OHAUS®

Ingeniously Practical   Asia Pacific

Table of Contents

Analytical
Explorer® Semi-Micro
Built for Sophisticated, Professional Weighing

- **0.01mg Readability**
- **220g Capacity**
- **Ultra-Fast Stabilization Time**
- **Full-Color Touchscreen**
- **Automatic Draftshield Doors***
- **Built-In Ionizer***
- **4 Programmable Touchless Sensors**
- **AutoCal™ Internal Calibration**
- **USB and RS232 Connectivity**
- **Audible Stability Alert**
- **Library Function**
- **Modular Design**

With unmatched weighing performance, intuitive software, and a full-color touchscreen. Eliminate static electricity with the built-in ionizer and automatically open the draftshield doors with any of the four touchless sensors! Ensure the best weighing results with AutoCal™ internal calibration and an audible stability alert. Conveniently fit the balance in the lab with a detachable display. Extreme durability is supported by the glass and steel construction and advanced connectivity is available through the RS232 and USB ports.

Automatically open side draftshield doors* with four programmable touchless sensors

Built-in ionizer neutralizes static charges

Feature	Feature
Parts Counting	Check-Weighing
Dynamic/Animal weighing	Percent Weighing
Totalization	Peak Hold
Statistics	Filling
Pipette Adjustment	Density Determination
Formulation	Differential Weighing
SQC	Internal Calibration
GLP Data Output	Time/Date
RS232/USB Interface	Weigh Below Hook
Backlit Touchscreen	Ethernet Interface (Optional)
NTEP Certified (Optional)	OIML Approved

Model	EX125D	EX125	EX225D	EX225D/AD	EX225/AD	EX125DM	EX125M	EX225DM	EX225DM/AD	EX225M/AD
Capacity	52 g / 120 g	120 g	120 g/220g	120 g/220 g	220 g	52 g / 120 g	120 g	120 g/220 g	120 g/220 g	220 g
Readability (d)	0.01 mg / 0.1 mg	0.01 mg	0.01 mg / 0.1 mg	0.01 mg / 0.1 mg	0.01 mg	0.01 mg / 0.1 mg	0.01 mg	0.01 mg / 0.1 mg	0.01 mg / 0.1 mg	0.01 mg
Repeatability (20 g) (std. dev.)	0.015 mg									
Linearity	±0.1mg									
Typical Min-weight (g) (USP, u=0.10%, k=2)	20.0 mg									
Optimized Min-weight (g) (USP, u=0.10%, k=2) SRP≤0.41d	9.0 mg									
Pan Size	Ø 80 mm									
Stablization Time	8 s									

Analytical

Explorer®
The Industry's Most Easy-to-Use Balance

- Metal base, ABS top housing, stainless steel pan and glass draftshield with flip-top/sliding top door and optional Auto-Door feature for side drafshield doors
- Full-color VGA graphic display (5.7 in /14.cm diagonal) with 4-wire resistive touch screen and modular design that can be separated from weighing base for increased flexibility
- SmarText™ 2.0 software with virtual QWERTY keyboard and numeric keypad to quickly input GLP/GMP data and other application data. Enhanced vibration filtering for better balance stability, as well as AutoCal™ automatic internal calibration to improve accuracy
- 4 programmable touchless sensors, icon-driven application software and weighing chamber light for increased efficiency

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

The OHAUS Explorer features a user friendly application-based graphical software platform in concert with a redesigned antistatic draftshield, enhanced weighing performance, and a flexible modular display that detaches from the weighing base. Ingeniously striking a balance between cutting-edge technology and functional design, the Explorer delivers accurate performance, with the end user in mind to improve lab efficiency.

Parts Counting	Check-Weighing	Dynamic/Animal weighing	Percent Weighing	Totalization	Peak Hold	Statistics	Filling

Pipette Adjustment	Differential Weighing	Formulation	Ingredient Costing	SQC	Gross/Net/Tare	Density Determination	Internal Calibration

Time/Date	GLP Data Output	Weigh Below Hook	Backlit Touchscreen	RS232/USB Interface	Ethernet Interface (Optional)	NTEP Certified (Optional)	OIML Approved

Resistive touch screen display quickly responds to operator's touch

Four touchless sensors provide hands-free operation of tare, print, calibration, and other selectable functions.

Model*	EX124	EX224	EX324
Automatic Door	EX124/AD	EX224/AD	EX324/AD
Capacity	120 g	220 g	320 g
Readability (g)	0.0001		
Repeatability std (g)	±0.0001		
Linearity (g)	±0.0002		
Typical Min-Weight (USP, K=3, U=0.1%)	0.24 g		
Typical Min-Weight (GLP, K=2, U=0.1%)	0.16 g		
PanSize (cm)	9 Diameter		
Display Housing (W×H×D) (cm)	19.5 × 9 × 15.4		
Base Housing (W×H×D) (cm)	23 × 35 × 39.3		

High resolution, 5.7" color TFT display

QWERTY and numeric key pads to quickly input GLP and GMP data

Data transfer function helps to output data directly into leading software applications.

Shown with SF40A impact printers.
See page17 for details.

Display can be separated from the weighing base. Extension cable accessory extends remote use up to 10 feet.

Explorer® Accessories	
OHAUS #	Description
83021102	Tower Mount for Display
83021083	Display Extension Cable
80253384	Density Determination Kit
83021084	Draftshield Kit (0.01g, 0.1g, excluding High Capacity models)
80850043	Security Device (Laptop Lock)
83021085	Interface Cable, USB (Type A to B)
83021081	Second RS232 Kit
80252581	RS232 Cable and Adapter to 80251992 Printer
83021082	Ethernet Kit
83021086	Foot Switch Kit
80500524	RS232 Cable, PC 25 Pin
80500525	RS232 Cable, PC 9 Pin
30130303	ION-100A - Ionizer
30045641	SF40A Impact Printer
12120799	Paper reels for Printer SF40A
12120798	Ink ribbon for Printer SF40A
12122603	RS232 Cable SF40A Impact Printer
80251992	Compact Thermal Printer
80253300	OHAUS DAS Software
80251396	Auxiliary Display PAD7

Analytical

Adventurer®

The Most Complete Balance in Its Class

NEW!

- Stability, Accuracy, and Fast Operation Ensure Optimal Weighing Results
- Color Touchscreen & Connectivity Options Power a Modern Weighing Experience
- Space-saving Draftshield Improves User Experience and Accessibility

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..

| Parts Counting | Dynamic/ Animal weighing | Check-weighing | Percent Weighing | Totalization | Display Hold | Formulation | Internal Calibration (Optional) |

| Time/ Date | GLP Data Output | Backlit Touchscreen | Weigh Below Hook | RS232/USB (2nd Interface Optional) | OIML Approved (Optional) | NTEP Certified (Optional) | Gross/Net/ Tare |

Save to USB function

Color Touchscreen

Model	AX124	AX224	AX324
External Calibration	AX124/E	AX224/E	-
Capacity (g)	120	220	320
Readability (mg)	0.0001		
Linearity (mg)	± 0.0002		
Typical Min-weight (g) (USP, u=0.10%, k=2)	0.20g		
Optimized Min-weight (g) (USP, u=0.10%, k=2) SRP≤0.41d	0.82g		
Pan Size (in/cm)	Ø 90 mm		
Base Housing (W×D×H) (cm)	35.4 × 23 × 34		
Shipping Dimensions (cm)	50.7 × 38.7 × 53.1		

Adventurer Accessories	
OHAUS #	Description
80251396	Auxiliary Display (PAD7)
80253384	Density Determination Kit
83021085	Cable, USB Interface (Type A to B)
80850043	Security Device (Laptop Lock)
80500524	RS232 Cable, PC 25 Pin
80500525	RS232 Cable, PC 9 Pin
30045641	SF40A Impact Printer
12120799	Paper reels for Printer SF40A
12120798	Ink ribbon for Printer SF40A

Analytical

Pioneer®
High Performance At an Economical Price

- **Easy to clean draftshield with sliding top**
- **Upfront level indicator**
- **Selectable environmental settings**
- **Optional internal Calibration models**

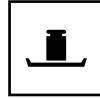Pioneer—full featured, simple to use. All the quality you have come to expect from OHAUS in an economical package.

| Parts Counting | Percent Weighing | Weigh Below Hook | Internal Calibration (Optional) | OIML Approved (Optional) | NTEP Certified (Optional) |

Model w/ InCal	PA64C	PA114C	PA214C
Model w/o InCal	**PA64**	**PA114**	**PA214**
Capacity (g)	65	110	210
Readability (mg)	0.1	0.1	0.1
Linearity (mg)	± 0.2	± 0.2	± 0.2
Platform Size (cm)	9 Diameter		
Base Housing (W×H×D) (cm)	19.6 × 28.7 × 32		
Shipping Dimensions (cm)	49.5 x 39.5 x 52.2		

Pioneer™ Accessories	
OHAUS #	**Description**
80251992	Compact Thermal Printer
80251931	Paper for Thermal Printer 80251992 (1 roll)
80252581	RS232 Cable & Adapter, 80251992 Printer
80500525	RS232 Cable, PC 9 Pin to Pioneer
80500524	RS232 Cable, PC 25 Pin to Pioneer
80251396	Auxiliary Display Kit for Pioneer
80253384	Density Determination Kit for Pioneer
80850000	Security Device (Cable & Lock)
80850043	Security Device (Laptop Lock)
30045641	SF40A Impact Printer
12120799	Paper reels for Printer SF40A
12120798	Ink ribbon for Printer SF40A

Removable doors for easy access and cleaning

Selectable environmental settings for working in practically any condition

RS232 interface for data connectivity

Built-in security bracket

Precision

Explorer®
The Industry's Most Easy-to-Use Balance

- **Metal base, ABS top housing, stainless steel pan and a glass draftshield with flip-top on 1mg models**
- **Full-color VGA graphic display (5.7 in /14.cm diagonal) with 4-wire resistive touch screen and modular design that can be separated from weighing base for increased flexibility**
- **SmarText™ 2.0 software with virtual QWERTY keyboard and numeric keypad to quickly input GLP and GMP data and other application data. Enhanced vibration filtering for better balance stability, with AutoCal™ automatic internal calibration to improve accuracy as well as external calibration for a more traditional approach**
- **4 programmable touchless sensors and icon-driven application software for increased efficiency**

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

The OHAUS Explorer features a user friendly application-based graphical software platform in concert with a redesigned antistatic draftshield, enhanced weighing performance, and a flexible modular display that detaches from the weighing base. Ingeniously striking a balance between cutting-edge technology and functional design, the Explorer delivers accurate performance, with the end user in mind to improve lab efficiency.

