EK-4100i/6000i/6100i/12Ki, EW-12Ki)	EK/Wi-OP-07
Rechargeable battery pack	EK/Wi-OP-09
Carrying case	EJ-12
Transparent plastic covers (5pcs.)	AX-3005824-5S

Model	Capacity	Resolution	Verification Value	Pan Size
EW-150i-EC*	30g	0.01g	-	Ø 110mm
	60g	0.02g	0.02g	
	150g	0.05g	0.05g	
EW-1500i-EC	300g	0.1g	0.1g	133 × 170mm
	600g	0.2g	0.2g	
	1500g	0.5g	0.5g	
EW-12Ki-EC	3000g	1g	1g	133 × 170mm
	6000g	2g	2g	
	12000g	5g	5g	

Models with "-EC" at the end are EC-type approved. "2nd stage verification" is available as an optional service.

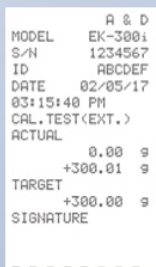
* Triple range, ** In case of EW-150i, after 2nd stage verification only dual range, highest ranges: 60/150g.

For 2nd stage verification (ex works) the postcode of point of use is required

EK/W-i Compact Balances



Carrying case
EJ-12



GLP Printout with balance I.D. number allows
calibration output verification print out

Options & accessories
Dot Matrix compact statistical printer
AD-8127



Ni-MH Battery Pack
*EK/Wi-OP-09, for complete portability and
use in areas without power

Model	Capacity	Resolution	Verification Value	Pan Size
EK-200i	200g	0.01g	-	Ø 110mm
EK-300i	300g	0.01g	-	Ø 110mm
EK-410i	400g	0.01g	-	Ø 110mm
EK-610i-EC	600g	0.01g	0.1g	Ø 110mm
EK-1200i	1200g	0.1g	-	133 × 170mm
EK-2000i	2000g	0.1g	-	133 × 170mm
EK-3000i	3000g	0.1g	-	133 × 170mm
EK-4100i	4000g	0.1g	-	133 × 170mm
EK-6100i-EC	6000g	0.1g	1g	133 × 170mm
EK-6000i	6000g	1g	-	133 × 170mm
EK-12Ki	12kg	1g	-	133 × 170mm

Models with "EC" at the end are EC-type approved.
"2nd stage verification" is available as an optional service.

Standard functions



Optional



for capacity
over 4kg

- EC Type approved (EK-610i-EC, EK-6100i-EC and EW-i series)
- Standard RS-232C interface
- Large LCD display with backlight
- Triple range (EW-i only, EW-150i-EC dual range after verification)
- Compact design
- GLP compliant
- Overload protection
- Standard comparator function
- Optional rechargeable battery pack
- 9 Weighing units plus count and percentage mode
- Counting function with Automatic Counting Accuracy Improvement (ACAI)
- Full digital calibration with optional user definable mass setting



For 2nd stage verification (ex works) the postcode of point of use is required

GX-K/GF-K Industrial Precision Balances

IP65 Water & Dust Protection



Water protected



Dust protected

GX-30K

Model	Capacity	Resolution	Pan Size
GX-8K	8.1kg	0.01g	270 × 210mm
GX-8K2*	8.1/2.1kg	0.1/0.01	270 × 210mm
GX-10K	10.1kg	0.01g	270 × 210mm
GX-12K	12kg	0.1g	270 × 210mm
GX-20K	21kg	0.1g	270 × 210mm
GX-30K	31kg	0.1g	270 × 210mm
GX-32K*	31/6.1kg	1/0.1g	270 × 210mm
GF-8K	8kg	0.01	270 × 210mm
GF-8K2*	8.1/2.1kg	0.1/0.01g	270 × 210mm
GF-10K	10kg	0.01g	270 × 210mm
GF-12K	12kg	0.1g	270 × 210mm
GF-20K	21kg	0.1g	270 × 210mm
GF-30K	31kg	0.1	270 × 210mm
GF-32K*	31/6.1kg	1/0.1g	270 × 210mm

* Smart Range (see icon definition)

Options & Accessories	Model
Comparator relay output with buzzer/current loop	GX/GF-OP-04K
Analog/current loop output	GX/GF-OP-06K
Waterproof RS-232C cable (5m)	GX/GF-OP-07K
Transparent plastic covers (5 pc)	AX-073007197-S
Breeze break (standard on GF/GX-8K/8K2 & 10K models)	AX-GXK-31
Rechargeable, portable power supply unit	AD-1682
Animal weighing pan	AX-GXK-012

*NOTE: In wet areas, please use interfaces only with OP-07.

- Fast response time with Super Hybrid sensor (SHS) – only 1.5 seconds
- One touch automatic calibration with motor-driven internal calibration mass (GX-K)
- Automatic self calibration when the ambient temperature changes (GX-K)
- IP65 – water and dust proof
- Standard RS-232C Interface
- GLP, GMP and ISO compliant
- Underhook weighing (for thermal or magnetic samples, or for density measurement)
- ACAI (Automatic Counting Accuracy Improvement)
- Auto power ON function
- Display auto power OFF function
- Data memory function
- Smart Range function (GX/GF-8K2/32K)



GX-K/GF-K Industrial Precision Balances



Robust:

- Die cast aluminium
- Four support points under the pan
- Mechanical keyboard
- SHS sensor technology

Easy to clean

IP 65 dust & water protected, for a large weighing capacity at a given resolution: 10kg × 0.01g, 31kg × 0.1g



GX-30K



IP65 protected data cable



Well protected, easy to clean

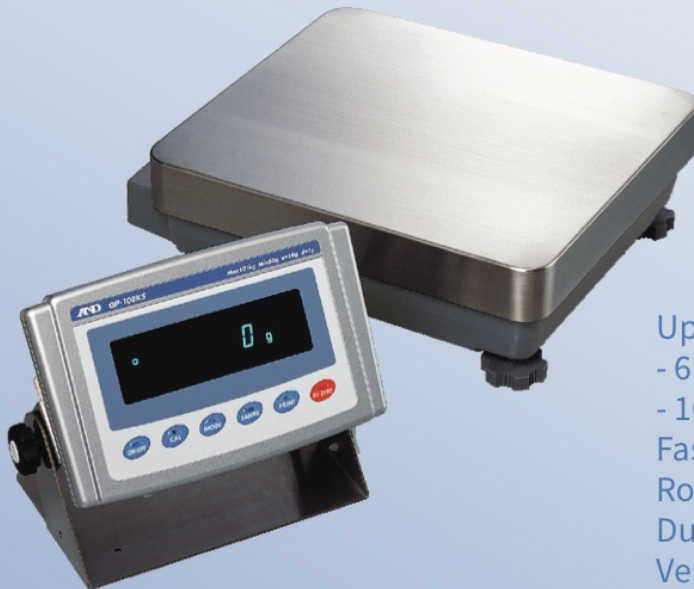
Standard functions

(GX-K)							
(GF-K)							
(GX-K)		(GX/F-8K2/32K)					

Optional



GP Industrial Precision Balances

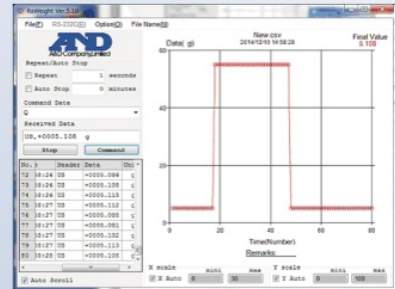


With detached display unit
(KS models only)

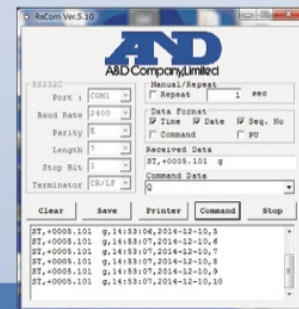
GP-100KS

Up to:
- 61kg × 0,1g
- 101kg × 1g
Fast
Robust
Durable
Versatile
IP65

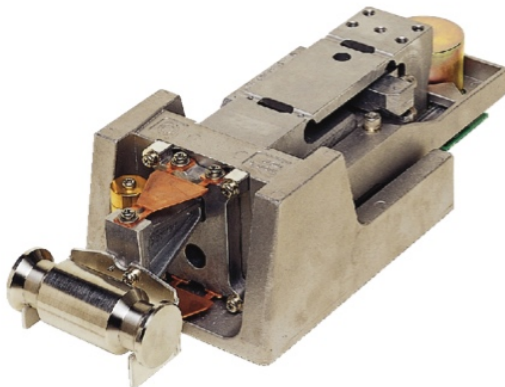
WinCT
Communications software provides easy
transmission of weighing data from A&D
balances to a computer



