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# The OHAUS Advantage

For more than a century, the OHAUS name has been synonymous with precision and reliability. Our high-quality balances and scales, laboratory equipment and analytical instruments are designed to meet the evolving needs of a growing range of industries. In addition to supporting the need for precision in every setting, our Ingeniously Practical methodology—demonstrated in all of our products and services—provides tangible benefits that improve accuracy and quality for our customers.

At OHAUS, we have an unwavering dedication to four principles that guide the way we conduct business and support our customers: trust, agility, ingenuity and commitment. That's the OHAUS Advantage, and it's the promise we make to our customers every day.

# **TRUST**

# More Than A Century Of Precision & Reliability

Trust is a cornerstone of our relationship with our customers. With more than a century of expertise, we have become a trusted resource for those who rely on precision weighing products and life science equipment. As customer needs have evolved over the decades, our ability to adapt to change and offer the latest practical innovations has contributed to this enduring trust.

Today, we continue to deliver the same level of trusted quality and reliability that our customers have come to expect. While remaining grounded in our deep American roots established by Gustav and Karl Ohaus in 1907, we have expanded into 20 countries across six continents, creating a strong global network positioned to meet customer needs around the world.



### **AGILITY**

# Always Evolving

Over the years, OHAUS has brought the quality and value that define our weighing products to a wider range of specialized products, including analytical instruments and laboratory equipment for various industries. Our ability to be agile supports our commitment to embrace and adapt new technologies that benefit our customers.

Through our global network of office locations, representatives, and dealers, we stay on top of industry trends around the world and are positioned to quickly adapt to market changes and customer needs. Together with research/development and advanced manufacturing processes, this knowledge enables us to design and craft every OHAUS product to meet and exceed the demands, trends and expectations of our markets.



### **INGENUITY**

### Ingeniously Practical In Meeting Customer Needs

Whether you're looking for traditional weighing products or specialized laboratory or analytical equipment, all OHAUS products are built with ingenuity while also remaining practical in meeting customer needs. In fact, we call our expanded portfolio of products "Ingeniously Practical." To us, this means they offer both pinpoint accuracy and ease of use, and they feature the highest quality while being affordable and durable.

All OHAUS products are rigorously tested to meet national and international safety, quality, and accuracy standards. As an ISO 9001-2015 manufacturer, we maintain our commitment to quality through certifications, listings and ratings such as NTEP, OIML, IP, NEMA and NSF, ensuring legal and operational compliance. Our products are further backed by our extended warranties and ongoing technical support.

OHAUS products also feature superior mechanical overload protection to protect the weighing cells, while IP and NEMA ratings demonstrate further protection from harsh environments. These protective attributes prolong the life of our equipment.



# **COMMITMENT**

## Supporting Our Customers Around The Globe

At OHAUS, we are committed to providing comprehensive customer support, from technical advice and marketing insight to the logistical capacity to meet specific requests and turnaround times. We complement these offerings with onsite training, webinars, video demonstrations and a monthly newsletter.

We believe this commitment means developing a relationship that benefits our customers for the long-term. Our responsive customer service and technical support representatives go the extra mile to provide value-added solutions in a timely manner. With offices in 20 countries, you can receive personalized service and support from anywhere in the world.

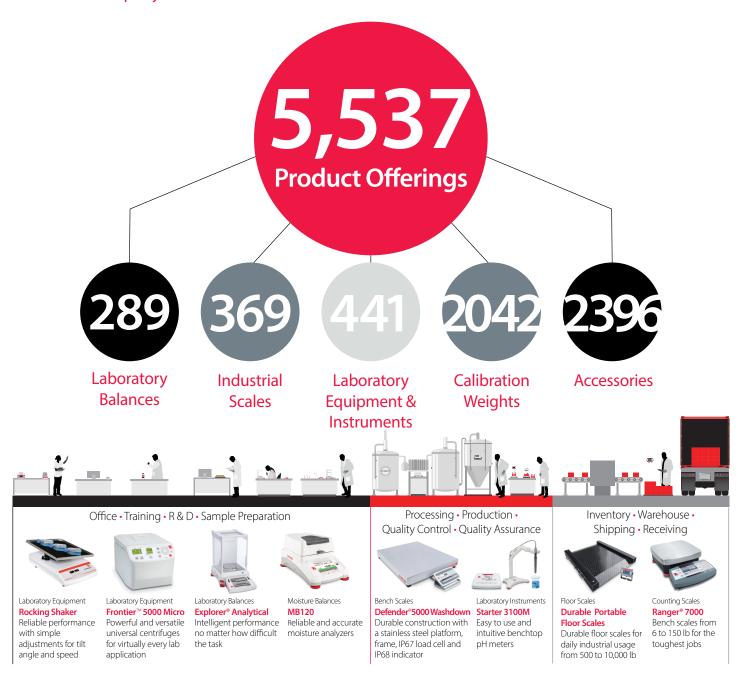


# **Products at Work**

The OHAUS product range is specifically designed to help maximize productivity, across every surface of the workspace. From the office to the warehouse, our Ingeniously Practical portfolio is packed with products made with your customers' needs in mind. Our industry-leading line of scales and balances offer the accuracy, speed, and peace of mind your customers need to Weigh It with ease, while our ever-growing line of laboratory instruments products allows them to Test It with the confidence they need. Introduced in 2017, the OHAUS line of laboratory equipment rounds out the ability to Do More in the lab, offering products ranging from mixers and shakers to clamps and supports—and everything in between.

No matter what your customers' needs are, from research and development to fulfillment and receiving, you can depend on OHAUS for everything you need to let your customers' operations thrive.

Don't stop at just measurement—Do More.





From our powerhouse flagship Explorer balance to our rugged and practical PR Series, OHAUS has a wide variety of semi-micro, analytical, precision, high-capacity, and moisture balances that are ideal for use in almost every area of your laboratory—and beyond.



	Analyt	ical Bala	nces				Precision Balances				Portables		
	Explorer Semi-Micro	Pioneer Semi-Micro	Explorer	Adventurer	Pioneer	PR Series	Explorer	Adventurer	Pioneer	PR Series	Navigator	Scout	Compass CX/CR
Weighing Capacity Range	51 g - 220 g	82 g- 220 g	120 g - 320 g	120 g - 320 g	80 g - 220 g	64 g - 220 g	220 g - 35000 g	220 g - 8200 g	160 g - 4200 g	320 g - 6200 g	220 g - 20 k g	120 g - 8200 g	220 g - 5,200 g
Readability Range	0.01 mg	0.01 mg	0.1 mg	0.1 mg	0.1 mg	0.1 mg	0.001 g - 0.1 g	0.01 g - 1 g	0.001 g - 1 g	0.1 g - 1 g			
Parts Counting	•	•	•	•	•	•	•	•	•	•	•	•	
Percent Weighing	•	•	•	•	•	•	•	•	•	•	•	•	
Custom Unit - Factor Entry	•		•	•	•		•	•	•			•*	
Checkweighing	•		•	•			•	•			•	•	
Dynamic Weighing	•	•	•	•	•		•	•	•			•*	
Gross/Net/Tare	•	•	•	•		•	•	•		•			
Totalization	•		•	•			•	•				•	
Statistics	•		•	•			•	•					
Differential Weighing	•		•				•						
Filling	•		•				•						
Mole Weighing												•*	
Density Determination	•	•	•	•	•		•	•	•			•*	
Pipette Calibration	•		•				•*						
High Point	•		•				•						
Display Hold				•				•				•*	
Formulation	•		•	•			•	•					
Ingredient Costing			•				•						
Battery Power							●*				•	•	•
Backlight LCD		•			•	•			•	•	•	•	•*
LCD		•			•	•			•	•	•	•	•
Color Graphics Display	•		•	•			•	•				•*	
Touchscreen	•		•	•			•	•				•*	
Keys		•		•	•	•		•	•	•		•	
Multi Languages	•	•	•	•			•	•				•*	
RS232	•	•	•	•	•	•	•	•	•	•	0	0	
USB - Host	•		•	•			•	•				0	
USB - Device	•	•	•	•	•	0	•	•	•	0	0	0	
Ethernet	0	0	0	0	0	0	0	0	0	0	0	0	
GLP / Time / Date	•	•	•	•	•		•	•	•			•*	
Bluetooth												0	
Internal Calibration	•*	•	•*	•*	•*	•*	•*	•*	•*	•*	•	•	•
External Calibration AutoCal	•*	•	•*	•*	•		•*	•*			_	•	•
Below Balance	•	•	•	•	•	•	•	•	•	•		•	
Weighing  NTEP Certified or Measurement Canada Approved			•*	•*			•*	•*		•		•	
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**O** Optional \* on specific models

# **EXPLORER® SEMI-MICRO BALANCES**

Advanced Functionality to Suit the Intelligent Research Lab

## Display

Full-color VGA graphic display (5.7 in. diagonal), 4-wire resistive touchscreen. QWERTY keyboard and numeric keypad to quickly input GLP and GMP data and other application data

#### Communication

RS232, USB Host, USB Device, optional Ethernet (accessory sold separately). GLP/GMP data output with real-time clock.

#### Construction

Metal base, ABS top housing, stainless steel pan, anti-static glass draftshield with flip-top door, replaceable in-use cover, automatic door as option models

#### Design Features

AutoCal™ fully automatic internal calibration system included on all models, fast stabilization time, four touchless sensors, built-in ionizer with automatic door models, 14 operating languages, save to USB function, menu lock switch, security bracket, integral weigh below hook for below balance weighing applications, removable stainless steel weighing platform, stability indicator, overload and underload indicators, auto standby.





Explorer's weighing cells, precision-machined from a solid metal block, together with AutoCal<sup>™</sup> provides exceptional accuracy and durability suitable for laboratory and industrial environments.

Features such as four-level user management with password protection, and an un-editable system log plus a high level of configurability make Explorer balances well suited for regulated applications.

A detachable terminal with a large color touchscreen, programmable IR sensors, optional built-in Ionizer and automatic doors, and a frameless draftshield make Explorer balances easy and convenient to use.

Model	Auto Door & Static Ionizer	Capacity	Readability	Pan Size	Item No.	List Price (USD)
EX125D		51 g; 120 g	0.01 mg; 0.1 mg	Ø 3.14 in / Ø 80 mm	30139510	5705
EX125		120 g	0.01 mg	Ø 3.14 in / Ø 80 mm	30139511	7115
EX225D		120 g; 220 g	0.01 mg; 0.1 mg	Ø 3.14 in / Ø 80 mm	30139512	7280
EX225D/AD	•	120 g; 220 g	0.01 mg; 0.1 mg	Ø 3.14 in / Ø 80 mm	30139513	7525
EX225/AD	•	220 g	0.01 mg	Ø 3.14 in / Ø 80 mm	30139514	8230

Accessories	Item No.	List Price (USD)
Printer, Impact, SF40A, AM	30064203	990
Static Ionizer, ION-100A, AM	30130302	1745
Pipette Adjustment Kit, EX Semi-Micro	30252145	1450
Dust Cover, Balance with Draft Shield	30093334	51
Auxiliary Display, AD7-RS	30472064	72
Paper Roll, (1), CBM910	80251932	20
Ink Ribbon, CBM910	80251933	56
Cable, RS232,CBM910-AV DV EX MB PA TxxP	80252571	193
Density Kit, Solids	80253384	780

Accessories	Item No.	List Price (USD)
Cable, 25 Pin-9 Pin, PC-TxxP	80500524	193
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Anti-Theft Device, MB AX EX	80850043	232
Ethernet Kit, EX EX-HiCap	83021082	193
Cable, RS422, Extension, EX EX-HiCap	83021083	108
Cable, USB, Type A-B	83021085	193









































































# **EXPLORER®ANALYTICAL BALANCES**

Advanced Functionality to Suit the Intelligent Research Lab

### Display

5.7" (145 mm) Full-color VGA graphic touchscreen display with user-controlled brightness

#### Communication

RS232, USB Host, USB Device, optional Ethernet (accessory sold separately). GLP/GMP data output with real-time clock.

#### Construction

Modular design, metal base, ABS top housing, stainless steel pan, glass draftshield with top mounted side doors and flip/sliding top door, illuminated up-front level indicator, integral weigh below hook, security bracket, calibration lock, four touchless sensors, in-use cover

### Design Features

Selectable environmental filters, auto tare, user selectable span calibration points, software lockout and reset menu, user selectable communication settings and data print options, user definable project and user IDs, auto standby, 14 operating languages





Equipped with a weighing cell that's precisionmachined from a solid metal block, Explorer balances are extremely accurate and durable, and are ideal for laboratory and industrial environments.

Features such as four-level user management with password protection, and an un-editable system log plus a high level of configurability make Explorer balances well suited for regulated applications.

A detachable terminal with a large color touchscreen, programmable IR sensors, optional built-in Ionizer and automatic doors, and a frameless draftshield make Explorer balances easy and convenient to use.

Model	Auto Door	Capacity	Readability	Pan Size	Item No.	List Price (USD)
EX124		120 g	0.1 mg	Ø 3.5 in / Ø 90 mm	83021331	4255
EX124/AD	•	120 g	0.1 mg	Ø 3.5 in / Ø 90 mm	30061976	4405
EX224		220 g	0.1 mg	Ø 3.5 in / Ø 90 mm	83021332	4730
EX224/AD	•	220 g	0.1 mg	Ø 3.5 in / Ø 90 mm	30061977	4890
EX324		320 g	0.1 mg	Ø 3.5 in / Ø 90 mm	83021335	5560
EX324/AD	•	320 g	0.1 mg	Ø 3.5 in / Ø 90 mm	30061978	5750

See page 8 for Approved Models

Accessories	Item No.	List Price (USD)
Printer, Impact, SF40A, AM	30064203	990
Cable, RS422, 9m, EX EX-HiCap	30078078	153
Dust Cover, Balance with Draft Shield	30093334	51
Auxiliary Display, AD7-RS	30472064	72
Printer, Thermal, STP-103, US	80251992	760
Cable, RS232,CBM910-AV DV EX MB PA TxxP	80252571	193
Cable, ST103-AV DV EX MB PA TxxP	80252581	193
Density Kit, Solids	80253384	780

Item No.	List Price (USD)
80500524	193
80500525	193
80850043	232
80850080	530
83021082	193
83021083	108
83021085	193
	80500524 80500525 80850043 80850080 83021082 33021083

















































































# **EXPLORER® PRECISION BALANCES**

Advanced Functionality to Suit the Intelligent Research Lab

## Display

5.7" (145 mm) Full-color VGA graphic touchscreen display with user-controlled brightness

#### Communication

RS232, USB Host, USB Device, optional Ethernet (accessory sold separately). GLP/GMP data output with real-time clock.

#### Construction

Modular design, metal base, ABS top housing, stainless steel pan, glass draftshield with top mounted side doors and flip/sliding top door (1 mg models only), illuminated up-front level indicator, integral weigh below hook, security bracket, calibration lock, four touchless sensors, in-use cover

#### **Design Features**

Selectable environmental filters, auto tare, user selectable span calibration points, software lockout and reset menu, user selectable communication settings and data print options, user definable project and user IDs, auto standby, 14 operating languages





Equipped with a weighing cell that's precisionmachined from a solid metal block, Explorer balances are extremely accurate and durable, and are ideal for laboratory and industrial environments.

Features such as four-level user management with password protection, and an un-editable system log plus a high level of configurability make Explorer balances well suited for regulated applications.

A detachable terminal with a large color touchscreen, programmable IR sensors, optional built-in Ionizer and automatic doors, and a frameless draftshield make Explorer balances easy and convenient to use.

Model	AutoCal™	Draftshield	Capacity	Readability	Pan Size	Item No.	List Price (USD)
EX223/E		•	220 g	1 mg	Ø 5.1 in / Ø 130 mm	30061979	2395
EX223	•	•	220 g	1 mg	Ø 5.1 in / Ø 130 mm	83021341	2790
EX423/E		•	420 g	1 mg	Ø 5.1 in / Ø 130 mm	30061980	2900
EX423	•	•	420 g	1 mg	Ø 5.1 in / Ø 130 mm	83021342	3260
EX623	•	•	620 g	1 mg	Ø 5.1 in / Ø 130 mm	83021348	3990
EX1103	•	•	1100 g	1 mg	Ø 5.1 in / Ø 130 mm	83021350	4680
EX2202/E			2200 g	0.01 g	7.5 in $\times$ 8 in / 190 mm $\times$ 200 mm	30061981	2610
EX2202	•		2200 g	0.01 g	7.5 in × 8 in / 190 mm × 200 mm	83021356	3020
EX4202/E			4200 g	0.01 g	7.5 in × 8 in / 190 mm × 200 mm	30061982	3045
EX4202	•		4200 g	0.01 g	7.5 in $\times$ 8 in / 190 mm $\times$ 200 mm	83021357	3470
EX6202/E			6200 g	0.01 g	7.5 in $\times$ 8 in / 190 mm $\times$ 200 mm	30061983	3495
EX6202	•		6200 g	0.01 g	7.5 in $\times$ 8 in / 190 mm $\times$ 200 mm	83021360	3940
EX6201/E			6200 g	0.1 g	7.5 in $\times$ 8 in / 190 mm $\times$ 200 mm	30061984	2800
EX6201	•		6200 g	0.1 g	7.5 in $\times$ 8 in / 190 mm $\times$ 200 mm	83021361	3270
EX10202	•		10200 g	0.01 g	7.5 in $\times$ 8 in / 190 mm $\times$ 200 mm	83021362	4675
EX10201	•		10200 g	0.1 g	7.5 in $\times$ 8 in / 190 mm $\times$ 200 mm	83021365	3590

See page 8 for Approved Models

















































































# **EXPLORER®APPROVED MODELS**

Advanced Functionality to Suit the Intelligent Research Lab

### Display

5.7" (145 mm) Full-color VGA graphic touchscreen display with user-controlled brightness

#### Communication

RS232, USB Host, USB Device, optional Ethernet (accessory sold separately). GLP/GMP data output with real-time clock.

#### Construction

Modular design, metal base, ABS top housing, stainless steel pan, glass draftshield with top mounted side doors and flip/sliding top door (1 mg models only), illuminated up-front level indicator, integral weigh below hook, security bracket, calibration lock, four touchless sensors, in-use cover

### Design Features

Selectable environmental filters, auto tare, user selectable span calibration points, software lockout and reset menu, user selectable communication settings and data print options, user definable project and user IDs, auto standby, 14 operating languages





Equipped with a weighing cell that's precisionmachined from a solid metal block, Explorer balances are extremely accurate and durable, and are ideal for laboratory and industrial environments.

Features such as four-level user management with password protection, and an un-editable system log plus a high level of configurability make Explorer balances well suited for regulated applications.

A detachable terminal with a large color touchscreen and programmable IR sensors make Explorer High-Capacity balances easy and convenient to use.

Model	AutoCal™	Draftshield	Capacity	Readability	<b>Certified Readability</b>	Class	Pan Size	Item No.	List Price (USD)
EX224N			220 g	0.1 mg	1 mg		Ø 3.5 in / Ø 90 mm	83021334	5205
EX224N/AD*		•	220 g	0.1 mg	1 mg	- 1	Ø 3.5 in / Ø 90 mm	30061998	5830
EX324N			320 g	0.1 mg	1 mg	1	Ø 3.5 in / Ø 90 mm	83021337	6090
EX324N/AD*		•	320 g	0.1 mg	1 mg	1	Ø 3.5 in / Ø 90 mm	30061999	6360
EX1103N	•	•	1100 g	1 mg	0.01 g	1	Ø 5.1 in / Ø 130 mm	83021352	5105
EX10202N	•		10200 g	0.01 g	0.1 g	- 1	7.5 in $\times$ 8 in / 190 mm $\times$ 200 mm	83021364	5105
EX10201N	•		10200 g	0.1 g	0.1 g	1	7.5 in $\times$ 8 in / 190 mm $\times$ 200 mm	83021367	3945
EX223N	•	•	220 g	0.001 g	0.01 g	II	Ø 5.1 in / Ø 130 mm	30553843	2990
EX223N/E		•	220 g	0.001 g	0.01 g	II	Ø 5.1 in / Ø 130 mm	30553844	2595
EX423N	•	•	420 g	1 mg	0.01 g	II	Ø 5.1 in / Ø 130 mm	83021344	3645
EX423N/E		•	420 g	0.001 g	0.01 g	II	Ø 5.1 in / Ø 130 mm	30553845	3100
EX2202N/E			2200 g	0.01 g	0.1 g	II	$7.5 \text{ in} \times 8 \text{ in} / 190 \text{ mm} \times 200 \text{ mm}$	30553846	2810
EX4202N	•		4200 g	0.01 g	0.1 g	II	$7.5 \text{ in} \times 8 \text{ in} / 190 \text{ mm} \times 200 \text{ mm}$	83021359	3815
EX4202N/E			4200 g	0.01 g	0.1 g	II	$7.5 \text{ in} \times 8 \text{ in} / 190 \text{ mm} \times 200 \text{ mm}$	30553847	3245
EX6202N	•		6200 g	0.01 g	0.1 g	II	$7.5 \text{ in} \times 8 \text{ in} / 190 \text{ mm} \times 200 \text{ mm}$	30553888	3695
EX6202N/E			6200 g	0.01 g	0.1 g	II	$7.5 \text{ in} \times 8 \text{ in} / 190 \text{ mm} \times 200 \text{ mm}$	30553889	4140
EX6201N	•		6200 g	0.1 g	0.1 g	II	$7.5 \text{ in} \times 8 \text{ in} / 190 \text{ mm} \times 200 \text{ mm}$	30553890	3470
EX6201N/E			6200 g	0.1 g	0.1 g	II	7.5 in $\times$ 8 in / 190 mm $\times$ 200 mm	30553891	3000

\*Auto Door



















































































# **EXPLORER® PRECISION BALANCE ACCESSORIES**

Advanced Functionality to Suit the Intelligent Research Lab



Accessories	Item No.	List Price (USD)
Printer, Impact, SF40A, AM	30064203	990
Cable, RS422, 9m, EX EX-HiCap	30078078	153
Auxiliary Display, AD7-RS	30472064	72
Printer, Thermal, STP-103, US	80251992	760
Cable, RS232,CBM910-AV DV EX MB PA TxxP	80252571	193
Cable, ST103-AV DV EX MB PA TxxP	80252581	193
Density Kit, Solids	80253384	780
Cable, 25 Pin-9 Pin, PC-TxxP	80500524	193
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193

Accessories	Item No.	List Price (USD)
Anti-Theft Device, MB AX EX	80850043	232
Software, Winwedge	80850080	530
Ethernet Kit, EX EX-HiCap	83021082	193
Cable, RS422, Extension, EX EX-HiCap	83021083	108
Draft Shield Kit, EX	83021084	940
Cable, USB, Type A-B	83021085	193
Column Kit, EX	83021102	167
In-Use-Cover, Terminal, EX	83033633	85

# **EXPLORER® HIGH CAPACITY BALANCES**

Advanced Functionality to Suit the Intelligent Research Lab

## Display

5.7" (145 mm) Full-color VGA graphic touchscreen display with user-controlled brightness

RS232, USB Host, USB Device, optional Ethernet (accessory sold separately). GLP/GMP data output with real-time clock.

#### Construction

Modular design, IP54 metal base, die-cast top housing, stainless steel pan, up-front level indicator, integral weigh below hook, calibration lock, two touchless sensors, terminal housing in-use cover

Selectable environmental filters, auto tare, user selectable span calibration points, software lockout and reset menu, user selectable communication settings and data print options, user definable project and user IDs, auto standby, 14 operating languages





Equipped with a weighing cell that's precisionmachined from a solid metal block, Explorer balances are extremely accurate and durable, and are ideal for laboratory and industrial environments.

Features such as four-level user management with password protection, and an un-editable system log plus a high level of configurability make Explorer balances well suited for regulated applications.

A detachable terminal with a large color touchscreen and programmable IR sensors make Explorer High-Capacity balances easy and convenient to use.

Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
EX12001	12000 g	0.1 g	14.8 in × 12.2 in / 377 mm × 311 mm	30057099	3970
EX24001	24000 g	0.1 g	$14.8 \text{ in} \times 12.2 \text{ in} / 377 \text{ mm} \times 311 \text{ mm}$	30057100	4835
EX35001	35000 g	0.1 g	$14.8 \text{ in} \times 12.2 \text{ in} / 377 \text{ mm} \times 311 \text{ mm}$	30057101	5680

Model	Autocal™	Capacity	Readability	<b>Certified Readability</b>	Class	Pan Size	Item No.	List Price (USD)
EX12001N	•	12000 g	0.1 g	1 g	II	14.8 in × 12.2 in / 377 mm × 311 mm	30553892	4170
EX24001N	•	24000 g	0.1 g	1 g	II	$14.8 \text{ in} \times 12.2 \text{ in} / 377 \text{ mm} \times 311 \text{ mm}$	30553893	5035
EX35001N	•	35000 g	0.1 g	1 g	II	$14.8 \text{ in} \times 12.2 \text{ in} / 377 \text{ mm} \times 311 \text{ mm}$	30553894	5880

Accessories	Item No.	List Price (USD)
Rechargeable Battery, EX-HiCap R71	30041295	388
Wheel Kit, Set (4), EX-HiCap	30041470	167
Printer, Impact, SF40A, AM	30064203	990
Cable, RS422, 9m, EX EX-HiCap	30078078	153
Column Kit, EX-HiCap	30078082	153
Auxiliary Display, AD7-RS	30472064	72
Printer, Thermal, STP-103, US	80251992	760
In-Use-Cover, Terminal, EX	83033633	85

Accessories	Item No.	List Price (USD)
Cable, ST103-AV DV EX MB PA TxxP	80252581	193
Cable, 25 Pin-9 Pin, PC-TxxP	80500524	193
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Anti-Theft Device, MB AX EX	80850043	232
Software, Winwedge	80850080	530
Ethernet Kit, EX EX-HiCap	83021082	193
Cable, RS422, Extension, EX EX-HiCap	83021083	108









































































\*Approved Models

# **ADVENTURER® ANALYTICAL BALANCES**

Intuitive Balances Designed for a Variety of Needs

## Display

4.3" (109 mm) Full-color VGA graphic touchscreen with user-controlled brightness

#### Communication

RS232, USB Host, USB Device (included). GLP/GMP data output with real-time clock.

#### Construction

Metal base, ABS top housing, stainless steel pan, glass draftshield with two piece top mounted side doors and sliding top door, illuminated up-front level indicator, integral weigh below hook, security bracket, calibration lock, full housing in-use cover

### **Design Features**

Selectable environmental filters, auto tare, user selectable span calibration points, software lockout and reset menu, user selectable communication settings and data print options, user definable project and user IDs, 9 operating languages





Adventurer balances feature a color touchscreen, icon-based user interface, and an ergonomic design making them easy to configure and use.

Features such as specialized weighing modes, multiple connectivity options, and AutoCal  $^{\text{\tiny TM}}$ provide versatility and flexibility for a variety of applications.

Durable construction, large weighing surfaces, a space-saving draftshield design, and full housing in-use cover allow for use in lab, education and industrial environments.

Model	AutoCal™	Capacity	Readability	Certified Readability	Class	Pan Size	Item No.	List Price (USD)
AX124	•	120 g	0.1 mg	_	_	Ø 3.5 in / Ø 90 mm	30100600	3095
AX124/E		120 g	0.1 mg	_	_	Ø 3.5 in / Ø 90 mm	30100601	2570
AX224	•	220 g	0.1 mg	_	_	Ø 3.5 in / Ø 90 mm	30100602	3415
AX224/E		220 g	0.1 mg	_	_	Ø 3.5 in / Ø 90 mm	30100603	2830
AX324	•	320 g	0.1 mg	_	_	Ø 3.5 in / Ø 90 mm	30100604	3735
AX224N*	•	220 g	0.1 mg	1 mg	1	Ø 3.5 in / Ø 90 mm	30100630	3625

<sup>\*</sup> Approved Model

Accessories	Item No.	List Price (USD)
Paper Roll, Set (2), 57.5mm, SF40A	12120799	19
Printer, Impact, SF40A, AM	30064203	990
Dust Cover, Balance with Draft Shield	30093334	51
SP In-Use-Cover wo DS AX	30111777	30
SP In-Use-Cover DS AX	30111792	30
Auxiliary Display, AD7-RS	30472064	72
Paper Roll, (1), Thermal, STP103	80251931	22

Accessories	Item No.	List Price (USD)
Printer, Thermal, STP-103, US	80251992	760
Cable, ST103-AV DV EX MB PA TxxP	80252581	193
Density Kit, Solids	80253384	780
Cable, 25 Pin-9 Pin, PC-TxxP	80500524	193
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Anti-Theft Device, MB AX EX	80850043	232
Cable, USB, Type A-B	83021085	193

























































# **ADVENTURER® PRECISION BALANCES**

Intuitive Balances Designed for a Variety of Needs

## Display

4.3" (109 mm) Full-color VGA graphic touchscreen with user-controlled brightness

#### Communication

RS232, USB Host, USB Device (included). GLP/GMP data output with real-time clock.

#### Construction

Metal base, ABS top housing, stainless steel pan, glass draftshield with two piece top mounted side doors and sliding top door, illuminated up-front level indicator, integral weigh below hook, security bracket, calibration lock, full housing in-use cover

### **Design Features**

Selectable environmental filters, auto tare, user selectable span calibration points, software lockout and reset menu, user selectable communication settings and data print options, user definable project and user IDs, 9 operating languages





Adventurer balances feature a color touchscreen, icon-based user interface, and an ergonomic design making them easy to configure and use.

Features such as specialized weighing modes, multiple connectivity options, and AutoCal™ provide versatility and flexibility for a variety of applications.

Durable construction, large weighing surfaces, a space-saving draftshield design, and full housing in-use cover allow for use in lab, education and industrial environments.

Model	AutoCal™	Draftshield	Capacity	Readability	Pan Size	Item No.	List Price (USD)
AX223	•	•	220 g	1 mg	Ø 5.1 in / Ø 130 mm	30100605	1865
AX223/E		•	220 g	1 mg	Ø 5.1 in / Ø 130 mm	30100606	1495
AX423	•	•	420 g	1 mg	Ø 5.1 in / Ø 130 mm	30100607	2255
AX423/E		•	420 g	1 mg	Ø 5.1 in / Ø 130 mm	30100608	1845
AX523	•	•	520 g	1 mg	Ø 5.1 in / Ø 130 mm	30100609	2465
AX523/E		•	520 g	1 mg	Ø 5.1 in / Ø 130 mm	30100610	2030
AX622	•		620 g	0.01 g	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30122632	1415
AX422/E			420 g	0.01 g	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30127981	1045
AX822/E			820 g	0.01 g	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30127983	1230
AX1502	•		1520 g	0.01 g	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30100611	1730
AX1502/E			1520 g	0.01 g	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30100612	1335
AX2202	•		2200 g	0.01 g	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30100613	1840
AX2202/E			2200 g	0.01 g	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30100614	1440
AX4202	•		4200 g	0.01 g	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30100615	2310
AX4202/E			4200 g	0.01 g	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30100616	1870
AX5202	•		5200 g	0.01 g	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30100617	2620
AX2201/E			2200 g	0.1 g	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30248912	1180
AX4201	•		4200 g	0.1 g	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30122634	1525
AX4201/E			4200 g	0.1 g	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30122635	1335
AX8201	•		8200 g	0.1 g	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30100618	1785
AX8201/E			8200 g	0.1 g	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30100619	1495































Approved models and accessories on next page.

































# **ADVENTURER® PRECISION BALANCES**

Intuitive Balances Designed for a Variety of Needs

Model	AutoCal™	Draftshield	Capacity	Readability	Certified Readability	Class	Pan Size	Item No.	List Price (USD)
AX223N/E*		•	220 g	1 mg	0.01 g	11	Ø 5.1 in / Ø 130 mm	30100631	1655
AX423N*	•	•	420 g	1 mg	0.01 g	11	Ø 5.1 in / Ø 130 mm	30100632	2410
AX423N/E*		•	420 g	1 mg	0.01 g	11	Ø 5.1 in / Ø 130 mm	30100633	1975
AX523N/E*		•	520 g	1 mg	0.01 g	11	Ø 5.1 in / Ø 130 mm	30100634	2190
AX622N/E*			620 g	0.01 g	0.1 g	11	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30100635	1280
AX1502N/E*			1520 g	0.01 g	0.1 g	11	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30100636	1440
AX2202N/E*			2200 g	0.01 g	0.1 g	11	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30100637	1600
AX4202N/E*			4200 g	0.01 g	0.1 g	11	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30122655	2030
AX8201N/E*			8200 g	0.1 g	1 g	П	7.7 in $\times$ 6.9 in / 195 mm $\times$ 175 mm	30100639	1600

#### \* Approved Model

Accessories	Item No.	List Price (USD)
Paper Roll, Set (2), 57.5mm, SF40A	12120799	19
Printer, Impact, SF40A, AM	30064203	990
Dust Cover, Balance with Draft Shield	30093334	51
SP In-Use-Cover wo DS AX	30111777	30
SP In-Use-Cover DS AX	30111792	30
Auxiliary Display, AD7-RS	30472064	72
Paper Roll, (1), Thermal, STP103	80251931	22

Accessories	Item No.	List Price (USD)
Printer, Thermal, STP-103, US	80251992	760
Cable, ST103-AV DV EX MB PA TxxP	80252581	193
Density Kit, Solids	80253384	780
Cable, 25 Pin-9 Pin, PC-TxxP	80500524	193
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Anti-Theft Device, MB AX EX	80850043	232
Cable, USB, Type A-B	83021085	193

























































# PIONEER® SEMI-MICRO BALANCES

Affordable Balance to Achieve Reliable Results

### Display

Backlit Liquid Crystal Display (LCD); second line display for additional information or guidance (dot matrix)

#### Communication

RS232 and USB device (included); GLP/GMP data output with real-time clock

Metal base, plastic top housing, removable stainless steel pan, glass draftshield, integrated weigh-below hook, security bracket, calibration lock and in-use cover

### Design Features

User-selectable environmental filters and brightness settings, auto-tare, auto-dim, user-selectable span calibration points, software lockout and reset menu, user-selectable communication settings and data print options, user-definable project and user IDs, software overload/underload indicator, stability indicator, four operating languages





The PX offers high accuracy and repeatability for essential weighing applications in laboratory, industrial and education settings at an economical price point.

Featuring a cast metal lower housing, sub-pan and stainless steel weighing pan, the PX is durably constructed for versatile, long-term use.

PX features a second line display for additional information/guidance, and USB/RS232 connectivity for easy communication. Draftshield models feature a static removal (ESR) bar for convenient grounding.

Model	AutoCal™	Draftshield	Capacity	Readability	Pan Size	Item No.	List Price (USD)
PX85	•	•	82 g	0.01 mg	3.15 in / 80 mm	30475733	4195
PX225D	•	•	82 g; 220 g	0.01 mg; 0.1 mg	3.15 in / 80 mm	30475734	4850

Accessories	Item No.	List Price (USD)
Paper Roll, Set (2), 57.5mm, SF40A	12120799	19
Printer, Impact, SF40A, AM	30064203	990
Dust Cover, Balance with Draft Shield	30093334	51
Auxiliary Display, AD7-RS	30472064	72
Paper Roll, (1), Thermal, STP103	80251931	22
Printer, Thermal, STP-103, US	80251992	760
Sinker Glass for Density Determination	83034024	650
Cable, USB, Type A-B	83021085	193
Anti-Theft Device	80850043	232

Accessories	Item No.	List Price (USD)
Static Ionizer, ION-100A, AM	30130302	1745
Cable, RS232,CBM910-AV DV EX MB PA TxxP	80252571	193
Cable, ST103-AV DV EX MB PA TxxP	80252581	193
Density Kit, Solids	80253384	780
Cable, 25 Pin-9 Pin, PC-TxxP	80500524	193
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Software, Winwedge	80850080	530
In-Use-Cover, PX	30372546	46

































# PIONEER® ANALYTICAL BALANCES

Affordable Balance to Achieve Reliable Results

## Display

Backlit Liquid Crystal Display (LCD); Second line display for additional information or guidance (dot

#### Communication

RS232 and USB device (included); GLP/GMP data output with real-time clock

Metal base, plastic top housing, removable stainless steel pan, glass draftshield, integrated weigh-below hook, security bracket, calibration lock and in-use cover

### **Design Features**

User-selectable environmental filters and brightness settings, auto-tare, auto-dim, user-selectable span calibration points, software lockout and reset menu, user-selectable communication settings and data print options, user-definable project and user IDs, software overload/underload indicator, stability indicator, four operating languages





The PX offers high accuracy and repeatability for essential weighing applications in laboratory, industrial and education settings at an economical price point.

Featuring a cast metal lower housing, sub-pan and stainless steel weighing pan, the PX is durably constructed for versatile, long-term use.

PX features a second line display for additional information/guidance, and USB/RS232 connectivity for easy communication. Draftshield models feature a static removal (ESR) bar for convenient grounding.

Model	InCal	Draftshield	Capacity	Readability	Pan Size	Item No.	List Price (USD)
PX84/E		•	82 g	0.1 mg	3.54 in / 90 mm	30429845	1725
PX84	•	•	82 g	0.1 mg	3.54 in / 90 mm	30429837	1985
PX124/E		•	120 g	0.1 mg	3.54 in / 90 mm	30429846	1990
PX124	•	•	120 g	0.1 mg	3.54 in / 90 mm	30429838	2275
PX224/E		•	220 g	0.1 mg	3.54 in / 90 mm	30429847	2210
PX224	•	•	220 g	0.1 mg	3.54 in / 90 mm	30430053	2505

Accessories	Item No.	List Price (USD)
Paper Roll, Set (2), 57.5mm, SF40A	12120799	19
Printer, Impact, SF40A, AM	30064203	990
Dust Cover, Balance with Draft Shield	30093334	51
Auxiliary Display, AD7-RS	30472064	72
Paper Roll, (1), Thermal, STP103	80251931	22
Printer, Thermal, STP-103, US	80251992	760
Sinker Glass for Density Determination	83034024	650
Cable, USB, Type A-B	83021085	193
Anti-Theft Device	80850043	232

Accessories	Item No.	List Price (USD)
Static Ionizer, ION-100A, AM	30130302	1745
Cable, RS232,CBM910-AV DV EX MB PA TxxP	80252571	193
Cable, ST103-AV DV EX MB PA TxxP	80252581	193
Density Kit, Solids	80253384	780
Cable, 25 Pin-9 Pin, PC-TxxP	80500524	193
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Software, Winwedge	80850080	530
In-Use-Cover, PX	30372546	46































# PIONEER® PRECISION BALANCES

Affordable Balance to Achieve Reliable Results

## Display

Backlit Liquid Crystal Display (LCD); Second line display for additional information or guidance (dot

#### Communication

RS232 and USB device (included); GLP/GMP data output with real-time clock

Metal base, plastic top housing, removable stainless steel pan, glass draftshield, integrated weigh-below hook, security bracket, calibration lock and in-use cover

#### **Design Features**

User-selectable environmental filters and brightness settings, auto-tare, auto-dim, user-selectable span calibration points, software lockout and reset menu, user-selectable communication settings and data print options, user-definable project and user IDs, software overload/underload indicator, stability indicator, four operating languages





The PX offers high accuracy and repeatability for essential weighing applications in laboratory, industrial and education settings at an economical price point.

Featuring a cast metal lower housing, sub-pan and stainless steel weighing pan, the PX is durably constructed for versatile, long-term use.

PX features a second line display for additional information/guidance, and USB/RS232 connectivity for easy communication. Draftshield models feature a static removal (ESR) bar for convenient grounding.

Model	InCal	Draftshield	Capacity	Readability	Pan Size	Item No.	List Price (USD)
PX163/E		•	160 g	1 mg	4.72 in / 120 mm	30429848	1000
PX163	•		160 g	1 mg	4.72 in / 120 mm	30429839	1245
PX323/E		•	320 g	1 mg	4.72 in / 120 mm	30429849	1165
PX323	•	•	320 g	1 mg	4.72 in / 120 mm	30429840	1400
PX523/E		•	520 g	1 mg	4.72 in / 120 mm	30430057	1475
PX523	•	•	520 g	1 mg	4.72 in / 120 mm	30430054	1720
PX1602/E			1600 g	0.01 g	7.09 in / 180 mm	30430058	965
PX1602	•		1600 g	0.01 g	7.09 in / 180 mm	30430055	1180
PX2202/E			2200 g	0.01 g	7.09 in / 180 mm	30429850	1055
PX2202	•		2200 g	0.01 g	7.09 in / 180 mm	30429841	1275
PX3202/E			3200 g	0.01 g	7.09 in / 180 mm	30429851	1275
PX3202	•		3200 g	0.01 g	7.09 in / 180 mm	30429842	1505
PX4202/E			4200 g	0.01 g	7.09 in / 180 mm	30429852	1440
PX4202	•		4200 g	0.01 g	7.09 in / 180 mm	30429843	1690
PX2201/E			2200 g	0.1 g	7.09 in / 180 mm	30430059	895
PX2201	•		2200 g	0.1 g	7.09 in / 180 mm	30430056	1095
PX4201/E			4200 g	0.1 g	7.09 in / 180 mm	30429853	1035
PX4201	•		4200 g	0.1 g	7.09 in / 180 mm	30429844	1240

Accessories	Item No.	List Price (USD)
Printer, Impact, SF40A, AM	30064203	990
Dust Cover, Balance with Draft Shield	30093334	51
Auxiliary Display, AD7-RS	30472064	72
Paper Roll, (1), Thermal, STP103	80251931	22
Printer, Thermal, STP-103, US	80251992	760
Sinker Glass for Density Determination	83034024	650
Cable, USB, Type A-B	83021085	193
Anti-Theft Device	80850043	232

Accessories	Item No.	List Price (USD)
Cable, RS232,CBM910-AV DV EX MB PA TxxP	80252571	193
Cable, ST103-AV DV EX MB PA TxxP	80252581	193
Density Kit, Solids	80253384	780
Cable, 25 Pin-9 Pin, PC-TxxP	80500524	193
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Software, Winwedge	80850080	530
In-Use-Cover, PX	30372546	46































# PR SERIES

Economical Balances For Routine Weighing Applications

## Display

Backlit liquid crystal display (LCD)

#### Communication

RS-232 port (standard), USB or Ethernet (via an interface kit)

#### Construction

ABS housing, stainless steel pan, glass draftshield (milligram models only), weigh below hook, security lock interface, LFT lockout switch

#### **Design Features**

User-selectable environmental filters and brightness settings, auto-tare, auto-dim, user-selectable span calibration points, software lockout and reset menu, user-selectable communication settings and data print options, software overload/underload indicator, stability indicator





The PR is equipped with 3 essential weighing modes, RS-232 connectivity for data transfer and storage, and internal calibration (in select models), making it ideal for routine weighing applications.

Equipped with an easy-to-read, bright backlit display and a simple user interface, the PR is incredibly easy to operate, with almost no training required.

The PR's small footprint saves desktop space while providing a large weighing surface. The PR is durably constructed, and features a stainless steel pan to withstand day-to-day use in the workplace.

Model	InCal	Draftshield	Capacity	Readability	Certified Readability	Class	Pan Size	Item No.	List Price (USD)
PR64/E		•	62 g	0.1 mg	_	_	4.72 in / 120 mm	30430060	1460
PR124		•	120 g	0.1 mg	_	_	4.72 in / 120 mm	30529065	1900
PR124/E		•	120 g	0.1 mg	_	_	4.72 in / 120 mm	30529066	1680
PR224		•	220 g	0.1 mg	_	_	4.72 in / 120 mm	30430061	2100
PR224/E		•	220 g	0.1 mg	_	_	4.72 in / 120 mm	30430062	1870
PR223/E		•	220 g	1 mg	_	_	7.09 in / 180 mm	30529239	925
PR523/E		•	520 g	1 mg	_	_	7.09 in / 180 mm	30430063	1250
PR1602/E			1600 g	0.01 g	_	_	7.09 in / 180 mm	30529067	850
PR2202/E			2200 g	0.01 g	_	_	7.09 in / 180 mm	30430064	975
PR4202/E			4200 g	0.01 g	_	_	7.09 in / 180 mm	30430065	1215
PR2201/E			2200 g	0.1 g	_	_	7.09 in / 180 mm	30529238	755
PR4201/E			4200 g	0.1 g	_	_	7.09 in / 180 mm	30430066	875
PR323N/E*		•	320 g	1 mg	0.01 g	II	4.72 in / 120 mm	30455605	1130
PR523N/E*		•	520 g	1 mg	0.01 g	II	4.72 in / 120 mm	30455606	1440
PR523N*		•	520 g	1 mg	0.01 g	II	4.72 in / 120 mm	30452494	1670
PR322N/E*		•	320 g	0.01 g	0.01 g	II	4.72 in / 120 mm	30515026	1130
PR522N/E*		•	520 g	0.01 g	0.01 g	II	4.72 in / 120 mm	30515027	1440
PR822N/E*			820 g	0.01 g	0.1 g	III	7.09 in / 180 mm	30455607	930
PR2202N/E*			2200 g	0.01 g	0.1 g	II	7.09 in / 180 mm	30455668	1035
PR5202N/E*			5200 g	0.01 g	0.1 g	II	7.09 in / 180 mm	30455670	1450
PR2201N/E*			2200 g	0.1 g	0.1 g	II	7.09 in / 180 mm	30455671	1060
PR5201N/E*			5200 g	0.1 g	0.1 g	II	7.09 in / 180 mm	30515038	1085
PR6201N/E*			6200 g	0.1 g	1 g	III	7.09 in / 180 mm	30455673	1160

<sup>\*</sup> Approved Model





























# PR SERIES ACCESSORIES

Economical Balances For Routine Weighing Applications

Accessories	Item No.	List Price (USD)
Paper Roll, Set (2), 57.5mm, SF40A	12120799	19
Printer, Impact, SF40A, AM	30064203	990
Auxiliary Display, AD7-RS	30472064	72
Paper Roll, (1), Thermal, STP103	80251931	22
Printer, Thermal, STP-103, US	80251992	760
Anti-Theft Device	80850043	232

Accessories	Item No.	List Price (USD)
Cable, RS232,CBM910-AV DV EX MB PA TxxP	80252571	193
Cable, ST103-AV DV EX MB PA TxxP	80252581	193
Cable, 25 Pin-9 Pin, PC-TxxP	80500524	193
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Software, Winwedge	80850080	530

# SCOUT® STX TOUCHSCREEN

Setting New Standards in Laboratory & Industrial Weighing

## Display

4.3" (109 mm) full-color VGA graphic touchscreen display with user-controlled brightness

#### Communication

RS232, USB Host, USB Device, Ethernet or Bluetooth® (available as accessories)

#### Construction

ABS housing, stainless steel pan, ABS draftshield (1 mg models only), weigh below hook, transportation lock, manual calibration lock switch, security slot, adjustable leveling feet, illuminated up-front level indicator

### **Design Features**

Stability indicator, stackable design with included stacking and storage cover (excluding 1 mg models), mechanical and software overload/underload protection, low battery indicator, auto shut-off, auto tare, span calibration mass included on models up to 620 g capacity







Large, intuitive, color touchscreen display allows for easy operation—guiding the user through every step of the weighing application.

Advanced weighing technology allows for one-second stabilization time for increased productivity.

Integrated overload protection system rated at ten times the capacity protects the balance in demanding environments.

Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
STX123	120 g	0.001g	Ø 3.7 in / Ø 93 mm	30253005	795
STX223	220 g	0.001g	Ø 3.7 in / Ø 93 mm	30253006	890
STX222	220 g	0.01 g	Ø 4.7 in / Ø 120 mm	30253007	580
STX422	420 g	0.01 g	Ø 4.7 in / Ø 120 mm	30253008	815
STX622	620 g	0.01 g	Ø 4.7 in / Ø 120 mm	30253009	955
STX1202	1200 g	0.01 g	$5.5 \text{ in} \times 6.7 \text{ in} / 140 \text{ mm} \times 170 \text{ mm}$	30253010	1090
STX2202	2200 g	0.01 g	$5.5 \text{ in} \times 6.7 \text{ in} / 140 \text{ mm} \times 170 \text{ mm}$	30253011	1220
STX421	420 g	0.1 g	Ø 4.7 in / Ø 120 mm	30253012	330
STX621	620 g	0.1 g	$5.5 \text{ in} \times 6.7 \text{ in} / 140 \text{ mm} \times 170 \text{ mm}$	30253013	488
STX2201	2200 g	0.1 g	$5.5 \text{ in} \times 6.7 \text{ in} / 140 \text{ mm} \times 170 \text{ mm}$	30253014	620
STX6201	6200 g	0.1 g	$5.5 \text{ in} \times 6.7 \text{ in} / 140 \text{ mm} \times 170 \text{ mm}$	30253015	990
STX8200	8200 g	1 g	$5.5 \text{ in} \times 6.7 \text{ in} / 140 \text{ mm} \times 170 \text{ mm}$	30253016	510

Accessories	Item No.	List Price (USD)
Printer, Impact, SF40A, AM	30064203	990
RS232 Kit, STX SPX ST3100M	30268982	167
USB Kit, Host, STX SPX	30268983	167
USB Kit, Device, STX SPX ST3100M	30268984	116
Bluetooth Kit, STX SPX	30268985	150
Ethernet Kit. STX SPX	30268986	181

Accessories	Item No.	List Price (USD)
Stacking & Storage Cover, x6, STX SPX	30268987	66
Stacking & Storage Cover, x1, STX SPX	30268988	23
Density Kit, STX	30269020	22
Anti-Theft Device, MB AX EX STX SPX	80850043	232
Carrying Case, Scout	30269021	131































































# **SCOUT® SPX**

Setting New Standards in Laboratory & Industrial Weighing

# **Display**

Liquid crystal display (LCD) with backlight

#### Communication

RS232, USB Host, USB Device, Ethernet or Bluetooth® (available as accessories)

#### Construction

ABS housing, stainless steel pan, ABS draftshield (1 mg models only), weigh below hook, transportation lock, manual calibration lock switch, security slot, adjustable leveling feet, illuminated up-front level indicator

#### **Design Features**

Stability indicator, stackable design with optional stacking & storage cover (excluding 1 mg models), mechanical and software overload/underload protection, low battery indicator, auto shut-off, auto tare, span calibration mass included on models up to 620 g capacity







Large backlit display improves readability in low light conditions and is easier to view from a distance.

Integrated overload protection and impactresistant pan allow the balance to operate efficiently in demanding environments.

Increase productivity with advanced weighing technology and stabilization time as fast as onesecond.

Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
SPX123	120 g	0.001 g	Ø 3.7 in / Ø 93 mm	30253017	695
SPX223	220 g	0.001 g	Ø 3.7 in / Ø 93 mm	30253018	780
SPX222	220 g	0.01 g	Ø 4.7 in / Ø 120 mm	30253019	510
SPX422	420 g	0.01 g	Ø 4.7 in / Ø 120 mm	30253020	715
SPX622	620 g	0.01 g	Ø 4.7 in / Ø 120 mm	30253021	835
SPX1202	1200 g	0.01 g	5.5 in $\times$ 6.7 in / 140 mm $\times$ 170 mm	30253022	955
SPX2202	2200 g	0.01 g	5.5 in $\times$ 6.7 in / 140 mm $\times$ 170 mm	30253023	1070
SPX421	420 g	0.1 g	Ø 4.7 in / Ø 120 mm	30253024	282
SPX621	620 g	0.1 g	5.5 in $\times$ 6.7 in / 140 mm $\times$ 170 mm	30253025	417
SPX2201	2200 g	0.1 g	5.5 in $\times$ 6.7 in / 140 mm $\times$ 170 mm	30253026	525
SPX6201	6200 g	0.1 g	5.5 in $\times$ 6.7 in / 140 mm $\times$ 170 mm	30253027	865
SPX8200	8200 g	1 g	5.5 in $\times$ 6.7 in / 140 mm $\times$ 170 mm	30253028	435

Accessories	Item No.	List Price (USD)
Printer, Impact, SF40A, AM	30064203	990
RS232 Kit, STX SPX ST3100M	30268982	167
USB Kit, Host, STX SPX	30268983	167
USB Kit, Device, STX SPX ST3100M	30268984	116
Bluetooth Kit, STX SPX	30268985	150
Ethernet Kit, STX SPX	30268986	181

Accessories	Item No.	List Price (USD)
Stacking & Storage Cover, x6, STX SPX	30268987	66
Stacking & Storage Cover, x1, STX SPX	30268988	23
Density Kit, STX	30269020	22
Anti-Theft Device, MB AX EX STX SPX	80850043	232
Carrying Case, Scout	30269021	131













































# **SCOUT® SJX**

Legal-for-Trade Portable Balances Ideal for Jewelry Weighing

# Display

Liquid crystal display (LCD) with backlight

#### Communication

RS232, USB Host, USB Device, Ethernet or Bluetooth® (available as accessories)

#### Construction

ABS housing, stainless steel pan, ABS draftshield (1mg model only), weigh below hook, transportation lock, manual calibration lock switch, security slot, adjustable leveling feet, illuminated up-front level indicator

### **Design Features**

Stability indicator, mechanical and software overload/underload protection, low battery indicator, auto shut-off, auto tare, scoop and weight on 64g model







Legal-for-Trade compliant balances are suitable for countertop retail applications. Manual internal settings allow for easy calibration.

Expanded connectivity options including RS232, USB host, USB device, Ethernet and Bluetooth\* allow for convenient data logging and communication.

Advanced weighing technology ensures reliable, repeatable weighing results.

Model	Capacity	Readability	<b>Certified Readability</b>	Class	Pan Size	Item No.	List Price (USD)
SJX323N/E*	64 g	1 mg	0.01 g	II	Ø 3.7 in / Ø 93 mm	30253054	700
SJX622N/E*	620 g	0.01 g	0.1 g	III	Ø 4.7 in / Ø 120 mm	30253055	875
SJX1502N/E*	1500 g	0.01 g	0.1 g	II	5.5 in $\times$ 6.7 in / 140 mm $\times$ 170 mm	30253056	1015
SJX6201N/E*	6200 g	0.1 g	1 g	III	5.5 in $\times$ 6.7 in / 140 mm $\times$ 170 mm	30253057	900

<sup>\*</sup>Approved Model

Accessories	Item No.	List Price (USD)
Printer, Impact, SF40A, AM	30064203	990
RS232 Kit, STX SPX ST3100M	30268982	167
USB Kit, Host, STX SPX	30268983	167
USB Kit, Device, STX SPX ST3100M	30268984	116
Bluetooth Kit, STX SPX	30268985	150
Ethernet Kit, STX SPX	30268986	181

Accessories	Item No.	List Price (USD)
Stacking & Storage Cover, x6, STX SPX	30268987	66
Stacking & Storage Cover, x1, STX SPX	30268988	23
Density Kit, STX	30269020	22
Anti-Theft Device, MB AX EX STX SPX	80850043	232
Carrying Case, Scout	30269021	131













































# **NAVIGATOR® SERIES**

Rugged, Multi-Purpose Balances for a Wide Range of General Weighing Applications

## **Display**

Backlit liquid crystal display (LCD)

#### Communication

RS232, USB, or Ethernet (available as accessories)

### Construction

ABS housing, stainless steel pan, transportation lock, menu and calibration lock switch, slip-resistant and adjustable feet, leveling bubble.

### **Design Features**

Mechanical and software overload/underload protection, touchless sensor, user selectable print and communication options







Navigator offers essential weighing applications at a competitive price point.

Advanced weighing technology offers onesecond stabilization for fast and accurate weighing results, improving operator efficiency, productivity and throughput.

Overload protection system that can withstand loads up to four times the rated capacity safeguards the balance.

Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
NV222	220g	0.01g	Ø145 mm / 5.7 in	30456410	371
NV422	420g	0.01g	Ø145 mm / 5.7 in	30456411	473
NV221	220g	0.1g	$190 \times 144 \text{ mm} / 7.5 \times 5.7 \text{ in}$	30456412	216
NV621	620g	0.1g	$190 \times 144  \text{mm} / 7.5 \times 5.7  \text{in}$	30456413	318
NV1201	1200g	0.1g	$190 \times 144 \text{ mm} / 7.5 \times 5.7 \text{ in}$	30456414	360
NV2201	2200g	0.1g	$190 \times 144  \text{mm} / 7.5 \times 5.7  \text{in}$	30456415	400
NVT2201	2200g	0.1g	$230 \times 174 \text{ mm} / 9.1 \times 6.9 \text{ in}$	30456416	400
NVT4201	4200g	0.1g	$230 \times 174 \text{mm} / 9.1 \times 6.9 \text{in}$	30456417	500
NVT2200	2200g	1.0g	$230 \times 174 \text{ mm} / 9.1 \times 6.9 \text{ in}$	30456418	376
NVT6200	6200g	1.0g	$230 \times 174 \text{ mm} / 9.1 \times 6.9 \text{ in}$	30456419	494
NVT12000	12000g	1.0g	$230 \times 174 \text{ mm} / 9.1 \times 6.9 \text{ in}$	30456420	535
NVT22000	22000g	1.0g	$230 \times 174 \text{ mm} / 9.1 \times 6.9 \text{ in}$	30456421	640

Accessories	Item No.	List Price (USD)
USB Interface	83032108	167
RS232 Interface	83032107	167
Ethernet Interface	83032109	167
Carrying Case	30467963	109
Adapter with plugs (EU-US-UK-AU-KR)	30467987	39



































# **COMPASS™ CX**

Energy-Efficient Portable Scale for Workplace and In-the-Field Weighing

# **Display**

Liquid Crystal Display (LCD) with backlight

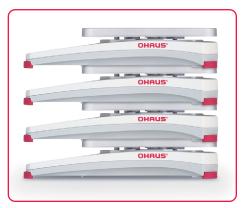
#### Construction

ABS housing, stainless steel pan, transportation lock, slip-resistant feet

#### **Design Features**

Stability indicator, mechanical and software overload/underload protection, low battery indicator, auto





Alkaline batteries provide up to 1,000 hours of continuous use, making for energy efficient weighing in the workplace, classroom, etc.

Large backlit display increases readability in low-light conditions and makes it easier to view results from a distance.

Slim, space-saving design allows for stackable storage for up to four scales.

Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
CX221	220 g	0.1 g	5.6 in × 5 in / 142 mm × 128 mm	30428199	168
CX221P*	220 g	0.1 g	5.6 in $\times$ 5 in / 142 mm $\times$ 128 mm	30467746	181
CX621	620 g	0.1 g	5.6 in $\times$ 5 in / 142 mm $\times$ 128 mm	30428200	174
CX1201	1,200 g	0.1 g	5.6 in $\times$ 5 in / 142 mm $\times$ 128 mm	30428201	184
CX2200	2,200 g	1 g	5.6 in $\times$ 5 in / 142 mm $\times$ 128 mm	30428202	168
CX2200P*	2,200 g	1 g	5.6 in $\times$ 5 in / 142 mm $\times$ 128 mm	30467747	181
CX5200	5,200 g	1 g	5.6 in $\times$ 5 in / 142 mm $\times$ 128 mm	30428203	198
CX5200F**	5,200 g	1 g	5.6 in $\times$ 5 in / 142 mm $\times$ 128 mm	30467762	228
CX5200P*	5,200 g	1 g	5.6 in $\times$ 5 in / 142 mm $\times$ 128 mm	30467761	198

<sup>\*</sup>Models followed by the letter "P" include a postal chart

<sup>\*\*</sup>Models followed by the letter "F" include a carrying case

Accessories	Item No.	List Price (USD)
Carrying Case	30467763	66
Bowl, 1050 mL	80850075	55
Adapter, 5V 1A, US plug	30330714	25
Adapter, 5V 1A, AU plug	30333865	26
Adapter, 5V 1A, UK plug	30333867	26
Carat Bowl XS	12102565	22
Carat Bowl	30020842	33

















# **COMPASS™ CR**

Quality Portable Electronic Scales Suitable for Everyday Weighing

# Display

Liquid crystal display (LCD)

### Construction

ABS housing and pan, transportation lock, slip-resistant feet

# **Design Features**

Mechanical and software overload/underload protection, auto shut-off





Intuitive two-button design makes for easy operation.

Slim, space-saving design allows for stackable storage.

Enlarged weighing platform can adequately handle large samples and a variety of objects.

Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
CR221	220 g	0.1 g	5.2 in × 5 in / 132 mm × 125 mm	30428204	117
CR621	620 g	0.1 g	5.2 in × 5 in / 132 mm × 125 mm	30428205	122
CR2200	2,200 g	1 g	$5.2 \text{ in} \times 5 \text{ in} / 132 \text{ mm} \times 125 \text{ mm}$	30428206	117
CR5200	5,200 g	1 g	5.2 in × 5 in / 132 mm × 125 mm	30428207	161

Accessories	Item No.	List Price (USD)
Carrying Case	30467763	66
Bowl, 1050 mL	80850075	55
Adapter with plugs (EU-US-UK-AU-KR)	30467987	39















# **HH SERIES**

Convenient, Compact and Portable Weighing in a Functional Design

#### **Display**

Liquid crystal display (LCD)

#### Construction

ABS housing and pan, protective snap-on cover

#### **Design Features**

Overload/underload indicators, external push-button calibration



HH is available in capacities ranging from 120 g to 320 g and is ideal for a variety of general, on-the-go weighing applications for many industries.

A backlit display illuminates the screen for viewing in dim lighting conditions, and a power-saving automatic shut-off feature conserves battery life.

Among HH's protective features are durable ABS housing and a snap-on cover for protection during storage and transportation.

Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
HH120	120 g	0.1 g	$3.25 \text{ in} \times 3 \text{ in} / 83 \text{ mm} \times 76 \text{ mm}$	71142842	228
HH120D	60 g / 120 g	0.2 g	3.25 in $\times$ 3 in $/$ 83 mm $\times$ 76 mm	71142841	192
HH320	320 g	0.1 g	$3.25 \text{ in} \times 3 \text{ in} / 83 \text{ mm} \times 76 \text{ mm}$	71142844	284













Stability

# **PS** SERIES

High Performance Portable Weighing in the Palm of Your Hand

#### Display

Liquid crystal display (LCD)

#### Construction

ABS housing and protective sliding pan

#### **Design Features**

Software overload/underload indicators, auto shut-off

One of the smallest portable balances on the market, PS can easily fit in to a standard shirt pocket.



The "pop-out" design of the battery compartment provides simple and fast battery replacement.

The one-piece combination pan and cover slides back when being used to weigh and forward when not in use to protect the buttons and display during storage and transportation.

List Price (USD) Model Capacity Readability Pan Size Item No. PS121  $2.5 \text{ in} \times 2.5 \text{ in} / 64 \text{ mm} \times 64 \text{ mm}$ 80104060 120 g 0.1 g 75 PS251 250 g 0.1 g  $2.5 \text{ in} \times 2.5 \text{ in} / 64 \text{ mm} \times 64 \text{ mm}$ 80104061









Stability Indicator

# YA SERIES

Portable Precision Weighing in a Compact Case

# Display

Backlit liquid crystal display (LCD)

### Construction

ABS housing, stainless steel pan, protective cover

### **Design Features**

Mechanical and software overload indicator, auto shut-off





A hinged cover, sturdy plastic housing and stainless steel weighing pan protect the small balance from damage.

With an extremely fast stabilization time, your results will appear quickly on the blue backlit LCD display.

Powered by two 'AAA' batteries, a power-saving auto shut-off feature helps to conserve battery life.

Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
YA102	100 g	0.01 g	2.8 in × 2 in / 70 mm × 50 mm	80251910	113
YA302	300 g	0.05 g	$2.8 \text{ in} \times 2 \text{ in} / 70 \text{ mm} \times 50 \text{ mm}$	80251911	98
YA501	500 g	0.1 g	$2.8 \text{ in} \times 2 \text{ in} / 70 \text{ mm} \times 50 \text{ mm}$	80251912	70

















Moisture Analyzer Selector Guide



	Moisture Analyzers				
	MB120	MB90	MB27	MB23	
Weighing Capacity Range	120 g	90 g	90 g	110 g	
Readability Range	0.001 g	0.001 g	0.001 g	0.01 g	
Halogen	•	•	•		
Infrared				•	
Color Graphics Display	•	•			
Backlit LCD			•	•	
Touchscreen	•	•			
% Moisture	•	•	•	•	
% Solids	•	•	•	•	
External Calibration	•	•	•	•	
GLP / Time / Date	•	•			
RS232	•	•	•	•	
Temperature Range	40-230 °C	40-200°C	50-160 °C	50-160 °C	
Page No.	28	29	30	31	

Faster, Smarter, More Efficient Moisture Analysis

## Display

4.3" TFT color touchscreen display

#### Communication

RS232, USB Host and USB Device (included)

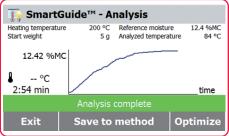
#### Construction

Metal base, ABS top housing, halogen heat source, stainless steel pan support, stainless steel pan handler, in-use cover

### **Design Features**

Seven shut-off criteria (manual, timed, autofree %/s, autofree mg/s, A30, A60 and A90), four drying profiles (standard, fast, ramp and step), storage for up to 100 methods and 1000 test results for all methods, temperature guide, 40 °C to 230 °C heating temperature range (1°C increments), 13 operational languages





The MB120 removes the guesswork and simplifies method creation and development; SmartGuide™ helps to analyze the sample and automatically create a method with the optimal drying temperature.