Draftshield accessory available

Parts Counting	Check-Weighing	Dynamic/ Animal weighing	Percent Weighing	Totalization	Peak Hold	Statistics	Filling
Pipette Adjustment	Differential Weighing	Formulation	Ingredient Costing	SQC	Density Determination	Internal Calibration	Gross/Net/ Tare
Time/ Date	GLP Data Output	Weigh Below Hook	Backlit Touchscreen	RS232/USB Interface	Ethernet Interface (Optional)	NTEP Certified (Optional)	OIML Approved

| Model | EX223** | EX423** | EX623** | EX1103** | EX2202 | EX4202 | EX6202 | EX10202 | EX6201 | EX10201 |
External Calibration	EX223/E	EX423/E	-	-	EX2202/E	EX4202/E	EX6202/E	-	EX6201/E	-
Capacity (g)	220	420	620	1100	2200	4200	6200	10200	6200	10200
Readability (g)	0.001				0.01				0.1	
Repeatability std (g)	±0.001				±0.01				±0.1	
Linearity (g)	±0.002				±0.02				±0.2	
Typical Min-Weight (USP, K=3, U=0.1%)	1.6 g				16 g				160 g	
PanSize (in/mm)	Ø5.1 / 130				7.5×7.9 / 190×200					
Display Housing (W×H×D) (in/mm)	$7.7 \times 3.5 \times 6.0$ / $195 \times 90 \times 154$									
Base Housing (W×H×D) (in/mm)	$9.1 \times 13.8 \times 15.5$ / $230 \times 350 \times 393$				$9.1 \times 3.9 \times 15.5$ / $230 \times 98 \times 393$					

**Includes draftshield.

High resolution, 5.7" color TFT display

QWERTY and numeric key pads to quickly input GLP and GMP data

Resistive touch screen display quickly responds to operator's touch

Four touchless sensors provide hands-free operation of tare, print, calibration, and other selectable functions.

Adjustable viewing angle display

Display can be separated from the weighing base. Extension cable accessory extends remote use up to 10 feet.

Tower mount accessory available

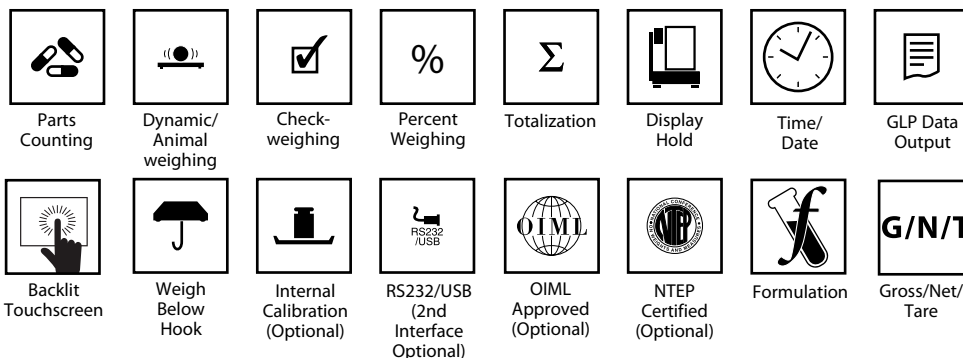| Explorer® Accessories	
OHAUS #	**Description**
83021102	Tower Mount for Display
83021083	Display Extension Cable
80253384	Density Determination Kit
83021084	Draftshield Kit (0.01g, 0.1g, excluding High Capacity models)
80850000	Security Device (Cable & Lock)
80850043	Security Device (Laptop Lock)
83021085	Interface Cable, USB (Type A to B)
83021081	Second RS232 Kit
80252581	RS232 Cable and Adapter to 80251992 Printer
83021082	Ethernet Kit
83021086	Foot Switch Kit
80500524	RS232 Cable, PC 25 Pin
80500525	RS232 Cable, PC 9 Pin
30045641	SF40A Impact Printer
12120799	Paper reels for Printer SF40A
12120798	Ink ribbon for Printer SF40A
80251992	Compact Thermal Printer
80251396	Auxiliary Display PAD7

Precision

Adventurer™
The Most Complete Balance in Its Class

- Stability, Accuracy, and Fast Operation Ensure Optimal Weighing Results
- Color Touchscreen & Connectivity Options Power a Modern Weighing Experience
- Space-saving Draftshield Improves User Experience and Accessibility

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..

Parts Counting	Dynamic/ Animal weighing	Check-weighing	Percent Weighing	Totalization	Display Hold	Time/ Date	GLP Data Output

Backlit Touchscreen	Weigh Below Hook	Internal Calibration (Optional)	RS232/USB (2nd Interface Optional)	OIML Approved (Optional)	NTEP Certified (Optional)	Formulation	Gross/Net/ Tare

Model	AX223	AX423	AX523	AX622	AX1502	AX2202	AX4202	AX5202	AX4201	AX8201
External Calibration	AX223/E	AX423/E	AX523/E	AX622/E	AX1502/E	AX2202/E	AX4202/E	-	AX4201/E	AX8201/E
Capacity (g)	220	420	520	620	1520	2200	4200	5200	4200	8200
Readability (mg)	0.001			0.01					0.1	
Linearity (mg)	±0.001			± 0.02					± 0.2	
Typical Min-Weight (USP, K=2, U=0.1%)	2.0 g			20.0 g					200.0 g	
Pan Size (cm)	Ø 13			17.5 × 19.5						
Base Housing (W×D×H) (cm)	35.4 × 23 × 34			35.4 × 23 × 10						
Shipping Dimensions (cm)	50.7 × 38.7 × 53.1			55.7 × 39.2 × 30.1						

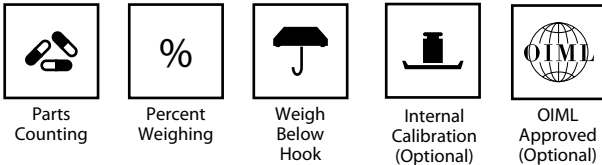| Adventurer Accessories	
OHAUS #	**Description**
80251396	Auxiliary Display (PAD7)
80253384	Density Determination Kit
83021085	Cable, USB Interface (Type A to B)
80850043	Security Device (Laptop Lock)
80500524	RS232 Cable, PC 25 Pin
80500525	RS232 Cable, PC 9 Pin
30045641	SF40A Impact Printer
12120799	Paper reels for Printer SF40A
12120798	Ink ribbon for Printer SF40A

Precision

Pioneer®
High Performance At an Economical Price

- **RS232 for data connectivity**
- **Upfront level indicator**
- **mg, g, oz, ozt, ct, GN, dwt, m, N, ti, t HK, t SG, t TW, baht, mesghal, tola**
- **Selectable environmental settings**

Pioneer—full featured, simple to use. All the quality you have come to expect from OHAUS in an economical package.

1mg models include draftshield.

