SHIMADZU
Excellence in Science

AP Series

Advanced Performance UniBloc Balances

NEW

Provides High-speed Response and High Stability
A New Stage in Analytical Balance Performance

The new model with a minimum display of 0.01 mg is released.

High Speed

The response time for trace measurements (from 1 mg) is reduced to about 2 seconds.
This significantly improves weighing efficiency.

Stress Free

The STABLO-AP ionizer can be mounted.
This eliminates the influence of static electricity, achieving reliable measurements in a simpler procedure.

For Regulation

Interlocking with LabSolutions Balance enables compliance with a variety of regulations for measurement data integrity, including ISO 17025 for testing laboratories, ISO 9001 and ISO 14001 for the manufacturing industry, and GLP/GMP and the United States Pharmacopeia (USP) for the pharmaceutical industry.

For HPLC

Functions are included for the preparation of buffer solutions used in HPLC.
As a result, the operation can be performed accurately and easily, even by non-specialists.

Save Your Operation

Equipped with USB as standard. Includes many diverse functions to support users.

* AP135W with optional ionizer

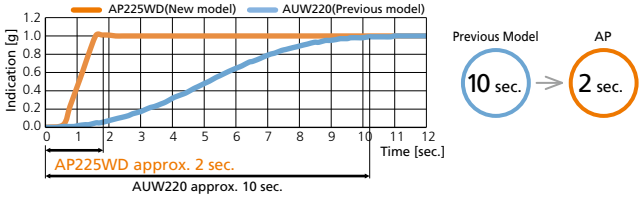
AP-W / AP-X Series (with built-in calibration weights) AP-Y Series (without built-in calibration weights)

Fast Response with UniBloc AP Technology

Shimadzu analytical balances boast a one-piece UniBloc weighing sensor, which is now even more advanced. The response time is reduced to about 1/5 the time of previous models.

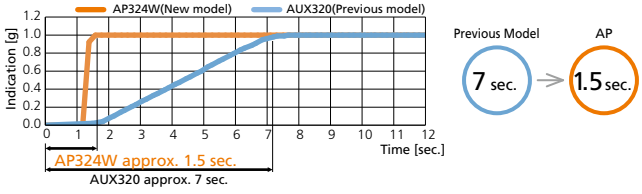
Response During Trace Measurements with the 0.01 mg Model

(Equivalent to 1 mg / With Conditions Set by Shimadzu)



Response During Trace Measurements with the 0.1 mg Model

(Equivalent to 1 mg / With Conditions Set by Shimadzu)



Built-in High-Performance Ionizer (Optional)

The STABLO-AP ionizer (optional) can be mounted.
(exclude AP-Y Series)
This eliminates the influence of static electricity, achieving reliable measurements.

USB Offers Greater Expandability

All models are equipped with USB and RS-232C connector as standard and can be connected to a computer.
APW Series with a USB host is able to save the data with a USB flash drive, or connect an external numeric keyboard, or a bar-code reader.

Equipped with USB as Standard

AP-W Series

For Users of HPLC Systems

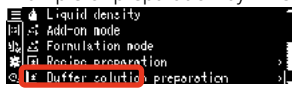
Buffer Solution Preparation Mode(AP-W Series only)

Recipes for 13 commonly used buffer solutions are included as standard. Buffer solutions can be prepared easily by only specifying the type and quantity of sample and prepare as instructed on screen. It also improves the efficiency and eliminates the mistakes.

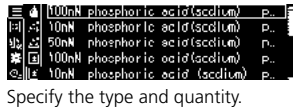
Buffer Solution Recipes (Examples)

Number		Buffer solution preparation list	
1	100mM	phosphoric acid (sodium)	pH=2.1
2	10mM	phosphoric acid (sodium)	pH=2.6
3	50mM	phosphoric acid (sodium)	pH=2.8
4	100mM	phosphoric acid (sodium)	pH=6.8
5	10mM	phosphoric acid (sodium)	pH=6.9

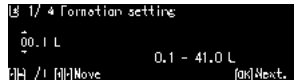
Example of preparation by AP series



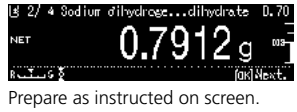
Select the buffer solution mode.



Specify the type and quantity.



Displays the name and quantity of sample.



Prepare as instructed on screen.