Removing a major roadblock to lab efficiency, the MB120 utilizes four pre-set drying profiles, customizable shut-off criteria, and drying temperatures up to 230 °C to reduce time and improve workflow.

Take control of your data with our internal memory capable of storing 100 methods and 1,000 measurements. Our intuitive User Management system makes exporting and sharing direct and simple.

Model	Capacity	Readability	Moisture Readability	Pan Size	Item No.	List Price (USD)
MB120	120 g	1 mg	0.01%	90 mm	30241165	5105

Accessories	Item No.	List Price (USD)
Pan Holder, MB90 MB120	30246947	71
In-Use-Cover, Accessory, MB90 MB120	30284478	80
Scoop, Accessory, MB90 MB120	30284477	51
Temperature Calibration Kit	11113857	585
Anti-Theft Device	80850043	232
Pan, Aluminum, Set (80), MB Series	80850086	66
Filter, Glass Fiber, Set (200)	80850087	103

Accessories	Item No.	List Price (USD)
Cage, Sample, MB Series	80252477	104
Pan, Reusable, Set (3), 7 mm, MB Series	80252478	87
Pan, Reusable, Set (3), 14 mm, MB Series	80252479	91
Printer, Impact, SF40A	30064203	990
Cable, ST103-AV DV EX MB PA TxxP	80252581	193
Printer, Thermal, STP-103, US	80251992	760
Software, Winwedge	80850080	530















































Combining Speed and Precision in One Moisture Analyzer —Test More Samples in Less Time

# **Display**

4.3" TFT color touchscreen display

#### Communication

RS232 with GLP/GMP data output, USB Host and USB Device (included)

#### Construction

Metal base, ABS top housing, halogen heat source, stainless steel pan support, stainless steel pan handler, in-use cover

#### **Design Features**

Three shut-off criteria (manual, timed or auto), two drying profiles (standard and fast), storage for up to two methods, 40 °C to 200 °C heating temperature range (1°C increments), 13 operational languages



Halogen heating increases efficiency for faster results.

Intuitive touchscreen menu offers step-by-step guidance for any application.

Tool-free cleaning for easy maintenance.

Model	Capacity	Readability	Moisture Readability	Pan Size	Item No.	List Price (USD)
MB90	90 g	1 mg	0.01%	90 mm	30241164	4020

Accessories	Item No.	List Price (USD)
Pan Holder, MB90 MB120	30246947	71
In-Use-Cover, Accessory, MB90 MB120	30284478	80
Scoop, Accessory, MB90 MB120	30284477	51
Temperature Calibration Kit	11113857	585
Anti-Theft Device	80850043	232
Pan, Aluminum, Set (80), MB Series	80850086	66
Filter, Glass Fiber, Set (200)	80850087	103

Accessories	Item No.	List Price (USD)
Cage, Sample, MB Series	80252477	104
Pan, Reusable, Set (3), 7 mm, MB Series	80252478	87
Pan, Reusable, Set (3), 14 mm, MB Series	80252479	91
Printer, Impact, SF40A	30064203	990
Cable, ST103-AV DV EX MB PA TxxP	80252581	193
Printer, Thermal, STP-103, US	80251992	760
Software, Winwedge	80850080	530









































The Affordable High Capacity Moisture Analyzer

# Display

Backlit liquid crystal display (LCD)

### Communication

RS232 (included)

### Construction

Halogen heat source, ABS housing, metal pan support, metal pan handler, in-use cover

### **Design Features**

3 shut off criteria (manual, timed or auto), 1 standard heating profile,  $50^{\circ}$  to  $160^{\circ}$ C heating range (5 °C increments)



With 0.01%, 0.001g readability, the MB27 Moisture Analyzer is suitable for most applications.

Halogen heating and dual weight-temperature calibration provide fast, reliable results.

User-friendly touch-button design for easy operation.

Model	Capacity	Readability	Moisture Readability	Pan Size	Item No.	List Price (USD)
MB27	90 g	1 mg	0.01%	90 mm	30251683	3000

Accessories	Item No.	List Price (USD)
Temp. Calibration Kit, MB Series	11113857	585
Holder, Pan, MB23 MB27	11113873	138
Printer, Impact, SF40A, AM	30064203	990
Printer, Thermal, STP-103, US	80251992	760
In-Use-Cover, MB23 MB27	80252475	40
Pan Holder MB23 MB27	80252476	80
Cage, Sample, MB Series	80252477	104
Pan, Reusable, Set (3), 7 mm, MB Series	80252478	87

Accessories	Item No.	List Price (USD)
Pan, Reusable, Set (3), 14 mm, MB Series	80252479	91
Cable, ST103-AV DV EX MB PA TxxP	80252581	193
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Cable, SF42-AV DV MB Ranger	80500571	193
Anti-Theft Device, MB AX EX	80850043	232
Software, Winwedge	80850080	530
Pan, Aluminum, Set (80), MB Series	80850086	66
Filter, Glass Fiber, Set (200)	80850087	103



























Stability

Redefining Value in Moisture Analysis

# Display

Backlit liquid crystal display (LCD)

### Communication

RS232 (included)

### Construction

Infrared heat source, ABS housing, metal pan support, metal pan handler,

# **Design Features**

3 shut off criteria (manual, timed or auto), 1 standard heating profile, 50° to 160 °C heating range



Glass-less infrared heating increases efficiency for faster results.

User-friendly touch-button design for easy operation.

Compact design suits any workspace.

Model	Capacity	Readability	Moisture Readability	Pan Size	Item No.	List Price (USD)
MB23	110 g	10 mg	0.10%	Ø 3.5 in / Ø 90 mm	83999801	3000

Accessories	Item No.	List Price (USD)
Temp. Calibration Kit, MB Series	11113857	585
Holder, Pan, MB23 MB27	11113873	138
Printer, Impact, SF40A, AM	30064203	990
Printer, Thermal, STP-103, US	80251992	760
In-Use-Cover, MB23 MB27	80252475	40
Pan Holder MB23 MB27	80252476	80
Cage, Sample, MB Series	80252477	104
Pan, Reusable, Set (3), 7 mm, MB Series	80252478	87

Accessories	Item No.	List Price (USD)
Pan, Reusable, Set (3), 14 mm, MB Series	80252479	91
Cable, ST103-AV DV EX MB PA TxxP	80252581	193
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Cable, SF42-AV DV MB Ranger	80500571	193
Anti-Theft Device, MB AX EX	80850043	232
Software, Winwedge	80850080	530
Pan, Aluminum, Set (80), MB Series	80850086	66
Filter, Glass Fiber, Set (200)	80850087	103

























# **D500**M

Economical Mechanical Bench Scale for Basic Industrial Applications

# Display

Easy-to-read, dual-side flat beam with a shadow-proof poise

#### Construction

Epoxy painted steel, phenolic wheels



Heavy-duty mechanical epoxy-painted steel construction makes D500M highly durable for industrial applications.

Phenolic wheels allow for mobility and a beam lock is integrated to protect the indicator when the scale is in motion.

Counterpoise weights allow for a maximum capacity of 1,000 lbs.

Model	Capacity	Readability	<b>Certified Readability</b>	Platform Size	Item No.	List Price (USD)
D500M	1000 lb	0.5 lb	0.5 lb	28.13 in × 19.25 in / 714 mm × 489 m	80252735	1455





# **HEAVY DUTY SOLUTION**

The Industry Standard for Precision and High Capacity Mechanical Weighing

# **Display**

Front and rear indicator plate

### Construction

Metal base and beam, stainless steel pan



Oversized stainless steel platform to accommodate large samples or containers.

A lockable Tare feature allows the operator to tare the balance once for multiple weighing procedures for containers up to 2270g.

Covers protect the self-aligning bearings which require little to no maintenance.

Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
1119-D0	20 kg	1 g	Ø 11 in / Ø 279 mm	80000000	2495
			- 2.1 (1152)		

Accessories	Item No.	List Price (USD)
Weight Set, Metric, 1119-D0	80780008	248



# **FIELD TEST**

Accurate Weighing Even Under Adverse Conditions

# Display

Sliding poise and graduated beam

#### Construction

Metal base and beam, oversized stainless steel pan

# **Design Features**

Magnetic damping, positive load stops



The Field Test scale is available to provide weighing results rain or shine. Without the restrictions of connecting the scale to an outlet, weighing can be conducted in any setting.

The large stable pan will hold oversized samples without tipping, and the weighted base keeps the entire scale extremely steady.

The portable Field Test scale can be easily moved from location to location around your work site with the integrated carrying handle.

Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
2400-12	36 lb	0.01 lb	Ø 11 in / Ø 279 mm	80000038	1595
2400-11	16 kg	5 g	Ø 11 in / Ø 279 mm	8000008	1540



# TRIPLE BEAM PRO®

Best-in-Class Mechanical Balance

# Display

Easy to-read deep-notched, tiered beams and dial plates

#### Construction

Metal base and beam, stainless steel pan

## **Design Features**

Two notched and tiered beams, positive poise positioning, spring loaded zero adjust compensator, self-aligning beam design, magnetic damping to minimize oscillation and speed weighing, security loop, included weight set and storage compartment. Includes rod & clamp assembly for below balance weighing.





The unique, easy-grip carrying handle is ergonomically designed to allow for effortless movement around the classroom.

A convenient compartment provides a place to store the included weight set when not in use, preventing the weights from becoming lost.

Prevent theft and accidental dropping by securing the balance to a desk or bench top with the security loop or Kensington-type lock (sold separately).

Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
TP2611 with Rod and Clamp	2610 g	0.1 g	5.8 in × 5.8 in / 147 mm × 147 mm	80621692	229

Accessories	Item No.	List Price (USD)
Kit, Rod and Clamp	80780011	74
Dust Cover, Triple Beam	80780017	40
Weight Set, $2 \times 1$ kg, $1 \times 500$ g	80780108	72
Anti-Theft Device, SP PA AV NV	80850000	89
Anti-Theft Device, MB AX EX	80850043	232



# TRIPLE BEAM 700 SERIES

The Standard by Which All Other Mechanical Balances Are Measured

## Display

Easy to-read deep-notched, tiered beams and dial plates

### Construction

Metal base and beam, stainless steel pan

## **Design Features**

Easy-to-read notched and tiered beams, self-aligning beam design, magnetic damping to minimize oscillation and speed weighing, zero adjust compensator





Superior magnetic damping provides stable results three times faster than any other three-beam balance on the market.

Five weighing pans of different sizes and designs can accommodate materials for a variety of weighing applications.

A counterbalancing knob provides quick zeroing of the balance while a self-aligning beam helps ensure accurate results.

Model	Triple Beam	Capacity	Readability	Pan Size	Pan Height	Pan Type	Item No.	List Price (USD)
720-00		610 g	0.1 g	12 in × 6 in / 30.5 mm × 152 mm	2.75 in / 70 mm	Polypropylene Scoop	80000032	341
720-S0		610 g	0.1 g	12 in $\times$ 7.4 in / 305 mm $\times$ 188 mm	1.7 in / 43 mm	Stainless Steel Scoop	80000033	396
710-00		610 g	0.1 g	Ø 6 in / Ø 152 mm	_	Removable Pan	80000011	290
750-S0		610 g	0.1 g	Ø 6 in / Ø 152 mm	_	Fixed Pan	80000012	159
760-00	•	610 g	0.1 g	Ø 6 in / Ø 152 mm	_	Fixed Pan	80000013	299
710-T0	•	610 g	0.1 g	Ø 6 in / Ø 152 mm	_	Removable Pan	80000031	354
730-00		610 g	0.1 g	Ø 9 in / Ø 229 mm	6 in / 152 mm	Animal Container	80000034	427

Accessories	Item No.	List Price (USD)
Subject Box	80000053	104
Scoop and Counter Weight	80780001	61
Scoop, PP, 0.8 I	80780006	40
Kit, Rod and Clamp	80780011	74
Scoop and Counter Weight, Poly	80780014	56
Scoop and Counter Weight, SST	80780015	131

Accessories	Item No.	List Price (USD)
Scoop and Counter Weight, 1.75 l	80780016	59
Dust Cover, Triple Beam	80780017	40
Weight Set, $2 \times 1$ kg, $1 \times 500$ g	80780108	72
Anti-Theft Device, SP PA AV NV	80850000	89
Clamp, Gas Cylinder	80850312	99



# TRIPLE BEAM JUNIOR

All the Benefits of a Triple Beam, Just for Younger Students

## Display

Easy to-read deep-notched, tiered beams and dial plates

### Construction

Metal base and beam, stainless steel pan

## **Design Features**

Notched and tiered beams, magnetic damping, zero adjust compensator



The notched and tiered beams provide for easy reading of measurement results.

Prevent theft and accidental dropping by securing the balance to a desk or bench top with the security loop or Kensington-type lock (sold separately).

The zero adjust compensator ensures the balance is at zero and weighing results will be accurate.

Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
TJ611	610 g	0.1 g	Ø 5.9 in / Ø 150 mm	80252052	155

Accessories	Item No.	List Price (USD)
Dust Cover, Triple Beam	80780017	40
Anti-Theft Device, SP PA AV NV	80850000	89



# TRIPLE BEAM DIAL-O-GRAM® 1600 SERIES

The Standard by Which All Others Are Measured

## Display

Easy to-read deep-notched, tiered beams and dial plates

### Construction

Metal base and beam, stainless steel pan

## **Design Features**

Counterbalancing knob for quick zeroing, positive poise positioning for repeatable results, self-aligning beam design, magnetic damping to minimize oscillation and speed weighing.





Superior magnetic damping provides three times faster stability reading than any other three-beam balance on the market.

Vernier dial convenience.

Counterbalancing knob for quick zeroing, selfaligning beam design.

Model	Tare Beam	Capacity	Readability	Pan Size	Pan Type	Item No.	List Price (USD)
1650-00	•	610 g	0.1 g	Ø 6 in / Ø 152 mm	Fixed Plate	80000006	374
1610-00	•	610 g	0.1 g	Ø 6 in / Ø 152 mm	Removable Pan	80000036	433
1650-W0		2610 g	0.1 g	Ø 6 in / Ø 152 mm	Fixed Plate and attachment weights	80000037	433

Accessories	Item No.	List Price (USD)
Scoop, Flat Bottomed, SST, 0.6 l	80250400	74
Scoop and Counter Weight	80780001	61
Scoop, PP, 0.8 I	80780006	40
Kit, Rod and Clamp	80780011	74
Scoop and Counter Weight, Poly	80780014	56
Scoop and Counter Weight, SST	80780015	131

Accessories	Item No.	List Price (USD)
Scoop and Counter Weight, 1.75 l	80780016	59
Dust Cover, Triple Beam	80780017	40
Weight Set, $2 \times 1$ kg, $1 \times 500$ g	80780108	72
Anti-Theft Device, SP PA AV NV	80850000	89
Clamp, Gas Cylinder	80850312	99



# **DIAL-O-GRAM® AND CENT-O-GRAM® 300 SERIES**

Extremely Precise Mechanical Balance with Precise Readability

## Display

Easy to-read deep-notched, tiered beams and dial plates

### Construction

Metal base and beam, stainless steel pan

## **Design Features**

Self-aligning beam design, magnetic damping to minimize oscillation and speed weighing, zero adjust compensator



With aluminum pressure castings for the base and beam assembly, agate bearings, steel knife-edges, and stainless steel pan, the Dial-O-Gram is built to the highest standard of quality.

The three-point base, special floating bearing principle and beam design eliminates the need for level adjustments.

The self-aligning beam ensures accurate results are garnered effortlessly.

Model	Capacity	Readability	Beams	Pan Size	Pan Height	Pan Type	Item No.	List Price (USD)
310-00	310 g	0.01 g	2 Beams with Dial	Ø 3.5 in / Ø 89 mm	0.5 in / 13 mm	Removable Pan	80000009	420
311-00	311 g	0.01 g	4 Beams	Ø 3.5 in / Ø 89 mm	0.5 in / 13 mm	Removable Pan	80000010	347

Accessories	Item No.	List Price (USD)
Dust Cover, Dial-O-Gram Cent-O-Gram	80780005	40
Anti-Theft Device, SP PA AV NV	80850000	89



# **HARVARD JUNIOR**

Two Pan Balance Designed to Teach Comparative Weighing

## Display

Steel pointer

## Construction

ABS base, pans and bowls, metal beam

## **Design Features**

Manual damping device, spring-loaded zero adjust compensator Includes teacher-developed activity guide





The easy-grip carrying handle will help students and teacher alike securely move the balances around the classroom.

The balances can be stacked to minimize the amount of storage space needed, and the lock feature protects the balance from damage when in storage.

An eight-piece weight set and bowls that fit on the weighing pans are included with every Harvard Junior.

Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
HJ2001	2000 g	0.5 g	Ø 6 in / Ø 150 mm	80252050	131



# HARVARD TRIP®

Two Pan Balance Designed for Comparative Weighing

## **Display**

Deep notched and tiered beams

### Construction

All-metal base and beam, stainless steel pan

## **Design Features**

Weight set (2000 g model, accessory sold separately), built-in sliding masses, magnetic damping, self-aligning beam design and floating agate bearings, counterbalancing knob for quick zeroing, hardened steel edges



The built-in sliding masses make weighing very simple and quick.

Magnetic damping minimizes oscillation and helps speed up weighing.

A counterbalancing knob provides quick zeroing of the balance while floating agate bearings help ensure accurate results.

Model	Capacity	Readability	Beams	Pan Size	Item No.	List Price (USD)
1450-SD	2000 g	0.1 g	Singe Beam	Ø 6.2 in / Ø 152 mm	80000003	387
1550-SD	2000 g	0.1 g	2 Beams	Ø 6.2 in / Ø 152 mm	80000004	415
1560-SD	2000 a	0.1 a	2 Beams and Tare Beam	Ø 6.2 in / Ø 152 mm	80000005	434

Accessories	Item No.	List Price (USD)
Scoop, PP, 0.8 I	80780006	40
Kit, Rod and Clamp	80780011	74
Scoop and Counter Weight, Poly	80780014	56
Scoop and Counter Weight, SST	80780015	131

Accessories	Item No.	List Price (USD)
Scoop and Counter Weight, 1.75 l	80780016	59
Anti-Theft Device, SP PA AV NV	80850000	89
Weight Set, 1 kg-1 g, ASTM 6, CYL	80850115	488
Dust Cover, Storage, Harvard	80850262	40



# **SCHOOL BALANCE**

The Young Scientist's First Balance

## Display

Plastic pointer

### Construction

ABS base, beam, and pans

## **Design Features**

Zero adjust compensator

Large, washable pans provide optimal space for samples to be weighed.



18-piece, color coded stackable plastic mass set included.

Front and rear pointers allow students to view results from both sides of the balance.

Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
SB1200	2000 g	0.5 g	5.5 in × 5.5 in / 140 mm × 140 mm	80000029	67



# PRIMER® BALANCE

The Scale for Budding Scientists

## **Display**

Plastic pointer

## Construction

ABS base, beam, and pans

### **Design Features**

Large, washable weighing pans, dual pointers, 18 piece stackable plastic mass set

An activity guide with 16 exercises is included with every Primer balance.

The easy-to-slide zero adjustment weight makes ensuring the balance is ready for weighing very simple.

Front and rear pointers allow students to view results from both sides of the balance.



Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
80410-00	2000 g	1 g	4 in × 4 in / 102 mm × 102 mm	80000024	49



# **SPRING SCALES**

Producing Reproducible Results at Unbeatable Prices

## Display

Dial plates

### Construction

ABS housing with metal face plate, pointer, spring and hook

## **Design Features**

Large bright colored dial face, easy-to-read black graduations on a frosted aluminum background



Pull type spring scales feature an internal spring mechanism and offer a versatile and inexpensive way to display measurements in grams, ounces, pounds and Newtons.

Dial type spring scales offer a versatile and inexpensive weight determination in classrooms, laboratories, field studies and much more.

Demonstration spring scales offer a large faceplate for easy viewing and are ideal for all basic weighing applications.

Model	Capacity	Readability	Туре	Item No.	List Price (USD)
8001-MA	9 oz / 250 g	0.25 oz / 10 g	Pull	80000039	24
8002-MA	18 oz / 500 g	0.5 oz / 20 g	Pull	80000041	24
8004-MA	72 oz / 2000 g	2 oz / 50 g	Pull	80000044	24
8001-MN	250 g / 2.5 N	10 g / 0.1 N	Pull	80000014	23
8002-MN	500 g / 5 N	20 g / 0.2 N	Pull	80000015	23
8003-MN	1000 g / 10 N	25 g / 0.25 N	Pull	80000016	23
8004-MN	2000 g / 20 N	50 g / 0.5 N	Pull	80000017	23
8008-MN	5000 g / 5 0N	100 g / 1 N	Pull	80000018	23
8261-M0	100 g	1 g	Pull	80000025	26
8262-M0	200 g	2 g	Pull	80000026	26
8263-M0	500 g	5 g	Pull	80000027	26
8264-M0	1000 g	10 g	Pull	80000028	26
8265-M0	2000 g	20 g	Pull	80000052	26
8001-PN	0.56 lb / 2.5 N	0.0 2lb / 0.1 N	Pull	80000040	27
8002-PN	1.12 lb / 5 N	0.04 lb / 0.2 N	Pull	80000042	27
8003-PN	2.25 lb / 10 N	0.05 lb / 0.25 N	Pull	80000043	27
8004-PN	4.5 lb / 20 N	0.125 lb / 0.5 N	Pull	80000045	27
8008-PN	11.25 lb / 50 N	0.25 lb / 1 N	Pull	80000046	27
8011-MA	9 oz / 250 g	0.125 oz / 2 g	Dial	80000047	37
8012-MA	18 oz / 500 g	0.25 oz / 5 g	Dial	80000048	37
8014-MA	2000 g / 72 oz	20 g / 0.5 oz	Dial	80000049	37
8011-MN	250 g / 2.5 N	2 g / 0.02 N	Dial	80000019	36
8012-MN	500 g / 5 N	5 g / 0.05 N	Dial	80000020	36
8014-MN	2000 g / 20 N	20 g / 0.2 N	Dial	80000022	36
8013-MN	1000 g / 10 N	10 g / 0.1 N	Dial	80000021	37
8016-00	20 N	1/2N	Dial	80000023	72
8015-00	22 hg	1 / 2 hg	Dial	80000050	72
8018-50	50 N	2 N	Dial	80000051	80

# **OHAUS RELOADING SCALES**

The Original OHAUS Reloading Scales are Back

## Display

Notched cast metal beams with large markings for easy reading using poises.

#### Construction

Cast metal housing and beams, stainless steel fine poises, hardened steel beam pivots, agate bearings, hanging metal pan support, gold-colored scoops with handle and spout

## **Design Features**

Scales include single leveling foot, ounce-to-grain conversion label for quick reference and large zero indicator.





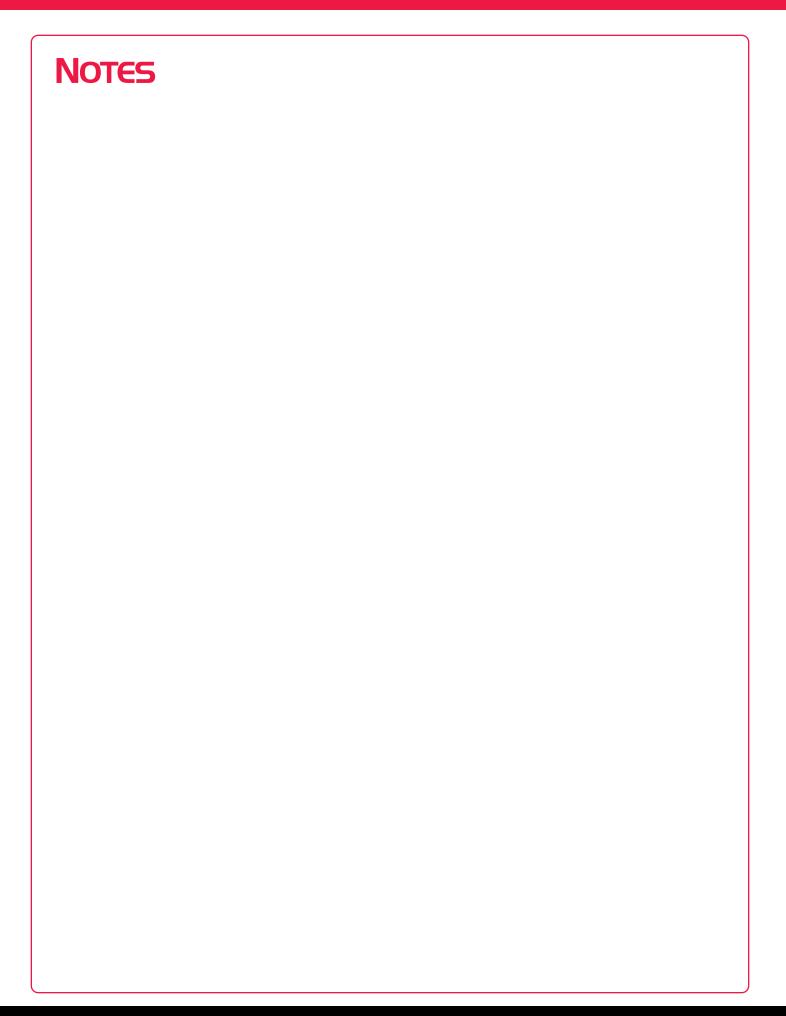
Equipped with cast metal beams designed with widespaced deep notches to prevent accidental poise movement. Self-aligning agate bearings with steel beam pivots guarantee sensitivity to 0.1 grain.

Removable pan with handle and spout. Pan supports cradle the pan so that it doesn't tip off when weighing cases, loaded cartridges, arrows etc. Ounce to grain conversion labels for quick reference.

Die-cast bases with large leveling feet for extra stability and durable stainless steel poises. Mechanical design allows for use on the bench or at the practice range—battery or AC power not needed.

Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
5-0-2	505 grains	0.1 grains	2" diameter	30332165	96
5-0-5	511 grains	0.1 grains	2" diameter	30393272	108







OHAUS offers a full line of products designed for industrial applications, including sophisticated, newly released software for our most powerful products. From shipping scales up to 10,000 lb floor scales, OHAUS has a product for use in every area of your facility.



İ	Compa	act Bend	ch Scale	S						Counti	ng Scal	es	Modul	ar Benc	h & Floo	or Scale	S	
	Ranger 7000	Ranger 4000	Ranger 3000	Valor 7000	Valor 4000	Valor 3000	Valor 2000	Valor 1000 (V12)	Catapult 1000	Ranger 7000	Ranger Count 4000	Ranger Count 3000	VX/VN Floor	Drum Scale	Defender 5000	Defender 3000	CKW	ES / SD
Weighing Capacity Range (lb)	6 to 150	6 to 60	3 to 60	3 to 60	3 to 30	0.4 to 13.2	3 to 60	6 to 60	20 to 165	6 to 150	6 to 60	3 to 60	2,500 to 10,000	500 to 2,500	5 to 1,000	30 to 660	6 to 60	13 to 440
lb, oz, lb:oz	All	All	All	All	All	All	All	All	lb	All	All	All	All	All	All	All	All	ES -all SD lb
kg or g	•	•	•	•	•	•	•	•	kg	•	•	•	•	•	•	•	•	ES -all SD - kg
Parts Counting	•	•	•							•	•	•	•	•	•	•	•	•
Checkweighing	•	•	•	•	•		●*			•	•	•		•	•		•	
Percent Weighing	•	•	•	•	•	•				•	•				•		•	
Display Hold / Dynamic Weighing	•	•	•							•	•			•	•		•	
Totalization / Accumulation		•	•	•	•						•	•		•	•		•	SD only
Barcode Scanner/ Label Printer Support	● / O**									● / O**					0/●‡			
NTEP Certified or Measurement Canada Approved	•	•	•	•	•	NTEP*				•	•	•	NTEP†		•	•	•	
Graphical Display	•									•					•			
LCD									•									•
Backlit LCD			•	•		•		•				•	•	•		•	•	
LED		•			•		•				•							
Numeric Keypad	●A									●A	•	•			●A		●A	
Metal	•	•								•	•		● Base	●*	●* Base			
ABS			•	•	•*		●*	•	•			•	●*		●*	•*		•*
Stainless Steel Washdown IP/					•*	•	●*						●*		●*	●*	•	●*
NEMA Rating					●8	65 / 4X*	●8								67/ 4X†	65 / 4X*	66/4X	
NSF Listed/ Certified				•	•	•	•	•									Base only	
RS232	•	•	•	•						•	•	•	•	•	•	•	•	
2 <sup>nd</sup> RS232	0	0	0	0						0	0	0			0		0	
RS485/422															O 485		0	
USB	•	0	0	0						•	0	0		0	0			
Ethernet	0	0	0	0						0	0	0		0	0			
AC or DC Relays / Digital I/O	0									0					0		0	
Wireless Connectivity															WiFi / Bluetooth			
GMP w/Time/Date	•									•					•		•	
Rechargeable Battery	0	•	•	•	•		•			0	•	•	•		0	•	0	
Disposable Batteries						•		•	•									•
Remote Scale Base Input	0									0							•	
Page No.	68	69	70	71	72	73	74	75	76	65	66	67	48, 49	47	54	60	51	63, 64

O Optional A Alphanumeric I Indicator \*on specific models † by base chosen ‡ optional barcode scanner, free label printer support

<sup>\*\*</sup> Barcode scanner support is included, Label Printer requires the 2<sup>nd</sup> RS232 port option

**DEFENDER® 3000 DRUM SCALE** 

Convenient Portability with Floor Scale Capacity

## Display

White backlit LCD display

### Communication

Standard RS232; Optional Ethernet or USB available with RS232 kits

### Construction

Epoxy-painted carbon steel frame and treaded deck, top adjustable carbon steel feet, IP67 nickel-plated alloy steel shear beam loadcells, IP65 aluminum junction box, T32ME indicator with painted metal back and ABS faceplate, 19.8 ft indicator cord with stainless steel folding cord storage cleats.

## **Design Features**

Easy mobility with integrated stainless steel folding handles and durable polyurethane wheels, indicator cord storage using folding stainless steel cleats on side of base. Indicator includes wall mount bracket. AC wall adapter power supply included.

Our Drum Scales come in 5 models with platform sizes ranging from  $30 \times 30$  to  $36 \times 36$  inch, and capacities ranging from 500 to 2,500 lb, giving you the flexibility to choose what best suits your weighing needs.

The OHAUS Drum Scales feature a platform constructed of mild steel with an epoxy paint finish, which means that the scale can stand up to heavy industrial use.

A low-profile design with front and back access ramps that make it easy to roll pallet jacks, dollies, carts & drums on to the platform. High-density polyurethane wheels provide convenient portability.

Model	Capacity	Readability	Platform Size	Item No.	List Price (USD)
DFD32M500ES	500 lb / 250 kg	0.1 lb / 0.05 kg	30 × 30 in / 762 × 762 mm	30469909	1609
DFD32M1000ES	1,000 lb / 500 kg	0.2 lb / 0.1 kg	$30 \times 30 \text{ in } / 762 \times 762 \text{ mm}$	30469910	1609
DFD32M2500ES	2,500 lb / 1,250 kg	0.5 lb / 0.2 kg	$30 \times 30 \text{ in } / 762 \times 762 \text{ mm}$	30469911	1609
DFD32M1000ER	1,000 lb / 500 kg	0.2 lb / 0.1 kg	$36 \times 36 \text{ in } / 914 \times 914 \text{ mm}$	30469912	1866
DFD32M2500ER	2,500 lb / 1,250 kg	0.5 lb / 0.2 kg	$36 \times 36 \text{ in } / 914 \times 914 \text{ mm}$	30469913	1866

Item No.	List Price (USD)
30304101	145
30304102	145
30064203	990
80251992	760
80500525	193
	30304101 30304102 30064203 80251992

Accessories	Item No.	List Price (USD)
Column Kit, Floor Stand, Painted	30531244	199
Column Kit, Floor Stand, Stainless Steel	30539553	399
RS232 Interface Cable to PC 25-pin	80500524	193
Software, Winwedge	80850080	530





















# **VX SERIES**

Economical Floor Scale for Basic Industrial Applications

## Display

Backlit liquid crystal display (LCD)

### Communication

Easy access communication port with RS232 interface (included)

### Construction

NEMA 4X/IP65 stainless steel indicator with hinged front-cover, 5mm fixed top plate, wall bracket, epoxy painted steel platform and frame, NEMA 4/IP67 plastic junction box with side access, 4 IP67 NTEP alloy steel load cells

### **Design Features**

125% overload protection, hardwired internal AC power supply and internal rechargeable battery included.

VX is ruggedly constructed and includes an epoxy painted steel frame, a NEMA 4X/IP65 stainless steel indicator, NEMA 4X/IP67 sealed plastic junction box and IP67 sealed load cells.

The included internal rechargeable battery keeps the scale running and allows for placement of the platform away from outlets while the backlit LCD projects large 1" digits.

Weighing and counting modes produce results in five weighing units, and the included RS232 provides the ability to connect the scale to a printer or PC for data reporting purposes.

Model	Capacity	Readability	Certified Readability	Platform Size	Item No.	List Price (USD)
VX32XW5000X	5000 lb / 2200 kg	1 lb / 0.5 kg	_	5 ft × 5 ft / 1,524 mm × 1,524 mm	80253296	3249
VX32XW10000L	10000 lb / 4500 kg	2 lb / 1 kg	_	4 ft × 4 ft / 1,219 mm × 1,219 mm	80253297	3593
VX32XW10000X	10000 lb / 4500 kg	2 lb / 1 kg	_	$5 \text{ ft} \times 5 \text{ ft} / 1,524 \text{ mm} \times 1,524 \text{ mm}$	80253298	4095
VX32XW2500L*	2500 lb / 1000 kg	0.5 lb / 0.2 kg	0.5 lb / 0.2 kg	$4 \text{ ft} \times 4 \text{ ft} / 1,219 \text{ mm} \times 1,219 \text{ mm}$	80253294	2839
VX32XW5000L*	5000 lb / 2200 kg	1 lb / 0.5 kg	1 lb / 0.5 kg	$4 \text{ ft} \times 4 \text{ ft} / 1,219 \text{ mm} \times 1,219 \text{ mm}$	80253295	2839

#### \* Approved Model

Accessories	Item No.	List Price (USD)
Printer, Impact, SF40A, AM	30064203	990
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
Foot Kit, Set (4), VX	80252545	121
Foot Plate, Set (2), Painted, VX	80252548	86
Column Kit, Floor Stand, Painted	30531244	199
Column Kit, Floor Stand, Stainless Steel	30539553	399
Ramp, 48 in wide $\times$ 48 in long, 2.5 K/5 K, VX	80252766	985
Ramp, 60 in wide × 48 in long, 5 K, VX	80252767	1240

Accessories	Item No.	List Price (USD)
Ramp, 48 in wide × 48 in long, 10 K, VX	80252795	2130
Ramp, 60 in wide × 48 in long, 10 K, VX	80252796	2355
Bolt Kit, Floor, VX	80252838	32
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Cable, RS232, CKW TxxXW	80500552	179
Software, Winwedge	80850080	530

























# **VN SERIES**

Economical Painted Steel Floor Scales for Basic Industrial Applications

## Display

Backlit liquid crystal display (LCD)

### Communication

Easy access communication port with RS232 interface

### Construction

ABS plastic indicator, black painted steel treaded platform, NEMA 4X/IP65 stainless steel junction box with side access, IP67 NTEP alloy steel load cells, two carbon steel eye bolts, four self-swiveling ball-in-cup feet, black painted steel ramps and fixed location foot mounting plate kits (accessories sold separately)



## **Design Features**

125% overload protection, AC wall adapter power supply and internal rechargeable battery included.

The durable VN is constructed of an epoxy painted steel frame, an ABS T31P indicator, NEMA 4X/IP65 sealed stainless steel junction box and IP67 sealed load cells.

With a rechargeable lead acid battery included with each VN, you can position the floor scale freely in the workspace without having to be forced to work near an outlet.

Painted steel ramps are available to be added to any VN platform, which provide bottom support ribs that prevent the platform from bending under heavy loads.

Model	Capacity	Readability	<b>Certified Readability</b>	Platform Size	Item No.	List Price (USD)
VN31P5000L	5000 lb / 2500 kg	1 lb / 0.5 kg	1 lb / 0.5 kg	4 ft × 4 ft / 1,219 mm × 1,219 mm	80252563	1840
VN31P5000X	5000 lb / 2500 kg	1 lb / 0.5 kg	1 lb / 0.5 kg	$5 \text{ ft} \times 5 \text{ ft} / 1,524 \text{ mm} \times 1,524 \text{ mm}$	80252564	2158

Accessories	Item No.	List Price (USD)
Column Kit, Floor Stand, Painted	30531244	199
Column Kit, Floor Stand, Stainless Steel	30539553	399
Printer, Impact, SF40A, AM	30064203	990
Foot Plate, Set (2), Painted, VE VN	72198344	60
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
Ramp, 48 in wide × 26.4 in long, Painted, VN	80252565	800

Accessories	Item No.	List Price (USD)
Ramp, 60 in wide × 26.4 in long, Painted, VN	80252566	905
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Software, Winwedge	80850080	530
Interface Kit, RS232-USB	30304101	145
Interface Kit, RS232-Ethernet	30304102	145

















# VN SERIES FLOOR SCALE PLATFORMS

Basic Level Floor Scale Bases

### Construction

Black painted steel platform, raised embossed treads, fixed top plate 5mm thick, four IP67 NTEP alloy steel load cells, NEMA 4X/IP65 stainless steel junction box with side access, self swiveling stainless steel ball in cup leveling feet.

## **Design Features**

Ball-in-Cup Leveling Feet, Steel Eye Bolts for Easy Lifting and Positioning.



Durable epoxy painted steel frame and platform

NEMA4X/IP65 sealed stainless steel junction box

IP67 sealed loadcells

Model	Capacity	Readability	<b>Certified Readability</b>	Platform Size	Item No.	List Price (USD)
VN5000L	5000 lb / 2500 kg	1 lb / 0.5 kg	1 lb / 0.5 kg	4 ft × 4 ft / 1,219 mm × 1,219 mm	80252561	1589
VN5000X	5000 lb / 2500 kg	1 lb / 0.5 kg	1 lb / 0.5 kg	$5 \text{ ft} \times 5 \text{ ft} / 1,524 \text{ mm} \times 1,524 \text{ mm}$	80252562	1850



# **DEFENDER® 6000 WASHDOWN**

Extreme Washdown Bench Scales

## Display

White LED with 20 mm / 0.8 in high digits and 3 color (red, green, orange)  $8 \times 16$  dot matrix LED checkweighing/filling display.

#### Communication

Built-in RS232 and USB host, Hands-free, touchless sensor reduces contamination risk; optional 2<sup>nd</sup> RS232/RS485/USB Device, Analog Output, Wi-Fi/Bluetooth, Ethernet and Discrete I/O with relays.

#### Construction

All 316 Stainless Steel indicator, column and base with hermetically-sealed load cell. Pan optional on  $10 \times 10$  in and  $12 \times 12$  in bases.

### **Design Features**

Up to 10,000d/5,000e NTEP certified and Measurement Canada approved Class III legal-for-trade, GMP/GLP output with time/date, EasyConnect connector allows fast set-up, hardwired internal AC power supply included—optional external USB powerbankholder available.





Defender 6000 stands up to harsh cleaning in processing and packaging environments with IP68 immersion/ IP69K washdown protection, 316 stainless steel construction and hermeticallysealed load cell.

Durable Defender 6000 is NSF certified, supporting HACCP systems with a 316 stainless steel base and sturdy indicator providing corrosion protection in food, chemical processing, and packaging.

Includes Library for up to 300 items and can support up to 100 user profiles for easy data management. Configurable data output with GMP/GLP and time/date for result traceability. Numeric keypad and dedicated target key for fast

Model	Capacity	Readability	<b>Certified Readability</b>	Platform Size	Item No.	List Price (USD)
i-D61XWE5K1S6	10 lb / 5 kg	0.001 lb / 0.5 g	0.002 lb / 1 g	9.8 × 9.8 in / 250 × 250 mm	30575563	1915
i-D61XWE12K1R6	25 lb / 12.5 kg	0.002 lb / 1 g	0.005 lb / 5 g	$11.8 \times 11.8 \text{ in } / 300 \times 300 \text{ mm}$	30575564	1995
i-D61XWE25K1R6	50 lb / 25 kg	0.005 lb/2 g	0.01 lb/5 g	$11.8 \times 11.8 \text{ in } / 300 \times 300 \text{ mm}$	30575565	1995
i-D61XWE50K1L7	100 lb / 50 kg	0.01 lb/5 g	0.02 lb / 10 g	$19.7 \times 15.7 \text{ in } / 500 \times 400 \text{ mm}$	30575566	2350
i-D61XWE150K1L7	300 lb / 150 kg	0.02 lb / 10 g	0.1 lb / 50 g	$19.7 \times 15.7 \text{ in } / 500 \times 400 \text{ mm}$	30575567	2350

Accessories	Item No.	List Price (USD)
Wi-Fi/Bluetooth Dongle	30412537	231
RS232/RS485/USB Device Kit	30424404	167
Ethernet Kit	30429666	167
Analog Output Kit	30424403	167
Discrete I/O with Relay Kit (2 In/4 Out)	30097591	155
Light Tower, 3 Colors, 243 mm, IP65 (requires 30097591)	30424021	194
External Power Bank Holder, 304 Stainless Steel (requires external USB power bank)	30572907	275

Accessories	Item No.	List Price (USD)
RS232 Cable	80500552	179
M16 Gland with Ferrite	30379716	21
Alibi Memory	80500503	123
30' Loadcell Extension Cable (9 m)	30424409	167
Wheel Kit, 304 Stainless Steel	30616409	167
Pan 12 × 12 in, 304 Stainless Steel	30427798	93
Pan 10 × 10 in, 304 Stainless Steel	30427799	78















































NSF













\*Option

# **DEFENDER® 6000 WASHDOWN**

Extreme Washdown Bench Scales

## Display

White backlit LCD display with 45 mm / 1.8 in high digits. Wide 3 Color (red, green, yellow) LED Bar spans width of display for clear checkweighing results.

#### Communication

Built-in RS232 requires optional IR connector.

#### Construction

316 Stainless Steel base with hermetically-sealed load cell. Polycarbonate indicator can be mounted on 316 column or front mount. Pan optional on  $10 \times 10$  in and  $12 \times 12$  in bases.

## **Design Features**

Up to 10,000d/5,000e NTEP certified and Measurement Canada approved Class III legal-for-trade, GMP/ GLP output with time/date, EasyConnect connector allows fast set-up, powered by 6 "D" cell batteries for up to 1,600 hours of use.



Durable Defender 6000 is NSF certified, supporting HACCP systems with a 316 stainless steel base and sturdy polycarbonate indicator providing corrosion protection in food, chemical processing, and packaging.





Can store up to 1,000 weighing results in memory for download using optional IR data connector. Configurable data output with GMP/GLP and time/date for result traceability. Dedicated target key for fast item setup.

processing and packaging environments with IP68 immersion/ IP69K washdown protection, polycarbonate indicator, 316 stainless steel base and column construction and hermetically-sealed

Defender 6000 stands up to harsh cleaning in

#### Scale with Column

Model	Capacity	Readability	Certified Readability	Platform Size	Item No.	List Price (USD)
i-D61PW5K1S6	10 lb / 5 kg	0.001 lb / 0.5 g	0.002 lb / 1 g	$9.8 \times 9.8 \text{ in } / 250 \times 250 \text{ mm}$	30575569	1825
i-D61PW12K1R6	25 lb / 12.5 kg	0.002 lb / 1 g	0.005 lb / 5 g	$11.8 \times 11.8 \text{ in } / 300 \times 300 \text{ mm}$	30575570	1925
i-D61PW25K1R6	50 lb / 25 kg	0.005 lb/2 g	0.01 lb/5 g	$11.8 \times 11.8 \text{ in } / 300 \times 300 \text{ mm}$	30575571	1925
i-D61PW50K1L7	100 lb / 50 kg	0.01 lb/5 g	0.02 lb / 10 g	$19.7 \times 15.7 \text{ in } / 500 \times 400 \text{ mm}$	30575572	2475
i-D61PW150K1L7	300 lb / 150 kg	0.02 lb / 10 g	0.1 lb / 50 g	$19.7 \times 15.7 \text{ in } / 500 \times 400 \text{ mm}$	30575573	2475

#### Scale with Front Mount

Model	Capacity	Readability	Certified Readability	Platform Size	Item No.	List Price (USD)
i-D61PW5K1S5	10 lb / 5 kg	0.001 lb / 0.5 g	0.002 lb / 1 g	9.8 × 9.8 in / 250 × 250 mm	30575568	1875
i-D61PW12K1R5	25 lb / 12.5 kg	0.002 lb / 1 g	0.005 lb / 5 g	$11.8 \times 11.8 \text{ in } / 300 \times 300 \text{ mm}$	30575562	1950
i-D61PW25K1R5	50 lb / 25 kg	0.005 lb / 2g	0.01 lb/5 g	$11.8 \times 11.8 \text{ in } / 300 \times 300 \text{ mm}$	30608733	1950
i-D61PW50K1L5	100 lb / 50 kg	0.01 lb/5 g	0.02 lb / 10 g	$19.7 \times 15.7 \text{ in } / 500 \times 400 \text{ mm}$	30608734	2525
i-D61PW150K1L5	300 lb / 150 kg	0.02 lb / 10 g	0.1 lb / 50 g	19.7 × 15.7 in / 500 × 400 mm	30608735	2525

Accessories	Item No.	List Price (USD)
IR Communication Kit	30572910	75
30' Loadcell Extension Cable (9 m)	30424409	167
Wheel Kit, 304 Stainless Steel	30616409	167
Pan 12 × 12 in, 304 Stainless Steel	30427798	93
Pan 10 × 10 in, 304 Stainless Steel	30427799	78



























































Stability

# **DEFENDER® 6000 INDICATORS** WITH DEFENDER W BASES

Washdown Bench Scales

## Construction

Defender 6000 XWE or PW IP68/IP69K Indicators, Defender W 304 Stainless Steel Bases with IP67 stainless steel loadcells. Columns and Front Mounts 304 Stainless Steel.

### Scale with 304 Stainless Steel Column and i-DTXWE 316 Stainless Steel Indicator, Defender W Base IP67 protected

Model	Capacity	Readability	<b>Certified Readability</b>	Platform Size	Item No.	List Price (USD)
i-D61XWE2WQS6	5 lb / 2.5 kg	0.0002 lb / 0.1g	0.001 lb / 0.5g	10 × 10 in / 254 × 254 mm	30631706	1795
i-D61XWE5WQS6	10 lb / 5 kg	0.001 lb / 0.5 g	0.002 lb / 1 g	$10 \times 10 \text{ in } / 254 \times 254 \text{ mm}$	30631707	1795
i-D61XWE12WQS6	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 5 g	$10 \times 10 \text{ in } / 254 \times 254 \text{ mm}$	30631718	1795
i-D61XWE12WQR6	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 5 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30631719	1935
i-D61XWE25WQR6	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb/5 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30631720	1935
i-D61XWE50WQR6	100 lb / 50 kg	0.005 lb / 2 g	0.02 lb / 10 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30631721	1935
i-D61XWE25WQL7	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb/5 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30631722	2660
i-D61XWE50WQL7	100 lb / 50 kg	0.005 lb / 2 g	0.02 lb / 10 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30631723	2660
i-D61XWE125WQL7	250 lb / 125 kg	0.01 lb/5g	0.05 lb / 50 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30631724	2660

## Scale with 304 Stainless Steel Column and i-DTPW Polycarbonate Indicator, Defender W Base IP67 protected

Model	Capacity	Readability	<b>Certified Readability</b>	Platform Size	Item No.	List Price (USD)
i-D61PW2WQS6	5 lb / 2.5 kg	0.0002 lb / 0.1g	0.001 lb / 0.5g	10 × 10 in / 254 × 254 mm	30626679	1570
i-D61PW5WQS6	10 lb / 5 kg	0.001 lb / 0.5 g	0.002 lb / 1 g	$10 \times 10 \text{ in } / 254 \times 254 \text{ mm}$	30626680	1570
i-D61PW12WQS6	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 5 g	$10 \times 10 \text{ in } / 254 \times 254 \text{ mm}$	30626681	1570
i-D61PW12WQR6	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 5 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30626682	1705
i-D61PW25WQR6	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb/5 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30626683	1705
i-D61PW50WQR6	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30626684	1705
i-D61PW25WQL7	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb/5 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30631703	2415
i-D61PW50WQL7	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30631704	2415
i-D61PW125WQL7	250 lb / 125 kg	0.01 lb/5g	0.05 lb / 50 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30631705	2415

## Scale with 304 Stainless Steel Front Mount and i-DTPW Polycarbonate Indicator, Defender W Base IP67 protected

Model	Capacity	Readability	<b>Certified Readability</b>	Platform Size	Item No.	List Price (USD)
i-D61PW2WQS5	5 lb / 2.5 kg	0.0002 lb / 0.1g	0.001 lb / 0.5g	10 × 10 in / 254 × 254 mm	30631725	1720
i-D61PW5WQS5	10 lb / 5 kg	0.001 lb / 0.5 g	0.002 lb / 1 g	$10 \times 10 \text{ in } / 254 \times 254 \text{ mm}$	30631726	1720
i-D61PW12WQS5	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 5 g	$10 \times 10 \text{ in } / 254 \times 254 \text{ mm}$	30631727	1720
i-D61PW12WQR5	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 5 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30631728	1855
i-D61PW25WQR5	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb/5 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30631729	1855
i-D61PW50WQR5	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30631730	1855
i-D61PW25WQL5	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb/5 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30572969	2315
i-D61PW50WQL5	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30572970	2315
i-D61PW125WQL5	250 lb / 125 kg	0.01 lb/5g	0.05 lb / 50 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30572971	2315

# **DEFENDER® 5000 WASHDOWN**

Multifunctional Stainless Steel Washdown Bench Scales for Standard Industrial Applications

## Display

Dot matrix LCD with white LED backlight, 256 x 80 pixels, with on-screen checkweighing display

## Communication

Standard RS232, MicroSD Card included; Optional Ethernet, WiFi/Bluetooth, 2<sup>nd</sup> RS232/RS485/USB, Analog Output, or 2 In/4 Out Discrete I/O.

#### Construction

All stainless steel platform, base frame, indicator, column and loadcell.

### **Design Features**

Up to 25,000d/5,000e NTEP Class III certified and Measurement Canada Class III approved legal-for-trade, GMP/GLP output with time/date, EasyConnect connector allows fast set-up, Hardwired internal AC power supply included—optional internal rechargeable battery available.



















User-friendly model with an easy-to-use keypad, large backlit display and plain text on-screen prompts which guide you through operation.

Durable construction with a stainless steel platform, frame, IP67 load cell and IP68 indicator. Defender meets NTEP or OIML/EC Type approvals (depending on region).

Features common industrial modes and supports a 50,000-item library with 1,000 user profiles for easy data management. Includes GMP/GLP with time/date for result traceability.

Model	Capacity	Readability	Certified Readability	Platform Size	Item No.	List Price (USD)
D52XW2WQS6	5 lb / 2.5 kg	0.0002 lb / 0.1g	0.001 lb / 0.5 g	10 × 10 in / 254 × 254 mm	30461673	1609
D52XW5WQS6	10 lb / 5 kg	0.0005 lb / 0.2 g	0.002 lb / 1 g	$10 \times 10 \text{ in } / 254 \times 254 \text{ mm}$	30461674	1609
D52XW12WQS6	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 5 g	$10 \times 10 \text{ in } / 254 \times 254 \text{ mm}$	30461675	1609
D52XW12WQR6	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 5 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30461676	1748
D52XW25WQR6	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb/5 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30461677	1748
D52XW50WQR6	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30461678	1748
D52XW25WQL7	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb/5 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30461679	2475
D52XW50WQL7	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30461680	2475
D52XW125WQL7	250 lb / 125 kg	0.01 lb/5 g	0.05 lb / 50 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30461681	2475
D52XW50WTX7	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$18 \times 24 \text{ in } / 457 \times 610 \text{ mm}$	30461682	2721
D52XW125WTX7	250 lb / 125 kg	0.01 lb/5 g	0.05 lb / 50 g	$18 \times 24 \text{ in } / 457 \times 610 \text{ mm}$	30461683	2721
D52XW250WTX7	500 lb / 250 kg	0.02 lb / 10 g	0.1 lb / 50 g	$18 \times 24 \text{ in } / 457 \times 610 \text{ mm}$	30461684	2721
D52XW50WQV8	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30461685	3162
D52XW125WQV8	250 lb / 125 kg	0.01 lb/5 g	0.05 lb / 50 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30461686	3162
D52XW250WQV8	500 lb / 250 kg	0.02 lb / 10 g	0.1 lb / 50 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30461687	3275
D52XW500WQV8*	1,000 lb / 500 kg	0.05 lb / 20 g	0.2 lb / 100 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30461688	3275
* Aluminum IP67 loa	ndcell					

Accessories	Item No.	List Price (USD)
2 <sup>nd</sup> RS232/RS485/USB, TD52	30424404	167
Ethernet Kit, TD52	30429666	167
Analog Output Kit, TD52	30424403	167
I/O with Relay (2 In/4 Out)	30097591	155
Light Tower, R-Y-G, IP65, 24VDC (requires 30097591)	30424021	194
WiFi/BT Dongle, OHAUS (requires 30424406)	30412537	231
USB Host for WiFi/Bluetooth/Flash Drive	30572923	135
Battery Kit, Li-ion, TD52	30424405	200
In-use Cover Set, TD52XW	30424023	28

Accessories	Item No.	List Price (USD)
In-use Cover set (10), TD52XW	30469949	222
LC Extension Cable, 9 meters, D52	30424409	167
M16 Gland with Ferrite, to TD52	30379716	21
Printer SF40A (includes RS232 cable)	30064203	990
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
Cable, RS232, CKW TxxXW	80500552	179
Printer Holder Kit, D52	30424025	62
Software, Winwedge	80850080	530
Wheel Kit, Defenders up to 600 lb / 300 kg capacity	30372146	134







































\*Option

# **DEFENDER® 5000 WASHDOWN LOW PROFILE**

Multifunctional Stainless Steel Washdown Bench Scales for Standard Industrial Applications

## Display

Dot matrix LCD with white LED backlight, 256 × 80 pixels, with on-screen checkweighing display

#### Communication

Standard RS232, MicroSD Card included; Optional Ethernet, WiFi/Bluetooth, 2<sup>nd</sup> RS232/RS485/USB, Analog Output, or 2 In/4 Out Discrete I/O.

#### Construction

All stainless steel platform, base frame, indicator, indicator front mount and loadcell.

### **Design Features**

Up to 25,000d/5,000e NTEP Class III certified and Measurement Canada Class III approved legal-for-trade, GMP/GLP output with time/date, EasyConnect connector allows fast set-up, Hardwired internal AC power supply included—optional internal rechargeable battery available.



















User-friendly model with an easy-to-use keypad, large backlit display and plain text on-screen prompts which guide you through operation.

Durable construction with a stainless steel platform, frame, IP67 load cell and IP68 indicator. Defender meets NTEP or OIML/EC Type approvals (depending on region).

Features common industrial modes and supports a 50,000-item library with 1,000 user profiles for easy data management. Includes GMP/GLP with time/date for result traceability.

Model	Capacity	Readability	Certified Readability	Platform Size	Item No.	List Price (USD)
D52XW2WQS5	5 lb / 2.5 kg	0.0002 lb / 0.1 g	0.001 lb / 0.5 g	10 × 10 in / 254 × 254 mm	30461661	1655
D52XW5WQS5	10 lb / 5 kg	0.0005 lb / 0.2 g	0.002 lb / 1 g	$10 \times 10 \text{ in } / 254 \times 254 \text{ mm}$	30461662	1655
D52XW12WQS5	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 5 g	$10 \times 10 \text{ in } / 254 \times 254 \text{ mm}$	30461663	1655
D52XW12WQR5	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 5 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30461664	1794
D52XW25WQR5	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb/5 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30461665	1794
D52XW50WQR5	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30461464	1794
D52XW25WQL5	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb/5 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30461465	2265
D52XW50WQL5	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30461466	2265
D52XW125WQL5	250 lb / 125 kg	0.01 lb / 5 g	0.05 lb / 50 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30461467	2265
D52XW50WTX5	100 lb / 50 kg	0.005 lb / 2 g	0.02 lb / 10 g	18 × 24 in / 457 × 610 mm	30461668	2650
D52XW125WTX5	250 lb / 125 kg	0.01 lb / 5 g	0.05 lb / 50 g	$18 \times 24 \text{ in } / 457 \times 610 \text{ mm}$	30461669	2650
D52XW250WTX5	500 lb / 250 kg	0.02 lb / 10 g	0.1 lb / 50 g	18 × 24 in / 457 × 610 mm	30461670	2650
D52XW50WQV5	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30461671	3039
D52XW125WQV5	250 lb / 125 kg	0.01 lb/5 g	0.05 lb / 50 g	$24 \times 24$ in $/ 610 \times 610$ mm	30461672	3039

Accessories	Item No.	List Price (USD)
2 <sup>nd</sup> RS232/RS485/USB, TD52	30424404	167
Ethernet Kit, TD52	30429666	167
Analog Output Kit, TD52	30424403	167
I/O with Relay (2 In/4 Out)	30097591	155
Light Tower, R-Y-G, IP65, 24VDC (requires 30097591)	30424021	194
WiFi/BT Dongle, OHAUS (Requires 30424406)	30412537	231
USB Host for WiFi/Bluetooth/Flash Drive	30572923	135
Battery Kit, Li-ion, TD52	30424405	200
In-use Cover Set, TD52XW	30424023	28
In-use Cover set (10), TD52XW	30469949	222

Accessories	Item No.	List Price (USD)
LC Extension Cable, 9 meters, D52	30424409	167
M16 Gland with Ferrite, to TD52	30379716	21
Wall Mount Kit, SST, TD52XW	30424026	84
Printer SF40A (includes RS232 cable)	30064203	990
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
Cable, RS232, CKW TxxXW	80500552	179
Printer Holder Kit, D52	30424025	62
Software, Winwedge	80850080	530
Wheel Kit, Defender up to 600 lb / 300 kg capacity	30372146	134









































# DEFENDER® 5000

Multifunctional Bench Scales for Standard Industrial Applications

## Display

Dot matrix LCD with white LED backlight, 256 x 80 pixels, with on-screen checkweighing display

#### Communication

Standard RS232, MicroSD Card included; Optional Ethernet, WiFi/Bluetooth, 2<sup>nd</sup> RS232/RS485/USB, Analog Output, or 2 In/4 Out Discrete I/O.

#### Construction

Stainless steel platform, powder-coated steel base frame and column, aluminum loadcell and stainless steel indicator.

### **Design Features**

Up to 25.000d/5.000e NTEP Class III certified and Measurement Canada Class III approved legal-for-trade. GMP/GLP output with time/date, EasyConnect connector allows fast set-up, hardwired internal AC power supply included—optional internal rechargeable battery available.





































time/date for result traceability.



easy data management. Includes GMP/GLP with



\*Option































Features common industrial modes and supports a 50,000-item library with 1,000 user profiles for

User-friendly model with an easy-to-use keypad, large backlit display and plain text on-screen prompts which guide you through operation.

Durable construction with a stainless steel platform, sand gray powder-coated steel frame and aluminum load cell. Defender meets NTEP/ Measurement Canada or OIML/EC type approvals (depending on region).

**Platform Size** Model Capacity Readability **Certified Readability** Item No. List Price (USD) D52XW12RQR1 25 lb / 12.5 kg 0.001 lb / 0.5 g 0.005 lb/2 g  $12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$ 30461689 1655 50 lb / 25 kg 0.002 lb / 1 g  $12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$ D52XW25RQR1 0.01 lb/5 g 30461690 1655 D52XW50RQR1 100 lb / 50 kg 0.005 lb / 2 g 0.02 lb / 10 g  $12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$ 30461691 1655 D52XW12RTR1 25 lb / 12.5 kg 0.001 lb / 0.5 g 0.005 lb / 2 g  $12 \times 14 \text{ in } / 305 \times 355 \text{ mm}$ 30461692 1655 D52XW25RTR1 50 lb / 25 kg 0.002 lb / 1 g 0.01 lb / 5 g  $12 \times 14 \text{ in} / 305 \times 355 \text{ mm}$ 30461693 1655 D52XW50RTR1 100 lb / 50 kg  $0.005 \, lb / 2 \, g$ 0.02 lb / 10 g  $12 \times 14 \text{ in } / 305 \times 355 \text{ mm}$ 30461694 1655 D52XW50ROL2 100 lb / 50 kg 0.005 lb / 2 g 0.02 lb / 10 g  $18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$ 30461695 1989 18 × 18 in / 457 × 457 mm 250 lb / 125 kg 0.05 lb / 20 g D52XW125ROL2  $0.01 \, \text{lb} / 5 \, \text{g}$ 30461696 1989 18 × 24 in / 457 × 610 mm 0.02 lb / 10 g D52XW50RTX2 100 lb / 50 kg 0.005 lb / 2 g 30461697 2096 250 lb / 125 kg 0.05 lb / 20 g  $18 \times 24 \text{ in } / 457 \times 610 \text{ mm}$ D52XW125RTX2 0.01 lb/5 g 30461698 2096 D52XW250RTX2 500 lb / 250 kg 0.02 lb / 10 g 0.1 lb / 50 g  $18 \times 24 \text{ in } / 457 \times 610 \text{ mm}$ 30461699 2096 D52XW50RQV3 100 lb / 50 kg 0.005 lb/2 g 0.02 lb / 10 g  $24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$ 30461700 2265 250 lb / 125 kg 0.05 lb / 20 g D52XW125RQV3 0.01 lb/5 g  $24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$ 30461701 2265 D52XW250RQV3 500 lb / 250 kg 0.02 lb / 10 g 0.1 lb / 50 g  $24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$ 30461702 2322 D52XW500RQV3 1,000 lb / 500 kg 0.05 lb / 20 g 0.2 lb / 100 g  $24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$ 30461703 2322 D52XW125RTV3 250 lb / 125 kg  $0.01 \, \text{lb} / 5 \, \text{g}$ 0.05 lb / 20 g  $23.6 \times 31.5 \text{ in } / 600 \times 800 \text{ mm}$ 30461704 2814 D52XW250RTV3 500 lb / 250 kg 0.02 lb / 10 g 0.1 lb / 50 g  $23.6 \times 31.5 \text{ in } / 600 \times 800 \text{ mm}$ 30461705 2814 D52XW500RTV3 1,000 lb / 500 kg 0.05 lb / 20 g 0.2 lb / 100 g  $23.6 \times 31.5 \text{ in } / 600 \times 800 \text{ mm}$ 30461706 2814

Accessories	Item No.	List Price (USD)
2 <sup>nd</sup> RS232/RS485/USB, TD52	30424404	167
Ethernet Kit, TD52	30429666	167
Analog Output Kit, TD52	30424403	167
I/O with Relay (2 In/4 Out)	30097591	155
Light Tower, R-Y-G, IP65, 24VDC (requires 30097591)	30424021	194
WiFi/BT Dongle, OHAUS (Requires 30424406)	30412537	231
USB Host for WiFi/Bluetooth/Flash Drive	30572923	135
Battery Kit, Li-ion, TD52	30424405	200
In-use Cover Set, TD52XW	30424023	28

Accessories	Item No.	List Price (USD)
In-use Cover set (10), TD52XW	30469949	222
LC Extension Cable, 9 meters, D52	30424409	167
M16 Gland with Ferrite, to TD52	30379716	21
Printer SF40A (includes RS232 cable)	30064203	990
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
Cable, RS232, CKW TxxXW	80500552	179
Printer Holder Kit, D52	30424025	62
Software, Winwedge	80850080	530
Wheel Kit, Defender up to 600 lb / 300 kg capacity	30372146	134

# **DEFENDER®** 5000

Multifunctional Bench Scales for Standard Industrial Applications

## Display

Dot matrix LCD with white LED backlight, 256 × 80 pixels, with on-screen checkweighing display

## Communication

Standard RS232, MicroSD Card included; Optional Ethernet, WiFi/Bluetooth, 2<sup>nd</sup> RS232/RS485/USB, Analog Output, or 2 In/4 Out Discrete I/O.

