



# EXPLORER<sup>®</sup>

Analytical, Precision, and High Capacity Balances



## *Flagship Balances from OHAUS*

The OHAUS Explorer Series of analytical balances combine modern features and design elements to offer unmatched functionality in a line of high-performance balances unlike any other on the market. These smart and intuitive balances and all of their intelligent features simplify even the most complex laboratory measurements.

### *Unique Features Include:*

- Equipped with a weighing cell that's precision-machined from a solid metal block, Explorer balances are extremely accurate and durable, and are ideal for laboratory and industrial environments.
- Features such as four-level user management with password protection, and un-editable system log plus a high level of configurability make Explorer balances well suited for regulated applications.
- A detachable terminal with a large color touchscreen, programmable IR sensors, automatic doors, and a frameless draftshield make Explorer analytical balances easy and convenient to use.

# EXPLORER<sup>®</sup> Analytical, Precision, High Capacity

## Intelligent. Intuitive. Ingeniously Practical.

The OHAUS Explorer Series of analytical, precision and high-capacity balances are capable of meeting the needs of your customers' laboratory and industrial applications. Explorer balances are able to increase operational efficiency by offering features such as a large color touch screen and intuitive user interface, large weighing pans, multiple connectivity options, and 14 weighing applications. They are durably constructed and offer capacities up to 35kg, readabilities from 0.1mg to 0.1g, and provide exceptional weighing performance for applications requiring high accuracy and repeatability.

### Weighing Performance

OHAUS' signature AutoCal™ internal calibration system ensures the balance is always ready for use. It eliminates the need for manual routine calibration and eliminates the need to maintain external calibration weights. Additionally a built in Repeatability Test helps evaluate the balance's performance and aids in determining a suitable minimum weight for applications requiring high accuracy.

### Connectivity

Explorer balances provide a variety of communication interfaces such as RS-232, USB, and Ethernet, allowing accessories such as RFID readers, impact printers, label printers and barcode scanners to be connected to the balance. A simple yet complete communication protocol allows Explorer balances to be easily connected to a PC or integrated with larger systems.

### Data Management

Explorer balances are equipped with internal databases which can be used to store, manage, and retrieve application and system data. An internal weighing mode library allows saving and loading of weighing mode configurations. Explorer balances offer two types of log files. One is the system log file which records up to 5000 changes to the balance's settings, calibrations and adjustments, and user access. The other is the calibration log which tells you when last calibrated the balance. Both log files can be exported as a non-editable PDF file and saved onto a USB memory stick. A built-in real time clock ensures that the data captured is contemporaneous.

### User Management

A simple yet effective user management system allows a system administrator to create up to 110 users and assign them to 1 of 4 pre-existing groups with varying access rights to the balance and enforce password policies. This provides security and allows Explorer balances to be used in multi-user workplaces and ensures that non-authorized users cannot change the balance's setup.

### Intuitive efficient Operation

Explorer balances are easy to setup and use. They feature a large color graphic touch screen and intuitive user interface and can operate in 14 different languages. Additional features such as a detachable terminal and multiple programmable touchless sensors allow the user to initiate balance functions such as zero, tare, print, automatically open draftshield doors\*, and more.

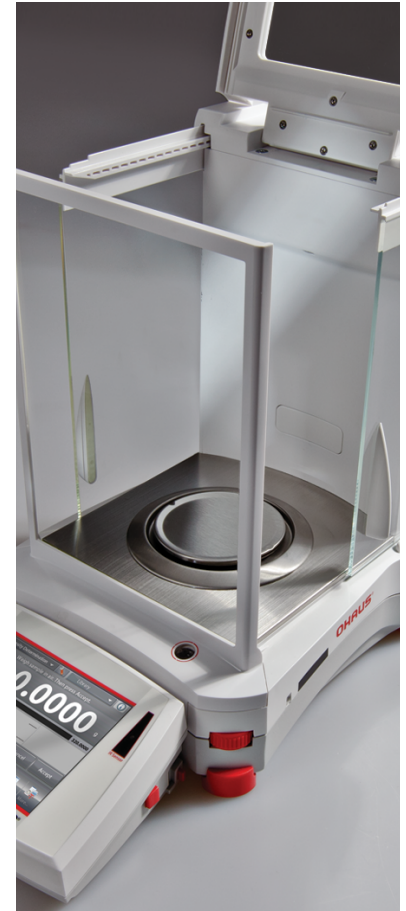
\*(on models equipped with motorized draftshield doors only)