AP Series Specifications

Series	W Series						X Series			Y Series		
Model	AP135W	AP125WD	AP225WD	AP124W	AP224W	AP324W	AP124X	AP224X	AP324X	AP124Y	AP224Y	AP324Y
Capacity	135g	120 g / 52g	220 g / 102g	120 g	220 g	320 g	120 g	220 g	320 g	120 g	220 g	320 g
Minimum Display	0.01 mg	0.1 mg / 0.01 mg		0.1 mg			0.1 mg			0.1 mg		
Calibration Weight	Built-in						Built-in			No		
External Calibration Weight Range for Span Calibration	45 to 135.0009 g (100 g)	45 to 120.0090 g (100 g)	95 to 220.0090 g (200 g)	45 to 120.009 g (100 g)	95 to 220.009 g (200 g)	95 to 320.009 g (300 g)	45 to 120.009 g (100 g)	95 to 220.009 g (200 g)	95 to 320.009 g (300 g)	45 to 120.009 g (100 g)	95 to 220.009 g (200 g)	95 to 320.009 g (300 g)
Repeatability (Standard deviation)	0.05 mg	0.1 mg / 0.02 mg	0.1 mg / 0.05 mg	0.1 mg		0.15 mg	0.1 mg		0.15 mg	0.1 mg		0.15 mg
Repeatability (for Low Loads)	0.015 mg (5 g low loads)			0.1 mg (5 g low loads)	0.1 mg (10 g low loads)	0.1 mg (20 g low loads)	0.1 mg (5 g low loads)	0.1 mg (10 g low loads)	0.1 mg (20 g low loads)	0.1 mg (5 g low loads)	0.1 mg (10 g low loads)	0.1 mg (20 g low loads)
Minimum Weight*1	30 mg			200 mg			200 mg			200 mg		
Linearity	±0.1 mg	±0.2 mg / ±0.05 mg	±0.2 mg / ±0.1 mg	±0.2 mg		±0.3 mg	±0.2 mg		±0.3 mg	±0.2 mg		±0.3 mg
Response Time for Trace Measurements*2	2 sec.											
Response Time*3	8 sec.	2 sec. / 8 sec.		2 sec.			2 sec.			2 sec.		
USB Host (Type A)	Included						Not Included			Not Included		
USB Device (Type B)	Included						Included			Included		
Recipe Compounding	Included						Not Included			Not Included		
HPLC Buffer Solution Preparation	Included						Not Included			Not Included		
mol Conversion Function	Included						Included			Not Included		
Sample (Concentration) Preparation	Included						Not Included			Not Included		
Inspection Support Function	Included						Included			Not Included		
Clock-CAL	Included						Included			Not Included		
Ionizer	Optional						Optional			Not Included		
Operating Temperature/Humidity Range	5 to 40°C 20 to 85%*4											
Sensitivity Stability Against Temperature Range	±2 ppm/°C (10 to 30°C)											
Pan Size	ø91 mm											
Body Dimensions	Approx. 212 (W) × 411 (D) × 345 (H) mm (power supply unit included)			Approx. 212 (W) × 367 (D) × 345 (H) mm								
Weight	Approx. 7.9 kg			Approx. 7.0 kg						Approx. 6.5 kg		
Display	OEL display (dot matrix)											
Input/Output Terminal	RS-232C (D-sub9P plug) USB host (Type A) USB device (Type B) Ionizer						RS-232C (D-sub9P plug) USB device (Type B) Ionizer			RS-232C (D-sub9P plug) USB device (Type B)		

*1 According to USP Chapter 41. This is the tested value by the weight of the balance's capacity of 5%.
*2 The response time for displaying 90% of added sample amount value in trace measurements (from 1mg)
*3 The response time value is typical.
*4 Non-condensing.

Options

- Static Electricity Remover STABLO-AP Ionizer
- Electronic Printer EP-100
- Electronic Printer EP-110 (Multifunction Printer with Liquid Crystal Display)
- Label Roll Paper for EP-100/110 (10 Rolls)
- Specific Measurement Kit SMK-601
- Display Protective Cover (Set of 5)
- USB Cable
- AC Adapter (Standard Accessory)
- Internal Windbreak Plate
- RSIO Interface Cable

STABLO-AP Ionizer

EP-100 Electronic Printer

EP-110 Electronic Printer
(multifunction printer with liquid crystal display)

SMK-601
Specific Gravity Measurement Kit

Internal Windbreak Plate

SHIMADZU

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