#### Construction

Stainless steel platform, powder-coated steel base frame and column, aluminum loadcell and ABS plastic indicator.

### **Design Features**

Up to 25,000d/5,000e NTEP Class III certified and Measurement Canada Class III approved legal-for-trade, GMP/GLP output with time/date, EasyConnect connector allows fast set-up, internal AC power supply with line cord included—optional internal rechargeable battery available.



































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User-friendly model with an easy-to-use keypad, large backlit display and plain text on-screen prompts which guide you through operation.

Durable construction with a stainless steel platform, sand gray powder-coated steel frame and aluminum load cell. Defender meets NTEP/ Measurement Canada or OIML/EC type approvals (depending on region).

Features common industrial modes and supports a 50,000-item library with 1,000 user profiles for easy data management. Includes GMP/GLP with time/date for result traceability.

Model	Capacity	Readability	Certified Readability	Platform Size	Item No.	List Price (USD)
D52P12RQR1	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 2 g	12 × 12 in / 305 × 305 mm	30461630	1486
D52P25RQR1	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb/5 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30461631	1486
D52P50RQR1	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30461632	1486
D52P12RTR1	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 2 g	$12 \times 14 \text{ in } / 305 \times 355 \text{ mm}$	30461633	1486
D52P25RTR1	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb/5 g	$12 \times 14 \text{ in } / 305 \times 355 \text{ mm}$	30461634	1486
D52P50RTR1	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$12 \times 14 \text{ in } / 305 \times 355 \text{ mm}$	30461635	1486
D52P50RQL2	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30461636	1814
D52P125RQL2	250 lb / 125 kg	0.01 lb/5 g	0.05 lb / 20 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30461637	1814
D52P50RTX2	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$18 \times 24 \text{ in } / 457 \times 610 \text{ mm}$	30461638	1922
D52P125RTX2	250 lb / 125 kg	0.01 lb/5 g	0.05 lb / 20 g	$18 \times 24 \text{ in } / 457 \times 610 \text{ mm}$	30461639	1922
D52P250RTX2	500 lb / 250 kg	0.02 lb / 10 g	0.1 lb / 50 g	$18 \times 24 \text{ in } / 457 \times 610 \text{ mm}$	30461640	1922
D52P50RQV3	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30461641	2086
D52P125RQV3	250 lb / 125 kg	0.01 lb/5 g	0.05 lb / 20 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30461642	2086
D52P250RQV3	500 lb / 250 kg	0.02 lb / 10 g	0.1 lb / 50 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30461643	2255
D52P500RQV3	1,000 lb / 500 kg	0.05 lb / 20 g	0.2 lb / 100 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30461644	2255
D52P125RTV3	250 lb / 125 kg	0.01 lb/5 g	0.05 lb / 20 g	$23.6 \times 31.5 \text{ in } / 600 \times 800 \text{ mm}$	30461645	2639
D52P250RTV3	500 lb / 250 kg	0.02 lb / 10 g	0.1 lb / 50 g	$23.6 \times 31.5 \text{ in } / 600 \times 800 \text{ mm}$	30461646	2639
D52P500RTV3	1,000 lb / 500 kg	0.05 lb / 20 g	0.2 lb / 100 g	$23.6 \times 31.5 \text{ in } / 600 \times 800 \text{ mm}$	30461647	2639

Accessories	Item No.	List Price (USD)
2 <sup>nd</sup> RS232/RS485/USB, TD52	30424404	167
Ethernet Kit, TD52	30429666	167
Analog Output Kit, TD52	30424403	167
I/O with Relay (2 In/4 Out)	30097591	155
Light Tower, R-Y-G, IP65, 24VDC (requires 30097591)	30424021	194
WiFi/BT Dongle, OHAUS (Requires 30424406)	30412537	231
USB Host for WiFi/Bluetooth/Flash Drive	30572923	135
Battery Kit, Li-ion, TD52	30424405	200
In-use Cover Set, TD52P	30424022	21
Zebra Label Printer GK420T	30611855	729

Accessories	Item No.	List Price (USD)
In-use Cover set (10), TD52P	30469948	167
LC Extension Cable, 9 meters, D52	30424409	167
M16 Gland with Ferrite, to TD52	30379716	21
Printer SF40A (includes RS232 cable)	30064203	990
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
RS232 Interface Cable to PC 9-pin	80500525	193
Printer Holder Kit, D52	30424025	62
Software, Winwedge	80850080	530
Wheel Kit, Defender up to 600 lb / 300 kg capacity	30372146	134
Datalogic Barcode Scanner QD2131 (requires 30572923)	30593703	191

# **DEFENDER® 5000 LOW PROFILE**

Multifunctional Bench Scales for Standard Industrial Applications

## Display

Dot matrix LCD with white LED backlight, 256 × 80 pixels, with on-screen checkweighing display

#### Communication

Standard RS232, MicroSD Card included; Optional Ethernet, WiFi/Bluetooth, 2<sup>nd</sup> RS232/RS485/USB, Analog Output, or 2 In/4 Out Discrete I/O.

#### Construction

Stainless steel platform, powder-coated steel base frame and column, aluminum loadcell and stainless steel indicator.

### **Design Features**

Up to 25,000d/5,000e NTEP Class III certified and Measurement Canada Class III approved legal-for-trade, GMP/GLP output with time/date, EasyConnect connector allows fast set-up, hardwired internal AC power supply included—optional internal rechargeable battery available.



















User-friendly model with an easy-to-use keypad, large backlit display and plain text on-screen prompts which guide you through operation.

Durable construction with a stainless steel platform, sand gray powder-coated steel frame & aluminum load cell. Defender meets NTEP/ Measurement Canada or OIML/EC type approvals (depending on region).

Features common industrial modes and supports a 50,000-item library with 1,000 user profiles for easy data management. Includes GMP/GLP with time/date for result traceability.

Model	Capacity	Readability	Certified Readability	Platform Size	Item No.	List Price (USD)
D52XW12RQR5	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 2 g	12 × 12 in / 305 × 305 mm	30467608	1573
D52XW25RQR5	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb/5 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30467609	1573
D52XW50RQR5	100 lb / 50 kg	0.005 lb / 2 g	0.02 lb / 10 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30467610	1573
D52XW12RTR5	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 2 g	$12 \times 14 \text{ in } / 305 \times 355 \text{ mm}$	30467611	1630
D52XW25RTR5	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb/5 g	$12 \times 14 \text{ in } / 305 \times 355 \text{ mm}$	30467612	1630
D52XW50RTR5	100 lb / 50 kg	0.005 lb / 2 g	0.02 lb / 10 g	$12 \times 14 \text{ in } / 305 \times 355 \text{ mm}$	30467613	1630
D52XW50RQL5	100 lb / 50 kg	0.005 lb / 2 g	0.02 lb / 10 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30467614	1876
D52XW125RQL5	250 lb / 125 kg	0.01 lb / 5 g	0.05 lb / 20 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30467615	1876
D52XW50RTX5	100 lb / 50 kg	0.005 lb / 2 g	0.02 lb / 10 g	$18 \times 24 \text{ in } / 457 \times 610 \text{ mm}$	30467616	1989
D52XW125RTX5	250 lb / 125 kg	0.01 lb / 5 g	0.05 lb / 20 g	$18 \times 24 \text{ in } / 457 \times 610 \text{ mm}$	30467617	1989
D52XW250RTX5	500 lb / 250 kg	0.02 lb / 10 g	0.1 lb × 50 g	18 × 24 in / 457 × 610 mm	30467618	1989
D52XW50RQV5	100 lb / 50 kg	0.005 lb / 2 g	0.02 lb / 10 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30467619	2096
D52XW125RQV5	250 lb / 125 kg	0.01 lb / 5 g	0.05 lb / 20 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30467620	2096
D52XW250RQV5	500 lb / 250 kg	0.02 lb / 10 g	0.1 lb / 50 g	24 × 24 in / 610 × 610 mm	30470990	2096
D52XW125RTV5	250 lb / 125 kg	0.01 lb/5 g	0.05 lb / 20 g	$23.6 \times 31.5 \text{ in } / 600 \times 800 \text{ mm}$	30467621	2486

Accessories	Item No.	List Price (USD)
2 <sup>nd</sup> RS232/RS485/USB, TD52	30424404	167
Ethernet Kit, TD52	30429666	167
Analog Output Kit, TD52	30424403	167
I/O with Relay (2 In/4 Out)	30097591	155
Light Tower, R-Y-G, IP65, 24VDC (requires 30097591)	30424021	194
WiFi/BT Dongle, OHAUS (Requires 30424406)	30412537	231
USB Host for WiFi/Bluetooth/Flash Drive	30572923	135
Battery Kit, Li-ion, TD52	30424405	200
In-use Cover Set, TD52XW	30424023	28

Accessories	Item No.	List Price (USD)
In-use Cover set (10), TD52XW	30469949	222
LC Extension Cable, 9 meters, D52	30424409	167
M16 Gland with Ferrite, to TD52	30379716	21
Printer SF40A (includes RS232 cable)	30064203	990
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
Cable, RS232, CKW TxxXW	80500552	179
Printer Holder Kit, D52	30424025	62
Software, Winwedge	80850080	530
Wheel Kit, Defender up to 600 lb / 300 kg capacity	30372146	134





































# **DEFENDER® 5000 LOW PROFILE**

Multifunctional Bench Scales for Standard Industrial Applications

## Display

Dot matrix LCD with white LED backlight, 256 × 80 pixels, with on-screen checkweighing display

#### Communication

Standard RS232, MicroSD Card included; Optional Ethernet, WiFi/Bluetooth, 2<sup>nd</sup> RS232/RS485/USB, Analog Output, or 2 In/4 Out Discrete I/O.

#### Construction

Stainless steel platform, powder-coated steel base frame and column, aluminum loadcell and ABS plastic indicator.

### **Design Features**

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Model	Capacity	Readability	Certified Readability	Platform Size	Item No.	List Price (USD)
D52P12RQR5	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 2 g	12 × 12 in / 305 × 305 mm	30461648	1374
D52P25RQR5	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb/5 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30461649	1374
D52P50RQR5	100 lb / 50 kg	0.005 lb / 2 g	0.02 lb / 10 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30461650	1374
D52P12RTR5	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 2 g	$12 \times 14 \text{ in } / 305 \times 355 \text{ mm}$	30461651	1430
D52P25RTR5	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb/5 g	$12 \times 14 \text{ in } / 305 \times 355 \text{ mm}$	30461652	1430
D52P50RTR5	100 lb / 50 kg	0.005 lb / 2 g	0.02 lb / 10 g	$12 \times 14 \text{ in } / 305 \times 355 \text{ mm}$	30461653	1430
D52P50RQL5	100 lb / 50 kg	0.005 lb / 2 g	0.02 lb / 10 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30461654	1676
D52P125RQL5	250 lb / 125 kg	0.01 lb/5 g	0.05 lb / 20 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30461655	1676
D52P50RTX5	100 lb / 50 kg	0.005 lb / 2 g	0.02 lb / 10 g	$18 \times 24 \text{ in } / 457 \times 610 \text{ mm}$	30461656	1758
D52P125RTX5	250 lb / 125 kg	0.01 lb / 5 g	0.05 lb / 20 g	$18 \times 24 \text{ in } / 457 \times 610 \text{ mm}$	30461657	1758
D52P250RTX5	500 lb / 250 kg	0.02 lb / 10 g	0.1 lb / 50 g	$18 \times 24 \text{ in } / 457 \times 610 \text{ mm}$	30461658	1758
D52P50RQV5	100 lb / 50 kg	0.005 lb / 2 g	0.02 lb / 10 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30461659	1871
D52P125RQV5	250 lb / 125 kg	0.01 lb / 5 g	0.05 lb / 20 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30461660	1871
D52P250RQV5	500 lb / 250 kg	0.02 lb / 10 g	0.1 lb / 50 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30467606	1871
D52P125RTV5	250 lb / 125 kg	0.01 lb/5 g	0.05 lb / 20 g	$23.6 \times 31.5 \text{ in } / 600 \times 800 \text{ mm}$	30467607	2475

Accessories	Item No.	List Price (USD)
2 <sup>nd</sup> RS232/RS485/USB, TD52	30424404	167
Ethernet Kit, TD52	30429666	167
Analog Output Kit, TD52	30424403	167
I/O with Relay (2 In/4 Out)	30097591	155
Light Tower, R-Y-G, IP65, 24VDC (requires 30097591)	30424021	194
WiFi/BT Dongle, OHAUS (Requires 30424406)	30412537	231
USB Host for WiFi/Bluetooth/Flash Drive	30572923	135
Battery Kit, Li-ion, TD52	30424405	200
In-use Cover Set, TD52P	30424022	21
Zebra Label Printer GK420T	30611855	729

Accessories	Item No.	List Price (USD)
In-use Cover set (10), TD52P	30469948	167
LC Extension Cable, 9 meters, D52	30424409	167
M16 Gland with Ferrite, to TD52	30379716	21
Printer SF40A (includes RS232 cable)	30064203	990
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
RS232 Interface Cable to PC 9-pin	80500525	193
Printer Holder Kit, D52	30424025	62
Software, Winwedge	80850080	530
Wheel Kit, Defender up to 600 lb / 300 kg capacity	30372146	134
Datalogic Barcode Scanner QD2131(requires 30572923)	30593703	191









































\*Option

# **DEFENDER® 3000 WASHDOWN**

Economical Stainless Steel Bench Scales for Basic Industrial Washdown Applications

## Display

Backlit liquid crystal display (LCD)

### Communication

Easy access communication port with RS232 interface (included)

### Construction

IP65 stainless steel indicator with hinged front cover, stainless steel column and wall bracket, 304 grade stainless steel platform with steel tubular frame, IP67 stainless steel load cell

## **Design Features**

125% overload protection, NTEP Certified and Measurement Canada Approved, Hardwired internal AC power supply and internal rechargeable battery included.



30 lb model available

The NEMA 4X/IP66 stainless steel indicator is built to endure tough industrial elements. The 58-hour rechargeable battery offers continuous operation for multi-day operations.

Durable construction with a 304 stainless steel platform, stainless steel tubular frame, column and indicator bracket, and IP67 stainless steel load cell.

Easy-to-read display & basic counting mode allow for simple operation for everyday basic industrial applications. Offered with NTEP/Measurement Canada or OIML/EC Type approvals (depending on region).

Model	<b>Protection Rating</b>	Capacity	Readability	Certified Readability	Platform Size	Item No.	List Price (USD)
D32XW15VR	IP65; NEMA 4X	30 lb / 15 kg	0.005 lb/2 g	0.01 lb / 5g	14 in × 12 in / 355 mm × 305 mm	30369114	1507
D32XW30VR	IP65; NEMA 4X	66 lb / 30 kg	0.01 lb/5 g	0.02 lb / 10 g	14 in $\times$ 12 in / 355 mm $\times$ 305 mm	83999817	1507
D32XW60VR	IP65; NEMA 4X	132 lb / 60 kg	0.02 lb / 10 g	0.05 lb / 20 g	$14 \text{ in} \times 12 \text{ in} / 355 \text{ mm} \times 305 \text{ mm}$	83999818	1507
D32XW60VL	IP65; NEMA 4X	132 lb / 60 kg	0.02 lb / 10 g	0.05 lb / 20 g	$21.7 \text{ in} \times 16.5 \text{ in} / 550 \text{ mm} \times 420 \text{ mm}$	83999819	1896
D32XW150VL	IP65; NEMA 4X	330 lb / 150 kg	0.05 lb/20 g	0.1 lb / 50 g	$21.7 \text{ in} \times 16.5 \text{ in} / 550 \text{ mm} \times 420 \text{ mm}$	83999820	1896
D32XW150VX	IP65; NEMA 4X	330 lb / 150 kg	0.05 lb/20 g	0.1 lb / 50 g	$25.6 \text{ in} \times 19.7 \text{ in} / 650 \text{ mm} \times 500 \text{ mm}$	83999821	2496
D32XW300VX	IP65; NEMA 4X	660 lb / 300 kg	0.1 lb / 50 g	0.2 lb / 100 g	25.6 in $\times$ 19.7 in / 650 mm $\times$ 500 mm	83999822	2496

Accessories	Item No.	List Price (USD)
Printer, Impact, SF40A, AM	30064203	990
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
Cable, RS232, CKW TxxXW	80500552	179
Software, Winwedge	80850080	530
Wheel Kit, Defender up to 600 lb / 300 kg capacity	30372146	134































# **DEFENDER® 3000**

Economical Bench Scales for Basic Industrial Applications

## Display

Backlit liquid crystal display (LCD)

### Communication

Easy access communication port with RS232 interface (included)

## Construction

ABS indicator with reversible rear cover, 304 grade stainless steel platform with painted steel tubular frame, IP67 aluminum load cell, self-adjusting stainless steel feet with removable rubber caps. Regular models have painted steel column and wall bracket, front mount models (Model ends in 5) have painted front mount.

## **Design Features**

125% overload protection, NTEP Certified and Measurement Canada Approved, AC wall adapter power supply and internal rechargeable battery included.



30 lb model available



Durable ABS plastic terminal houses a 100-hour rechargeable battery which allows for continuous operation for five straight days.

This tough industrial scale features a 304 stainless steel platform, painted steel tubular frame, aluminum load cell, and painted steel base mount bracket. Includes a handle for easy scale mobility.

Easy-to-read display & basic counting mode allow for simple operation for everyday basic industrial applications. Offered with NTEP/Measurement Canada or OIML/EC Type approvals (depending on region).

Model	Mount	Capacity	Readability	<b>Certified Readability</b>	Platform Size	Item No.	List Price (USD)
D31P15BR	Column	30 lb / 15 kg	0.005 lb/2 g	0.01 lb/5 g	14 in × 12 in / 355 mm × 305 mm	30369116	841
D31P30BR	Column	66 lb / 30 kg	0.01 lb/5 g	0.02 lb / 10 g	14 in $\times$ 12 in / 355 mm $\times$ 305 mm	83998111	841
D31P60BR	Column	132 lb / 60 kg	0.02 lb / 10 g	0.05 lb / 20 g	14 in $\times$ 12 in / 355 mm $\times$ 305 mm	83998112	841
D31P60BL	Column	132 lb / 60 kg	0.02 lb / 10 g	0.05 lb / 20 g	$21.7 \text{ in} \times 16.5 \text{ in} / 550 \text{ mm} \times 420 \text{ mm}$	83998113	1030
D31P150BL	Column	330 lb / 150 kg	0.05 lb/20 g	0.1 lb / 50 g	$21.7 \text{ in} \times 16.5 \text{ in} / 550 \text{ mm} \times 420 \text{ mm}$	83998114	1030
D31P150BX	Column	330 lb / 150 kg	0.05 lb/20 g	0.1 lb / 50 g	25.6 in $\times$ 19.7 in / 650 mm $\times$ 500 mm	83998115	1092
D31P300BX	Column	660 lb / 300 kg	0.1 lb / 50 g	0.2 lb / 100 g	$25.6 \text{ in} \times 19.7 \text{ in} / 650 \text{ mm} \times 500 \text{ mm}$	83998116	1092
D31P15BR5	Front	30 lb / 15 kg	0.005 lb/2 g	0.01 lb/5 g	14 in $\times$ 12 in / 355 mm $\times$ 305 mm	30490640	702
D31P30BR5	Front	66 lb / 30 kg	0.01 lb/5 g	0.02 lb / 10 g	14 in $\times$ 12 in / 355 mm $\times$ 305 mm	30490641	702
D31P60BR5	Front	132 lb / 60 kg	0.02 lb / 10 g	0.05 lb / 20 g	14 in $\times$ 12 in / 355 mm $\times$ 305 mm	30490642	702
D31P60BL5	Front	132 lb / 60 kg	0.02 lb / 10 g	0.05 lb / 20 g	$21.7 \text{ in} \times 16.5 \text{ in} / 550 \text{ mm} \times 420 \text{ mm}$	30490643	810
D31P150BL5	Front	330 lb / 150 kg	0.05 lb/20 g	0.1 lb / 50 g	21.7 in $\times$ 16.5 in $/$ 550 mm $\times$ 420 mm	30490644	810

Accessories	Item No.	List Price (USD)
Printer, Impact, SF40A, AM	30064203	990
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Software, Winwedge	80850080	530
Interface Kit, RS232-USB	30304101	145
Interface Kit, RS232-Ethernet	30304102	145
Wheel Kit, Defender up to 600 lb / 300 kg capacity	30372146	134
Handle Kit, D3K	30381321	102



























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800.672.7722 www.ohaus.com

# **DEFENDER® DIGITAL FIELD TEST SCALE**

Portable Precision Ready for the Field

## Display

Backlit LCD display

### Communication

Standard RS232; Optional Ethernet or USB available with RS232 kits

### Construction

Painted steel base, ABS plastic indicator, metal carrying case

## **Design Features**

Bright backlit display, internal rechargeable battery with 70 hours use between recharges, metal case with locking latches, 9 ft. indicator cord to base, 9ft. cord from AC adapter to indicator, in-use cover included, AC wall adapter power supply and internal rechargeable battery included.



A capacity of 165 lb with a readability of 0.05 lb and the painted steel base in a case means that the Digital Field Test Scale provides precise, clear measurements, no matter where you're working.

The Field Test Scale comes packaged in a durable metal carrying case with steel latches and carrying handle, ensuring maximum portability for use anywhere on the job - without limiting you to the lab.

The backlit LCD display allows for easy reading of results - even in low-light conditions. The internal battery means that you can operate for up to 70 hours between recharges.

Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
D31P75SD	165 lb / 75 kg	0.05 lb / 0.02 kg	12.4 × 11 in / 316 × 280 mm	30448500	390

Accessories	Item No.	List Price (USD)
Interface Kit, RS232-USB	30304101	145
Interface Kit, RS232-Ethernet	30304102	145
Printer SF40A (includes RS232 cable)	30064203	990
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
RS232 Interface Cable to PC 9-pin	80500525	193
Software, Winwedge	80850080	530



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Software

# **ES** SERIES

Multipurpose Low Profile Shipping Scale

## Display

Liquid crystal display (LCD)

## Construction

ABS indicator, stainless steel platform, painted steel frame, 3 way mounting bracket

### **Design Features**

Auto-zero tracking, auto shut-off, AC wallpack power supply (included) or disposable battery power.





With different size low-profile platforms, there are ES scales that can accommodate weighing loads of different shapes and sizes.

The three-way mounting bracket allows you to mount the indicator to the scale base, above the scale platform, or on any vertical surface for maximum flexibility.

The sturdy and durable ES has a stainless steel platform and painted steel frame.

Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
ES6R	13 lb / 6 kg	0.005 lb / 0.002 kg	12.2 in × 10.8 in / 310 mm × 270 mm	71138830	887
ES30R	66 lb / 30 kg	0.05 lb / 0.01 kg	12.2 in $\times$ 10.8 in / 310 mm $\times$ 270 mm	71138831	887
ES50R	110 lb / 50 kg	0.05 lb / 0.02 kg	12.2 in $\times$ 10.8 in / 310 mm $\times$ 270 mm	71138832	887
ES50L	110 lb / 50 kg	0.05 lb / 0.02 kg	$20.5 \text{ in} \times 15.7 \text{ in} / 520 \text{ mm} \times 400 \text{ mm}$	71138833	943
ES100L	220 lb / 100 kg	0.1 lb / 0.05 kg	$20.5 \text{ in} \times 15.7 \text{ in} / 520 \text{ mm} \times 400 \text{ mm}$	71138834	943
ES200L	440 lb / 200 kg	0.2 lb / 0.1 kg	20.5 in $\times$ 15.7 in / 520 mm $\times$ 400 mm	71138835	943













Stability Indicator

# **SD** SERIES

Rugged Economical Shipping Scales

## **Display**

Liquid crystal display (LCD)

### Construction

ABS indicator, painted steel base, raised, embossed painted steel tread platform (non-L models), rubber feet (adjustable on L models), mounting brackets, transportation handle, extendable coiled cable

### Design Features

Transportation handle on packaging (non-L models), AC wallpack power supply (included) or disposable battery power.



WeighAlert mode available





The SD is available in three capacities of 35 kg, 75 kg and 200 kg and two platform sizes to meet the weighing needs of jobs of different physical sizes and capacities.

SD not only provides accurate general weight determination but also has the software to support dynamic/animal weighing and display hold.

New WeighAlert mode flashes weight display when weight on platform is greater than 70lb and less than 151lb, alerting user that package is too heavy for USPS service but below Less-Than-Truckload (LTL) limit for shipping.

Model	Capacity	Readability	Pan Size	Item No.	List Price (USD)
SD35	77 lb / 35 kg	0.05 lb / 0.02 kg	12.4 in × 11 in / 316 mm × 280 mm	83998234	243
SD75	165 lb / 75 kg	0.1 lb / 0.05 kg	12.4 in $\times$ 11 in / 316 mm $\times$ 280 mm	83998235	253
SD75L	165 lb / 75 kg	0.1 lb / 0.05 kg	20.5 in $\times$ 15.7 in / 520 mm $\times$ 400 mm	83998236	422
SD200	440 lb / 200 kg	0.2 lb / 0.1 kg	$12.4 \text{ in} \times 11 \text{ in} / 316 \text{ mm} \times 280 \text{ mm}$	83998237	295
SD200L	440 lb / 200 kg	0.2 lb / 0.1 kg	$20.5 \text{ in} \times 15.7 \text{ in} / 520 \text{ mm} \times 400 \text{ mm}$	83998238	455



















Simplifying Even the Most Complex Industrial Applications

## Display

4.3" (109 mm) Full-color WQVGA graphic display with user-controlled brightness

### Communication

Easy access communication port including standard USB and RS232 (included) and an optional third port of RS232 or Ethernet (accessories sold separately). GLP/GMP Data Output with Real Time Clock.

### Construction

Modular design, die-cast housing, removable stainless steel platform, integral weigh below hook, menu lock switch, level indicator

## Design Features

Checkweighing lights with selectable operation and audible signal settings, several selectable operating languages, selectable environmental and auto-print settings, stability indicator, overload/underload indicators, selectable brightness settings, auto-dim, auto-sleep, auto tare, chain tare, Internal AC power supply with line cord included, or optional internal rechargeable battery available.





With added Counting Features

Simplify complex applications and minimize the need for manual calculations with 10 advanced application modes, peripheral device control and an optional kit for a second scale platform.

The most precise scale in its class with onesecond stabilization time, up to 75,000d or 350,000d display resolution and legal-for-trade certifications.

Extremely durable scale designed to thrive in rugged industrial environments. Features IP54rated metal housing and sealed metal terminal.

Model	InCal™	Capacity	Readability	<b>Certified Readability</b>	Platform Size	Item No.	List Price (USD)
R71MD3		6 lb / 3 kg	0.0001 lb / 0.05 g	0.001 lb / 0.5 g	11 in × 11 in / 280 mm × 280 mm	30070289	1968
R71MD6		15 lb / 6 kg	0.0002 lb / 0.1 g	0.002 lb / 1 g	11 in $\times$ 11 in $/$ 280 mm $\times$ 280 mm	30070310	1968
R71MD15		30 lb / 15 kg	0.0005 lb / 0.2 g	0.005 lb / 2 g	12.2 in × 14.8 in / 311 mm × 377 mm	30070311	1968
R71MD35		70 lb / 35 kg	0.001 lb / 0.5 g	0.01 lb/5 g	$12.2 \text{ in} \times 14.8 \text{ in} / 311 \text{ mm} \times 377 \text{ mm}$	30070312	1968
R71MD60		150 lb / 60 kg	0.002 lb / 1 g	0.02 lb / 10 g	12.2 in × 14.8 in / 311 mm × 377 mm	30212873	1968
R71MHD3	•	6 lb / 3 kg	0.00002 lb / 0.01 g	0.0002 lb / 0.1 g	9.4 in × 9.4 in / 240 mm × 240 mm	30088840	3090
R71MHD6	•	15 lb / 6 kg	0.00005 lb / 0.02 g	0.0005 lb / 0.2 g	$9.4 \text{ in} \times 9.4 \text{ in} / 240 \text{ mm} \times 240 \text{ mm}$	30088841	3439
R71MHD15	•	30 lb / 15 kg	0.0002 lb / 0.1 g	0.002 lb / 1 g	$12.2 \text{ in} \times 14.8 \text{ in} / 311 \text{ mm} \times 377 \text{ mm}$	30088842	4546
R71MHD35	•	70 lb / 35 kg	0.0002 lb / 0.1 g	0.002 lb / 1 g	12.2 in × 14.8 in / 311 mm × 377 mm	30088843	5479

Accessories	Item No.	List Price (USD)
Ethernet Kit, R31 RC31 R71 V71	30037447	155
RS232 Kit, R31 RC31 R71 V71	30037448	155
Rechargeable Battery, EX-HiCap R71	30041295	388
Printer, Impact, SF40A, AM	30064203	990
Column Kit, Painted, R71	30095408	155
PCBA Kit, 2 <sup>nd</sup> Platform, R71	30097590	156
Zebra Label Printer GK420T (requires 30037448)	30611855	729
Datalogic Barcode Scanner QD2131	30593703	191

Accessories	Item No.	List Price (USD)
Discrete I/O Kit, 2-In/4-Out, R71	30097591	155
Cable, Extension, 9m, R71	30101495	109
PCBA Kit, Alibi Memory, R71 T71	80500503	123
Accessory, In Use Cover, R71	30135320	46
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Software, Winwedge	80850080	530





























































\* Not in parts counting mode \*\* Option

# RANGER® COUNT 4000

The Best Value for Durable Industrial Counting

## Display

3 window backlit liquid crystal display (LCD), 3 color Checkweighing LEDs

### Communication

Easy access communication port including standard RS232 (included) and second RS232, USB or Ethernet (accessories sold separately)

### Construction

Rugged Cast Aluminum Housing, Stainless Steel Platform

## **Design Features**

Cast Aluminum Housing, stainless steel platform, sealed front panel, menu lockswitch, up front level indicator, adjustable leveling feet, selectable environmental and auto-print settings, stability indicator, overload and underload indicators, low battery indicator, auto shut-off, auto tare, Internal AC power supply with line cord and internal rechargeable battery included.





Sturdy metal housing and slip-resistant rubber feet provide the protection, stability and long product life needed for tough industrial weighing.

Accurate weighing and counting performance is assured with 1:1,500,000 internal counting resolution and auto-optimization software that reduces errors.

Easy to operate with SmarText™ software, a centrally located count display and dedicated Sample and Tare keys.

Model	Capacity	Readability	<b>Certified Readability</b>	Platform Size	Item No.	List Price (USD)
RC41M3	6 lb / 3 g	0.0002 lb / 0.1 g	0.002 lb / 1 g	8.9 in × 11.8 in / 225 mm × 300 mm	30236779	1040
RC41M6	15 lb / 6 kg	0.0005 lb / 0.2 g	0.005 lb / 2 g	$8.9 \text{ in} \times 11.8 \text{ in} / 225 \text{ mm} \times 300 \text{ mm}$	30236940	1040
RC41M15	30 lb / 15 kg	0.001 lb / 0.5 g	0.01 lb/5 g	$8.9 \text{ in} \times 11.8 \text{ in} / 225 \text{ mm} \times 300 \text{ mm}$	30236941	1040
RC41M30	60 lb / 30 kg	0.002 lb / 1 g	0.02 lb / 10 g	$8.9 \text{ in} \times 11.8 \text{ in} / 225 \text{ mm} \times 300 \text{ mm}$	30236942	1040

Accessories	Item No.	List Price (USD)
PCBA Kit, 2 <sup>nd</sup> Platform, RC31 RC41	30037446	155
Ethernet Kit, R31 RC31 R71 V71 RC41	30037447	155
RS232 Kit, R31 RC31 R71 V71 RC41	30037448	155
USB Kit, R31 RC31 V71 RC41	30037449	155
In Use Cover	30240697	37

Accessories	Item No.	List Price (USD)
Printer, Impact, SF40A, AM	30064203	990
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Software, Winwedge	80850080	530











































\* Not in parts counting mode

# RANGER® COUNT 3000

Multipurpose Compact Counting Scales for Basic Industrial Applications

## Display

3 window backlit liquid crystal display (LCD), 3 color Checkweighing LEDs

#### Communication

Easy access communication port including standard RS232 (included) and second RS232, USB or Ethernet (accessories sold separately)

### Construction

ABS housing, stainless steel platform, numeric keypad, menu lock switch, up front level indicator, transportation handle

## Design Features

30 item library, 210 hours of battery life, 3 LED Checkweighing lights with selectable operation and audible signal settings, auto tare, selectable environmental and auto-print settings, auto shut-off, optional 2<sup>nd</sup> scale input, Internal AC power supply with line cord and internal rechargeable battery included.





Accurate weighing and counting are assured with high-resolution, 30-item library function, and auto-optimization software that reduces errors.

Easy to use in multi-step counting operations. Features three backlit LCD displays, including a centrally located count display, and an easy-tonavigate menu.

Eliminate waiting time and increase control of your operation with accurate one-second results.

Model	Capacity	Readability	<b>Certified Readability</b>	Platform Size	Item No.	List Price (USD)
RC31P1502	3 lb / 1.5 kg	0.0001 lb / 0.05 g	0.001 lb / 0.5 g	8.9 in × 11.8 in / 225 mm × 300 mm	30031787	856
RC31P3	6 lb / 3 kg	0.0002 lb / 0.1 g	0.002 lb / 1 g	$8.9 \text{ in} \times 11.8 \text{ in} / 225 \text{ mm} \times 300 \text{ mm}$	30031788	856
RC31P6	15 lb / 6 kg	0.0005 lb / 0.2 g	0.005 lb/2 g	$8.9 \text{ in} \times 11.8 \text{ in} / 225 \text{ mm} \times 300 \text{ mm}$	30031789	856
RC31P15	30 lb / 15 kg	0.001 lb / 0.5 g	0.01 lb/5 g	$8.9 \text{ in} \times 11.8 \text{ in} / 225 \text{ mm} \times 300 \text{ mm}$	30031790	856
RC31P30	60 lb / 30 kg	0.002 lb / 1 g	0.02 lb / 10 g	$8.9 \text{ in} \times 11.8 \text{ in} / 225 \text{ mm} \times 300 \text{ mm}$	30031791	856

Accessories	Item No.	List Price (USD)
PCBA Kit, 2 <sup>nd</sup> Platform, RC31	30037446	155
Ethernet Kit, R31 RC31 R71 V71	30037447	155
RS232 Kit, R31 RC31 R71 V71	30037448	155
USB Kit, R31 RC31 V71	30037449	155
Hook, R21 RC21 R31 RC31 V71	30037450	111
In-Use-Cover, R21 RC21 R31 RC31	30037451	39

Accessories	Item No.	List Price (USD)
Printer, Impact, SF40A, AM	30064203	990
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Carrying Case, TR TC R31 TC31 RC31	80850084	373
Software, Winwedge	80850080	530



































\* Not in parts counting mode

<sup>\*\*</sup> Option

Simplifying Even the Most Complex Industrial Applications

## Display

4.3" (109 mm) Full-color WQVGA graphic display with user-controlled brightness

### Communication

Easy access communication port including standard USB and RS232 (included) and an optional third port of RS232 or Ethernet (accessories sold separately). GLP/GMP Data Output with Real Time Clock.

## Construction

Modular design, die-cast housing, removable stainless steel platform, integral weigh below hook, menu lock switch, level indicator

### **Design Features**

Checkweighing lights with selectable operation and audible signal settings, several selectable operating languages, selectable environmental and auto-print settings, stability indicator, overload/underload indicators, selectable brightness settings, auto-dim, auto-sleep, auto tare, chain tare, Internal AC power supply with line cord included, or optional internal rechargeable battery available.





With Sieve Analysis Mode



Simplify complex applications and minimize the need for manual calculations with 10 advanced application modes, peripheral device control and an optional kit for a second scale platform.

The most precise scale in its class with onesecond stabilization time, up to 75,000d or 350,000d display resolution and legal-for-trade certifications.

Extremely durable scale designed to thrive in rugged industrial environments. Features IP54rated metal housing and sealed metal terminal.

Model	InCal™	Capacity	Readability	<b>Certified Readability</b>	Platform Size	Item No.	List Price (USD)
R71MD3		6 lb / 3 kg	0.0001 lb / 0.05 g	0.001 lb / 0.5 g	11 in × 11 in / 280 mm × 280 mm	30070289	1968
R71MD6		15 lb / 6 kg	0.0002 lb / 0.1 g	0.002 lb / 1 g	11 in × 11 in / 280 mm × 280 mm	30070310	1968
R71MD15		30 lb / 15 kg	0.0005 lb / 0.2 g	0.005 lb / 2 g	$12.2 \text{ in} \times 14.8 \text{ in} / 311 \text{ mm} \times 377 \text{ mm}$	30070311	1968
R71MD35		70 lb / 35 kg	0.001 lb / 0.5 g	0.01 lb/5 g	$12.2 \text{ in} \times 14.8 \text{ in} / 311 \text{ mm} \times 377 \text{ mm}$	30070312	1968
R71MD60		150 lb / 60 kg	0.002 lb / 1 g	0.02 lb / 10 g	$12.2 \text{ in} \times 14.8 \text{ in} / 311 \text{ mm} \times 377 \text{ mm}$	30212873	1968
R71MHD3	•	6 lb / 3 kg	0.00002 lb / 0.01 g	0.0002 lb / 0.1 g	9.4 in $\times$ 9.4 in / 240 mm $\times$ 240 mm	30088840	3090
R71MHD6	•	15 lb / 6 kg	0.00005 lb / 0.02 g	0.0005 lb / 0.2 g	9.4 in $\times$ 9.4 in / 240 mm $\times$ 240 mm	30088841	3439
R71MHD15	•	30 lb / 15 kg	0.0002 lb / 0.1 g	0.002 lb / 1 g	$12.2 \text{ in} \times 14.8 \text{ in} / 311 \text{ mm} \times 377 \text{ mm}$	30088842	4546
R71MHD35	•	70 lb / 35 kg	0.0002 lb / 0.1 g	0.002 lb / 1 g	$12.2 \text{ in} \times 14.8 \text{ in} / 311 \text{ mm} \times 377 \text{ mm}$	30088843	5479

Accessories	Item No.	List Price (USD)
Ethernet Kit, R31 RC31 R71 V71	30037447	155
RS232 Kit, R31 RC31 R71 V71	30037448	155
Rechargeable Battery, EX-HiCap R71	30041295	388
Printer, Impact, SF40A, AM	30064203	990
Column Kit, Painted, R71	30095408	155
PCBA Kit, 2 <sup>nd</sup> Platform, R71	30097590	156
Zebra Label Printer GK420T (requires 30037448)	30611855	729
Datalogic Barcode Scanner QD2131	30593703	191

Accessories	Item No.	List Price (USD)
Discrete I/O Kit, 2-In/4-Out, R71	30097591	155
Cable, Extension, 9m, R71	30101495	109
PCBA Kit, Alibi Memory, R71 T71	80500503	123
Accessory, In Use Cover, R71	30135320	46
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Software, Winwedge	80850080	530

































































\* Not in parts counting mode \*\* Option

The Best Value for Durable Industrial Weighing

## Display

Light-emitting diode display (LED), 3 color Checkweighing LEDs

#### Communication

Easy access communication port including standard RS232 (included) and second RS232, USB or Ethernet (accessories sold separately)

### Construction

Rugged Cast Aluminum Housing, Stainless Steel Platform

## **Design Features**

Cast aluminum housing, stainless steel platform, integral weigh-below hook, sealed front panel, menu lock switch, up front level indicator, adjustable leveling feet, selectable environmental and auto-print settings, stability indicator, overload and underload indicators, low battery indicator, auto shut-off, auto tare, NTEP Certified and Measurement Canada Approved, Internal AC power supply with line cord and internal rechargeable battery included.





Sturdy metal housing and slip-resistant rubber feet provide the protection, stability and long product life needed for tough industrial weighing.

The most user-friendly scale on the market features Smart Text<sup>™</sup> for easy operation and setup to ensure efficiency in the workplace.

With the largest display in its class, checkweighing LED indicators and backlit LCD display, the Ranger 4000 can function in almost any industrial environment.

Model	Capacity	Readability	Certified Readability	Platform Size	Item No.	List Price (USD)
R41ME3	6 lb / 3 kg	0.0002 lb / 0.1 g	0.002 lb / 1 g	8.9 in × 11.8 in / 225 mm × 300 mm	30236775	984
R41ME6	15 lb / 6 kg	0.0005 lb / 0.2 g	0.005 lb / 2 g	8.9 in × 11.8 in / 225 mm × 300 mm	30236776	984
R41ME15	30 lb / 15 kg	0.001 lb / 0.5 g	0.01 lb/5 g	$8.9 \text{ in} \times 11.8 \text{ in} / 225 \text{ mm} \times 300 \text{ mm}$	30236777	984
R41ME30	60 lb / 30 kg	0.002 lb / 1 g	0.02 lb / 10 g	8.9 in × 11.8 in / 225 mm × 300 mm	30236778	984

Accessories	Item No.	List Price (USD)
PCBA Kit, 2 <sup>nd</sup> Platform, RC31 R41	30037446	155
Ethernet Kit, R31 RC31 R71 V71 R41	30037447	155
RS232 Kit, R31 RC31 R71 V71 R41	30037448	155
USB Kit, R31 RC31 V71 R41	30037449	155
In Use Cover	30240697	37

Accessories	Item No.	List Price (USD)
Printer, Impact, SF40A, AM	30064203	990
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Software, Winwedge	80850080	530















































Multipurpose Compact Bench Scales for Basic Industrial Applications

## Display

Backlit liquid crystal display (LCD), 3 color Checkweighing LEDs

#### Communication

Easy access communication port including standard RS232 (included) and second RS232, USB or Ethernet (accessories sold separately)

#### Construction

ABS housing, stainless steel platform, menu lock switch, up-front level indicator, integral weigh-below hook, transportation handle

## **Design Features**

210 hours of battery life, 3 LED Checkweighing lights with selectable operation and audible signal settings, selectable environmental and auto-print settings, auto shut-off, auto tare, NTEP Certified and Measurement Canada Approved, internal AC power supply with line cord and internal rechargeable battery included.





User-friendly scale with easy setup to ensure

Eliminate waiting time and increase control of efficiency in the workplace. your operation with accurate one-second results.

With the largest display in its class, checkweighing LED indicators and backlit LCD display, the Ranger 3000 can function in any industrial environment.

Model	Capacity	Readability	Certified Readability	Platform Size	Item No.	List Price (USD)
R31P1502	3 lb / 1.5 kg	0.0001 lb / 0.05 g	0.001 lb / 0.5 g	8.9 in × 11.8 in / 225 mm × 300 mm	30031707	692
R31P3	6 lb / 3 kg	0.0002 lb / 0.1 g	0.002 lb / 1 g	$8.9 \text{ in} \times 11.8 \text{ in} / 225 \text{ mm} \times 300 \text{ mm}$	30031708	692
R31P6	15 lb / 6 kg	0.0005 lb / 0.2 g	0.005 lb / 2 g	$8.9 \text{ in} \times 11.8 \text{ in} / 225 \text{ mm} \times 300 \text{ mm}$	30031709	692
R31P15	30 lb / 15 kg	0.001 lb / 0.5 g	0.01 lb/5 g	$8.9 \text{ in} \times 11.8 \text{ in} / 225 \text{ mm} \times 300 \text{ mm}$	30031710	692
R31P30	60 lb / 30 kg	0.002 lb / 1 g	0.02 lb / 10 g	$8.9 \text{ in} \times 11.8 \text{ in} / 225 \text{ mm} \times 300 \text{ mm}$	30031711	692

Accessories	Item No.	List Price (USD)
Ethernet Kit, R31 RC31 R71 V71 R41	30037447	155
RS232 Kit, R31 RC31 R71 V71 R41	30037448	155
USB Kit, R31 RC31 V71 R41	30037449	155
In-Use-Cover, R21 RC21 R31 RC31 R41	30037451	39
Printer, Impact, SF40A, AM	30064203	990

Accessories	Item No.	List Price (USD)
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Carrying Case, TR TC R31 TC31 V71	80850084	373
Software, Winwedge	80850080	530











































The Best Compact Food Scale in its Class

### Display

Dual backlit liquid crystal displays (LCD)

### Communication

RS232 (included) or second RS232 or USB or Ethernet (accessories sold separately)

### Construction

ABS housing, stainless steel platform, touchless sensor, transportation handle, menu lock switch, up front level indicator

### **Design Features**

210 hours of battery life, 3 LED Checkweighing lights with selectable operation and audible signal settings, selectable environmental and auto-print settings, auto shut-off, auto tare, NTEP Certified and Measurement Canada Approved, internal AC power supply with line cord and internal rechargeable battery included.





Food-safe Valor 7000 is NSF-certified, USDA-AMS accepted, and supports HACCP-certified systems—suitable for food applications in dry areas.

Large displays with backlight allow for easy viewing of results. Easy access communication ports for fast and useful data transfer and storage.

Valor 7000 produces repeatable and accurate results within less than one second to virtually eliminate your wait time and improve productivity.

Model	Capacity	Readability	Certified Readability	Platform Size	Item No.	List Price (USD)
V71P1502T	3 lb / 1.5 kg	0.0001 lb / 0.05 g	0.001 lb / 0.5 g	8.9 in × 11.8 in / 225 mm × 300 mm	30031827	718
V71P3T	6 lb / 3 kg	0.0002 lb / 0.1 g	0.002 lb / 1 g	$8.9 \text{ in} \times 11.8 \text{ in} / 225 \text{ mm} \times 300 \text{ mm}$	30031828	718
V71P6T	15 lb / 6 kg	0.0005 lb / 0.2 g	0.005 lb/2 g	$8.9 \text{ in} \times 11.8 \text{ in} / 225 \text{ mm} \times 300 \text{ mm}$	30031829	718
V71P15T	30 lb / 15 kg	0.001 lb / 0.5 g	0.01 lb/5 g	$8.9 \text{ in} \times 11.8 \text{ in} / 225 \text{ mm} \times 300 \text{ mm}$	30031830	718
V71P30T	60 lb / 30 kg	0.002 lb / 1 g	0.02 lb / 10 g	$8.9 \text{ in} \times 11.8 \text{ in} / 225 \text{ mm} \times 300 \text{ mm}$	30031831	718

Accessories	Item No.	List Price (USD)
In-Use-Cover, V71	30037445	39
Ethernet Kit, R31 RC31 R71 V71	30037447	155
RS232 Kit, R31 RC31 R71 V71	30037448	155
USB Kit, R31 RC31 V71	30037449	155
Hook, R21 RC21 R31 RC31 V71	30037450	111

Accessories	Item No.	List Price (USD)
In-Use-Cover, Set (10), V71	30037469	79
Printer, Impact, SF40A, AM	30064203	990
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Carrying Case, TR TC R31 TC31 V71	80850084	373
Software, Winwedge	80850080	530



















\* Option



















Legal-for-Trade Food Scale That Enhances Efficiency in Harsh Environments

### **Display**

Dual light emitting diode (LED) displays

### Construction

ABS housing with stainless steel platform (PW), stainless steel housing and platform (XW), illuminated up-front level indicator, rear touchless sensor

### Design Features

Auto-close power jack cover, menu and mode setup navigation prompts on keys, transportation handle, NTEP Certified and Measurement Canada Approved, AC wallpack power supply and internal rechargeable battery included.







Food-safe Valor 4000 is NSF-certified, USDA-AMS accepted, and supports HACCP-certified systems, making it suitable demanding food processing applications.

Increase productivity with its touchless tare sensor, half-second stabilization time, check weighing mode, LEDs, and percent weighing mode.

Unique knife resistant keypad and IPX8 protection ensures durability and safe operation in wet conditions.

Model	Top Housing	Protection Rating	Capacity	Readability	Certified Readability	Platform Size	Item No.	List Price (USD)
V41XWE1501T	Stainless Steel	IPX8	3 lb / 1.5 kg	0.0005 lb / 0.2 g	0.001 lb / 0.5 g	7.5 in $\times$ 9.5 in / 190 mm $\times$ 242 mm	30035444	620
V41XWE3T	Stainless Steel	IPX8	6 lb / 3 kg	0.001 lb / 0.5 g	0.002 lb / 1 g	7.5 in $\times$ 9.5 in / 190 mm $\times$ 242 mm	30035445	620
V41XWE6T	Stainless Steel	IPX8	15 lb / 6 kg	0.002 lb / 1 g	0.005 lb/2 g	7.5 in $\times$ 9.5 in / 190 mm $\times$ 242 mm	30035446	620
V41XWE15T	Stainless Steel	IPX8	30 lb / 15 kg	0.005 lb / 2 g	0.01 lb/5 g	7.5 in $\times$ 9.5 in / 190 mm $\times$ 242 mm	30035447	620
V41PWE1501T	ABS	IPX8	3 lb / 1.5 kg	0.0005 lb / 0.2 g	0.001 lb / 0.5 g	7.5 in $\times$ 9.5 in / 190 mm $\times$ 242 mm	30035434	528
V41PWE3T	ABS	IPX8	6 lb / 3 kg	0.001 lb / 0.5 g	0.002 lb / 1 g	7.5 in $\times$ 9.5 in / 190 mm $\times$ 242 mm	30035435	528
V41PWE6T	ABS	IPX8	15 lb / 6 kg	0.002 lb / 1 g	0.005 lb/2 g	7.5 in $\times$ 9.5 in / 190 mm $\times$ 242 mm	30035436	528
V41PWE15T	ABS	IPX8	30 lb / 15 kg	0.005 lb/2 g	0.01 lb/5 g	7.5 in $\times$ 9.5 in / 190 mm $\times$ 242 mm	30035437	528

Accessories	Item No.	List Price (USD)
Large Pan, 11.8 × 8.8 in V22 V41	30251753	60
In-Use Cover for V41P	30479818	10



































Rugged, Full Stainless Steel Design in a High Performance Portable Scale

### Display

Backlit liquid crystal display (LCD)

#### Construction

Stainless steel housing and platform, up-front level indicator, load cell lock

### **Design Features**

Selectable environmental settings, auto tare, auto shut-off, selectable power-up unit, optional food accessories, NTEP Certified models available, AC wallpack power supply (included) or disposable battery power.







The stainless steel Valor 3000 Xtreme is NSF Certified and supports HACCP-Certified systems helping to ensure the integrity and safety of all food products weighed on the scale.

The compact Valor 3000 Xtreme requires minimal counter space and offers resolutions up to 40,000d and 0.01 g, providing precise measurements in demanding environments.

With software for general weighing, percent weighing and specific gravity, the Valor 3000 can be used for a variety of food weighing and measurement needs.

Model	Protection Rating	Capacity	Readability	Certified Readability	Platform Size	Item No.	List Price (USD)
V31XH202	Not Applicable	0.441 lb / 200 g	0.00005 lb / 0.01 g	_	Ø 4.7 in / Ø 120 mm	83998130	800
V31XW301	IP65; NEMA 4X	0.662 lb / 300 g	0.0005 lb / 0.1 g	_	6.2 in $\times$ 5.7 in / 158 mm $\times$ 146 mm	83998134	625
V31XH402	Not Applicable	0.88 lb / 400 g	0.00005 lb / 0.01 g	_	Ø 4.7 in / Ø 120 mm	83998178	1092
V31X501	Not Applicable	1.1 lb / 500 g	0.0005 lb / 0.1 g	_	Ø 4.7 in / Ø 120 mm	83998176	584
V31XH2	Not Applicable	4.4 lb / 2 kg	0.0005 lb / 0.1 g	_	6.2 in $\times$ 5.7 in / 158 mm $\times$ 146 mm	83998131	800
V31X3	Not Applicable	6 lb / 3 kg	0.005 lb / 1 g	_	6.2 in $\times$ 5.7 in / 158 mm $\times$ 146 mm	83998132	528
V31XH4	Not Applicable	8.8 lb / 4 kg	0.0005 lb / 0.1 g	_	6.2 in $\times$ 5.7 in / 158 mm $\times$ 146 mm	83998177	1092
V31X6	Not Applicable	15 lb / 6 kg	0.005 lb / 1 g	_	6.2 in $\times$ 5.7 in / 158 mm $\times$ 146 mm	83998133	528
V31XW3*	IP65; NEMA 4X	6 lb / 3 kg	0.005 lb / 0.5 g	0.005 lb / 1 g	6.2 in $\times$ 5.7 in / 158 mm $\times$ 146 mm	83998135	615
V31X3N*	Not Applicable	6 lb / 3 kg	0.005 lb / 0.5 g	0.005 lb / 1 g	6.2 in $\times$ 5.7 in / 158 mm $\times$ 146 mm	83999992	615
V31X6N*	Not Applicable	13.23 lb / 6 kg	0.005 lb / 1 g	0.005 lb / 2 g	6.2 in $\times$ 5.7 in / 158 mm $\times$ 146 mm	83999996	615
V31XW6*	IP65; NEMA 4X	15 lb / 6 kg	0.005 lb / 1 g	0.005 lb / 2 g	6.2 in $\times$ 5.7 in / 158 mm $\times$ 146 mm	83998136	615

Accessories	Item No.	List Price (USD)
Large Pan, SST, Sandwich, V31	80251147	86
Holder, SST, French Fries, V31	80251148	86
Holder, SST, Ice Cream Cone, V31	80251149	86
Carrying Case, V31	80251216	132





























NSF Listed USDA-AMS Accepted

A Rapid-Response Food Scale That Enhances Productivity in Harsh Environments

### Display

Dual light emitting diode (LED) displays

### Construction

ABS housing with stainless steel platform (PW), stainless steel housing and platform (XW), up-front level indicator

### **Design Features**

Auto-close power jack cover, transportation handle, AC wallpack power supply and internal rechargeable battery included.





60 lb models available



The sturdy polycarbonate keypad offers protection from knives and other sharp instruments used in food preparation, processing and portioning applications.

A unique IPX8 flow-thru design ensures that the NSF-certified Valor 2000 will drain moisture in the scale when used in wet conditions.

Stabilization time is less than a half-second. Large front and rear LED displays allow for easy viewing so two operators can share one scale.

Model	Top Housing	Protection Rating	Capacity	Readability	Platform Size	Item No.	List Price (USD)
V22XWE1501T	Stainless Steel	IPX8	3 lb / 1.5 kg	0.0005 lb / 0.2 g	7.5 in × 9.5 in / 190 mm × 242 mm	30035439	564
V22XWE3T	Stainless Steel	IPX8	6 lb / 3 kg	0.001 lb / 0.5 g	7.5 in $\times$ 9.5 in / 190 mm $\times$ 242 mm	30035440	564
V22XWE6T	Stainless Steel	IPX8	15 lb / 6 kg	0.002 lb / 1 g	7.5 in $\times$ 9.5 in / 190 mm $\times$ 242 mm	30035441	564
V22XWE15T	Stainless Steel	IPX8	30 lb / 15 kg	0.005 lb / 2 g	7.5 in $\times$ 9.5 in / 190 mm $\times$ 242 mm	30035442	564
V22XWE30T	Stainless Steel	IPX8	60 lb / 30 kg	0.01 lb/5 g	7.5 in $\times$ 9.5 in / 190 mm $\times$ 242 mm	30251705	564
V22PWE1501T	ABS	IPX8	3 lb / 1.5 kg	0.0005 lb / 0.2 g	7.5 in $\times$ 9.5 in / 190 mm $\times$ 242 mm	30035682	475
V22PWE3T	ABS	IPX8	6 lb / 3 kg	0.001 lb / 0.5 g	7.5 in $\times$ 9.5 in / 190 mm $\times$ 242 mm	30035683	475
V22PWE6T	ABS	IPX8	15 lb / 6 kg	0.002 lb / 1 g	7.5 in $\times$ 9.5 in / 190 mm $\times$ 242 mm	30035684	475
V22PWE15T	ABS	IPX8	30 lb / 15 kg	0.005 lb / 2 g	7.5 in $\times$ 9.5 in / 190 mm $\times$ 242 mm	30035685	475
V22PWE30T	ABS	IPX8	60 lb / 30 kg	0.01 lb / 5 g	7.5 in $\times$ 9.5 in / 190 mm $\times$ 242 mm	30251704	475

Accessories	Item No.	List Price (USD)
Large Pan, 11.8 × 8.8 in V22 V41	30251753	60
In-Use Cover for V41P	30479818	10

























# **VALOR®1000 (VI2)**

Reliable Food-Safe Scale for Dry Environments

### Display

1"/25.4 mm white backlit LCD

#### Construction

ABS housing with integrated carry handles, removable stainless steel platform

### **Design Features**

External calibration software, integrated up front level bubble, adjustable feet, selectable weighing units, included in-use cover, AC wallpack power supply (included) or disposable battery power.





NSF Certified, USDA-AMS listed and supports HACCP-Certified systems for use in food processing and food preparation.

Can be powered for up to 1,500 hours on a single set of disposable batteries (not included) for portable use.

White ABS housing is designed to limit build-up of food on scale - in-use cover included for added protection.

Model	Capacity	Readability	Platform Size	Item No.	List Price (USD)
V12P3	6 lb 3 kg / 3,000 g 6 lb / 96 oz	0.001 lb 0.0005 kg / 0.5 g 0.02 oz	9.65 × 7.48 in 245 × 190 mm	30539390	222
V12P6	15 lb 6 kg / 6,000 g 15 lb / 240 oz	0.002 lb 0.001 kg / 1 g 0.05 oz	$9.65 \times 7.48 \text{ in}$ $245 \times 190 \text{ mm}$	30539391	222
V12P15	30 lb 15 kg / 15,000 g 30 lb / 480 oz	0.005 lb 0.002 kg / 2 g 0.1 oz	$9.65 \times 7.48 \text{ in}$ 245 × 190 mm	30539392	222
V12P30	60 lb 30 kg / 30,000 60 lb / 960 oz	0.01 lb 0.005 kg / 5 g 0.2 oz	$9.65 \times 7.48 \text{ in}$ $245 \times 190 \text{ mm}$	30539393	222

Accessories	Item No.	Price (USD)
In-use cover (1)	30559105	10
In-use cover (10)	30559106	100
Stainless Steel Platform 11.8 in x 8.9 in 300 x 225 mm	30559107	50

















# **CATAPULT® 1000**

Economical Compact Shipping Scales

### Display

Liquid crystal display (LCD)

### Construction

ABS housing and platform, stainless steel platform (accessory sold separately), transportation handle

### **Design Features**

Low profile, compact design, AC wallpack (included) or disposable battery power.



WeighAlert mode available



Bring the Catapult 1000 right to your work with the integrated carrying handle and its battery powered operation. Catapult 1000 not only provides accurate general weight determination but also has the software to support dynamic/animal weighing.

New WeighAlert mode in C11P75 model flashes weight display when weight on platform is greater than 70 lb and less than 151 lb, alerting user that package is too heavy for USPS service but below Less-Than-Truckload (LTL) limit for shipping.

Model	Capacity	Readability	Platform Size	Item No.	List Price (USD)
C11P9	20 lb / 9 kg	0.01 lb / 0.005 kg	11 in × 12.4 in / 280 mm × 316 mm	83998137	273
C11P20	44 lb / 20 kg	0.02 lb / 0.01 kg	11 in $\times$ 12.4 in / 280 mm $\times$ 316 mm	83998138	273
C11P75	165 lb / 75 kg	0.1 lb / 0.05 kg	11 in $\times$ 12.4 in / 280 mm $\times$ 316 mm	83998139	301

Accessories	Item No.	List Price (USD)
Pan, SST, C11P	80251248	55















## **DEFENDER® 6000 WASHDOWN**

Extreme Washdown Indicators

### Display

- i-DT61XWE has a white LED with 20 mm / 0.8 in high digits and 3 color (red, green, orange) 8 × 16 dot matrix LED checkweighing/filling display.
- i-DT61PW has a white backlit LCD display with 45 mm / 1.8 in high digits. Wide 3 Color (red, green, yellow) LED Bar spans width of display for clear checkweighing results.

### Communication

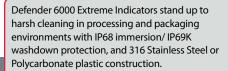
- i-DT61XWE has built-in RS232 and USB host, Hands-free, touchless sensor reduces contamination risk; optional 2nd RS232/RS485/USB Device, Analog Output, Wi-Fi/Bluetooth, Ethernet and Discrete I/O
- i-DT61PW can store up to 1,000 weighing results in memory for download using optional IR data connector.

#### Construction

i-DT61XWE: 316 Stainless Steel / i-DT61PW: Polycarbonate

### **Design Features**

Up to 75,000d/5,000e NTEP certified and Measurement Canada approved Class III/IIIHD legal-for-trade, GMP/GLP output with time/date, EasyConnect connector allows fast set-up. i-DT61XWE has hardwired internal AC power supply included—optional external USB powerbank holder available. i-DT61PW powered by 6 "D" cell batteries for up to 1,600 hours of continuous use.



NSF certified, supporting HACCP systems with corrosion protection in food, chemical processing, and packaging.





Configurable data output with GMP/GLP and time/date for result traceability. Dedicated target key for fast item setup. i-DT61XWE includes numeric keypad and Library for up to 300 items, and can support up to 100 user profiles for easy data management.

Model	Protection Rating	Construction	Item No.	List Price (USD)
i-DT61PW for Wall or Column Mounting	IP68 / IP69K	Polycarbonate with 316 Stainless Steel Bracket	30575583	695
i-DT61PW for use with Front Mount Kit 30424024	IP68 / IP69K	Polycarbonate with 316 Stainless Steel Bracket	30575585	695
i-DT61XWE for Wall or Column Mounting	IP68 / IP69K	316 Stainless Steel Housing and Bracket	30575584	950

Accessories	Item No.	List Price (USD)
Wi-Fi/Bluetooth Dongle for i-DT61XWE	30412537	231
RS232/RS485/USB Device Kit for i-DT61XWE	30424404	167
Ethernet Kit for i-DT61XWE	30429666	167
Analog Output Kit for i-DT61XWE	30424403	167
Discrete I/O with Relay Kit (2 In/4 Out) for i-DT61XWE	30097591	155
Light Tower, 3 Colors, 243 mm, IP65 (requires 30097591) for i-DT61XWE	30424021	194
External Power Bank Holder, 304 Stainless Steel (requires external USB power bank) for i-DT61XWE	30572907	275

Accessories	Item No.	List Price (USD)
RS232 Cable	80500552	179
M16 Gland with Ferrite	30379716	21
Alibi Memory for i-DT61XWE	80500503	123
30' Loadcell Extension Cable (9 m)	30424409	167
IR Communication Kit for i-DT61PW only	30572910	75
Column Kit 10.2 in high, 316 Stainless Steel	30572908	150
Column Kit 26.4 in high, 316 Stainless Steel	30572909	180
Front Mounting Kit, 316 Stainless Steel for i-DT61PW	30424024	140















































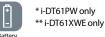












### Multifunctional Indicators for Standard Industrial Applications

### Display

Dot matrix LCD with white LED backlight, 256 × 80 pixels

### Communication

Standard RS232, MicroSD Card included; Optional Ethernet, WiFi/Bluetooth, 2<sup>nd</sup> RS232/RS485/USB, Analog Output, or 2 In/4 Out Digital I/O.

#### Construction

TD52XW: All stainless steel housing and bracket , TD52P: ABS plastic housing and powder-coated steel bracket

### **Design Features**

Configurable resolution 75,000d/10,000e NTEP Class III/IIIL certified and Measurement Canada Class III/IIIHD approved, GMP/GLP output with time/date, Alibi or standard memory, multiple operating languages, EasyConnect connector allows fast set-up with compatible Defender bases. Includes internal terminal block for hardwiring TD52 indicator to bases without EasyConnect module.

TD52P: Internal AC power supply with line cord included. TD52XW: Hardwired internal AC power supply included. Optional internal rechargeable battery available for both indicators.



TD52P



TD52XW

See results clearly on the large backlit display. The alphanumeric keypad & function keys allow for a simplified user experience. On-screen prompts and soft keys will guide you through the operation.

Results can be stored in the Micro SD card. Data output via built-in RS232 or optional interfaces including RS232/RS485/USB device, Ethernet & Bluetooth/WiFi. Analog Output & Discrete I/O with relays.