WinCT-RsCom



WinCT-RsWeight



SHS sensor
(and its internal calibration weight)

- EC Type approved (not KS models, GP-40K, GP-61K)
- Swing arm design or separate display and platform design
- IP65 protected
- Durable aluminium alloy & stainless steel construction
- Easy calibration with internal calibration mass
- SHS response speed of only 1.5 seconds
- GLP, GMP and ISO compliant
- RS-232C interface
- Comparator output and analog output (optional)
- Large Vacuum Fluorescent display
- Data memory function
- Counting function with ACAI (Automatic Counting Accuracy Improvement)
- Smart range function (GP-32K/102K/32KS)
- Comparator function
- Underhook weighing for thermal and magnetic samples as well as for density calculation
- Animal weighing function



Options & Accessories	Model
Comparator output with buzzer/RS-232C/current loop output	GP-OP-04
Analog output	GP-OP-06
5m extension cable (KS model only)	GP-OP-07
Underhook (GP-12K/20K/22K/30K/30KS)	GP-OP-20
Underhook (GP-60K/100K/100KS/102K)	GP-OP-21
AD-8121 printer mounting kit	GP-OP-22
Transparent plastic covers (1 pc)	07:3004753
Rechargeable, portable power supply unit	AD-1682

GP Industrial Precision Balances



Swing arm display



GP-30K



Model	Capacity	Resolution	Verification Value	Pan Size
GP-12K-EC	12kg	0.1g	1g	384 × 344mm
GP-20K-EC	21kg	0.1g	1g	384 × 344mm
GP-32K-EC*	31kg/6.1kg	1g/0.1g	10g/1g	384 × 344mm
GP-32KS*	31kg/6.1kg	1g/0.1g	-	384 × 344mm
GP-30K-EC	31kg	0.1g	1g	384 × 344mm
GP-30KS**	31kg	0.1g	-	384 × 344mm
GP-40K	41kg	0.5g	-	384 × 344mm
GP-60K-EC	61kg	1g	10g	384 × 344mm
GP-60KS	61kg	1g	-	384 × 344mm
GP-61K	61kg	0.1g	-	384 × 344mm
GP-61KS	61kg	1g	-	384 × 344mm
GP-100K-EC	101kg	10g	100g	386 × 346mm
GP-100KS**	101kg	1g	-	386 × 346mm
GP-102K-EC*	101kg/61kg	10g/1g	100/10g	386 × 346mm

* Smart Range (see icon definition), ** Detachable display (KS models)
 Models with "EC" at the end are EC-type approved.
 2nd stage verification is available as an optional service.

Standard functions



Optional



For 2nd stage verification (ex works) the postcode of point of use is required

AD-4212A/B

High Speed Production Weighing Sensor



Ensures maximum efficiency of your production line

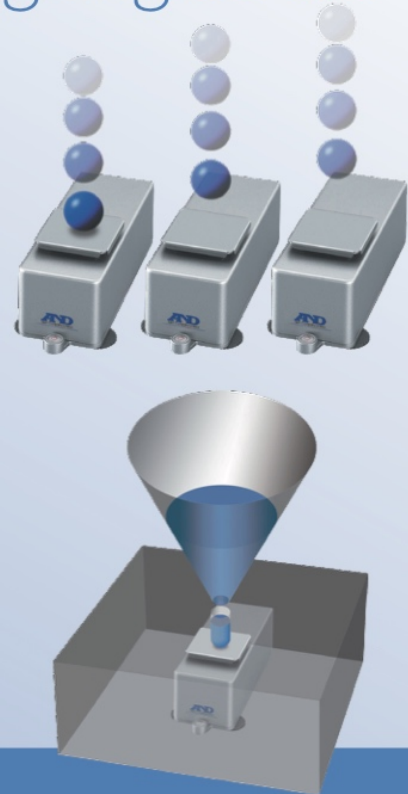
For applications such as:

- High-speed weighing
- High-speed check weighing
- Filling
- Isolated weighing

Fast, Precise, Compact, Durable



AD-4212A-1000



Model	Capacity	Resolution	Pan Size
AD-4212A-100	110g	0.1mg	50 × 50mm
AD-4212A-200	210g	1mg	50 × 50mm
AD-4212A-600	610g	1mg	50 × 50mm
AD-4212A-1000	1100g	1mg	70 × 70mm
AD-4212B-23	21g	0.001mg	Ø 34mm
AD-4212B-101*	110g/31g	0.1mg/0.01mg	Ø 34mm
AD-4212B-102	110g	0.01mg	Ø 34mm
AD-4212B-201	210g	0.1mg	50 × 50mm
AD-4212B-301	310g	0.1mg	50 × 50mm

* Smart Range (see icon definition)

Options & Accessories	Model
BCD output/external contact input	AD4212A-OP-01
Comparator output (only AD-4212A)	AD4212A-OP-04
Extension cable 3m	AD4212A-OP-07
Ethernet interface (with application software WinCT-plus in CD-ROM)	AD4212A-OP-08
Stainless steel breeze break (standard for AD-4212A-100 and all B models)	AD4212A-OP-19
Metal levelling foot	AD4212A-OP-20
Static eliminator	AD-1683

Standard functions



(AD-4212B-101)

- High resolution and quick stabilization times down to:

- » 0.8 second for 1mg AD-4212A models
- » 1.1 second for 0.1mg AD-4212A models
- » 2.5 seconds for 0.1mg AD-4212B models
- » 4 seconds for 0.01mg AD-4212B models

- Possibility to use a weighing pan of your own design for holding special objects
- Standard RS-232C interface
- The AD-4212A offers 3-level comparator with contact output and buzzer
- The AD-4212B offers 5-level comparator with contact output and buzzer
- External digital inputs to trigger actions such as RE-ZERO or PRINT
- Data memory, GLP and GMP compliant
- WinCT: software tool for data acquisition from PC
- Multiple weighing units: g, mg, OZ, Lb, LOZ, Ozt, ct, mom, dwt, GN, TL, t, MS, PCS (counting) and Pct (%)
- 2m connection cable in between sensor and indicator
- Protection against vertical or transverse shocks - patented (AD-4212B)



Optional

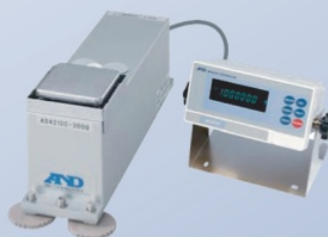


AD-4212C

High Speed Production Weighing Sensor



Fast: down to 0.5s
 Precise: down to 0.1mg
 Compact: only 59mm width
 Durable: with IP65



Autonomous operation with optional AD-8922A controller.

(AD-8922A can also interface with a PC or a PLC)



Direct connection of sensor to PC or PLC by RS-232C

AD-4212C-300

Model	Capacity	Resolution	Pan Size
AD-4212C-301*	51g/320g	0.1mg/1mg	50 × 50mm
AD-4212C-300	320g	1mg	50 × 50mm
AD-4212C-600	610g	1mg	50 × 50mm
AD-4212C-3100*	510g/3200g	1mg/10mg	50 × 50mm
AD-4212C-3000	3200g	10mg	50 × 50mm
AD-4212C-6000	6100g	10mg	50 × 50mm

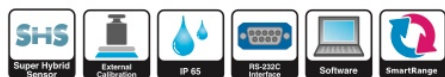
* Smart Range (see icon definition)

Options & Accessories	Model
Remote controller and display unit	AD-8922A
Remote controller with BCD interface and display	AD-8923-BCD
Remote controller with CC interface and display	AD-8923-CC
Static eliminator	AD-1683

- High resolution and quick stabilization times down to:
 - » 0.5 second up to 30 grams
 - » 1.0 second up to maximum capacity
- Possibility to use a weighing pan of your own design for holding special objects
- Protected against vertical and transverse overloading (patent pending)
- Outputs digital weighing data directly to a panel computer, PLC, or PC via standard RS-232C interface
- Analog, comparator, and BCD outputs are also available when using the optional AD-8922A controller
- High-speed data transmission of up to 50 times/second
- IP65 dust and water-proof construction for powder or liquid weighing
- Easy calibration and response speed adjustment using WinCT-AD4212 software
- Calibration weight included
- Connection cable included (about 5m)
- Securable to a base by replacing levelling feet with screws



Standard functions



AD-4212C-300(3100)

AD-4212D Analytical Weighing Sensor



AD-4212D-33

AD-1691

Model	Capacity	Resolution	Pan Size
AD-4212D-33	32 g	0.001 mg	Ø34 mm
AD-4212D-32	5.1 g/32 g ⁻¹	0.001 mg/0.01 mg ⁻¹	Ø34 mm
AD-4212D-302	320 g	0.01 mg	Ø50 mm
AD-4212D-301	320 g	0.1 mg	Ø50 mm

*1 Smart range function: The display will switch to the standard range automatically when the value exceeds 5.1g but will return to the precision range when RE-ZERO (tare) is performed.