Parts Counting	Percent Weighing	Weigh Below Hook	Internal Calibration (Optional)	OIML Approved (Optional)

Model w/ InCal	PA213C	PA413C	PA512C	PA2102C	PA4102C	PA4101C
Model w/o InCal	PA213	PA413	PA512	PA2102	PA4102	PA4101
Capacity (g)	210	410	510	2100	4100	4100
Readability (g)	0.001		0.01			0.1
Linearity (g)	±0.002		±0.02			±0.1
Typical Min-Weight (USP, K=2, U=0.1%)	2.0 g		20 g			200 g
Platform Size (cm)	12 Diameter		18 Diameter			
Base Housing (W×H×D) (cm)	19.6 × 28.7 × 32					
Shipping Dimensions（cm）	49.5 x 39.5 x 52.2		49.5 x 39.5 x 32.7			

Selectable environmental settings for working in practically any condition

Built-in security bracket

Pioneer™ Accessories	
OHAUS #	Description
80251992	Compact Thermal Printer
30045641	SF40A Impact Printer
12120799	Paper reels for Printer SF40A
12120798	Ink ribbon for Printer SF40A
80251931	Paper for Thermal Printer 80251992 (1 roll)
80252581	RS232 Cable & Adapter, 80251992 Printer to all MB models
80500525	RS232 Cable, PC 9 Pin to Pioneer
80500524	RS232 Cable, PC 25 Pin to Pioneer
80251396	Auxiliary Display Kit for Pioneer
80850000	Security Device (Cable & Lock)

RS232 interface for data connectivity
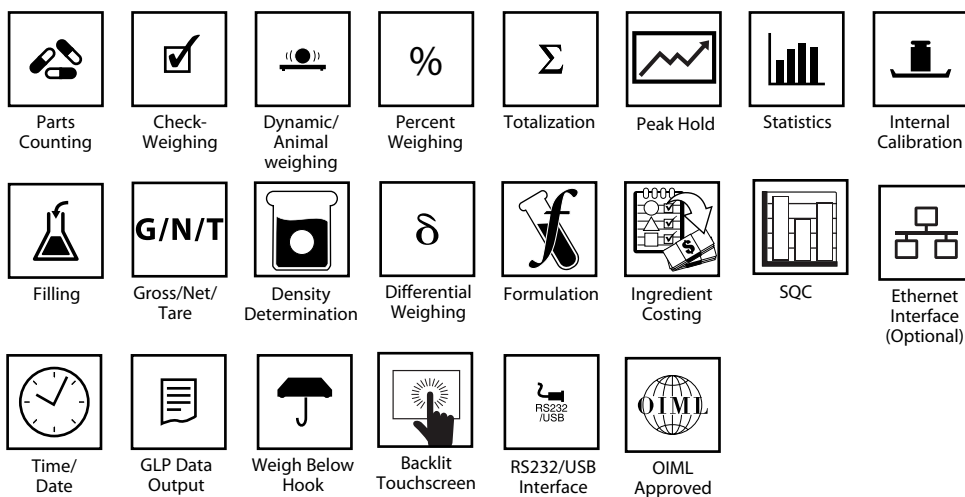
High Capacity

Explorer®
The Industry's Most Easy-to-Use Balance

- Die-cast metal base with 2-D protection that prevents shock and damage associated with movement and forces applied to the balance. IP54 base enclosure protects the weighing base from damage by debris, humidity and accidental spills and splashes. Includes a large stainless steel pan built to withstand rugged every day use

- Full-color VGA graphic display (5.7 in / 14.cm diagonal) with 2-wire resistive touch screen and modular design that can be separated from weighing base for increased flexibility

- SmarText™ 2.0 software with virtual QWERTY keyboard and numeric keypad to quickly input GLP and GMP data and other application data. Enhanced vibration filtering for better balance stability, as well as AutoCal™ automatic internal calibration to improve accuracy

- 2 programmable touchless sensors, icon-driven application software for increased efficiency with Weigh-below hook included

Parts Counting	Check-Weighing	Dynamic/Animal weighing	Percent Weighing	Totalization	Peak Hold	Statistics	Internal Calibration
Filling	Gross/Net/Tare	Density Determination	Differential Weighing	Formulation	Ingredient Costing	SQC	Ethernet Interface (Optional)
Time/Date	GLP Data Output	Weigh Below Hook	Backlit Touchscreen	RS232/USB Interface	OIML Approved		

Model	EX12001	EX24001	EX35001
Capacity (g)	12000	24000	35000
Readability (g)	0.1	0.1	0.1
Linearity (g)	±0.2	±0.2	±0.2
Stabilization TIme	≤1	≤1	≤1
Sensitivity Draft (PPM/°C)	3	3	3
Typical Min-Weight (USP, K=2, U=0.10%)	160 g	160 g	160 g
Pan Size (cm)	37.7 × 31.1		
Display Housing (W × H × D) (cm)	19.5 × 9 × 15.4		
Base Housing (W × H × D) (cm)	37.7 × 12 × 44.3		
Shipping Dimensions	66.5 × 52.5 × 33		

*Shown with optional rolling feet and tower mount*

Moisture Analysis

MB Series
Redefining Value in Moisture Analysis

- **Easy to setup and operate**—The MB45/35 utilize a dot matrix graphic display for quick setup and use. The MB23/25 /27employ a bright backlit LCD display.
- **Halogen or IR heating elements**—MB45/35/27/25 have a fast and even heating halogen lamp, while the MB23 uses a glass free IR heating system.
- **Simple or Advanced**—The MB45 features powerful software with an integrated database to store 50 drying procedures along with the ability to track statistical data. All products feature multiple shut off criteria to save time and cost.
- **Flexible Performance**—The MB27 provides accurate results at 0.01%, 0.001g. With a large capacity of 90 g, it is ideal for food, agriculture, chemical, pharmaceutical and other applications that require measurements up to 0.01%, 0.001g.

Flexible choices with capacities from 35g to 110g and readabilities of 0.01g to 0.001g.
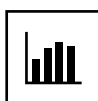
Statistics	Moisture Analysis	Multi-language	Time/Date	GLP Data Output	Backlight	RS232 Interface
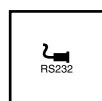
MB45 Dot Matrix display   Pan Handler

Model	MB45	MB35	MB27	MB25	MB23
Capacity (g)	45	35	90 g	110	110
Readability	0.01%/0.001g	0.02%/0.002g	0.01%/0.001 g	0.05% / 0.005g	0.1% / 0.01g
Repeatability (g)	0.05 % (3g sample) 0.015 % (10g sample)	0.18 % (3g sample) 0.05 % (10g sample)	0.2% (3 g sample) 0.05% (10 g sample)	0.2% (3 g sample) 0.05% (10 g sample)	0.3% (3g sample) 0.2% (10g sample)
Pan Size (in/cm) Diameter	3.5/90 Sample Pan Handler included				3.5/90 Sample Pan Handler optional
Timer	1-120 Minutes in 10 second increments	1-120 Minutes in 30 second increments	1 - 99 minutes, 30-second increments to 60 minutes		
Heating ELment	Halogen				IR
Temperature Range	50º to 200º C in 1º C increments	50º to 160º C in 5º C increments 5 °C to 40 °C			
Dimensions (W×H×D) (in/cm)	7.5 × 6 × 14 / 19 × 15.2 × 35	6.5 x 5 x 11 / 17 x 13 x 28			
Displays	% Moisture, % Solids, Time, Weight, Statistics, Temperature, Test ID, Drying Curve	% Moisture, Time, Weight,Temperature	% moisture or % solids or weight (g), temperature, time		

MB Accessories	
OHAUS #	**Description**
11113857	Temperature Calibration Kit for all MB Models
80251992	Compact Thermal Printer
30045641	Printer Impact SF40A
12120799	Paper reels for Printer SF40A
12120798	Ink Ribbon for Printer SF40A
80252475	In-Use Cover for MB25 and MB23
80252581	RS232 Cable & Adapter, 80251992 Printer
80500525	RS232 Cable, PC 9 Pin
80850086	Sample Pans - all MB models (80/box)
80850087	Pads, Glass Fiber for all MB Models (200/box)
80850043	Anti-Theft Device, MB AX EX
80850085	In-Use Cover for MB45 and MB35
80252476	Holder, Pan, MB Series
80252478	Pan Reusable 7mm 3Pcs MB Series
80252479	Pan Reusable 14mm 3Pcs MB Series

NEW!

MB27   MB25

MB23

Portable

Navigator®
The Only Scale in Its Class With Touchless Sensors!

- Two touchless sensors which free up your hands for handling samples and minimizing wear & tear on the keypad
- Application modes include weighing, percent weighing, parts counting, display hold and accumulate
- Weighing units – gram, kilogram, pound, ounce (decimal or fractional)
- One second stabilization time provides fast, accurate weighing results; improving efficiency, productivity and throughput
- Superior overload protection system allows the scale to withstand loads up to 400% of its rated capacity
- Multiple application modes allow for a wide range of use; quality control, inventory management, shipping, receiving, recipes, formulation, portioning and more!

The Navigator series offers a unique combination of features including touchless sensors, ultra-fast response time and superior overload protection for use in a wide variety of weighing applications.

Set up the two sensors independently to operate up to 36 combinations of functions without touching the keys.
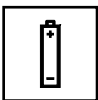
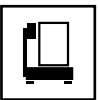| Parts Counting	Backlight	Check-Weighing	Percent Weighing	Totalization	Battery Power NV	Rechargeable Battery NVL, NVT	RS232/USB (2nd Interface Optional)	Display Hold
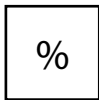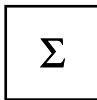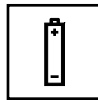
Navigator	NV212
Capacity (g)	210
Readability (g)	0.01
Linearity (g)	±0.02
Span Calibration Mass	200 g
Pan Size (W x D) mm	120mm diameter
Scale Dimensions (W x D x H)	204 x 212 x 58 mm

Navigator

Navigator XL	NVL511	NVL1101	NVL2101	NVL5101	NVL10001	NVL20000
Capacity (g)	510	1100	2100	5100	10000	20000
Readability (g)	0.1	0.1	0.1	0.5	1	1
Linearity (g)	±0.2	±0.2	±0.2	±1	±2	±2
Span Calibration Mass	300 g	500 g	1 kg	3 kg	5 kg	10 kg
Pan Size (W × D)	194 × 203 mm					
Scale Dimensions (W × D × H)	204 × 282 × 74 mm					

Optional rechargeable battery!