Features common industrial modes & supports a 50,000 item library & 1,000 user profiles which can be downloaded/uploaded for easy set-up (with SD Card). GMP/GLP with time/date for result traceability.

Model	Protection Rating	Item No.	List Price (USD)
TD52P	Dry Use ABS Indicator	30424078	702
TD52XW	IP68 / NEMA 4X Stainless Steel Indicator	30424079	866

<b>SD)</b> 167
170
1/2
193
167
167
155
194
231
135
200
21
729
191

Accessories	Item No.	List Price (USD)
In-use Cover Set, TD52XW	30424023	28
In-use Cover set (10), TD52P	30469948	167
In-use Cover set (10), TD52XW	30469949	222
LC Extension Cable, 9 meters, D52	30424409	167
M16 Gland with Ferrite, to TD52	30379716	21
Wall Mount Kit, SST, TD52XW	30424026	84
Wall Mount Kit, CS, TD52P	30424027	62
Printer SF40A	30064203	990
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
Cable, RS232, CKW TxxXW	80500552	179
Software, Winwedge	80850080	530
Column Kit, Floor Stand, Painted	30531244	199
Column Kit, Floor Stand, Stainless Steel	30539553	399

























NTEP Certified



























\*Option

### **172xw**

### Advanced Performance Stainless Steel Indicator with External Device Control Capabilities

### Display

Transflective graphic LCD with white backlight,  $240 \times 96$  pixels

#### Communication

RS232 and SD card reader with SD card included. Ethernet, USB/Discrete I/O or COM2 kit with 2<sup>nd</sup> RS232/485 available.

### Construction

IP66/NEMA 4X stainless steel housing and mounting bracket

### **Design Features**

User-configurable resolution 50,000d/10,000e, Checkweighing lights with selectable operation and audible signal settings, sealed front panel, five operating languages (English, Spanish, French, German and Italian), selectable environmental and auto-print settings, stability indicator, overload/underload indicators, NTEP Certified and Measurement Canada Approved, hardwired internal AC power supply included.



With Truck In/Out Mode

With a 50,000 displayed resolution and the ability to support up to 10 load cells, T72XW was designed for heavy-duty industrial applications such as vehicle weighing.

Two option slots are available to enable a wide range of connectivity interfaces. Control external devices using the discrete I/O interface and transfer data through the serial, USB or Ethernet ports.

T72XW is very easy to set up and navigate featuring a vivid graphic display with on-screen prompts and an alphanumeric keypad with designated keys for common functions such as Tare and ID information.

Model	Protection Rating	Item No.	List Price (USD)
T72XW	IP66; NEMA 4X	30126959	917

Item No.	List Price (USD)
30064203	990
80251992	760
30132163	155
30132164	173
30132165	155
72209340	55
80500552	179
80252584	216
80850080	530
	30064203 80251992 30132163 30132164 30132165 72209340 80500552 80252584









































## T5lxw

### Multifunctional Bench Scales for Standard Industrial Applications

### Display

Backlit liquid crystal display (LCD), 3 color Checkweighing LEDs

#### Communication

RS232 (included). Internal 2<sup>nd</sup> RS232, RS232/RS485, AC or DC relay kits available. GLP/GMP data output with real-time clock.

### Construction

IP66/NEMA 4X stainless steel housing and mounting bracket, four-key membrane keypad, easy-open hinged front cover

#### **Design Features**

User-configurable resolution up to 30,000d/10,000e, NTEP Certified and Measurement Canada Approved, hardwired internal AC power supply included.



T51XW features software for parts counting, dynamic weighing, percent weighing, checkweighing, display hold for large containers and can meet traceability requirements.

Multiple connectivity capabilities include built-in RS232 bi-directional interface and external input as well as optional RS422/485, second RS232 and AC or DC relay.

The durably-built T51XW NEMA 4X/IP66 stainless steel water resistant indicator has a hinged front cover that opens easily for servicing and installation of the connectivity options.

> 80850080 30454644

30531244

30539553

80252584

254

199

399

216

Model	Protection Rating	Item No.	List Price (USD)
T51XW	IP66; NEMA 4X	83999840	712
Accessories	Item No. List Price (USD)	Accessories	Item No. List Price (USD)

Accessories	Item No.	List Price (USD)
Printer, Impact, SF40A, AM	30064203	990
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
Cable, RS232, CKW TxxXW	80500552	179
Relay Kit, AC, T51 T71	80500720	355
Relay Kit, DC, T51 T71	80500727	305
Wall Mount Kit, SST, T51XW T71XW	80500735	84









































### **T32xw**

### Economical Stainless Steel Washdown Indicator for Basic Industrial Applications

### **Display**

Backlit liquid crystal display (LCD)

### Communication

Easy access communication port including RS232 interface (included)

### Construction

IP65/NEMA 4X stainless steel housing and mounting bracket, easy-open hinged front cover

### **Design Features**

User-configurable resolution up to 20,000d/6,000e, NTEP Certified and Measurement Canada Approved, Hardwired AC power supply and rechargeable battery included.



The NEMA 4X/IP65 stainless steel construction protects the indicator from water damage and a hinged front cover opens up easily, offering instant access for servicing.

The long-lasting internal rechargeable battery provides continuous operation for up to 58 hours, ensuring uninterrupted operation for more than two straight days.

Simple operation enhanced by an easy-to-read display and even basic counting mode round out this industrial indicator, making it ideal for everyday basic industrial use.

Model	Protection Rating	Item No.	List Price (USD)
T32XW	IP65; NEMA 4X	83999823	474

Accessories	Item No.	List Price (USD)
Printer, Impact, SF40A, AM	30064203	990
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
Cable, RS232, CKW TxxXW	80500552	179
Software, Winwedge	80850080	530
Column Kit, Floor Stand, Painted	30531244	199
Column Kit, Floor Stand, Stainless Steel	30539553	399
Cable ST103 - TxxXW	80252584	216



























## T32M

### Economical Metal Indicator for Basic Industrial Applications

### **Display**

T32MC: Backlit liquid crystal display (LCD) T32ME: Light-emitting diode display (LED); 3 color checkweigh LEDs included with both models

### Communication

Easy access communication port including RS232 interface (included). External RS232-USB or RS232-Ethernet connectors available.

### Construction

Front ABS/rear painted steel housing and painted steel mounting bracket

### **Design Features**

User-configurable resolution up to 20,000d/6,000e, NTEP Certified and Measurement Canada Approved, AC wall adapter power supply included.





T32MC and T32ME are OIML approved, NTEP certified, and Measurement Canada approved for use in all legal-for-trade applications.

Application modes include weighing, simple parts counting, basic checkweighing, display hold and accumulation of results.

Constructed of painted steel housing and highimpact ABS faceplate, T32MC and T32ME are highly durable.

Model	Item No.	List Price (USD)
T32ME	83998166	306
T32MC	83998167	306

Accessories	Item No.	List Price (USD)
Printer, Impact, SF40A, AM	30064203	990
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Software, Winwedge	80850080	530
Column Kit, Floor Stand, Painted	30531244	199
Column Kit, Floor Stand, Stainless Steel	30539553	399
Interface Kit, RS232-USB	30304101	145
Interface Kit, RS232-Ethernet	30304102	145





























# T3IP

### Economical ABS Plastic Indicator for Basic Industrial Applications

### Display

Backlit liquid crystal display (LCD)

### Communication

Easy access communication port including RS232 interface (included). External RS232-USB or RS232-Ethernet connectors available.

### Construction

ABS housing and painted steel mounting bracket, non-slip rubber feet

### **Design Features**

User-configurable resolution up to 20,000d/6,000e, NTEP Certified and Measurement Canada Approved, AC wall adapter power supply and internal rechargeable battery included.





Front mount handle accessory available

T31P is OIML approved, NTEP certified and Measurement Canada approved for use in all legal-for-trade applications.

The ultra-long-lasting internal rechargeable battery provides operation on a single charge for up to 100 hours.

The reversible rear cover offers the flexibility for connected cables to exit above or below the indicator housing.

Model	Item No.	List Price (USD)
T31P	83998110	390

Accessories	Item No.	List Price (USD)
Printer, Impact, SF40A, AM	30064203	990
Printer, Thermal, STP-103, US (requires 80500525)	80251992	760
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	193
Software, Winwedge	80850080	530
Column Kit, Floor Stand, Painted	30531244	199
Column Kit, Floor Stand, Stainless Steel	30539553	399
Interface Kit, RS232-USB	30304101	145
Interface Kit, RS232-Ethernet	30304102	145
Handle Kit, D3K	30381321	102



















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# **CKW BASES**

High Quality Washdown Checkweighing Base

### Construction

304 grade stainless steel platform with no visible threads, rounded corners, drain holes, extended skirt and open frame, IP67 stainless steel load cells

### Design Features

No visible threads for conformance to food safety requirements, NSF Certified, USDA-AMS Accepted, and supports HACCP-certified systems with NTEP Certified and Measurement Canada Approved



The CKW base is NSF Certified, USDA-AMS Accepted, supports HACCP-certified systems, and is safe for use in food processing applications.

Constructed of IP67 stainless steel loadcells, the CKW base is protected from harsh elements and can be thoroughly washed down to ensure cleanliness.

The external level indicator and adjustable nonslip leveling feet assure that the base is stable and producing accurate results.

Model	Capacity	Readability	Certified Readability	Platform Size	Item No.	List Price (USD)
CKW3R	6 lb / 3 kg	0.001 lb / 0.5 g	0.002 lb / 1 g	10 in × 10 in / 254 mm × 254 mm	30379430	964
CKW6R	15 lb / 6 kg	0.002 lb / 1 g	0.005 lb / 2 g	10 in $\times$ 10 in / 254 mm $\times$ 254 mm	30379431	964
CKW15L	30 lb / 15 kg	0.005 lb / 2 g	0.01 lb/5 g	12 in $\times$ 12 in / 305 mm $\times$ 305 mm	30379432	1112

Accessories	Item No.	List Price (USD)
Column Kit, 23 cm / 9 in, Stainless Steel for T71XW/T51XW Indicator	30454644	254
Wall Mount Bracket Stainless Steel for T71XW/T51XW Indicator	80500735	84









NSF Listed USDA-AMS Accepted

**DEFENDER® K SERIES 316 STAINLESS STEEL BASES** 

High Quality All Stainless Steel Base for Harsh Washdown Industrial Weighing

### Construction

316 Stainless Steel base with IP68/IP69K hermetically-sealed load cell. Pan optional on  $10 \times 10$  in and  $12 \times 12$  in bases.

### **Design Features**

Up to 10,000d/5,000e NTEP certified and Measurement Canada approved Class III legal-for-trade resolution.



Defender K base stands up to harsh cleaning in processing and packaging environments with 316 stainless steel construction and IP68 immersion/ IP69K washdown protected, hermetically-sealed load cell.

Durable Defender 6000 is NSF certified, supporting HACCP systems with a 316 stainless steel base providing corrosion protection in food, chemical processing, and packaging.

Includes EasyConnect module for fast connection to selected OHAUS Defender indicators (TD52XW, i-DT61XWE, i-DT61PW).

Model	Capacity	Readability	<b>Certified Readability</b>	Platform Size	Item No.	List Price (USD)
i-D5K1S	10 lb / 5 kg	0.001 lb / 0.5 g	0.002 lb / 1 g	9.8 × 9.8 in / 250 × 250 mm	30575603	1090
i-D12K1R	25 lb / 12.5 kg	0.002 lb / 1 g	0.005 lb / 5 g	$11.8 \times 11.8 \text{ in } / 300 \times 300 \text{ mm}$	30575604	1170
i-D25K1R	50 lb / 25 kg	0.005 lb/2 g	0.01 lb/5 g	$11.8 \times 11.8 \text{ in } / 300 \times 300 \text{ mm}$	30575605	1170
i-D50K1L	100 lb / 50 kg	0.01 lb/5 g	0.02 lb / 10 g	$19.7 \times 15.7 \text{ in } / 500 \times 400 \text{ mm}$	30575606	1475
i-D150K1L	300 lb / 150 kg	0.02 lb / 10 g	0.1 lb / 50 g	$19.7 \times 15.7 \text{ in } / 500 \times 400 \text{ mm}$	30575607	1475

Accessories	Item No.	List Price (USD)
Wheel Kit, 304 Stainless Steel	30616409	167
Pan 12 × 12 in, 304 Stainless Steel	30427798	93
Pan 10 × 10 in, 304 Stainless Steel	30427799	78
Column Kit 10.2 in high, 316 Stainless Steel	30572908	150
Column Kit 26.4 in high, 316 Stainless Steel	30572909	180
Front Mounting Kit, 316 Stainless Steel for i-DT61PW	30424024	140











HACCP SUPPORTS HACCP SYSTEMS

### **DEFENDER® WQ & WT SERIES STAINLESS STEEL BASES**

High Quality All Stainless Steel Base for Washdown Industrial Weighing

### Construction

Stainless steel platform, base frame and loadcell.

### **Design Features**

Up to 25,000d/5,000e NTEP Class III certified and Measurement Canada Class III approved legal-for-trade performance, EasyConnect connector allows fast set-up with OHAUS TD52 indicators, speeding configuration and installation. Adapter available for wiring to non-TD52 indicator.



Welded stainless steel construction in square and rectangular shapes for demanding industrial applications.

Resolutions up to 25,000d/5,000e NTEP Class III and Measurement Canada Class III approved for legal-for-trade performance.

Durably constructed with stainless steel platform, bases and loadcells.

Model	Capacity	Readability	<b>Certified Readability</b>	Platform Size	Item No.	List Price (USD)
D2WQS	5 lb / 2.5 kg	0.0002 lb / 0.1g	0.001 lb / 0.5 g	10 × 10 in / 254 × 254 mm	30419628	861
D5WQS	10 lb / 5 kg	0.0005 lb / 0.2 g	0.002 lb / 1 g	$10 \times 10 \text{ in } / 254 \times 254 \text{ mm}$	30419629	861
D12WQS	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 5 g	$10 \times 10 \text{ in } / 254 \times 254 \text{ mm}$	30419630	861
D12WQR	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 5 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30419634	912
D25WQR	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb / 5 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30419635	912
D50WQR	100 lb / 50 kg	0.005 lb / 2 g	0.02 lb / 10 g	12 × 12 in / 305 × 305 mm	30419636	912
D25WQL	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb / 5 g	18 × 18 in / 457 × 457 mm	30419642	1450
D50WQL	100 lb / 50 kg	0.005 lb / 2 g	0.02 lb / 10 g	18 × 18 in / 457 × 457 mm	30419643	1450
D125WQL	250 lb / 125 kg	0.01 lb / 5 g	0.05 lb / 50 g	18 × 18 in / 457 × 457 mm	30419644	1450
D50WTX	100 lb / 50 kg	0.005 lb / 2 g	0.02 lb / 10 g	18 × 24 in / 457 × 610 mm	30419648	1691
D125WTX	250 lb / 125 kg	0.01 lb / 5 g	0.05 lb / 50 g	18 × 24 in / 457 × 610 mm	30419649	1691
D250WTX	500 lb / 250 kg	0.02 lb / 10 g	0.1 lb / 50 g	18 × 24 in / 457 × 610 mm	30419650	1691
D50WQV	100 lb / 50 kg	0.005 lb / 2 g	0.02 lb / 10 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30419655	2014
D125WQV	250 lb / 125 kg	0.01 lb / 5 g	0.05 lb / 50 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30419656	2014
D250WQV	500 lb / 250 kg	0.02 lb / 10 g	0.1 lb / 50 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30419657	2142
D500WQV*	1,000 lb / 500 kg	0.05 lb / 20 g	0.2 lb / 100 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30419658	2142

<sup>\*</sup> Aluminum loadcell

Accessories	Item No.	List Price (USD)
Column Kit, 35 cm / 13.9 in, Painted Carbon Steel to TD52 Indicator	30424410	73
Column Kit, 68 cm / 26.9 in, Painted Carbon Steel to TD52 Indicator	30424411	95
Column Kit, 98 cm / 38.8 in, Painted Carbon Steel to TD52 Indicator	30424412	106
Column Kit, 35 cm / 13.9 in, Stainless Steel to TD52 Indicator	30424413	161
Column Kit, 68 cm / 26.9 in, Stainless Steel to TD52 Indicator	30424414	205
Column Kit, 98 cm / 38.8 in, Stainless Steel to TD52 Indicator	30424415	222

Accessories	Item No.	List Price (USD)
Indicator Front Mount Kit Stainless Steel for TD52 Indicator	30424024	111
Column Mounted Printer Holder Kit	30424025	62
LC Extension Cable, 9m/29.7 ft to TD52 Indicator	30424409	167
Load Cell Cable Adapter Kit, non-TD52 Indicator to D52 Base	30429931	51
Wheel Kit, Defender Series (for bases up to 300 kg/600lb)	30372146	134





# **DEFENDER® RQ & RT SERIES BASES**

High Quality Powder-Coated Steel Bases for Industrial Weighing

### Construction

Stainless steel platform, powder-coated base frame and aluminum loadcell.

### **Design Features**

Up to 25,000d/5,000e NTEP Class III certified and Measurement Canada Class III approved legal-for-trade performance, EasyConnect connector allows fast set-up with OHAUS TD52 indicators, speeding configuration and installation. Adapter available for wiring to non-TD52 indicator.



Welded steel construction in square and rectangular shapes for demanding industrial applications.

Resolutions up to 25,000d/5,000e NTEP Class III and Measurement Canada Class III approved for legal-for-trade performance.

Durably constructed with stainless steel platform, powder-coated steel bases and aluminum loadcells.

Model	Capacity	Readability	Certified Readability	Platform Size	Item No.	List Price (USD)
D12RQR	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 2 g	12 × 12 in / 305 × 305 mm	30419631	753
D25RQR	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb/5 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30419632	753
D50RQR	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$12 \times 12 \text{ in } / 305 \times 305 \text{ mm}$	30419633	753
D12RTR	25 lb / 12.5 kg	0.001 lb / 0.5 g	0.005 lb / 2 g	$12 \times 14 \text{ in } / 305 \times 355 \text{ mm}$	30419637	861
D25RTR	50 lb / 25 kg	0.002 lb / 1 g	0.01 lb/5 g	$12 \times 14 \text{ in } / 305 \times 355 \text{ mm}$	30419638	861
D50RTR	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	12 × 14 in / 305 × 355 mm	30419639	861
D50RQL	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$18 \times 18 \text{ in } / 457 \times 457 \text{ mm}$	30419640	1076
D125RQL	250 lb / 125 kg	0.01 lb/5 g	0.05 lb / 20 g	18 × 18 in / 457 × 457 mm	30419641	1076
D50RTX	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$18 \times 24 \text{ in } / 457 \times 610 \text{ mm}$	30419645	1128
D125RTX	250 lb / 125 kg	0.01 lb/5 g	0.05 lb / 20 g	18 × 24 in / 457 × 610 mm	30419646	1128
D250RTX	500 lb / 250 kg	0.02 lb / 10 g	0.1 lb / 50 g	$18 \times 24 \text{ in } / 457 \times 610 \text{ mm}$	30419647	1128
D50RQV	100 lb / 50 kg	0.005 lb/2 g	0.02 lb / 10 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30419651	1261
D125RQV	250 lb / 125 kg	0.01 lb/5 g	0.05 lb / 20 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30419652	1261
D250RQV	500 lb / 250 kg	0.02 lb / 10 g	0.1 lb / 50 g	24 × 24 in / 610 × 610 mm	30419653	1286
D500RQV	1,000 lb / 500 kg	0.05 lb / 20 g	0.2 lb / 100 g	$24 \times 24 \text{ in } / 610 \times 610 \text{ mm}$	30419654	1286
D125RTV	250 lb / 125 kg	0.01 lb/5 g	0.05 lb / 20 g	$23.6 \times 31.5 \text{ in } / 600 \times 800 \text{ mm}$	30419659	1691
D250RTV	500 lb / 250 kg	0.02 lb / 10 g	0.1 lb / 50 g	$23.6 \times 31.5 \text{ in } / 600 \times 800 \text{ mm}$	30419660	1691
D500RTV	1,000 lb / 500 kg	0.05 lb / 20 g	0.2 lb / 100 g	$23.6 \times 31.5 \text{ in } / 600 \times 800 \text{ mm}$	30419661	1691

Item No.	List Price (USD)
30424410	73
30424411	95
30424412	106
30424413	161
30424414	205
	30424410 30424411 30424412 30424413

Accessories	Item No.	List Price (USD)
Column Kit, 98 cm / 38.8 in, Stainless Steel to TD52 Indicator	30424415	222
Indicator Front Mount Kit Stainless Steel for TD52 Indicator	30424024	111
Column Mounted Printer Holder Kit	30424025	62
LC Extension Cable, 9m/29.7 ft to TD52 Indicator	30424409	167
Load Cell Cable Adapter Kit, non-TD52 Indicator to D52 Base	30429931	51
Wheel Kit, Defender Series (for bases up to 300 kg/600lb)	30372146	134





# **DEFENDER® V SERIES STAINLESS STEEL BASES**

Economical Base for Washdown Industrial Weighing

### Construction

304 grade stainless steel platform, stainless steel tubular frame, IP67 stainless steel load cell, level indicator

### **Design Features**

125% capacity overload protection, NTEP Certified and Measurement Canada Approved 3,000e, Wheel kits (optional)



30 lb model available

The sturdy tubular 304 stainless steel platform provides ample support for industrial weighing applications.

The IP67 load cells ensure accurate and repeatable results.

The non-slip adjustable rubber leveling feet provide stability during the weighing process.

Model	Capacity	Readability	Certified Readability	Platform Size	Item No.	List Price (USD)
D15VR	30 lb / 15 kg	0.005 lb / 2g	0.01 lb/5 g	14 in × 12 in / 355 mm × 305 mm	30379441	810
D30VR	60 lb / 30 kg	0.01 lb/5 g	0.02 lb / 10 g	14 in $\times$ 12 in / 355 mm $\times$ 305 mm	30379442	810
D60VR	150 lb / 60 kg	0.02 lb / 10 g	0.05 lb / 20 g	14 in $\times$ 12 in / 355 mm $\times$ 305 mm	30379443	810
D60VL	150 lb / 60 kg	0.02 lb / 10 g	0.05 lb / 20 g	21.7 in $\times$ 16.5 in / 550 mm $\times$ 420 mm	30379444	1363
D150VL	300 lb / 150 kg	0.05 lb / 20 g	0.1 lb / 50 g	$21.7 \text{ in} \times 16.5 \text{ in} / 550 \text{ mm} \times 420 \text{ mm}$	30379445	1363
D150VX	300 lb / 150 kg	0.05 lb / 20 g	0.1 lb / 50 g	25.6 in $\times$ 19.7 in / 650 mm $\times$ 500 mm	30379446	2024
D300VX	600 lb / 300 kg	0.1 lb/50 g	0.2 lb / 100 g	25.6 in $\times$ 19.7 in / 650 mm $\times$ 500 mm	30379447	2024

Accessories	Item No.	List Price (USD)
Column Kit, 23 cm / 9 in, Stainless Steel for T71XW/T51XW Indicator	30454644	254
Wall Mount Bracket Stainless Steel for T71XW/T51XW Indicator	80500735	84
Wheel Kit, Defender Series (for bases up to 300 kg/600lb)	30372146	134
Column Kit, 35 cm / 13.9 in, Stainless Steel, to T51/71/72XW	80500725	175
Column Adapter, Stainless Steel, T32XW/T51XW/T71XW	72209340	55





# **DEFENDER® B SERIES BASES**

Economical Base for Industrial Weighing

### Construction

304 grade stainless steel platform, black painted steel tubular frame, IP67 aluminum load cell, level indicator

### **Design Features**

125% capacity overload protection, NTEP Certified and Measurement Canada Approved 3,000e, Wheel kits (optional)



30 lb model available

The sturdy tubular 304 stainless steel platform provides ample support for industrial weighing applications.

The IP67 load cells ensure accurate and repeatable results.

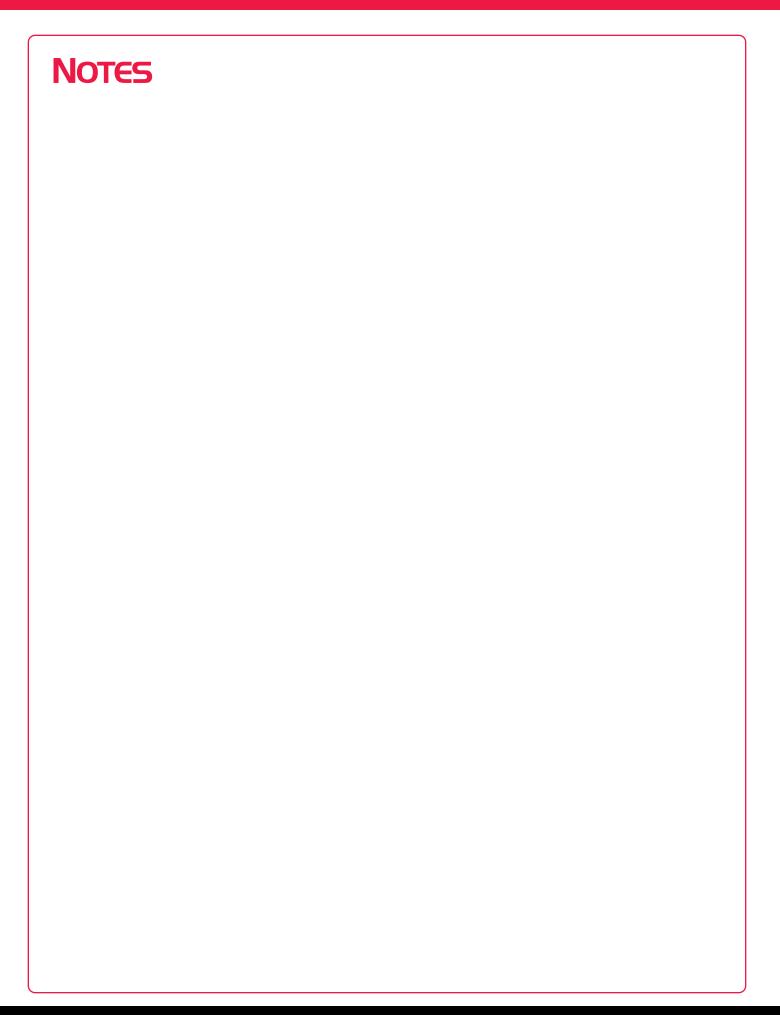
The non-slip adjustable rubber leveling feet provide stability during the weighing process.

Model	Capacity	Readability	Certified Readability	Platform Size	Item No.	List Price (USD)
D15BR	30lb / 15kg	0.005 lb / 2g	0.01 lb/5 g	14 in × 12 in / 355 mm × 305 mm	30379434	718
D30BR	60 lb / 30 kg	0.01 lb/5 g	0.02 lb / 10 g	14 in $\times$ 12 in / 355 mm $\times$ 305 mm	30379435	718
D60BR	150 lb / 60 kg	0.02 lb / 10 g	0.05 lb / 20 g	14 in $\times$ 12 in / 355 mm $\times$ 305 mm	30379436	718
D60BL	150 lb / 60 kg	0.02 lb / 10 g	0.05 lb / 20 g	21.7 in $\times$ 16.5 in / 550 mm $\times$ 420 mm	30379437	743
D150BL	300 lb / 150 kg	0.05 lb / 20 g	0.1 lb / 50 g	21.7 in $\times$ 16.5 in $/$ 550 mm $\times$ 420 mm	30379438	743
D150BX	300 lb / 150 kg	0.05 lb / 20 g	0.1 lb / 50 g	25.6 in × 19.7 in / 650 mm × 500 mm	30379439	825
D300BX	600 lb / 300 kg	0.1 lb / 50 g	0.2 lb / 100 g	25.6 in $\times$ 19.7 in / 650 mm $\times$ 500 mm	30379440	825

Accessories	Item No.	List Price (USD)
Column Kit, 23 cm / 9 in, Stainless Steel for T71XW/T51XW Indicator	30454644	254
Wall Mount Bracket Stainless Steel for T71XW/T51XW Indicator	80500735	84
Wheel Kit, Defender Series (for bases up to 300 kg/600lb)	30372146	134
Column Kit, 35 cm / 13.9 in, Stainless Steel, to T51/71/72XW	80500725	175
Column Adapter, Stainless Steel, T32XW/T51XW/T71XW	72209340	55









OHAUS' portfolio now includes the Troemner library of weights, backed by exclusive construction and more than 100 years of expertise. With a wide selection of weight classes backed by both ASTM and OIML, OHAUS weights offer a comprehensive range of 1mg to 5,000 lb, and are available with certifications.





Our weights and weight sets are backed by the world's leading supplier of precision weights and mass standards. Since 1838, Troemner has enhanced its reputation as being the premier precision weight company by having industry recognized metrologists and highly trained calibrators on staff. Troemner's production of precision weights involves using the finest materials and equipment available in a state-of-the-art facility. For these important reasons, Troemner is capable of providing unmatched measurements and metrological analysis, to provide our customers with the precision weights they need.

Only the finest raw materials are selected in order to manufacture high quality weights. Troemner is the only supplier that has a special stainless steel blend called Troemner Alloy 8, which possesses closely controlled density (8.03 g/cm3), extremely low magnetic properties, good stability and resistance to corrosion.

### Weight Selector Guide

**Troemner UltraClass** - For analytical and microbalances with readability as low as 1 g. These are the most precise two-piece weights available, with weight tolerances 40 to 50% better than ANSI/ASTM Class 1. Ultra Class weights combine high precision with the advantage of two-piece construction (1 g and larger) to avoid costly issues associated with one-piece weights.

**ANSI/ASTM Class 1** - Can be used as a reference standard in calibrating other weights and is appropriate for calibrating high-precision analytical balances with a readability as low as 0.1 mg to 0.01 mg.

**ANSI/ASTM Class 4** - For calibration of semi-analytical balances and for student use.

**ANSI/ASTM Class 6** - This class meets the specifications of OIML R 111 Class M2.

**OIML Class E1** - Used as a primary reference for calibrating other reference standards and weights where the stability of the environment and careful handling are assured. Class E1 weights have no method of adjustment and are not suitable for general laboratory use. The uncertainty is guaranteed to be 1/3 the tolerance.

**OIML Class E2** - Can be used as a reference standard in calibrating other weights and is appropriate for calibrating high-precision analytical balances with a readability as low as 0.1 mg to 0.01 mg.

OIML Class F1 - Appropriate for calibrating high-precision top loading balances with a readability as low as 0.01 g to 0.001 g.

**OIML Class F2** - For calibration of semi-analytical balances and for student use.

**NIST Class F** - Primarily used to test commercial weighing devices by state and local weights and measures officials, device installers, and service technicians.

# TROEMNER ULTRACLASS INDIVIDUAL WEIGHTS

Weight tolerance is equal to ANSI/ASTM E617 Class 0

UltraClass weights combine high precision with the advantage of two-piece construction (1 g and larger) avoiding costly replacement issues associated with one-piece weights. Weights are designed so the specifications on surface finish, markings, construction, material density, and magnetic properties become more restrictive as the weight tolerances decrease. Individual weights 1 mg through 10 kg are supplied in durable polycarbonate cases. Case lids lock tightly to ensure that your weight is held securely and kept clean and dust free.

Without Certificate			Traceable Certificate			NVLAP Certificate		
Model	Item No.	List Price (USD)	Model	Item No.	List Price (USD)	Model	Item No.	List Price (USD)
50 kg	30390204	10470	50 kg	30390236	11200	50 kg	30390269	11390
30 kg	30390203	7090	30 kg	30390235	7135	30 kg	30390268	7830
25 kg	30390202	5620	25 kg	30390234	5690	25 kg	30390267	5755
20 kg	30390201	3040	20 kg	30390233	3200	20 kg	30390266	3285
10 kg	30390200	2605	10 kg	30390232	2740	10 kg	30390265	3090
5 kg	30390199	1410	5 kg	30390231	1475	5 kg	30390264	1650
3 kg	30390198	1220	3 kg	30390230	1285	3 kg	30390263	1370
2 kg	30390197	950	2 kg	30390229	1025	2 kg	30390262	1110
1 kg	30390196	600	1 kg	30390228	680	1 kg	30390261	770
500 g	30390195	293	500 g	30390227	337	500 g	30390260	379
300 g	30390194	215	300 g	30390226	276	300 g	30390259	318
200 g	30390193	201	200 g	30390225	246	200 g	30390258	310
100 g	30390192	132	100 g	30390224	169	100 g	30390257	201
50 g	30390191	116	50 g	30390223	164	50 g	30390256	182
30 g	30390190	110	30 g	30390222	158	30 g	30390255	182
20 g	30390189	104	20 g	30390221	152	20 g	30390254	169
10 g	30390188	104	10 g	30390220	152	10 g	30390253	159
5 g	30390187	104	5 g	30390219	152	5 g	30390252	159
3 g	30390186	104	3 g	30390218	152	3 g	30390251	159
2 g	30390185	93	2 g	30390217	141	2 g	30390250	159
1 g	30390184	93	1 g	30390216	141	1 g	30390249	159
500 mg	30390183	89	500 mg	30390215	122	500 mg	30390248	144
300 mg	30390182	89	300 mg	30390214	122	300 mg	30390247	144
200 mg	30390181	89	200 mg	30390213	122	200 mg	30390246	144
100 mg	30390180	89	100 mg	30390212	122	100 mg	30390245	144
50 mg	30390179	89	50 mg	30390211	122	50 mg	30390244	144
30 mg	30390178	89	30 mg	30390210	122	30 mg	30390243	144
20 mg	30390177	89	20 mg	30390209	122	20 mg	30390242	144
10 mg	30390176	89	10 mg	30390208	122	10 mg	30390241	144
5 mg	30390175	89	5 mg	30390207	122	5 mg	30390240	144
3 mg	30390174	89	3 mg	30390206	122	3 mg	30390239	144
2 mg	30390173	89	2 mg	30390205	122	2 mg	30390238	144
1 mg	30390172	89	1 mg	30390270	122	1 mg	30390237	144





# **ASTM** CLASS I INDIVIDUAL WEIGHTS

Adjusted to meet ASTM Class 1 Tolerances

Can be used as a reference standard in calibrating other weights and is appropriate for calibrating high-precision analytical balances with a readability as low as 0.1 mg to 0.01 mg.

Weights are designed so the specifications on surface finish, markings, construction, material density, and magnetic properties become more restrictive as the weight tolerances decrease.

Individual weights 1 mg through 10 kg are supplied in durable polycarbonate cases. Case lids lock tightly to ensure that your weight is held securely and kept clean and dust free.

Without Certificate				Traceable Certificate			NVLAP Certificate		
Model	Item No.	List Price (USD)	Model	Item No.	List Price (USD)	Model	Item No.	List Price (USD)	
50 kg	30391425	10130	50 kg	30391607	10970	50 kg	30391458	11160	
30 kg	30391424	6450	30 kg	30391606	6955	30 kg	30391457	7460	
25 kg	30391423	5105	25 kg	30391605	5155	25 kg	30391456	5345	
20 kg	30391422	3475	20 kg	30391604	3615	20 kg	30391455	3660	
10 kg	30391421	2375	10 kg	30391603	2435	10 kg	30391454	2490	
5 kg	30391420	1290	5 kg	30391602	1405	5 kg	30391453	1560	
3 kg	30391419	1105	3 kg	30391601	1265	3 kg	30391452	1290	
2 kg	30391418	865	2 kg	30391600	955	2 kg	30391451	1020	
1 kg	30391417	550	1 kg	30391599	645	1 kg	30391450	715	
500 g	30391416	258	500 g	30391598	314	500 g	30391449	368	
300 g	30391415	197	300 g	30391597	264	300 g	30391448	306	
200 g	80781143	191	200 g	30391596	245	200 g	80781144	297	
100 g	80781141	118	100 g	30391595	163	100 g	80781142	175	
50 g	80781139	112	50 g	30391594	158	50 g	80781140	170	
30 g	30391411	106	30 g	30391593	153	30 g	30391444	164	
20 g	80781135	101	20 g	30391592	148	20 g	80781136	162	
10 g	80781133	101	10 g	30391591	148	10 g	80781134	160	
5 g	80781131	101	5 g	30391590	148	5 g	80781132	158	
3 g	30391407	91	3 g	30391589	138	3 g	30391440	149	
2 g	80781127	91	2 g	30391588	138	2 g	80781128	149	
1 g	80781125	85	1 g	30391587	126	1 g	80781126	137	
500 mg	80781123	82	500 mg	30391586	114	500 mg	80781124	130	
300 mg	30391403	82	300 mg	30391585	114	300 mg	30391436	130	
200 mg	80781119	82	200 mg	30391584	114	200 mg	80781120	130	
100 mg	80781117	82	100 mg	30391583	114	100 mg	80781118	130	
50 mg	80781115	82	50 mg	30391582	114	50 mg	80781116	130	
30 mg	30391399	82	30 mg	30391581	114	30 mg	30391432	130	
20 mg	80781111	82	20 mg	30391580	114	20 mg	80781112	130	
10 mg	80781109	82	10 mg	30391579	114	10 mg	80781110	130	
5 mg	80781107	82	5 mg	30391578	114	5 mg	80781108	130	
3 mg	30391395	82	3 mg	30391577	114	3 mg	30391428	130	
2 mg	80781103	82	2 mg	30391576	114	2 mg	80781104	130	
1 mg	80781101	82	1 mg	30391575	114	1 mg	80781102	130	





# **ASTM CLASS 4 INDIVIDUAL WEIGHTS**

Adjusted to meet ASTM Class 4 Tolerances

Can be used for calibration of semi-analytical balances and for student use.

Weights are designed so the specifications on surface finish, markings, construction, material density, and magnetic properties become more restrictive as the weight tolerances decrease.

Individual weights 1 mg through 10 kg are supplied in durable polycarbonate cases. Case lids lock tightly to ensure that your weight is held securely and kept clean and dust free.

Without Certificate			Traceable Certificate			NVLAP Certificate		
Model	Item No.	List Price (USD)	Model	Item No.	List Price (USD)	Model	Item No.	List Price (USD)
50 kg	30391295	9750	50 kg	30391108	9765	50 kg	30391328	9885
30 kg	30391294	6080	30 kg	30391107	6140	30 kg	30391327	6295
25 kg	30391293	4605	25 kg	30391106	4700	25 kg	30391326	4845
20 kg	30391292	2530	20 kg	30391105	2575	20 kg	30391325	2745
10 kg	30391291	1600	10 kg	30391104	1625	10 kg	30391324	2025
5 kg	30391290	1185	5 kg	30391103	1255	5 kg	30391323	1385
3 kg	30391289	970	3 kg	30391102	1020	3 kg	30391322	1100
2 kg	30391288	760	2 kg	30391101	880	2 kg	30391321	920
1 kg	30391287	482	1 kg	30391100	535	1 kg	30391320	580
500 g	30391286	226	500 g	30391099	232	500 g	30391319	310
300 g	30391285	159	300 g	30391098	185	300 g	30391318	243
200 g	30391284	141	200 g	30391097	171	200 g	30391317	225
100 g	80780063	93	100 g	30391096	123	100 g	80850287	148
50 g	80780075	93	50 g	30391095	116	50 g	80850297	145
30 g	30391281	80	30 g	30391094	116	30 g	30391314	141
20 g	80780068	80	20 g	30391093	106	20 g	80850292	137
10 g	80780062	74	10 g	30391092	106	10 g	80850286	133
5 g	80780074	58	5 g	30391091	90	5 g	80850296	128
3 g	30391277	58	3 g	30391090	87	3 g	30391310	128
2 g	80780067	58	2 g	30391089	87	2 g	80850291	128
1 g	80780061	58	1 g	30391088	87	1 g	80850285	122
500 mg	80780073	38	500 mg	30391087	73	500 mg	80850295	105
300 mg	30391273	38	300 mg	30391086	73	300 mg	30391306	105
200 mg	80780066	38	200 mg	30391085	73	200 mg	80850290	105
100 mg	80780060	38	100 mg	30391084	73	100 mg	80850284	105
50 mg	80780072	38	50 mg	30391083	73	50 mg	80850294	105
30 mg	30391269	38	30 mg	30391082	73	30 mg	30391302	105
20 mg	80780065	38	20 mg	30391081	73	20 mg	80850289	105
10 mg	80780059	38	10 mg	30391080	73	10 mg	80850283	105
5 mg	80780071	38	5 mg	30391079	73	5 mg	80850293	105
3 mg	30391265	38	3 mg	30391078	73	3 mg	30391298	105
2 mg	80780064	38	2 mg	30391077	73	2 mg	80850288	105
1 mg	80780058	38	1 mg	30391076	73	1 mg	80850282	105





# **CAL-PAKS**

### Designed for Routine Maintenance of Your Balance

The three weights included in the set will test the accuracy and linearity of your balance throughout its entire range.

Cal-Pak components and carrying case are linked through the use of a unique serial number. You can trace your individual weights to the appropriate NVLAP Certificate and master carrying case.

Cal-Paks are supplied in a case with accessories for care and handling of the weights including gloves and forceps.

2 G-1 MG CAL-PAK ULTRACLASS W/ NVLAP 5 G-1 MG CAL-PAK ULTRACLASS W/ NVLAP 20 G-20 MG CAL-PAK CL 1 W/ NVLAP 20 G-200 MG CAL-PAK CL 1 W/ NVLAP 50 G-200 MG CAL-PAK CL 1 W/ NVLAP 50 G-20 G CAL-PAK CL 1 W/ NVLAP 30 50 G-2 G CAL-PAK CL 1 W/ NVLAP 30	em No. List Pric 0391799 0391798 0391797 0391796 0390007 0391795 0391794	423 423 416 416 404 404
5 G-1 MG CAL-PAK ULTRACLASS W/ NVLAP       30         20 G-20 MG CAL-PAK CL 1 W/ NVLAP       30         20 G-200 MG CAL-PAK CL 1 W/ NVLAP       30         50 G-200 MG CAL-PAK CL 1 W/ NVLAP       30         50 G-2 G CAL-PAK CL 1 W/ NVLAP       30	0391798 0391797 0391796 0390007 0391795	423 416 416 404
20 G-20 MG CAL-PAK CL 1 W/ NVLAP       30         20 G-200 MG CAL-PAK CL 1 W/ NVLAP       30         50 G-200 MG CAL-PAK CL 1 W/ NVLAP       30         50 G-2 G CAL-PAK CL 1 W/ NVLAP       30	0391797 0391796 0390007 0391795	416 416 404
20 G-200 MG CAL-PAK CL 1 W/ NVLAP       30         50 G-200 MG CAL-PAK CL 1 W/ NVLAP       30         50 G-2 G CAL-PAK CL 1 W/ NVLAP       30	0391796 0390007 0391795	416 404
50 G-200 MG CAL-PAK CL 1 W/ NVLAP 30 50 G-2 G CAL-PAK CL 1 W/ NVLAP 30	0390007 0391795	404
50 G-2 G CAL-PAK CL 1 W/ NVLAP	)391795	
		404
100 G-20 MG CAL-PAK CL 1 W/NVLAP 30	)391794	101
		404
100 G-200 MG CAL-PAK CL 1 W/NVLAP 30	)391793	404
100 G-2 G CAL-PAK CL 1 W/NVLAP 30	)391792	419
200 G-200 MG CAL-PAK CL 1 W/NVLAP 30	)391791	472
200 G-2 G CAL-PAK CL 1 W/NVLAP 30	)391790	472
500 G-20 MG CAL-PAK CL 1 W/NVLAP 30	)391789	600
500 G-200 MG CAL-PAK CL 1 W/NVLAP 30	)391788	600
500 G-2 G CAL-PAK CL 1 W/NVLAP 30	)391787	600
1 KG-2 G CAL-PAK CL 1 W/NVLAP 30	)391786	735
1 KG-20 G CAL-PAK CL 1 W/NVLAP 30	)391785	880
2 KG-2 G CAL-PAK CL 1 W/NVLAP 30	)391784	1075
2 KG-20 G CAL-PAK CL 1 W/NVLAP 30	)391783	1375
5 KG-2 G CAL-PAK CL 1 W/NVLAP 30	)390006	1445
5 KG-2 G CAL-PAK CLASS 1 W/NVLAP 30	390005	1535
5 KG-20 G CAL-PAK CL 1 W/NVLAP 30	)391782	1600
5 KG-20 G CAL-PAK CLASS 1 W/NVLAP 30	)390004	1575
5 KG-2 G CAL-PAK CL 1 W/NVLAP 30	)390003	1580
5 KG-2 G CAL-PAK CLASS 1 W/NVLAP 30	)390002	1675
5 KG-20 G CAL-PAK CL 1 W/NVLAP 30	390001	1515
5 KG-20 G CAL-PAK CLASS 1 W/NVLAP 30		1675



# TROEMNER ULTRACLASS WEIGHT SETS

Weight tolerance is equal to ANSI/ASTM E617 Class 0

UltraClass weights combine high precision with the advantage of two-piece construction (1 g and larger) avoiding costly replacement issues associated with one-piece weights.

Weights are designed so the specifications on surface finish, markings, construction, material density, and magnetic properties become more restrictive as the weight tolerances decrease.

Without Certificate						
Model	Item No.	List Price (USD)				
50 kg-1 g	30390097	26430				
50 kg-1 mg	30390096	26910				
30 kg-1 g	30390095	18460				
30 kg-1 mg	30390094	19340				
25 kg-1 g	30390093	18130				
25 kg-1 mg	30390092	18700				
20 kg-1 g	30390091	11770				
20 kg-1 mg	30390090	12090				
10 kg-1 g	30390089	9190				
10 kg-1 mg	30390088	9670				
5 kg-1 g	30390087	6290				
5 kg-1 mg	30390086	6935				
2 - 2 kg-1 g	30390011	5000				
2 - 2 kg-1 mg	30390010	5485				
2 kg-1 g	30390085	4195				
2 kg-1 mg	30390084	4840				
1 kg-1 g	30390083	3105				
1 kg-1 mg	30390082	3790				
500 g-1 g	30390081	2100				
500 g-1 mg	30390080	2740				
2 - 200 g-1 g	30390009	1190				
2 - 200 g-1 mg	30390008	1680				
200 g-1 g	30390079	1075				
200 g-1 mg	30390078	1535				
100 g-1 g	30390077	900				
100 g-100 mg	30390076	1100				
100 g-10 mg	30390075	1325				
100 g-5 mg	30390074	1380				
100 g-1 mg	30390073	1435				
50 g-1 g	30390072	965				
50 g-100 mg	30390071	1060				
50 g-10 mg	30390070	1260				
50 g- 5 mg	30390069	1330				
50 g-1 mg	30390068	1515				
20 g-1 g	30390067	810				
20 g-100 mg	30390066	1010				
20 g-10 mg	30390065	1195				
20 g-5 mg	30390064	1280				
20 g-1 mg	30390063	1460				
500 mg-10 mg	30390062	585				
500 mg-1 mg	30390061	875				

	eable Certific	.ate
Model	Item No.	List Price (USD)
50 kg-1 g	30390134	28440
50 kg-1 mg	30390133	29550
30 kg-1 g	30390132	20260
30 kg-1 mg	30390131	21130
25 kg-1 g	30390130	18520
25 kg-1 mg	30390129	19220
20 kg-1 g	30390128	13190
20 kg-1 mg	30390127	13980
10 kg-1 g	30390126	9535
10 kg-1 mg	30390125	10490
5 kg-1 g	30390124	6995
5 kg-1 mg	30390123	7985
2 - 2 kg-1 g	30390015	5805
2 - 2 kg-1 mg	30390014	6755
2 kg-1 g	30390122	4610
2 kg-1 mg	30390121	5485
1 kg-1 g	30390120	3590
1 kg-1 mg	30390119	4565
500 g-1 g	30390118	2625
500 g-1 mg	30390117	3580
2 - 200 g-1 g	30390013	1440
2 - 200 g-1 mg	30390012	2425
200 g-1 g	30390116	1260
200 g-1 mg	30390115	2220
100 g-1 g	30390114	1080
100 g-100 mg	30390113	1350
100 g-10 mg	30390112	1710
100 g-5 mg	30390111	1770
100 g-1 mg	30390110	1900
50 g-1 g	30390109	1095
50 g-100 mg	30390108	1360
50 g-10 mg	30390107	1680
50 g- 5 mg	30390106	1785
50 g-1 mg	30390105	1925
20 g-1 g	30390104	955
20 g-100 mg	30390103	1150
20 g-10 mg	30390102	1565
20 g-5 mg	30390101	1465
20 g-1 mg	30390100	1820
500 mg-10 mg	30390099	915
500 mg-1 mg	30390098	1075

NVLAP Certificate					
Model	Item No.	List Price (USD)			
50 kg-1 g	30390171	28930			
50 kg-1 mg	30390170	29960			
30 kg-1 g	30390169	20670			
30 kg-1 mg	30390168	21930			
25 kg-1 g	30390167	18860			
25 kg-1 mg	30390166	19940			
20 kg-1 g	30390165	13480			
20 kg-1 mg	30390164	14740			
10 kg-1 g	30390163	10050			
10 kg-1 mg	30390162	11230			
5 kg-1 g	30390161	7685			
5 kg-1 mg	30390160	8745			
2 - 2 kg-1 g	30390019	6185			
2 - 2 kg-1 mg	30390018	7440			
2 kg-1 g	30390159	4945			
2 kg-1 mg	30390158	6170			
1 kg-1 g	30390157	4005			
1 kg-1 mg	30390156	5235			
500 g-1 g	30390155	2965			
500 g-1 mg	30390154	4225			
2 - 200 g-1 g	30390017	1840			
2 - 200 g-1 mg	30390016	3285			
200 g-1 g	30390153	1665			
200 g-1 mg	30390152	2930			
100 g-1 g	30390151	1455			
100 g-100 mg	30390150	1900			
100 g-10 mg	30390149	2335			
100 g-5 mg	30390148	2210			
100 g-1 mg	30390147	2685			
50 g-1 g	30390146	1395			
50 g-100 mg	30390145	1780			
50 g-10 mg	30390144	2210			
50 g- 5 mg	30390143	2145			
50 g-1 mg	30390142	2565			
20 g-1 g	30390141	1090			
20 g-100 mg	30390140	1590			
20 g-10 mg	30390139	1915			
20 g-5 mg	30390138	1990			
20 g-1 mg	30390137	2295			
500 mg-10 mg	30390136	1210			
500 mg-1 mg	30390135	1505			





# **ASTM** CLASS I WEIGHT SETS

Adjusted to meet ASTM Class 1 Tolerances

Can be used as a reference standard in calibrating other weights and is appropriate for calibrating high-precision analytical balances with a readability as low as 0.1 mg to 0.01 mg.

Weights are designed so the specifications on surface finish, markings, construction, material density, and magnetic properties become more restrictive as the weight tolerances decrease.

Without Certificate					
Model	Item No.	List Price (USD)			
50 kg-1 g	30391360	22730			
50 kg-1 mg	30391359	23210			
30 kg-1 g	30391358	15960			
30 kg-1 mg	30391357	16520			
25 kg-1 g	30391356	15640			
25 kg-1 mg	30391355	16120			
20 kg-1 g	30391354	10160			
20 kg-1 mg	30391353	11770			
10 kg-1 g	30391352	7980			
10 kg-1 mg	30391351	8380			
5 kg-1 g	30391350	5445			
5 kg-1 mg	30391349	5965			
2 - 2 kg-1 g	30390054	4355			
2 - 2 kg-1 mg	30390053	4675			
2 kg-1 g	30391348	3545			
2 kg-1 mg	30391347	4195			
1 kg-1 g	30391346	2660			
1 kg-1 mg	30391345	3265			
500 q-1 q	30391344	1810			
500 g-1 mg	30391343	2450			
2 - 200 g-1 g	80781033	980			
2 - 200 g-1 mg	80781031	1445			
200 g-1 g	30391342	880			
200 g-1 mg	30391341	1320			
100 g-1 g	80781029	755			
100 g-100 mg	30391340	890			
100 g-10 mg	30391339	1100			
100 g-5 mg	30391338	1160			
100 g-1 mg	80781027	1250			
50 g-1 g	80781025	730			
50 g-100 mg	30391337	880			
50 g-10 mg	30391336	1015			
50 g- 5 mg	30391335	1085			
50 g-1 mg	80781023	1200			
20 q-1 q	30391334	680			
20 g-100 mg	30391333	820			
20 g-10 mg	30391332	975			
20 g-5 mg	30391331	1010			
20 g-1 mg	30391330	1175			
500 mg-10 mg	30391329	494			
500 mg-1 mg	80781021	690			
		330			

Traceable Certificate					
Model	Item No.	List Price (USD)			
50 kg-1 g	30391574	24790			
50 kg-1 mg	30391573	25740			
30 kg-1 g	30391572	17640			
30 kg-1 mg	30391571	18430			
25 kg-1 g	30391570	16050			
25 kg-1 mg	30391569	16840			
20 kg-1 g	30391568	11280			
20 kg-1 mg	30391567	12160			
10 kg-1 g	30391566	8265			
10 kg-1 mg	30391565	9140			
5 kg-1 g	30391564	6120			
5 kg-1 mg	30391563	6915			
2 - 2 kg-1 g	30390060	5005			
2 - 2 kg-1 mg	30390059	5880			
2 kg-1 g	30391562	3935			
2 kg-1 mg	30391561	4760			
1 kg-1 g	30391560	3130			
1 kg-1 mg	30391559	3960			
500 g-1 g	30391558	2275			
500 g-1 mg	30391557	3150			
2 - 200 g-1 g	30390058	1385			
2 - 200 g-1 mg	30390057	2225			
200 g-1 g	30391556	1205			
200 g-1 mg	30391555	1990			
100 g-1 g	30391554	990			
100 g-100 mg	30391553	1230			
100 g-10 mg	30391552	1545			
100 g-5 mg	30391551	1565			
100 g-1 mg	30391550	1770			
50 g-1 g	30391549	995			
50 g-100 mg	30391548	1175			
50 g-10 mg	30391547	1405			
50 g- 5 mg	30391546	1495			
50 g-1 mg	30391545	1695			
20 g-1 g	30391544	810			
20 g-100 mg	30391543	1045			
20 g-10 mg	30391542	1350			
20 g-5 mg	30391541	1375			
20 g-1 mg	30391540	1615			
500 mg-10 mg	30391539	795			
500 mg-1 mg	30391538	990			

NVLAP Certificate					
Model	Item No.	List Price (USD)			
50 kg-1 g	30391392	25140			
50 kg-1 mg	30391391	26050			
30 kg-1 g	30391390	18050			
30 kg-1 mg	30391389	19080			
25 kg-1 g	30391388	16350			
25 kg-1 mg	30391387	17340			
20 kg-1 g	30391386	11680			
20 kg-1 mg	30391385	12760			
10 kg-1 g	30391384	8710			
10 kg-1 mg	30391383	9770			
5 kg-1 g	30391382	6515			
5 kg-1 mg	30391381	7590			
2 - 2 kg-1 g	30390056	5395			
2 - 2 kg-1 mg	30390055	6470			
2 kg-1 g	30391380	4295			
2 kg-1 mg	30391379	5370			
1 kg-1 g	30391378	3470			
1 kg-1 mg	30391377	4540			
500 g-1 g	30391376	2590			
500 g-1 mg	30391375	3815			
2 - 200 g-1 g	80781034	1590			
2 - 200 g-1 mg	80781032	2835			
200 q-1 q	30391374	1395			
200 g-1 mg	30391373	2610			
100 g-1 g	80781030	1310			
100 g-100 mg	30391372	1655			
100 g-10 mg	30391371	2115			
100 g-5 mg	30391370	1915			
100 g-1 mg	80781028	2455			
50 g-1 g	80781026	1255			
50 g-100 mg	30391369	1575			
50 g-10 mg	30391368	1970			
50 g- 5 mg	30391367	2045			
50 g-1 mg	80781024	2295			
20 g-1 g	30391366	950			
20 g-100 mg	30391365	1305			
20 g-10 mg	30391364	1590			
20 g-5 mg	30391363	1670			
20 g 3 mg 20 g-1 mg	30391362	2075			
500 mg-10 mg	30391361	1055			
500 mg-1 mg	80781022	1255			
Joo mg i mg	00/01022	1233			





# **ASTM CLASS 4 WEIGHT SETS**

Adjusted to meet ASTM Class 4 Tolerances

Can be used for calibration of semi-analytical balances and for student use.

Weights are designed so the specifications on surface finish, markings, construction, material density, and magnetic properties become more restrictive as the weight tolerances decrease.

Traceable Certificate

Without Certificate					
Model	Item No.	List Price (USD)			
50 kg - 1 g	30391228	18700			
50 kg - 1 mg	30391227	18980			
30 kg - 1 g	30391226	13060			
30 kg - 1 mg	30391225	13580			
25 kg - 1 g	30391224	12660			
25 kg - 1mg	30391223	13300			
20 kg - 1 g	30391222	8345			
20 kg - 1 mg	30391221	9785			
10 kg - 1 g	30391220	6530			
10 kg -1 mg	30391219	6885			
5 kg -1 g	30391218	4500			
5 kg - 1 mg	30391217	4885			
2 - 2kg-1 g	30390048	3545			
2 - 2 kg-1 mg	30390047	4175			
2 kg - 1 g	30391216	2935			
2 kg - 1 mg	30391215	3420			
1 kg - 1 g	30391214	2210			
1 kg - 1 mg	30391213	2710			
500 g - 1 g	30391212	1480			
500 g - 1 mg	30391211	1905			
2 - 200 g - 1 g	30390046	785			
2 - 200 g - 1 mg	30390045	1010			
200 g - 1 g	30391210	675			
200 g - 1 mg	30391209	925			
100 g - 1 g	30391208	625			
100 g - 100 mg	30391207	715			
100 g - 10 mg	30391206	850			
100 g - 5 mg	30391205	855			
100 g - 1 mg	80780101	875			
50 g - 1 g	30391204	478			
50 g - 100 mg	30391203	570			
50 g - 10 mg	30391202	665			
50 g - 5 mg	30391201	690			
50 g - 1 mg	80780111	760			
20 g - 1 g	30391200	397			
20 g - 100 mg	30391199	473			
20 g - 10 mg	30391198	525			
20 g - 5 mg	30391197	575			
20 g - 1 mg	30391196	640			
500 mg - 10 mg	30391195	244			
500 mg - 1 mg	80780100	355			
5 5	· · · · · ·				

Tra	Traceable Certificate						
Model	Item No.	List Price (USD)					
50 kg - 1 g	30391075	21450					
50 kg - 1 mg	30391074	22240					
30 kg - 1 g	30391073	15210					
30 kg - 1 mg	30391072	15890					
25 kg - 1 g	30391071	13910					
25 kg - 1mg	30391070	14620					
20 kg - 1 g	30391069	9775					
20 kg - 1 mg	30391068	10490					
10 kg - 1 g	30391067	7150					
10 kg -1 mg	30391066	7865					
5 kg -1 g	30391065	5245					
5 kg - 1 mg	30391064	6040					
2 - 2kg-1 g	30390044	4370					
2 - 2 kg-1 mg	30390043	5085					
2 kg - 1 g	30391063	3420					
2 kg - 1 mg	30391062	4110					
1 kg - 1 g	30391061	2700					
1 kg - 1 mg	30391060	3420					
500 g - 1 g	30391059	1970					
500 g - 1 mg	30391058	2690					
2 - 200 g - 1 g	30390042	900					
2 - 200 g - 1 mg	30390041	1465					
200 g - 1 g	30391057	855					
200 g - 1 mg	30391056	1250					
100 g - 1 g	30391055	765					
100 g - 100 mg	30391054	925					
100 g - 10 mg	30391053	1060					
100 g - 5 mg	30391052	1175					
100 g - 1 mg	30391051	1230					
50 g - 1 g	30391050	590					
50 g - 100 mg	30391049	740					
50 g - 10 mg	30391048	955					
50 g - 5 mg	30391047	1130					
50 g - 1 mg	30391046	1165					
20 g - 1 g	30391045	505					
20 g - 100 mg	30391044	640					
20 g - 10 mg	30391043	760					
20 g - 5 mg	30391042	890					
20 g - 1 mg	30391041	995					
500 mg - 10 mg	30391040	477					
500 mg - 1 mg	30391039	585					

NVLAP Certificate					
Model	Item No.	List Price (USD)			
50 kg - 1 g	30391262	22110			
50 kg - 1 mg	30391261	22640			
30 kg - 1 g	30391260	15630			
30 kg - 1 mg	30391259	16530			
25 kg - 1 g	30391258	14200			
25 kg - 1mg	30391257	15100			
20 kg - 1 g	30391256	10160			
20 kg - 1 mg	30391255	11150			
10 kg - 1 g	30391254	7555			
10 kg -1 mg	30391253	8490			
5 kg -1 g	30391252	5665			
5 kg - 1 mg	30391251	6455			
2 - 2kg-1 g	30390052	4660			
2 - 2 kg-1 mg	30390051	5750			
2 kg - 1 g	30391250	3770			
2 kg - 1 mg	30391249	4770			
1 kg - 1 g	30391248	3150			
1 kg - 1 mg	30391247	3955			
500 g - 1 g	30391246	2295			
500 g - 1 mg	30391245	3185			
2 - 200 g - 1 g	30390050	1135			
2 - 200 g - 1 mg	30390049	1900			
200 g - 1 g	30391244	990			
200 g - 1 mg	30391243	1750			
100 g - 1 g	30391242	885			
100 g - 100 mg	30391241	1200			
100 g - 10 mg	30391240	1435			
100 g - 5 mg	30391239	1490			
100 g - 1 mg	80850265	1685			
50 g - 1 g	30391238	815			
50 g - 100 mg	30391237	1045			
50 g - 10 mg	30391236	1395			
50 g - 5 mg	30391235	1530			
50 g - 1 mg	80850264	1575			
20 g - 1 g	30391234	715			
20 g - 100 mg	30391233	840			
20 g - 10 mg	30391232	1025			
20 g - 5 mg	30391232	1235			
20 g - 1 mg	30391231	1415			
500 mg - 10 mg	30391230	770			
500 mg - 1 mg	80850263	850			
200 mg - 1 mg	000000200	630			





# **ASTM CLASS I ELECTRONIC BALANCE WEIGHTS**

Adjusted to meet ASTM Class 1 Tolerances

Can be used to check or verify the accuracy of your balance and/or scale between calibrations.

Weights are available in a cylindrical design up through 5 kg and a stackable grip-handle design from 5 kg through 30 kg for all necessary testing, calibration and adjustment of electronic scales and balances.

Weights 10 g through 10 kg are supplied in a high quality polycarbonate case; a nylon glove is included to protect weights during use.

	Without Certificate		Traceable Certificate			NVLAP Certifica	ite	
Model	Item No.	List Price (USD)	Model	Item No.	List Price (USD)	Model	Item No.	List Price (USD)
30 kg grip	80781007	2200	30 kg grip	30391520	2395	30 kg grip	80781008	2490
25 kg grip	30391488	1880	25 kg grip	30391519	1960	25 kg grip	30391537	1990
24 kg grip	30391487	1825	24 kg grip	30391518	1920	24 kg grip	30391536	1915
20 kg grip	80781005	1565	20 kg grip	30391517	1665	20 kg grip	80781006	1675
16 kg grip	30391485	1460	16 kg grip	30391516	1510	16 kg grip	30391535	1535
10 kg grip	80781003	1045	10 kg grip	30391515	1145	10 kg grip	80781004	1180
8 kg grip	30391483	1010	8 kg grip	30391514	1085	8 kg grip	30391534	1120
5 kg grip	80781001	765	5 kg grip	30391513	815	5 kg grip	80781002	910
5 kg cyl	30391481	695	5 kg cyl	30391512	765	5 kg cyl	30391533	835
4 kg grip	30391480	710	4 kg grip	30391511	745	4 kg grip	30391532	865
4 kg cyl	80780027	600	4 kg cyl	30391510	685	4 kg cyl	80850275	750
3 kg cyl	30391478	358	3 kg cyl	30391509	442	3 kg cyl	30391531	510
2 kg cyl	80780024	220	2 kg cyl	30391508	295	2 kg cyl	80850272	376
1500 g cyl	30391476	199	1500 g cyl	30391507	289	1500 g cyl	30391530	365
1000 g cyl	80780021	192	1000 g cyl	30391506	277	1000 g cyl	80850269	339
600 g cyl	30391474	189	600 g cyl	30391505	248	600 g cyl	30391529	318
500 g cyl	80780029	150	500 g cyl	30391504	219	500 g cyl	80850277	283
400 g cyl	80780026	148	400 g cyl	30391503	208	400 g cyl	80850274	276
300 g cyl	30391471	136	300 g cyl	30391502	195	300 g cyl	30391528	267
200 g cyl	80780023	130	200 g cyl	30391501	190	200 g cyl	80850271	262
160 g cyl	30391469	128	160 g cyl	30391500	187	160 g cyl	30391527	258
150 g cyl	30391468	114	150 g cyl	30391499	174	150 g cyl	30391526	243
100 g cyl	80780020	109	100 g cyl	30391498	148	100 g cyl	80850268	169
80 g cyl	30391466	105	80 g cyl	30391497	144	80 g cyl	30391525	169
70 g cyl	30391465	102	70 g cyl	30391496	142	70 g cyl	30391524	169
60 g cyl	30391464	97	60 g cyl	30391495	140	60 g cyl	30391523	169
50 g cyl	80780028	93	50 g cyl	30391494	138	50 g cyl	80850276	169
40 g cyl	80780025	93	40 g cyl	30391493	138	40 g cyl	80850273	169
30 g cyl	30391461	93	30 g cyl	30391492	138	30 g cyl	30391522	169
20 g cyl	80780022	93	20 g cyl	30391491	138	20 g cyl	80850270	169
10 g cyl	30391459	93	10 g cyl	30391490	138	10 g cyl	30391521	169







# **ASTM CLASS 4 ELECTRONIC BALANCE WEIGHTS**

Adjusted to meet ASTM Class 4 Tolerances

Can be used to check or verify the accuracy of your balance and/or scale between calibrations.

