



Explorer[®]

Analytical, Precision, and High Capacity Balances



Intelligent. Intuitive. Ingeniously Practical.

The OHAUS Explorer[®] Series has risen to the next level of ingenuity – expanding on its modern features and design to offer unmatched functionality in a line of high-performance balances unlike any other on the market.

Standard Features Include:

- **Intelligent PERFORMANCE** – All Explorers have newly optimized linearity and repeatability specifications and enhanced vibration filtering for better balance stability. All models also come standard with AutoCal™ automatic internal calibration. 3×3 filtering setup ensures fast and stable weighing results. The Explorer EX.../E models offer traditional external calibration. These combined enhancements improve accuracy, efficiency, and throughput.
- **Intuitive OPERATION** – A large color touch-screen display, icon-driven application software that features 14 unique application modes*, and a 3 level adjustable angle display make Explorer the easiest to use, most advanced balance in its class today.
- **Ingenious DESIGN** – The base and display separate for maximum flexibility in any work area. Draftshield models isolate the weighing chamber to enhance stability and speed results while offering maximum accessibility to the weighing chamber through top-mounted side doors or through the versatile top door that flips or slides open. Hands-free entry is available with automated side doors on selected models.
- **Practical FEATURES** – Explorer has up to four user-programmable touchless sensors to minimize cross contamination and wear and tear normally associated with repeated touching of the balance. The OHAUS Explorer EX...M series of balances meet or exceed the Class I or II accuracy requirements in accordance with EC directives and EN45501.

* 13 application modes on Explorer High Capacity models

Explorer[®] Analytical, Precision, High Capacity

Intelligent PERFORMANCE

With stabilization times up to 50% faster and superior shock protection, Explorer delivers fast, accurate, and reliable results.

- **Fast stabilization time**
 - Improves operational efficiency
 - Increases throughput
 - Improves productivity
- **Optimized linearity and repeatability specifications**
 - Provides accurate and repeatable results
- **Optimized vibration filtering**
 - Provides balance stability in unstable environments
- **Superior Shock, Spill and Splash Resistance**
 - 2-D Protection guards balance against disruptions in service due to shock or sudden movements. IP54 base enclosure protects the weighing base from damage by debris, humidity and accidental spills and splashes.*

**High Capacity Models Only*



Intuitive SOFTWARE

SmarText™ 2.0 is OHAUS' easy-to-use graphical software featuring 14 applications, virtual QWERTY and numeric keypads, and below-minimum weight indication.

- **Color VGA display with icons for simple menu navigation**
 - High resolution, 145mm (5.7") diagonal color 640 x 480 pixel display reproduces highly readable operating software
 - Resistive touch screen display quickly responds to operator's touch or stylus
- 14 built-in applications* with customization capabilities to meet the varying needs in laboratory and industrial settings
- Minimum Weight capability with visual warning feature
- Virtual QWERTY keyboard and numeric keypad to quickly input GLP and GMP data and other application data
- User Manager with administrator capability
- Library function to store and recall customized applications
- Alternate RS232 command feature adapts the balance to existing data acquisition software
- External input for zero, tare or print operations via the external foot switch accessory
- Audible and visual feedback for touch screen input commands as well as the indication of the check weighing status

** 13 application modes on Explorer High Capacity models*



Ingenious DRAFTSHIELD

Explorer's draftshield provides ample access and visibility to the weighing chamber through the versatile top door and side sliding doors. Selected models feature motorized side doors that open and close automatically with use of the touchless sensors on the base and display.

- The automatic draftshield door models have a new function for automatically opening draftshield doors without touching the balance. It helps to eliminate sample residue transfer and contaminations.
- Side doors seamlessly glide on top-mounted bearings
- The versatile top door offers two entry options; access the weighing chamber by flipping the top door or sliding the glass panel open.
- The expansive side entry 160 mm × 240 mm (6.3" × 9.4") allows you to freely place and remove large weigh boats or other large vessels in the weighing chamber
- Antistatic coated glass helps dissipate static charges in the weighing chamber which could adversely affect the weighing results
- Easy to install and remove glass panels and a stainless steel bottom make Explorer extremely easy to clean
- A draftshield chamber light is available when the balance is used in low lighting environments



Practical TOUCHLESS SENSORS

Explorer features up to four touchless sensors for hands-free operation of zero, print, calibration, tare, automated draftshield doors and other selectable functions

- **Hands-free operation**
 - Improves weighing efficiency
 - Eliminates sample residue transfer
 - Minimizes contamination
- Two sensors on the base* and two on the display can be set up individually to allow for remote operations
- The sensors can be set up to provide automated operation of the draftshield side doors** and can be programmed to automatically open the opposite side door in order to support efficient and logical sample placement with your free hand.

* Analytical and Precision models only

** Automatic Draftshield door operation only offered on Analytical models



Explorer[®] Analytical, Precision, High Capacity

Intelligent CALIBRATION

AutoCal™ ensures performance and assists with routine maintenance by automatically calibrating the balance daily.