Navigator XL

Navigator XT	NVT1601/2	NVT3201/2	NVT6401/2	NVT10001/2	NVT16000/2
Capacity (g)	1600	3200	6400	10000	16000
Readability (g)	0.1	0.2	0.5	0.5	1
Linearity (g)	±0.2	±0.4	±1	±1	±2
Span Cal Mass (kg)	1	2	5	10	10
Pan Size (W × D)	230 × 174 mm				
Scale Dimensions (W × D × H)	240 × 250 × 70 mm				

Optional rechargeable battery!

Navigator XT

MODELS COULD BE DIFFERENT IN EACH COUNTRY. CONTACT YOUR DEALER MANAGER FOR INFORMATION.

Portable

Scout® Pro
Hands Down—the Industry's Best Portable Balance

- **Mechanical and software protection provides superior resistance to shock and overloading**
- **Easy, snap-in RS232 or USB interface accessory**
- **g, kg*, oz, ozt, lbs and combined lb:oz display**, dwt**
- **Software lock switch and integrated transportation lock**

Designed for use in laboratory applications, the Scout *Pro* features easy-to-use two-button operation, a high-contrast LCD display, multiple weighing units, four application modes. And with the option of either RS232 or USB connectivity, the OHAUS Scout *Pro* is the portable balance for your needs!

*kg available in models SP202, SP402, SP602, SP401, SP601
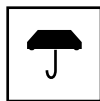**lbs and lb:oz available in models SP202, SP402, SP401
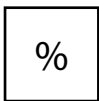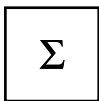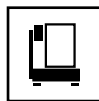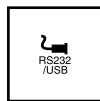

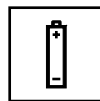
| Parts Counting | Percent Weighing | Totalization | Weigh Below Hook | Display Hold | RS232/ USB Interface (Optional) | Battery Power |

Transportation lock

Internal RS232 or USB port with integrated cable.

Mechanical and software overload protection

Model	SPS202	SPS402	SPS602	SPS401	SPS601	SPS2001	SPS4001	SPS6001	SPS6000
Capacity (g)	200	400	600	400	600	2000	4000	6000	6000
Readability (g)	0.01			0.1					1
Linearity	±0.01		±0.02	±0.1				±0.02	±1
Pan Size (in/cm)	4.7 / 12 Diameter				6.5 × 5.5 / 16.5 × 14.2				
Dimensions (W×H×D) (in/cm)	7.56 × 2.13 × 8.27 / 19.2 × 5.4 × 21								
Span Mass (g)	200	200	300	200	300	2000	4000	6000	4000
Mass Item # (opt.)	51025-16	51025-16	51025-16	51025-16	51035-16	51026-16	51026-16 (2)	51026-16 (2)	51026-16 (2)

Scout Pro Accessories	
OHAUS #	**Description**
83032107	RS232 Interface (cable Included)
83032108	USB Interface (cable Included)
TAD7	Auxiliary Display Kit
30045641	SF40A Impact Printer
12120799	Paper reels for Printer SF40A
12120798	Ink Ribbon for Printer SF40A

Integrated security bracket accommodates accessory security device.

Portable

Valor® 3000 Xtreme
Stainless Steel Design in a High Performance, Easy-to-Use, Portable Scale

- **10× capacity rated overload protection**
- **Easy-to-clean stainless steel pan and housing**
- **Bright backlit LCD**
- **g, kg, decimal or fractional oz, fluid oz (of water), lb, lb:oz**
- **4 large non-slip adjustable rubber feet**
- **SmarText™ user interface guides users through application use and scale setup**

The Valor 3000 Xtreme offers high precision readability, durability, and ease-of-use, in a sleek and stainless steel housing. Washdown versions models ensure that the Valor 3000 Xtreme meets the needs of even the most demanding environments.

%	▯	SPG	●	☀
Percent Weighing	Battery Power	Specific Gravity Mode	IP65 Models Available	Backlight

WASHDOWN

Model	V31XH202	V31XH402	V31XW301	V31X501	V31XH2	V31X3	V31XH4	V31XW3	V31XW6	V31X6
Capacity (g)	200	400g	300	500	2000	3000	4000	3000	6000	6000
Readability (g)	0.01	0.01	0.1	0.1	0.1	0.5	0.1	0.5	1	1
Linearity (g)	±0.01		±0.2	±0.1		±1	±0.1	±1	±2	±1
Platform Size (in/cm)	4.7 / 12 Diameter		5.8 × 6.2 / 14.6 × 15.8	4.7 / 12 Dia.	5.8 × 6.2 / 14.6 × 15.8					
Dimensions (W×H×D) (in/cm)	8.5 × 7.3 × 3 / 21.8 × 18.6 × 7.7									
Span Mass (g)	200	400	300	500	2000	3000	4000	3000	6000	6000

Valor™ 3000 Xtreme Accessories	
OHAUS #	**Description**
80251216	Hard Shell Carrying Case for Valor 3000 Xtreme
80251147	Sandwich Pan
80251148	French Fries / Taco Holder
80251149	Ice Cream Cone Holder
3369-10	Polypropylene Maxi-Scoop™ 10" Diameter × 2.5" deep (25.4cm Diameter × 6.4cm Deep) with pouring spout, weight 145g
80250954	Stainless Steel Scoop 17.2 × 11 × 3.4 in (44 × 28 × 8.5cm)
80250400	Stainless Steel Scoop 11.9 × 7.38 × 1.69 in

Sandwich Pan   Ice Cream Cone Holder   French Fries/Taco Holder   Carrying Case

Portable

Compact
The Economical Portable Scale

- Best overall overload protection and durability in its class
- Superior RF protection for use in production areas
- g, lb:oz, Newton
- Battery or AC powered
- Available with Postal charts and metal letter holders

From the laboratory to the field, our Compact Scales are reliable and easy to use. The portable Compact moves with you to any environment and has a long battery life for all-day field experiments. Consistent and quick weighing has never been so easy!

Model	CS200	CS2000	CS5000
Capacity × Readability (g)	200 × 0.1	2000 × 1	5000 × 1
Linearity (g)	±0.1	±1	±1
Pan Size (in/cm)	5.75 × 5.25 / 14.6 × 13.3		
Dimensions (W×H×D) (in/cm)	7.6 × 1.5 × 5.3 / 19.3 × 3.9 × 13.5		
Span Mass (g)	200	1000	2000
Mass Item # (optional)	51025-16	51016-16	51026-16

STAINLESS STEEL PAN AND AC POWER PACK INCLUDED!

Hand-Held
Convenient, Compact Weighing in the Palm of Your Hand

- Backlit display for easy viewing in low light
- g, oz, dwt, ozt*
- Protective snap-on cover

Small enough to fit in your pocket, this electronic scale is great for your prep work and field experiments. Why carry bulky equipment when you can easily take our hand-helds with you?

*oz, ozt, and dwt only available in models HH120 and HH320

Model	HH120D	HH120	HH320
Capacity × Readability (g)	0-60 × 0.1 60-120 × 0.2	120 × 0.1	320 × 0.1
Linearity (g)	0-60 : ±0.1 60-120 : ±0.2	±0.1	±0.2
Pan Size (in/cm)	3.25 × 3.0 / 8.3 × 7.6		
Dimensions (W×H×D) (in/cm)	5.35 × 3.25 × 0.8 / 13.6 × 8.3 × 2.0		
Span Mass (g)	100	100	200
Mass Item # (optional)	51015-16	51015-16	51025-16

Small enough to carry in your lab coat pocket!

CL Series
Simple Weighing At an Affordable Price

- Load cell lock protects scales when transported or stacked for storage
- g, ozt, lb:oz, dwt
- Auto shut-off

The OHAUS CL is a portable scale for basic weighing in grams. Two easy-to-use buttons let you

Model	CL201	CL2000	CL5000	CL5000F
Capacity × Readability (g)	200 × 0.1	2000 × 1	5000 × 1	5000 × 1
Linearity (g)	±0.1	±1	±1	±1
Pan Size (in/cm)	4.75/12 Diameter			
Dimensions (W×H×D) (in/cm)	5.5 × 1.6 × 7.9 / 14 × 4 × 20			
Span Mass (g)	100	100	200	
Mass Item # (optional)	51015-16	51015-16	51025-16	

CL5000F comes with carrying case

Mechanical

Triple Beam
The Standard for Over 75 Years

- Three notched and tiered beams with center reading
- Four weighing platforms to choose from
- Spring loaded zero adjust compensator

Whether you're weighing solids, liquids, powders or even animals, the OHAUS Triple Beam balance can handle the job. The 700/1600 Series provides the convenience of a toploading balance with the durability and versatility to accommodate a range of lab applications. Some models have a tare beam to allow containers up to 225g to be balanced out, and a variety of weighing platforms are also available.