## Ingenious DRAFTSHIELD

Explorer's draftshield provides ample access and visibility to the weighing chamber through the versatile top door and side sliding doors. Select 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 6.3" × 9.4" (160 mm × 240 mm) 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<sup>®</sup> Analytical, Precision, High Capacity

## Intelligent CALIBRATION

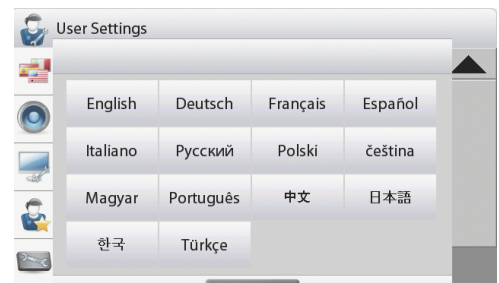
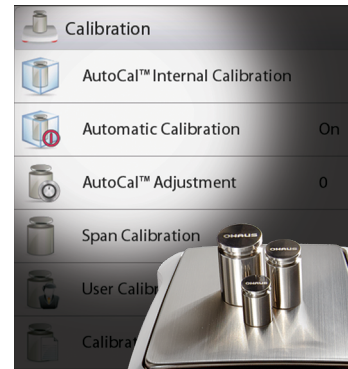
AutoCal™ ensures performance and assists with routine maintenance by automatically calibrating the balance daily.

- Self-calibrates the system when it senses a temperature change sufficient enough to affect weighing accuracy, or every 3-11 hours, depending on the user configuration
- Performs routine calibration and reduces the need for external masses
- External Calibration Models Available—  
All 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

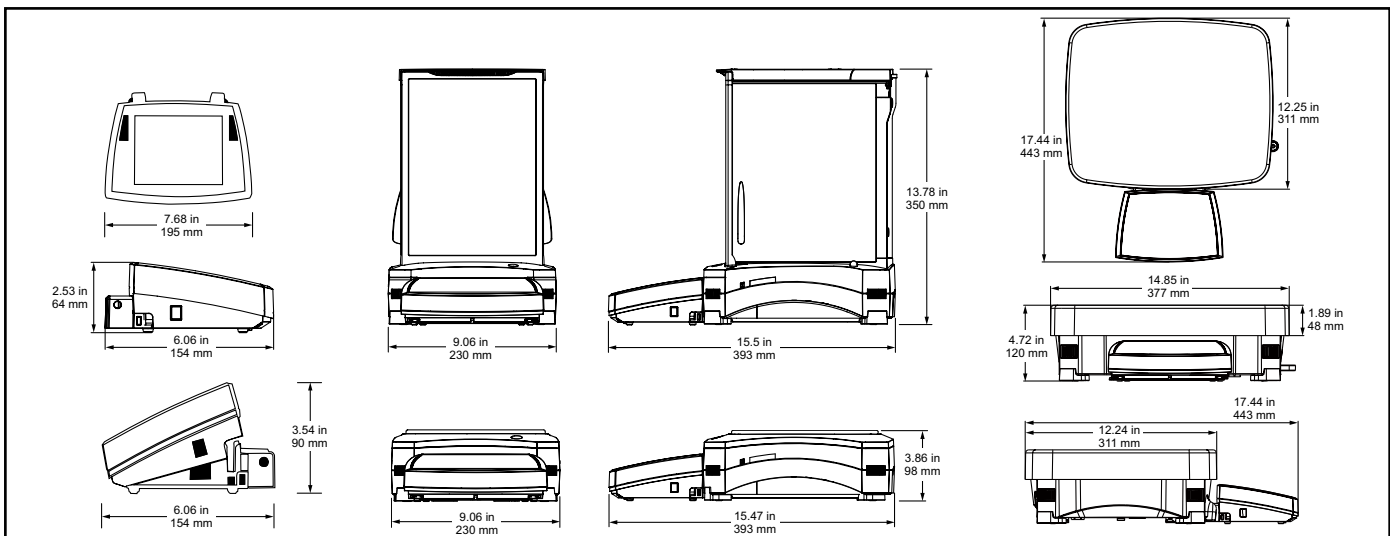
## Intuitive USER SETUP

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 14 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 USB and RS232 and an optional third 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 27 feet (9 meters)



- **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*



## Practical APPROVALS

Explorer EX...N series of balances meet or exceed the Class I or II accuracy requirements in accordance with NIST Handbook 44 and Canada's Weights and Measures Regulations. Certificate of Conformance Number 12-012 was issued under the National Type Evaluation Program (NTEP) of the National Conference on Weights and Measures. Notice of Approval AM-5847 was issued by Measurement Canada, an Agency of Industry Canada.