- Self-calibrates the system when it senses a temperature change sufficient enough to affect weighing accuracy, or every 11 hours
- Performs routine calibration and reduces the need for external masses
- External Calibration Models available
 - Selected models feature traditional external calibration in which external weights (user's choice of calibration weight values) are required to calibrate the balance to ensure accuracy



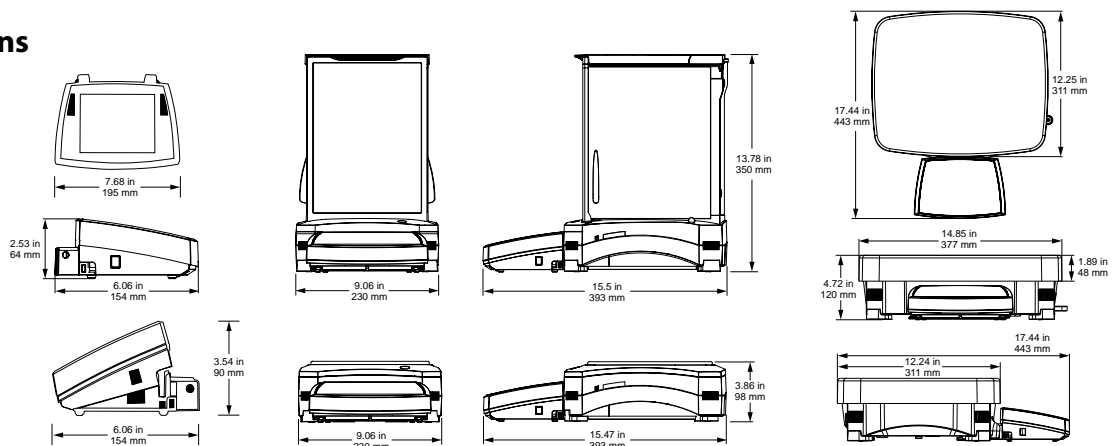
Intuitive USER SETUP

Explorer is the industry's most easy-to-use balance, featuring leveling assistance and instructional messaging for quick out-of-the-box setup and use.

- Easy to view illuminated level indicator placed at the front of the balance
- Adjustable thumbwheels are easy to turn to level the balance
- Level assist screen helps users quickly identify which thumbwheels need to be adjusted to level the balance
- Data Transfer Function helps to output data directly into Microsoft Excel
- Instructional messaging during application use guides users through the weighing process
- User information menu allows users quickly view and learn more about the available balances features
- Up to 13 operating languages make Explorer's Intuitive User Setup truly universal



Dimensions



Ingenious MODULAR DESIGN

Explorer's modular design features a color touch display that can be separated from the weighing base

Display features:

- 3 position, angular adjustment to optimize viewing
 - Easy access communication ports include standard 2x USB and RS232 and an optional 4th port for either RS232 or Ethernet
 - Left and right side cable exit feature for customized installation capability
 - Tower and wall mount ready for modular installation*
 - In-use cover for protection against rugged use
 - Extension cable accessory extends remote use up to 9 meters (27 feet)
- **Base features**
 - Quadrastance™ design with four adjustable thumbwheels provides superior stability
 - Robust die-cast metal bottom housing
 - Accessory tower mount ready for modular installation
 - Cable storage system underneath base keeps excess cables manageable
 - **Adjustable rolling feet accessory allows for simple and quick movement and relocation of the balance****

*Tower mount sold separately

**High capacity models only



Shown with optional tower mount



Practical APPROVALS

Explorer EX...M Models are designed and engineered to meet stringent OIML and NAWI Directive (Non Automatic Weighing Instruments) requirements for use in legal and prescribed applications such as in pharmaceutical laboratories, jewelry stores or QC laboratories. OHAUS Explorer also features NTEP Type approved models. The Explorer EX...M Models have been designed and verified to meet or exceed the Class I and II accuracy requirements in accordance with EC Directives and EN45501.

Other Standard Features & Equipment:

Menu lock switch, security bracket, integral weigh below hook for below balance weighing applications, removable stainless steel weighing pan, stability indicator, overload and underload indicators, auto standby.

Explorer® Application Software

The OHAUS Explorer's advanced applications simplify even the most complex laboratory measurements. Whether it's determining the difference between initial and residual weights or calculating the density of solids and liquids,

Explorer eliminates the need for time consuming manual calculations and data logging. The high resolution display and innovative user interface make balance setup and application use effortless.

Displays your current application. One-touch drop down menu shows additional application choices

Touch to change your application settings

Quickly store and recall your library data of regularly used items

Need help? Just tap the Info button for built-in assistance

Easy-to-follow text prompts tell you what to do next

Large weigh results can be viewed at any angle

Results area shows pertinent application information (varies by application)

Seven quick keys make balance operation a breeze!



Battery life indicator when powered by optional battery pack (for High Capacity models only)

Press the weighing unit to change the unit of measure (activate in Weighing Units menu)

Fill and capacity bar indicators assure you are always in range (indicators vary by application)

Soft keys are application specific

Press Menu to choose applications, change user settings, balance setup and much more!

Standard Apps



Weighing

Determine weight of items in the selected unit of measure. Minimum Weight feature is also available.



Percent Weighing

Measure the weight of a sample displayed as a percentage of a pre-established Reference Weight.



Dynamic Weighing

Weigh an unstable load. Balance takes an average of weights over a time period.



Totalization

Measure cumulative weight of multiple items. Cumulative total may exceed balance capacity.



Differential Weighing

Store sample weights and calculate the difference between initial weights and final weights.