Weights are available in a cylindrical design up through 5 kg and a stackable grip-handle design from 5 kg through 30 kg for all necessary testing, calibration and adjustment of electronic scales and balances. Weights 10 g through 10 kg are supplied in a high quality polycarbonate case; a nylon glove is included to protect weights during use.

	Without Certific	ate		Traceable Certific	ate		NVLAP Certifica	ite
Model	Item No.	List Price (USD)	Model	Item No.	List Price (USD)	Model	Item No.	List Price (USD)
30 kg grip	30391139	1515	30 kg grip	30391170	1710	30 kg grip	30391194	1830
25 kg grip	30391138	1350	25 kg grip	30391169	1355	25 kg grip	30391193	1450
24 kg grip	30391137	1285	24 kg grip	30391168	1320	24 kg grip	30391192	1410
20 kg grip	30391136	1100	20 kg grip	30391167	1160	20 kg grip	30391191	1240
16 kg grip	30391135	965	16 kg grip	30391166	1070	16 kg grip	30391190	1140
10 kg grip	30391134	740	10 kg grip	30391165	800	10 kg grip	30391189	855
8 kg grip	30391133	720	8 kg grip	30391164	735	8 kg grip	30391188	785
5 kg grip	30391132	500	5 kg grip	30391163	540	5 kg grip	30391187	625
5 kg cyl	30391131	482	5 kg cyl	30391162	510	5 kg cyl	30391186	580
4 kg grip	30391130	467	4 kg grip	30391161	520	4 kg grip	30391185	560
4 kg cyl	30391129	472	4 kg cyl	30391160	483	4 kg cyl	30391184	550
3 kg cyl	30391128	293	3 kg cyl	30391159	340	3 kg cyl	30391183	378
2 kg cyl	80780145	187	2 kg cyl	30391158	251	2 kg cyl	80780146	271
1500 g cyl	30391126	184	1500 g cyl	30391157	250	1500 g cyl	30391182	330
1000 g cyl	80780143	174	1000 g cyl	30391156	209	1000 g cyl	80780144	237
600 g cyl	30391124	163	600 g cyl	30391155	194	600 g cyl	30391181	224
500 g cyl	80780141	127	500 g cyl	30391154	162	500 g cyl	80780142	215
400 g cyl	80780139	127	400 g cyl	30391153	157	400 g cyl	80780140	199
300 g cyl	80780137	114	300 g cyl	30391152	150	300 g cyl	80780138	191
200 g cyl	80780135	111	200 g cyl	30391151	148	200 g cyl	80780136	189
160 g cyl	30391119	107	160 g cyl	30391150	143	160 g cyl	30391180	205
150 g cyl	30391118	97	150 g cyl	30391149	148	150 g cyl	30391179	205
100 g cyl	80780133	93	100 g cyl	30391148	119	100 g cyl	80780134	140
80 g cyl	30391116	90	80 g cyl	30391147	113	80 g cyl	30391178	140
70 g cyl	30391115	88	70 g cyl	30391146	113	70 g cyl	30391177	140
60 g cyl	30391114	87	60 g cyl	30391145	113	60 g cyl	30391176	140
50 g cyl	30391113	84	50 g cyl	30391144	110	50 g cyl	30391175	132
40 g cyl	30391112	78	40 g cyl	30391143	104	40 g cyl	30391174	132
30 g cyl	30391111	78	30 g cyl	30391142	104	30 g cyl	30391173	132
20 g cyl	30391110	78	20 g cyl	30391141	104	20 g cyl	30391172	132
10 g cyl	30391109	78	10 g cyl	30391140	104	10 g cyl	30391171	132







# **OIML & & E2 INDIVIDUAL WEIGHTS**

Manufactured to meet OIML R 111 weight specifications

OIML R 111 weight specifications are designed so the specifications on surface finish, markings, construction, material density and magnetic properties become more restrictive as weight tolerances decrease in order to enable the weight to maintain its tolerance over time.

Weights 1 g and above are one-piece construction. Weights 1 g and larger are cylindrical in shape with a tapered neck for easy gripping. They are perfectly flat on top to stack easily on center. Weight bottoms are slightly recessed to expose the smallest possible area to wear.

Individual weights 1 mg through 10 kg are supplied in durable polycarbonate cases. Case lids lock tightly to ensure that your weight is held securely and kept clean and dust free.

		'LAP
Model I	tem No.	List Price (USD)
50 kg 3	0390927	10840
20 kg 3	0390928	4935
10 kg 3	0390929	3245
5 kg 3	0390930	2405
2 kg 3	0390931	1755
1 kg 3	0390932	1195
500 g 3	0390933	980
200 g 3	0390934	800
100 g 3	0390935	710
50 g 3	0390936	635
20 g 3	0390937	600
10 g 3	0390938	575
5 g 3	0390939	555
2 g 3	0390940	535
1 g 3	0390941	535
500 mg 3	0390942	289
200 mg 3	0390943	289
100 mg 3	0390944	289
50 mg 3	0390945	289
20 mg 3	0390946	289
10 mg 3	0390947	289
5 mg 3	0390948	289
2 mg 3	0390949	289
1 mg 3	0390950	289

E2 Weights NVLAP					
Model	Item No.	List Price (USD)			
50 kg	30390903	9600			
20 kg	80780306	3120			
10 kg	80780305	2415			
5 kg	80780304	1385			
2 kg	80780303	875			
1 kg	80780302	650			
500 g	80780301	453			
200 g	80780300	358			
100 g	80780299	271			
50 g	80780298	244			
20 g	80780297	234			
10 g	80780296	226			
5 g	80780295	220			
2 g	80780294	214			
1 g	80780293	214			
500 mg	80780292	134			
200 mg	80780291	134			
100 mg	80780290	134			
50 mg	80780289	134			
20 mg	80780288	134			
10 mg	80780287	134			
5 mg	80780286	134			
2 mg	80780285	134			
1 mg	80780284	134			





# **OIML FI & F2 INDIVIDUAL WEIGHTS**

Model

50 kg

20 kg

Manufactured to meet OIML R 111 weight specifications

OIML R 111 weight specifications are designed so the specifications on surface finish, markings, construction, material density and magnetic properties become more restrictive as weight tolerances decrease in order to enable the weight to maintain its tolerance over time.

Weights 1 g and above are two-piece construction. OIML Calibration Weights 1 g and larger are cylindrical in shape with a tapered neck for easy gripping. They are perfectly flat on top to stack easily on center. Weight bottoms are slightly recessed to expose the smallest possible area to wear.

F2 Weights Without Certificate

Item No.

List Price (USD)

Individual weights 1 mg through 10 kg are supplied in durable polycarbonate cases. Case lids lock tightly to ensure that your weight is held securely and kept clean and dust free.

F1 Weights Without Certificate				
Model	Item No.	List Price (USD)		
50 kg	80780330	6855		
20 kg	80780329	2480		
10 kg	80780328	1785		
5 kg	80780327	1050		
2 kg	80780326	615		
1 kg	80780325	434		
500 g	80780324	250		
200 g	80780323	195		
100 g	80780322	139		
50 g	80780321	121		
20 g	80780320	121		
10 g	80780319	121		
5 g	80780318	121		
2 g	80780317	121		
1 g	80780316	121		
500 mg	80780315	51		
200 mg	80780314	51		
100 mg	80780313	51		
50 mg	80780312	51		
20 mg	80780311	51		
10 mg	80780310	51		
5 mg	80780309	51		
2 mg	80780308	51		
1 mg	80780307	51		

10 kg	30390855
5 kg	30390856
2 kg	30390857
1 kg	30390858
500 g	30390859
200 g	30390860
100 g	30390861
50 g	30390862
20 g	30390863
10 g	30390864
5 g	30390865
2 g	30390866
1 g	30390867
500 mg	30390868
200 mg	30390869
100 mg	30390870
50 mg	30390871
20 mg	30390872
10 mg	30390873
5 mg	30390874
2 mg	30390875
1 mg	30390876
F2 Weight	ts NVLAP Certificate
50 kg	30390877
20 kg	30390878
10 kg	30390879
5 kg	30390880

1 1119	00700307	<u> </u>			
F1 Weights NVLAP Certificate					
50 kg	30390901	6920			
20 kg	80780353	2610			
10 kg	80780352	1910			
5 kg	80780351	1200			
2 kg	80780350	770			
1 kg	80780349	565			
500 g	80780348	381			
200 g	80780347	326			
100 g	80780346	196			
50 g	80780345	180			
20 g	80780344	180			
10 g	80780343	180			
5 g	80780342	180			
2 g	80780341	180			
1 g	80780340	180			
500 mg	80780339	108			
200 mg	80780338	108			
100 mg	80780337	108			
50 mg	80780336	108			
20 mg	80780335	108			
10 mg	80780334	108			
5 mg	80780333	108			
2 mg	80780332	108			
1 mg	80780331	108			

F2 Weights NVLAP Certificate				
50 kg	30390877	4980		
20 kg	30390878	2335		
10 kg	30390879	1495		
5 kg	30390880	885		
2 kg	30390881	735		
1 kg	30390882	505		
500 g	30390883	381		
200 g	30390884	321		
100 g	30390885	174		
50 g	30390886	174		
20 g	30390887	174		
10 g	30390888	142		
5 g	30390889	174		
2 g	30390890	174		
1 g	30390891	174		
500 mg	30390892	103		
200 mg	30390893	103		
100 mg	30390894	103		
50 mg	30390895	103		
20 mg	30390896	103		
10 mg	30390897	103		
5 mg	30390898	103		
2 mg	30390899	103		
1 mg	30390900	103		





# OIML EI & E2 WEIGHT SETS

Manufactured to meet OIML R 111 weight specifications

OIML R 111 weight specifications are designed so the specifications on surface finish, markings, construction, material density and magnetic properties become more restrictive as weight tolerances decrease in order to enable the weight to maintain its tolerance over time.

Weights 1 g and above are one-piece construction. Weights 1 g and larger are cylindrical in shape with a tapered neck for easy gripping. They are perfectly flat on top to stack easily on center. Weight bottoms are slightly recessed to expose the smallest possible area to wear.

E1 Sets NVLAP				
Model	Item No.	List Price (USD)		
50 kg - 1 g	30390904	40880		
50 kg - 1 mg	30390905	42180		
20 kg - 1 g	30390906	19470		
20 kg - 1 mg	30390907	20770		
10 kg - 1 g	30390908	15580		
10 kg - 1 mg	30390909	16100		
5 kg-1 kg	30390910	7270		
5 kg - 1 g	30390911	11580		
5 kg - 1 mg	30390912	12460		
2 kg - 1 g	30390913	7270		
2 kg - 1 mg	30390914	9250		
(2) 2 kg - 1 g	30390037	8700		
(2) 2 kg - 1 mg	30390038	10390		
1 kg - 1 g	30390915	6100		
1 kg - 1 mg	30390916	7660		
500 g - 1 g	30390917	5195		
500 g - 1 mg	30390918	7010		
200 g - 1 g	30390919	4415		
200 g - 1 mg	30390920	5625		
(2) 200 g - 1 g	30390039	4805		
(2) 200 g - 1 mg	30390040	5845		
100 g - 1 g	30390921	4025		
100 g - 1 mg	30390922	5450		
50 g - 1 g	30390923	3505		
50 g - 1 mg	30390924	4545		
5 g - 1 mg	30390925	3505		
500 mg - 1 mg	30390926	2210		

	E2 Sets NVLAF	
Model	Item No.	List Price (USD)
50 kg - 1 g	80780407	23490
50 kg - 1 mg	80780406	23880
20 kg - 1 g	80780405	11570
20 kg - 1 mg	80780404	12260
10 kg - 1 g	80780403	8700
10 kg - 1 mg	80780402	8960
5 kg-1 kg	80780401	4010
5 kg - 1 g	80780400	5975
5 kg - 1 mg	80780399	6880
2 kg - 1 g	80780398	4155
2 kg - 1 mg	80780397	5065
(2) 2 kg - 1 g	80780396	4750
(2) 2 kg - 1 mg	80780395	5260
1 kg - 1 g	80780394	3760
1 kg - 1 mg	80780393	4905
500 g - 1 g	80780392	2600
500 g - 1 mg	80780391	3270
200 g - 1 g	80780390	1690
200 g - 1 mg	80780389	2965
(2) 200 g - 1 g	80780388	2340
(2) 200 g - 1 mg	80780387	2860
100 g - 1 g	80780386	1335
100 g - 1 mg	80780385	2195
50 g - 1 g	80780384	1170
50 g - 1 mg	80780383	1950
5 g - 1 mg	80780382	1530
500 mg - 1 mg	80780381	1325





# OIML FISE F2 WEIGHT SETS

Manufactured to meet OIML R 111 weight specifications

OIML R 111 weight specifications are designed so the specifications on surface finish, markings, construction, material density and magnetic properties become more restrictive as weight tolerances decrease in order to enable the weight to maintain its tolerance over time.

Weights 1 g and above are two-piece construction. OIML Calibration Weights 1 g and larger are cylindrical in shape with a tapered neck for easy gripping. They are perfectly flat on top to stack easily on center. Weight bottoms are slightly recessed to expose the smallest possible area to wear.

F1 Weights	Without Ce	rtificate	F1 Weights	Veights NVLAP Certificate F2 Weights Without Certificate F2 Weights NVLA		F2 Weights Without Certificate		NVLAP Certificate			
Model	Item No.	List Price (USD)	Model	Item No.	List Price (USD)	Model	Item No.	List Price (USD)	Model	Item No.	List Price (USD)
50 kg - 1 g	80780434	15600	50 kg - 1 g	80780461	16880	50 kg - 1 g	30390807	13020	50 kg - 1 g	30390830	13240
50 kg - 1 mg	80780433	15060	50 kg - 1 mg	80780460	17520	50 kg - 1 mg	30390808	13300	50 kg - 1 mg	30390831	13890
20 kg - 1 g	80780432	9290	20 kg - 1 g	80780459	10640	20 kg - 1 g	30390809	8275	20 kg - 1 g	30390832	9625
20 kg - 1 mg	80780431	9565	20 kg - 1 mg	80780458	11330	20 kg - 1 mg	30390810	8505	20 kg - 1 mg	30390833	10270
10 kg - 1 g	80780430	7075	10 kg - 1 g	80780457	8315	10 kg - 1 g	30390811	6300	10 kg - 1 g	30390834	7540
10 kg - 1 mg	80780429	7320	10 kg - 1 mg	80780456	8895	10 kg - 1 mg	30390812	6505	10 kg - 1 mg	30390835	8085
5 kg-1 kg	80780428	3490	5 kg-1 kg	80780455	3800	5 kg-1 kg	30390813	3180	5 kg-1 kg	30390836	3585
5 kg - 1 g	80780427	4380	5 kg - 1 g	80780454	5510	5 kg - 1 g	30390814	3760	5 kg - 1 g	30390837	4890
5 kg - 1 mg	80780426	4650	5 kg - 1 mg	80780453	6125	5 kg - 1 mg	30390815	4260	5 kg - 1 mg	30390838	5730
2 kg - 1 g	80780425	2905	2 kg - 1 g	80780452	3790	2 kg - 1 g	30390816	2875	2 kg - 1 g	30390839	3760
2 kg - 1 mg	80780424	3760	2 kg - 1 mg	80780451	4850	2 kg - 1 mg	30390817	3260	2 kg - 1 mg	30390840	4635
(2) 2 kg - 1 g	80780423	3440	(2) 2 kg - 1 g	80780450	4445	(2) 2 kg - 1 g	30390029	3260	(2) 2 kg - 1 g	30390033	4320
(2) 2 kg - 1 mg	80780422	3930	(2) 2 kg - 1 mg	80780449	5010	(2) 2 kg - 1 mg	30390030	3310	(2) 2 kg - 1 mg	30390034	4765
1 kg - 1 g	80780421	2560	1 kg - 1 g	80780448	3535	1 kg - 1 g	30390818	2540	1 kg - 1 g	30390841	3305
1 kg - 1 mg	80780420	2760	1 kg - 1 mg	80780447	4420	1 kg - 1 mg	30390819	2665	1 kg - 1 mg	30390842	3935
500 g - 1 g	80780419	1450	500 g - 1 g	80780446	2120	500 g - 1 g	30390820	1285	500 g - 1 g	30390843	1955
500 g - 1 mg	80780418	1945	500 g - 1 mg	80780445	3125	500 g - 1 mg	30390821	1660	500 g - 1 mg	30390844	2835
200 g - 1 g	80780417	1020	200 g - 1 g	80780444	1590	200 g - 1 g	30390822	1000	200 g - 1 g	30390845	1460
200 g - 1 mg	80780416	1605	200 g - 1 mg	80780443	2760	200 g - 1 mg	30390823	1580	200 g - 1 mg	30390846	2555
(2) 200 g - 1 g	80780415	1105	(2) 200 g - 1 g	80780442	1655	(2) 200 g - 1 g	30390031	1050	(2) 200 g - 1 g	30390035	1570
(2) 200 g - 1 mg	80780414	1645	(2) 200 g - 1 mg	80780441	2720	(2) 200 g - 1 mg	30390032	1605	(2) 200 g - 1 mg	30390036	2675
100 g - 1 g	80780413	755	100 g - 1 g	80780440	1125	100 g - 1 g	30390824	720	100 g - 1 g	30390847	1095
100 g - 1 mg	80780412	1145	100 g - 1 mg	80780439	2015	100 g - 1 mg	30390825	900	100 g - 1 mg	30390848	1775
50 g - 1 g	80780411	655	50 g - 1 g	80780438	980	50 g - 1 g	30390826	645	50 g - 1 g	30390849	970
50 g - 1 mg	80780410	1075	50 g - 1 mg	80780437	1905	50 g - 1 mg	30390827	880	50 g - 1 mg	30390850	1710
5 g - 1 mg	80780409	640	5 g - 1 mg	80780436	1080	5 g - 1 mg	30390828	605	5 g - 1 mg	30390851	1060
500 mg - 1 mg	80780408	555	500 mg - 1 mg	80780435	1050	500 mg - 1 mg	30390829	550	500 mg - 1 mg	30390852	1045





# **ASTM CLASS 6 WEIGHTS - CYLINDRICAL**

Adjusted to Meet or Exceed ASTM Class 6 Tolerances

Weights from 1 g to 2 kg are Stainless Steel and Weights 500 mg and below are Aluminum.

Weight Sets include a Weight Case.

Individual Weights do not include a case

Cylindric	al Weights	
Model	Item No.	List Price (USD)
Weight Set, 500 mg-1 mg, ASTM 6, Cyl	80850110	81
Weight Set, 50 g-10 mg, ASTM 6, Cyl	80850111	190
Weight Set, 100 g-1 mg, ASTM 6, Cyl	80850112	228
Weight Set, 200 g-1 mg, ASTM 6, Cyl	80850113	279
Weight Set, 500 g-1 g, ASTM 6, Cyl	80850114	356
Weight Set, 1 kg-1 g, ASTM 6, Cyl	80850115	488
Weight Set, 2 kg-1 g, ASTM 6, Cyl	80850116	745
Weight Set, 50 g-1 g, ASTM 6, Cyl	80850117	156
Weight, 1 g, ASTM 6, Cyl, Body	80850118	17
Weight, 2 g, ASTM 6, Cyl, Body	80850119	17
Weight, 5 g, ASTM 6, Cyl, Body	80850120	18
Weight, 10 g, ASTM 6, Cyl, Body	80850121	20
Weight, 20 g, ASTM 6, Cyl, Body	80850122	23
Weight, 50 g, ASTM 6, Cyl, Body	80850123	25
Weight, 100 g, ASTM 6, Cyl, Body	80850124	35
Weight, 200 g, ASTM 6, Cyl, Body	80850125	45
Weight, 300 g, ASTM 6, Cyl, Body	80850126	59
Weight, 500 g, ASTM 6, Cyl, Body	80850127	72
Weight, 1 kg, ASTM 6, Cyl, Body	80850128	125
Weight, 2 kg, ASTM 6, Cyl, Body	80850129	199
, ,		

Hooked Weights					
Model	Item No.	List Price (USD)			
Weight Set, 1 kg-10 g, ASTM 6, Hooked	80850130	186			
Weight, 10 g, Hooked	80850131	23			
Weight, 20 g, Hooked	80850132	23			
Weight, 50 g, Hooked	80850133	24			
Weight, 100 g, Hooked	80850134	25			
Weight, 200 g, Hooked	80850135	36			
Weight, 500 g, Hooked	80850136	49			
Weight, 1 kg, Hooked	80850137	90			

Slotted Weights					
Model	Item No.	List Price (USD)			
Weight Set, Slotted 500 g-10 g	80850138	153			
Weight Set, Slotted 500 g-1 g	80850139	196			
Weight Set, 1 g, ASTM 6, Slotted	80850140	25			
Weight Set, 2 g, ASTM 6, Slotted	80850141	25			
Weight Set, 5 g, ASTM 6, Slotted	80850142	25			
Weight Set, 20 g, ASTM 6, Slotted	80850144	25			
Weight Set, 50 g, ASTM 6, Slotted	80850145	25			
Weight Set, 100 g, ASTM 6, Slotted	80850146	27			
Weight Set, 200 g, ASTM 6, Slotted	80850147	34			
Weight Set, 500 g, ASTM 6, Slotted	80850148	57			
Weight, 50 g, Hanger	80850149	34			





## **NIST CLASS F CAST IRON GRIP WEIGHTS**

Manufactured to meet NIST Handbook 105-1 specifications

Cast Iron Grip Handle Weights are primarily used to test commercial weighing devices by state and local weights and measures officials, device installers, and service technicians.

Cast Iron Grip Handle Weights larger than 5 kg/10 lb are legal-for-trade, which means their design is acceptable for use in checking weighing devices where the price of the item being purchased is based on its weight.

All surfaces are smooth and free of scratches, dents and pores as outlined in NIST Handbook 105-1.

Without Certificate		
Model	Item No.	List Price (USD)
5000 lb	30391735	14920
3000 lb	30391734	9360
2500 lb	30391733	8400
2000 lb	30391732	7430
1500 lb	30391731	6495
1250 lb	30391730	5625
1000 lb	30391729	2630
500 lb	30391728	1690
250 lb	30391727	1550
200 lb	30391726	1350
100 lb	80850311	580
50 lb	80850310	138
30 lb	30391723	184
25 lb	80850309	124
20 lb	80850308	100
10 lb	80850307	78
5 lb	80850306	60

Traceable Certificate		
Model	Item No.	List Price (USD)
5000 lb	30391764	17060
3000 lb	30391763	10050
2500 lb	30391762	9275
2000 lb	30391761	7875
1500 lb	30391760	6735
1250 lb	30391759	6065
1000 lb	30391758	3345
500 lb	30391757	2260
250 lb	30391756	1900
200 lb	30391755	1670
100 lb	30391754	860
50 lb	30391753	228
30 lb	30391752	206
25 lb	30391751	192
20 lb	30391750	158
10 lb	30391749	130
5 lb	30391748	114

NVLAP Certificate		
Model	Item No.	List Price (USD)
5000 lb	30391781	17420
3000 lb	30391780	10790
2500 lb	30391779	9425
2000 lb	30391778	7990
1500 lb	30391777	7005
1250 lb	30391776	6185
1000 lb	30391775	2865
500 lb	30391774	1885
250 lb	30391773	1745
200 lb	30391772	1550
100 lb	30391771	685
50 lb	30391770	235
30 lb	30391769	266
25 lb	30391768	206
20 lb	30391767	175
10 lb	30391766	160
5 lb	30391765	147

Without Certificate		
Model	Item No.	List Price (USD)
1000 kg	30391717	7435
500 kg	30391716	3020
250 kg	30391715	1730
200 kg	30391714	1490
100 kg	30391713	1365
50 kg	80850305	600
25 kg	80850304	189
20 kg	80850303	141
10 kg	80850302	136
5 kg	80850301	82
2 kg	80850300	71

Traceable Certificate		
Model	Item No.	List Price (USD)
1000 kg	30391746	8110
500 kg	30391745	3750
250 kg	30391744	2145
200 kg	30391743	1940
100 kg	30391742	1705
50 kg	30391741	825
25 kg	30391740	261
20 kg	30391739	209
10 kg	30391738	162
5 kg	30391737	130
2 kg	30391736	112

NVLAP Certificate		
Model	Item No.	List Price (USD)
1000 kg	30391705	8225
500 kg	30391704	3845
250 kg	30391703	2250
200 kg	30391702	2040
100 kg	30391701	1810
50 kg	30391700	710
25 kg	30391699	235
20 kg	30391698	255
10 kg	30391697	205
5 kg	30391696	162
2 kg	30391695	146







## **NIST CLASS F STAINLESS STEEL INDIVIDUAL WEIGHTS**

Manufactured to meet NIST Handbook 105-1 specifications

Stainless Steel Test Weights are primarily used to test commercial weighing devices by state and local weights and measures officials, device installers, and service technicians.

Weights 5 kg /10 lb and below must be made of stainless steel of quality no lower than 300 series. Adjusting cavities are typically on the top of the weight and must be tamper resistant.

All surfaces have a satin finish and conform to specifications in NIST Handbook 105-1.

Without Certificate		
Model	Item No.	List Price (USD)
20 kg grip	30390593	870
16 kg grip	30390592	855
10 kg grip	30390591	630
8 kg grip	30390590	595
5 kg grip	30390589	370
5000 g	30390588	234
4000 g	30390587	216
3000 g	30390586	196
2000 g	30390585	139
1000 g	30390584	80
500 g	30390582	73
400 g	30390580	70
300 g	30390579	67
200 g	30390577	50
100 g	30390575	47
50 g	30390573	41
30 g	30390572	40
20 g	30390571	37
10 g	30390570	37
5 g	30390569	31
3 g	30390568	31
2 g	30390567	31
1 g	30390566	31

Traceable Certificate			
Model	Item No.	List Price (USD)	
20 kg grip	30390657	1005	
16 kg grip	30390656	985	
10 kg grip	30390655	715	
8 kg grip	30390654	675	
5 kg grip	30390653	417	
5000 g	30390652	292	
4000 g	30390651	279	
3000 g	30390650	266	
2000 g	30390649	217	
1000 g	30390648	170	
500 g	30390646	158	
400 g	30390644	156	
300 g	30390643	132	
200 g	30390641	114	
100 g	30390639	103	
50 g	30390637	99	
30 g	30390636	98	
20 g	30390635	98	
10 g	30390634	98	
5 g	30390633	92	
3 g	30390632	92	
2 g	30390631	92	
1 g	30390630	92	

NVLAP Certificate		
Model	Item No.	List Price (USD)
20 kg grip	30390721	1060
16 kg grip	30390720	1050
10 kg grip	30390719	760
8 kg grip	30390718	735
5 kg grip	30390717	510
5000 g	30390716	355
4000 g	30390715	338
3000 g	30390714	321
2000 g	30390713	258
1000 g	30390712	199
500 g	30390710	188
400 g	30390708	188
300 g	30390707	154
200 g	30390705	139
100 g	30390703	121
50 g	30390701	121
30 g	30390700	112
20 g	30390699	112
10 g	30390698	112
5 g	30390697	102
3 g	30390696	102
2 g	30390695	102
1 g	30390694	102

Without Certificate		
Model	Item No.	List Price (USD)
20 lb. grip	30390550	580
10 lb. grip	30390549	352
10 lb.	30390548	230
5 lb.	30390547	149
4 lb.	30390546	141
3 lb.	30390545	131
2 lb.	30390544	93
1 lb.	30390542	67
12 oz	30390540	57
8 oz	30390539	53
8 oz cube	30390538	119
4 oz	30390537	48
4 oz cube	30390536	106
2 oz	30390535	43
2 oz cube	30390534	97
1 oz	30390533	40

	Traceable Certificate		te
	Model	Item No.	List Price (USD)
	20 lb. grip	30390614	645
	10 lb. grip	30390613	505
	10 lb.	30390612	304
	5 lb.	30390611	237
	4 lb.	30390610	230
	3 lb.	30390609	223
	2 lb.	30390608	186
	1 lb.	30390606	171
	12 oz	30390604	116
	8 oz	30390603	112
	8 oz cube	30390602	162
	4 oz	30390601	109
	4 oz cube	30390600	154
	2 oz	30390599	105
	2 oz cube	30390598	146
	1 oz	30390597	103

NVLAP Certificate		2
Model	Item No.	List Price (USD)
20 lb. grip	30390678	725
10 lb. grip	30390677	615
10 lb.	30390676	362
5 lb.	30390675	283
4 lb.	30390674	278
3 lb.	30390673	270
2 lb.	30390672	225
1 lb.	30390670	208
12 oz	30390668	139
8 oz	30390667	139
8 oz cube	30390666	189
4 oz	30390665	129
4 oz cube	30390664	181
2 oz	30390663	128
2 oz cube	30390662	174
1 oz	30390661	121





Weights by

TROEMNER

## **NIST CLASS F STAINLESS STEEL WEIGHT SETS**

Manufactured to meet NIST Handbook 105-1 specifications

Stainless Steel Test Weights are primarily used to test commercial weighing devices by state and local weights and measures officials, device installers, and service technicians.

Weights 5 kg /10 lb and below must be made of stainless steel of quality no lower than 300 series. Adjusting cavities are typically on the top of the weight and must be tamper resistant.

All surfaces have a satin finish and conform to specifications in NIST Handbook 105-1.

Without Certificate				
Model	Item No.	List Price (USD)		
5000 g-1 mg	30390403	905		
5000 g-1 mg	30390397	1580		
5000 g-1 g	30390405	795		
5000 g-1 g	30390399	1455		
2000 g-1 mg	30390406	675		
2000 g-1 g	30390408	595		
2000 g-10 mg	30390407	640		
2000 g-1 mg	30390400	1520		
1000 g-1 g	30390411	505		
500 g-1 g	30390414	394		
100 g-1 mg	30390415	281		
50 g-1 g	30390420	190		
50 g-10 mg	30390419	240		

Traceable Certificate				
Model	List Price (USD)			
5000 g-1 mg	30390459	1025		
5000 g-1 mg	30390453	1735		
5000 g-1 g	30390461	925		
5000 g-1 g	30390455	1630		
2000 g-1 mg	30390462	755		
2000 g-1 g	30390464	690		
2000 g-10 mg	30390463	725		
2000 g-1 mg	30390456	1690		
1000 g-1 g	30390467	615		
500 g-1 g	30390470	525		
100 g-1 mg	30390471	432		
50 g-1 g	30390476	220		
50 g-10 mg	30390475	391		

NVLAP Certificate						
Model Item No. List Price (USI						
5000 g-1 mg	30390515	1240				
5000 g-1 mg	30390509	1860				
5000 g-1 g	30390517	1115				
5000 g-1 g	30390511	1765				
2000 g-1 mg	30390518	915				
2000 g-1 g	30390520	835				
2000 g-10 mg	30390519	885				
2000 g-1 mg	30390512	1810				
1000 g-1 g	30390523	745				
500 g-1 g	30390526	640				
100 g-1 mg	30390527	535				
50 g-1 g	30390532	273				
50 g-10 mg	30390531	468				

Without Certificate			
Model	Item No.	List Price (USD)	
10 lb-1/32 oz	30390384	860	
10 lb001 lb	30390383	870	
5 lb001 lb	30390373	1235	
5 lb001 lb	30390375	1220	
5 lb-1/32 oz	30390376	1200	
5 lb05 oz	30390374	1230	
5 lb-1/32 oz	30390387	585	
4 oz-1/32 oz	30390379	225	
.2 lb001 lb	30390381	242	

Traceable Certificate				
Model Item No. List Price (U				
10 lb-1/32 oz	30390440	1360		
10 lb001 lb	30390439	1375		
5 lb001 lb	30390429	1600		
5 lb001 lb	30390431	1570		
5 lb-1/32 oz	30390432	1575		
5 lb05 oz	30390430	1600		
5 lb-1/32 oz	30390443	1005		
4 oz-1/32 oz	30390435	365		
.2 lb001 lb	30390437	390		

NVLAP Certificate				
Model	Item No.	List Price (USD)		
10 lb-1/32 oz	30390496	1645		
10 lb001 lb	30390495	1670		
5 lb001 lb	30390485	1870		
5 lb001 lb	30390487	1855		
5 lb-1/32 oz	30390488	1835		
5 lb05 oz	30390486	1870		
5 lb-1/32 oz	30390499	1205		
4 oz-1/32 oz	30390491	620		
.2 lb001 lb	30390493	494		





# Accessories for Weighing

## SF40A

OHAUS Value in a Full-Featured, Portable Printer

### Operation

AC adapter (included)

#### Communication

RS232 (included)

#### Construction

**ABS** Housing

#### **Design Features**

Status indicator, 40 characters per line, compatible with continuous label paper, perform zero and tare operations directly from the printer

Model	Item No.	List Price (USD)
SF40A	30064203	990







The statistics and totalization modes and real time clock complement OHAUS weighing instruments' application modes and offer functionality that assists the reporting processes.

SF40A helps support the efficiency of the weighing and recording processes. RS232 interface and PC configuration software make setting up and using the printer fast and simple.

With the ability to print in 13 different languages, SF40A can print in the language of the connected

## **STP**103

Economical Palm-Sized Thermal Printer

#### Operation

AC adapter (included)

#### Communication

RS232 (included)

#### Construction

**ABS Housing** 

#### **Design Features**

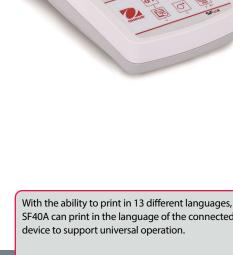
Status indicator, paper feeder, graphical printing capabilities

Model	Item No.	List Price (USD)	
Printer Thermal STP103 120vac LIS	80251992	760	

This ultra compact printer has a very small footprint and also features very low power consumption, requiring limited resources from your workspace.

The extremely fast STP103 offers 42 column printing at a speed of approximately 11.8 lines per second.

Loading paper into the printer is quick and easy and when the paper becomes low, the printer will suspend printing in order to prevent printing errors resulting from lack of paper.





## **ZEBRA GK-420T**

Economical Barcode Label Printer

### **Applications**

Thermal Transfer Barcode Label Printing for Defender 5000 (TD52) and Ranger 7000.

#### Communication

RS232 (cable 80500525 required). Other communication not supported for OHAUS products.

#### Construction

**ABS** Housing

### **Design Features**

Status indicator, paper feeder, graphical printing capabilities, AC adapter power (included). Requires RS232 Kit 30037448 for connection to Ranger 7000.

Both Ranger 7000 and Defender 5000 (TD52) require RS232 Cable 80500525.



Model	Printing Method	Printing Speed	Media Specifications	Operating Temperature	Dimensions (W x D x H)	Item No.	List Price (USD)
GK420T	Thermal Transfer, 203 dpi/8 dots per mm	4" / 102 mm per second maximum	0.75" / 19 mm to 4.25" / 108 mm wide 0.38" / 9.7 mm to 39" / 990 mm long 0.003" / 0.08 mm to 0.0075" / 0.19 mm thick Max. roll size 5"/127 mm O.D.	40° F to 105° F / 4.4° C to 41° C 10% to 90% non-condensing relative humidity	7.5 × 7.6 × 10" / 191 × 193 × 254 mm	30611855	729

Fast label printing with full part information—supports EPL2 and ZLP II Zebra programming languages.

Quickly configured with Ranger 7000 and Defender 5000 (TD52 models) using ScaleMate and print templates available on OHAUS DMX for dealers. Easy label loading—accepts wide range of labels

#### **Accessories**

Item No.	Description	List Price (USD)
30593703	Datalogic Barcode Scanner QD2131	191
30037448	RS232 Kit, Ranger 7000	155
80500525	Cable, RS232 for TD52 and Ranger 7000	193
30572923	USB Host (required for OD2131 to TD52)	135



Datalogic QD2131 Barcode Scanner

# Weighing & Measuring Accessories

## **ADAPTERS**

Accessories	Item No.	Price (USD)
LC Extension Cable, 9 meters, D52	30424409	167
Load Cell Cable Adapter Kit, to D52 Base	30429931	51

## **ANTITHEFT DEVICES**

Accessories	Item No.	Price (USD)
Anti-Theft Device, SP PA AV NV	80850000	89
Anti-Theft Device, MB AX EX	80850043	232

## **AUXILIARY DISPLAYS**

Accessories	Item No.	Price (USD)
Auxiliary Display, TAD7, SP SPJ TA TAJ	80251395	69
Auxiliary Display, AD7-RS	30472064	72

## **BASE MOUNTS**

Accessories	Item No.	Price (USD)
Handle Kit, D3K	30381321	102
Front Mount Kit, SS, TD52	30424024	111

## **CARRYING CASES**

Accessories	Item No.	Price (USD)
Carrying Case, V31	80251216	132
Carrying Case, FD V51	80251394	132
Carrying Case, EB EC	80251532	205
Carrying Case, SP	80850028	127
Carrying Case, Ranger	80850083	373
Carrying Case, TR TC R31 TC31 V71	80850084	373
Carrying Case, NVT	83032224	119
Carrying Case, NVL	83032225	119
Carrying Case, NV	83032226	119
Portable Bag STARTER	30031635	61
Carrying Case, SD (R base only)	30454761	91

## **COLUMN MOUNTS**

Item No.	Price (USD)
30531244	199
30539553	399
30078082	153
30095408	155
30454644	254
72209339	28
72209340	55
30424410	73
30424411	95
30424412	106
30424413	161
30424414	205
30424415	222
30424025	62
	30531244 30539553 30078082 30095408 30454644 72209339 72209340 30424410 30424411 30424412 30424413 30424414

## **COLUMN MOUNTS**

Accessories	Item No.	Price (USD)
Column Kit, 350mm, Painted, T31P	80251743	91
Column Kit, 700mm, Painted, T31P	80251744	101
Column Kit, 350mm, SST, T32XW	80251745	203
Column Kit, 700mm, SST, T32XW	80251746	255
Column Kit, 350mm, Painted, T51P T71P	80500723	79
Column Kit, 680mm, Painted, T51P T71P	80500724	91
Column Kit, 350mm, SST, T51XW T71XW	80500725	175
Column Kit, EX	83021102	167

## **DENSITY DETERMINATION KITS**

Accessories	Item No.	Price (USD)
Density Kit, Solids	80253384	780

## **DUST COVERS**

Accessories	Item No.	Price (USD)
Dust Cover, Balance with Draft Shield	30093334	51
Stacking Kit, x6, STX SPX SKX SJX/E	30268987	66
Stacking Kit, x1, STX SPX SKX SJX/E	30268988	23
Dust Cover, Dial-O-Gram Cent-O-Gram	80780005	40
Dust Cover, Triple Beam	80780017	40
Dust Cover, Storage, Harvard	80850262	40

## INTERFACE CABLES AND KITS

Accessories	Item No.	Price (USD)
Ethernet Kit, R31 RC31 R71 V71	30037447	155
RS232 Kit, R31 RC31 R71 V71	30037448	155
USB Kit, R31 RC31 V71	30037449	155
Cable, RS422, 9m, EX EX-HiCap	30078078	153
Cable, Extension, 9m, R71	30101495	109
Ethernet Kit, T72XW	30132163	155
USB with I/O Kit, T72XW	30132164	173
COM2 Kit, T72XW	30132165	155
RS232 Interface, STX SPX ST3100M	30268982	167
USB Host Interface, STX SPX	30268983	167
USB Device Interface, STX SPX ST3100M	30268984	116
Bluetooth Interface, STX SPX	30268985	150
Ethernet Interface, STX SPX	30268986	181
Ethernet Kit, EX EX-HiCap	83021082	193
Cable, USB, Type A-B	83021085	193
RS232 Kit, SP TA Navigator	83032107	167
USB Kit, SP TA NV NVL NVT	83032108	167
Ethernet Kit, NV NVL NVT	83032109	167
USB Kit, AV	83033014	193
Interface Kit, RS232-USB	30304101	145
Interface Kit, RS232-Ethernet	30304102	145
USB Host for WiFi/Bluetooth/Flash Drive	30572923	135
USB Host for Dongle, TD52	30424406	139
Analog Output Kit, TD52	30424403	167
2nd RS232/RS485/USB, TD52	30424404	167
Ethernet Kit, TD52	30429666	167
Discrete I/O Kit, 2-In/4-Out, R71 TD52	30097591	155

## **IN-USE COVERS**

Accessories	Item No.	Price (USD)
In-Use-Cover, V71	30037445	39
In-Use-Cover, R21 RC21 R31 RC31	30037451	39
In-Use-Cover, Set (10), V71	30037469	79
In-Use-Cover, STARTER	30058734	24
In-Use-Cover wo DS AX	30111777	30
In-Use-Cover DS AX	30111792	30
Accessory, In Use Cover, R71	30135320	46
In-Use-Cover, Scout	30269022	23
In-Use-Cover, Set (3), SP	71168909	57
In-Use-Cover, bRite A51 A71	72247038	38
In-Use-Cover, Pan, bRite A51 A71	72247039	25
Cover In-Use R11P RC11P	80120028	55
In-Use-Cover, FD V51	80251140	41
In-use cover (1), V12P	30559105	10
In-use cover (10), V12P	30559106	100
In-Use Cover for V41P	30479818	10
In Use Cover , R41 RC41	30240697	37
In-Use-Cover, MB23 MB27	80252475	40
In-Use-Cover, PA	83020221	48
In-Use-Cover, Terminal, EX	83033633	85
In-Use-Cover, ST5000	30129897	28
In-use Cover Set, TD52P	30424022	21
In-use Cover Set, TD52XW	30424023	28
In-use Cover set (10), TD52P	30469948	167
In-use Cover set (10), TD52XW	30469949	222

## **MISCELLANEOUS**

Accessories	Item No.	Price (USD)
Scoop, Gold	30020842	33
PCBA Kit, 2nd Platform, RC31 R41 RC41	30037446	155
Hook, R21 RC21 R31 RC31 R41 RC41 V71	30037450	111
Wheel Kit, Set (4), EX-HiCap	30041470	167
Holder, Attached, Electrode	30058732	46
Holder, Stand Alone, Electrode	30058733	88
PCBA Kit, 2nd Platform, R71	30097590	156
Static Ionizer, ION-100A, AM	30130302	1745
Pipette Adjustment Kit, EX Semi-Micro	30252145	1450
Subject Box	80000053	104
PCBA Kit, Alibi Memory, R71 T71	80500503	123
Kit, Rod and Clamp	80780011	74
Test Tube, 310-00 311-00	80780018	40
Weight Set, $2 \times 1$ kg, $1 \times 500$ g	80780108	72
Clamp, Gas Cylinder	80850312	99
Cable, RS422, Extension, EX EX-HiCap	83021083	108
Draft Shield Kit,EX	83021084	940
Seal kit, STARTER portables	83032962	47
Wheel Kit, Defender up to 600 lb / 300 kg capacity	30372146	134
Light Tower, R-Y-G, IP65, 24VDC	30424021	194
Datalogic Barcode Scanner QD2131	30593703	191

## **MOISTURE ANALYZER ACCESSORIES**

Accessories	Item No.	Price (USD)
Temp. Calibration Kit, MB Series	11113857	585
Holder, Pan, MB35 MB45	11113873	138
Scoop, Accessory, MB90 MB120	30284477	51
In-Use-Cover, Accessory, MB90 MB120	30284478	80
Holder, Pan, MB Series	80252476	80
Cage, Sample, MB Series	80252477	104
Pan, Reusable, Set (3), 7 mm, MB Series	80252478	87
Pan, Reusable, Set (3), 14 mm, MB Series	80252479	91
Pan, Aluminum, Set (100), MB200	80780012	82
Pan, Aluminum, Set (80), MB Series	80850086	66
Filter, Glass Fiber, Set (200)	80850087	103
Pan, Reusable(3), D90mm, MB45	80850088	202

## PANS, STANDS, BOWLS

Accessories	Item No.	Price (USD)
Pan, SST, R21 RC21 R31 RC31 V71	30037452	61
Platform, SST, 300x225mm, V22 V41	30251753	60
Pan, SST, Flat, FD V51	80251141	62
Pan, SST, Sandwich, V31	80251147	86
Holder, SST, French Fries, V31	80251148	86
Holder, SST, Ice Cream Cone, V31	80251149	86
Pan, SST, C11P	80251248	55
Stainless Steel Platform, 11.8 in $\times$ 8.9 in, V12	30559107	50
Large Pan, 11.8 × 8.8 in, V22 V41	30251753	60
Bowl, 1050ml, CS	80850075	55
Pan Cover, SST, CS	80850076	60

## PRINTER CABLES

Accessories	Item No.	Price (USD)
Cable, PC, 9 Pin, NV AV	12106964	199
Adapter, 9 Pin-9 Pin, PC-SF40A	30059316	39
Cable, RJ45-RS232, Printer, bRite A71	72249531	48
Adapter, 25 Pin-9 Pin, STP103	80251930	38
Adapter, 25 Pin -9 Pin, CBM910-SPU TA	80251934	38
Cable, RS232,CBM910-AV DV EX MB PA TxxP	80252571	193
Cable, RS232, CBM910-CKW TxxXW	80252574	216
Cable, ST103-AR EP VP	80252580	193
Cable, ST103-AV DV EX MB PA TxxP	80252581	193
Cable, ST103-TC TR	80252583	193
Cable, ST103-CKW55 TxxXW	80252584	216
Cable, 25 Pin-9 Pin, PC-TxxP	80500524	193
Cable, RS232, IBM 9P, AV DV MB Ranger TD52P	80500525	193
Cable, RS232 Connector, Ranger	80500526	193
Cable, RS232, CKW TxxXW	80500552	179
Cable, RS232, Ranger	80500556	193
Cable, SF42-AV DV MB Ranger	80500571	193

## **PRINTER SUPPLIES**

Accessories	Item No.	Price (USD)
Paper Roll, Set (5), SF42	12101511	80
Paper Roll, Set (2), 57.5mm, SF40A	12120799	19
Axis, Paper Roll, SF40A	30063920	20
Paper Roll, (1), Thermal, STP103	80251931	22
Paper Roll, (1), CBM910	80251932	20
Ink Ribbon, CBM910	80251933	56

## **RAMPS**

Accessories	Item No.	Price (USD)
Foot Plate, Set (2), Painted, VE VN	72198344	60
Ramp, 48 in $\times$ 26.4 in long, Painted, VN	80252565	800
Ramp, 60 in $\times$ 26.4 in long, Painted, VN	80252566	905
Ramp, 60 in × 48 in, 2.5 K/5 K, VX	80252766	985
Ramp, 60 in × 48 in, 5 K, VX	80252767	1240
Ramp, 60 in × 48 in, 10 K, VX	80252795	2130
Ramp, 60 in × 48 in, 10 K, VX	80252796	2355

## **RELAY KITS**

Accessories	Item No.	Price (USD)
USB with I/O Kit, T72XW	30132164	173
Discrete I/O Kit, 2-In/4-Out, R71 TD52	30097591	155
Relay Kit, AC, T51 T71	80500720	355
Relay Kit, DC, T51 T71	80500727	305

## RECHARGEABLE BATTERIES

Accessories	Item No.	Price (USD)
Rechargeable Battery, EX-HiCap R71	30041295	388
Battery Kit, Li-ion, TD52	30424405	200

## **S**COOPS

Accessories	Item No.	Price (USD)
Scoop, $110 \times 90 \times 30$ mm, Black	80250048	37
Scoop, Flat Bottomed, SST, 0.6 l	80250400	74
Scoop, Large, Flat Bottomed, SST	80250954	92
Scoop and Counter Weight	80780001	61
Scoop, PP, 0.8 I	80780006	40
Scoop and Counter Weight, Poly	80780014	56
Scoop and Counter Weight, SST	80780015	131
Scoop and Counter Weight, 1.75 l	80780016	59
Scoop, Small, Analytical	80850321	38
Scoop, Large, PAJ	80850322	40
Scoop, Poly, 0.6l	80850359	41
Scoop, Small, PAJ	80850364	30

## **SOFTWARE**

Accessories	Item No.	Price (USD)
Software, Winwedge	80850080	530

## **WALL MOUNTS**

Accessories	Item No.	Price (USD)
Wall Mount Kit, Painted, T31P	80251747	45
Wall Mount Kit, SST, T32XW	80251748	55
Wall Mount Kit, SST, T51XW T71XW	80500735	84
Wall Mount Kit, SST, TD52XW	30424026	84
Wall Mount Kit, CS, TD52P	30424027	62

## **WEIGHT ACCESSORIES**

Accessories	Item No.	Price (USD)
Weight Set, Metric, 1119-D0	80780008	248
Forceps,70 mm, 2-3/8 in.	80780009	25
Forceps, 3-3/8	80780010	25



OHAUS is now offering equipment designed for every area of the laboratory, giving you the opportunity to Do More. From stirrers to shakers, lifts to clamps, our newly expanded portfolio is filled with products perfect for life sciences laboratories, giving you countless opportunities to fill every inch of your laboratory.



## FRONTIER™ 5000 SERIES MICRO

Smooth and Dependable High-Speed Microliter Centrifuges for Life Science Separation Applications

### **Application**

High Speed Centrifugation, Cell Pelleting, Protein Separation, Nucleic Acid Separation

### Display

LCD, backlight, 2 lines

#### Operation

AC Power (included)

### Construction

Brushless quiet motor, small footprint

### **Design Features**

High sample throughput, multi-safety control, personal program function



FC5513



FC5515R

Excellent functionality when used with rotors compatible with 1.5/2.0 ml or 5 ml microtubes with high throughput & biocontainment options, spin columns, PCR strips, cryo tubes & hematocrit capillaries.

Designed for ease of operation, Frontier Micro centrifuges feature convenient controls on an intuitive interface, allowing responsive operation —even when wearing gloves.

Packaging all their functionality within a small footprint, Frontier Micro centrifuges save valuable space on the lab bench.

Model	Speed Range	Temp Range	Max g-force	Capacity	Weight	Dimensions (L $\times$ W $\times$ H)	Item No.	List Price (USD)
FC5513	200 rpm -13,500 rpm	Air Cooled	17,317 g	24 × 1.5 / 2.0 ml	28lb / 12.5Kg	11.0 × 9.4 × 13.8" (280 × 240 × 350 mm)	30393188	1840
FC5515	200 rpm-15,200 rpm	Air Cooled	21,953 g	$44 \times 1.5 / 2.0 \text{ ml};$ $12 \times 5 \text{ ml};$ $4 \times 8 \text{ place PCR Strips}$	37.4lb / 17Kg	15.43 × 11.3 × 11.5" (392 × 287 × 292 mm)	30130867	2695
FC5515R	200 rpm-15,200 rpm	-20° to 40°C	21,953 g	$44 \times 1.5/2.0 \text{ ml};$ $12 \times 5 \text{ ml};$ $4 \times 8 \text{ place PCR Strips}$	77lb / 35Kg	21.85 × 11.3 × 11.5" (555 × 287 × 292 mm)	30130869	5815

Accessories for FC5515 and FC5515R	Item No.	Price (USD)
Rotor, Angle, $24 \times 1.5 / 2.0 \text{ ml}$	30130870	745
Rotor, Angle, $24 \times 1.5 / 2.0$ ml, Sealable	30130871	990
Rotor, Angle, $30 \times 1.5 / 2.0$ ml, Sealable	30130872	1325
Rotor, Angle, 12 × 5 ml, Sealable	30130873	1480
Rotor, Angle, 4 × 8-Place PCR Stripes	30130874	1740
Rotor, Hematocrit, 24× Capillaries	30130881	640
Rotor, Angle, 44x1.5 / 2.0ml, ID, v2	30372717	1060

Accessories for FC5513	Item No.	Price (USD)
Rotor, Angle, $24 \times 1.5 / 2.0$ ml, Sealable, V2	30472302	530
Rotor, Angle, 18 × 2 ml Spin Column	30472303	419
Rotor, Hematocrit, 24 × Capillaries, V2	30472304	615
Adapter, $1 \times 0.5$ ml D8 mm, $6/pk$	30130885	98
Adapter, $1 \times 0.2 / 0.4$ ml D6 mm, $6/pk$	30130884	98
Rotor, Angle, 24 × 1.5/2.0ml, V2	30472301	392

## FRONTIER™ 5000 SERIES MULTI PRO

Powerful and Versatile Universal Centrifuges for Virtually Every Lab Application

### **Application**

Centrifugal Separation, General Sample Preparation, Cell Pelleting, Protein Separation, Nucleic Acid Separation, Cell Concentrating, Chemical Separation, Diagnostics, Environmental Sample Preparation, Blood Sample Processing

### Display

Backlit Liquid Crystal Display (LCD)

### Operation

Designed to be used with a variety of rotors and accessories

### Construction

Corrosion-resistant stainless steel chamber with Polycarbonate/ABS plastic lid

### **Design Features**

Ten acceleration & deceleration rates, selection of running time from 10 s to 99 h 59 min or continuous, quick spin, CFC-free refrigeration system, sample temp. indication (refrigerated models), lid-locking system, over-speed protection, dual imbalance sensing





Our multi-purpose centrifuges offer a high-speed centrifugation platform which can be customized to fit workflow needs using a wide variety of rotors and accessories.

The intuitive design of the centrifuges & accessories enable easy access to parameter settings, and quick rotation between applications.

The performance of these centrifuges is propelled by German engineering, and high-quality components for reliable use.

Model	Speed Range	Temp Range	Max g-force	Capacity	Dimensions $(L \times W \times H)$	Item No.	List Price (USD)
FC5714	200 rpm-14,000 rpm	Air Cooled	18,624 g	4 × 100 ml	19.4 × 14.25 × 14.25 in (493 × 362 × 362 mm)	30314811	3150
FC5718	200 rpm-18,000 rpm	Air Cooled	23,542 g	$4 \times 100 \text{ ml}$	$19.65 \times 16.06 \times 13.82$ in (499 × 408 × 351 mm)	30314813	4580
FC5718R	200 rpm-18,000 rpm	-20° to 40°C	23,542 g	$4 \times 100  \text{ml}$	$28.78 \times 16.02 \times 14.13$ in (731 × 407 × 359 mm)	30314815	6840
FC5816	200 rpm-15,000 rpm	Air Cooled	21,379 g	$6 \times 250  \text{ml}$	21.18 × 21.18 × 13.94 in (538 × 446 × 354 mm)	30314817	5330
FC5816R	200 rpm-16,000 rpm	-20° to 40°C	24,325 g	$6 \times 250  \text{ml}$	$21.18 \times 28.46 \times 28.46$ in (538 × 723 × 354 mm)	30314819	8095
FC5916	200 rpm-16,000 rpm	Air Cooled	24,325 g	$4 \times 750  \text{ml}$	$21.3 \times 26.4 \times 15.4$ in (541 × 670 × 391 mm)	30553037	6870
FC5916R	200 rpm-16,000 rpm	-20° to 40°C	26,331 g	$4 \times 750  \text{ml}$	$28.7 \times 26.4 \times 15.4$ in (729 × 670 × 391 mm)	30553103	9945

Accessories	Item No.	Price (USD)
Rotor, Angle, $24 \times 1.5 / 2.0$ ml, ID, Sealable	30304361	1120
Rotor, Swing out, $4 \times 250$ ml, ID	30314820	1550
Rotor, Angle, $6 \times 250$ ml FB, ID	30314821	3825
Rotor, Swing out, $4 \times 100$ ml, ID	30314822	1290
Rotor, Swing out, $4 \times 100$ ml, ID, Sealable	30314823	1085
Rotor, Swing out, $2 \times 3$ MTP, ID	30314824	1875
Rotor, Angle, $6 \times 85$ ml RB, ID, Hi	30314825	2135
Rotor, Angle, $6 \times 85$ ml RB, ID	30314826	2160
Rotor, Angle, $4 \times 85$ ml RB, ID, Hi	30314827	2205
Rotor, Swing out, $16 \times 50$ ml, ID	30314828	2300
Rotor, Angle, $10 \times 50$ ml FA, ID	30314829	2740
Rotor, Swing out, 4 x 750 ml, ID	30553085	1760
Rotor, Angle, 4 x 500 ml, ID	30553086	4245

Accessories	Item No.	Price (USD)
Rotor, Angle, $6 \times 50$ ml RB/FA, ID	30314830	935
Rotor, Angle, $6 \times 50$ ml RB, ID, Hi	30314831	1875
Rotor, Angle, $30 \times 15$ ml RB/FA, ID	30314832	1460
Rotor, Angle, $20 \times 10$ ml RB, ID, Hi	30314833	1930
Rotor, Angle, $12 \times 15$ ml RB/FA, ID	30314834	945
Rotor, Angle, $30 \times 1.5 / 2.0$ ml, ID, Sealable	30314836	1510
Rotor, Angle, $24 \times 1.5 / 2.0  \text{ml, ID}$	30314838	845
Rotor, Angle, $12 \times 1.5 / 2.0$ ml, ID	30314839	1355
Rotor, Angle, $64 \times 0.5$ ml, ID	30314840	1370
Rotor, Angle, $4 \times 8$ -w PCR Strip, ID	30314841	1950

## FRONTIER™ 5000 SERIES MULTI

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

### **Application**

Low Speed Centrifugation

### Display

LCD, backlight, 2 lines

#### Operation

AC Power (included)

### Construction

Brushless quiet motor, small footprint

### **Design Features**

Easy installation design



FC5707



FC5706

Designed for ease of operation, Frontier™ Multi Centrifuges feature convenient control on an intuitive interface, which allows for responsive operation—even when wearing gloves. Frontier™ Multi Centrifuges can accommodate standard 50 ml and 15 ml tubes, including common blood tubes. When used with accessories, rotors can be adapted for sizes as small as 1.5 ml.

Enclosing all its functionalities within a small footprint, Frontier™ Multi Centrifuges save valuable space on the lab bench.

Model	Speed Range	Max g-force	Capacity	Dimensions (L $\times$ W $\times$ H)	Weight	Item No.	List Price (USD)
FC5706 120V	200 rpm-6,000 rpm	4,427 g	6 × 50 ml	15.4 × 11.5 × 10.5" (392 × 291 × 266 mm)	23lbs / 10.5Kg	30130876	1990
FC5706 120V*	200 rpm-6,000 rpm	4,427 g	6 × 50 ml	$15.4 \times 11.5 \times 10.5$ " (392 × 291 × 266 mm)	23lbs / 10.5Kg	30332132	2200
FC5707 100-230V**	* 200 rpm-6,800 rpm	4,445 g	$8 \times 15 \text{ ml RB} / 4 \times 15 \text{ ml FA}$	$11.0 \times 9.4 \times 13.8$ " (280 × 240 × 350 mm)	18lb / 8Kg	30393189	1565

<sup>\*</sup> Includes Rotor, Angle  $6 \times 50$  mL

<sup>\*\*</sup> Includes Rotor, Angle, 8 ×15 mL

Item No.	Price (USD)
30130878	1000
30130891	242
30130892	242
30130893	242
30130894	169
30130877	565
30130889	116
30130890	106
30130886	192
30130880	670
30130895	101
	30130878 30130891 30130892 30130893 30130894 30130877 30130889 30130880 30130886

<sup>†</sup> Includes 6 buckets

Accessories for FC5707	Item No.	Price (USD)
Rotor, Angle, $8 \times 15$ ml	30472305	407
Adapter, D11mm, 1.5 / 2.0 mLTubes ×6	30130886	192
Adapter, D13.5mm, 7ml Tubes ×2	30130889	116
Adapter, D13.5mm, 5ml Tubes ×2	30130890	106

## FRONTIER™ 5000 SERIES MINI

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

### **Application**

Sample preparation

### Operation

AC adapter (included)

#### Construction

Brushless quiet motor, auto shut-off safety switches

### **Design Features**

One-touch operation





Two rotors and adapters are included

With a low voltage power input, quiet brushless motor and a rubber base that absorbs vibrations, Frontier 5306 minimizes operational noise and reduces disruptions in the laboratory.

Frontier 5306 is designed with operator safety in mind, and includes a rotor imbalance sensor and two safety switches which immediately stop the rotors should the lid open during use.

Frontier 5306 takes simple one-step operation to a new level. Simply place your sample in the centrifuge, close the lid, and it will begin to rotate without the press of a button.

Model	Maximum Speed	Max g-force	Capacity	Dimensions (L $\times$ W $\times$ H)	Item No.	List Price (USD)
FC5306	6,000 rpm	2,000 g	$8 \times 1.5$ ml / $2.0$ ml; $4 \times 8$ place PCR Strips	$6.6 \times 5.9 \times 5$ " (168 × 150 × 128 mm)	30134157	196

Accessories	Item No.	Price (USD)
Adapter for 0.2 ml Tube (8PCS/Package)	30129561	50
Adapter for 0.5 ml Tube (8PCS/Package)	30129562	50

## FRONTIER™ 5000 ROTORS

Offering Flexibility to Maximize Sample Preparation

## **Application**

Centrifugation Accessory

#### Construction

Aluminum or polypropylene material

Choose from a range of rotors to be used with Frontier centrifuges to match capacities and flexibility required for your basic to high-performance sample preparation needs.

Designed with usability in mind, the Frontier rotors can be effortlessly installed or removed in a few quick and simple steps, and users have easy access to the samples.



The sturdy rotors are constructed of high-quality materials, built to last through demanding workflows from autoclave sterilization to sub-zero temperature.

