



# Explorer<sup>®</sup>

Analytical, Precision, and High Capacity Balances



## *Intelligent. Intuitive. Ingeniously Practical.*

The OHAUS Explorer<sup>®</sup> 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<sup>®</sup> 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 × 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<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 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



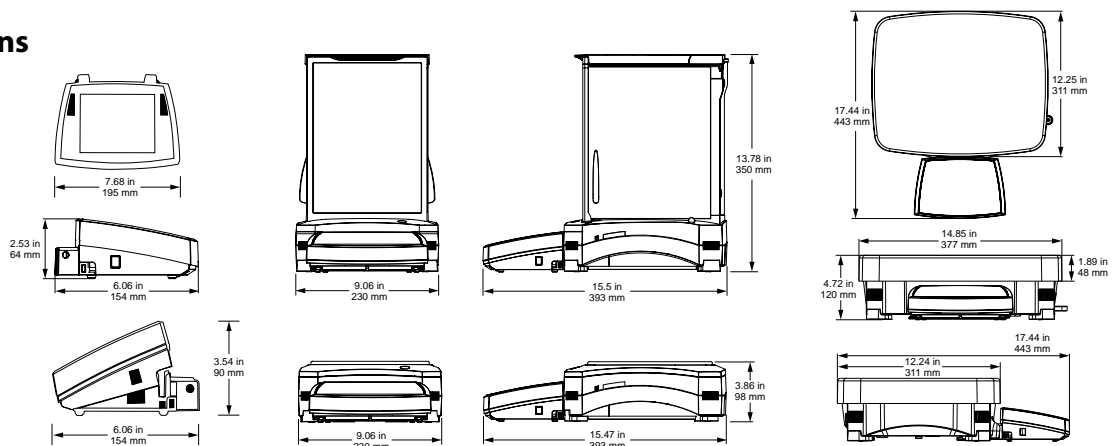
## Intuitive USER SETUP

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<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" (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 <sup>nd</sup> 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<sup>®</sup> 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 <sup>nd</sup> 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

<b>Tower Mount for Display</b> (non High Capacity models)	<b>Second RS232 Kit</b> .....	83021081
.....83021102	<b>Ethernet Kit</b> .....	83021082
<b>Tower Mount for Display**</b> .....30078082	<b>Foot Switch Kit</b> .....	83021086
<b>Display Extension Cable</b> (9 Meter / 27 Feet)....30078078	<b>RS232 Cable &amp; Adapter</b> (to 80251993 Printer)....	80252581
<b>Display Extension Cable</b> (3 Meter / 9 Feet).....83021083	<b>RS232 Cable, PC 9 Pin</b> .....	12106964
<b>Density Determination Kit</b> .....80253384	<b>Impact Printer SF40A</b> .....	30064202
<b>Draftshield Kit</b> (0.01g, 0.1g, non High Capacity models)	<b>STP103 Thermal Printer</b> without cable - EU....	80251993
.....83021084	<b>SF40A Paper roll 57.5mm</b> (2 Rolls).....	12120799
<b>Security Device</b> (Cable & Lock).....80850000	<b>SF40A Ink ribbon cassette</b> .....	12120798
<b>Security Device</b> (Laptop Lock).....80850043	<b>Rolling Feet Kit**</b> .....	30041470
<b>Interface Cable, USB</b> (Type A to B).....83021085	<b>Rechargeable Battery Pack**</b> .....	30041295
	<b>Auxiliary Display PAD7</b> .....	80251396

\*Approved models only \*\*High Capacity models only





Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



**UK Office**

**Keison Products,**

**P.O. Box 2124, Chelmsford, Essex, CM1 3UP, England.**

**Tel: +44 (0)330 088 0560**

**Fax: +44 (0)1245 808399**

**Email: [sales@keison.co.uk](mailto:sales@keison.co.uk)**

Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.