Peak Hold

Capture and store highest weight in a series. Both stable and unstable weights are captured.



Parts Counting

Count samples of uniform weight. Choose Standard Counting, Check Counting, or Fill Counting.



Pipette Adjustment

Check pipette values by weight analysis, with built-in water density table. (Non High Capacity Models)



Check Weighing

Compare the weight of a sample against target limits. Choose from Standard, Nominal-weight, or Nominal-Percent.



Filling

Fill a container to a target weight. Progress bar displays filling status.



Formulation

For compounding and recipe making. The number of components can be from two to 99.



Density Determination

Determine density of solids more dense than water, solids less dense than water, liquids, or porous material.



Ingredient Costing

Determine cost of formula or recipe based on known cost/quantity of components or ingredients.



SQC

Monitor and/or control processes to eliminate under and over filling.

Explorer[®] High Capacity

The Explorer series includes three high-capacity precision models with capacities up to 35 kg. Explorer high-capacity balances offer the same intuitive features, such as AutoCal™ and a 1 second stabilization time, with additional functions and attributes to support higher capacity weighing applications.

Modular Design

- 5.7" (145 mm) diagonal color VGA touch screen optimizes viewing and menu navigation
- Two touchless sensors on display offer hands-free operation
- The display can be separated from the base up to 1.5 meters (5 feet) in order to fit operational needs in almost any workspace. A 9 meter (27 foot) cable is also available when additional flexibility is needed.

Superior protection in rugged or unstable environments

- With a die-cast metal base and a 377 × 311 mm (14.8" × 12.2") stainless steel pan, the Explorer High Capacity is built to withstand rugged, every day use.
- 2-D Protection prevents shock and damage associated with movement and forces applied to the balance
- IP54 base rating protects the weighing base from damage by debris, humidity and accidental spills and splashes. (High Capacity models only)

High Capacity Accessories for Added Efficiency

- Adjustable rolling feet option provides assistance to easily moving the balance
- Rechargeable battery option provides 10 hours of operation away from a power source



Shown with optional tower mount and rolling feet

Model	EX12001	EX24001	EX35001
Approved Model	EX12001M	EX24001M	EX35001M
Capacity (g)	12000	24000	35000
Readability (g)	0.1	0.1	0.1
Verification interval, approved models (g)	1	1	1
Class, approved models	II	II	II
Repeatability std (g)	±0.1	±0.1	±0.1
Linearity (g)	±0.2	±0.2	±0.2
Stabilization Time	≤1	≤1	≤1
Sensitivity drift (PPM/°C)	3	3	3
Typical Operating Range (g) (USP, u=0,10%, k=2)	160 g - 12000 g	160 g - 24000 g	160 g - 35000 g
Optimal Operating Range (g) (USP, u=0,10%, k=2)	82 g - 12000 g	82 g - 24000 g	82 g - 35000 g
Weighing Applications	Weighing, Percent Weighing, Parts Counting, Check Weighing, Dynamic/Animal Weighing, Filling, Totalization, Formulation, Differential Weighing, Density Determination, Peak Hold, Ingredient Costing, SQC		
Weighing Units	g, kg, ct, gn, lb, oz, N, dwt, hkt, sgt, twt, mom, tical, msg, tola, Custom Unit 1, Custom Unit 2, Custom Unit 3		
Weighing units, approved models	g, kg, ct		
Pan Size	377 × 311 mm / 14.84 × 12.24 in		
Calibration	AutoCal™ internal calibration		
Tare Range	To capacity by subtraction		
Power Requirement	Power Input 100-240 VAC, 0.5-0.25A, 47-63 Hz, Power Output: 24 VDC, 0.63 A, 15W		
Display Type	Full-color VGA graphic display, 4-wire resistive touch screen		
Display Size	145 mm / 5.7 in (diagonal)		
Display Housing (W × H × D)	195 × 90 × 154 mm / 7.68 × 3.54 × 6.06 in		
Base Housing (W × H × D)	377 × 120 × 443 mm / 14.84 × 4.72 × 17.44 in		
Communication	Standard RS232, 2x USB, Optional 2 nd RS232 or Ethernet		
Operating Temperature Range	10°C to 30°C / 50°F to 86°F		
Operating Humidity Range	80% max up to 30°C / 86°F, decreasing linearly to 50% at 40°C / 104°F, non-condensing		
Storage Conditions	-10°C / 14°F to 60°C / 140°F at 10% to 90% relative humidity, non-condensing		
Net Weight	10 kg / 22 lbs		
Shipping Weight	12.5 kg / 25.8 lbs		
Shipping Dimensions	665 × 525 × 330 mm / 26.18 × 20.67 × 13.00 in		