Model	<b>Rotor Style</b>	Capacity	Max g-force	Maximum Speed	Item No.	List Price (USD)
R-A8 × 2/6M	Angle	8 × 1.5 / 2.0 ml	2,560 g	6,000 rpm	30129559	50
R-A4 × PCR/6	Angle	4 × 0.2 ml PCR8	2,260 g	6,000 rpm	30129560	50
R-A24 × 2/15M	Angle	$24 \times 1.5 / 2.0 \text{ ml}$	21,953 g	15,200 rpm	30130870	745
R-A24 × 2/15MS	Angle	$24 \times 1.5 / 2.0 \text{ ml}$	21,953 g	15,200 rpm	30130871	990
R-A30 × 2/13MS	Angle	$30 \times 1.5 / 2.0 \text{ ml}$	19,150 g	13,500 rpm	30130872	1325
R-A12 × 5/14MS	Angle	$12 \times 5 \text{ ml}$	19,978 g	14,500 rpm	30130873	1480
$R-A4 \times PCR/15$	Angle	$4 \times 0.2$ ml PCR8	15,342 g	15,000 rpm	30130874	1740
R-A12 × 15/6M	Angle	12 × 15 ml	4,427 g	6,000 rpm	30130877	565
R-A6 × 50/6M	Angle	6 × 50 ml	4,427 g	6,000 rpm	30130878	1000
R-S6 × 5/4	Swing out	$6 \times 5  \text{ml}$	1,817 g	4,000 rpm	30130880	670
$R-A24 \times CAP/12$	Angle	24 × Capillaries	14,970 g	12,000 rpm	30130881	640
R-A24 × 2/16MIS	Angle	$24 \times 1.5 / 2.0 \text{ ml}$	24,325 g	16,000 rpm	30304361	1120
R-S4 × 250/4MI	Swing out	4 × 250 ml	3,780 g	4,500 rpm	30314820	1550
R-A6 × 250/8MI	Angle	6 × 250 ml	10,016 g	8,000 rpm	30314821	3825
R-S4 × 100/4MI	Swing out	$4 \times 100 \text{ ml}$	3,350 g	4,500 rpm	30314822	1290
$R-S4 \times 100/5MIS$	Swing out	$4 \times 100  \text{ml}$	3,885 g	5,000 rpm	30314823	1085
$R-S6 \times MTP/4MI$	Swing out	2 × 3 MTP	2,716 g	4,500 rpm	30314824	1875
R-A6 × 85/14MI	Angle	6 × 85 ml	20,984 g	13,500 rpm	30314825	2135
R-A6 × 85/13MI	Angle	6 × 85 ml	21,726 g	13,000 rpm	30314826	2160
R-A4 × 85/12MI	Angle	4 × 85 ml	14,809 g	12,000 rpm	30314827	2205
R-S16 × 50/4MI	Swing out	$16 \times 50  \text{ml}$	3,735 g	4,500 rpm	30314828	2300
R-A10 × 50/10MI	Angle	$10 \times 50  \text{ml}$	16,022 g	10,500 rpm	30314829	2740
R-A6 × 50/6MI	Angle	6 × 50 ml	4,427 g	6,000 rpm	30314830	935
R-A6 × 50/13MI	Angle	$6 \times 50  \text{ml}$	15,869 g	13,000 rpm	30314831	1875
R-A30 × 15/4MI	Angle	$30 \times 15  \text{ml}$	2,830 g	4,500 rpm	30314832	1460
$R-A20 \times 10/12MI$	Angle	$20 \times 10 \text{ ml}$	15,775 g	12,000 rpm	30314833	1930
R-A12 × 15/6MI	Angle	$12 \times 15  \text{ml}$	4,427 g	6,000 rpm	30314834	945
R-A30 × 2/14MIS	Angle	$30 \times 1.5 / 2.0 \text{ ml}$	20,595 g	14,000 rpm	30314836	1510
R-A24 × 2/16MI	Angle	$24 \times 1.5 / 2.0 \text{ ml}$	24,325 g	16,000 rpm	30314838	845
R-A12 × 2/18MI	Angle	$12 \times 1.5 / 2.0 \text{ ml}$	23,542 g	18,000 rpm	30314839	1355
R-A64 × 0.5/13I	Angle	$64 \times 0.5 \text{ ml}$	16,298 g	13,500 rpm	30314840	1370
R-A4 × PCR/15I	Angle	4 × 8-w PCR Strip	15,343 g	15,000 rpm	30314841	1950

Sample Preparation

### **Application**

Frontier rotors extend the functionality of Frontier centrifuges by increasing the number of tubes of varied types and sizes that can be used in conjunction with each of the centrifuge models. Easy to clean and operate, the rotors are durably constructed to withstand demanding centrifugation.

### Fixed Angle Rotor $24 \times 1.5 / 2.0 \text{ ml}$

Description	Item No.	Price (USD)
Rotor, Angle, $24 \times 1.5 / 2.0$ ml, ID, Sealable	30304361	11 <b>20</b>



Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Adapter, 1 × 0.5 ml D8mm, 6/pk	0.5 ml	8mm	Eppendorf tube	24	30130885	98
Adapter, 1 × 0.2 / 0.4 ml D6mm, 6/pk	0.2 / 0.4 ml	6mm	Eppendorf tube	24	30130884	98

## Fixed Angle Rotor 6 × 250 ml FB

Description	Item No.	Price (USD)
Rotor, Angle, 6 × 250 ml FB, ID	30314821	3825



Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Adapter, 1 × 50 ml D30 mm FA, 2/pk	50 ml	30 mm	Conical bottom	6	30304374	267
Adapter, 1 × 50 ml D29 mm RB, 2/pk	50 ml	29 mm	Round bottom	6	30304373	267
Adapter, 2 × 30 ml D26 mm RB, 2/pk	30 ml	26 mm	Round bottom	12	30304372	267
Adapter, 4 × 15 ml D17 mm FA, 2/pk	15 ml	17 mm	Conical bottom	24	30304371	267
Adapter, $5 \times 10$ ml D16 mm RB, $2/pk$	10 ml	16 mm	Round bottom	30	30304370	267
Adapter, $8 \times 1.5$ ml D11 mm, $2/pk$	1.5 ml	11 mm	Eppendorf tube	48	30304369	267



Sample Preparation

### **Application**

Frontier rotors extend the functionality of Frontier centrifuges by increasing the number of tubes of varied types and sizes that can be used in conjunction with each of the centrifuge models. Easy to clean and operate, the rotors are durably constructed to withstand demanding centrifugation.

## Fixed Angle Rotor 6 × 85 ml RB

Description	Item No.	Price (USD)
Rotor, Angle, $6 \times 85$ ml RB, ID, Hi	30314825	2135



Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No. List Price (USD)
Max. RCF	_	13932 xg	20984 xg	=	_
Max. Speed	=	11000 rpm	13500 rpm	=	=
Compatible to	FC5714	FC5718	FC5718R	FC5816	FC5816R

Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Adapter, 1 × 50 ml D29 mm RB, 2/pk, v2	50 ml	29 mm	Round bottom	6	30314895	184
Adapter, $1 \times 50$ ml D29 mm FA, $2/pk$	50 ml	29 mm	Conical bottom	6	30314896	184
Adapter, 1 × 30 ml D25 mm RB, 2/pk	30 ml	25 mm	Round bottom	6	30314894	184
Adapter, 1 × 16 ml D18 mm RB, 2/pk	16 ml	18 mm	Round bottom	6	30314899	184
Adapter, 1 × 15 ml D17 mm FA, 2/pk	15 ml	17 mm	Conical bottom	6	30314897	184
Adapter, 2 × 15 ml D17 mm RB, 2/pk	15 ml	17 mm	Round bottom	12	30314898	184
Adapter, $1 \times 15$ ml D17 mm RB, $2/pk$	15 ml	17 mm	Round bottom	6	30314893	184

## Fixed Angle Rotor $6 \times 85$ ml RB

Description	Item No.	Price (USD)
Rotor, Angle, $6 \times 85$ ml RB, ID	30314826	2160



Compatible to	FC5714	FC5718	FC5718R	FC5816	FC5816R
Max. Speed	_	9000 rpm	9000 rpm	11000 rpm	13000 rpm
Max. RCF	-	10413 xg	10413 xg	15555 xg	21726 xg
Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No. List Price (USD)

Accessories	voi./Tube	Diameter	rube type	No.01 tubes/rotor	item No.	LIST PIICE (USD)
Adapter, 1 × 50 ml D29 mm RB, 2/pk, v2	50 ml	29 mm	Round bottom	6	30314895	184
Adapter, 1 × 50 ml D29 mm FA, 2/pk	50 ml	29 mm	Conical bottom	6	30314896	184
Adapter, 1 × 30 ml D25 mm RB, 2/pk	30 ml	25 mm	Round bottom	6	30314894	184
Adapter, 1 × 16 ml D18 mm RB, 2/pk	16 ml	18 mm	Round bottom	6	30314899	184
Adapter, 1 × 15 ml D17 mm FA, 2/pk	15 ml	17 mm	Conical bottom	6	30314897	184
Adapter, $2 \times 15$ ml D17 mm RB, $2/pk$	15 ml	17 mm	Round bottom	12	30314898	184
Adapter, $1 \times 15$ ml D17 mm RB, $2/pk$	15 ml	17 mm	Round bottom	6	30314893	184

FC5816R

## MULTI PRO CENTRIFUGE ROTORS & ACCESSORIES

Sample Preparation

### **Application**

Compatible to

Frontier rotors extend the functionality of Frontier centrifuges by increasing the number of tubes of varied types and sizes that can be used in conjunction with each of the centrifuge models. Easy to clean and operate, the rotors are durably constructed to withstand demanding centrifugation.

## Fixed Angle Rotor 4 × 85 ml RB

Description	Item No.	Price (USD)
Rotor, Angle, $4 \times 85$ ml RB, ID, Hi	30314827	2205

FC5714



FC5816

Adapter, 1 × 50 ml D29 mm RB, 2/pk, v2	50 ml	29 mm	Round bottom	4	30314895	184
Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Max. RCF –		14809 xg	14809 xg	14809 xg		14809 xg
Max. Speed –		12000 rpm	12000 rpm	12000 rpm	1	12000 rpm

FC5718

FC5718R

Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Adapter, 1 × 50 ml D29 mm RB, 2/pk, v2	50 ml	29 mm	Round bottom	4	30314895	184
Adapter, 1 × 50 ml D29 mm FA, 2/pk	50 ml	29 mm	Conical bottom	4	30314896	184
Adapter, 1 × 30 ml D25 mm RB, 2/pk	30 ml	25 mm	Round bottom	4	30314894	184
Adapter, 1 × 16 ml D18 mm RB, 2/pk	16 ml	18 mm	Round bottom	4	30314899	184
Adapter, 1 × 15 ml D17 mm FA, 2/pk	15 ml	17 mm	Conical bottom	4	30314897	184
Adapter, 2 × 15 ml D17 mm RB, 2/pk	15 ml	17 mm	Round bottom	8	30314898	184
Adapter, $1 \times 15$ ml D17 mm RB, $2/pk$	15 ml	17 mm	Round bottom	4	30314893	184

## Fixed Angle Rotor $10 \times 50$ ml FA





Compatible to	FC5714	FC5718	FC5718R	FC5816	FC5816R
Max. Speed	-	7500 rpm	7500 rpm	9000 rpm	10500 rpm
Max. RCF	_	8174 xg	8174 xg	11771 xg	16022 xg

Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Adapter, 1 × 15 ml D17 mm FA 2/pk V2	15 mL	17 mm	Conical	10	30472307	106
Adapter, $1 \times 15$ ml D17 mm RB 2/pk V2	15 mL	17 mm	Round	10	30472300	106
Adapter, $1 \times 7$ ml D13.5 mm RB, $2/pk$	7 ml	13.5 mm	Round bottom	10	30130889	116
Adapter, $1 \times 5$ ml D13.5 mm, $2/pk$	5 ml	13.5 mm	Round bottom	10	30130890	106
Adapter, $1 \times 1.5/2.0$ ml D11 mm, $6/pk$	1.5/2.0 ml	11 mm	Eppendorf tube	10	30130886	192

Sample Preparation

### **Application**

Frontier rotors extend the functionality of Frontier centrifuges by increasing the number of tubes of varied types and sizes that can be used in conjunction with each of the centrifuge models. Easy to clean and operate, the rotors are durably constructed to withstand demanding centrifugation.

## Fixed Angle Rotor 6 × 50 ml RB/FA

Description	Item No.	Price (USD)
Rotor, Angle, $6 \times 50$ ml RB/FA, ID	30314830	935



Compatible to	FC5714	FC5718	FC5718R	FC5816	FC5816R
Max. Speed	6000 rpm	6000 rpm	6000 rpm	-	
Max. RCF	4427 xg	4427 xg	4427 xg	=	-
Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No. List Price (USD)

Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Adapter, 1 × 30 ml D26 mm, 2/pk	30 ml	26 mm	Round bottom	6	30130891	242
Adapter, $1 \times 16$ ml D18 mm, $2/pk$	16 ml	18 mm	Round bottom	6	30130892	242
Adapter, 1 × 15 ml D17 mm, 2/pk	15 ml	17 mm	Round bottom	6	30130893	242
Adapter, 1 × 15 ml D17 mm RB, 2/pk, v2	15 ml	17 mm	Round/Conical bottom	6	30130894	169
Adapter, 1 × 7 ml D13.5 mm RB, 2/pk	7 ml	13.5 mm	Round bottom	6	30130889	116
Adapter, $1 \times 5$ ml D13.5 mm, $2/pk$	5 ml	13.5 mm	Round bottom	6	30130890	106
Adapter, $1 \times 1.5/2.0$ ml D11 mm, $6/pk$	1.5/2.0 ml	11 mm	Eppendorf tube	6	30130886	192

## Fixed Angle Rotor 6 × 50 ml RB

Description	Item No.	Price (USD)
Rotor, Angle, 6 × 50 ml RB, ID, Hi	30314831	1875



Compatible to	FC5714	FC5718	FC5718R	FC5816	FC5816R
Max. Speed	-	12000 rpm	12000 rpm	13000 rpm	13000 rpm
Max. RCF	=	13522 xg	13522 xg	15869 xg	15869 xg

Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Adapter, 1 × 30 ml D26 mm, 2/pk	30 ml	26 mm	Round bottom	6	30130891	242
Adapter, $1 \times 16$ ml D18 mm, $2/pk$	16 ml	18 mm	Round bottom	6	30130892	242
Adapter, $1 \times 15$ ml D17.5 mm FA, $2/pk$	15 ml	17.5 mm	Conical bottom	6	30314892	207
Adapter, 1 × 15 ml D17 mm, 2/pk	15 ml	17 mm	Round bottom	6	30130893	242

## Fixed Angle Rotor 4 × 500 ml RB

Description		Item No.	Price (USD)
Rotor, Angle, $4 \times 500$ ml, ID, Hi		30553086	4245
Compatible to	FC5916	FC	5916R
Max. Speed	8,000 rpm	8,00	00 rpm
Max. RCF	10.374	10	0.374



Sample Preparation

### **Application**

Frontier rotors extend the functionality of Frontier centrifuges by increasing the number of tubes of varied types and sizes that can be used in conjunction with each of the centrifuge models. Easy to clean and operate, the rotors are durably constructed to withstand demanding centrifugation.

## Fixed Angle Rotor $30 \times 15$ ml RB/FA

Description	Item No.	Price (USD)
Rotor, Angle, 30 × 15 ml RB/FA, ID	30314832	1460

Compatible to	FC5714	FC5718	FC5718R	FC5816	FC5816R
Max. Speed	4500 rpm				
Max. RCF	2830 xg				

Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Adapter, 1 × 7 ml D13.5 mm RB, 2/pk	7 ml	13.5 mm	Round bottom	30	30130889	116
Adapter, $1 \times 5$ ml D13.5 mm, $2/pk$	5 ml	13.5 mm	Round bottom	30	30130890	106
Adapter, 1 $\times$ 1.5 / 2.0 ml D11 mm, 6/pk	1.5/2.0 ml	11 mm	Eppendorf tube	30	30130886	192

## Fixed Angle Rotor $20 \times 10$ ml RB

Description	Item No.	Price (USD)
Rotor, Angle, 20 × 10 ml RB, ID, Hi	30314833	1930

Compatible to	FC5714	FC5718	FC5718R	FC5816	FC5816R
Max. Speed	-	12000 rpm	12000 rpm	12000 rpm	12000 rpm
Max. RCF	_	15775 xg	15775 xg	15775 xg	15775 xg

## Fixed Angle Rotor $12 \times 15$ ml RB/FA

Description	Item No.	Price (USD)
Rotor, Angle, 12 × 15ml RB/FA, ID	30314834	945

Compatible to	FC5714	FC5718	FC5718R	FC5816	FC5816R
Max. Speed	6000 rpm	6000 rpm	6000 rpm	-	-
Max. RCF	4427 xg	4427 xg	4427 xg	=	-

Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Adapter, 1 × 7 ml D13.5 mm RB, 2/pk	7 ml	13.5 mm	Round bottom	12	30130889	116
Adapter, $1 \times 5$ ml D13.5 mm, $2/pk$	5 ml	13.5 mm	Round bottom	12	30130890	106
Adapter, $1 \times 1.5 / 2.0$ ml D11 mm, $6/pk$	1.5/2.0 ml	11 mm	Eppendorf tube	12	30130886	192





Sample Preparation

### **Application**

Frontier rotors extend the functionality of Frontier centrifuges by increasing the number of tubes of varied types and sizes that can be used in conjunction with each of the centrifuge models. Easy to clean and operate, the rotors are durably constructed to withstand demanding centrifugation.

### Fixed Angle Rotor $44 \times 1.5 / 2.0 \text{ ml}$

Description	Item No.	Price (USD)
Rotor, Angle, $44 \times 1.5 / 2.0$ ml, ID	30372718	1190



Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Adapter, 1 × 0.5 ml D8 mm, 6/pk	0.5 ml	8 mm	Eppendorf tube	44	30130885	98
Adapter, 1 × 0.2 /0.4 ml D6 mm, 6/pk	0.2 / 0.4 ml	6 mm	Eppendorf tube	44	30130884	98

## Fixed Angle Rotor $30 \times 1.5/2.0$ ml

Description	Item No.	Price (USD)
Rotor, Angle, 30 × 1.5 / 2.0 ml, ID, Sealable	30314836	1510

Compatible to	FC5714	FC5718	FC5718R	FC5816	FC5816R
Max. Speed	12000 rpm	13000 rpm	14000 rpm	=	=
Max. RCF	15131 xg	17758 xg	20595 xg	-	_

Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Adapter, 1 × 0.5 ml D8 mm, 6/pk	0.5 ml	8 mm	Eppendorf tube	30	30130885	98
Adapter, 1 × 0.2 / 0.4 ml D6 mm, 6/pk	0.2 / 0.4 ml	6 mm	Eppendorf tube	30	30130884	98

## Fixed Angle Rotor $24 \times 1.5/2.0$ mIFA

Description	Item No.	Price (USD)
Rotor, Angle, $24 \times 1.5 / 2.0$ ml, ID	30314838	845

Compatible to	FC5714	FC5718	FC5718R	FC5816	FC5816R
Max. Speed	14000 rpm	14000 rpm	15000 rpm	15000 rpm	16000 rpm
Max. RCF	18624 × g	18624 × g	21379 × g	21379 × g	24325 × g

Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Adapter, 1 × 0.5 ml D8 mm, 6/pk	0.5 ml	8 mm	Eppendorf tube	24	30130885	98
Adapter, $1 \times 0.2/0.4$ ml D6 mm, $6/pk$	0.2 / 0.4 ml	6 mm	Eppendorf tube	24	30130884	98





Sample Preparation

### **Application**

Frontier rotors extend the functionality of Frontier centrifuges by increasing the number of tubes of varied type and sizes that can be used in conjunction with each of the centrifuge models. Easy to clean and operate, the rotors are durably constructed to withstand demanding centrifugation.

## Fixed Angle Rotor $12 \times 1.5 / 2.0 \text{ ml}$

Description	Item No.	Price (USD)
Rotor, Angle, 12 × 1.5 / 2.0 ml, ID	30314839	1355



Compatible to	FC5714	FC5718	FC5718R	FC5816	FC5816R
Max. Speed	-	18000 rpm	18000 rpm	-	-
Max. RCF	=	23542 xg	23542 xg	=	_

Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Adapter, $1 \times 1.5$ ml for over $16000 \times g$ , $6/pk$	1.5 ml	11 mm	Eppendorf tube	12	30314900	100
Adapter, $1 \times 0.5$ ml D8 mm, $6/pk$	0.5 ml	8 mm	Eppendorf tube	12	30130885	98
Adapter, 1 $\times$ 0.2 / 0.4 ml D6 mm, 6/pk	0.2/0.4 ml	6 mm	Eppendorf tube	12	30130884	98

## Fixed Angle Rotor 64 × 0.5 ml

Description	Item No.	Price (USD)
Rotor, Angle, $64 \times 0.5$ ml, ID	30314840	1370



Compatible to	FC5714	FC5718	FC5718R	FC5816	FC5816R
Max. Speed	-	13500 rpm	13500 rpm	-	-
Max. RCF	_	16298 xg	16298 xg	-	-

## Fixed Angle Rotor $4 \times 8$ -w PCR Strip

Description	Item No.	Price (USD)
Rotor, Angle, $4 \times 8$ -w PCR Strip, ID	30314841	1950



Compatible to	FC5714	FC5718	FC5718R	FC5816	FC5816R
Max. Speed	-	15000 rpm	15000 rpm	-	-
Max. RCF	-	15343 xg	15343 xg	-	-

Sample Preparation

### **Application**

Frontier rotors extend the functionality of Frontier centrifuges by increasing the number of tubes of varied types and sizes that can be used in conjunction with each of the centrifuge models. Easy to clean and operate, the rotors are durably constructed to withstand demanding centrifugation.

## Swing Out Rotors 4 × 250 ml

Description	Item No.	Price (USD)
Rotor, Swing out, 4 × 250 ml, ID	30314820	1550

Compatible to	FC5714	FC5718	FC5718R	FC5816	FC5816R
Max. Speed	=	-		4500 rpm	4500 rpm
Max. RCF	-	-	-	3780 xg	3780 xg

Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Screw Cap, Rack of 250 ml Rotor, 2/pk	-	_	_	-	30314901	128
O-ring, Rack of 250 ml Rotor, 10/pk	-	-	-	-	30314902	66
Rack, 1 × 250 ml D62 mm FB, 2/pk	250 ml	62 mm	Flat bottom	4	30314903	302
Rack, $1 \times 100$ ml D41 mm RB, $2/pk$	100 ml	41 mm	Round bottom	4	30314904	302
Rack, $1 \times 50$ ml D34 mm RB, $2/pk$ , v3	50 ml	34 mm	Round bottom	4	30314907	302
Rack, $3 \times 50$ ml D29 mm RB, $2/pk$	50 ml	29 mm	Round bottom	12	30314905	302
Rack, $3 \times 50$ ml D29 mm FA, $2/pk$	50 ml	29 mm	Conical bottom	12	30314906	302
Rack, $2 \times 50$ ml D29 mm Rim, $2/pk$	50 ml	29 mm	Skirted conical bottom	8	30314908	302
Rack, $1 \times 50$ ml D29 mm Rim, $2/pk$ , $v3$	50 ml	29 mm	Skirted conical bottom	4	30314909	302
Rack, $5 \times 25$ ml D24.5 mm RB, $2/pk$	25 ml	24.5 mm	Round bottom	20	30314910	302
Rack, $3 \times 25$ ml D24.5 mm Rim, $2/pk$	25 ml	24.5 mm	Skirted conical bottom	12	30314911	302
Rack, $9 \times 15$ ml D17 mm RB, $2/pk$	15 ml	17 mm	Round bottom	36	30314912	302
Rack, $7 \times 15$ ml D17 mm FA, $2/pk$	15 ml	17 mm	Conical bottom	28	30314913	302
Rack, $7 \times 15$ ml D17 mm Rim, $2/pk$	15 ml	17 mm	Skirted conical bottom	28	30314914	302
Rack, 8 × 10 ml D16 mm RB, 2/pk	10 ml	16 mm	Round bottom	32	30314915	302
Rack, 8 × 4-10 ml D16 mm Vac, 2/pk	4-10 ml	16 mm	Vacutainer	32	30304367	311
Rack, 14 × 5-7 ml D13 mm RB, 2/pk	5-7 ml	13 mm	Round bottom	56	30314916	302
Rack, 10 × 1.6-7 ml D13 mm Vac, 2/pk	1.6-7 ml	13 mm	Vacutainer	40	30314917	302
Adapter, 9 × 1.5/2.0 ml D11 mm, 2/pk	1.5/2.0 ml	11 mm	Eppendorf tube	36	30304368	286



Sample Preparation

### **Application**

Frontier rotors extend the functionality of Frontier centrifuges by increasing the number of tubes of varied types and sizes that can be used in conjunction with each of the centrifuge models. Easy to clean and operate, the rotors are durably constructed to withstand demanding centrifugation.

### Swing Out Rotor 4 × 100 ml

Description	Item No.	Price (USD)
Rotor, Swing out, 4 ×100 ml, ID	30314822	1290



Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Rack, 1 × 100 ml D46 mm RB, 2/pk	100 ml	46 mm	Round bottom	4	30314842	263
Rack, $1 \times 85$ ml D38 mm RB, $2/pk$	85 ml	38 mm	Round bottom	4	30314843	263
Rack, $1 \times 50$ ml D34 mm RB, $2/pk$	50 ml	34 mm	Round bottom	4	30314844	263
Rack, $1 \times 50$ ml D29 mm RB, $2/pk$	50 ml	29 mm	Round bottom	4	30314845	263
Rack, $1 \times 50$ ml D29 mm FA, $2/pk$	50 ml	29 mm	Conical bottom	4	30314846	263
Rack, $1 \times 50$ ml D29 mm Rim, $2/pk$	50 ml	29 mm	Skirted conical bottom	4	30314847	263
Rack, $1 \times 30$ ml D25 mm Rim, $2/pk$	30 ml	25 mm	Skirted conical bottom	4	30314848	263
Rack, $1 \times 25$ ml D25 mm RB, $2/pk$	25 ml	25 mm	Round bottom	4	30314849	263
Rack, $7 \times 15$ ml D17 mm RB, $2/pk$	15 ml	17 mm	Round bottom	28	30314852	263
Rack, $2 \times 15$ ml D17 mm FA, $2/pk$	15 ml	17 mm	Conical bottom	8	30314850	263
Rack, $1 \times 15$ ml D17 mm Rim, $2/pk$	15 ml	17 mm	Skirted conical bottom	4	30314851	263
Rack, $5 \times 4$ -10 ml D16 mm Sar, $2/pk$	4-10 ml	16 mm	Sarstedt	20	30314858	263
Rack, $9 \times 5$ -7 ml D13 mm RB, $2/pk$	5-7 ml	13 mm	Round bottom	36	30314853	263
Rack, $7 \times 5$ -7 ml D13 mm RB, 2/pk	5-7 ml	13 mm	Round bottom	28	30314856	263
Rack, $7 \times 5$ -7 ml D13 mm Vac, $2/pk$	5-7 ml	13 mm	Vacutainer	28	30314857	263
Rack, 10 × 1.5 ml D11 mm, 2/pk	1.5 ml	11 mm	Eppendorf tube	40	30314854	263
Rack, 9 × 4.5 ml D12 mm FB, 2/pk	4.5 ml	12 mm	Flat bottom	36	30314855	263

Sample Preparation

### **Application**

Frontier rotors extend the functionality of Frontier centrifuges by increasing the number of tubes of varied types and sizes that can be used in conjunction with each of the centrifuge models. Easy to clean and operate, the rotors are durably constructed to withstand demanding centrifugation.

### Swing Out Rotors 4 × 100 ml

Description	Item No.	Price (USD)
Rotor, Swing out, $4 \times 100$ ml, ID, Sealable	30314823	1085

Compatible to	FC5714	FC5718	FC5718R	FC5816	FC5816R
Max. Speed	4000 rpm	5000 rpm	5000 rpm	-	-
Max. RCF	2486 xg	3885 xg	3885 xg	=	=

Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Bucket, 100 ml w/o Cap, 2/pk	-	_	_	-	30314860	321
Bucket, 100 ml w/ Cap, Sealable, 2/pk	-	-	=	=	30314861	386
Screw Cap, 100 ml Bucket, Sealable, 2/pk	_	_			30314862	113
O-ring, 100 ml Bucket, Sealable, 10/pk	-	-	=	=	30314863	54
Rack, $1 \times 100$ ml D40 mm RB, $2/pk$	100 ml	40 mm	Round bottom	4	30314864	236
Rack, $1 \times 85$ ml D38 mm RB, $2/pk$ , $v2$	85 ml	38 mm	Round bottom	4	30314865	236
Rack, $1 \times 50$ ml D34 mm RB, $2/pk$ , $v2$	50 ml	34 mm	Round bottom	4	30314866	236
Rack, $1 \times 50$ ml D29 mm RB, $2/pk$ , $v2$	50 ml	29 mm	Round bottom	4	30314867	236
Rack, $1 \times 50$ ml D29 mm FA, $2/pk$ , $v2$	50 ml	29 mm	Conical bottom	4	30314868	236
Bucket, $2 \times 50$ ml D29 mm FA, w/ Rack, 2/pk	50 ml	29 mm	Conical bottom	8	30314881	500
Rack, $1 \times 50$ ml D29 mm Rim, $2/pk$ , v2	50 ml	29 mm	Skirted conical bottom	4	30314869	236
Rack, $1 \times 30$ ml D25 mm Rim, $2/pk$ , $v2$	30 ml	25 mm	Skirted conical bottom	4	30314870	236
Rack, $1 \times 25$ ml D25 mm RB, $2/pk$ , $v2$	25 ml	25 mm	Round bottom	4	30314871	242
Rack, $1 \times 15$ ml D17 mm FA, $2/pk$	15 ml	17 mm	Conical bottom	4	30314872	242
Rack, $2 \times 15$ ml D17 mm FA, $2/pk$ , $v2$	15 ml	17 mm	Conical bottom	8	30314873	242
Rack, $2 \times 15$ ml D17 mm Rim, $2/pk$	15 ml	17 mm	Skirted conical bottom	8	30314874	242
Rack, $4 \times 15$ ml D17 mm RB, $2/pk$	15 ml	17 mm	Round bottom	16	30314875	242
Bucket, $3 \times 15$ ml D17 mm FA, w/ Rack, 2/pk	15 ml	17 mm	Conical bottom	12	30314882	505
Rack, $3 \times 10$ ml D17 mm Sar, $2/pk$	10 ml	17 mm	Sarstedt	12	30314878	242
Rack, $4 \times 10$ ml D17 mm Vac, $2/pk$	10 ml	17 mm	Vacutainer	16	30314880	236
Rack, $7 \times 5$ -7 ml D13 mm RB, 2/pk, v2	5-7 ml	13 mm	Round bottom	28	30314876	242
Rack, $4 \times 5$ -7 ml D13 mm RB, $2/pk$	5-7 ml	13 mm	Round bottom	16	30314879	242
Rack, $5 \times 1.5$ ml D11 mm, $2/pk$	1.5 ml	11 mm	Eppendorf tube	20	30314877	242



Sample Preparation

### **Application**

Frontier rotors extend the functionality of Frontier centrifuges by increasing the number of tubes of varied types and sizes that can be used in conjunction with each of the centrifuge models. Easy to clean and operate, the rotors are durably constructed to withstand demanding centrifugation.

## Swing Out Rotors $2 \times 3$ MTP

Description	Item No.	Price (USD)
Rotor, Swing out, 2 × 3MTP, ID	30314824	1875

Compatible to	FC5714	FC5718	FC5718R	FC5816	FC5816R
Max. Speed	4500 rpm				
Max. RCF	2716 xg				

Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Bucket, 3 × MTP, 2/pk	MTP	=	=	6	30314890	3080
Adapter, 48 × 1.5/2.0 ml D11 mm, 2/pk	1.5/2.0 ml	11mm	Eppendorf tube	96	30314891	815

### Swing Out Rotors 4 × 200 ml

Description	Item No.	Price (USD)
Rotor, Swing out, 4 × 200 ml, ID	30314828	2300

Compatible to	FC5714	FC5718	FC5718R	FC5816	FC5816R
Max. Speed	-	-	-	4500 rpm	4500 rpm
Max. RCF	=	-	-	3735 xg	3735 xg

Accessories	Vol./Tube	Diameter	Tube type	No.of tubes/rotor	Item No.	List Price (USD)
Rack, 4 × 50 ml D29 mm FA, 2/pk	50 ml	29 mm	Conical bottom	16	30304375	421
Rack, $10 \times 15$ ml D17 mm FA, $2/pk$	15 ml	17 mm	Conical bottom	40	30314583	421
Rack, $12 \times 4$ -10 ml D16 mm Vac/Sar, 2/pk	4-10 ml	16 mm	Vacutainer/Sarstedt	48	30314585	421
Rack, $14 \times 5$ -7 ml D13 mm Vac/Sar, 2/pk	5-7 ml	13 mm	Vacutainer/Sarstedt	56	30314584	421

## Swing Out Rotors $4 \times 750 \text{ mL}$

Description		Item No.	Price (USD)
Rotor, Swing out, $4 \times 750$ n	30553085	1760	
Compatible to	FC5916	FC5916R	
Max. Speed	4,000 rpm	4,00	0 rpm
Max. RCF	3.434	4.	346













	Light Duty Orbital Shaker	Light Duty Orbital Shaker	Light Duty Orbital Shaker	Light Duty Orbital Shaker
Model	SHLD0415AL	SHLD0403DG	SHLD0415DG	SHLDMP03DG
Speed Range	40 to 300 rpm	100 to 1200 rpm	40 to 300 rpm	100 to 1200 rpm
Timer	N/A	1 second to 160 hours	1 second to 160 hours	1 second to 160 hours
Motion	Orbital	Orbital	Orbital	Orbital
Orbit	15 mm	3 mm	15 mm	3 mm
Max Weight Capacity	8 lbs	8 lbs	8 lbs	4 microplates / 2 micro-tube racks
Audible Alarm	_	•	•	•
Load Sensor	_	_	_	_
Motor Type	Brushless DC Motor	Brushless DC Motor	Brushless DC Motor	Brushless DC Motor
CO <sub>2</sub> Environment	•	•	•	•
Overload Protection	_	•	•	•
User Calibration (Speed)	_	_	_	_
RS232 Interface	_	_	_	_
Included Tray (L × W)	11.75 × 8.75"	11.75 × 8.75"	11.75 × 8.75"	11 × 7.75"
Tray / Platform Options (L × W)	N/A	Adjustable Platform	Adjustable Platform	N/A





	High Speed Microplate Shaker	Extreme Environment Shaker	Heavy Duty Shaker	Heavy Duty Shaker	Heavy Duty Shaker
Model	SHHSMPDG	SHEX1619DG	SHHD1619AL	SHHD1619DG	SHHD2325AL
Speed Range	600 rpm to 2500 rpm	15 to 500 rpm	25 to 500 rpm	15 to 500 rpm	25 to 500 rpm
Timer	1 second to 160 hours	1 second to 160 hours	1 to 120 minutes	1 second to 160 hours	1 to 120 minutes
Motion	Orbital	Orbital	Orbital	Orbital	Orbital
Orbit	3.6 mm	19 mm	19 mm	19 mm	25 mm
Max Weight Capacity	48 microplates	35 lbs	35 lbs	35 lbs	50 lbs
Audible Alarm	•	•	_	•	_
Load Sensor	•	•	_	•	_
Motor Type	Brushless DC Motor	Brushless DC Motor	Brushless DC Motor	Brushless DC Motor	Brushless DC Motor
CO <sub>2</sub> Environment	•	•	•	•	•
Overload Protection	•	•	_	•	_
User Calibration (Speed)	•	•	_	•	_
RS232 Interface	•	•	_	•	_
Included Tray (L × W)	12.3 × 11"	11 × 13"	11 × 13"	11 × 13"	18 × 24"
Tray / Platform Options (L × W)	12.25 × 11" (31.1 × 27.9 cm)	11 × 13", 13 × 13", 18 × 18", 18 × 24" Adjustable Platform Separatory Funnel Platform	11 × 13", 13 × 13", 18 × 18", 18 × 24" Adjustable Platform Separatory Funnel Platform	11 × 13", 13 × 13", 18 × 18", 18 × 24" Adjustable Platform Separatory Funnel Platform	18 × 24", 18 × 30" Adjustable Platform Large Vessel Carrier Platform

<sup>•</sup> Yes \*Maximum speed/tilt angle may vary with heavy or unbalanced loads. \*\*Centered on tray.



	Heavy Duty Orbital Shaker	Heavy Duty Orbital Shaker	Heavy Duty Orbital Shaker	Heavy Duty Orbital Shaker	Heavy Duty Orbital Shaker
Model	SHHD2325DG	SHHD4525DG	SHHD4550DG	SHHD6825DG	SHHD6850DG
Speed Range	20 to 500 rpm	15 to 500 rpm	15 to 300 rpm	15 to 500 rpm	15 to 300 rpm
Timer	1 second to 160 hours	1 second to 160 hours	1 second to 160 hours	1 second to 160 hours	1 second to 160 hours
Motion	Orbital	Orbital	Orbital	Orbital	Orbital
Orbit	25 mm	25 mm	51 mm	25 mm	51 mm
Max Weight Capacity	50 lbs	100 lbs	100 lbs	150 lbs	150 lbs
Audible Alarm		•	•	•	•
Load Sensor	•	•	•	•	•
Motor Type	Brushless DC Motor	Brushless DC Motor	Brushless DC Motor	Brushless DC Motor	Brushless DC Motor
CO <sub>2</sub> Environment	•	•	•	•	•
Overload Protection	•	•	•	•	•
User Calibration (Speed)		•	•	•	•
RS232 Interface			•	•	
Included Tray (L × W)	18 × 24"	24 × 24"	24 × 24"	24×36"	24 × 36"
Tray / Platform Options (L × W)	18 × 24", 18 × 30" Adjustable Platform Large Vessel Carrier Platform	24 × 24" Large Vessel Carrier Platform	24 × 24" Large Vessel Carrier Platform	24 × 36" Large Vessel Carrier Platform	24 × 36" Large Vessel Carrier Platform











	Rocking Shaker	Rocking Shaker	Waving Shaker	Waving Shaker	Reciprocating Shaker
Model	SHRK04DG	SHRK07AL1	SHWV02DG	SHWV02AL	SHRC0719DG
Speed Range	1 to 50 rpm*	1 to 75 rpm*	1 to 30 rpm*	1 to 75 rpm*	20 to 300 rpm
Timer	1 second to 160 hours	1 minute to 120 minutes	1 second to 160 hours	1 minute to 120 minutes	1 second to 160 hours
Motion	Rocking	Rocking	Waving	Waving	Reciprocating
Orbit	Tilt Angle: 0 to 15°	Tilt Angle: 0 to 15°	Tilt Angle: 0 to 20° *	Tilt Angle: 0 to 16°	Stroke: 19 mm
Max Weight Capacity	10 lbs**	16 lbs**	5 lbs**	5 lbs**	15 lbs
Audible Alarm		_	•	_	•
Load Sensor	_	_	_	_	•
Motor Type	Stepper Motor	Stepper Motor	Stepper Motor	Stepper Motor	Brushless DC Motor
CO <sub>2</sub> Environment	•	_	•	_	•
Overload Protection		_	•	_	
User Calibration (Speed)	-	_	_	_	•
RS232 Interface	_	_	_	_	•
Included Tray (L × W)	12.75 × 10"	14×11"	11.75 × 8.75"	14×11"	11 × 13"
Tray / Platform Options (L × W)	Stacking Tray	Stacking Tray	Stacking Tray	_	11 × 13", 13 × 13", 18 × 18", 18 × 24" Separatory Funnel Platform

<sup>•</sup> Yes \*Maximum speed/tilt angle may vary with heavy or unbalanced loads. \*\*Centered on tray.

## LIGHT DUTY ORBITAL SHAKERS

Choose the Perfect Light Duty Orbital Shaker You Can Trust for Reliable Everyday Shaking





### **Application**

Blotting techniques, staining/destaining, and general shaking procedures.

Unit can be run in cold rooms, incubators, and CO<sub>2</sub> environments from 0 to 40°C (32 to 104°F), maximum 80% relative humidity, non-condensing.

### **Design Features**

Low Profile Design: Takes up less space and easily fits into most hoods and incubators.

Microprocessor Control: The variable speed microprocessor control provides consistent uniform shaking action. Triple Eccentric Drive: Permanently lubricated ball bearings and maintenance free, brushless DC motor provide reliable service and continuous duty operation.

Adjustment Knob: Basic speed knob with dial settings from 1 to 10.



Designed for flexibility with your applications -OHAUS Light Duty Shakers include the readyto-use tray and mat, or remove the mat and customize the tray with over 20 easy-to-install accessories.

Well-performing economical choice for your everyday laboratory shaking needs. Non-digital model offers reliable shaking across the entire speed range with the robust triple eccentric drive design.

Microplate shaker is designed to securely hold up to four microplates or deepwell plates, or easily install two microtube racks. Units slowly increase speed to desired setpoint to avoid splashing.

Model	Speed Range	Orbit	Maximum Weight Capacity	Tray Material	Tray Dimensions $(L \times W \times H)$	Item No.	List Price (USD)
SHLD0415AL	40 to 300 rpm	15 mm (0.6")	8 lbs (3.6 kg)	Aluminum	11.75 × 8.75" (29.9 × 22.2 cm)	30391891	1085

## LIGHT DUTY ORBITAL SHAKERS

Choose the Perfect Light Duty Orbital Shaker You Can Trust for Reliable Everyday Shaking





### **Application**

Cell cultures, immunoassays, and protein studies.

### Safety Features

Overload Protection: Audible and visual signals activate when system detects an obstruction or overload Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing. Audible Alarm: In timed mode, alarm will sound when the time reaches zero.

Spill-Resistant Design: Channels fluids away from internal components.



Units can be run in cold rooms, incubators, and CO<sub>2</sub> environments.

SHLD0403DG: -10 to 60°C (14 to 140°F), SHLD0415DG: -10 to 40°C (14 to 104°F) Max. 80% relative humidity, non-condensing.



Low Profile Design: Takes up less space and easily fits into most hoods and incubators.

Microprocessor Control: The variable speed microprocessor control provides consistent uniform shaking action.

Microprocessor will display last set-point and will restart if power is interrupted.

Triple Eccentric Drive: Permanently lubricated ball bearings and maintenance free, brushless DC motor provide reliable service and continuous duty operation.

LED Display: Touchpad controls with easy-to-read, independent LED displays for speed and time allow operator to view both settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

Designed for flexibility with your applications -OHAUS Light Duty Shakers include the readyto-use tray and mat, or remove the mat and customize the tray with over 20 easy-to-install accessories.

Well-performing economical choice for your everyday laboratory shaking needs. Non-digital model offers reliable shaking across the entire speed range with the robust triple eccentric drive design.

Microplate shaker is designed to securely hold up to four microplates or deepwell plates, or easily install two microtube racks. Units slowly increase speed to desired setpoint to avoid splashing.

Model	Speed Range	Speed Accuracy	Timer	Orbit	Max. Weight Capacity	Tray Material	Tray Dimen- sions (L × W)	Item No.	List Price (USD)
SHLD0403DG	100 to 1200 rpm	+/-2% above 100 rpm	1 second to 160 hours	3 mm (0.12")	8 lbs (3.6 kg)	Aluminum	11.75 × 8.75" (29.9 × 22.2 cm)	30391898	1435
SHLD0415DG	40 to 300 rpm	+/-2 rpm below 100 rpm	1 second to 160 hours	15 mm (0.6")	8 lbs (3.6 kg)	Aluminum	11.75 × 8.75" (29.9 × 22.2 cm)	30391912	1385



## LIGHT DUTY ORBITAL SHAKERS

Choose the Perfect Light Duty Orbital Shaker You Can Trust for Reliable Everyday Shaking





### **Application**

ELISA assays and DNA studies.

### Safety Features

Overload Protection: Audible and visual signals activate when system detects an obstruction or overload Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing. Audible Alarm: In timed mode, alarm will sound when the time reaches zero. Spill-Resistant Design: Channels fluids away from internal components.



Unit can be run in cold rooms, incubators, and CO<sub>2</sub> environments from -10 to 60°C (14 to 140°F), maximum 80% relative humidity, non-condensing.

### Design Features

Low Profile Design: Takes up less space and easily fits into most hoods and incubators. Base offers durability and added stability Microprocessor Control: The variable speed microprocessor control provides consistent uniform shaking action. Microprocessor will display last set-point and will restart if power is interrupted.

Triple Eccentric Drive: Permanently lubricated ball bearings and maintenance free, brushless DC motor provide reliable service and continuous duty operation.

LED Display: Touchpad controls with easy-to-read, independent LED displays for speed and time allow operator to view all settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

Designed for flexibility with your applications -OHAUS Light Duty Shakers include the readyto-use tray and mat, or remove the mat and customize the tray with over 20 easy-to-install accessories.

Well-performing economical choice for your everyday laboratory shaking needs. Non-digital model offers reliable shaking across the entire speed range with the robust triple eccentric drive design.

Microplate shaker is designed to securely hold up to four microplates or deepwell plates, or easily install two microtube racks. Units slowly increase speed to desired setpoint to avoid splashing.

Model	Speed Range	Speed Accuracy	Timer	Orbit	Maximum Weight Capacity	Tray Material	Tray Dimensions (L × W)	Item No.	List Price (USD)
SHLDMP03DG	100 to 1200 rpm	± 2%	1 second to 160 hours	3 mm (0.12")	4 microplates or 2 micro-tube racks	Aluminum	11 × 7.75" (27.9 × 19.7 cm)	30391905	1100

## **EXTREME ENVIRONMENT SHAKERS**

High Performance Orbital Shaker Designed to Withstand Extreme Environments Up To 100% Humidity

### **Application**

Cell cultures, solubility studies, and extraction procedures.

#### Safety Features

Overload Protection: Audible and visual signals activate when system detects an obstruction or overload

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing. Audible Alarm: In timed mode, alarm will sound when the time reaches zero. Spill-Resistant Design: Channels fluids away from internal components.

### Operation

Unit can be run in cold rooms, incubators, and CO2 environments from -10 to  $60^{\circ}$ C (14 to 140°F), up to 100% humidity.



Defy the elements—rely on this orbital shaker's unique construction to deliver exceptional speed control, accuracy and durability under the most extreme environmental conditions.

Best in class load capacity to maximize efficiency in your incubator. Customize the Extreme Environment Shaker for your unique application with over 50 accessories.

For repeatable results, the exclusive Accu-Drive shaking system ensures speed accuracy. The triple eccentric drive provides smooth, stable shaking motion throughout the entire speed range.

Model	Speed Range	Speed Accuracy	Timer	Orbit	Maximum Weight Capacity	Tray Material	Tray Dimensions (L × W)	Item No.	List Price (USD)
SHEX1619DG	15 to 500 rpm	above 100 rpm ± 1% of set speedbelow 100 rpm ± 1 rpm	1 second to 160 hours	0.75" (19 mm)	35 lbs (16 kg)	Aluminum	$11 \times 13$ " (27.9 × 33 cm)	30391809	3550

#### **Design Features**

Accu-Drive Shaking System: The exclusive patented Accu-Drive Shaking System delivers exceptional speed control, accuracy, and durability. The shaking system continuously monitors shaking speed and maintains set-point, even under changing loads. When unit is set to a speed above 100 rpm, the speed accuracy is  $\pm$  1% of set speed. When set under 100 rpm, speed accuracy is  $\pm$  1 rpm.

Microprocessor Control: The variable speed microprocessor control provides consistent uniform shaking action. Microprocessor will display last set-point and will restart if power is interrupted. Triple Eccentric Drive: Permanently lubricated ball bearings and maintenance free, brushless DC motor provide reliable service and continuous duty operation.

Remote Controller: The control module is designed to sit outside of the incubator. Settings can be easily viewed or changed from outside of the incubator without disturbing the incubator's atmosphere. The thin ribbon cable is 5.5 feet long and easily passes underneath an incubator door via incubator's utility port. Controller magnetically attaches to most incubator doors or can sit on a lab bench.

LED Display: Touchpad controls with easy-to-read, independent LED displays for speed and time allow operator to view both settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

RS232 Interface: Provides two-way communication for data logging and unit control. Speed Calibration Mode: Allows user to automatically recalibrate speed display.

Eight Orbital Shakers Offering a Variety of Capacities and Flexibility to Maximize Sample Processing

### **Application**

Bacterial suspensions, staining/destaining, and general mixing

### Safety Features

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing. Spill-Resistant Design: Channels fluids away from internal components.

#### Operation

Unit can be run in cold rooms, incubators, and  ${\rm CO_2}$  environments from 0 to 40°C (32 to 104°F), maximum 80% relative humidity, non-condensing.

### Design Features

Microprocessor Control: The variable speed microprocessor control provides consistent uniform shaking action. The shaker will automatically restart after a power interruption.

Triple Eccentric Drive: Permanently lubricated ball bearings and maintenance free, brushless DC motor provide reliable service and continuous duty operation.

Adjustment Knobs: Basic speed and time knobs with dial settings from 1 to 10.



Ready for your lab—all models include a tray and rubber mat and can be customized with over 70 accessory options.

Rely on the digital shakers' exclusive Accu-Drive shaking system for exceptional speed control, accuracy and durability. All models feature a maintenance-free motor for long-term use. Protect your samples. Optimal speed ramping feature slowly increases speed to setpoint to avoid splashing. The load sensor detects unbalanced conditions and automatically reduces to a safe speed.

Model	Speed Range	Timer	Orbit	Max. Weight Capacity	Tray Material	Tray Dimensions (L × W)	Item No.	List Price (USD)
SHHD1619AL	25 to 500 rpm	1 minute to 120 minutes	19 mm (0.75")	35 lbs (16 kg)	Aluminum	11 × 13" (27.9 × 33 cm)	30391307	2160

Eight Orbital Shakers Offering a Variety of Capacities and Flexibility to Maximize Sample Processing

### **Application**

Cell cultures, solubility studies, and extraction procedures

### Safety Features

Load Sensor: A built-in load sensor detects unbalanced conditions and automatically reduces rpm to a safe speed to protect samples.

Overload Protection: Audible and visual signals will activate when system detects an obstruction or overload of the tray.

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing.

Audible Alarm: In timed mode, alarm will sound when the time reaches zero. Alarm has optional mute function which can be set from the Touchpad control.

Spill-Resistant Design: Channels fluids away from internal components.

### Operation

Unit can be run in cold rooms, incubators, and  $CO_2$  environments from -10 to 60°C (14 to 140°F), maximum 80% relative humidity, non-condensing.



Ready for your lab—all models include a tray and rubber mat and can be customized with over 70 accessory options.

Rely on the digital shakers' exclusive Accu-Drive shaking system for exceptional speed control, accuracy and durability. All models feature a maintenance-free motor for long-term use. Protect your samples. Optimal speed ramping feature slowly increases speed to setpoint to avoid splashing. The load sensor detects unbalanced conditions and automatically reduces to a safe speed.

Model	Speed Range	Speed Accuracy	Timer	Orbit	Max. Weight Capacity	Tray Material	Tray Dimensions (L × W)	Item No.	List Price (USD)
SHHD1619DG	15 to 500 rpm	above 100 rpm ± 1% of set speedbelow 100 rpm ± 1 rpm	1 second to 160 hours	19 mm (0.75") orbit	35 lbs (16 kg)	Aluminum	$11 \times 13$ " (27.9 × 33 cm)	30391807	2575

#### **Design Features**

Accu-Drive Shaking System: The exclusive patented Accu-Drive Shaking System delivers exceptional speed control, accuracy, and durability. The shaking system continuously monitors shaking speed and maintains set-point, even under changing loads. When unit is set to a speed above 100 rpm, the speed accuracy is  $\pm$  1% of set speed. When set under 100 rpm, speed accuracy is  $\pm$  1 rpm.

Microprocessor Control: The variable speed microprocessor control provides consistent uniform shaking action. Microprocessor will display last set-point and will restart if power is interrupted.

Triple Eccentric Drive: Permanently lubricated ball bearings and maintenance free, brushless DC motor provide reliable service and continuous duty operation.

LED Display: Touchpad controls with easy-to-read, independent LED displays for speed and time allow operator to view both settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

RS232 Interface: Provides two-way communication for data logging and unit control. Speed Calibration Mode: Allows user to automatically recalibrate speed display.

Eight Orbital Shakers Offering a Variety of Capacities and Flexibility to Maximize Sample Processing

### **Application**

Bacterial suspensions, staining/destaining, and general mixing

### Safety Features

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing. Spill-Resistant Design: Channels fluids away from internal components.

#### Operation

Unit can be run in cold rooms, incubators, and  ${\rm CO_2}$  environments from 0 to 40°C (32 to 104°F), maximum 80% relative humidity, non-condensing.

### **Design Features**

Microprocessor Control: The variable speed microprocessor control provides consistent uniform shaking action. The shaker will automatically restart after a power interruption.

Triple Eccentric Drive: Permanently lubricated ball bearings and maintenance free, brushless DC motor provide reliable service and continuous duty operation.

Adjustment Knobs: Basic speed and time knobs with dial settings from 1 to 10.



Ready for your lab—all models include a tray and rubber mat and can be customized with over 70 accessory options.

Rely on the digital shakers' exclusive Accu-Drive shaking system for exceptional speed control, accuracy and durability. All models feature a maintenance-free motor for long-term use. Protect your samples. Optimal speed ramping feature slowly increases speed to setpoint to avoid splashing. The load sensor detects unbalanced conditions and automatically reduces to a safe speed.

Model	Speed Range	Timer	Orbit	Max. Weight Capacity	Tray Material	Tray Dimensions (L × W)	Item No.	List Price (USD)
SHHD2325AL	25 to 500 rpm	1 minute to 120 minutes	25 mm (1")	50 lbs (22.7 kg)	Aluminum	18 × 24" (45.7 × 61 cm)	30391835	4760

Eight Orbital Shakers Offering a Variety of Capacities and Flexibility to Maximize Sample Processing

### **Application**

Cell cultures, solubility studies, and extraction procedures

### Safety Features

Load Sensor: A built-in load sensor detects unbalanced conditions and automatically reduces rpm to a safe speed to protect samples.

Overload Protection: Audible and visual signals will activate when system detects an obstruction or overload of the tray.

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing.

Audible Alarm: In timed mode, alarm will sound when the time reaches zero. Alarm has optional mute function which can be set from the Touchpad control.

Spill-Resistant Design: Channels fluids away from internal components.

### Operation

Unit can be run in cold rooms, incubators, and  $CO_2$  environments from -10 to 60°C (14 to 140°F), maximum 80% relative humidity, non-condensing.



Ready for your lab—all models include a tray and rubber mat and can be customized with over 70 accessory options.

Rely on the digital shakers' exclusive Accu-Drive shaking system for exceptional speed control, accuracy and durability. All models feature a maintenance-free motor for long-term use. Protect your samples. Optimal speed ramping feature slowly increases speed to setpoint to avoid splashing. The load sensor detects unbalanced conditions and automatically reduces to a safe speed.

Model	Speed Range	Speed Accuracy	Timer	Orbit	Maximum Weight Capacity	Tray Material	Tray Dimensions (L × W)	Item No.	List Price (USD)
SHHD2325DG	20 to 500 rpm	above 100 rpm ± 1% of set speedbelow 100 rpm ± 1 rpm	1 second to 160 hours	25 mm (1")	50 lbs (22.7 kg)	Aluminum	18 × 24" (45.7 × 61 cm)	30391842	5045

#### **Design Features**

Accu-Drive Shaking System: The exclusive patented Accu-Drive Shaking System delivers exceptional speed control, accuracy, and durability. The shaking system continuously monitors shaking speed and maintains set-point, even under changing loads. When unit is set to a speed above 100 rpm, the speed accuracy is  $\pm$  1% of set speed. When set under 100 rpm, speed accuracy is  $\pm$  1 rpm.

Microprocessor Control: The variable speed microprocessor control provides consistent uniform shaking action. Microprocessor will display last set-point and will restart if power is interrupted.

Triple Eccentric Drive: Permanently lubricated ball bearings and maintenance free, brushless DC motor provide reliable service and continuous duty operation.

LED Display: Touchpad controls with easy-to-read, independent LED displays for speed and time allow operator to view both settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

RS232 Interface: Provides two-way communication for data logging and unit control. Speed Calibration Mode: Allows user to automatically recalibrate speed display.

Eight Orbital Shakers Offering a Variety of Capacities and Flexibility to Maximize Sample Processing

### **Application**

Cell cultures, solubility studies, and extraction procedures

### Safety Features

Load Sensor: A built-in load sensor detects unbalanced conditions and automatically reduces rpm to a safe speed to protect samples.

Overload Protection: Audible and visual signals will activate when system detects an obstruction or overload of the tray.

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing.

Audible Alarm: In timed mode, alarm will sound when the time reaches zero. Alarm has optional mute function which can be set from the Touchpad control.

Spill-Resistant Design: Channels fluids away from internal components.

### Operation

Unit can be run in cold rooms, incubators, and  ${\rm CO_2}$  environments from -10 to 60°C (14 to 140°F), maximum 80% relative humidity, non-condensing.



Ready for your lab—all models include a tray and rubber mat and can be customized with over 70 accessory options.

Rely on the digital shakers' exclusive Accu-Drive shaking system for exceptional speed control, accuracy and durability. All models feature a maintenance-free motor for long-term use. Protect your samples. Optimal speed ramping feature slowly increases speed to setpoint to avoid splashing. The load sensor detects unbalanced conditions and automatically reduces to a safe speed.

Model	Speed Range	Speed Accuracy	Timer	Orbit	Max. Weight Capacity	Tray Material	Tray Dimensions (L×W)	Item No.	List Price (USD)
SHHD4525DG	15 to 500 rpm	above 100 rpm $\pm$ 1% of set speedbelow 100 rpm $\pm$ 1 rpm	1 second to 160 hours	25 mm (1")	100 lbs (45.4 kg)	Aluminum	24 × 24" (61 × 61 cm)	30391863	7175
SHHD4550DG	15 to 300 rpm	above 100 rpm $\pm$ 1% of set speedbelow 100 rpm $\pm$ 1 rpm	1 second to 160 hours	51 mm (2")	100 lbs (45.4 kg)	Aluminum	$24 \times 24$ " (61 × 61 cm)	30391870	7410

#### **Design Features**

Accu-Drive Shaking System: The exclusive patented Accu-Drive Shaking System delivers exceptional speed control, accuracy, and durability. The shaking system continuously monitors shaking speed and maintains set-point, even under changing loads. When unit is set to a speed above 100 rpm, the speed accuracy is  $\pm$  1% of set speed. When set under 100 rpm, speed accuracy is  $\pm$  1 rpm.

Microprocessor Control: The variable speed microprocessor control provides consistent uniform shaking action. Microprocessor will display last set-point and will restart if power is interrupted.

Triple Eccentric Drive: Permanently lubricated ball bearings and maintenance free, brushless DC motor provide reliable service and continuous duty operation.

LED Display: Touchpad controls with easy-to-read, independent LED displays for speed and time allow operator to view both settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

RS232 Interface: Provides two-way communication for data logging and unit control. Speed Calibration Mode: Allows user to automatically recalibrate speed display.

## **HEAVY DUTY ORBITAL SHAKERS**

Eight Orbital Shakers Offering a Variety of Capacities and Flexibility to Maximize Sample Processing

#### **Application**

Cell cultures, solubility studies, and extraction procedures

#### **Safety Features**

Load Sensor: A built-in load sensor detects unbalanced conditions and automatically reduces rpm to a safe speed to protect samples.

Overload Protection: Audible and visual signals will activate when system detects an obstruction or overload of the tray.

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing.

Audible Alarm: In timed mode, alarm will sound when the time reaches zero. Alarm has optional mute function which can be set from the Touchpad control.

Spill-Resistant Design: Channels fluids away from internal components.



Unit can be run in cold rooms, incubators, and  $CO_2$  environments from -10 to 60°C (14 to 140°F), maximum 80% relative humidity, non-condensing.



Ready for your lab—all models include a tray and rubber mat and can be customized with over 70 accessory options.

Rely on the digital shakers' exclusive Accu-Drive shaking system for exceptional speed control, accuracy and durability. All models feature a maintenance-free motor for long-term use. Protect your samples. Optimal speed ramping feature slowly increases speed to setpoint to avoid splashing. The load sensor detects unbalanced conditions and automatically reduces to a safe speed.

Model	Speed Range	Speed Accuracy	Timer	Orbit	Max. Weight Capacity	Tray Material	Tray Dimensions (L × W)	Item No.	List Price (USD)
SHHD6825DG	15 to 500 rpm	above 100 rpm $\pm$ 1% of set speedbelow 100 rpm $\pm$ 1 rpm	1 second to 160 hours	25 mm (1")	150 lbs (68 kg)	Aluminum	24 × 36" (61 × 91 cm)	30391877	8090
SHHD6850DG	15 to 300 rpm	above 100 rpm ± 1% of set speedbelow 100 rpm + 1 rpm	1 second to 160 hours	51 mm (2")	150 lbs (68 kg)	Aluminum	24 × 36" (61 × 91 cm)	30391884	9005

#### **Design Features**

Accu-Drive Shaking System: The exclusive patented Accu-Drive Shaking System delivers exceptional speed control, accuracy, and durability. The shaking system continuously monitors shaking speed and maintains set-point, even under changing loads. When unit is set to a speed above 100 rpm, the speed accuracy is  $\pm$  1% of set speed. When set under 100 rpm, speed accuracy is  $\pm$  1 rpm.

Microprocessor Control: The variable speed microprocessor control provides consistent uniform shaking action. Microprocessor will display last set-point and will restart if power is interrupted.

Triple Eccentric Drive: Permanently lubricated ball bearings and maintenance free, brushless DC motor provide reliable service and continuous duty operation.

LED Display: Touchpad controls with easy-to-read, independent LED displays for speed and time allow operator to view both settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off

RS232 Interface: Provides two-way communication for data logging and unit control. Speed Calibration Mode: Allows user to automatically recalibrate speed display.

Reliable Rocking and Waving Shakers with Simple Adjustments for Tilt Angle and Speed





#### **Application**

Staining and destaining gels, hybridization procedures, hematology, and blotting techniques

#### Safety Features

Overload Protection: Audible and visual signals will activate when system detects an obstruction or overload of the tray.

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing.

Timer: Timer will automatically stop rocking motion when timer reaches zero.

Spill-Resistant Design: Channels fluids away from internal components.

#### Operation

Unit can be run in cold rooms, incubators, and CO<sub>2</sub> environments from -10 to 60°C (14 to 140°F), maximum 80% relative humidity, non-condensing.

#### **Design Features**

Low Profile Design: Takes up less bench space and fits into most hoods and incubators. Two-tier option increases the capacity with the same footprint and provides a 3.5" (8.9 cm) clearance between platforms. Cast aluminum base offers durability and added stability

Microprocessor Control: The microprocessor control provides tilt adjustment which allows user to easily adjust rocking angle from 0 to 15° while unit is operating. Smooth speed control with low speed rocking motion.

Independent Control Knobs: Independent control knobs for speed, tilt, and time, allow for easy adjustments.



Electronic control allows simple tilt angle and speed adjustments while the unit is still running to achieve optimal mixing.

Achieve reproducible results you can trust with digital models. Precisely adjust the tilt angle in 1° increments with variable speed down to 1 rpm with intuitive touchpad controls.

Optimal speed ramping feature slowly increases speed to desired setpoint to avoid splashing. Smooth rocking or waving motion is maintained with state-of-the-art motor and electronics.

Model	Speed Range	Tilt Angle	Timer	Max. Weight Capacity	Tray Material	Tray Dimensions (L × W)	Item No.	List Price (USD)
SHRK07AL1	1 to 75 rpm*	0 to 15°*	1 minute to 120 minutes	16 lbs (7.3 kg)**	Aluminum	14 × 11" (35.6 × 27.9 cm)	30391959	975
SHRK07AL2	1 to 75 rpm*	0 to 15°*	1 minute to 120 minutes	16 lbs (7.3 kg)**	Aluminum	$14 \times 11$ " (35.6 × 27.9 cm)	30391966	1080

<sup>\*</sup> Maximum speed/tilt angle may vary with heavy or unbalanced loads.

<sup>\*\*</sup> Centered on tray.

Reliable Rocking and Waving Shakers with Simple Adjustments for Tilt Angle and Speed





#### **Application**

Staining and destaining gels, hybridization procedures, hematology, and blotting techniques

#### Safety Features

Overload Protection: Audible and visual signals will activate when system detects an obstruction or overload of the tray.

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing.

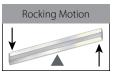
Timer: Timer will automatically stop rocking motion when timer reaches zero.

Spill-Resistant Design: Channels fluids away from internal components.

#### Operation

Unit can be run in cold rooms, incubators, and CO<sub>2</sub> environments from -10 to 60°C (14 to 140°F), maximum 80% relative humidity, non-condensing.





Electronic control allows simple tilt angle and speed adjustments while the unit is still running to achieve optimal mixing.

Achieve reproducible results you can trust with digital models. Precisely adjust the tilt angle in 1° increments with variable speed down to 1 rpm with intuitive touchpad controls.

Optimal speed ramping feature slowly increases speed to desired setpoint to avoid splashing. Smooth rocking or waving motion is maintained with state-of-the-art motor and electronics.

Model	Speed Range	Speed Accuracy	Tilt Angle	Timer	Max. Weight Capacity	Tray Material	Tray Dimensions (L × W)	Item No.	List Price (USD)
SHRK04DG	1 to 50 rpm*	± 1 rpm	0 to 15°*	1 second to 160 hours	10 lbs (4.5 kg)**	Aluminum	12.75 × 10" (32.4 × 25.4 cm)	30391994	1185

<sup>\*</sup> Maximum speed/tilt angle may vary with heavy or unbalanced loads.

#### **Design Features**

Low Profile Design: Takes up less space and easily fits into most hoods and incubators. Cast aluminum base offers durability and added stability.

Microprocessor Control: The microprocessor control provides electronic tilt angle adjustment which allows user to easily adjust rocking angle from 0 to 15° while unit is operating. Precise speed control provides smooth, low-speed rocking motion down to 1 rpm.

LED Display: Touchpad controls with easy-to-read, independent LED displays for speed and tilt angle, and time allow operator to view all settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

<sup>\*\*</sup> Centered on tray.