Options & Accessories	Model
Static eliminator	AD-1683
Electrostatic field meter	AD-1684
Compact printer	AD-8127
Remote controller and display unit	AD-8922A
Remote controller (BCD)	AD-8923-BCD
Remote controller (CC-link)	AD-8923-CC
RS-232C cable (10m, for A&D's external display)***	AX-KO3590-1000
AX-KO4472-1000: RS-232C cable (10m, for a PC/PLC)	AX-KO4472-1000

*** A 2m cable is provided as standard

Standard functions



AD-4212D-32

- Minimum weighing value from 1 µg
- EM-DLC* technology for direct connection to a PC or PLC
- Compact size and resistance to vacuum state ideal for use in a glove box
- Stable measurement in a fume hood (for 0.1 mg readability only)
- Internal calibration function to ensure accuracy with one key
- Protection mechanism against vertical and transverse overloading due to actuator malfunctions, etc.
- Adjustable response characteristics to help cope with the effects of drafts and vibrations
- Automatic zero display after data output
- Equipped with a small breeze break
- Possible to design and attach your preferred weighing pan/receptacle
- Underhook for weighing magnetic materials and density measurements
- GLP/GMP/GCP/ISO compliant output
- Clock and calendar function
- Built-in temperature sensor for temperature data output
- Can be secured directly to a base by removing the levelling feet and using screws
- Water-resistant cap for cleaning**
- High extensibility with A&D's various peripheral devices
- AD-1691 weighing environment analyzer provided as standard



* Electromagnetic Digital Load Cell

** The AD-4212D has an IP65 rating when the cap is put on the pan support boss (after removing the weighing pan and pan support).



Industrial Weighing

HV/W-C(P) Series Multi-Functional Platform Scales



Examples of display

HW-200KCP

Model	Capacity	Resolution	Pan Size
HV-15KC HV-15KCP	3kg 6kg 15kg	0.001kg 0.002kg 0.005kg	250 x 250mm
HV-60KC HV-60KCP	15kg 30kg 60kg	0.005kg 0.01kg 0.02kg	330 x 424mm
HV-200KC HV-200KCP	60kg 150kg 220kg	0.02kg 0.05kg 0.1kg	390 x 530mm
HW-10KC HW-10KCP	10kg	0.001kg	250 x 250mm
HW-60KC HW-60KCP	60kg	0.005kg	330 x 424mm
HW-100KC HW-100KCP	100kg	0.01kg	390 x 530mm
HW-200KC HW-200KCP	220kg	0.02kg	390 x 530mm

Options & Accessories	Model
USB interface (bi-directional)	HVV-02CB
RS-232C interface	HVV-03C
Comparator relay output/buzzer/contact input	HVV-04C
Extension cable (5 m)	HVV-08C
Wall-mount bracket	HVV-11C
Support bracket for the AD-8127 printer	HVV-12C
Large roller conveyer (100kg and 200kg models)	HVV-13
Medium-size roller conveyer (60kg models)	HVV-14
Paper for built-in printer (CP models)	AX-PP147-S

Standard functions



Optional



HV/W-KC(P) Series Multi-Functional Platform Scales



Display unit with HVW-02CB,
HVW-03C, HVW-04C



HV-15KC/P

HW-60KC/P

HV-200KC/P

- Wide selection of capacities and resolutions. Choose from high capacity, high resolution HW-C(P) or multi-interval HV-C(P) models
- High-speed measurement-stabilization within 1 second (HV-C(P) series)
- IP65 dust & waterproof base unit with a stainless steel (SUS430) pan
- Built-in printer for creating paper-based records on the spot (CP models) includes Date & Time
- Operation with either AC adapter or dry cell batteries (AC adapter only for CP models)
- Up to 1200 hours from 4 D size batteries (C models)
- Highly-visible, LCD display (25 mm character height) with white backlight
- Bright and multi-coloured 5-step LED comparator lights
- Auto-tare, negative weighing and initial tare functions. Ideal for 'take-away' check weighing
- Alphanumeric keypad for quick entry of ID number, pre-set tare, comparator limits etc.
- Key lock function to prevent operators from making changes to the scale settings
- Optional roller conveyers for weighing in production lines
- Universal Flexi Coms (UFC) function to edit serial data output/printout format. Enables control of barcode label printers etc.



IP65 base unit with a SUS430 pan

- Three Interface slots for optional communication interfaces including RS-232C, USB, comparator output, buzzer, control input
- Display hold, Counting, Accumulation, Key Lock, Auto-On/Off, Display working cover
- Adjustable display angle
- Optional 5m display extension cable and wall-mount bracket

FG Platform Scales



FG-60KBM



FG-150KAL

Model	Capacity	Resolution	Verification Value	Pan Size
FG-150KAL	150kg	10*/20*/50g	-	530 × 390mm
FG-150KAL-EC	150kg	50g	50g	530 × 390mm
FG-60KAL	60kg	5*/10*/20g	-	530 × 390mm
FG-60KAL-EC	60kg	20g	20g	530 × 390mm
FG-60KBM	60kg	5*/10*/20g	-	380 × 300mm
FG-60KBM-EC	60kg	20g	20g	380 × 300mm
FG-30KBM	30kg	2*/5*/10g	-	380 × 300mm
FG-30KBM-EC	30kg	10g	10g	380 × 300mm

Options & Accessories	Model
RS-232 interface	FG-OP-23
RS-232 interface & comparator relay output	FG-OP-24
Transparent plastic working covers (5 pcs.)	AX-3007527-5S

Models with "-EC" at the end are EC-type approved.
2nd stage verification is available as an optional service.

- EC type approved
- Comparator function
- Full digital calibration
- Counting function
- Auto power OFF function
- Status indicators (stable, zero, and net)
- High-speed weighing with 1-second stabilization
- Washable and hygienic stainless steel weighing pan in two sizes
- Optional RS-232C and comparator output (FG-OP-23/FG-OP-24)
- Display unit either on a column (FG-KAM/KAL) or attached directly to the platform (FG-KBM)
- Three selectable weighing resolutions
- Approx. 150 hours with 4 x C type dry-cell batteries, batteries not included
- For KBM models the indicator can be detached and the cable length is 1.5m



Standard functions



Optional



For 2nd stage verification (ex works) the postcode of point of use is required

EM Platform Scales



Swivel and rotatable display head

EM-30KAM

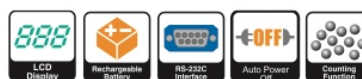
Model	Capacity	Resolution	Pan Size
EM-30KAM	30kg	2/5/10g	300 × 350mm
EM-60KAM	60kg	5/10/20g	300 × 350mm
EM-60KAL	60kg	5/10/20g	400 × 500mm
EM-150KAL	150kg	10/20/50g	400 × 500mm

Options & Accessories	Model
Table/wall bracket	EM-OP-14
Protective cover	EM-OP-15
Loadcell extension cable (3m)	EM-OP-16
Loadcell extension cable (5m)	EM-OP-17

- 3 selectable resolutions
- Large, easy to read backlit display
- Rechargeable, internal battery
- Stainless steel weighing pan
- Swivel and rotatable display head
- "Auto power OFF" function
- Counting function
- RS-232C interface
- 200 hours autonomy for batteries (backlight off)
- Battery level indicator
- Easy carrying because of lightweight body