Explorer[®] Analytical and Precision Balances

Model	EX124	EX224	EX324	EX223	EX423	EX623	EX1103	EX2202	EX4202	EX6202	EX10202	EX6201	EX10201
Automatic Door	EX124/AD	EX224/AD	EX324/AD	—	—	—	—	—	—	—	—	—	—
External Calibration	—	—	—	EX223/E	EX423/E	—	—	EX2202/E	EX4202/E	EX6202/E	—	EX6201/E	—
Approved Models	EX124M/AD	EX224M EX224M/AD	EX324M EX324M/AD	—	EX423M	—	EX1103M	—	EX4202M	—	EX10202M	—	EX10201M
Capacity (g)	120	220	320	220	420	620	1100	2200	4200	6200	10200	6200	10200
Readability d (g)	0.0001			0.001				0.01			0.1		
Verification Interval* e (g)	0.001			—	0.01	—	0.01	—	0.1	—	0.1	—	0.1
Class*	I			—	II	—	I	—	II	—	I	—	I
Repeatability std (g)	±0.0001			±0.001				±0.01			±0.1		
Linearity (g)	±0.0002			±0.002				±0.02			±0.2		
Stabilization Time (sec)	≤2		≤3	≤1.5				≤1					
Sensitivity Drift (ppm/°C)	1.5			3							5	3	
Typical Operating Range (g) (USP u=0.10%, k=2)	0.16 g - 120 g	0.16 g - 220 g	0.16 g - 320 g	1.6 g - 220 g	1.6 g - 420 g	1.6 g - 620 g	1.6 g - 1100 g	16 g - 2200 g	16 g - 4200 g	16 g - 6200 g	16 g - 10200 g	160 g - 6200 g	160 g - 10200 g
Optimal Operating Range (g) (USP, u=0.10%, k=2)	0.082 g - 120 g	0.082 g - 220 g	0.082 g - 320 g	0.82 g - 220 g	0.82 g - 420 g	0.82 g - 620 g	0.82 g - 1100 g	8.2 g - 2200 g	8.2 g - 4200 g	8.2 g - 6200 g	8.2 g - 10200 g	82 g - 6200 g	82 g - 10200 g
Weighing Units	Gram, Milligram, Kilogram, Carat, Ounce, Ounce Troy, Pound, Pennyweight, Grain, Newton, Momme, Mesghal, Hong Kong Tael, Singapore Tael, Taiwan Tael, Tical, Tola, Baht, Custom Unit 1, Custom Unit 2, Custom Unit 3												
Weighing Units, Approved Models	mg, g, ct			—	mg, g, ct	—	mg, g, ct	—	g, kg, ct	—	g, kg, ct	—	g, kg, ct
Weighing Applications	Weighing, Percent Weighing, Parts Counting, Check Weighing, Dynamic/Animal Weighing, Filling, Totalization, Formulation, Differential Weighing, Density Determination, Peak Hold, Ingredient Costing, Pipette Adjustment, SQC												
Pan Size	Ø 90 mm / 3.54 in			Ø 130 mm / 5.12 in				190 × 200 mm / 7.48 × 7.87 in					
Calibration	All models feature external calibration. Models feature AutoCal™ internal calibration, except for EX.../E models												
Tare Range	To capacity by subtraction												
Power Requirements	AC Adapter Input: 100-240 VAC, 0.6A, 50-60 Hz												
Display Type	Full-color VGA graphic display, 4-wire resistive touch screen												
Display Size	145 mm / 5.7 in (diagonal)												
Display Housing (WxHxD)	195 × 90 × 154 mm / 7.68 × 3.54 × 6.06 in												
Base Housing (WxHxD)	230 × 350 × 393 mm / 9.06 × 13.78 × 15.47 in						230 × 98 × 393 mm / 9.06 × 3.86 × 15.47 in						
Communication	Standard RS232, 2x USB, Optional 2 nd RS232 or Ethernet												
Temperature Range	10°C to 30°C / 50°F to 86°F												
Humidity Range	80% max up to 30°C / 86°F decreasing linearly to 50% at 40°C / 104°F, non-condensing												
Storage Conditions	60°C / 140°F at 10% to 90% relative humidity, non-condensing												
Net Weight	6.9 kg / 15 lbs						4.3 kg / 10 lbs			5 kg / 11 lbs			
Shipping Weight	9.6 kg / 21 lbs						6.8 kg / 15 lbs			7.4 kg / 16 lbs			
Shipping Dimensions	55 × 38.5 × 55.1 cm / 21.65 × 15.16 × 21.69 in						55 × 38.5 × 29.1 cm / 21.65 × 15.16 × 11.45 in						

Compliance

Metrology: EC, OIML, NTEP, Measurement Canada (Class I, 320000e; Class II, 42000e; approved models only)

Product Safety: IEC/EN 61010-1:2010; CAN/CSA-C22.2 No. 61010-1-12; UL Std. No. 61010-1 (3rd Edition)

Electromagnetic Compatibility: IEC 61326-1; EN 61326-1:2006 (Class B); C-Tick; FCC Part 15 (Class A); ICES-003 (Class A)

Environment: RoHS; WEEE

Accessories

Tower Mount for Display (non High Capacity models)	Second RS232 Kit	83021081
.....83021102	Ethernet Kit	83021082
Tower Mount for Display**30078082	Foot Switch Kit	83021086
Display Extension Cable (9 Meter / 27 Feet)....30078078	RS232 Cable & Adapter (to 80251993 Printer)...80252581	
Display Extension Cable (3 Meter / 9 Feet).....83021083	RS232 Cable, PC 9 Pin	00410024
Density Determination Kit80253384	Impact Printer SF40A	30064202
Draftshield Kit (0.01g, 0.1g, non High Capacity models)	STP103 Thermal Printer without cable - EU...80251993	
.....83021084	SF40A Paper roll 57.5mm (2 Rolls).....	12120799
Security Device (Cable & Lock).....80850000	SF40A Ink ribbon cassette	12120798
Security Device (Laptop Lock).....80850043	Rolling Feet Kit**	30041470
Interface Cable, USB (Type A to B).....83021085	Rechargeable Battery Pack**	30041295
	Auxiliary Display PAD7	80251396

*Approved models only **High Capacity models only

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With offices throughout Europe,
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***ISO 9001:2008**

Registered Quality
Management System





The Most Complete Balance in its Class!