Model	Triple Beam						Dial-O-Gram®		
Model	710-00	710-T0	720-S0	730-00	750-S0	760-00	1610-00	1650-00	1650-W0
Capacity (g)	610						610		2610
Readability (g)	0.1						0.1		
Calibrations: Front Beam Middle Beam Rear Beam Dial	10g × 0.1g 500g × 100g 100g × 10g —						225g tare 500g × 100g 100g × 10g 10g × 0.1g		
Stainless Steel Pan Size (in/cm) Platform Diameter × Depth	6 × 0.8 / 15.2 × 1.9	—					6 × 0.8 / 15.2 × 1.9	—	
Stainless Steel Scoop L × W × D (in/cm)	—		12 × 6 × 2.75 / 30.5 × 15.2 × 7	—					
Animal Container Diameter × Height (in/cm)	—			9 × 6 / 22.9 × 15.2	—				
Stainless Steel Plate Platform Diameter (in/cm)	—				6 / 15.2	—		6 / 15.2	
Tare Range (g)	—	225	—			225	225		

Triple Beam Accessories	
OHAUS #	Description
80780014	Polypropylene Scoop, 12 × 6 × 2.75 in / 30.5 × 15.2 × 7cm
80780015	Stainless Steel Scoop, 12 × 6 × 2.75 in / 30.5 × 15.2 × 7cm
80780016	Polypropylene Maxi-Scoop, 10 " dia. × 2.5" deep pouring spout, weight 142g & 42g counterweight
80780017	Vinyl Dust Cover
80780011	Rod and Clamp Assembly

Stainless steel scoop
(model 720-S0)

Animal weighing container
(model 730-00)

Triple Beam Pro™

- Ergonomically designed easy-grip carrying handle
- Two notched and tiered beams to provide ease in reading
- Magnetic damping reduces oscillation to speed up weighing

Accurate, dependable and stylish; the new OHAUS Triple *Pro*™ Balance offers it all, the superior quality and durability you've come to expect from OHAUS plus all the extras to satisfy every laboratory activity requiring a balance.

Model	TP2611
Capacity	2610g (when using the attachment weight set-included)
Readability	0.1g
Calibrations: Front Beam Middle Beam Rear Beam	10g × 0.1g 500g × 100g 100g × 10g
Stainless Steel Plate Platform Dia.	5.8" × 5.8"
Tare Range	—

Triple *Pro* Accessories	
OHAUS #	Description
80850312	Security Device for Loop
80850000	Security Device
80780011	Rod and Clamp Assembly

Mechanical

Harvard Trip
Solid Construction & Classic Performance

- **Highly versatile and rugged**
- **Two-pan design ideal for comparative weighing**
- **Built-in sliding masses**

With a two-pan design based on the classic Roberval balance principle, OHAUS Harvard Trip balances feature the additional advantages of magnetic damping, beams with sliding weights and a variety of weighing platforms.

Commonly used for comparative weighing to determine the difference in mass between two objects, rather than their absolute value, these balances come equipped with built-in sliding masses. Harvard Trip balances are known for their accuracy and durability—constructed and precision-engineered for years of maintenance-free laboratory use.

Model	1450-SD	1550-SD	1560-SD
Capacity (g)	2000		
Readability (g)	0.1		
Calibrations: (g) Top Beam Bottom Beam	10 × 0.1	10 × 0.1 200 × 10	
Stainless Steel Plate (in/cm)	6 / 15.2 Diameter		
Tare Range	—	—	225g

Harvard Trip Accessories	
OHAUS#	**Description**
80780006	Polypropylene Maxi-Scoop, 10" diameter × 2.5" Deep /25.4 Diameter × 6.4cm Deep (with pouring spout) and counterweight
80850262	Vinyl Dust Cover
80780011	Rod and Clamp Assembly

Printer

SF40A
Combines High Performance and Multiple Functions

- **Multiple Application Modes and Features Support the Data Reporting Process**
- **Easy Setup And Configuration Eliminate Wasted Time**
- **Multi-Language Printing Supports Universal Operation**

The all-new SF40A combines high performance and multiple functions to offer OHAUS quality and durability in a portable printer. The SF40A offers advanced functionality in an easy-to-use and set up printer at an exceptional value. This versatile printer is ideal for use in conjunction with OHAUS balances and scales in laboratory, industrial, and educational applications to ensure accurate documentation of weighing results..

Model	SF40A
Number of Columns	40 columns
Print Speed	Approximately 1.2 lines per second
Paper Roll (W x Dia.)	Standard paper 2.26 in. x Ø 2.36 in. max / 57.5 mm x Ø 60 mm max.
Power Requirements	AC adapter Input: 100 – 240 VAC, 50 - 60 Hz AC adapter output: 12 VDC, 2.5 A
Interface	RS232C
Ambient Temperature	32 ºF – 104 ºF / 0 ºC – 40 ºC
Printer Dimensions (W x L x H)	5.5 x 8.1 x 2.9 in. / 140 x 205 x 73 mm
Net Weight	1.6 lb / 740 g (Paper roll included)

Water Analysis

NEW!

Starter 5000 pH Bench
High Performance Bench Meter for Universal Applications

- Large memory store for measurement and calibration data, three endpoint modes, 8+1 buffer groups etc. make ST5000 a high-level and powerful product
- 4.3" color touchscreen with large digits and well-arranged icons support complex applications with intuitive operation
- IP54 housing and transparent in-use cover protect the meter, built-in USB host port to export data or RS232 to connect a printer

Model	Description
ST5000-B	5000 meter, stand alone electrode holder, ST5000 in-use-cover, 4G USB-driver
ST5000-F	ST5000-B, ST350 , pH buffer powder sachet

Starter 3100 pH Bench
Smart PH Bench Meter for Standard Laboratory Applications

- Automatic and manual endpoint functions determine the stability of readings
- The height of the standalone electrode holder can be adjusted for maximum versatility
- Connection to peripheral devices through RS232 port

Model	Description
ST3100-B	3100 meter (with standalone electrode holder, in-use-cover)
ST3100-F	ST3100-B with ST310 3-in-1 plastic refillable pH electrode, pH buffer powder sachet

Starter 2100 pH Bench
Economic Benchtop PH Meter for Basic Measurement Tasks

- Built-in electrode arm makes operation simple and convenient
- Auto buffer recognition stores calibration data and helps to avoid errors during the calibration process
- Each time a pH sensor is calibrated, electrode condition icon helps you to know the performance of the sensor so as to ensure accurate measurement.

Model	Description
ST2100-B	2100 meter with built-in electrode arm
ST2100-E	ST2100-B with ST210 2-in-1 plastic refillable pH electrode and pH buffer powder sachet
ST2100-F	ST2100-B with ST210 2-in-1 plastic refillable pH electrode +STTEMP30 temperature electrode, and pH buffer powder sachet

Water Analysis

Starter 3100C Conductivity Bench

Smart Conductivity Bench Meter for Standard Laboratory Applications

- A one-touch switch between conductivity, salinity, and TDS measurements
- The 4-pole linear electrode offers a large conductivity range that safeguards itself from polarization and pollution effects
- Automatic temperature compensation with an adjustable temperature coefficient
- Automatic and manual endpoint functions determine the stability of readings

Model	Description
ST3100C-B	3100C meter (with standalone electrode holder, and 2 small bottles of standard conductivity solution- 1413 µS/cm and 12.88ms/cm, in-use-cover)
ST3100C-F	ST3100C-B meter with STCON3 4-pole Conductivity Electrode (70 µS/cm-200ms/cm)

Bench Meter Specifications

Model	ST5000*	ST3100*	ST2100*	ST3100C*
Measurement Range	-2.000…20.000 pH -2000.00…+2000.00 mV -30℃…130 ℃	-2.00…16.00 pH −1999…1999 mV -5 ℃…110 ℃	0.00…14.00 pH −1999…1999 mV 0 ℃…100 ℃	00.0 µS/cm…199.9 mS/cm 0.1 mg/l…199.9 g/l (TDS) 0.00 ... 19.99 psu (Salinity) 0 ℃…100 ℃
Resolution	0.1/0.01/0.001pH 1/0.1/0.01mV 0.1 ℃	0.01 pH 1 mV 0.1 ℃	0.01 pH 1 mV 0.1 ℃	Automatic Range 0.1 ℃
Error Limits	± 0.002 pH ± 1 mV ± 0.1 ℃	± 0.01 pH ± 1 mV ± 0.5 ℃	± 0.01 pH ± 1 mV ± 0.5 ℃	± 0.5 % of the Measured Value ± 0.3 ℃
Calibration	1-9 points	3 Points 3 Predefined Buffer Groups	1 or 2 Points 1 Predefined Buffer Group (4.01, 7.00, 10.01)	1 Point 4 Predefined Standards
Memory	1000 sets, with 10*10 calibration data, 8 predefined buffer groups and 1 self-define buffer group	99 Measurements Last Calibration Data	Last Calibration Data	99 Measurements Last Calibration Data
Power Supply	110-240V/50 Hz, DC 9V	110-240V/50Hz, DC 12V	110-240V/50Hz, DC 12V	110-240V/50Hz, DC 12V
Size/Weight	220 W × 175 D× 78 H mm / 0.55 kg	Approximately 220 W × 175 D × 78 H mm / 0.75 kg	Approximately 220 W × 175 D × 78 H mm / 0.75 kg	Approximately 220 W × 175 D × 78 H mm / 0.75 kg
Display	Color Touch-Screen LCD	Liquid Crystal Backlight	Liquid crystal	Liquid Crystal Backlight
Input	BNC, impedance >3*10e+12 Ω Cinch, NTC 30 kΩ	BNC, impedance > 10e+12 Ω Cinch, NTC 30 kΩ	BNC, impedance > 10e+12 Ω Cinch, NTC 30 kΩ	Mini-Din
Temperature Compensation	ATC and MTC	ATC & MTC	ATC & MTC	Linear: 0.00 %/℃…10.00 %/℃ Reference Temperature: 20 & 25 ℃
Housing	ABS	ABS	ABS	ABS

*Bench meters are available in different packages.