Reliable Rocking and Waving Shakers with Simple Adjustments for Tilt Angle and Speed





#### **Application**

Staining and destaining gels, hybridization procedures, hematology, and blotting techniques

#### Safety Features

Overload Protection: Audible and visual signals will activate when system detects an obstruction or overload of the tray.

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing.

Timer: Timer will automatically stop rocking motion when timer reaches zero.

Spill-Resistant Design: Channels fluids away from internal components.



Unit can be run in cold rooms, incubators, and CO<sub>2</sub> environments from -10 to 60°C (14 to 140°F), maximum 80% relative humidity, non-condensing.



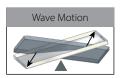
Low Profile Design: Takes up less space and easily fits into most hoods and incubators. Cast aluminum base offers durability and added stability.

Microprocessor Control: Provides tilt adjustment which allows user to easily adjust waving angle from

0 to 16° while unit is operating. Smooth speed control with low speed waving motion.

Independent Control Knobs: Independent control knobs for speed, tilt, and time, allow for easy adjustments.





Electronic control allows simple tilt angle and speed adjustments while the unit is still running to achieve optimal mixing.

Achieve reproducible results you can trust with digital models. Precisely adjust the tilt angle in 1° increments with variable speed down to 1 rpm with intuitive touchpad controls.

Optimal speed ramping feature slowly increases speed to desired setpoint to avoid splashing. Smooth rocking or waving motion is maintained with state-of-the-art motor and electronics.

Model	Speed Range	Tilt Angle	Timer	Max. Weight Capacity	Tray Material	Tray Dimensions (L × W)	Item No.	List Price (USD)
SHWV02AL	1 to 75 rpm*	0 to 16°*	1 minute to	5 lbs (2.3 kg)**	Aluminum	14 × 11" (35.6 × 27.9 cm)	30391973	1395

<sup>\*</sup> Maximum speed/tilt angle may vary with heavy or unbalanced loads.

<sup>\*\*</sup> Centered on tray.

Reliable Rocking and Waving Shakers with Simple Adjustments for Tilt Angle and Speed





#### **Application**

Blood samples, DNA extractions, blotting techniques, and general mixing of various size tubes.

#### Safety Features

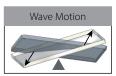
Overload Protection: Audible and visual signals will activate when system detects an obstruction or overload of the tray.

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing. Audible Alarm: In timed mode, alarm will sound when the time reaches zero. Spill-Resistant Design: Channels fluids away from internal components.



#### Operation

Unit can be run in cold rooms, incubators, and CO<sub>2</sub> environments from -10 to 60°C (14 to 140°F), maximum 80% relative humidity, non-condensing.



Electronic control allows simple tilt angle and speed adjustments while the unit is still running to achieve optimal mixing.

Achieve reproducible results you can trust with digital models. Precisely adjust the tilt angle in 1° increments with variable speed down to 1 rpm with intuitive touchpad controls.

Optimal speed ramping feature slowly increases speed to desired setpoint to avoid splashing. Smooth rocking or waving motion is maintained with state-of-the-art motor and electronics.

Model	Speed Range	Speed Accuracy	Tilt Angle	Timer	Max. Weight Capacity	Tray Material	Tray Dimensions (L × W)	Item No.	List Price (USD)
SHWV02DG	1 to 30 rpm*	± 1 rpm	0 to 20°*	1 second to 160 hours	5 lbs (2.3 kg)**	Aluminum	11.75 × 8.75" (29.9 × 22.2 cm)	30391947	1760

<sup>\*</sup> Maximum speed/tilt angle may vary with heavy or unbalanced loads.

#### **Design Features**

Low Profile Design: Takes up less space and easily fits into most hoods and incubators. Cast aluminum base offers durability and added stability.

Microprocessor Control: The microprocessor control provides electronic tilt angle adjustment which allows user to easily adjust waving angle from 0 to 20° while unit is operating. Precise speed control provides smooth, low-speed waving motion down to 1 rpm.

LED Display: Touchpad controls with easy-to-read, independent LED displays for speed and tilt angle, and time allow operator to view all settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last settings, even after power has been turned off.

<sup>\*\*</sup> Centered on tray.

### RECIPROCATING SHAKERS

Providing Consistent, Repeatable Reciprocating Shaking Action for a Variety of Applications





#### **Application**

Cell cultures, solubility studies, and extraction procedures.

#### Safety Features

Load Sensor: A built-in load sensor detects unbalanced conditions and automatically reduces rpm to a safe speed to protect samples.

Overload Protection: Audible and visual signals will activate when system detects an obstruction or overload of the tray.

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing.

Audible Alarm: In timed mode, alarm will sound when the time reaches zero. Alarm has optional mute function which can be set from the Touchpad control.

Spill-Resistant Design: Channels fluids away from internal components.



Unit can be run in cold rooms, incubators, and CO<sub>2</sub> environments from -10 to 60°C (14 to 140°F), maximum 80% relative humidity, non-condensing.



A flexible unit for the lab—our multi-purpose Reciprocating Shakers can be customized to fit your unique workflow needs using a wide variety of accessories.

Reciprocating motion is ideal for gentle-tovigorous mixing of separatory funnels with the sturdy separatory funnel platform. Other optional platforms for flask clamps, media bottles and tube racks.

Designed for safety—speed ramping feature slowly increases speed to avoid splashing. Load sensor detects unbalanced conditions and automatically reduces to a safe speed to protect samples.

Model	Speed Range	Speed Accuracy	Timer	Stroke	Max. Weight Capacity	Tray Material	Tray Dimensions (L × W)	Item No.	List Price (USD)
SHRC0719DG	20 to 300 rpm	above 100 rpm ± 1% of set speedbelow 100 rpm ± 1 rpm	1 second to 160 hours	19 mm (0.75")	15 lbs (6.8 kg)	Aluminum	11 × 13" (27.9 × 33 cm)	30391828	2285

#### Design Features

The shaking system in both models continuously monitors shaking speed and maintains set-point, even under changing loads. When unit is set to a speed above 100 rpm, the speed accuracy is  $\pm$  1% of set speed. When set under 100 rpm, speed accuracy is  $\pm$  1 rpm.

Microprocessor Control: The variable speed microprocessor control provides consistent uniform shaking action. Microprocessor will display last set-point and will restart if power is interrupted.

Single Eccentric Drive: Permanently lubricated ball bearings and maintenance free, brushless DC motor provide reliable service and continuous duty operation.

LED Display: Touchpad controls with easy-to-read, independent LED displays for speed and time allow operator to view both settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

RS232 Interface: Provides two-way communication for data logging and unit control. Speed Calibration Mode: Allows user to automatically recalibrate speed display.

## HIGH SPEED MICROPLATE SHAKER

High Speed Shaking for up to 48 Microplates

#### **Applications**

Cell Lysing, Emulsifications, Mixing Microplates, DNA Preparation

#### Display

Independent LED displays for speed and time

#### Communication

RS-232 Interface

#### Construction

Die Cast Aluminum

#### **Design Features**

Programmable pulse feature with adjustments for pulse ON and pulse OFF intervals of between 1 and 59 seconds. Program timer to count down from set time and turn off when timer reaches zero, or to run in continuous mode as timer counts accumulated time until user turns it off.

#### **Operating Conditions**

39–104°F, 20% to 80% Relative Humidity, non-condensing



Sturdy, adjustable top plate secures up to 48 microplates, 6 deep well plates, or small tubes less than 5 in (12.7 cm) tall and up to 7 lb (3.2 kg).

For difficult to mix samples, or to prevent overheating samples while shaking, the Pulse Feature can be adjusted to Pulse ON and Pulse OFF for intervals of between 1 and 59 seconds. Independent LEDs and Touchpad Control for Speed and Time allow you to accurately reproduce the exact settings every time.

Model	Motion	Speed Range	Capacity	Dimensions $(H \times L \times W)$	Tray Dimensions (L × W)	Timer	Net Weight	Power Consumption	Item No.	List Price (USD)
SHHSMPDG	Orbital,	600 rpm to 2500 rpm		12.8 x 15.5 x 12 in 32.5 x 39.4 x 30.5 cm	12.3 x 11 in 31.1 x 27.9 cm	1 second to 160 hours	48.1 lb/ 21.8 ka	120 W	30573784	5,196

## Incubating & Incubating Cooling Shakers Selector Guide







	Incubating Cooling Thermal Shakers	Incubating Light Duty Orbital Shaker	Incubating Light Duty Orbital Shakers
Model	ISTHBLCTS (Heat/Cool) ISTHBLHTS (Heat)	ISLD04HDG	ISLDMPHDG ISLDMPHDGL
Temperature Range	17 below ambient to 100°C / ambient +4 to 100°C	Ambient +5° to 65°C	Ambient +5° to 65°C
Speed Range	300 to 3000 rpm	100 to 1200 rpm	100 to 1200 rpm
Timer	1 minute to 99 hours, 59 min	1 second to 160 hours	1 second to 160 hours
Motion	Orbital	Orbital	Orbital
Orbit	3 mm	3 mm	3 mm
Max Weight Capacity	1 Block	8 lbs	4 Microplates / 2 Micro-Tube Racks
Audible Alarm	•	•	•
Load Sensor		_	_
Drive System	_	Triple Eccentric	Triple Eccentric
Motor Type	Brushless DC Motor	Brushless DC Motor	Brushless DC Motor
Set-Point Retention	• Displays Last Setting	• Displays Last Setting	• Displays Last Setting
Restart/Power Out	•		•
Ramp to Speed	•	•	•
Temperature Overshoot Protection		_	_
Overload Protection	•		•
User Calibration (Temperature)	•		•
User Calibration (Speed)	•	_	_
Interface	USB	-	_
Overall Dimensions (L × W ×H)	10.59 × 10.31 × 5.39"	17 × 11 × 10.5"	17 × 11 × 7.75"
Included Tray (L × W)	N/A	11×7.75"	11 × 7.75"
Platform Options (L × W)	N/A	N/A	N/A

<sup>•</sup> Yes \*\* Maximum speed/tilt angle may vary with heavy or unbalanced loads.

<sup>\*\*</sup> Centered on tray.

## **Incubating & Incubating Cooling Shakers Selector Guide**









	Incubating Cooling Light Duty Orbital Shaker	Incubating Rocking Shaker	Incubating Waving Shaker	Incubating Heavy Duty Orbital Shakers
Model	ISICMBCDG	ISRK04HDG	ISWV02HDG	ISHD16HDG, ISHD23HDG, ISHD23CDG
Temperature Range	10°C Below Ambient to 65°C	Ambient +5° to 65°C	Ambient +5° to 65°C	Ambient +5°C to 65°C, 15°C below ambient to 65°C (ISHD23CDG Models only)
Speed Range	100 to 1200 rpm	1 to 50 rpm	1 to 30 rpm	15 to 500 rpm
Timer	1 second to 160 hours	1 second to 160 hours	1 second to 160 hours	1 second to 160 hours
Motion	Orbital	Rocking	Waving	Orbital
Orbit	3 mm	Tilt Angle: 0 to 15° *	Tilt Angle: 0 to 20° *	19 mm
Max Weight Capacity	2 Microplates 2 Modular Blocks	10 lbs**	5 lbs**	ISHD16HDG 5/35 lb ISHD23HDG 10/50 lb ISHD23CDG 10/50 lb
Audible Alarm	•	•	_	•
Load Sensor	_	_	_	•
Drive System	Triple Eccentric	Cable	Cable	Triple Eccentric
Motor Type	Brushless DC Motor	Stepper Motor	Stepper Motor	Brushless DC Motor
Set-Point Retention	• Displays Last Setting	• Displays Last Setting	• Displays Last Setting	Displays Last Setting
Restart/Power Out	•	•	_	•
Ramp to Speed	•	•	_	•
Temperature Overshoot Protection	_	_	_	•
Overload Protection	•	•	_	•
User Calibration (Temperature)	_	_	_	•
User Calibration (Speed)	_	_	_	•
Interface	_	_	_	RS-232 Interface
Overall Dimensions (L × W ×H)	16.49 × 10.11 × 10.98"	17 × 11 × 10.5"	17 × 11 × 10.5"	ISHD16HDG 16.0 × 25.5 × 14.0" ISHD23HDG 23.5 × 32.1 × 26.6" ISHD23CDG 23.5 × 41.1 × 26.6"
Included Tray (L × W)	N/A	10×7.5"	9.25 × 7.25"	ISHD16HDG 13 × 11" ISHD23HDG 18 × 18" ISHD23CDG 18 × 18"
Platform Options (L × W)	N/A	N/A	N/A	N/A

<sup>•</sup> Yes \*\* Maximum speed/tilt angle may vary with heavy or unbalanced loads. \*\* Centered on tray.

## INCUBATING COOLING THERMAL SHAKERS

Exceptional Heating/Cooling Performance with High Speed Shaking

#### **Application**

Cell cultures, DNA, RNA, and protein studies.

#### Safety Features

Cool Touch Housing: Constructed from a high-quality, heat and chemical resistant polymer. The unit's housing remains cool to the touch throughout normal operating temperatures.

Maximum Temperature Limiting Function: Ensures the temperature will not exceed preset limits, allowing the user control of temperature sensitive samples.

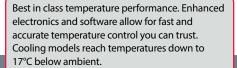
Hot Top Indicator: A hot top warning light will illuminate when the temperature reaches 40°C, and will remain lit until the unit is sufficiently cooled.

Audible Alarm: In timed mode, an alarm will sound when the time reaches zero or set-point temperature is reached. Additionally, the heat function will automatically shut off if the unit recognizes an internal issue.

Automatic Block Recognition: The unit will read the specific block being used and prevents potential over-speed programming.

#### Operation

Unit can operate in conditions from 5 to 35°C (41 to 95°F), max. 80% relative humidity, non-condensing.



Intuitive touchscreen for simple operation and programming. Set the functions and the comprehensive help screens in one of six languages to guide the user through the operation of the unit.

Easily create programs for repeat applications. Storage for five separate, 5-step programs. The USB port allows the transfer of test data to a flash drive for data logging and program storage.

Model	Temp. Range	Temp. Accuracy	Speed Range	Speed Accuracy	Timer	Orbit	Cooling Rate	Heating Rate	Ite(m No.	List Price (USD)
ISTHBLHTS*	4°C above ambient to 100°C	± 1°C between 20°C and 45°C ± 2°C above 45°C	300 to 3000 rpm	± 2%	1 minute to 99 hours, 59 minutes	3 mm (0.12")	above ambient 2-3°C/ minbelow ambient 0.5-1.0°C/min	5°C/min	30392003	2,405
ISTHBLCTS*	17°C below ambient to 100°C	$\pm$ 0.5°C between 20°C and 45°C $\pm$ 2°C below 20°C and above 45°C	300 to 3000 rpm	± 2%	1 minute to 99 hours, 59 minutes	3 mm (0.12")	above ambient 2-3°C/ minbelow ambient 0.5-1.0°C/min	5°C/min	30391996	3,200
ISTHBLHTSN	4°C above ambient to 100°C	± 1°C between 20°C and 45°C ± 2°C above 45°C	300 to 3000 rpm	± 2%	1 minute to 99 hours, 59 minutes	3 mm (0.12")	above ambient 2-3°C/ minbelow ambient 0.5-1.0°C/min	5°C/min	30573847	2,230
ISTHBLCTSN	17°C below ambient to 100°C	± 0.5°C between 20°C and 45°C± 2°C below 20°C and above 45°C	300 to 3000 rpm	± 2%	1 minute to 99 hours, 59 minutes	3 mm (0.12")	above ambient 2-3°C/ minbelow ambient 0.5-1.0°C/min	5°C/min	30573841	2,880

<sup>\*</sup>Units are supplied with block for 24  $\times$  1.5 mL tubes

#### **Design Features**

Low Profile Design: The low profile design minimizes the unit's footprint on the bench.

LCD Touchscreen: Enables faster setting of temperature, speed, and time which can all be viewed at once. Display features on-screen help topics with operational tips available in six languages.

Touchscreen is compatible with rubber gloves used in labs. USB port can transfer information to a flash drive for data logging, program storage and software updates.

Program Control: Program control capabilities allow user programmable operation for automated use and memory. Storage for five separate 5-step programs, or unlimited number of programs with the use of the USB.

Temperature Ramp Rate: Adjustable temperature ramp rate feature separately defines the heating and cooling rate in increments of  $0.5^{\circ}$ C/min.

Single Point Calibration Mode: For maximum temperature accuracy, the single point calibration procedure allows the user to calibrate up to 6 different user defined temperatures.

Pulse Mode Feature: The unit is equipped with a pulse mode feature for quick vortex applications.



## INCUBATING COOLING THERMAL SHAKERS MODULAR BLOCKS



### Microplate Block

Sample Type	Well Size	Well Depth	Dimensions (L $\times$ W $\times$ H)	Item No.	List Price (USD)
Microplate Thermal Block with Lid	$4.21 \times 2.81 \times 0.1$ " (10.7 × 7.1 × 0.25 cm)	0.9" (2.30 cm)	4.7 × 6.4 × 3.0" (11.9 × 16.3 × 7.6 cm)	30400126	1120
		Well Denth			List Price
Sample Type	Well Diameter	Well Depth	Dimensions (L $\times$ W $\times$ H)	Item No.	(USD)
384 Well Plate Thermal Block with Lid	0.16" (0.40 cm)	0.32" (0.81 cm)	Dimensions (L × W × H) $4.7 \times 6.4 \times 3.0" (11.9 \times 16.3 \times 7.6 \text{ cm})$	30400127	(USD) 1120

### **Tube Blocks**

Sample Type	No. of Wells	Well Diameter	Well Depth	Dimensions $(L \times W \times H)$	Item No.	List Price (USD)
0.5 mL Microtubes*	30	0.31" (0.79 cm)	0.97" (2.46 cm)	$4.0 \times 5.6 \times 1.8$ " (10.2 × 14.2 × 4.6 cm)	30400129	850
1.5 mL Microtubes*	24	0.44" (1.11 cm)	1.39" (3.53 cm)	$4.0 \times 5.6 \times 2.1$ " (10.2 × 14.2 × 5.3 cm)	30400130	850
2.0 mL Microtubes*	24	0.45" (1.15 cm)	1.39" (3.53 cm)	$4.0 \times 5.6 \times 2.1$ " (10.2 × 14.2 × 5.3 cm)	30400131	850
12 mm Tubes	24	0.47" (1.20 cm)	1.42" (3.61 cm)	$4.0 \times 5.6 \times 2.2$ " (10.2 × 14.2 × 5.6 cm)	30400132	850

<sup>\*</sup> Supplied with clear rack and cover

### **Racks and Covers**

Description	Item No.	List Price (USD)
Rack For 30 × 0.5 mL Tube Block	30400250	44
Rack For $24 \times 1.5 / 24 \times 2.0$ mL Tube Blocks	30400251	44
Cover For 0.5mL / 1.5mL / 2.0mL Tube Blocks	30400252	30

### Cryotube Block

Sample Type	No. of Wells	Well Diameter	Well Depth	Dimensions (L $\times$ W $\times$ H)	Item No.	List Price (USD)
2.0 mL Cryotubes	24	0.50" (1.26 cm)	1.42" (3.6 cm)	$4.0 \times 5.6 \times 2.2$ " (10.2 × 14.2 × 5.6 cm)	30400133	850

#### **Conical Tube Blocks**

Sample Type	Sample Type No. of Wells Well Diameter Well Depth		Well Depth	Dimensions (L $\times$ W $\times$ H)	Item No.	List Price (USD)
5 mL Eppendorf Tube Block	9	0.66" (1.68 cm)	1.93" (4.9 cm)	$4.1 \times 5.7 \times 2.8$ " (10.4 × 14.5 × 7.1 cm)	30400134	850
15 mL Conical Tubes	9	0.68" (1.73 cm)	4.11" (10.44 cm)	$4.2 \times 5.7 \times 5.0$ " (10.7 × 14.7 × 12.7 cm)	30400135	850
50 mL Conical Tubes	4	1.18" (3.0 cm)	3.97" (10.09 cm)	$4.0 \times 5.7 \times 4.8$ " (10.2 × 14.5 × 12.2 cm)	30400136	850

### INCUBATING LIGHT DUTY ORBITAL SHAKERS

Save Bench Space with Combined Incubating and Shaking Features





#### **Application**

Cell cultures, DNA, RNA, and protein studies.

#### Safety Features

Overload Protection: Audible and visual signals will activate when system detects an obstruction or overload of the tray.

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing.

Audible Alarm: In timed mode, alarm will sound when the time reaches zero.

Caution Hot Indicator: Symbol illuminates when the temperature of the air in the chamber reaches 40°C and remains lit until temperature cools down.

Spill-Resistant Design: Channels fluids away from internal components.

Polycarbonate Lid: Permits viewing of samples without disturbing internal temperature.

Unit can be run in conditions from 5 to 40°C (41 to 104°F), maximum 80% relative humidity, non-condensing.



Designed to provide flexibility in your applications, these shakers with a 4 kg capacity include the ready-to-use tray to customize with over 10 easy-to-install accessories.

When precision is required, achieve temperature accuracy with the user-controlled temperature calibration feature for sensitive applications. Digital control for reliable and repeatable shaking speed.

Microplate shaker is designed to hold up to 4 microplates or deepwell plates, or easily install 2 microtube racks. Two options—opaque lid for light sensitive samples and clear lid for viewing samples.

Model	Temp. Range	Temp. Uniformity	Speed Range	Speed Accuracy	Timer	Orbit	Maximum Weight Capacity	Tray Dimensions (L×W)	Interior Dimensions (L × W × H)	Item No.	List Price (USD)
ISLD04HDG	Ambient +5°C to 65°C	± 0.5°C at 37°C	100 to 1200 rpm	± 2% of set speed	1 second to 160 hours	3 mm (0.12")	8 lbs (3.6 kg)	11 × 7.75" (27.9 × 19.7 cm)	11.3 × 8.3 × 5.7" (28.7 × 21.1 × 14.5 cm)	30391924	3000

#### Design Features

Microprocessor Control: The variable speed microprocessor control provides consistent uniform shaking action. Microprocessor will display last set-point and will restart if power is interrupted.

PID Temperature Controller: Maintains precise temperature control from ambient +5°C to 65°C. Easy-touse controls allow users to adjust temperature in 1°C increments.

Triple Eccentric Drive: Permanently lubricated ball bearings and maintenance free, brushless DC motor provide reliable service and continuous duty operation.

LED Display: Touchpad controls with easy-to-read, independent LED displays for temperature, speed and time allow operator to view all settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

Temperature Calibration Mode: Allows user to calibrate unit to an external temperature device.

## INCUBATING LIGHT DUTY ORBITAL SHAKERS

Save Bench Space with Combined Incubating and Shaking Features





#### **Application**

Cell cultures, DNA, RNA, and protein studies.

#### Safety Features

Overload Protection: Audible and visual signals will activate when system detects an obstruction or overload of the tray.

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing.

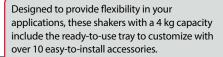
Audible Alarm: In timed mode, alarm will sound when the time reaches zero.

Caution Hot Indicator: Symbol illuminates when the temperature of the air in the chamber reaches 40°C and remains lit until temperature cools down.

Spill-Resistant Design: Channels fluids away from internal components.

Polycarbonate Lid: Permits viewing of samples without disturbing internal temperature.

Unit can be run in conditions from 5 to 40°C (41 to 104°F), maximum 80% relative humidity, non-condensing.



When precision is required, achieve temperature accuracy with the user-controlled temperature calibration feature for sensitive applications. Digital control for reliable and repeatable shaking speed.

Microplate shaker is designed to hold up to 4 microplates or deepwell plates, or easily install 2 microtube racks. Two options—opaque lid for light sensitive samples and clear lid for viewing samples.

Model	Temp. Range	Temp. Uniformity	Speed Range	Speed Accuracy	Timer	Orbit	Maximum Weight Capacity	Tray Dimensions (L×W)	Item No.	List Price (USD)
ISLDMPHDG	Ambient +5°C to 65°C	± 0.5°C at 37°C	100 to 1200 rpm	± 2%	1 second to 160 hours	3 mm (0.12")	4 microplates or 2 micro-tube racks	11 × 7.75" (27.9 × 19.7 cm)	30391938	2745
ISLDMPHDGL*	Ambient +5°C to 65°C	± 0.5°C at 37°C	100 to 1200 rpm	± 2%	1 second to 160 hours	3 mm (0.12")	4 microplates or 2 micro-tube racks	11 × 7.75" (27.9 × 19.7 cm)	30391931	2745

<sup>\*</sup>Unit includes opaque lid





INCUBATING COOLING ORBITAL SHAKERS

Innovatively Designed Incubating Orbital Shaker to Heat, Cool and Shake Samples

#### **Application**

Cell and bacterial cultures, hybridizations, and enzyme reactions.

#### **Safety Features**

Overload Protection: Audible and visual signals will activate when system detects an obstruction or overload of the tray.

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing.

Audible Alarm: In timed mode, alarm will sound when the time reaches zero. Alarm has optional mute function which can be set from the Touchpad control.

Caution Hot Indicator: Symbol illuminates when the temperature of the air in the chamber reaches 40°C and remains lit until temperature cools down.

Spill-Resistant Design: Channels fluids away from internal components.

Polycarbonate Lid: Permits viewing of samples without disturbing internal temperature.

#### Operation

Unit can be run in conditions from 5 to  $40^{\circ}$ C (41 to  $104^{\circ}$ F), maximum 80% relative humidity, non-condensing.



Designed to provide flexibility in your applications, these shakers are microplate ready - no accessories required, and can easily accommodate modular blocks with the included block adapter.

When precision is required, achieve temperature accuracy with the unique temperature calibration feature for sensitive applications. Digital control for reliable and repeatable shaking speed.

Innovative temperature system allows for fast, accurate and uniform temperatures you can trust. The unique Peltier design with direct plate-to-sample contact offers precise heating and cooling.

Model	Temp. Range	Temp. Uniformity	Speed Range using Microplates	Speed Range using Modular Blocks	Speed Accuracy	Timer	Orbit	Maximum Weight Capacity	Item No.	List Price (USD)
ISICMBCDG	10°C below ambient to 65°C	± 0.5°C at 37°C	100 to 1200 rpm	100 to 600 rpm	± 2%	1 second to 160 hours	3 mm (0.12")	2 microplates or 2 modular blocks	30391945	4565

#### **Design Features**

Microprocessor Control: The variable speed microprocessor control provides consistent uniform shaking action. Microprocessor will display last set-point and will restart if power is interrupted.

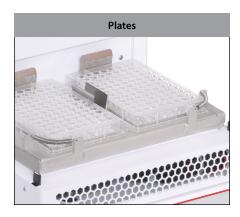
PID Temperature Controller: Maintains precise temperature control from  $10^{\circ}$ C below ambient to  $65^{\circ}$ C. Easy-to-use controls allow users to adjust temperature in  $1^{\circ}$ C increments.

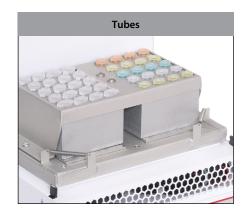
Triple Eccentric Drive: Permanently lubricated ball bearings and maintenance free, brushless DC motor provide reliable service and continuous duty operation.

LED Display: Touchpad controls with easy-to-read, independent LED displays for temperature, speed, and time allow operator to view all settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

Temperature Calibration Mode: Allows user to calibrate unit to an external temperature device.

## INCUBATING LIGHT DUTY ORBITAL SHAKERS MODULAR BLOCKS







#### **Modular Blocks**

Modular Blocks are constructed from a solid anodized aluminum block. The close contact of tubes to block walls allow for maximum temperature transfer.

Block dimensions (L  $\times$  W  $\times$  H): 3.75  $\times$  3  $\times$  2" (9.5  $\times$  7.6  $\times$  5.1 cm) Applications: Cell cultures, hybridizations, and extraction procedures

OHAUS modular blocks also fit in the OHAUS Dry Block Heaters. Constructed of anodized aluminum, this material is ideal for its temperature conducting and corrosion resistant properties.

### Microcentrifuge Tube Blocks Single block

Sample Type	No. of Wells	Well Diameter	Well Depth	Item No.	List Price (USD)
0.5 mL tube	30	7.9 mm	27.6 mm	30400157	147
1.5 mL tube	20	11.1 mm	39.1 mm	30400159	147
2 mL tube	20	11.5 mm	38.1 mm	30400191	147





## Conical-Bottom Centrifuge Single block

Sample Type	No. of Wells	Well Diameter	Well Depth	Item No.	List Price (USD)
15 mL tube	12	17.1 mm	44.5 mm	30400172	147
50 mL tube	5	29.0 mm	47.6 mm	30400168	147





# INCUBATING LIGHT DUTY ORBITAL SHAKERS MODULAR BLOCKS

### Standard Test Tube Blocks Single block

Sample Type	No. of Wells	Well Diameter	Well Depth	Item No.	List Price (USD)
6 mm tube	30	8.3 mm	48.4 mm	30400158	147
10 mm tube	24	10.7 mm	48.4 mm	30400151	147
12/13 mm tube	20	13.9 mm	48.4 mm	30400152	147





### Centrifuge Tube Combination Block

#### Single block

These blocks have been designed for variable sized samples.

Sample Type	No. of Wells	Well Diameter	Well Depth	Item No.	List Price (USD)
Test Tube Combi	ination				
6 mm	6	8.3 mm	48.4 mm	30400156	147
12/13 mm	5	13.8 mm	48.4 mm	30400156	147
25 mm	3	26.2 mm	48.4 mm	30400156	147
Centrifuge Tube	Combination				
1.5 mL	4	11.1 mm	39.1 mm	30400193	147
15 mL	3	17.1 mm	44.5 mm	30400193	147
50 mL	2	29.0 mm	47.6 mm	30400193	147
Micro-Tube Com	bination				
0.5 mL	6	7.9 mm	27.6 mm	30400194	147
1.5 mL	10	11.1 mm	39.1 mm	30400194	147
2 mL	5	11.5 mm	38.1 mm	30400194	147



#### **Vial Blocks**

#### Single block

Designed for sample/serum and scintillation vials.

Sample Type	No. of Wells	Well Diameter	Well Depth	Item No.	List Price (USD)
12 mm vial	20	12.7 mm	30 mm	30400182	147
15 mm vial	20	15.8 mm	35 mm	30400183	147
16 mm vial	15	16.4 mm	45 mm	30400190	147
17 mm vial	12	17.8 mm	45 mm	30400184	147
19 mm vial	12	19.7 mm	45 mm	30400185	147
21 mm vial	9	21.7 mm	45 mm	30400186	147
23 mm vial	8	23.8 mm	45 mm	30400187	147
25 mm vial	8	25.8 mm	45 mm	30400188	147
28 mm vial	6	28.8 mm	45 mm	30400189	147







## INCUBATING ROCKING & WAVING SHAKERS

Save Incubator Space with Unique Benchtop Incubating Rocking and Waving Shakers





#### **Application**

Cell cultures, staining and destaining gels, hybridization procedures, and blotting techniques.

#### Safety Features

Overload Protection: Audible and visual signals will activate when system detects an obstruction or overload of the tray.

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing.

Audible Alarm: In timed mode, alarm will sound when the time reaches zero.

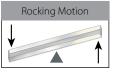
Caution Hot Indicator: Symbol illuminates when the temperature of the air in the chamber reaches 40°C and remains lit until temperature cools down.

Spill-Resistant Design: Channels fluids away from internal components.

Polycarbonate Lid: Permits viewing of samples without disturbing internal temperature.

Unit can be run in conditions from 5 to 40°C (41 to 104°F), maximum 80% relative humidity, non-condensing.





Electronic control allows simple tilt angle, speed and temperature adjustments while the unit is still running to achieve optimal mixing.

Achieve reproducible results you can trust. Precisely adjust the tilt angle in 1° increments, vary the speed by 1 rpm and set temperature in 1°C increments with intuitive touchpad controls.

Innovative speed ramping feature slowly increases speed to desired setpoint to avoid splashing. Smooth rocking or waving motion is maintained with unique, state-of-the-art motor and electronics.

Model	Temp. Range	Temp. Uniformity	Speed Range	Speed Accuracy	Tilt Angle	Timer	Maximum Weight Capacity	Tray Dimensions (L×W)	Interior Dimensions (L×W×H)	Item No.	List Price (USD)
ISRK04HDG	Ambient +5°C to 65°C	± 0.5°C at 37°C	1 to 50 rpm *	± 1 rpm	0 to 15° *	1 second to 160 hours	10 lbs (4.5 kg) **	10 × 7.5" (25.4 × 19.1 cm)	10.75 × 7.75 × 3.8" (27.3 × 19.7 × 9.7 cm)	30391980	3150

<sup>\*</sup> Maximum speed/tilt angle may vary with heavy or unbalanced loads.

#### **Design Features**

Microprocessor Control: The microprocessor control provides electronic tilt angle adjustment which allows user to easily adjust rocking angle from 0 to 15° while unit is operating. Precise speed control provides smooth, low-speed rocking motion down to 1 rpm.

PID Temperature Controller: Maintains precise temperature control from ambient +5°C to 65°C. Easy-touse controls allow users to adjust temperature in 1°C increments.

LED Display: Touchpad controls with easy-to-read, independent LED displays for temperature, speed and tilt angle, and time allow operator to view all settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

<sup>\*\*</sup> Centered on tray.

## INCUBATING ROCKING & WAVING SHAKERS

Save Incubator Space with Unique Benchtop Incubating Rocking and Waving Shakers





#### **Application**

Cell cultures, hybridization procedures, and blotting techniques.

#### Safety Features

Overload Protection: Audible and visual signals will activate when system detects an obstruction or overload of the tray.

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing.

Audible Alarm: In timed mode, alarm will sound when the time reaches zero.

Caution Hot Indicator: Symbol illuminates when the temperature of the air in the chamber reaches 40°C and remains lit until temperature cools down.

Spill-Resistant Design: Channels fluids away from internal components.

Polycarbonate Lid: Permits viewing of samples without disturbing internal temperature.

Unit can be run in conditions from 5 to 40°C (41 to 104°F), maximum 80% relative humidity, non-condensing.





Electronic control allows simple tilt angle, speed and temperature adjustments while the unit is still running to achieve optimal mixing.

Achieve reproducible results you can trust. Precisely adjust the tilt angle in 1° increments, vary the speed by 1 rpm and set temperature in 1°C increments with intuitive touchpad controls.

Innovative speed ramping feature slowly increases speed to desired setpoint to avoid splashing. Smooth rocking or waving motion is maintained with unique, state-of-the-art motor and electronics.

Model	Temp. Range	Temp. Uniformity	Speed Range	Speed Accuracy	Tilt Angle	Timer	Maximum Weight Capacity	Tray Dimensions (L × W)	Interior Dimensions (L × W × H)	Item No.	List Price (USD)
ISWV02HDG	Ambient +5°C to	± 0.5°C at 37°C	1 to 30 rpm *	± 1 rpm	0 to 20° *	1 second to 160 hours	5 lbs (2.3 kg) **	9.25 × 7.25" (23.5 × 18.4 cm)	10.75 × 7.75 × 3.4" (27.3 × 19.7 × 8.6 cm)	30391987	3080

<sup>\*</sup> Maximum speed/tilt angle may vary with heavy or unbalanced loads.

#### **Design Features**

Microprocessor Control: The microprocessor control provides electronic tilt angle adjustment which allows user to easily adjust waving angle from 0 to 20° while unit is operating. Precise speed control provides smooth, low-speed waving motion down to 1 rpm.

PID Temperature Controller: Maintains precise temperature control from ambient +5°C to 65°C. Easy-to-use controls allow users to adjust temperature in 1°C increments..

LED Display: Touchpad controls with easy-to-read, independent LED displays for temperature, speed and tilt angle, and time allow operator to view all settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

<sup>\*\*</sup> Centered on tray.

## **INCUBATING HEAVY DUTY ORBITAL SHAKERS**

Save Incubator Space with Benchtop Incubating and Incubating Refrigerating Shakers

#### **Applications**

Cell Cultures, Solubility Studies, Bacterial Suspensions, Extraction Procedures

#### Display

Independent LED displays for temperature, speed and time

#### Communication

RS-232 Interface

#### Construction

Aluminum and Cycoloy

#### **Design Features**

Temperature calibration feature, overload protection, overshoot protection (temperature), load sensor, PID temperature controller, Triple Eccentric Drive system

#### Operation

59°F – 90°F, 80% Relative Humidity, non-condensing





The exclusive Opti-Flow Forced Ventilation System utilizes twin induction or a single large fan. Air is deflected around & not directly on samples, creating a circular flow of air ensuring uniformity. For repeatable results, the exclusive Accu-Drive shaking system ensures speed accuracy. The Triple Eccentric Drive provides consistent shaking motion throughout the entire speed range.

The chambers for the ISHD23HDG and ISHD23CDG units are large enough to hold  $2\times6$  L Erlenmeyer flasks with optional clamps and platform.

Model	Motion	Speed Range	Speed Accuracy	Temperature Range	Temperature Uniformity	Timer	Item No.	List Price (USD)
ISHD16HDG	Orbital, 0.75 in / 19 mm	15 rpm to 500 rpm	Above 100 rpm - +/-1% / Under 100 rpm +/- 1rpm	Ambient +5°C to 65°C	+/- 0.5°C at 37°C	1 second to 160 hours	30573769	3,500
ISHD23HDG	Orbital, 1 in / 25 mm	15 rpm to 500 rpm	Above 100 rpm - +/-1% / Under 100 rpm +/- 1rpm	Ambient +5°C to 65°C	+/- 0.5°C at 37°C	1 second to 160 hours	30573774	6,500
ISHD23CDG	Orbital, 1 in / 25 mm	15 rpm to 500 rpm	Above 100 rpm - +/-1% / Under 100 rpm +/- 1rpm	15°C below ambient to 65°C	+/- 0.5°C at 37°C	1 second to 160 hours	30573779	8,900

Model	Max Weight Capacity	Drive System	Dimensions $(H \times L \times W)$	Interior Dimensions $(H \times L \times W)$	Tray Dimensions (L × W)	Net Weight	Power Consumption
ISHD16HDG	35 lb (16 kg) @ 75rpm,	Triple Eccentric;	16 × 25.5 × 14 in	9.5 × 13.4 × 12 in	13 × 11 in	79.1 lb/	450 W
ואחטוטחטם	5 lb (2.3 kg) @ 500 rpm	Brushless DC motor	$40.6 \times 64.8 \times 35.6$ cm	$24.1 \times 34 \times 30.5$ cm	$33 \times 27.9  \text{cm}$	35.9 kg	430 W
ISHD23HDG	50 lb (22.7kg) @ 125 rpm,	Triple Eccentric;	$23.5 \times 32.1 \times 26.6$ in	$17 \times 20.6 \times 24.8 \text{ in}$	18 × 18 in	224.1 lb/	800 W
ISHDZSHDG	10 lb (4.53kg) @ 500 rpm	Brushless DC motor	$59.6 \times 81.5 \times 67.5$ cm	$43.2 \times 52.3 \times 62.9$ cm	$45.6 \times 45.7$ cm	101.6 kg	000 VV
ISHD23CDG	50 lb (22.7kg) @ 125 rpm,	Triple Eccentric;	$23.5 \times 41.1 \times 26.6$ in	$17 \times 20.6 \times 24.8 \text{ in}$	18 × 18 in	290.4 lb/	900 W/
ISHD23CDG	10 lb (4.53kg) @ 500 rpm	Brushless DC motor	$59.6 \times 104.4 \times 67.5$ cm	$43.2 \times 52.3 \times 62.9$ cm	$45.6 \times 45.7$ cm	131.7 kg	800 W

Accessories list on next page

#### Stainless Steel Flask Clamps

Designed to hold Erlenmeyer flasks from 10 mL to 6 L. Constructed of type 302 and 304 stainless steel. Includes hardware for easy attachment to platforms. Flask clamps 50 mL and higher are supplied with a spring to hold the flask in place. The 2.8 L clamp is designed to hold a Fernbach flask. Media bottle clamps feature the same details as flask clamps.





















	10 mL Erlenmeyer Flask Clamp	25 mL Erlenmeyer Flask Clamp	50 mL Erlenmeyer Flask Clamp	125 mL Erlenmeyer Flask Clamp	250 mL Erlenmeyer Flask Clamp	500 mL Erlenmeyer Flask Clamp	1 L Erlenmeyer Flask Clamp	2 L Erlenmeyer Flask Clamp
Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Item No.	30400084	30400085	30400086	30400087	30400088	30400089	30400090	30400091
List Price (USD)	38	38	40	40	40	43	58	91
Tray or Platform			Nι	ımber of Flask Clam	nps per Tray or Platf	orm		
11.75 × 8.75" (29.9 × 22.2 cm) Open Air Digital 4 kg Shakers	35	20	15	12	6	4	N/A	N/A
11 × 7.75" (27.9 × 19.7 cm) Incubating 4 kg Shakers	35	20	12	8	5	N/A	N/A	N/A
11 × 13" (27.9 × 33 cm)								
Analog/Digital 16 kg Shakers	60	25	13	10	9	7	4	N/A
Digital Reciprocating Shakers	60	25	13	10	9	7	4	N/A
13 × 13" (33 × 33 cm)								
Analog/Digital 16 kg Shakers	60	30	15	12	12	8	4	3
Digital Reciprocating Shakers	60	30	15	12	12	8	4	3
18 × 18" (45.7 × 45.7 cm)								
Analog/Digital 16 kg Shakers	113	64	32	20	20	13	8	5
Digital Reciprocating Shakers	113	64	32	20	20	13	8	5
18 × 24" (45.7 × 61 cm)								
Analog/Digital 16 kg Shakers	158	88	44	28	28	20	12	6
Digital Reciprocating Shakers	158	88	44	28	28	20	12	6
Analog/Digital 23 kg Shakers	158	88	44	28	28	20	12	6
18 × 30" (45.7 × 76.2 cm) Analog/Digital 23 kg Shakers	203	112	56	36	36	26	15	8
24 × 24" (61 × 61 cm) Digital 45 kg Shakers	221	121	61	41	41	25	16	9
24 × 36" (61 × 91.4 cm) Digital 63 kg Shakers	336	160	94	61	64	40	24	14

<sup>\*</sup>All units require a universal platform for mounting flask clamps or test tube racks with the exception of the digital open air and incubating 4 kg shakers

#### **PVC Flask Clamps**

Constructed of one piece, molded PVC. Autoclavable. Will not scratch or mark flask like other clamps. Includes hardware for easy attachment to universal platforms. The attachment and removal of flasks is quick and easy. Ideal for polycarbonate flasks.























2.8 L & 3 L Fernbach Flask Clamp	4 L Erlenmeyer Flask Clamp	5 L & 6 L Erlenmeyer Flask Clamp	500 mL Media Bottle Clamp	1 L Media Bottle Clamp	125 mL Erlenmeyer Flask Clamp	250 mL Erlenmeyer Flask Clamp	500 mL Erlenmeyer Flask Clamp	1 L Erlenmeyer Flask Clamp	2 L Erlenmeyer Flask Clamp		
Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	PVC	PVC	PVC	PVC	PVC		
2.8L-30400092 3L-30400093	30400094	5 L-30400095 6 L-30400096	30400097	30400098	30400099	30400100	30400101	30400102	30400103		
121 / 164	151	183 / 179	113	122	42	43	49	55	92		
	Number of Flask Clamps per Tray or Platform										
N/A	N/A	N/A	3	N/A	12	6	4	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	8	4	N/A	N/A	N/A		
N/A	N/A	N/A	5	2	10	8	5	2	N/A		
N/A	N/A	N/A	5	2	10	8	5	2	N/A		
1	1	1	6	5	12	10	6	4	3		
1	1	1	6	5	12	10	6	4	3		
2	4	2	16	10	20	18	12	8	4		
2	4	2	16	10	20	18	12	8	4		
3	4	3	20	13	28	25	16	10	6		
3	4	3	20	13	28	25	16	10	6		
3	4	3	20	13	28	25	16	10	6		
3	6	4	28	18	36	33	20	14	8		
5	5	5	25	18	41	35	24	13	9		
7	9	7	40	30	61	55	38	22	13		

#### **Test Tube Racks**

#### Half Size, Stationary

Racks constructed of PVC coated steel. Includes hardware for easy attachment to platforms.

#### **Dimensions:**

 $5 L \times 7 W \times 4$ " H (12.7 × 17.8 × 10.2 cm) / Micro-Tube Rack: 1.7" H (4.3 cm).



	1.5 to 2 mL Micro-Tube Rack Half Size, Stationary	10 to 13 mm Test Tube Rack Half Size, Stationary	14 to 16 mm Test Tube Rack Half Size, Stationary	18 to 20 mm Test Tube Rack Half Size, Stationary	22 to 25 mm Test Tube Rack Half Size, Stationary	15 mL Centrifuge Tube Rack Half Size, Stationary	50 mL Centrifuge Tube Rack Half Size, Stationary
Tube Capacity	70	63	48	35	24	35	12
Item No.	30400114	30400115	30400116	30400117	30400118	30400119	30400120
List Price (USD)	165	182	182	182	182	189	189
Tray or Platform			Number of	Test Tube Racks per	Tray or Platform		
11.75 × 8.75" (29.9 × 22.2 cm)							
Digital Open Air 4 kg Shakers	2	2	2	2	2	2	2
11 × 7.75" (27.9 × 19.7 cm)							
Incubating 4 kg Shakers	2	1	1	N/A	N/A	1	1
Digital Open Air 4 kg Shakers	2	N/A	N/A	N/A	N/A	N/A	N/A
Incubating Microplate Shakers	2	N/A	N/A	N/A	N/A	N/A	N/A
11 × 13" (27.9 × 33 cm)							
Analog/Digital 16 kg Shakers	2	2	2	2	2	2	2
Digital Reciprocating Shakers	2	2	2	2	2	2	2
13 × 13" (33 cm × 33 cm)							
Analog/Digital 16 kg Shakers	2	2	2	2	2	2	2
Digital Reciprocating Shakers	2	2	2	2	2	2	2
18 × 18" (45.7 × 45.7 cm)							
Analog/Digital 16 kg Shaker	4	4	4	4	4	4	4
Digital Reciprocating Shakers	4	4	4	4	4	4	4
18 × 24" (45.7 × 61 cm)							
Analog/Digital 16 kg Shakers	6	6	6	6	6	6	6
Digital Reciprocating Shakers	6	6	6	6	6	6	6
Analog/Digital 23 kg Shakers	6	6	6	6	6	6	6
18 × 30" (45.7 × 76.2 cm)							
Analog/Digital 23 kg Shakers	8	8	8	8	8	8	8
24 × 24" (61 × 61 cm)							
Digital 45 kg Shakers	8	8	8	8	8	8	8
24 × 36" (61 × 91.4 cm)							
Digital 63 kg Shakers	7	7	7	7	7	7	7

<sup>\*</sup>All units require a universal platform for mounting flask clamps or test tube racks with the exception of the digital open air and incubating 4 kg shakers

#### **Test Tube Racks**

#### **Full Size, Stationary**

Racks constructed of PVC coated steel. Includes hardware for easy attachment to platforms...

#### **Dimensions:**

 $3.75 L \times 16.5 W \times 4$ " H (9.5 × 41.9 × 10.2 cm)

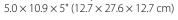
#### **Full Size, Pivoting**

Has adjustable angle, custom tilt. Stainless steel holder includes removable plastic rack. Rack is easily removed to transport from work area to shaker.

#### Inside pivoting rack dimensions:

 $5.1 \times 10.8 \times 3.9$ " (12.9 × 27.4 × 9.9 cm)

#### Outside stationary rack dimensions:







10 to 14 mm Test Tube Rack Full Size, Stationary	16 to 20 mm Test Tube Rack Full Size, Stationary	21 to 25 mm Test Tube Rack Full Size Stationary	50 mL Centrifuge Tube Rack Full Size, Stationary	13 mm Test Tube Rack Full Size, Pivoting	16 mm Test Tube Rack Full Size, Pivoting	20 mm Test Tube Rack Full Size, Pivoting	25 mm Tube Rack Full Size, Pivoting	30 mm Tube Rack Full Size, Pivoting
48	33	21	17	90	60	40	24	21
30400110	30400111	30400112	30400113	30400105	30400106	30400107	30400108	30400109
359	359	359	376	320	320	320	320	320
			Number of Test	Tube Racks per Tra	y or Platform			
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	1	1	1	1	1
N/A	N/A	N/A	N/A	1	1	1	1	1
N/A N/A	N/A N/A	N/A N/A	N/A N/A	2	2	2	2	2 2
N/A N/A	N/A N/A	N/A N/A	N/A N/A	2	2	2	2	2 2
5 5	5 5	5 5	5 5	3	3	3	3	3
5	5	5	5	3	3	3	3	3
6	6	6	6	4	4	4	4	4
7	7	7	7	4	4	4	4	4
5	5	5	5	6	6	6	6	6

## **INCUBATING HEAVY DUTY ORBITAL SHAKER ACCESSORIES**

Save Incubator Space with Benchtop Incubating and Incubating Refrigerating Shakers

Accessories	ISHD16HDG	ISHD23HDG	ISHD23CDG	Item No.	List Price (USD)
Universal Platform 11 × 13" S/S	•			30400052	220
Universal Platform, 46 × 46 cm, S/S I-IR		•	•	30400055	368
Rubber Mat 11 × 13"	•			30400060	63
Flask Clamps, 10 mL	•	•	•	30400084	39
Flask Clamps, 25 mL	•	•	•	30400085	39
Flask Clamps, 50 mL	•	•	•	30400086	41
Flask Clamps, 125 mL	•	•	•	30400087	41
Flask Clamps, 250 mL	•	•	•	30400088	41
Flask Clamps, 500 mL	•	•	•	30400089	45
1 Liter Erlynmeyer Flask Clamp	•	•	•	30400090	60
2 Liter Erlynmeyer Flask Clamp		•	•	30400091	94
2.8 Liter Erlynmeyer Flask Clamp		•	•	30400092	125
3 Liter Erlenmeyer Flask Clamp		•	•	30400093	169
4 Liter Erlynmeyer Flask Clamp		•	•	30400094	155
5 Liter Erlenmeyer Flask Clamp		•	•	30400095	188
6 Liter Erlynmeyer Flask Clamp		•	•	30400096	184
500mL Media Bottle Clamp		•	•	30400097	116
1000mL Media Bottle Clamp		•	•	30400098	126
Flask Clamp PVC 125 mL		•	•	30400099	44
Flask Clamp PVC 250 mL		•	•	30400100	45
Flask Clamp PVC 500 mL		•	•	30400101	51
Flask Clamp PVC 1000 mL		•	•	30400102	57
Flask Clamp PVC 2000 mL		•	•	30400103	95
Clamp Microplate SS	•	•	•	30400104	64
Test Tube Rack 10-13 mm Dia	•	•	•	30400115	187
Test Tube Rack 14-16 mm Dia	•	•	•	30400116	187
Test Tube Rack 18-20 mm Dia	•	•	•	30400117	187
Test Tube Rack 22-25 mm Dia	•	•	•	30400118	187
Test Tube Rack For 15 mL Tubes	•	•	•	30400119	194
Test Tube Rack For 50 mL Tubes	•	•	•	30400120	194
Test Tube Rack 13 mm Pivoting	•	•	•	30400105	328
Test Tube Rack 16 mm Pivoting	•	•	•	30400106	328
Test Tube Rack 20 mm Pivoting	•	•	•	30400107	328
Test Tube Rack 25 mm Pivoting	•	•	•	30400108	328
Test Tube Rack 30 mm Pivoting	•	•	•	30400109	328
Test Tube Rack 10-14 mm Stationary		•	•	30400110	368
Test Tube Rack 16-20 mm Stationary		•	•	30400111	368
Test Tube Rack 21-25 mm Stationary		•	•	30400112	368
Test Tube Rack 50 mL Tubes Stationary		•	•	30400113	386

#### **Universal Platforms**

Allows for mounting of flask clamps, test tube racks, and bottle clamps. Platform slides over top of included tray and is tightened with adjustment screws. Optional accessories screw directly into mounting point openings. The two-tier braces allow stacking of platforms with a 10" clearance (available for select sizes). An optional non-skid rubber mat can be placed on the platform for an added non-slip surface. The platform is constructed of type 304 stainless steel.



Description	Used on Shakers	Item No.	List Price (USD)
11 × 13" (27.9 × 33 cm) Universal Platform	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400052	220
$13 \times 13$ " (33 × 33 cm) Universal Platform	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400053	313
$18 \times 18$ " (45.7 $\times$ 45.7 cm) Universal Platform*	Analog/Digital 16 kg Shakers and Reciprocating Shakers**	30400054	375
$18 \times 18$ " (45.7 × 45.7 cm) Universal Platform	Digital 23 kg Heavy Duty Incubating Shakers	30400055	368
$18 \times 24$ " (45.7 × 61 cm) Universal Platform*	Analog/Digital 16 kg & 23 kg Shakers and Reciprocating Shakers**	30400056	422
$24 \times 24$ " (61 × 61 cm) Universal Platform	Digital 45 kg Shakers	30400057	1000
$18 \times 30$ " (45.7 × 76.2 cm) Universal Platform*	Analog/Digital 23 kg Shakers	30400058	960
$24 \times 36$ " (61 $\times$ 91.4 cm) Universal Platform	Digital 68 kg Shakers	30400059	1280
Two-Tier Braces (set of 4)	Analog/Digital 16 kg & 23 kg Shakers	30400051	119

#### **Rubber Mats**

Description	Used on Shakers	Item No.	List Price (USD)
11 × 13" (27.9 × 33 cm) Rubber Mat	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400060	63
$13 \times 13$ " (33 × 33 cm) Rubber Mat	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400061	76
$18 \times 18$ " (45.7 × 45.7 cm) Rubber Mat	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400062	109
18 × 24" (45.7 × 61 cm) Rubber Mat	Analog/Digital 16 kg Shakers, Reciprocating Shakers and Analog Digital 23kg Shakers	30400063	120
$24 \times 24$ " (61 × 61 cm) Rubber Mat	Digital 45 kg Shakers	30400064	142
$24 \times 36$ " (61 × 91.4 cm) Rubber Mat	Digital 68 kg Shakers	30400065	157

#### **Culture Platforms**

Ideal for slow speed applications; Petri dishes, culture flasks, and other flat bottom, low profile vessels. The two-tier braces (available for both sizes) allow stacking of platforms with a 10" clearance. The platform is constructed of type 304 stainless steel. The platform has a non-skid rubber surface.



Description	Used on Shakers	Item No.	List Price (USD)
18 × 18" (45.7 × 45.7 cm) Culture Platform*	Analog/ Digital 16 kg Shakers* and Reciprocating Shakers**	30400066	374
$18 \times 24$ " (45.7 × 61 cm) Culture Platform*	Analog/ Digital 16 kg* & 23 kg Shakers and Reciprocating Shakers**	30400067	390
Two-Tier Braces (set of 4)	Analog/ Digital 16 kg & 23 kg shakers	30400051	119

<sup>\*</sup>Two-tier ready

<sup>\*\*</sup>Stacking of platforms is not recommended for Reciprocating Shaker

### **Large Vessel Carrier Platforms**

Ideal for large sample containers like carboys, jugs and bottles. The platform's high side walls secure samples, has a heavy-duty design and is constructed of stainless steel. The base tray has a non-skid rubber surface.



Description	Bar Size	Overall Dimensions (L $\times$ W $\times$ H)	Used on Shakers	Item No.	List Price (USD)
4-bar Large Vessel Carrier Platform	18" (45.7 cm)	30.1 × 18.1 × 13.9" (76.4 × 45.9 × 35.3 cm)	Analog/Digital 23 kg Shakers	30400070	1360
4-bar Large Vessel Carrier Platform	24" (61 cm)	24.4 × 24.3 × 14.2" (61.9 × 61.7 × 36.0 cm)	Digital 45 kg Shakers	30400071	1425
5-bar Large Vessel Carrier Platform	24" (61 cm)	36.9 × 24.3 × 14.2" (93.7 × 61.7 × 36.0 cm)	Digital 68 kg Shakers	30400072	1825

Replacement Part	Used with Carrier	Item No.	List Price (USD)
18" (45.7 cm) Adjustable Bar (with Mounting Hardware)	30400070	30400073	65
24" (61 cm) Adjustable Bar (with Mounting Hardware)	30400071 & 30400072	30400074	81

#### **Separatory Funnel Platform**

Holds 3 funnels at once on an  $18 \times 18$ " (45.7  $\times$  45.7 cm) platform. Platform can accommodate 500 mL to 2 L separatory funnels and is constructed of stainless steel. Includes platform, clamps and hardware to secure 3 funnels.



Description	Used on Shakers	Item No.	List Price (USD)
Separatory Funnel Platform 46 × 46 cm	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400083	630

#### Microplate Clamp

Can hold one standard microplate or deep-well plate. Constructed of type 304 stainless steel.

Platform Capacities f	or Microplate Clamps
Platform Size	Microplate Cla

Platform Size	Microplate Clamps	Platform Item No.	List Price (USD)
11 × 13	4	30400052	220
13 × 13	6	30400053	313
18 × 18	12	30400054	375
18 × 24	18	30400056	422
18 × 30	21	30400057	1000
24 × 24	24	30400058	960
24 × 36	36	30400059	1280



Description	Used on Shakers	Item No.	List Price (USD)
Microplate Clamp	Analog/Digital 16 kg, 23 kg, 45 kg, & 68 kg Shakers	30400104	64

#### **Dedicated Platforms**

Pre-mounted flask clamps for maximum utilization of platform space for flasks of all one size. The two-tier braces allow stacking of platforms with a clearance (available for select sizes). Platform is constructed of type 304 stainless steel. Flask clamps are constructed of PVC. Ideal for polycarbonate flasks.



Description	Flask Capacity	Used on Shakers	Item No.	List Price (USD)
13 × 13" (33 × 33 cm) Dedicated Platform / 125 mL Flask Clamp	16	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400075	590
$13 \times 13$ " (33 $\times$ 33 cm) Dedicated Platform / 250 mL Flask Clamp	12	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400076	590
$13 \times 13$ " (33 $\times$ 33 cm) Dedicated Platform / 500 mL Flask Clamp	8	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400077	590
$13 \times 13$ " (33 $\times$ 33 cm) Dedicated Platform / 1 L Flask Clamp	4	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400078	590
18 × 18" (45.7 × 45.7 cm) Dedicated Platform / 125 mL Flask Clamp*	27	Analog/Digital 16 kg Shakers and Reciprocating Shakers**	30400079	650
$18 \times 18$ " (45.7 $\times$ 45.7 cm) Dedicated Platform / 250 mL Flask Clamp*	20	Analog/Digital 16 kg Shakers and Reciprocating Shakers**	30400080	650
$18 \times 18$ " (45.7 $\times$ 45.7 cm) Dedicated Platform / 500 mL Flask Clamp*	13	Analog/Digital 16 kg Shakers and Reciprocating Shakers**	30400081	650
18 $\times$ 18" (45.7 $\times$ 45.7 cm) Dedicated Platform / 1 L Flask Clamp	9	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400082	650
Two-Tier Braces (set of 4)		Analog/Digital 16 kg Shakers	30400051	119

#### Adjustable Platforms

Adjustable clamping bars accommodate various vessel types. Constructed of stainless steel. The base tray has a non-skid rubber surface.

Upper slot distance – 4.5" from platform Lower slot distance – 2 14" from platform



Description	Bar Size	Overall Dimensions	Used on Shakers	Item No.	List Price (USD)
2-bar Adjustable Platform	8.6" (21.8 cm)	8.6 × 11.7" (21.8 × 29.7 cm)	Digital 4 kg Shakers	30400121	535
4-bar Adjustable Platform	18" (45.7 cm)	18 × 18" (45.7 × 45.7 cm)	Analog/Digital 16 kg Shakers	30400068	570
4-bar Adjustable Platform	18" (45.7 cm)	$18 \times 24$ " (45.7 × 61 cm)	Analog/Digital 23 kg Shakers	30400069	815

#### **Replacement Parts**

Description	Used with Platforms	Item No.	List Price (USD)
8.6" (21.8 cm) Adjustable Bar (with Mounting Hardware)	30400121	30400122	49
18" (45.7 cm) Adjustable Bar (with Mounting Hardware)	30400068 & 3040069	30400073	65

<sup>\*</sup>Two-tier ready

<sup>\*\*</sup>Stacking of platforms is not recommended for Reciprocating Shaker

#### **Universal Harness**

Attaches to tray to secure low-profile plates.

Description	Used on Shakers	Item No.	List Price (USD)
Universal Harness	Digital 4 kg Open Air Orbital Shakers	30400123	44



#### **Dimpled Mat**

Designed to hold centrifuge tubes, vials, culture tubes, and micro-tubes securely in place. Mat can easily be removed for cleaning and transporting of tubes from bench to tray.

Description	Used on Shakers	Item No.	List Price (USD)
Dimpled Mat, 12.75 × 10" (32.4 × 25.4 cm)	Digital Rocking Shaker	30400140	59
Dimpled Mat, 11.75 × 8.75" (29.9 × 22.2 cm)	Digital Waving Shaker	30400142	59
Dimpled Mat, $10 \times 7.5$ " (25.4 × 19.1 cm)	Incubating Rocking Shaker	30400141	59
Dimpled Mat, 9.25 $\times$ 7.25" (23.5 $\times$ 18.4 cm)	Incubating Waving Shaker	30400143	59
Dimpled Mat, 11.75 × 8.75" (29.9 × 22.2 cm)	Open Air 4 kg Orbital Shaker	30400124	56
Dimpled Mat, $14 \times 11$ " (35.6 × 27.9 cm)	Analog Rocking & Waving Shaker	30400144	68



#### **Stacking Tray**

Easily attaches to the units'included tray to add a second tier for higher capacity applications. Second tier tray mounts 3.5" (8.9 cm) above lower tray. The tray includes hardware and a rubber mat.

Description	Used on Shakers	Item No.	List Price (USD)
Stacking Tray, 12.75 × 10" (32.4 × 25.4 cm)	Digital Rocking Shaker	30400137	141
Stacking Tray, 11.75 × 8.75" (29.9 × 22.2 cm)	Digital Waving Shaker	30400138	172
Stacking Tray, 14 × 11" (35.6 × 27.9 cm)	Analog Rocking Shaker	30400139	125



#### **Dilution Cup Tray**

Constructed of type 304 stainless steel. Holds  $24 \times 28$  mm dilution vials.

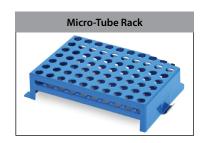
Description	Used on Unit	Item No.	List Price (USD)
1.5 to 2 mL Micro-Tube Rack	Digital 4 kg Open Air Orbital Shakers	30400125	240



#### Micro-Tube Rack

Optional 1.5 to 2 mL Micro-Tube Rack attaches to tray to hold up to  $70 \times 1.5$  mL or 2 mL micro-tubes. Tray can accommodate up to 2 micro-tube racks.

Description	Used on Unit	Item No.	List Price (USD)
Stacking Tray, 12.75 × 10" (32.4 × 25.4 cm)	Digital Open Air and Incubating Microplate Shaker	30400114	170



## MINI VORTEX MIXERS

Choose the Perfect Vortex Mixer From Four Durable Models for Everyday Mixing

#### **Operating Conditions**

Unit can be run in conditions from 4 to 40°C (39 to 104°F), 20% to 85% relative humidity, non-condensing.

#### **Ordering Information**

Units include a 3-wire cord and plug. Includes both cup head and 3" head with cover. Pulsing Model (VXMNPS) includes easy-to-load 1.5 mL to 2 mL Micro-Tube Holder, Holder has a built-in cup head.









Touch mode operation activates mixing when depressing the cup head or continuous mode for use with accessory attachments. Sturdy, rugged design ensures the unit stays in place while in use.

Robust digital and non-digital Vortex Mixers offer effective speed control from low RPM start-up for gentle shaking to high-speed mixing for vigorous vortexing of samples.

The Fixed Speed Vortex Mixer is an economical choice for vigorous mixing of samples at high speed. To ease repetitive sample processing, this unit provides simple, effective full-speed mixing.