Striking the ideal balance between inventive features and functional, uncomplicated weighing capabilities, the OHAUS Adventurer incorporates all of the applications necessary for routine weighing and measurement activities. With a color touchscreen, GLP/GMP compliance capabilities, two USB ports, ingenious draftshield, and much more, Adventurer is the most complete balance in its class.

Standard Features Include:

- **Stability, Accuracy, and Fast Operation Ensure Optimal Weighing Results** — This trio of characteristics ensures the most important aspects of routine laboratory weighing are covered: accurate results you can count on extremely quickly.
- **Color Touchscreen & Connectivity Options Power a Modern Weighing Experience** — The wide viewing angle color touchscreen provides quick access to all of Adventurer's applications, while dual USB ports with GLP/GMP tracking capabilities assist in the monitoring and reporting of data.
- **Space-saving Draftshield Improves User Experience and Accessibility** — The two piece, top-mounted draftshield doors open wide on both sides, providing ample room for sample placement, and also reduce the footprint of the draftshield in the rear of the balance when open.

Adventurer[®] Analytical and Precision Balances

Stability, Accuracy, and Fast Operation Ensure Optimal Weighing Results in Routine Weighing Tasks

Weighing Performance

- Delivers stable and reliable weighing results for routine weighing tasks

Stabilization Time

- Adventurer's fast stabilization time improves productivity in the laboratory

Calibration

- **AutoCal™**
 - Select models feature OHAUS' automatic internal calibration system that performs routine maintenance by calibrating the balance daily.
- **External Calibration**
 - Traditional calibration in which the operator manually calibrates the balance with their choice of calibration weight value to ensure accuracy available on every model.



Color Touchscreen Offers Easy and Fast Operation of Adventurer's Applications

- Operate and access Adventurer's nine application modes and abundant features that eliminate the need to do several manual calculations through the modern color touchscreen
- Operators can wear laboratory gloves while utilizing the touchscreen, eliminating the inconvenience and hazards associated with constantly putting on and removing gloves
- In addition to the touchscreen, Adventurer also has six mechanical keys that provide tactile feedback and allow the operator to perform repetitive operations such as tare, zero, calibration, and print



Application Modes



Weighing

Determine the weight of items in the selected unit of measure.



Parts Counting

Count samples of uniform weight.



Percent Weighing

Measure the weight of a sample displayed as a percentage of a pre-established Reference Weight.



Dynamic Weighing

Weigh an unstable load. Scale takes an average of weights over a period of time.



Density Determination

Determine density of solids or liquid. With the weigh below hook, it's possible to perform specific gravity tests for objects that cannot be easily placed on the weighing pan.



Check Weighing

Compare the weight of a sample against target limits.



Display Hold

Manually holds the last stable weight or highest weighing value on the display.



Totalization/Statistic

Measure cumulative weight of multiple items. Cumulative total may exceed balance capacity.



Formulation

For compounding and recipe making. The number of components can range from 2 to 50.

Equipped with the Connectivity and Functional Features Required in Laboratories

Dual USB Ports

- A front USB host port is easily accessible and makes it simple to load data from the balance on to a flash drive without having to reach around to the back or move the balance
- A second USB device is located at the rear of the balance that can be used to connect the balance to a PC
- The connectivity options help meet traceability requirements in traditional installations



Real Time Clock with GLP/GMP Data

- A real-time clock function keeps accurate time even during power loss and the GLP data capability has the ability to record Sample name, Project names and Balance ID's to help meet traceability and compliance requirements

Balance Profiles

- The cloning feature allows you to save user and application settings to a USB flash drive which can be easily used to configure additional Adventurer balances