Water Analysis

Starter 400D Dissolved Oxygen Meter

Convenient Portable PH Meter for Wherever Your Work Takes You

- Frequent membrane replacement not needed. Also, warm up and stirring of samples when taking measurements is not required.
- The automatic/manual endpoints enable easy recall of last calibration data and stored information with one touch.
- Simple calibration process offers quick delivery of measurements, and automatic temperature and barometric pressure compensation ensure accurate results.

Model	Description
ST400D-B	400D Meter with IP54 Sets, Electrode Clip, Wrist Strap and 4 AAA BATTERIES (ELECTRODE NOT INCLUDED)
ST400D	ST400D-B with STDO21 Probe
ST400D-G	ST400D-B with STDO21 Optical DO Probe, Portable Bag

Starter 300 pH Portable

Convenient Portable PH Meter for Wherever Your Work Takes You

- Each time the meter is calibrated, icons appear on the display to confirm the accuracy of the calibration process so you can ensure accurate measurement
- Auto buffer recognition stores calibration data and helps to avoid errors during the calibration process
- Automatic and manual temperature compensation helps ensure accurate readings

Model	Description
ST300-B	300 Meter (with IP54 Sets, Electrode Clip, Wrist Strap and 4 AAA Batteries)
ST300	ST300-B, ST320 3-in-1 Plastic Gel pH Electrode, and pH Buffer Powder Sachet
ST300D-G	ST300D-B with STDO11 Galvanic DO Probe, STTEMP30 Temperature Probe, Portable Bag

Starter 300C Conductivity Portable

Convenient Portable Conductivity Meter for Wherever Your Work Takes You

- The 4-pole linear electrode offers a large conductivity range that safeguards itself from polarization and pollution effects
- Automatic temperature compensation with an adjustable temperature coefficient

Model	Description
ST300C-B	300C Meter (with 2 Small Bottles of Standard Conductivity Solution - 1413 µS/cm and 12.88ms/cm, IP54 Sets, Electrode Clip, Wrist Strap, 4 AAA Batteries)
ST300C	ST300C-B, with STCON3 4-Ring Conductivty Electrode (70 µS/cm-200ms/cm)
ST300C-G	ST300C-B, STCON3 4-Pole Conductivity Probe (70 µS/cm - 200 mS/cm), Portable Bag

Water Analysis

Starter 300D Dissolved Oxygen Portable

Convenient Portable Dissolved Oxygen Meter for Wherever Your Work Takes You

- Each time the meter is calibrated, icons appear on the display to confirm the accuracy of the calibration process so you can ensure accurate measurement
- Push-button toggling between ppm, mg/L and percentage
- The galvanic electrode can be used immediately after being powered on without the wait time typically associated with dissolved oxygen meters

Model	Description
ST300D-B	300D Meter (with IP54 Sets, Electrode Clip, Wrist Strap and 4 AAA Batteries)
ST300D	ST300D-B with STDO11 Galvanic DO Electrode, and STTEMP30 Temperature Electrode
ST300D-G	ST300D-B with STDO11 Galvanic DO Probe, STTEMP30 Temperature Probe, Portable Bag

Portable Meter Specifications

Model	ST400D*	ST300*	ST300C*	ST300D*
Measurement Range	0.0 to 200.0% 0.00 to 20.0mg/L(ppm) 0 to 50 °C	0.00…14.00 pH −1999…1999 mV 0 °C…100 °C	0.0 µS/cm…199.9 mS/cm 0.1 mg/l…199.9 g/l (TDS) 0 °C…100 °C	0.0 to 199.9%; 200 to 400% 0.00 to 19.99; 20.0 to 45.0 mg/L 0.00 to 19.99; 20.0 to 45.0 ppm 0 to 50 °C
Measurement Resolution	0.1% 0.01 mg/L(ppm) 0.1 °C	0.01 pH 1 mV 0.1°C	Automatic Range 0.1°C	0.1%; 1% 0.1 mg/L; 1mg/L 0.01 ppm; 0.1 ppm 0.1 °C
Barometric Range	50.0 to 115.0 kPa	NA	NA	375 to 825 mmHg 500 to 1100 mbar 500 to 1100 hPa
Barometric Resolution	0.1Kpa	NA	NA	1 mmHg 1 mbar 1 hPa
Error Limits	± 0.2 mg/L (<8 mg/L), ± 0.3 mg/L (8 to 20 mg/L); ± 0.3 °C ± 1.5 Kpa	± 0.01 pH ± 1 mV ± 0.5 °C	± 0.5 % of the Measured Value ± 0.3°C	± 1% ; ± 0.3 °C
Calibration	1 point or 2 points	1-3 Points 4 Predefined Buffer Groups	1 Point 4 Predefined Standards	1 or 2 Points 100% and 0%
Memory	99 sets, Last Calibration Data	30 Measurements Last Calibration Data	30 Measurements Last Calibration Data	30 Measurements Last Calibration Data
Power Supply	4 x AAA(LR03) Batteries, 12 hrs	4 AAA > 500 Operating Hours	4 AAA > 250 Operating Hours	4 AAA > 250 Operating Hours
Size/Weight	Approximately 90 W × 150 D × 35 H mm / 0.16 kg (Without Batteries)	Approximately 90 W × 150 D × 35 H mm / 0.18 kg (Without Batteries)	Approximately 90 W × 150 D x 35 H mm / 0.16 kg (Without Batteries)	Approximately 90 W × 150 D x 35 H mm / 0.18 kg (Without Batteries)
Display	Liquid Crystal	Liquid Crystal	Liquid Crystal	Liquid Crystal
Input	Mini-DIN	BNC, Impedance > 10e+12 Ω Cinch, NTC 30 kΩ	Mini-Din	BNC, Cinch, NTC 30 kΩ
Temperature Compensation	ATC	ATC & MTC	ATC,Linear: 0.00 %/°C…10.00 %/°C Reference Temperature: 20 & 25 °C	ATC & MTC
Salinity Compensation	0.0 to 40.0 ppt	NA	NA	0.0 to 50.0 ppt
IP Protection	IP54	IP54	IP54	IP54
Housing	ABS	ABS	ABS	ABS

Water Analysis

Starter Pen Meters

OHAUS Pen Meters Provide Accurate Measurement of PH, Oxidation-Reduction Potential (ORP), Conductivity, Salinity and Total Dissolved Solids (TDS).

- **Simple Operation in a Slim and Portable Design—Starter pen meters provide what should be expected of a small pen meter: simple, fast, straightforward, no-frills yet highly accurate operation time and time again.**

- **Durably Constructed to Withstand Wear and Tear Resulting from Repetitive use— With durable plastic housing, a protective cap that safeguards the sensor and an automatic shut-down feature to preserve battery life (6 minutes of non-use), the Starter pen meters can endure consistent use in rugged environments.**

- **Waterproof Housing Protects the Meters in their Working Environment— Equipped with a wrist strap that helps to prevent unintentional dropping, Starter pen meters are con-structed with an IP67 waterproof design that can prevent water damage when accidentally dropped into liquid.**

- **All pen meters meet CE requirement and comply with FCC Part 15 Class B emissions.**

All the pen meters pre-installed 4 AG 131.5V micro alkaline batteries which are easily to be replaced.

pH Pen
Convenient PH Testing

Two models with varying resolution and accuracy, ST10 and ST20 offer a con-venient way to measure pH, or the relative acidity or alkalinity of a sample at a given temperature. The pH pen meters can be completely operated with just one hand, freeing up your other hand to handle samples.

Model	ST20	ST10
Range	0.00-14.00	0.0-14.0
Resolution	0.01pH	0.1pH
Accuracy	0.05pH	0.1pH
Temperature Range	0.0-99.0 °C	NA
Temperature Compensation	Yes	NA
Display	Dual	Single
Calibration	3 Point	NA
Buffer Group	4.01, 7.00, 10.01	NA

Water Analysis

ORP Pen
Portable ORP Measurement

ST10R and ST20R can bring measurement of ORP to virtually anywhere your need for the measurement of the availability of electrons in a liquid lies. Both models provide almost instantaneous results and the ST20R offers the ability to freeze the reading right on the display to provide additional time for data logging.

Model	ST20R	ST10R
Range	-1000mV-1000mV	-1000mV-1000mV
Resolution	1mV	1mV
Accuracy	2mV	2mV
Temperature Range	0.0-99.0 °C	NA
Temperature Compensation	Yes	NA
Display	Dual	Single
Calibration	NA	NA

DO Pen
Simple and Fast Dissolved Oxygen (DO) Measurement

The perfect DO Meter for every application that requires portable operation and quick results. With IP67 waterproof design and automatic shutdown feature that preserves battery life, the Starter DO Meters can endure consistent use in rugged environments.

Model	ST20D
Measurement Range	0.0 – 19.9 mg/L
Resolution	0.1 mg/L
Accuracy	± 0.5 mg/L
Battery	4 AG13 1.5V Micro Alkaline Batteries
Dimension	185 × 42 × 37 mm
Weight	90 g
Auto-off	After 15 Minutes of Inactivity
Auto Temperature Compensation Range	5 to 45 °C (41 to 113 °F)
Materials	ABS

NEW!

Water Analysis

Conductivity Pen
Small But Productive Conductivity Meters

Starter pen meters are the choice for basic testing needs of the total ionic concentration within a solution. With six models that can measure within three different conductivity ranges, there is a Starter conductivity meter for every application that requires portable operation and quick results.