Standard functions



SJ Digital Scales



- Stainless steel weighing pan
- Large LCD display
- Short stabilization time - less than 1 second
- Multiple weighing units – g, lb, oz and lb-oz
- Level bubble and adjustable feet for precise levelling
- Battery or AC adapter operation (AC adapter comes as option)
- 4 type D batteries (batteries not included)
- Long battery life: approx. 1,600 hours with alkaline cells at 20°C
- Simple and easy to change the batteries: battery tray at the back
- Flat design for avoiding food traps
- Hygiene - NSF approved



Model	Capacity	Resolution	Verification Value	Pan Size
SJ-1000HS	1000g	0.5g	-	230 × 190mm
SJ-1000-EC	1000g	1g	1g	230 × 190mm
SJ-2000HS	2000g	1g	-	230 × 190mm
SJ-2000-EC	2000g	2g	2g	230 × 190mm
SJ-5001HS	5000g	1g	-	230 × 190mm
SJ-5000HS	5000g	2g	-	230 × 190mm
SJ-5000-EC	5000g	5g	5g	230 × 190mm
SJ-12KHS	12kg	5g	-	230 × 190mm
SJ-12K-EC	10/12kg	10/20g	10/20g	230 × 190mm
SJ-20KHS	20kg	10g	-	230 × 190mm
SJ-20K-EC	20kg	20g	20	230 × 190mm
SJ-30KHS	30kg	20g	-	230 × 190mm
SJ-30K-EC	20/30kg	20/50g	20/50g	230 × 190mm

Accessories	Model
AC adapter UK/EU	AX-TB280

Models with “-EC” at the end are EC-type approved.
2nd stage verification is available as an optional service.

Standard functions



For 2nd stage verification (ex works) the postcode of point of use is required

EK-L Precision Bench Scales



- EK-15KL: Offers a large capacity and high resolution
- EK-30KL: Especially useful when the gross weight exceeds 15 kg, yet 0.1 g readability is necessary to measure the net weight
- Large (300 × 210 mm) weighing pan for measurements of bulky objects or quantities
- Hygienic and scratch-resistant stainless steel (SUS430) weighing pan
- Easy-to-read LCD display, white backlight (22 mm characters)
- RS-232C interface as standard
- GLP/GMP/GCP/ISO compliant output
- Multiple weighing units: g, kg, oz, lb, ozt
- Automatic Counting Accuracy Improvement (ACAI) function
- Operation with either AC adapter or optional rechargeable battery
- Percent function, comparator function, display hold function



Standard functions



Model	Capacity	Resolution	Pan Size
EK-15KL	15 kg	0.1g	300 × 210mm
EK-30KL	3 kg/30 kg	0.1g/1g	300 × 210mm

Accessories	Model
Rechargeable battery pack	HC-OP-02i

HT Compact Scales



Ideal for classrooms! The stackable case takes up less space for storage

HT with stainless steel pan

- Large LCD display with clearly visible characters (13.5mm)
- External calibration
- Tare
- Battery operation with 4 AA size dry batteries (batteries are included)
- Long battery life: approx. 450 hours with alkaline cells
- Optional AC adapter
- Automatically turns off the display after 5 minutes of inactivity
- Delivered with a storage box
- Anti-theft lock
- Three colour bars to sort scales easily - not HT-120 (e.g., colour coded identification depending on classroom, lab, application...)



Model	Capacity	Resolution	Pan Size
HT-120	120g	0.01g	Ø 70mm
HT-300	310g	0.1g	132 × 130mm
HT-500	510g	0.1g	132 × 130mm
HT-3000	3100g	1g	132 × 130mm
HT-5000	5100g	1g	132 × 130mm

Options & Accessories	Model
AC adapter UK/EU	AX-TB280
Stainless steel pan (not HT-120)	HT-OP-10

Standard functions



HL-i Compact Scales



Easy storage on the side

- High weighing resolution (1/2,000)
- Large LCD Display
- Calibration function
- AC Adapter (option) or battery operation
- Long Battery Life: approx. 450 hours with alkaline cells
- Auto Power OFF
- Batteries included (4 x AA)
- Low battery indicator
- Multi weighing units
- Tare
- Overload protection



Model	Capacity	Resolution	Pan Size
HL-200i	200g	0.1g	Ø 130mm
HL-2Ki	2000g	1g	Ø 130mm

Options & Accessories	Model
AC adapter UK/EU	AX-TB264U

Standard functions



FC-i/FC-Si

High-Performance Counting Scales



Simple operation and easy to read Vacuum Fluorescent Display

More flexible and versatile with additional options



Optional interface to remote scale for bulk counting



FC-Si with optional traffic light and optional comparator relay interface

Model	Min. Piece Weight (Normal Mode)	Min. Piece Weight (Fine Mode)	Capacity	Resolution	Pan Size
FC-500Si	0.001g	0.00005g	500g	0.02g	128 × 128mm
FC-5000Si	0.01g	0.0005g	5kg	0.2g	165 × 165mm
FC-500i	0.01g	0.0005g	500g	0.05g	205 × 152mm
FC-1000i	0.02g	0.001g	1kg	0.1g	205 × 152mm
FC-2000i	0.04g	0.002g	2kg	0.2g	300 × 280mm
FC-5000i	0.1g	0.005g	5kg	0.5g	300 × 280mm
FC-10Ki	0.2g	0.01g	10kg	1g	300 × 280mm
FC-20Ki	0.4g	0.02g	20kg	2g	300 × 280mm
FC-50Ki	1g	0.05g	50kg	5g	300 × 280mm

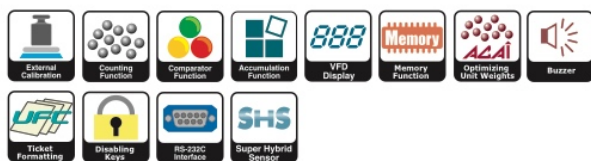
Options & Accessories	Model
NiMH rechargeable battery pack (10 hours operation)	FC-OP-02i
Module with 2 RS-232C ports - 3 ports in total *	FC-OP-03i
RS-232C port & 1 comparator relay output *	FC-OP-04i
Remote scale option (incl. AX-NJC-207PF plug)	FC-OP-05i

*FC-OP-04i and 03i cannot be installed at the same time

- High internal resolution: 1/10,000,000 (FC-Si), and 1/1,000,000 (FC-i)
- Up to 3 RS-232C ports (option)
- 4 methods to initialize the unit weight: sample, memory, keyboard input, bar code
- FC-Si models come with SHS sensor, same as one of our laboratory balances
- Large memory for up to 500 IDs (ID, name, unit weight, tare, comparator limit)
- Navigation system with LEDs indicating active keys for easy and faster operation
- Automatic counting accuracy improvement (ACAI)
- Comparator with HI (exceeding), OK, and LO (insufficient) results
- Accumulation function totals piece count into memory
- Remote platform option offers bulk counting
- UFC: easy formatting of your RS-232C outputs and labels for printers (Universal Flexible Comms)
- Optional rechargeable battery pack (NiMH)



Standard functions



Optional



HC-i Counting Scales



Detachable display



Internal, rechargeable battery pack (optional)



HC-6Ki

Model	Min. Piece Weight (Normal Mode)	Min. Piece Weight (Fine Mode)	Capacity	Resolution	Pan Size
HC-3Ki	0.1g	0.005g	3kg	0.5g	300 × 210mm
HC-6Ki	0.2g	0.01g	6kg	1g	300 × 210mm
HC-15Ki	0.4g	0.02g	15kg	2g	300 × 210mm
HC-30Ki	1.0g	0.05g	30kg	5g	300 × 210mm

Options & Accessories	Model
Internal, rechargeable battery pack (80 hours)	HC-OP-02i
RS-232C interface	HC-OP-03i
RS-232C and comparator relay output	HC-OP-04i
Display extension cable 2m	HC-OP-08i

- High resolution of 1/600,000 or 1/750,000
- Ability to count even small objects down to 0.005g
- 3 methods to initialize unit weights: sample, memory, and keyboard input
- Large memory for 99 products incl. tare, unit weight and comparator limits
- Navigation system with LEDs indicating active keys for easy and faster operation
- Automatic Counting Accuracy Improvement (ACAI)
- Comparator with HI (exceeding), OK, and LO (insufficient) results
- Accumulation function totals piece count into memory
- Beeping function with frequency variation as you approach your preset target
- UFC: easy formatting of your RS-232C outputs and labels for printers (Universal Flexible Comms)
- The indicator can be detached, and the cable length is 1.5m



Standard functions



Optional



SW Platform Scales - IP69K Super Washdown



The large LED screen is highly visible and intuitive. Capacitive keys prevent damage from sharp objects, thus contribute to maintain the integrity of the equipment



The desktop/wall-mount stand can be selected instead of the pole stand



Premium resistance to hostile environments!