Below Minimum Sample Weight Indication

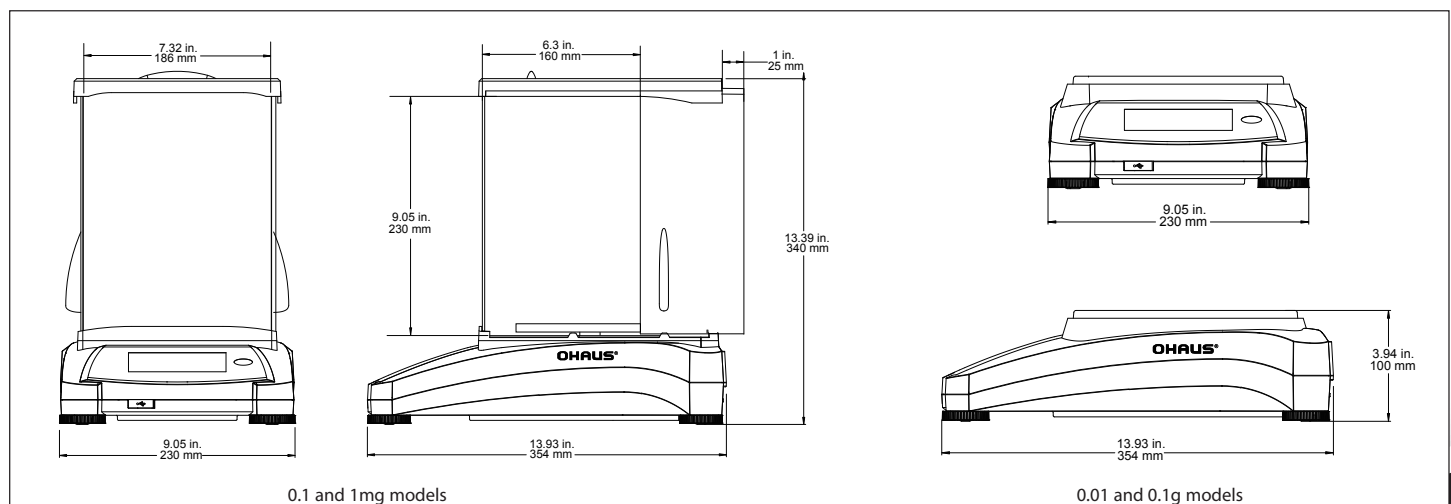
- When using the minimum weight feature, the display clearly indicates that your current sample weight is below your defined minimum limit. Simply increase your sample weight to assure that your results are up to your standards

Space-saving Draftshield Designed to Improve User Experience and Accessibility

- Draftshield doors are constructed of two glass panels, reducing the space required on the lab bench when the doors are open
- Wide door entry provides unobstructed access and allows larger weighing vessels to be easily placed on the pan, reducing the chance of accidental spillage
- Easy to keep clean in order to ensure a safe workspace by minimizing contamination



Outline Dimensions



Adventurer® Analytical and Precision Balances

Model	AX124	AX224	AX324	AX223	AX423	AX523	AX622	AX1502	AX2202	AX4202	AX5202	AX4201	AX8201
External Calibration	AX124/E	AX224/E	—	AX223/E	AX423/E	AX523/E	AX622/E	AX1502/E	AX2202/E	AX4202/E	—	AX4201/E	AX8201/E
Capacity (g)	120	220	320	220	420	520	620	1,520	2,200	4,200	5,200	4,200	8,200
Readability d (g)	0.0001			0.001			0.01			0.1			
Repeatability std (g)	±0.0001			±0.001			±0.01			±0.1			
Linearity (g)	±0.0002			±0.002			±0.02			±0.2			
Stabilization Time (sec)	≤3			≤2			≤1.5			≤1.5			
Sensitivity Drift (ppm/°C)	1.5			3			3			1.9		9	
Typical Min-weight (g) (USP, u=0.10%, k=2)	0.20g	0.20g	0.20g	2.0g	2.0g	2.0g	20.0g	20.0g	20.0g	20.0g	20.0g	200.0g	200.0g
Optimized Min-weight (g) (USP, u=0.10%, k=2) SRP≤0.41d	0.082g	0.082g	0.082g	0.82g	0.82g	0.82g	8.2g	8.2g	8.2g	8.2g	8.2g	82g	82g
Weighing Units	gram, milligram, mesgal, momme, Newton, ounce, pennyweight, Baht, carat, grain, pound, Tael (Hong Kong), Tael, (Singapore), Tael (Taiwan), tical, tola, troy ounce, custom (1)												
Weighing Applications	Weighing, Parts Counting, Percent Weighing, Check Weighing, Dynamic Weighing, Formulation, Density Determination, Totalization/Statistic, Display Hold												
Pan Size	Ø 90 mm			Ø 130 mm			175 × 195 mm						
Calibration	All models feature external calibration. Models feature AutoCal™ internal calibration, except for AX.../E models												
Tare Range	To capacity by subtraction												
Power Requirements	AC Adapter Input: 100-240 VAC 0.3A 50-60 Hz AC Adapter Output: 12 VDC 0.84A												
Display Type	Full-Color Touchscreen WQVGA Graphic LCD												
Display Size	109 mm / 4.3 in (diagonal)												
Base Housing (WxDxH)	354 × 230 × 340 mm						354 × 230 × 100 mm						
Communication	RS232, USB Device, USB Host												
Temperature Range	10°C to 30°C / 50°F to 86°F												
Humidity Range	Maximum relative humidity 80 % for temperatures up to 30°C / 86°F												
Storage Conditions	-10°C / 14°F to 60°C / 140°F at 10% to 90% relative humidity, non-condensing												
Shipping Dimensions	507 × 387 × 531 mm						557 × 392 × 301 mm						
Net Weight	5.1 kg			5.8 kg			4.6 kg			3.8 kg			
Shipping Weight	7.8 kg			8.5 kg			6.5 kg			5.7 kg			

*The value for SRP is the standard deviation for n replicate weighing's (n≥10)

Additional Features

RS232 interface, integral weigh below hook, full housing in-use cover, removable stainless steel pan, die-cast metal bottom housing, security bracket, illuminated up-front level indicator, four adjustable feet, software lockout menus, stability indicator, software overload/underload indicators, user selectable environmental settings, audible indicator, user selectable brightness settings, auto dim, touchscreen calibration, auto tare, user selectable operating language (nine)

Approvals

Metrology: OIML R76, EN 45501 (Class I, nmax 320000; Class II, nmax 52000)
Product Safety: EN 61010-1, IEC 61010-1
Electromagnetic Compatibility: IEC 61326-1, EN 61326-1 (emissions Class B, immunity Industrial requirements)

Accessories

SF40A Impact Printer	30045641
Auxiliary Display (PAD7)	80251396
Density Determination Kit	80253384
Cable, USB Interface (Type A to B)	83021085
Security Device (Laptop Lock)	80850043
RS232 Cable, PC 25 Pin	80500524
RS232 Cable, PC 9 Pin	80500525

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Pioneer® Series

Analytical and Precision Balances



The Best Balance For Basic Weighing!