Model	ST20C-C	ST20C-B	ST20C-A	ST10C-C	ST10C-B	ST10C-A
Range	0.00-19.99 ms/cm	0-1999 us/cm	0.0-199.9 us/cm	0.00-19.99 ms/cm	0-1999 us/cm	0.0-199.9 us/cm
Resolution	10 us/cm	1 us/cm	0.1 us/cm	10 us/cm	1 us/cm	0.1 us/cm
Accuracy	±1.5% FS	±1.5% FS	±1.5% FS	±2.5% FS	±2.5% FS	±2.5% FS
ATC	With Temperature Display			Without Temperature Display		
Display	Dual	Dual	Dual	Single	Single	Single

Salinity Pen
Simple Salinity Measurement

Starter pen meters combine all of the most useful features for measuring salinity, or the dissolved salt content in a liquid medium. With the combination of quality construction and sturdy design, Starter pen meters will provide durable operation in even tougher environments.

Model	ST20S	ST10S
Range	0.0-80.0 ppt	0.0-10.0 ppt
Resolution	0.0-50.0 ppt	0.1 ppt
Accuracy	±1.5% FS	±2.5% FS
ATC	With Temperature Display	Without Temperature Display
Display	Dual	Single

TDS Pen
Complete TDS Meters
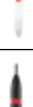
When you need reliable and accurate measurement of TDS, the Starter pen meters offer a great value in a portable and compact design. Bring the Starter TDS meter wherever your need to measure the combined content of all organic and inorganic substances in a liquid takes you.

Model	ST20T-B	ST20T-A	ST10T-B	ST10T-A
Range	0-1000 mg/L	0.0-100.0 mg/L	0-1000 mg/L	0.0-100.0 mg/L
Resolution	1 mg/L	0.1 mg/L	1 mg/L	0.1 mg/L
Accuracy	±1.5% FS	±1.5% FS	±2.5% FS	±2.5% FS
ATC	With Temperature Display	With Temperature Display	Without Temperature Display	Without Temperature Display
Display	Dual	Dual	Single	Single

Water Analysis

Sensor specifications

Sensor Type	Picture	Model	Description	Shaft Material Refillable	Shaft dimension Cable length	Measurement range and accuracy	Temp. Range	Application Area/Features	Connector
pH		ST350	3-in-1 within temp. sensor	glass refillabe	120 × 12mm 1m	0--14pH	0-100°C	Normal samples with ATC; as well as high temperature, organic etc.	BNC +Cinch
		ST320	3-in-1 within temp. sensor	plastic non-refillabe	120 × 12mm 1m	0--13pH	0-80°C	Normal samples with ATC	BNC +Cinch
		ST310	3-in-1 within temp. sensor	plastic refillabe	120 × 12mm 1m	0--14pH	0-80°C	Normal samples with ATC	BNC +Cinch
		ST270	2-in-1	plastic refillabe	120 × 12mm 1m	0--14pH	0-80°C	Normal samples with ATC	BNC +Cinch
		ST260	2-in-1	glass refillabe	120 × 12mm 1m	0--14pH	0-80°C	Tris-buffer solution	BNC
		ST230	2-in-1	glass refillabe	110 × 12mm 1m	0--14pH	0-100°C	Muddy samples (milk, juice…)	BNC
		ST210	2-in-1	plastic refillabe	120 × 12mm 1m	0--14pH	0-80°C	Normal samples	BNC
		STPURE	2-in-1	glass refillabe	120 × 12mm 1m	0--13pH	0-100°C	low conductivity samples (pure water, distilled water, rain water..)	BNC
		STSURF	2-in-1	plastic refillabe	120 × 12mm 1m	2--12pH	0-80°C	Flat surface such as skin, paper etc.	BNC
		STMICRO5	2-in-1	glass refillabe	80 × 5mm 1m	0--14pH	0-100°C	Mico samples in tube or microcentrifuge tube	BNC
		STMICRO8	2-in-1	glass refillabe	150 × 8mm 1m	0--14pH	0-100°C	Mico samples in tube or microcentrifuge tube	BNC
Reference		STREF2	SCE	glass refillabe	120 × 12mm 1m	NA	0-50°C	E Vs SHE is 0.241V	2mm banana
		STREF1	Ag|AgCl	glass refillabe	110 × 12mm 1m	NA	0-100°C	E Vs SHE is 0.198V	2mm banana

Water Analysis

Sensor specifications

Sensor Type	Picture	Model	Description	Shaft Material Refillable	Shaft dimension Cable length	Measurement range and accuracy	Temp. Range	Application Area/Features	Connector
ORP		STORP1	Pt disk	plastic non-refillabe	120 × 12mm 1m	-1000mV--1000mV 1mV	0-80°C	Normal samples	BNC
		STORP2	Pt band	glass refillabe	120 × 12mm 1m	-1000mV--1000mV 1mV	0-100°C	Can endure high temperature and organic solvents	BNC
Conductivity		STCON3	4-pole sensor with temp sensor	Plastic	130 × 14mm 1m	70µS/cm-200mS/cm 0.5%	0-50°C	Normal samples	Mini-Din
		STCON7	2-pole sensor with temp sensor	Plastic	95 × 12mm 1m	0.02µS/cm-200µS/cm 0.5%	0-50°C	Pure water, not fit for ultra-pure water	Mini-Din
Dissolved Oxygen		STDO11	Galvanic	Plastic	120 × 12mm 1m	0-45mg/L	0-50°C	Normal samples,no warm up needed, no maintenance	BNC
		STDO21	Optical	Plastic	125 × 13mm 1m	0-20mg/L	0-60°C	low maitena nce, no need stirring samples	Mini-Din
Temperature		STTEMP30	NTC 30KΩ	Steel	120 × 3mm 1m	0-100°C 0.5°C	0-100°C	Can work with ST300, ST300D, ST2100 and ST3100	Cinch

Solution and Buffers

OHAUS #	Description
30100424	pH1.68, 250ml per bottle
30100425	pH4.01, 250ml per bottle
30100426	pH6.86, 250ml per bottle
30100427	pH7.00, 250ml per bottle
30100428	pH9.18, 250ml per bottle
30100429	pH10.01, 250ml per bottle
30100440	pH12.45, 250ml per bottle
30100441	Cond 10 µS/cm, 250ml per bottle
30100442	Cond 84 µS/cm, 250ml per bottle
30100443	Cond 1413 µS/cm, 250ml per bottle
30100444	Cond 12.88 µS/cm, 250ml per bottle
83033971	pH buffer powder Sachet(4.01;7.00;10.01)
30059255	pH electrode reference electrolyte
30059256	pH electrode protection solution

Mini Centrifuge

Frontier™ 5306

Powerful and Convenient Mini Centrifuge for Simple and Rapid Life Science Separation Applications

- A Quiet Motor and Rubber Base Assure Quiet Operation
- Multiple Protective Features Ensure the Safety of Centrifuge Operators, with two safety switches, imbalanced sensor, sturdy lid, Frontier™ 5306 could shut down immediately while the centrifuge open up or become imbalanced
- Simple One-Step Operation, Frontier™ 5306 takes simple operation to a new level. Not even one button press is needed in order to separate your sample or replace the rotor

Model	FC5306	
Rotor	Angle Rotor	Tube Bank Rotor
Rotating Speed Scope	6000 rpm	
Centrifugal Force	2000 g	
Rotating Direction	Counterclockwise	
Maximum Capacity	8 × 1.5 ml /2 ml	4 × 0.2 ml-PCR 8-tube bank
		or 32 × 0.2 ml single centrifugal tube
Adapter	0.2 ml / 0.5ml	—
Accelerating Time	≤2 s	
Decelerating Time	≤3 s	
Power Supply	Input: 100-240V ~ 50/60Hz 1.5A Output: 24V 2.0A	
Dimensions (W × D × H)	150 × 168 × 128 mm	

Frontier 5306 with safety switch

Frontier 5306 with different rotors

Multi Centrifuge

Frontier™ 5706

Reliable and Compact Multi-Function Centrifuge For Standard Life Science Separation Applications

- **Extremely Simple and Intuitive Operation, with an easy-to-turn control knob, a large LCD display and the capabilities to set and view both speed in rpm and g-force.**

- **Compatibility with Test Tubes of Various Sizes, has a large capacity, and can hold six 50 mL tubes and twelve 15 mL tubes during one process.**

- **Several Safety Features that Protect Against Injury, among Frontier 5706's safety attributes are sturdy mechanical lid with locking system and a rotor imbalance sensor.**

Model	FC5706	
Speed Range	200 rpm - 6000 rpm; 50 rpm/set	
Maximum RCF	4427 x g;10 × g/set	
Maximum Capacity (Rotor)	6 x 50 mL	
Temperature range	Air cool	
Running Time	10 sec to 99 hr 99 min 99 sec or continuous	
Noise level (depending on the rotor)	≤ 60 +2 dB(A)	
AC Power	230 V / 50-60 Hz	120 V / 50-60 Hz
Voltage Fluctation	± 10 %	± 10 %
Current Consumption	0.55 A	1.1 A
Power Consumption	100 W	100 W
EMC	EN/IEC 61326-1 Class B emissions, Basic immunity FCC Class B emissions	
Dimensions (W × D × H)	11.5 × 15.4 × 10.5 in / 291 × 392 × 266 mm	

High-Speed Microliter Centrifuges

Frontier™ 5515 & 5515R

Smooth and Dependable High-Speed Microliter Centrifuge for Liquid Separation Applications

- **Easy-to-Use Control Panel that Supports Simple Operation,** with rotary knob puts the centrifuge's simple operations at your fingertips, including the ability to set and recall speed and g-force, as well as control the temperature (FC5515R only).