The pole can be set up on the end side or on the longitudinal side depending on your ergonomic requirements

Model	Capacity	Resolution	Verification Value	Pan Size
SW-6KS	6kg	0.5/1/2g	-	250 × 250mm
SW-6KS-EC	6kg	2g	2g	250 × 250mm
SW-15KS	15kg	1/2/5g	-	250 × 250mm
SW-15KS-EC	15kg	5g	5g	250 × 250mm
SW-15KM	15kg	1/2/5g	-	300 × 380mm
SW-15KM-EC	15kg	5g	5g	300 × 380mm
SW-30KM	30kg	2/5/10g	-	300 × 380mm
SW-30KM-EC	30kg	10g	10g	300 × 380mm
SW-60KM	60kg	5/10/20g	-	300 × 380mm
SW-60KM-EC	60kg	20g	20g	300 × 380mm
SW-60KL	60kg	5/10/20g	-	390 × 530mm
SW-60KL-EC	60kg	20g	20g	390 × 530mm
SW-150KM	150kg	10/20/50g	-	390 × 530mm
SW-150KM-EC	150kg	50g	50g	390 × 530mm
SW-150KL	150kg	10/20/50g	-	390 × 530mm
SW-150KL-EC	150kg	50g	50g	390 × 530mm

Models with "-EC" at the end are EC-type approved.
"2nd stage verification" is available as an optional service.

Options & Accessories	Model
Sealed, lead acid rechargeable battery	HC-OP-02i
RS-232C and comparator relay output*	SW-OP-03
RS-422/485*	SW-OP-04
Short pole stand - for SW-6KS/15KS (approx. 35.3cm)	SW-OP-09
Long pole stand (approx. 72.2cm)	SW-OP-10
Desktop/wall-mount stand	SW-OP-11

* OP-03 and OP-04 cannot be installed at the same time. The connectors of optional OP-03 and OP-04 are not IP69K.

For 2nd stage verification (ex works) the postcode of point of use is required

- IP69K - the highest level of dust and water-proofing:
 - » High pressure: ~ 10,000 kPa / 100 bars / 1,450 PSI
 - » High temperature: ~85°C
- EC-type approved
- Auto tare (comparator)
- Auto tare (initial weight)
- Auto tare (reload)
- Negative in addition to positive comparator (loss-in-weight and weight-in-weight batching)
- Grading
- Ultimate protection against the effects of condensation
- Streamlined construction for easy cleaning of food-processing residues
- Stainless steel: sensor, pan, framework, column

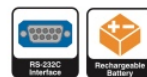
- Durable and adjustable indicator bracket
- Capacitive keys for light touch operation and robustness
- Bright, multicoloured LED display
- 5-step comparator for check weighing and filling applications
- 5-level comparator output with colour lights: red, orange, green
- Desktop/wall-mount stand available instead of the pole stand
- Optional rechargeable battery
- Optional interfaces: RS-232C + comparator, RS-422 / RS-485



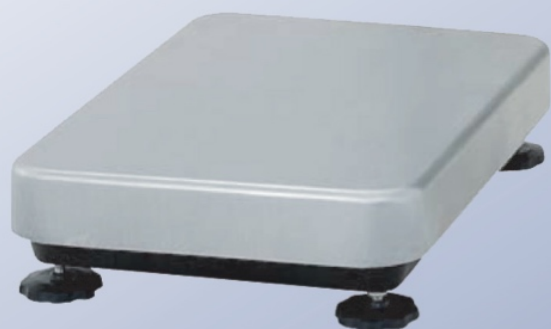
Standard functions



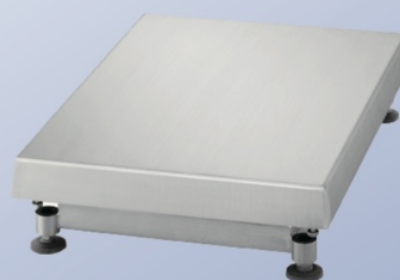
Optional



SB/SB-SW Platforms



SB



SB-SW

SB Platforms IP65

Model	Capacity	Pan Size
SB-15K10	15kg	250 × 250mm
SB-60K11	60kg	330 × 424mm
SB-100K12	100kg	390 × 530mm
SB-200K12	220kg	390 × 530mm

Standard functions



SB-SW Platforms IP69K

Model	Capacity	Pan Size
SB-6K13SW	6kg	250 × 250mm
SB-15K13SW	15kg	250 × 250mm
SB-15K14SW	15kg	300 × 380mm
SB-30K14SW	30kg	300 × 380mm
SB-60K14SW	60kg	300 × 380mm
SB-150K14SW	150kg	300 × 380mm
SB-60K15SW	60kg	390 × 530mm
SB-150K15SW	150kg	390 × 530mm

- IP69K - the highest level of dust and waterproofing:
 - » High pressure: ~ 10,000 kPa / 100 bars
 - » High temperature: ~85°C
- Ultimate protection against the effects of condensation
- Streamlined construction: ideal for wash down applications
- Stainless steel: sensor, pan, framework

Standard functions

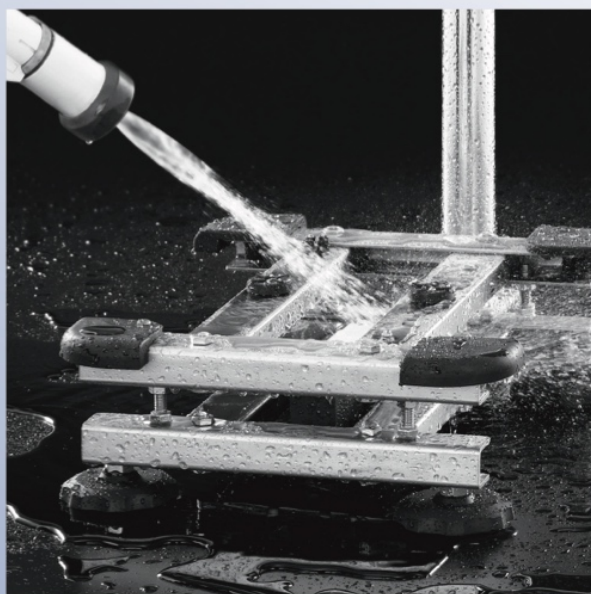


SC/SE Platform Scales - IP68

Excellent Resistance to Hostile Environments!



Water jet cleaning



Stainless steel frame (SC)

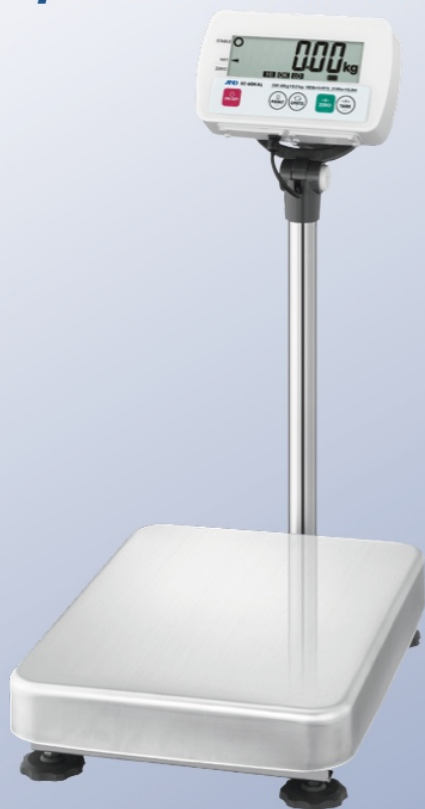
Stainless steel frame
and column (SC)Painted steel frame and
column (SE)