The OHAUS Pioneer Series of analytical and precision balances are designed for basic routine weighing in a variety of laboratory, industrial and education applications. Now with both internal and external calibration models and the right combination of performance and features, the OHAUS Pioneer offers uncomplicated performance for all your basic weighing needs.

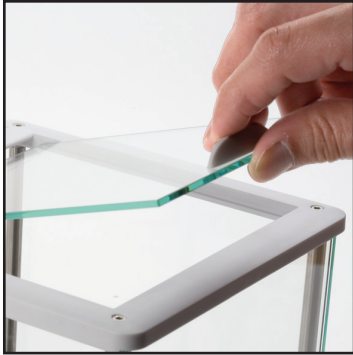
Standard Features Include:

- **Easy to Clean Analytical Draftshield** — Pioneer's draftshield is designed with all glass panels, including three sliding doors. All panels are easy to remove and replace, and together with a stainless steel bottom, make it fast and easy to clean.
- **Bright Backlit Display** — The bright backlit LCD display is easy-to-view in any environment.
- **Selectable Environmental Settings** — Three filter modes and adjustable zero tracking adjust balance sensitivity to environmental disturbances, or application requirements.

Pioneer® Series Analytical and Precision Balances

Removable Doors Provide Convenient Access and Easy Cleaning

To address the ease of cleaning requirement often expressed by routine users, Pioneer's draftshield has been designed with easy to remove doors and panels. Disassembly takes just seconds and all components including the balance housing can be quickly wiped clean.



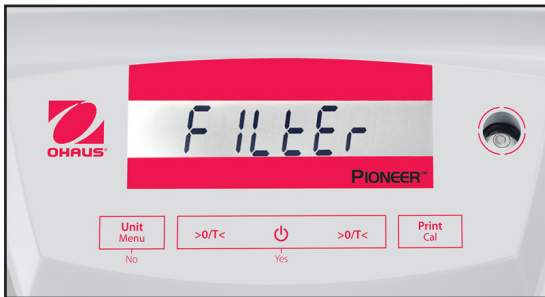
Periodic cleaning made easy helps avoid sample contamination and extends product life. In addition, a standard in-use cover provides added protection against accidental spillage and helps minimize the chance of damage to the display and keypad.

Should breakage occur, each replacement door or panel can be installed in seconds.



Backlit Display Bolsters Visibility

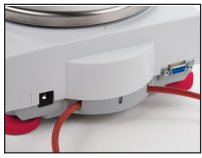
The bright backlit LCD display provides ample lighting, making the display very easy-to-view in laboratories with dim lighting.



Selectable Environmental Settings For Working in Practically Any Condition

To help adapt the balance to real life working conditions, Pioneer is designed with selectable environmental settings. When working in harsh environments, the balance can be adjusted to compensate for vibrations and other disturbances. Conversely, the balance can be adjusted for working in slow filling applications where sensitivity is a must.

Standard Features



Integral Security Bracket

Allows you to secure your balance to a workstation to prevent unwarranted movement or theft

RS232 Interface

Pioneer's RS232 allows connection to an Ohaus printer or a computer. Sends Balance ID plus spaces for recording User ID, Project ID, time and date

Integral Menu Lock

A combination of software and a mechanical switch locks menus, including calibration



Weigh-Below Hook

Pioneer's built-in weigh-below hook allows you to suspend an item below the balance to calculate density/specific gravity



Up-Front Level Indicator

A quick glance at the up-front level indicator helps to ensure that the balance is level prior to each use

