# 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 × 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.

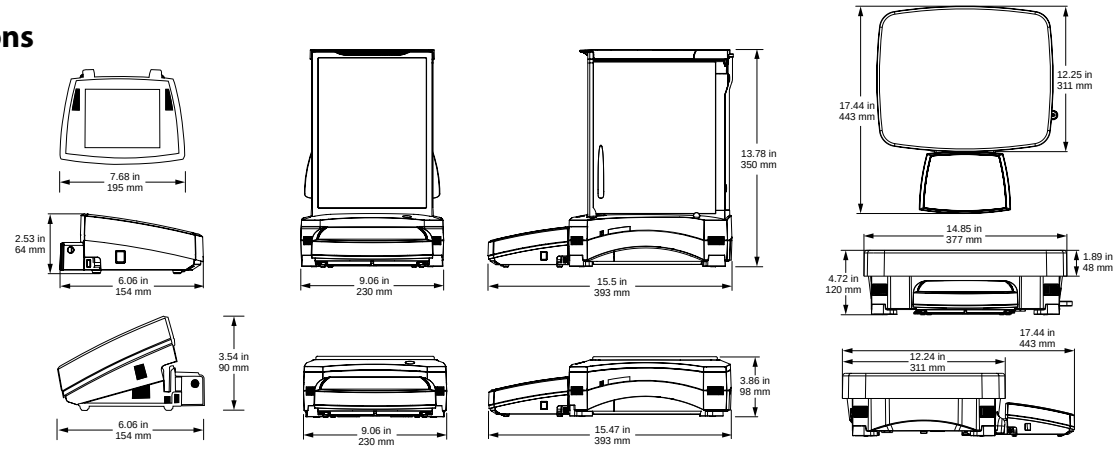
- **Self-calibrates the system when it senses a temperature change sufficient enough to affect weighing accuracy, or every 11 hours**
- **Performs routine calibration and reduces the need for external masses**
- **External Calibration Models available**
  - Selected models feature traditional external 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.

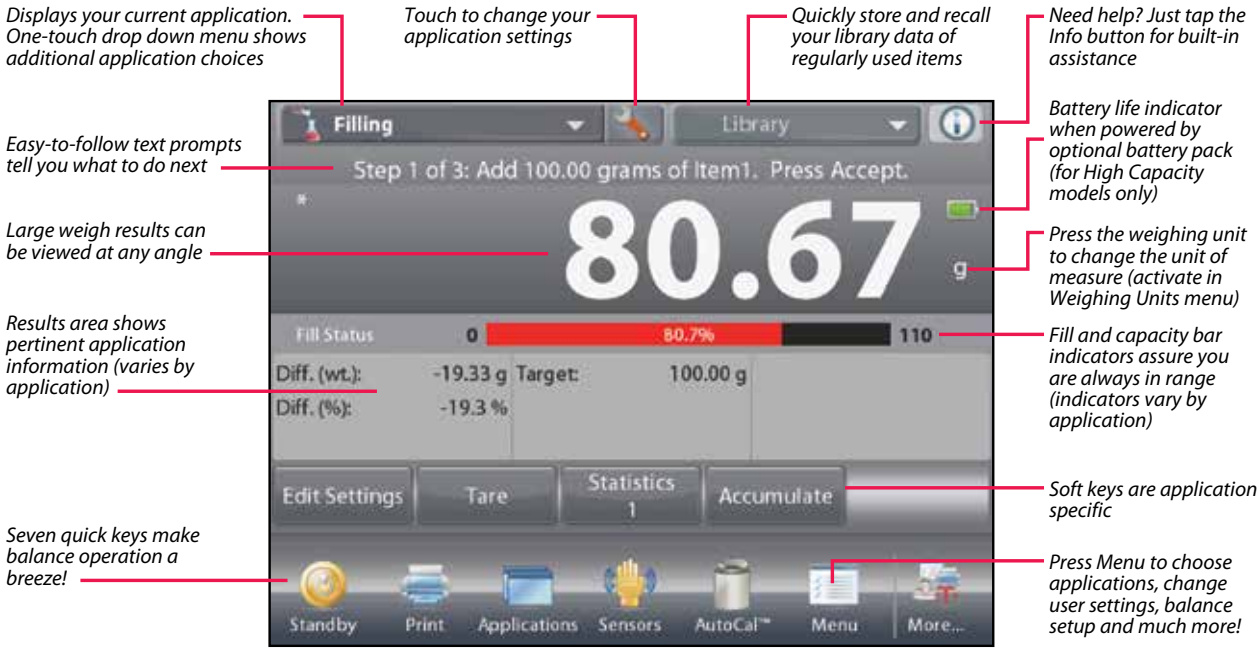
## Other Standard Features & Equipment:

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.




## 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 |
| Typicial 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 , ozt, 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 2nd 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 |
| Typicial 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 (W×H×D) | 195 × 90 × 154 mm / 7.68 × 3.54 × 6.06 in | | | | | | | | | | | | |
| Base Housing (W×H×D) | 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 2nd 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) ..... 83021102
**Tower Mount for Display**** ..... 30078082
**Display Extension Cable** (9 Meter / 27 Feet) ..... 30078078
**Display Extension Cable** (3 Meter / 9 Feet) ..... 83021083
**Density Determination Kit** ..... 80253384
**Draftshield Kit** (0.01g, 0.1g, non High Capacity models) ..... 83021084
**Security Device** (Cable & Lock) ..... 80850000
**Security Device** (Laptop Lock) ..... 80850043
**Interface Cable, USB** (Type A to B) ..... 83021085
**Second RS232 Kit** ..... 83021081
**Ethernet Kit** ..... 83021082
**Foot Switch Kit** ..... 83021086
**RS232 Cable & Adapter** (to 80251993 Printer) ..... 80252581
**RS232 Cable, PC 9 Pin** ..... 00410024
**Impact Printer SF40A** ..... 30064202
**STP103 Thermal Printer** whithout cable - EU ..... 80251993
**SF40A Paper roll 57.5mm** (2 Rolls) ..... 12120799
**SF40A Ink ribbon cassette** ..... 12120798
**Rolling Feet Kit**** ..... 30041470
**Rechargeable Battery Pack**** ..... 30041295
**Auxiliary Display PAD7** ..... 80251396

*Approved models only **High Capacity models only

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