## 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.



### Differential Weighing

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



### Filling

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



### Percent Weighing

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



### Peak Hold

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



### Formulation

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



### Dynamic Weighing

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



### Parts Counting

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



### Density Determination

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



### Totalization

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



### Pipette Adjustment

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



### Ingredient Costing

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



### Fill Weight Variation

Check whether the individual pill weight is in the tolerance of the average of total pill weight.



### Check Weighing

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



### SQC

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

# EXPLORER<sup>®</sup> 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" (145mm) 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 5 feet (1.5 meters) in order to fit operational needs in almost any workspace. A 27 foot (9 meter) cable is also available when additional flexibility is needed.

## Superior protection in rugged or unstable environments

- With a die-cast metal base and a 14.8" × 12.2" (377 × 311 mm) 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 enclosure protects the weighing base from damage by debris 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
- Weigh-below hook included and can be used for density determination



*Shown with optional tower mount and rolling feet*

Model	EX12001	EX24001	EX35001
Certified Models	EX12001N	EX24001N	EX35001N
Capacity (g)	12000	24000	35000
Readability (g)	0.1		
Verification Interval* e (g)	1g		
Class*	II		
Repeatability (sd.), ≤5% of Full Load (g)	0.08		
Repeatability (sd.), 5% of Full Load to Full Range (g)	0.1		
Linearity Deviation, Typical (g)	±0.06		
Linearity Deviation (g)	±0.2		
Stabilization Time (sec)	≤1		
Sensitivity Draft (PPM/°C)	3		
Min-Weight (Typical) (g) (USP, K=2, U=0,10%)	160		
Min-Weight (Optimal) (g) (USP, K=2, U=0,10%, SRP≤0,41d)***	82		
Min-Weight (Typical) (g) (USP, K=2, U=1%)	16		
Weighing Applications	Weighing, Percent Weighing, Parts Counting, Check Weighing, Dynamic/Animal Weighing, Filling, Totalization, Formulation, Differential Weighing, Density Determination, Peak Hold, Ingredient Costing, SQC, Fill Weight Variation		
Weighing Units	g, kg, ct, gn, lb, oz, ozt, N, dwt, hkt, sgt, twt, mom, tical, msg, tola, Custom Unit 1, Custom Unit 2, Custom Unit 3		
Weighing Units, Certified Models	g, kg, oz, lb, ct, ozt, grain, dwt		
Pan Size	14.84 × 12.24 in / 377 × 311 mm		
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	5.7 in / 145 mm (diagonal)		
Display Housing (W × H × D)	7.68 × 3.54 × 6.06 in / 195 × 90 × 154 mm		
Base Housing (W × H × D)	14.84 × 4.72 × 17.44 in / 377 × 120 × 443 mm		
Communication	Standard RS232, USB, Optional Ethernet		
Operating Temperature Range	50°F to 86°F / 10°C to 30°C		
Operating Humidity Range	80% max up to 86°F/30°C, decreasing linearly to 50% at 104°F/40°C, non-condensing		
Storage Conditions	14°F/-10°C to 140°F/60°C at 10% to 90% relative humidity, non-condensing		
Net Weight	22 lbs / 10 kg		
Shipping Weight	25.8 lbs / 12.5 kg		
Shipping Dimensions	26.18 × 20.67 × 13.00 in / 665 × 525 × 330 mm		