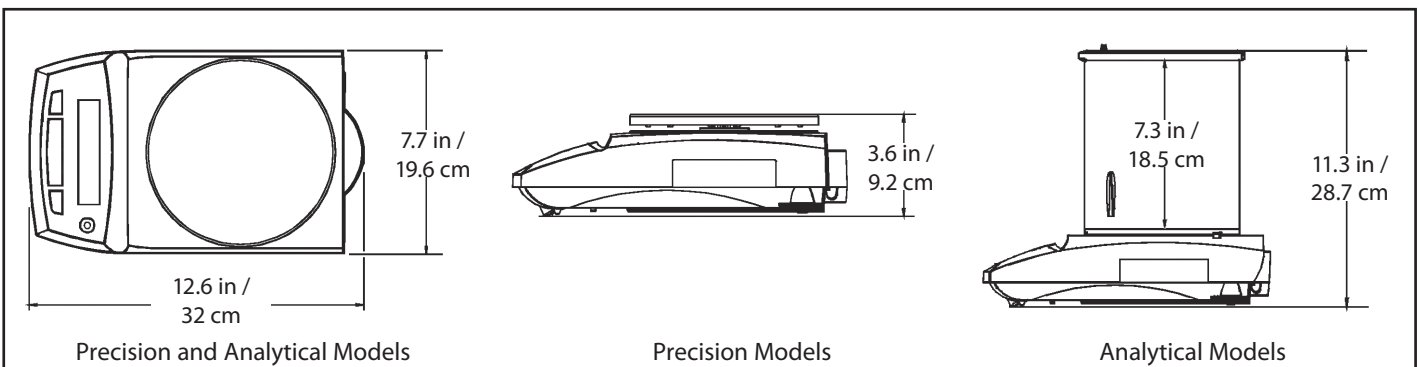
Multiple Application Modes and Units

Pioneer features basic weighing, parts counting and percent weighing, density weighing, and dynamic weighing and 15 international weighing units including one custom unit

Backlit Display

Enables optimal viewing of results in various lighting conditions

Outline Dimensions



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Excal Model	PA84	PA124	PA224	PA163	PA323	PA523	PA1602	PA2202	PA3202	PA4202	PA2201	PA4201
Incal Model	PA84C	PA124C	PA224C	PA163C	PA323C	PA523C	PA1602C	PA2202C	PA3202C	PA4202C	PA2201C	PA4201C
Capacity (g)	85	120	220	160	320	520	1600	2200	3200	4200	2200	4200
Readability d	0.1mg			1mg			10mg				100mg	
Repeatability (Std Dev)	0.1mg			1mg			10mg				100mg	
Linearity	0.2mg		0.3mg		2mg		20mg				100mg	
Application Modes	Weighing, Parts Counting, Percent Weighing, Animal/Dynamic Weighing, Density Determination											
Weighing Units	mg, g, ct, oz, dwt, tical, tola, mommes, baht, grain, mesghal, Newton, ozt, custom unit						g, kg, lb, ct, oz, dwt, tical, tola, mommes, baht, grain, mesghal, Newton, ozt, custom unit					
Platform Size	3.54 in / 9 cm diameter			4.72 in / 12 cm diameter			7.1 in / 18 cm diameter					
Cal Weight-Span	50,80g	50,100g	100,200g	100,150g	200g,300g	200,500g	1,1.5kg	1,2kg	2,3kg	2,4kg	1,2kg	2,4kg
Cal Weight-Linearity	20/60	50/100g	100/200g	100/150g	150/300g	200/500g	1/1.5kg	1/2kg	1.5/3kg	2/4kg	1/2kg	2/kg
Taring Time	1 second											
Stabilization Time	3 seconds											
Draftshield	7.3 in / 18.5 cm inside height						N/A					
Operating Conditions	50° F / 10° C to 104° F / 40° C at 10% to 80% relative humidity, non-condensing, up to 4000m above sea level											
Storage Temperature	-40° F / -40° C to 158° F / 70° C at 10% to 80% relative humidity, non-condensing											
Net Weight	10.0 lb / 4.5 kg						7.3 lb / 3.3 kg					
Shipping Weight	15.2 lb / 6.9 kg						11.8 lb / 5.4 kg					
Balance Dimensions W x H x D	7.7 x 11.3 x 12.6 in / 19.6 x 28.7 x 32 cm						7.7 x 3.6 x 12.6 in / 19.6 x 9.2 x 32 cm					
Carton Dimensions L x W x H	19.5 x 15.5 x 20.6 in / 49.5 x 39.5 x 52.2 cm						19.5 x 15.5 x 12.8 in / 49.5 x 39.5 x 32.7 cm					

Other Standard Features and Equipment

Fixed integral weigh below hook, user selectable span calibration points, software rest menu, stability indicator, auto tare, user selectable communication setting, user selectable printing options, up-front level indicator, menu and calibration locks, mechanical and software overload/underload protection, integral weigh below hook, security bracket, stainless steel platform, backlit LCD

Compliance

- **Electromagnetic Compatibility:** FCC (Part 15 Class A); Industry Canada (ICES-003 Class A); CE (EN 61326-1:2006 Class B emissions, basic immunity); C-tick (AS/NZS 61000.6.3: 2007 Class B)
- **Product Safety:** cCSAus (CAN/CSA-C22.2 No. 61010-1-04, UL Std. No. 61010-1 2nd Edition); CE (EN 61010-1:2010)

Accessories

Dot Matrix Printer (SF40A)	30064203
Cable to connect SF40A to Pioneer	12122603
Paper for SF40A	12120799
Ink Ribbon for SF40A	12120798
Thermal Printer	80251992
Paper for Thermal Printer	80251931
Cable kit to connect Thermal Printer to Pioneer	80252581
TAL Software WinWedge	80850080
RS232 Cable, PC 9 Pin to Pioneer	80500525
RS232 Cable, PC 25 Pin to Pioneer	80500524
Auxiliary Display Kit for Pioneer	80251396
Security Device for Pioneer	80850000
Density Determination Kit for Pioneer (0.1mg and 1mg)	80253384

Industry Leading Quality and Support

All OHAUS Pioneer balances are manufactured under an ISO 9001:2008 Registered Quality Management System. Our rugged construction and stringent quality control have been hallmarks of all OHAUS products for over a century.

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