- IP68 dust and water-proof: submersible at 1m under water for 24 hours!
- Wash down construction for easy cleaning
- High speed stabilization in 1 second
- Battery operated
- 4,500 hours of continuous operation with 6 D batteries
- Supersized LCD of 39 mm character height
- Stainless steel weighing pan and frame (SC)
- Painted steel frame and column (SE)
- **Waterproof and corrosion-resistant load cell** (aluminium anodized and coated with epoxy resin with protective silicon over wiring)
- Comparator function
- Counting function
- Automatic power OFF
- Multiple interfaces (options):
 - » RS-232C
 - » Quick USB
 - » Comparator output
- Easily switchable, multiple weighing units (kg, lb, oz, and pcs)



For 2nd stage verification (ex works) the postcode of point of use is required

SC/SE Platform Scales - IP68



SC-60KAL



SE-60KAL

Model	Capacity	Resolution	Verification Value	Pan Size
SC-30KAM-EC SE-30KAM-EC	30kg	10g	10g	300 × 380mm
SC-60KAM-EC SE-60KAM-EC	60kg	20g	20g	300 × 380mm
SC-150KAM-EC SE-150KAM-EC	150kg	50g	50g	300 × 380mm
SC-60KAL-EC SE-60KAL-EC	60kg	20g	20g	390 × 530mm
SC-150KAL-EC SE-150KAL-EC	150kg	50g	50g	390 × 530mm
SC-30KAM SE-30KAM	30kg	5g/10g	-	300 × 380mm
SC-60KAM SE-60KAM	60kg	10g/20g	-	300 × 380mm
SC-150KAM SE-150KAM	150kg	20g/50g	-	300 × 380mm
SC-60KAL SE-60KAL	60kg	10g/20g	-	390 × 530mm
SC-150KAL SE-150KAL	150kg	20g/50g	-	390 × 530mm

Models with "-EC" at the end are EC-type approved.
2nd stage verification is available as an optional service.

Options & Accessories	Model
Quick USB interface*	SCE-02
RS-232C and comparator relay output*	SCE-03

* SCE-02 and SCE-03 cannot be installed at the same time.
* The connectors of optional SCE-02 and SCE-03 are not IP68.

For 2nd stage verification (ex works) the postcode of point of use is required

Standard functions



Optional



FS-i Checkweighing IP65 Scales



Auto tare (comparator)
Auto tare (initial weight)
Auto tare (reload)
Negative and positive Checkweighing

FS-30Ki

Model	Capacity	Adjustable Resolution	Pan Size
FS-6Ki	6kg	0.5g/1g/2g	250 × 250mm
FS-15Ki	15kg	1g/2g/5g	250 × 250mm
FS-30Ki	30kg	2g/5g/10g	380 × 300mm

Options & Accessories	Model
Internal rechargeable battery pack - SLA technology (80 hours)	HC-OP-02i
RS-232C and comparator relay output	FS-OP-03i
RS-422/485 and comparator relay output	FS-OP-04i

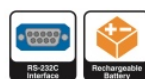
- Ultra fast weighing response – only 0.5 seconds!
- Intuitive operation
- IP65 Dust and Waterproof
- Comparator function with LO, OK or HI
- Large comparator lights
- Analog bar display - 3 modes
- Memory for 99 products
- Hygiene - NSF certified
- Large backlit LCD display
- Rechargeable battery pack (optional)
- Filtering function
- Buzzer
- UFC: easy formatting of your RS-232C outputs and labels for printers (Universal Flexible Comms)



Standard functions



Optional



For 2nd stage verification (ex works) the postcode of point of use is required

SJ-WP IP67

Checkweighing Bench Scales



Standard functions



- EC type approved
- IP67, dust and waterproof
- Externally mounted load cell to allow fast stabilization (max. 0.5 seconds)
- 5,000 hours of continuous operation with 6 D alkaline batteries (LED and backlight off) (batteries not included)
- Large LCD display (26 mm character height) with white backlight
- Bright and multi-coloured 5-step LED comparator lamps
- Take-away check weighing using the auto-tare function
- Touch sensitive capacitive keys to prevent damage from sharp objects
- Scratch-free and hygienic stainless steel (SUS304) weighing pan
- Waterproof and anti-corrosive load cell with integrated overload protection mechanism
- Four selectable weighing resolutions from 1/3,000 up to 1/30,000
- Auto tare function
- Counting function
- Auto power OFF function
- Multiple weighing units: g, kg, lb, oz, ozt, lb-oz, tael, tola, Newton
- Battery life indicator



Model	Capacity	Adjustable Resolution	Pan Size
SJ-3000WP	3kg	1/0.5/0.2/0.1g	232 x 192mm
SJ-3000WP-EC	1.5kg/3kg	0.5g/1g	232 x 192mm
SJ-6000WP	6Kg	2/1/0.5/0.2g	232 x 192mm
SJ-6000WP-EC	3Kg/6Kg	1/2g	232 x 192mm
SJ-15KWP	15kg	5/2/1/0.5g	232 x 192mm
SJ-15KWP-EC	15kg/30kg	2/5g	232 x 192mm
SJ-30KWP	30kg	10/5/2/1g	232 x 192mm
SJ-30KWP-EC	15kg/30kg	5/10g	232 x 192mm

Models with "-EC" at the end are EC-type approved.
2nd stage verification is available as an optional service.

Options & Accessories	Model
XL-weighing pan 320 x 195 mm	SJ-OP-11

For 2nd stage verification (ex works) the postcode of point of use is required

HT-CL

Checkweighing Compact Scales



Standard functions



- Highly-visible, multi-coloured LED lights for quick and unmistakable comparator judgments
- 9 memories for comparator settings
- Negative values for comparator limits allow for checking weights that are taken out of (instead of added to) a container*1
- Operation with either four AA batteries or the provided AC adapter
- Large LCD display with 13.5-mm high characters
- Auto power OFF function to avoid wasting power
- Multiple weighing units: g, oz, ozt, lb-oz, dwt, ct, tael (HK general/HK jewelry/Taiwan), tola, and N*2
- Security slot at the back to accommodate an anti-theft lock
- Key lock function to prevent operators from making changes to the scale settings
- Comes in a stackable carrying case to save space when stored
- Includes three colour bars (red, green and orange) for sorting the scales depending on the purpose, owner, point of use, etc.



*1 The display needs to be set to zero before each measurement.
*2 The comparator function cannot be used with lb-oz or tael, and lb-oz is not available with the HT-300CL.

Model	Capacity	Resolution	Pan Size
HT-300CL	310g	0.1g	132 x 130mm
HT-500CL	510g	0.1g	132 x 130mm
HT-3000CL	3100g	1g	132 x 130mm
HT-5000CL	5100g	1g	132 x 130mm

Options & Accessories	Model
Stainless steel weighing pan	HT-OP-10

SK-WP

IP65 Bench Scales



- EC type approved
- Dust and waterproof (IP65)
- Stainless steel body and weighing pan
- Large & clear LCD display (25mm)
- 1/2,000 Resolution (SK-5001WP: 1/5,000)
- Net weight / Stability indication
- Separate keys for Power and Re-Zero
- Portable (6 D type batteries, batteries not included)
- Long battery life: approx. 1,200 hours with alkaline cells at 20°C
- Low battery indication
- Auto Power Off
- Optional AC adapter



Model	Capacity	Resolution	Verification Value	Pan Size
SK-1000WP-EC	1000g	0.5g	0.5g	232 × 192mm
SK-2000WP-EC	2000g	1g	1g	232 × 192mm
SK-5000WP-EC	5000g	2g	2g	232 × 192mm
SK-5001WP	5000g	1g	-	232 × 192mm
SK-10KWP-EC	10Kg	5g	5g	232 × 192mm
SK-20KWP-EC	20Kg	10g	10g	232 × 192mm
SK-30KWP-EC	30Kg	20g	20g	232 × 192mm

Models with "EC" at the end are EC-type approved.
2nd stage verification is available as an optional service.

Options & Accessories	Model
AC adapter UK/EU	AX-TB280

Standard functions



For 2nd stage verification (ex works) the postcode of point of use is required

HL-WP

IP65 Bench Scales



HL-300WP

HL-3000LWP-EC

- EC type approved (HL-3000WP/HL-3000LWP)
- Dust and waterproof (IP65)
- Stainless steel case and weighing pan
- Compact design
- High resolution (1/3,000)
- Low battery indicator
- Portable (6 AA type batteries, batteries not included)
- Net weight and stability indicator
- Auto power OFF
- Optional AC adapter



Model	Capacity	Resolution	Verification Value	Pan Size
HL-300WP	300g	0.1g	-	128 × 128mm
HL-1000WP	1000g	0.5g	-	128 × 128mm
HL-3000WP-EC	3000g	1g	1g	128 × 128mm
HL-3000LWP-EC	3000g	1g	1g	133 × 170mm

Models with "EC" at the end are EC-type approved.
2nd stage verification is available as an optional service.