\*Certified models only



# EXPLORER<sup>®</sup> Analytical and Precision Balances

Model	EX124	EX224	EX324	EX423	EX623	EX1103	EX2202	EX4202	EX6202	EX1201	EX6201	
Automatic Door	EX124/AD	EX224/AD	EX324/AD	—	—	—	—	—	—	—	—	
External Calibration	—	—	—	EX223/E	EX423/E	—	EX2202/E	EX4202/E	EX6202/E	—	EX6201/E	
Certified Models	EX124N/AD	EX224N EX224N/AD	EX324N EX324N/AD	EX223N/AD	EX423N/AD	—	EX2202N/AD	EX4202N/AD	EX6202N/AD	EX1201N/AD	EX6201N/AD	
Capacity (g)	120	220	320	220	420	620	1100	2200	4200	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				
Class*	I			II		—	I	II		I	II	
Repeatability (sd.), ≤5% of Full Load (g)	0.00008			0.0008			0.008			0.08		
Repeatability (sd.), 5% of Full Load to Full Range (g)	0.0001			0.001			0.01			0.1		
Linearity Deviation, Typical (g)	±0.00006			±0.0006			±0.006			±0.06		
Linearity Deviation (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		
Min-Weight (Typical) (g) (USP, K=2, U=0,10%)	0.16			1.6			16			160		
Min-Weight (Optimal) (g) (USP, K=2, U=0,10%, SRP≤0,41d)***	0.082			0.82			8.2			82		
Min-Weight (Typical) (g) (USP, K=2, U=1%)	0.016			0.16			1.6			16		
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, Certified Models	mg, g, oz, lb, ct, ozt, grain, dwt			—			mg, g, oz, lb, ct, ozt, grain, dwt		g, kg, oz, lb, ct, ozt, grain, dwt			
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, Fill Weight Variation											
Pan Size	Ø 3.54 in / 90 mm			Ø 5.12 in / 130 mm			7.48 × 7.87 in / 190 × 200 mm					
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	5.7 in / 145 mm (diagonal)											
Display Housing (WxHxD)	7.68 × 3.54 × 6.06 in / 195 × 90 × 154 mm											
Base Housing (WxHxD)	9.06 × 13.78 × 15.47 in / 230 × 350 × 393 mm						9.06 × 3.86 × 15.47 in / 230 × 98 × 393 mm					
Communication	RS232, USB and optional ethernet											
Temperature Range	50°F to 86°F / 10°C to 30°C											
Humidity Range	80% max up to 86°F/30°C decreasing linearly to 50% at 104°F/40°C, non-condensing											
Storage Conditions	140°F/60°C at 10% to 90% relative humidity, non-condensing											
Net Weight	15 lbs / 6.9 kg			10 lbs / 4.3 kg			11 lbs / 5 kg					
Shipping Weight	21 lbs / 9.6 kg			15 lbs / 6.8 kg			16 lbs / 7.4 kg					
Shipping Dimensions	21.65 × 15.16 × 21.69 in / 55 × 38.5 × 55.1 cm						21.65 × 15.16 × 11.45 in / 55 × 38.5 × 29.1 cm					

For specifications related to the Unites States Pharmacopoeia (USP) minimum weight standard visit [www.Ohaus.com/USPMinWeight](http://www.Ohaus.com/USPMinWeight)

## Compliance

- **Metrology:** NIST Handbook 44 (NTEP CC 12-012), Measurement Canada Weights and Measures Regulations (AM-5847) (Class I, nmax 320000; Class II, nmax 42000; certified 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

Density Determination Kit	80253384
Sinker glass for Density Determination Kit	83034024
Full-featured Impact Printer SF40A	30064203
Full-featured Bluetooth Impact Printer SF40A/BT	30944360
SF40A Paper roll (57,5mm 2pcs)	12120799
SF40A Ink ribbon cassette	12120798
ION-100A – Ionizer	30130302
RS232 Cable, PC 9 Pin	00410024
Cable, USB A to Mini USB, 1.8m Black	28120263
Cable, USB-RS232 Converter	30268619
Ethernet Kit	83021082
Tower Mount for Display (non High Capacity models)	83021102

Tower Mount for Display**	30078082
Display Extension Cable (9 Meter / 27 Feet)	30078078
Display Extension Cable (2 Meter / 6.56 Feet)	83021083
Draftshield Kit (0.01g, 0.1g) (non High Capacity models)	83021084
Security Device (Cable & Lock)	80850000
Security Device (Laptop Lock)	80850043
Foot Switch Kit	83021086
Rolling Feet Kit**	30041470
Rechargeable Battery Pack**	30041295
Auxiliary Display	30472064
Terminal in-use cover	83033633
Dust cover	30093334

\*Certified models only \*\*High Capacity models only

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The management system governing the manufacture of this product is ISO 9001:2015 certified.