- **Sophisticated Technology that Drives High-Performance,** a powerful brushless induction motor, 10 acceleration and deceleration settings, and memory for up to 99

- **Several Safety Features that Protect Against Injury.**

- **Seven Rotor Sizes that Provide Flexibility for Varied Centrifugation Needs.**

Model	FC5515R		FC5515	
Speed Range	200 rpm - 15200 rpm; 10 rpm/set		200 rpm - 15200 rpm; 10 rpm/set	
Maximum RCF	21953 × g; 10 × g/set		21953 × g; 10 × g/set	
Maximum Capacity (Rotor)	44 × 1.5/2.0mL; 12 × 5mL		44 × 1.5/2.0mL; 12 × 5mL	
Temperature Range	-20° to 40°C,1°C/set		Air cool	
Running Time	10 sec to 99 hr 99 min 59 sec or continuous		10 sec to 99 hr 99 min 59 sec or continuous	
Noise Level (varies by rotor)	≤ 57 + 2 dB(A)		≤ 60 + 2 dB(A)	
AC Power	230 V/50-60 Hz	120 V/50-60 Hz	230 V/50-60 Hz	120 V/50-60 Hz
Fluctation	± 10%	± 10%	± 10%	± 10%
Current Consumption	2.4 A	5.1 A	1.3 A	2.3 A
Power Consumption	500 W	560 W	270 W	280 W
Dimensions (W × D × H)	287 × 561 × 292 mm		287 × 393 × 292 mm	

Easy-to-Use Control Panel   Safety Features that Prevent Injury   Flexibility for Varied Centrifugation Needs

Pipetting

Across Pro Pipette
Combine Precision, Comfort, and Durability

- **Built to Last and Withstand Heavy Use.**
- **Reliable, Accurate, and Reproducible Results with Each Use.**
- **Designed to Support Ergonomic Safety and Maximum Comfort**

	Volume Range	Volume µL	Increment µL	Accuracy %	Accuracy µL (±)	Precision %	Precision µL (±)
AO-2	0.1 - 2µL	0.2 1.0 2.0	0.002	12 2.7 1.5	0.024 0.027 0.030	6 1.3 0.7	0.012 0.013 0.014
AO-10	0.5 - 10µL	1 5 10	0.02	2.5 1.5 1	0.025 0.075 0.1	1.2 0.6 0.4	0.012 0.03 0.04
AO-20	2 - 20µL	2 5 10 20	0.02	7.5 3 1.5 1	0.15 0.15 0.15 0.2	2 0.9 0.5 0.3	0.04 0.045 0.05 0.06
AO-100	10 - 100µL	10 50 100	0.2	3.5 0.8 0.8	0.35 0.4 0.8	1 0.24 0.15	0.1 0.12 0.15
AO-200	20 - 200µL	20 100 200	0.2	2.5 0.8 0.8	0.5 0.8 1.6	1 0.25 0.15	0.2 0.25 0.3
AO-1000	100 - 1000µL	100 500 1000	2	3 0.8 0.8	3 4 8	0.6 0.2 0.15	0.6 1 1.5
AO-5000	500 - 5000µL	500 2500 5000	2	2.4 0.6 0.6	12 15 30	0.6 0.2 0.16	3 5 8
AO-10mL	1 - 10mL	1mL 5mL 10mL	20	5 1 0.6	50 50 60	0.6 0.2 0.16	6 10 16

Across Pro Pipette_micrometer

Across Pro Pipette_family in stand

Across Pro Pipette_Color Coded Plunger Buttons

Pipetting

Pipette Tips
Highest Quality Yet Affordable Pipette Tips

- Top grade Polypropylene material, chemically stable.
- Sterile tips, including all ltered tips, are free of DNA, DNAse, RNAse, ATP, and Endotoxin.
- Premium tooling and molding facility, tips have very low liquid retention.
- Unique extended length design makes it easy to reach into long tubes, also pro-

Model	Description	Packaging
Filtered Tips		
PCR-10MF	0.1 – 10 µl, Filtered tips, clear, sterile	5 packs in a case, 10 racks of 96 tips per pack
PCR-10F	0.5 – 10 µl, Filtered tips, clear, sterile	5 packs in a case, 10 racks of 96 tips per pack
PCR-200F	2 – 200 µl, Filtered tips, yellow, sterile	5 packs in a case, 10 racks of 96 tips per pack
PCR-1000F	100 – 1000 µl, Filtered tips, blue, sterile	5 packs in a case, 10 racks of 96 tips per pack
Non-Filtered Tips **0.1 – 10µl, 32mm** **Compatible OHAUS Pipettes: AO-2, AO-10**		
PCB-10M	0.1 – 10 µl, Bulk tips, clear, non-sterile	10 bags in a case, 1000 tips per bag
P CR-10M	0.1 – 10 µl, Racked tips, clear, non-sterile	5 packs in a case, 10 racks of 96 tips per pack
PCR-10MS	0.1 – 10 µl, Racked tips, clear, sterile	5 packs in a case, 10 racks of 96 tips per pack
PCS-10M	0.1 – 10 µl, Stacked tips, clear, non-sterile	12 packs in a case, 5 stacks of 96 tips per pack
Non-Filtered Tips (Extra-long) **0.5 – 10µl, 44mm** **Compatible OHAUS Pipettes: AO-2, AO-10**		
PCB-10	0.5 – 10 µl, Bulk tips, clear, non-sterile	10 bags in a case, 1000 tips per bag
PCR-10	0.5 – 10 µl, Racked tips, clear, non-sterile	5 packs in a case, 10 racks of 96 tips per pack
PCR-10S	0.5 – 10 µl, Racked tips, clear, sterile	5 packs in a case, 10 racks of 96 tips per pack
PCS-10	0.5 – 10 µl, Stacked tips, clear, non-sterile	12 packs in a case, 5 stacks of 96 tips per pack
2 – 200 µl, 50mm **Compatible OHAUS Pipettes: AO-20, AO-100, AO-200**		
PCB-200	2 – 200 µl, Bulk tips, yellow, non-sterile	10 bags in a case, 1000 tips per bag
PCR-200	2 – 200 µl, Racked tips, yellow, non-sterile	5 packs in a case, 10 racks of 96 tips per pack
PCR-200S	2 – 200 µl, Racked tips, yellow, sterile	5 packs in a case, 10 racks of 96 tips per pack
PCS-200	2 – 200 µl, Stacked tips, yellow, non-sterile	12 packs in a case, 5 stacks of 96 tips per pack
100 – 1000 µl, 101mm **Compatible OHAUS Pipette: AO-1000**		
PCB-1000	100 – 1000 µl, Bulk tips, blue, non-sterile	10 bags in a case, 1000 tips per bag
PCR-1000	100 – 1000 µl, Racked tips, blue, non-sterile	5 packs in a case, 10 racks of 96 tips per pack
PCR-1000S	100 – 1000 µl, Racked tips, blue, sterile	5 packs in a case, 10 racks of 96 tips per pack
PCS-1000	100 – 1000 µl, Stacked tips, blue, non-sterile	12 packs in a case, 5 stacks of 96 tips per pack
500 – 5000 µl, 100mm **Compatible OHAUS Pipette: AO-5000**		
PCB-5000	500 – 5000 µl, Bulk tips, clear, non-sterile	4 bags in a case, 250 tips per bag
1 – 10ml, 160mm **Compatible OHAUS Pipette: AO-10ML**		
PCB-10ML	1 – 10 ml, Bulk tips, clear, non-sterile	4 bags in a case, 50 tips per bag
Tip BOX		
Tip BOX-10	Tips racks for 10 µl tips	5 packs in a case, 10 racks per pack
Tip BOX-200	Tips racks for 200 µl tips	5 packs in a case, 10 racks per pack
Tip BOX-1000	Tips racks for 1000 µl tips	5 packs in a case, 10 racks per pack

Application Selector
Cross Reference Chart

	Analytical & Precision						Portable				
32	Explorer® Semi-Micro	Explorer®	Explorer® Pro Hi-Capacity	Adventurer® Pro	Pioneer®	MB Series	Navigator®	Scout® Pro	Compact	Hand-Held	CL
General Weighing	•	•	•	•	•	•	•	•	•	•	•
Parts Counting	•	•	•	•	•		•	•			
Percent Weighing	•	•	•	•	•		•	•			
Checkweighing	•	•	•	•			•				
Below Balance	•	•	•	•	•			•			
Dynamic Weighing	•	•	•	•							
Filling	•	•	•								
Totalization	•	•		•			•	•			
Gross/Net/Tare	•	•	•								
Statistics	•	•	•			•					
Formulation	•	•	•								
Differential Weighing	•	•	•								
Display Hold	•	•		•			•	•			
Density Determination	•	•									
Pipette Calibration	•	•									
GLP/GMP	•	•	•	•		•					
High Point	•	•									
Moisture Determination						•					
SQC	•	•									
NTEP Certified	Optional	Optional		Optional			Optional				