Options & Accessories	Model
AC adapter UK/EU	AX-TB280

Standard functions



For 2nd stage verification (ex works) the postcode of point of use is required



Weighing Terminals

AD-4401A-EC

Batching/Weighing Indicator



- EC-type approved
- Powerful vibration-cancelling filter (High Performance Digital Filter)
- 100 times/sec. High speed sampling
- Up to 1 million counts of A/D resolution
- High display resolution up to 1/16,000
- Sub display provides feedback on all set points & simplifies calibration
- Digital Span Calibration enhances technical support and difficult installations



Model	Description
AD-4401A-EC	High speed weighing indicator

Options & Accessories	Model
BCD output	AD-4401A-OP-01
RS422/RS485 serial interface	AD-4401A-OP-03
RS-232C serial interface	AD-4401A-OP-04
Set point unit	AD-4401-OP-06
Analog output (4-20mA)	AD-4401A-OP-07

Standard functions



AD-4430C

Ultra compact weighing module with CC-Link. For use in unstable weighing environments



- DIN rail mounted type ideal for insertion into control board
- Powerful vibration-cancelling function (High Performance Digital Filter)
- High speed sampling (1,000/sec) - High accuracy
- Load cell connection failure diagnosis function
- Equipped with powerful noise suppression circuit
- Accurate linear correction function using high-order equations
- Equipped with averaging hold, peak hold and comparator functions
- Sequential filling/dispensing measurement capability
- Active free fall compensation
- I/O points (6 inputs, 8 outputs) as standard



Model	Description
AD-4430C	Weighing module with CC-link

AD-4410

High Speed Weighing Indicator



- Powerful vibration-cancelling function (High Performance Digital Filter)
- High speed sampling (100 times/second), high accuracy
- Circuits equipped with powerful noise reduction
- Accurate linear correction function using high-order equations
- Average holding function
- Comes equipped with Modbus-RTU



Model	Description
AD-4410	Vibration-resistant weighing indicator

Options and Accessories	Model
RS-485 DIN connector	AD-4410-OP-03
RS-232 DIN connector	AD-4410-OP-04
Desk stand	AD-4410-OP-11

AD-4329A

Multi Interval Indicator



- Vacuum Fluorescent Display
- Standard RS-232C interface
- 4-point digital linearization
- Triple range on weighing capacity are available
- Automatic or manual storage of accumulated data
- Comparator output to optional relays
- Set-point comparison for batching applications
- Select weighing range (up to triple range)
- 1/20,000 displayed count resolution (maximum)
- Powers up to 8 units of load cells
- Controllable via external input
- RFI/EMI protected
- Mount on panel, column or desk top
- Use the keypad to enter the predetermined tare weight



Model	Description
AD-4329A	Weighing indicator

Options and Accessories	Model
BCD output (open collector)	AD-4329A-OP-01
Comparator output (relay output)	AD-4329A-OP-02
RS-422/485	AD-4329A-OP-03
Analog output (4-20mA)	AD-4329A-OP-07

Standard functions



FS-D IP65 Indicator with 3-level Comparator



- Intuitive operation
- IP65 dust and waterproof
- Comparator function with LO, OK, or HI
- Large comparator lights
- Buzzer
- Analog sweep display - 3 modes
- Memory for 99 products
- Hygiene - NSF certified
- Large backlit LCD display
- Rechargeable battery pack (optional)
- Filtering function
- Auto tare
- Negative weighing
- Desktop/wall-mount bracket included as standard



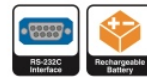
Model	Description
FS-D	IP65 indicator with 3-level-comparator
Options & Accessories	
Internal, rechargeable battery	HC-OP-02i
RS232C with comparator output*	FS-OP-03i
RS-422/485*	FS-OP-04i

*OP-03 and OP-04 cannot be used at the same time.

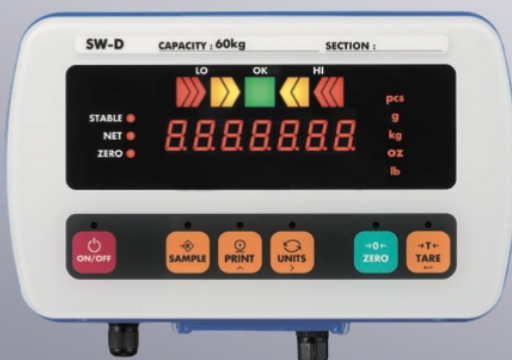
Standard functions



Optional



SW-D IP69K Indicator with 5-level Comparator



- IP69K - the highest level of dust and water-proofing:
 - » High pressure: ~ 10,000 kPa / 100 bars
 - » High temperature: ~85°C
- Ultimate protection against the effects of condensation
- Capacitive keys for light touch operation and durability
- Bright, multicoloured LED display
- 5-step comparator for check weighing and filling applications
- 5-level comparator output
- with colour lights: red/orange/green
- Auto tare
- Negative weighing
- Optional desktop/wall-mount bracket
- Optional rechargeable battery
- Optional interfaces: RS-232C + comparator, and RS-422 / RS-485



Model	Description
SW-D	IP69K indicator with 5-level comparator
Options & Accessories	
Internal, rechargeable battery	HC-OP-02i
RS-232C & comparator relay output*	SW-OP-03
RS-422/485*	SW-OP-04
Short pole (SW-6KS/SW-15KS)	SW-OP-09
Long pole	SW-OP-10
Desktop/wall-mount stand	SW-OP-11

*OP-03 and OP-04 cannot be used at the same time.
SW series is not IP69K compliant with SW-03 or SW-04

Optional



Standard functions





Accessories

AD-8527 Quick USB Adapter

Transmits weighing data directly from the RS-232C port of an A&D balance or scale to the USB port of a PC. Makes the data available at application level



Dimensions including cap
55 x 103 x 16.5 mm IP65



The AD-8527 offers:

- Easy installation - "Plug & Play": No configuration change on PC. No driver or software to be installed.
- Easy operation: Each time your balance or scale sends a weighing result, it appears on the screen wherever the text cursor is (for example in a cell of MS-Excel, or in an entry field of your MRP application). The computer recognizes the device as a keyboard.
- Time stamping of data: date and time can be added to transmitted data



Model	Description
AD-8527	Quick USB adapter

AD-1688 Weighing Data Logger

Save, Carry, and Retrieve! Handheld device that lets you collect weighing data without connecting the balance or scale to a PC!



- Dual interface: An RS-232C interface to import weighing data from an A&D balance or scale and a USB interface to export the data to a PC (no driver software is required)
- Large memory: approx. 5000 weighing data sets (in the A&D standard format) can be stored
- Internal clock: date, time, & seq. N° can be added to weighing data
- Interval mode: periodic data acquisition
- Complex data records: records containing multiple data (tare, unit weight, weight, count, comparison result, product name...).
- No battery required: power supplied directly from a balance, scale or PC



Model	Description
AD-1688	Weighing data logger

AD-1687 Weighing Environment Logger

Allows simultaneous and chronological recording of environmental and weighing data. Environmental data are produced by AD-1687 embedded sensors. Weighing data is acquired from a balance.



- Four kinds of environmental data can be added to your weighing records:
 - » Temperature (°C/°F),
 - » Humidity (%),
 - » Barometric pressure (hPa),
 - » Vibration (mG)
- Large memory capacity of 10,000 data sets
- Graphic and numeric display of information
- Connects to balance by RS-232C and to PC by USB
- Time stamping of data



Model	Description
AD-1687	Weighing environment logger

AD-1641 Air Flow and Environmental Logger



- High precision, fast response air flow sensor to capture low-velocity air flows of 0 to 1.00 m/s
- Measuring and recording of four additional kinds of environmental data - temperature, humidity, barometric pressure and vibration
- Alarm for abnormal values (comparator function)



Model	Description
AD-1641	AD-1641 Air flow and environment logger

AD-1683 Static Eliminator



- The AD 1683 generates positive and negative ions to eliminate static electricity, which is often the cause of inaccurate weighing.
- Ideal for treating your glassware, Petri dishes, powders, samples, etc.
- No fan, no breeze is produced, ideal for powder.
- Can be easily and safely installed and requires no high-voltage wiring
- Compact and lightweight:
- Size without its U shaped stand
- 112mm (L) × 92mm (W) × 40mm (H)



Model	Description
AD-1683	Static eliminator

AD-1684 Electrostatic Field Meter



- The AD-1684 is an electrostatic field meter designed for detecting the existence of static electricity, which is often the cause of inaccurate weighing.
- Size: 123mm (L) × 73mm (W) × 25mm (H)



Model	Description
AD1684	Electrostatic field meter

AD-8526 RS-232 Ethernet Converter



- The RS-232C output signal can be converted to Ethernet
- Available to use with all A&D balances equipped with RS-232C



Model	Description
AD-8526	RS-232 ethernet converter

AD-1682 Rechargeable portable Power Supply



- Ideal for mobile operation in the field
- Compatible Products: GH, GR, HR, GX, GF, GP, EK-i, EW-i, FC-i, HC-i, FX-i, FZ-i, FX-i-WP, FZ-i-WP



Specifications	
Weight	Approx. 1.1kg
Battery life	4-50 hours, depending on operating conditions and connected devices
Dimensions	57(H) × 96(W) × 124(D) mm
Battery type	Nickel-metal-hydride (Ni-MH) battery

Model	Description
AD-1682	Rechargeable portable power supply

AD-8922A Remote Controller



- The AD-8922A is a remote controller that can be connected to certain A&D weighing instruments in order to display and control the weighing instrument remotely.



Model	Description
AD-8922A	Remote controller

AD-8920A Remote Display



- With this unit, weighing values can be viewed in a remote area
- Can be used with all A&D products using the RS-232C interface
- Bright Vacuum Fluorescent Display



Model	Description
AD-8920A	Remote display

ADI-CL130 Comparator Lights

ADI-CL130: A single lamp that changes colour



- For check weighing or filling applications: show your comparator outputs visually (orange = not enough, green = OK, red = too much).



Model	Description
ADI-CL130	3 in 1 high contrast, bright lamp with almost unlimited service life. Stable and robust. H = 130mm.

AD-8127 Multi-functional Compact Printer



- Dot-Matrix mechanism
- Statistic function
- Date & time



Model	Description
AD-8127	Multi-functional Compact Printer
Accessories	
AX-PP137-S	Plain Printer Paper (10 rolls)
AX-PP173-S	Dust-Free Printer Paper (10 rolls)
AX-ERC22B	Ink Ribbon (5 pcs)
AX-KO1786-200	Printer Cable DIN - D-sub9 pin - RS232
AX-KO5291-100	Printer Cable DIN - D-sub9 pin - Current Loop

MCP-1000 Thermal Printers



- Thermal print mechanism
- Statistic function (MCP-1000-118S)
- Date & time



Model	Description
MCP-1000-118S	Statistical printer
MCP-1000-118	Standard printer
Accessories	
AX-PPMCP	Thermal paper (20 rolls)

WinCT Software

Software, Connectivity, Data Transfer, Labels

This software is a suite of 3 modules that have been designed to download information from your A&D balance or scale directly into your personal computer. Communication is done via a RS-232C link. A USB adaptor can be added if required.

RS-Com module: sending commands, data acquisition, printing, and virtual indicator.

- Transmission of commands to control the balance/scale and acquisition of weighing data in text format. Periodical actions are possible in an automated manner. Available commands include among others: calibrate, ON/OFF, print, query (for "transmit") weighing data, re-zero, range, sample...
- The GLP data can be transferred directly to a PC/printer, without another software application. With RS-Com the weighing data is displayed in real-time on your PC.

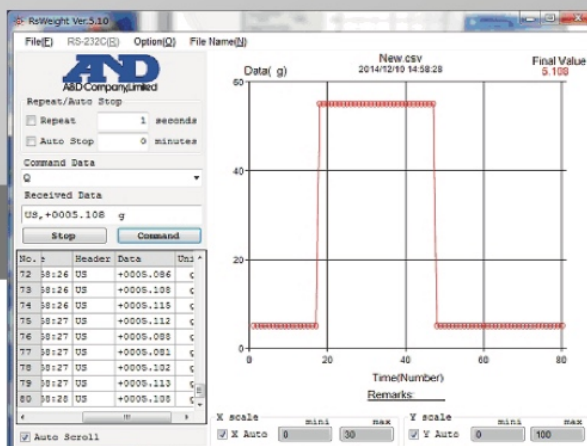
RS-Key module: data transfer into target applications

- Transfer of weighing results directly into your target applications. Once started, RS-Key runs in the background on your PC. Your main application runs in foreground. Each time the balance/scale sends data, it automatically appears

in the active field (e.g., where the cursor is located) in your application. For example, in case of MS-Excel, you can configure RS-Key so that each new weighing data sent by the balance appears as a new line/new record.

RS-Weight module: real-time curves

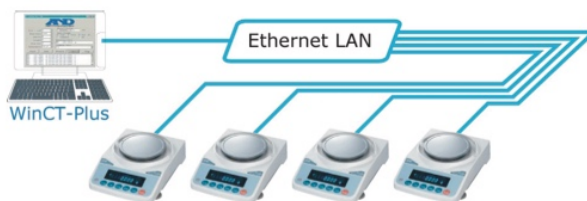
- The weighing data can be periodically retrieved from the balance/scale and displayed in graph form on the monitor in real-time. Statistics such as maximum, minimum, average, range, standard deviation and coefficient of variation values can be calculated and displayed. Individual weighing data can be time stamped and saved in a CSV file (MS Excel compatible). For example, RS-Weight is very convenient for measuring humidity intake over time or filtration speeds...



WinCT-Plus Software



WinCT-Plus is the network version of WinCT. It enables the centralized management of a network of distributed heterogeneous balances/scales. Weighing data can be collected from various weighing devices into your personal computer while ensuring traceability. Communication takes place via RS-232C or Ethernet LAN (in the latter case, balances/ scales are given IP addresses).



The screenshot shows a data table with columns for 'Date', 'Time', 'Scale', and 'Weight'. It displays data for two scales: QR-200 and QR-2000. The data is organized into two columns, one for each scale, showing a series of weighings over time.

Date	Time	Scale	Weight
21	18:18:31	QR-200	7.8526 g
21	18:18:31	QR-2000	10.2653 g
21	18:18:33	QR-200	7.8534 g
21	18:18:33	QR-2000	11.5467 g
21	18:20:34	QR-200	6.0091 g
21	18:20:34	QR-2000	6.3769 g
21	18:20:38	QR-200	0 g
21	18:20:38	QR-2000	0 g
21	18:20:34	QR-200	0 g
21	18:20:34	QR-2000	0 g
21	18:20:38	QR-200	0 g
21	18:20:38	QR-2000	0 g
21	18:20:44	QR-200	0 g
21	18:20:44	QR-2000	0 g
21	18:20:48	QR-200	0 g
21	18:20:48	QR-2000	0 g
21	18:20:54	QR-200	0 g
21	18:20:54	QR-2000	0 g
21	18:20:58	QR-200	0 g
21	18:20:58	QR-2000	0 g
21	18:21:04	QR-200	0 g
21	18:21:04	QR-2000	0 g
21	18:21:08	QR-200	0 g
21	18:21:08	QR-2000	0 g
21	18:21:14	QR-200	0 g
21	18:21:14	QR-2000	0 g
21	18:21:18	QR-200	0 g
21	18:21:18	QR-2000	0 g
21	18:21:24	QR-200	0 g
21	18:21:24	QR-2000	0 g
21	18:21:28	QR-200	0 g
21	18:21:28	QR-2000	0 g
21	18:21:34	QR-200	0 g
21	18:21:34	QR-2000	0 g
21	18:21:38	QR-200	0 g
21	18:21:38	QR-2000	0 g
21	18:21:44	QR-200	0 g
21	18:21:44	QR-2000	0 g
21	18:21:48	QR-200	0 g
21	18:21:48	QR-2000	0 g
21	18:21:54	QR-200	0 g
21	18:21:54	QR-2000	0 g
21	18:21:58	QR-200	0 g
21	18:21:58	QR-2000	0 g
21	18:22:04	QR-200	0 g
21	18:22:04	QR-2000	0 g
21	18:22:08	QR-200	0 g
21	18:22:08	QR-2000	0 g

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