Model	Туре	Speed Range* 120V	Timer	Orbit	Controls	Duty Rating	Item No.	List Price (USD)
VXMNFS	Fixed Speed	3200 rpm	_	4.9 mm (0.19")	None	Intermittent duty	30392108	280
VXMNAL	Analog	300 to 3200 rpm	_	4.9 mm (0.19")	Auto/Off/On Rocker Switch, Speed Knob: Variable 1 to 10 Dial Marks	Intermittent duty	30392115	319
VXMNDG	Digital	500 to 3000 rpm	1 second to 160 hours	4.9 mm (0.19")	Auto/Standby/On Rocker Switch, LED Displays for Speed/Time, Up/Down Buttons for Set-Point Control	Intermittent duty	30392122	409
VXMNPS	Pulsing	500 to 3000 rpm	1 second to 160 hours	2.5 mm (0.098")	Auto/Standby/On Rocker Switch, LED Displays for Speed/Time, Up/Down Buttons for Set-Point Control Pulse Button	Intermittent duty	30392129	498

<sup>\*</sup> Maximum speed will vary depending on accessory used.

## MINI VORTEX MIXER ACCESSORIES

#### Micro-Tube Holder

Mixes (48) 0.25 to 2 mL micro-tubes. Requires Insert Retainer.

Description	Item No.	List Price (USD)
Micro-Tube Holder (2 pack)	30400232	73
Insert Retainer	30400227	142

#### 9 to 13 mm Tube Holder

Ideal for mixing 5 mL culture tubes and micro-vials. Requires Insert Retainer.

Description	Item No.	List Price (USD)
9 to 13 mm Tube Holder (2 pack)	30400229	35
Insert Retainer	30400227	142

#### 14 to 19 mm Tube Holder

Ideal for mixing up to (8) 15 mL centrifuge tubes. Requires Insert Retainer.

Description	Item No.	List Price (USD)
14 to 19 mm Tube Holder (2 pack)	30400230	35
Insert Retainer	30400227	142

#### 20 to 25 mm Tube Holder

Ideal for mixing up to (8) 50 mL centrifuge tubes. Requires Insert Retainer

Description	Item No.	List Price (USD)
20 to 25 mm Tube Holder (2 pack)	30400231	35
Insert Retainer	30400227	142

#### **Vessel Harness**

Mixes Erlenmeyer flasks and media bottles. Requires Insert Retainer.

Description	Item No.	List Price (USD)
Vessel Harness (2 pack)	30400228	12
Insert Retainer	30400227	142

#### Cup Head

Designed for mixing 1 tube at a time.

	Description	Item No.	List Price (USD)
Cup Head		30400235	43

#### 3" Rubber Head Cover and 3" Head

Designed for mixing irregular shaped objects.

Description	Item No.	List Price (USD)
3" (7.6 cm) Rubber Head Cover	30400196	59
3" (7.6 cm) Head	30400236	43
3" (7.6 cm) Head with Rubber Cover	30400237	43

#### Microplate Holder

Ideal for mixing 96-well plates or deep well blocks. Requires Insert Retainer.

Description	Item No.	List Price (USD)
Microplate Holder (2 pack)	30400233	73
Insert Retainer	30400227	142

#### Flat Foam Insert

Ideal for custom applications. Can be cut or drilled to fit your specifications. Requires Insert Retainer.

Description	Item No.	List Price (USD)
Flat Foam Insert (2 pack)	30400234	33
Insert Retainer	30400227	142

#### Microwell Kit with Retainer

Includes:

- 2 Microplate Holders
- 1 Insert Retainer

Description	Item No.	List Price (USD)
Microwell Kit with Retainer	30400199	126

#### Microtube Kit with /Retainer

Includes:

- 2 Micro-Tube Holders
- 1 Insert Retainer

Description	Item No.	List Price (USD)	
Microtube Kit with /Retainer	30400200	126	

#### Foam Insert Variety Pack

Includes:

- (1) 9 to 13 mm Tube Holder
- (1) 14 to 19 mm Tube Holder
- (1) 20 to 25 mm Tube Holder
- 1 Flat Foam Insert

Description	Item No.	List Price (USD)
Foam Insert Variety Pack	30400201	64

#### Micro-Tube and Microplate Holder Kit

Includes:

- 1 Micro-Tube Holder
- 1 Microplate Holder
- 1 Insert Retainer

Description	Item No.	List Price (USD)	
Micro-Tube & Microplate Holder Kit	30400198	126	

#### **Tube Holder Kit**

Includes:

- (1) 9 to 13 mm Tube Holder
- (1) 14 to 19 mm Tube Holder
- (1) 20 to 25 mm Tube Holder
- 1 Flat Foam Insert
- 2 Vessel Harnesses
- 1 Insert Retainer

Description	Item No.	List Price (USD)
Tube Holder Kit	30400197	215

OHAUS Vortex Mixer accessories are interchangeable with other manufacturers' models. Call 1-800-672-7722 for assistance.

## MINI VORTEX MIXER ACCESSORIES

#### Single Tube Holder

Single tube, hands free mixing. Easily attaches to the top of any Vortex Mixer with the use of a strong magnetic base. Accepts tubes from 2.5 to 4.5" (6.4 to 11.4 cm) in length. Minimum tube diameter of 0.75" (19 mm).

<b>Description</b> Single Tube Holder	Item No.	List Price (USD)
Single Tube Holder	30400202	184

#### **Single Tube Holder Accessories**

(requires Single Tube Holder)

#### 0.5 mL Micro-Tube Holder

Mixes (24) 0.5 mL micro-tubes. For use with Single Tube Holder.

Description  Misro Tube Holder (0.5 ml.)	Item No.	List Price (USD)
Micro-Tube Holder (0.5 mL)	30400204	80

#### Ampule Tube Holder

Mixes up to 4 storage vials and test tubes.

Description	Item No.	List Price (USD)
15 to 17 mm Ampule Tube Holder	30400207	136
10 to 17 mm Ampule Tube Holder	30400208	191

#### Stainless Steel Microtube Holder

Mixes up to (12) 1.5 to 5 mL tubes. Stainless steel construction.

Description	Item No.	List Price (USD)
Microtube Holdp0er	30400206	292

#### Adapter for Vortex-Genie® Mixer\*

Adapter plate easily adheres to the Vortex-Genie® Mixer housing so Single Tube Holder (sold separately) can be attached.

Description	Item No.	List Price (USD)
Adapter plate	30400203	94

<sup>\*</sup> The Vortex-Genie\* Mixer is a registered trademark of Scientific Industries, Inc.

#### 1.5 mL to 2.0 mL Micro-Tube Holder

Mixes (18) 1.5 to 2 mL micro-tubes. For use with Single Tube Holder.

Description	Item No.	List Price (USD)	
Microtube Holder (1.5 mL to 2.0 mL)	30400205	80	

## **HEAVY-DUTY VORTEX MIXERS**

Increase Productivity with Continuous-Duty Vortexing of Multiple Samples

#### **Operating Features**

Microprocessor Control: The variable speed microprocessor control provides consistent uniform mixing action.

LED Display: Touchpad controls with easy-to-read, independent LED displays for speed and time allow operator to view both settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

#### **Operating Conditions**

Unit can be run in conditions from 4 to  $40^{\circ}$ C (39 to  $104^{\circ}$ F), 20% to 85% relative humidity, non-condensing.

#### Ordering Information

Mixer includes a cup head, universal holder with cover, foam microtube insert for (38) 1.5 to 2.0 mL microtubes, and a detachable, 3-wire cord and specified plug.



Safe to mix at high speeds—the unique locking design of the mixer accessories allows the mixer to safely operate throughout the entire speed range.

For the most demanding applications, these mixers utilize a high quality Germanmanufactured motor, allowing for continuous duty operation and increased load capacities up to 1.1 kg.

Robust digital and non-digital models offer effective speed control from low rpm for gentle shaking to high-speed mixing for vigorous vortexing of difficult samples.

Model	Speed Range	Timer	Orbit	Controls	Capacity	Duty Rating	Dimensions $(L \times W \times H)$	Item No.	List Price (USD)
VXHDDG	On Mode 300 to 2500 rpm Touch Mode 300 to 3500 rpm	1 second to 160 hours	4.9 mm (0.19")	Touch/Standby/On Rocker Switch, LED Displays for Speed/Time, Up/Down Buttons for Set-Point Control	2.5 lbs (1.1 kg)	Continuous duty	9.5 × 6.6 × 6.1" (24.1 × 16.8 × 16.5 cm)	30392146	1180
VXHDAL	On Mode 300 to 2500 rpm Touch Mode 300 to 3500 rpm	_	4.9 mm (0.19")	Analog	2.5 lbs (1.1 kg)	Continuous duty	9.5 × 6.6 × 6.1" (24.1 × 16.8 × 16.5 cm)	30392148	1015

## MICROPLATE VORTEX MIXERS

The Ideal Solution for Dependable Vortex Mixing of Microplates

#### **Operating Features**

Microprocessor Control: The variable speed microprocessor control provides consistent uniform mixing action.

LED Display: Touchpad controls with easy-to-read, independent LED displays for speed and time allow operator to view both settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

### **Operating Conditions**

Unit can be run in conditions from 4 to  $40^{\circ}$ C (39 to  $104^{\circ}$ F), 20% to 85% relative humidity, non-condensing.

#### Ordering Information

Mixer includes a cup head, single microplate holder, and a detachable, 3-wire cord and specified plug. Accessories that can be used on the Microplate Vortex Mixer are cup head, single microplate holder and double microplate holder.



Safe to mix at high speeds—the innovative locking design of the microplate accessories allows these mixers to safely operate throughout the entire speed range.

These mixers utilize a high quality Germanmanufactured motor allowing for reliable, continuous-duty operation at any speed. Robust digital and non-digital models offer effective speed control from low rpm for gentle shaking to high-speed mixing for vigorous vortexing of samples.

Model	Speed Range	Timer	Orbit	Controls	Capacity	Duty Rating	Dimensions (L × W × H)	Item No.	List Price (USD)
VXMPDG	On Mode 300 to 2500 rpm / Touch Mode 300 to 3500 rpm	1 second to 160 hours	3.5 mm (0.13")	Touch/Standby/On Rocker Switch, LED Displays for Speed/Time,Up/Down Buttons for Set-Point Control	2 microplates	Continuous duty	10.5 × 5.4 × 4.5" (26.7 × 13.7 × 11.4 cm)	30392160	550
VXMPAL	On Mode 300 to 2500 rpm Touch Mode 300 to 3500 rpm	-	3.5 mm (0.13")	Analog	2 microplates	Continuous duty	10.5 × 5.4 × 4.5" (26.7 × 13.7 × 11.4 cm)	30392162	473

## HEAVY DUTY AND MICROPLATE VORTEX MIXER ACCESSORIES

#### Foam Insert for 0.5 mL Microtubes

Foam insert holds (52) 0.5 mL microtubes. Requires Universal Holder.

Description	Item No.	List Price (USD)
0.5 mL microtubes	30400216	44
Universal Holder	30400226	65

#### Foam Insert for 1.5 to 2.0 mL Microtubes

Foam insert holds (38) 1.5 to 2.0 mL microtubes. Requires Universal Holder.

Description	Item No.	List Price (USD)
1.5 to 2.0 mL microtubes	30400217	44
Universal Holder	30400226	65

#### Foam Insert for 12-13 mm Test Tubes

Foam insert holds (34) 12-13 mm diameter test tubes. Requires Universal Holder.

Description	Item No.	List Price (USD)
12-13 mm test tubes	30400220	44
Universal Holder	30400226	65

#### Foam Insert for 15-18 mm Test Tubes

Foam insert holds (20) 15-18 mm diameter test tubes. Ideal for 15 mL centrifuge tubes.

Requires Universal Holder.

Description	Item No.	List Price (USD)
15-18 mm test tubes	30400221	44
Universal Holder	30400226	65

#### Foam Insert for 19-21 mm Test Tubes

Foam insert holds (18) 19-21 mm diameter test tubes. Requires Universal Holder.

Description	Item No.	List Price (USD)
19-21 mm test tubes	30400222	44
Universal Holder	30400226	65

#### Foam Insert for 22-25 mm Test Tubes

Foam insert holds (13) 22-25 mm diameter test tubes. Requires Universal Holder.

Description	Item No.	List Price (USD)
22-25 mm test tubes	30400223	44
Universal Holder	30400226	65

#### Foam Insert for 26-29 mm Test Tubes

Foam insert holds (4) 26-29 mm diameter test tubes. Ideal for 50 mL centrifuge tubes. Requires Universal Holder.

Description	Item No.	List Price (USD)
26-29 mm test tubes	30400224	44
Universal Holder	30400226	65

#### Cup Head\*

Designed for mixing 1 tube at a time.

Description	Item No.	List Price (USD)
Cup Head	30400210	43

#### Small Vessel Holder

Rubber holder secures 125 and 250 mL Erlenmeyer flasks. Vessel holder also includes a grip mat. Requires Universal Holder.

Description	Item No.	List Price (USD)
Small Vessel Holder	30400218	53
Universal Holder	30400226	65

#### Large Vessel Holder

Rubber holder secures 500 and 1000 mL Erlenmeyer flasks. Vessel holder also includes a grip mat. Requires Universal Holder.

Description	Item No.	List Price (USD)
Large Vessel Holder	30400211	53
Universal Holder	30400226	65

#### Microplate Holder (Single)\*

Designed to hold one standard microplate.

Description	Item No.	List Price (USD)
Single Holder	30400215	63

#### Microplate Holder (Double)\*

Designed to hold two standard microplates.

Description	Item No.	List Price (USD)
Double Holder	30400213	71

#### Microplate Holder (Quad)

Designed to hold four standard microplates.

Description	Item No.	List Price (USD)	
Quad Holder	30400214	143	

#### Stackable Microplate Holder Four

Designed to maximize the capacity of the Heavy-Duty Vortex Mixer to eight microplates by stacking the tray on top of the four plate holder.

Description	Item No.	List Price (USD)
Stackable Holder	30400212	134

#### Flat Foam Insert

Ideal for custom applications. Can be cut or drilled to fit your specifications. Requires Universal Holder.

Description	Item No.	List Price (USD)	
Flat Foam Insert	30400209	44	
Universal Holder	30400226	65	

#### **Universal Holder & Cover**

Replacement for items supplied with Heavy-Duty Vortex Mixer. Cover allows for mixing irregularly shaped objects.

Description	Item No.	List Price (USD)		
Universal Holder	30400226	65		
Universal Holder Cover	30400225	23		

<sup>\*</sup>Unless noted with an asterisk (\*), for use on Heavy-Duty Vortex only.

## **MULTI-TUBE VORTEX MIXERS**

Powerful Hands-Free Vortex Mixer for Efficient High-Throughput Mixing

#### **Operating Features**

One piece, stainless steel housing design optimizes clean-ups. Ideal for applications requiring accuracy and repeatability. The stainless steel one piece housing design is conducive to keeping your vortexer clean and free from contaminants.

Microprocessor Control: The variable speed microprocessor control provides consistent uniform mixing action.

Adjustment Knobs: Basic speed and time knobs with 1 to 10 dial markings.

#### **Operating Conditions**

Unit can be run in conditions from 4 to  $40^{\circ}$ C (39 to  $104^{\circ}$ F), 20% to 85% relative humidity, non-condensing.

#### **Applications**

Suspensions, high throughput testing in clinical, environmental, and chemistry labs.

#### **Ordering Information**

Unit includes a detachable, 3-wire cord and plug. Unit is also supplied with a Tray Pad Set for support and one 12 mm Test Tube Foam Rack (30400239).



Easily process up to 50 samples at one time—the Multi-Tube Vortex Mixer can be customized for your application with six different tube racks and a post-extension kit.

The Multi-Tube Vortex Mixers feature an easy to clean one-piece stainless steel housing that is perfect to use in all environments—especially clean rooms.

For challenging samples, enhance vortex action & create a more vigorous mix with the programmable pulse mode on the digital models. Adjust the pulse-on/pulse-off time interval to customize operation.

Model	Speed Range*	Timer	Orbit	Max. Weight Capacity	Duty Rating	Tray Dimensions (L×W)	Item No.	List Price (USD)
VXMTAL	1200 to 2400 rpm	0 to 60 seconds	3.6 mm (0.14")	10 lbs (4.5 kg)	Continuous duty	7.25 × 12.25" (18.4 × 31.1 cm)	30392164	2900
VXMTALB**	1200 to 2400 rpm	0 to 60 seconds	3.6 mm (0.14")	10 lbs (4.5 kg)	Continuous duty	7.25 × 12.25" (18.4 × 31.1 cm)	30573831	2,465

<sup>\*</sup> Maximum speed will vary depending on load.

<sup>\*\*</sup> Painted Steel / Two-Piece Housing

## **MULTI-TUBE VORTEX MIXERS**

Powerful Hands-Free Vortex Mixer for Efficient High-Throughput Mixing

#### **Operating Features**

One piece, stainless steel housing design optimizes clean-ups. Ideal for applications requiring accuracy and repeatability. The stainless steel one piece housing design is conducive to keeping your vortexer clean and free from contaminants.

Microprocessor Control: The variable speed microprocessor control provides consistent uniform mixing action. LED Display: Touchpad controls with easy-to-read, independent LED displays for speed and time allow operator to view both settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

Pulsing Mode: Programmable pulsing mode allows user to adjust the pulse-on and pulse-off times between 1 and 59 seconds in 1 second intervals. This feature enhances the vortex action by creating a more vigorous mix.

#### **Operating Conditions**

Unit can be run in conditions from 4 to 40°C (39 to 104°F), 20% to 85% relative humidity, non-condensing.

#### Application:

Suspensions, high throughput testing in clinical, environmental, and chemistry labs.

#### **Ordering Information**

Unit includes a detachable, 3-wire cord and plug. Unit is also supplied with a Tray Pad Set for support and one 12 mm Test Tube Foam Rack (30400239).

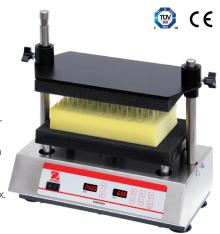
Easily process up to 50 samples at one time—the Multi-Tube Vortex Mixer can be customized for your application with six different tube racks and a post-extension kit.

The Multi-Tube Vortex Mixers feature an easy to clean one-piece stainless steel housing that is perfect to use in all environments—especially clean rooms.

For challenging samples, enhance vortex action & create a more vigorous mix with the programmable pulse mode on the digital models. Adjust the pulse-on/pulse-off time interval to customize operation.

Model	Speed Range*	Speed Accuracy	Timer	Orbit	Max. Weight Capacity	Duty Rating	Tray Dimensions (L × W)	Item No.	List Price (USD)
VXMTDG	500 to 2500 rpm	± 25 rpm	1 second to 160 hours	3.6 mm (0.14")	10 lbs (4.5 kg)	Continuous duty	7.25 × 12.25" (18.4 × 31.1 cm)	30392171	3400
VXMTDGB*	500 to 2500 rpm	± 25 rpm	1 second to 160 hours	3.6 mm (0.14")	10 lbs (4.5 kg)	Continuous duty	7.25 × 12.25" (18.4 × 31.1 cm)	30573836	2,890

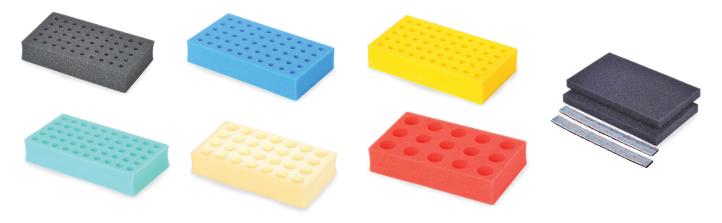
<sup>\*</sup> Maximum speed will vary depending on load.



<sup>\*\*</sup> Painted Steel / Two-Piece Housing

# **MULTI-TUBE VORTEXER ACCESSORIES**

### Foam Test Tube Racks



Description	Tube Capacity	Color	Dimensions (L × W × H)	Item No.	List Price (USD)
10 mm Test Tube Foam Rack	50	Gray	$5.5 \times 9.5 \times 2$ " (14 × 24.1 × 5.1 cm)	30400238	39
12 mm Test Tube Foam Rack	50	Blue	$5.5 \times 9.5 \times 2$ " (14 × 24.1 × 5.1 cm)	30400239	38
13 mm Test Tube Foam Rack	50	Yellow	$5.5 \times 9.5 \times 2$ " (14 × 24.1 × 5.1 cm)	30400240	38
16 mm Test Tube Foam Rack (for 15 mL centrifuge tubes)	50	Green	$5.5 \times 9.5 \times 2$ " (14 × 24.1 × 5.1 cm)	30400241	50
25 mm Test Tube Foam Rack	28	White	$5.5 \times 9.5 \times 2$ " (14 × 24.1 × 5.1 cm)	30400243	50
29 mm Test Tube Foam Rack (for 50 mL centrifuge tubes)	15	Red	$5.5 \times 9.5 \times 2$ " (14 × 24.1 × 5.1 cm)	30400242	50
Replacement Tray Pad Set (upper & lower)	N/A	Gray	$7 \times 12 \times 1$ " (17.8 × 30.5 × 2.5 cm)	30400245	56

#### Post Extension Kit

Adds 6" (15.2 cm) to the post of the Multi-Tube Vortex Mixer to accommodate tubes up to 10" (25.4 cm) tall.

Description	Item No.	List Price (USD)
Post Extension Kit	30400244	195



## **DRY BLOCK HEATERS**

Versatile Block Heaters Designed for Everyday Use with Accessories for Every Application



#### **Applications**

Denaturing proteins, DNA applications, ELISA and other immunoassay studies.

#### Operating Features

Microprocessor Control: PID temperature control, with optional external RTD probe, offers a temperature stability as low as ± 0.1°C with a temperature uniformity as low as ± 0.1°C. Samples are heated to temperature guickly and accurately. Temperature is adjusted in  $\pm$  0.1°C increments.

LED Display: Touchpad controls with easy-to-read, independent LED displays for temperature, and time. Provides repeatable and accurate results every time and is easily visible across lab benches. Shows set-point and actual temperature. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off. Temperature Calibration Mode: Allows user to calibrate unit to an external temperature device.



#### Safety Features

Caution Hot Indicator: Hot warning symbol light is illuminated when the temperature is above 40°C. Overshoot Protection: If the unit exceeds the set temperature by 10°C the unit will automatically stop heating. Audible Alarm: In timed mode, alarm will sound when time reaches zero and when unit reaches set-point temperature. CAUTION! To avoid possible electrical hazard, do not fill well or block opening with water or other fluids. Unit is designed as a dry bath/incubator.

#### **Operating Conditions**

Units can be run in conditions from 18 to 33°C (64 to 91°F), 20% to 80% relative humidity, non-condensing.

Designed for reliable everyday use in the lab. Digital and non-digital block heaters offer exceptional temperature uniformity with outstanding temperature stability.

Ensure temperature accuracy. Digital models include a unique single point calibration feature to match the block heater's display to a known external temperature standard for 3 temperature setpoints.

Digital models feature easy to use touchpad controls with independent displays for temperature and time. Robust non-digital models are controlled with dual temperature adjustment knobs.

Size	Temperature Range	Temperature Stability @ 37°C	Uniformity Within the Block @ 37°C	Uniformity Across Similar Blocks @ 37°C	Heat-Up Time to 100°C	Model	Item No.	List Price (USD)
1 block	Ambient +5°C to 120°C	120 volt units: ± 0.1°C	120 volt units: ± 0.1°C	N/A	≤ 16 minutes	HB1DG	30392059	454
2 block	Ambient +5°C to 120°C	120 volt units: ± 0.1°C	120 volt units: ± 0.1°C	± 0.1°C	≤ 16 minutes	HB2DG	30392080	550
4 block	Ambient +5°C to 120°C	120 volt units: ± 0.1°C	120 volt units: ± 0.1°C	± 0.2°C	≤ 23 minutes	HB4DG	30392087	710
6 block	Ambient +5°C to 120°C	120 volt units: ± 0.1°C	120 volt units: ± 0.1°C	± 0.3°C	≤ 30 minutes	HB6DG	30392094	1070

#### **External Temperature Probe Kit**

Enables the unit to read actual block or sample temperature and display that temperature on the control panel. The optional External Temperature Probe Kit includes a stainless steel RTD PT100 probe, 18" (45.7 cm) stainless steel support rod, thermometer/temperature probe extension clamp and hook connector. The PT100 RTD probe is designed to fit perfectly into the thermometer well of each modular block.





## DRY BLOCK HEATERS

Versatile Block Heaters Designed for Everyday Use with Accessories for Every Application



#### **Applications**

Coagulation and RH Studies.

#### **Operating Features**

High wattage, constant-temperature Dry Block Heaters are economical, versatile and compact. Microprocessor Control: PID temperature controller maintains precise temperature control. Samples are heated to temperature quickly and accurately.

Adjustment Knobs: Dual temperature control knobs with dial markings from 1 to 10 for low temperature and high temperature adjustments. Low range knob adjusts from ambient to 100°C and high range knob adjusts from 75°C to 150°C.

CAUTION! To avoid possible electrical hazard, do not fill well or block opening with water or other fluids. Unit is designed as a dry bath/incubator.



### **Operating Conditions**

Units can be run in conditions from 18 to 33°C (64 to 91°F), 20% to 80% relative humidity, non-condensing.

Designed for reliable everyday use in the lab. Digital and non-digital block heaters offer exceptional temperature uniformity with outstanding temperature stability.

Ensure temperature accuracy. Digital models include a unique single point calibration feature to match the block heater's display to a known external temperature standard for 3 temperature setpoints.

Digital models feature easy to use touchpad controls with independent displays for temperature and time. Robust non-digital models are controlled with dual temperature adjustment knobs.

Size	Temperature Range	Uniformity Within the Block @ 37°C	Temperature Stability @ 37°C	Uniformity Across Similar Blocks @ 37°C	Heat-Up Time to 100°C	Model	Item No.	List Price (USD)
1 block	Low Range: Ambient +5°C to 100°C High Range: 75°C to 150°C	120 volt units: ± 0.1°C	120 volt units: ± 1.0°C	N/A	≤ 16 minutes	HB1AL	30392045	340
2 block	Low Range: Ambient +5°C to 100°C High Range: 75°C to 150°C	120 volt units: ± 0.1°C	120 volt units: ± 1.5°C	± 0.1°C	≤ 16 minutes	HB2AL	30392052	441
4 block	Low Range: Ambient +5°C to 100°C High Range: 75°C to 150°C	120 volt units: ± 0.1°C	120 volt units: ± 2.0°C	± 0.2°C	≤ 23 minutes	HB4AL	30392066	645
6 block	Low Range: Ambient +5°C to 100°C High Range: 75°C to 150°C	120 volt units: ± 0.1°C	120 volt units: ± 2.0°C	± 0.3°C	≤ 30 minutes	HB6AL	30392073	960

## DRY BLOCK HEATERS

Versatile Block Heaters Designed for Everyday Use with Accessories for Every Application



#### **Applications**

Isothermal incubation, enzyme reactions, immunoassays and nucleic acid denaturation and a wide variety of other laboratory procedures.

#### **Operating Features**

Microprocessor Control: PID temperature control, with optional external RTD probe, offers a temperature stability as low as ± 0.1°C with a temperature uniformity as low as ± 0.1°C. Samples are heated to temperature quickly and accurately. Temperature is adjusted in  $\pm$  0.1°C increments.

LED Display: Touchpad controls with easy-to-read, independent LED displays for temperature, and time. Provides repeatable and accurate results every time and is easily visible across lab benches. Shows set-point and actual temperature. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off. Temperature Calibration Mode: Allows user to calibrate unit to an external temperature device.

### Safety Features

Caution Hot Indicator: Hot warning symbol light is illuminated when the temperature is above 40°C. Overshoot Protection: If the unit exceeds the set temperature by 10°C the unit will automatically stop heating. Audible Alarm: In timed mode, alarm will sound when time reaches zero and when unit reaches set-point temperature.

CAUTION! To avoid possible electrical hazard, do not fill well or block opening with water or other fluids. Unit is designed as a dry bath/incubator.

#### **Operating Conditions**

Units can be run in environments from 18 to 33°C (64 to 91°F), 20% to 80% relative humidity, non-condensing.

Three models to customize your application. All models offer exceptional temperature uniformity with outstanding temperature stability.

Avoid contamination to ensure repeatable, reliable results. The Heatblock with Heated Lid features a second heater in the lid to minimize condensation to maintain your sample integrity.

Ensure temperature accuracy. Digital models include a unique single point calibration feature to match the block heater's display to a known external temperature standard for 3 temperature setpoints.

Model	Size	Temperature Range	Temperature Stability @ 37°C	Uniformity Within the Block @ 37°C	Uniformity Across Similar Blocks @ 37°C	Heat-Up Time to 100°C	Item No.	List Price (USD)
HB2DGHL	2 block	Ambient +5°C to 100°C	120 volt units: ± 0.1°C	120 volt units: ± 1.0°C	± 0.1°C	≤ 30 minutes	30392101	1165

## **MODULAR BLOCKS\* & ACCESSORIES**

Modular blocks are constructed from a solid anodized aluminum block\*. The close contact of tubes-to-block walls allow for maximum heat retention. Each block has a thermometer well for measuring block temperature.

**Caution!** To avoid possible electrical hazard, do not fill well or block with water or other fluids. Units are designed as a dry bath/incubator.

Single block dimensions (L  $\times$  W  $\times$  H): 3.75  $\times$  3  $\times$  2" (9.5  $\times$  7.6  $\times$  5.1 cm) **Double block dimensions (**L  $\times$  W  $\times$  H): 6  $\times$  3.75  $\times$  2.25" (15.2  $\times$  9.5  $\times$  5.7 cm)









### Microcentrifuge Tube Blocks

Single block

Brand/Sample Type	No. of Wells	Well Dia.	Well Depth	Item No.	List Price (USD)
0.5 mL Tube	30	7.9 mm	27.6 mm	30400157	147
1.5 mL Tube	20	11.1 mm	39.1 mm	30400159	147
1.5 mL Eppendorf™ Tube	20	11.5 mm	36.9 mm	30400162	147
2 mL Eppendorf™Tube	20	11.5 mm	38.1 mm	30400191	147
2 mL Corning™ Tube	20	10.9 mm	38.1 mm	30400192	147

#### **Titer Plate Block**

#### **Double block**

Fits 2/4/6 block Dry Block Heaters. Ideal for 96-well or 384-well titer plates. Recessed well for better stability, flat surface good for flat and round bottom plates.

Sample Type	Well Depth	Item No.	List Price (USD)
Titer Plate	13.5 mm	30400164	301

### Conical-Bottom Centrifuge Tube Blocks

	Single/Sample Type	No. of Wells	Well Dia.	Well Depth	Item No.	List Price (USD)
15 mL Tube		12	17.1 mm	44.5 mm	30400172	147
50 mL Tube		5	29.0 mm	47.6 mm	30400168	147

#### Standard Test Tube Blocks

Single/Sample Type	No. of Wells	Well Dia.	Well Depth	Item No.	List Price (USD)
6 mm Tube	30	8.3 mm	48.4 mm	30400158	147
10 mm Tube	24	10.7 mm	48.4 mm	30400151	147
12/13 mm Tube	20	13.9 mm	48.4 mm	30400152	147
12/13 mm Tube	16	13.9 mm	48.4 mm	30400165	147
15/16 mm Tube	12	17.5 mm	48.4 mm	30400153	147
17/18 mm Tube	12	19.1 mm	48.4 mm	30400195	147
20 mm Tube	8	21.0 mm	48.4 mm	30400154	147
25 mm Tube	6	26.2 mm	48.4 mm	30400155	147
35 mm Tube	4	35.0 mm	47.6 mm	30400167	147

<sup>\*</sup> Block color subject to change

## **MODULAR BLOCKS\* & ACCESSORIES**

#### **Combination Blocks**

#### Single block

These blocks have been designed for variable sized samples.

Sample Type		No. of Wells	Well Dia.	Well Depth	Item No.	List Price (USD)
	6 mm	6	8.3 mm	48.4 mm		
Test Tube Combination	12/13 mm	5	13.8 mm	48.4 mm	30400156	147
	25 mm	3	26.2 mm	48.4 mm		
	1.5 mL	4	11.1 mm	39.1 mm		
Centrifuge Tube Combination	15 mL	3	17.1 mm	44.5 mm	30400193	147
	50 mL	2	29.0 mm	47.6 mm		
	0.5 mL	6	7.9 mm	27.6 mm		
Micro-Tube Combination	1.5 mL	10	11.1 mm	39.1 mm	30400194	147
	2 mL	5	11.5 mm	38.1 mm		



#### **Vial Blocks**

#### Single block

Designed for sample/serum and scintillation vials.

Sample Type	No. of Wells	Well Dia.	Well Depth	Item No.	List Price (USD)
12 mm Vial	20	12.7 mm	30 mm	30400182	147
15 mm Vial	20	15.8 mm	35 mm	30400183	147
16 mm Vial	15	16.4 mm	45 mm	30400190	147
17 mm Vial	12	17.8 mm	45 mm	30400184	147
19 mm Vial	12	19.7 mm	45 mm	30400185	147
21 mm Vial	9	21.7 mm	45 mm	30400186	147
23 mm Vial	8	23.8 mm	45 mm	30400187	147
25 mm Vial	8	25.8 mm	45 mm	30400188	147
28 mm Vial	6	28.8 mm	45 mm	30400189	147

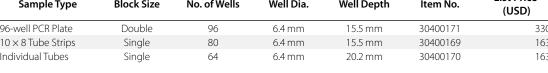


### PCR—Plate, Tube, Strip Blocks

#### Single and double block

Tapered tube wells for 0.2 mL tubes. Spaced for easy access and removal.

Sample Type	Block Size	No. of Wells	Well Dia.	Well Depth	Item No.	List Price (USD)
96-well PCR Plate	Double	96	6.4 mm	15.5 mm	30400171	330
10 × 8 Tube Strips	Single	80	6.4 mm	15.5 mm	30400169	163
Individual Tubes	Single	64	6.4 mm	20.2 mm	30400170	163



#### **Cuvette Block**

#### Single block

Two parallel slots fit 6 cuvettes in each slot, side-by-side.

Sample Type	No. of Wells	Well Depth	Item No.	List Price (USD)
(12) 12.5 mm Cuvettes	2	25.4 mm	30400161	176





## **MODULAR BLOCKS\* & ACCESSORIES**

#### **Solid Blocks**

#### Single and double block

For use as a low-temperature hotplate, slide drying, or for custom drilling to make a custom block.

Block Size	Dimensions (L $\times$ W $\times$ H)	Item No.	List Price (USD)
Single	3.75 × 3 × 2" (9.5 × 7.6 × 5.1 cm)	30400160	147
Double	$6 \times 3.75 \times 2.25$ " (15.2 × 9.5 × 5.7 cm)	30400166	215



#### Stainless Steel Sand Baths

Ideal for irregular vessels. Stainless steel construction for superior corrosion resistance. Designed to hold sand, stainless steel shot or non-volatile fluids.

For Unit	Dimensions (L $\times$ W $\times$ H)	Item No.	List Price (USD)
1 Block Dry Block Heater	3.8 × 3.0 × 2.5" (9.5 × 7.6 × 6.4 cm)	30400173	#N/A
2 Block Dry Block Heater	$3.8 \times 5.9 \times 2.5$ " (9.5 × 14.9 × 6.4 cm)	30400174	329
4 Block Dry Block Heater	$5.8 \times 7.5 \times 2.5$ " (14.7 × 19.1 × 6.4 cm)	30400175	352
6 Block Dry Block Heater	$5.8 \times 11.3 \times 2.5$ " (14.7 × 28.7 × 6.4 cm)	30400176	365

Accessories	Item No.	List Price (USD)
Sand, 1 lb (0.45 kg)	30400177	90
Stainless Steel Shot, 1 lb (0.45 kg)	30400178	110



### **Low Temperature Covers**

Plexiglass cover reduces air flow for additional temperature stability in low-temperature applications. Two sides are open 0.25" (6.4 mm).

Block Size	Dimensions (L $\times$ W $\times$ H)	nsions (L $\times$ W $\times$ H) Item No.	
2 Block Cover	6.5 × 6.5 × 1.6" (16.5 × 16.5 × 4.1 cm)	30400179	131
4 Block Cover	$8.5 \times 8.5 \times 1.6$ " (21.6 × 21.6 × 4.1 cm)	30400180	127
6 Block Cover	$12.5 \times 8.5 \times 1.6$ " (31.8 × 21.6 × 4.1 cm)	30400181	138





## **GUARDIAN™ 7000 HOTPLATES**

Durable Hotplate Stirrers with Superior Safety Features and Intelligent Performance



### **Applications**

Research and Academia chemistry.

#### **Operating Features**

Adjustment Knobs: Used to adjust speed, temperature, time and also to activate program mode for advanced settings.

### **Operating Conditions**

Units can be run in conditions from 5 to 40°C (41 to 104°F), 20% to 80% relative humidity, non-condensing.





Protect your lab with patented SmartPresence™  $\&\,SmartLink^{\scriptscriptstyle\mathsf{TM}}\,technologies.\,These\,exclusive$ features automatically shut off the heater if no one is detected after a user set "time out" period has passed.

An industry-leading early detection system that uses two independent safety controls to continuously monitor the electronics and will shut off heating before an overtemperature condition occurs.

Precise stirring from 60 to 1600 rpm is made possible by the design of a powerful motor, strong magnet and software controlled ramp rate, ensuring secure magnetic coupling for viscous applications.

Model	Speed Range	Temperature Range	Maximum Stirring Capacity (H <sub>2</sub> O)	Top Plate Material	Top Plate Dimen- sions	Overall Dimensions (L × W × H)	Item No.	List Price (USD)
e-G71HS07C	60 rpm to 1600 rpm	Ambient + 5°C – 500°C	15L	Ceramic	7" × 7" Square	12.2" × 8.8" × 4.8"	30500600	750
e-G71HS10C	60 rpm to 1600 rpm	Ambient + 5°C – 500°C	18L	Ceramic	10" × 10" Square	16.3"×11.25"×4.8"	30500610	1050
e-G71HSRDM	60 rpm to 1600 rpm	Ambient + 5°C − 380°C	20L	Aluminum	5.3" Round	$10.5" \times 6.8" \times 5.0"$	30500620	675
C D 101 f								

See Page 181 for accessories

## **GUARDIAN™ 5000 HOTPLATES**

Reliable Hotplate Stirrers with Exceptional Safety Features for Everyday Use

### **Applications**

Academia, Research and Industrial chemistry

#### **Operating Features**

Adjustment Knobs: Used to adjust speed, temperature, time and also to activate program mode for advanced settings.

#### **Operating Conditions**

Units can be run in conditions from 5 to 40°C (41 to 104°F), 20% to 80% relative humidity, non-condensing





An industry-leading early detection system that uses two independent safety controls to continuously monitor the electronics and shut off heating before an overtemperature condition occurs.

Precise stirring from 60 to 1600 rpm is made possible by the design of a powerful motor, strong magnet and software controlled ramp rate, ensuring secure magnetic coupling for viscous applications.

The bright LCD display includes large temperature and speed settings, intuitive icons and a prominent hot top indicator – all designed to quickly and easily monitor performance from across the lab.

Model	Speed Range	Temperature Range	Maximum Stirring Capacity (H <sub>2</sub> O)	Top Plate Material	Top Plate Dimensions	Overall Dimensions (L × W × H)	Item No.	List Price (USD)
e-G51HS07C	60 rpm to 1600 rpm	Ambient + 5°C – 500°C	15L	Ceramic	7" × 7" Square	12.2" × 8.8" × 4.8"	30500520	500
e-G51HP07C	n/a	Ambient + 5°C – 500°C	15L	Ceramic	7" × 7" Square	$12.2" \times 8.8" \times 4.8"$	30500530	300
e-G51ST07C	60 rpm to 1600 rpm	n/a	15L	Ceramic	7" × 7" Square	10.5" × 6.8" × 5.0"	30500540	300
e-G51HS10C	60 rpm to 1600 rpm	Ambient + 5°C – 500°C	18L	Ceramic	10" × 10" Square	16.3" × 11.25" × 4.8"	30500550	650
e-G51HSRDM	60 rpm to 1600 rpm	Ambient + 5°C − 380°C	20L	Aluminum	5.3" Round	10.5" × 6.8" × 5.0"	30500560	500

Item No.	List Price (USD)
30400146	157
30392233	43
30392238	47
30392239	41
30392258	15
30500570	257
30500571	204
30500572	98
30500573	98
30500574	98
30500575	98
30500576	98
30500577	200
30500578	200
30500579	200
30500580	200
30500581	282
	30400146 30392233 30392238 30392239 30392258 30500570 30500571 30500572 30500574 30500574 30500576 30500577 30500578 30500579 30500580

Accessories	Item No.	List Price (USD)
Uni Block 15 mm vials	30500582	282
Uni Block 17 mm Vials	30500583	282
Uni Block 21 mm Vials	30500584	282
Uni Block 28 mm Vials	30500585	282
Uni Block 12 mm Test Tubes	30500586	318
Uni Block 16 mm Test Tubes	30500587	318
Uni Block 20 mm Test Tubes	30500588	318
Uni Block 25 mm Test Tubes	30500589	318
Temperature Probe 20 cm S/S	30500590	200
Temperature Probe 20 cm PTFE	30500591	221
Temperature Probe 25 cm S/S	30500592	257
Temperature Probe 25 cm PTFE	30500593	282
In Use Cover Guardian 7x7	30500594	47
In Use Cover Guardian 10x10	30500595	47
In Use Cover Guardian Round	30500596	47
Vessel Clamp	30500597	199
Stir Bar Retriever	30500598	41

## MINI HOTPLATES & STIRRERS

Compact, Reliable, Easy-to-Use Hotplates and Stirrers for Basic Heating and Stirring

#### **Applications**

Academia and basic chemistry

#### **Operating Features**

Adjustment Knobs: Basic speed and temperature control knobs with dial markings from 1 to 10s

#### **Operating Conditions**

Units can be run in conditions from 5 to 40°C (41 to 104°F), 20% to 85% relative humidity, non-condensing





Select the function you need for your everyday heating and stirring. Five models to choose from - Hotplate, Fixed Temperature Hotplate, Stirrer, Auto Stirrer and combination Hotplate-Stirrer.

Our mini hotplate stirrer is easy to clean up. All models feature a smooth, chemical-resistant ceramic top plate. This brilliant white reflective surface is optimal for viewing your samples.

Designed for safety - unique housing material is heat-resistant making it not only cool to the touch, but also chemical-resistant. Spill resistant design ensures long-term reliable use.

### **Basic Mini Hotplates**

Model	Temperature Range	Max. Capacity (H <sub>2</sub> O)	Top Plate Dimensions (Dia.)	Overall Dimensions $(L \times W \times H)$	Item No.	List Price (USD)
HSMNHP4CAL	to 500°C*	1000 mL	4 × 4" (10.2 × 10.2 cm)	$7.9 \times 6 \times 5$ " (20.1 × 15.2 × 12.7 cm)	30392010	221
HSMNHP4CFT*	to 500°C*	1000 mL	4 × 4" (10.2 × 10.2 cm)	$7.9 \times 6 \times 5$ " (20.1 × 15.2 × 12.7 cm)	30392031	210

<sup>\*</sup> Fixed Temperature Hotplate has a fixed temperature of 500°C.

#### **Basic Mini Stirrers**

Model	Speed Range	Max. Capacity (H <sub>2</sub> O)	Top Plate Dimensions (Dia.)	Overall Dimensions $(L \times W \times H)$	Item No.	List Price (USD)
HSMNST4CAL	100 to 1200 rpm	1000 mL	4 × 4" (10.2 × 10.2 cm)	$7.9 \times 6 \times 5$ " (20.1 × 15.2 × 12.7 cm)	30392017	195
HSMNAS4CAL**	100 to 1200 rpm	1000 mL	4 × 4" (10.2 × 10.2 cm)	$7.9 \times 6 \times 5$ " (20.1 × 15.2 × 12.7 cm)	30392038	242

<sup>\*\*</sup>Mini auto stirrer

### **Basic Mini Hotplate-Stirrers**

Model	Temperature Range	Speed Range	Max. Capacity (H <sub>2</sub> O)	Top Plate Dimensions (Dia.)	Overall Dimensions $(L \times W \times H)$	Item No.	List Price (USD)
HSMNHS4CAL	to 500°C	100 to 1200 rpm	1000 mL	4 × 4" (10.2 × 10.2 cm)	$7.9 \times 6 \times 5$ " (20.1 × 15.2 × 12.7 cm)	30392024	367





## **MULTI-POSITION STIRRERS**

Synchronized and Uniform Mixing

#### **Applications**

Dissolution Studies, Titrations, Media/Reagent Preparations, Synchronized Stirring of multiple samples

#### Display

Independent LED displays for speed and time (on digital models); Knob with 1-10 dial markings (on non-digital models)

#### Construction

Cast aluminum housing, glass filled nylon top plate. Includes stir bars to accommodate each stirring position

#### **Design Features**

Speed ramping feature slowly increases motor speed for enhanced coupling and improved stirring. Microprocessor-controlled for precise speed regulation. Timer counts up or when programmed to a set time will turn off stirring & sound alarm when timer reaches zero.

#### **Operating Conditions**

41°F – 104°F, 80% Relative Humidity, non-condensing





The 318  $\times$  279 mm top plate accommodates up to 9  $\times$  250 mL or 4  $\times$  1 L flasks. The glass-filled nylon surface has a reflective white color, is chemical-resistant & minimizes unintended heating of samples.

Speed ramping feature slowly increases the motor speed for improved safety and enhanced coupling. Avoids splashing, improves spin bar control and provides excellent low-end speed control

Digital models have touchpad controls for input of speed and time. Non-digital models have an adjustment knob with dial markings from 1–10. The microprocessor regulates adjustments throughout the range.

Model	Control	Speed Range	Capacity	Dimensions $(H \times L \times W)$	Plate Dimensions (L × W)	Timer	Net Weight	Power Consumption	Item No.	List Price (USD)
STMP4AL	Analog	60 rpm to 1400 rpm	4×1L	4 × 17 × 11 in 9.7 × 43.2 × 27.9 cm	12.5 × 11 in 31.8 × 27.9 cm	N/A	14 lb. / 6.3 kg	75 W	30573789	1,249
STMP9AL	Analog	60 rpm to 1400 rpm	9 × 250 mL	$4 \times 17 \times 11$ in $9.7 \times 43.2 \times 27.9$ cm	12.5 × 11 in 31.8 × 27.9 cm	N/A	14 lb. / 6.3 kg	75 W	30573794	1,784
STMP4DG	Digital	60 rpm to 1400 rpm	4×1L	$4 \times 17 \times 11 \text{ in}$ $9.7 \times 43.2 \times 27.9 \text{ cm}$	$12.5 \times 11 \text{ in}$ $31.8 \times 27.9 \text{ cm}$	1 second to 160 hours	14 lb. / 6.3 kg	75 W	30573799	1,440
STMP9DG	Digital	60 rpm to 1400 rpm	9 × 250 mL	$4 \times 17 \times 11 \text{ in}$ $9.7 \times 43.2 \times 27.9 \text{ cm}$	12.5 × 11 in 31.8 × 27.9 cm	1 second to 160 hours	14 lb. / 6.3 kg	75 W	30573804	2,348

Accessories	Item No.	List Price (USD)
Spinbar 2.5cm PTFE	30400147	12

## LARGE VOLUME STIRRERS

Powerful Motor and Magnet Mixes Samples Up To 200 L

#### **Applications**

Carboys, Chromatography, Mixing viscous materials, polymers, pilot scale and other large volume Stirring and Mixing

#### **Display**

Independent LED displays for speed and time (on digital models), Knob with 1-10 dial markings (on non-digital models)

#### Construction

High Volume Stirrers feature a cast aluminum housing and glass filled nylon top plate. Large Capacity Stirrers feature both stainless steel housing and top plate. Models include either a 70 mm egg shaped stir bar or 102 mm stir bar with pivot ring.

#### **Design Features**

Speed ramping feature slowly increases motor speed for enhanced coupling & improved stirring. Microprocessor-controlled for precise speed regulation. Timer counts up or when programmed to a set time, will turn off stirring & sound alarm when timer reaches 0.

#### **Operating Conditions**

41°F-104°F, 20% to 80% Relative Humidity non-condensing





Large Capacity Stirrers with a 100 or 200 L capacity are made with a stainless steel base offering durability and stability, and feature a  $54 \times 53$  cm stainless steel top plate.

Large  $32 \times 28$  cm top plate is chemical-resistant with a white reflective surface that is easy to clean. Digital and non-digital models allow you to choose the right model for your application.

Speed ramping feature slowly increases the motor speed for improved safety and enhanced coupling. Avoids splashing, improves spin bar control and provides excellent low-end speed control.

Model	Control	Speed Range	Capacity	Dimensions $(H \times L \times W)$	Plate Dimensions (L × W)	Timer	Net Weight	Power Consumption	Item No.	List Price (USD)
STHVAL	Analog	60 rpm to 1400 rpm	25L	4 × 17 × 11 in 9.7 × 43.2 × 27.9 cm	12.5 × 11 in 31.8 × 27.9 cm	N/A	13.6 lb / 6.2 kg	75 W	30573809	933
STHVDG	Digital	60 rpm to 1400 rpm	25L	$4 \times 17 \times 11 \text{ in}$ $9.7 \times 43.2 \times 27.9 \text{ cm}$	12.5 × 11 in 31.8 × 27.9 cm	1 second to 160 hours	13.6 lb / 6.2 kg	75 W	30573814	1,081
STLC1DG	Digital	100 rpm to 1800 rpm	100 L	$5.25 \times 28.5 \times 26.75$ in $13.3 \times 72.4 \times 68$ cm	$21.25 \times 25 \text{ in}$ $54 \times 63.5 \text{ cm}$	1 second to 160 hours	67 lb / 30.4 kg	41 W	30573819	2,989
STLC2DG	Digital	100 rpm to 1800 rpm	200L	$5.25 \times 28.5 \times 26.75$ in $13.3 \times 72.4 \times 68$ cm	$21.25 \times 25 \text{ in}$ $54 \times 63.5 \text{ cm}$	1 second to 160 hours	67 lb / 30.4 kg	82 W	30573825	4,299

Accessories	STHVAL	STHVDG	STLC1DG	STLC2DG	Item No.	List Price (USD)
Spinbar 7 cm PTFE	•	•	•		30400149	45
Spinbar 10 cm with Pivot Ring PTFE					30400150	85

## **ACHIEVER™ 5000 OVERHEAD STIRRERS**

Reliable Overhead Stirrers with Excellent Performance for Everyday Use

#### **Applications**

Stirring of high viscosity and large sample volumes

#### Display

Torque tendency 7 Digit LED indicator

#### Construction

Sealed housing with IP54 rating

#### **Design Features**

Speed accuracy of 1 rpm, timer, digital speed control, chuck range 1 to 13 mm, pass through shaft diameter up to 8.5 mm, support stand and clamp required for set up (sold separately)

#### **Operating Conditions**

41°F–104°F, 80% Relative Humidity, non-condensing



Powerful mixing and constant speed is assured with the brushless motor and torque compensation technology—delivering accurate, controlled stirring of viscous liquids with quiet operation.

Simplify set up with the Keyless Chuck—no tools required. Change shafts quickly and easily with one handed operation. This unique design will save time and effort for everyone in the lab.



Designed for safety. The lock button prevents accidental speed changes and the motor's overload sensing technology simply shuts off stirring before an overload condition occurs to protect the sample.

Model	Speed Range (rpm)	Speed Accuracy (rpm)	Speed Gears	Stirring Volume (L)	Operating Mode	Max. Viscosity (mPas)	Torque @ Max. Speed (Ncm)	Chuck Range Diameter (mm)	Hollow Shaft Inner Diameter (mm)	Item No.	List Price (USD)
e-A51ST020	30-2000 rpm	1	1	up to 25	Continuous / Timer	10,000	20	1–13	1–8.5	30586763	1,270
e-A51ST040	30-2000 rpm	1	1	up to 25	Continuous / Timer	25,000	40	1–13	1-8.5	30586764	1,405
e-A51ST060	30-2000 rpm	1	1	up to 40	Continuous / Timer	50,000	60	1–13	1-8.5	30586765	1,592
e-A51ST100	30-1300 rpm	1	1	up to 100	Continuous / Timer	70,000	100	1–13	1-8.5	30586766	2,084
e-A51ST200	6–400 rpm (I) 30–2000 rpm (II)	1	2	up to 100	Continuous / Timer	100,000	200	1–13	1-8.5	30586767	2,213

Accessories	Item No.	List Price (USD)
Stirrer Shaft 45 × 0.7 cm, Anchor Blade	30586775	120
Stirrer Shaft $40 \times 0.7$ cm, Fixed Blade	30586776	120
Stirrer Shaft $40 \times 0.7$ cm, Floating Blade	30586777	125
Stirrer Shaft $40 \times 0.7$ cm, Folding Blade	30586778	125
Stirrer Shaft $45 \times 0.7$ cm, Paddle 6 Holes	30586779	125
Stirrer Shaft $40 \times 0.7$ cm, Propeller	30586780	125
Stirrer Shaft 45 $\times$ 0.7 cm, Turbine	30586781	225
Stirrer Shaft $45 \times 0.7$ cm, Turbo Propeller	30586782	225
Support Stand Universal-H	30586771	350
Support Stand Telescopic-H	30586772	550
Clamp Double	30586773	75
Clamp Ribbon	30586774	110
Power Cable US e-A51	30586768	12

## HT LYSING BEAD MILL HOMOGENIZER

Provides Simple and Powerful Solutions for Rapid High-Throughput Grinding

### **Applications**

DNA, RNA and Protein Analysis (from mammalian tissue, plant, soil, seed, fungi, bacteria, virus and other cells), Cell Lysing, PCR, Gene Expression.

#### **Operating Features**

LED display: Allows the operator to view speed and time settings Microprocessor-control: Unit includes sample clamp and hex key.



For high performance grinding, the HT Lysing Homogenizer is one of the most flexible models on the market. The built-in adjustable holder allows for easy processing of samples—no accessories needed.

This versatile Homogenizer allows high throughput grinding, and is ideal for processing multiple tubes, microplates, deep-well plates, or any sample container that fits in the  $10.2 \times 12.7 \times 6.4$  cm holder.

Take the guesswork out of sample preparation.
Five preset programs optimized for speed and
time to process the most common samples,
including bacteria, fungi, plant, and animal tissue
easily.

Model	Speed Range	Motion	Timer	Capacity	Dimensions	Weight	Max. Capacity	Item No.	List Price (USD)
HOHTDG	300 to 1600 rpm (1 rpm increments)	Reciprocal, 31 mm	1 second to 10 minutes (1 second increments)	1 deep well plate, 4 microplates, or any sample matrix that can fit in the 10.2 × 12.7 × 6.4 cm adjustable holder	17.5 × 11.3 × 20.4 in / 44.6 × 28.6 × 51.8 cm	59 lb / 26.8 kg	300 g	30391393	8305

Accessories	Item No.	List Price (USD)
White, Bacteria, 2 mL tube, 100/box	30391402	333
Yellow, Yeast, 2 mL Tube, 100/box	30391404	333
Blue, Fungi, 2 mL Tube, 100/box	30391405	333
Orange, Soft Sample, 2 mL Tube, 100/box	30391406	333
Green, Plant, 2 mL Tube, 100/box	30391408	333
Red, Animal Tissue, 2 mL Tube, 100/box	30391409	333
Brown, Environmental, 2 mL Tube, 100/box	30391410	340
Tube Rack, $25 \times 2ml$ Tubes, 2 per pack	30391431	13
Sample Tube Kit, 14 Tubes	30391433	39







A LabJaws Clamp for Every Application—Choose From Over 85 Options to Hold Everything In Your Lab

#### **UltraJaws Heavy-Duty Clamps**

Our patented multi-purpose UltraJaws Heavy-Duty Clamps feature an innovative closed yoke construction that minimizes contamination and corrosion of internal components. The unique design enables secure gripping and positioning with added strength and durability.

Available in both single and dual prong adjustment, prongs open gradually to maximize grip size without binding. Both designs feature precise pressure regulation when gripping glassware surfaces to reduce the chance of breakage. UltraJaws clamps are constructed with extension rods for easy attachment to lab-frames and other apparatus. Supplied with non-slip vinyl sleeves and, for temperatures above 100°C, fiberglass covers. The prong height of the UltraJaws Heavy-Duty Clamps make them ideal for use in holding and securing glassware with precision ground glass joints. The chart details which UltraJaws Clamps are recommended.

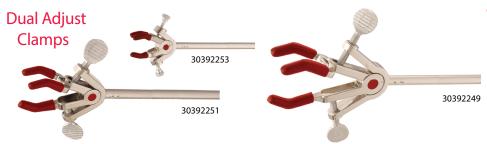
### Single Adjust Clamps



30392250



NOTE: An additional holder must be purchased in order to attach clamps to frames or other apparatus.



Corrosion-resistant stainless steel clamps provide excellent chemical resistance, durability, and can be autoclaved. Nickel-plated zinc clamps offer high-tensile strength at an economical price.

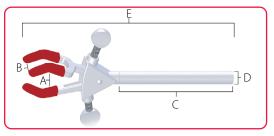
Prevent accidents in the lab—versatile multipurpose LabJaws clamps securely hold glassware and irregularly-shaped objects. Select from a variety of grip sizes, prong styles, and adjustment types. Choose from a variety of specialized LabJaws clamps with adjustable features to provide an exact fit for labware such as thermometers, thermocouples, columns, funnels, and round bottom flasks.

### 3-Prong Single Adjust Clamps

Size	(A) Min. to Max Grip Size	(B) Prong Width	(C) Arm Length	(D) Arm Dia.	(E) Overall Length	Item No.	List Price (USD)
Small	0 to 23 mm (0 to 0.91")	6 mm (0.24")	102 mm (4")	8 mm (0.32")	162 mm (6.38")	30392254	55
Medium	0 to 50 mm (0 to 1.97")	19 mm (0.75")	127 mm (5")	11 mm (0.43")	229 mm (9.02")	30392252	56
Large	0 to 72 mm (0 to 2.83")	29 mm (1.14")	127 mm (5")	11 mm (0.43")	260 mm (10.24")	30392250	63

### 3-Prong Dual Adjust Clamps

Size	(A) Min. to Max Grip Size	(B) Prong Width	(C) Arm Length	(D) Arm Dia.	(E) Overall Length	Item No.	List Price (USD)
Small	0 to 32 mm (0 to 1.26")	6 mm (0.24")	102 mm (4")	8 mm (0.32")	152 mm (5.98")	30392253	55
Medium	0 to 70 mm (0 to 2.76")	19 mm (0.75")	127 mm (5")	11 mm (0.43")	222 mm (8.74")	30392251	56
Large	0 to 103 mm (0 to 4.06")	29 mm (1.14")	127 mm (5")	11 mm (0.43")	260 mm (10.24")	30392249	63



#### **Ground Glass Joint Reference Chart**

Clamp	Joint Size
Small Dual Adjust	10/30, 12/30, 14/20, 19/22, 24/40, 29/42, 34/45
Medium Dual Adjust	14/40, 19/38
Large Dual Adjust	45/50

A LabJaws Clamp for Every Application—Choose From Over 85 Options to Hold Everything In Your Lab

### **Heavy-Duty Tapered Clamps**

Heavy-Duty, 4-prong, dual adjust tapered clamps are designed to hold large vessels with ground glass joint necks. Clamps are constructed with extension rods for easy attachment to lab-frames and other apparatus. Nickel-plated zinc construction.

#### 3-Prong Clamps

The versatile 3-prong design secures various lab apparatus such as jointed glassware, columns, flasks, and tubes. Dual prong adjustments offer a wide range of motion. Long stainless steel extension arm offers easy positioning and depth adjustment. Autoclavable. Supplied with non-slip vinyl sleeves and, for temperatures above 100°C, fiberglass covers.

NOTE: An additional holder must be purchased in order to attach clamps to frames or other apparatus.





Corrosion-resistant stainless steel clamps provide excellent chemical resistance, durability, and can be autoclaved. Nickel-plated zinc clamps offer high-tensile strength at an economical price.



Prevent accidents in the lab—versatile multipurpose LabJaws clamps securely hold glassware and irregularly-shaped objects. Select from a variety of grip sizes, prong styles, and adjustment types.



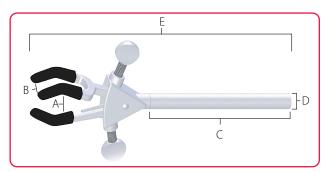
Choose from a variety of specialized LabJaws clamps with adjustable features to provide an exact fit for labware such as thermometers, thermocouples, columns, funnels, and round bottom flasks.

### **Heavy-Duty Tapered Clamps**

Size	Joint Size	<b>Prong Width</b>	Arm Length	Arm Dia.	Overall Length	Item No.	List Price (USD)
Small	24/40 mm	16 mm (0.63")	229 mm (9.02")	13 mm (0.51")	356 mm (14")	30392193	153
Large	34/45 mm	19 mm (0.75")	229 mm (9.02")	13 mm (0.51")	381 mm (15")	30392194	153

### 3-Prong Stainless Steel Dual Adjust Clamps

Size	(A) Min. to Max Grip Size	(B) Prong Width	(C) Arm Length	(D) Arm Dia.	(E) Overall Length	Item No.	List Price (USD)
Small	0 to 48 mm (0 to 1.9")	13 mm (0.51")	102 mm (4")	10 mm (0.39")	172 mm (6.77")	30392354	89
Medium	0 to 69 mm (0 to 2.72")	19 mm (0.75")	127 mm (5")	13 mm (0.51")	229 mm (9.02")	30392353	104
Large	0 to 102 mm (0 to 4")	29 mm (1.14")	127 mm (5")	13 mm (0.51")	273 mm (10.75")	30392352	116



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#### 3-Prong Multi-Purpose Clamps

Designed to securely hold every type of laboratory glassware and apparatus. Long, seamless nickle-plated brass tubing attaches clamp head securely and offers easy positioning in the deepest fume hoods. Clamps are constructed with round extension arms, which allow the clamps to be rotated 360°. Extension arms also allow placement of apparatus at various distances from lab-frames without compromising the integrity of your experiment. Supplied with non-slip vinyl sleeves and, for temperatures above 100°C, fiberglass covers.

**NOTE:** An additional holder must be purchased in order to attach clamps to frames or other apparatus.



3-Prong Single Adjust Clamps



Corrosion-resistant stainless steel clamps provide excellent chemical resistance, durability, and can be autoclaved. Nickel-plated zinc clamps offer high-tensile strength at an economical price.

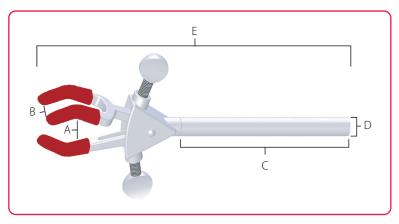
Prevent accidents in the lab—versatile multipurpose LabJaws clamps securely hold glassware and irregularly-shaped objects. Select from a variety of grip sizes, prong styles, and adjustment types. Choose from a variety of specialized LabJaws clamps with adjustable features to provide an exact fit for labware such as thermometers, thermocouples, columns, funnels, and round bottom flasks.

### 3-Prong Single Adjust Clamps

Size	(A) Min. to Max Grip Size	(B) Prong Width	(C) Arm Length	(D) Arm Dia.	(E) Overall Length	Item No.	List Price (USD)
Small	0 to 39 mm (0 to 1.54")	11 mm (0.43")	102 mm (4")	8 mm (0.32")	160 mm (6.3")	30392205	49
Medium	0 to 71 mm (0 to 2.8")	19 mm (0.75")	127 mm (5")	11 mm (0.43")	218 mm (8.58")	30392203	52
Large	0 to 108 mm (0 to 4.25")	29 mm (1.14")	127 mm (5")	11 mm (0.43")	248 mm (9.76")	30392200	54

### 3-Prong Dual Adjust Clamps

Size	(A) Min. to Max Grip Size	(B) Prong Width	(C) Arm Length	(D) Arm Dia.	(E) Overall Length	Item No.	List Price (USD)
Small	0 to 46 mm (0 to 1.81")	11 mm (0.43")	102 mm (4")	8 mm (0.32")	168 mm (6.61")	30392204	49
Medium	0 to 69 mm (0 to 2.72")	19 mm (0.75")	127 mm (5")	11 mm (0.43")	229 mm (9.02")	30392201	52
Medium (extended)	0 to 69 mm (0 to 2.72")	19 mm (0.75")	305 mm (12")	13 mm (0.5")	406 mm (16")	30392202	64
Large	0 to 105 mm (0 to 4.13")	29 mm (1.14")	127 mm (5")	11 mm (0.43")	273 mm (10.75")	30392198	54
Large (extended)	0 to 105 mm (0 to 4.13")	29 mm (1.14")	305 mm (12")	13 mm (0.5")	451 mm (17.76")	30392199	67



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#### 2-Prong Multi-Purpose Clamps

Designed to securely hold laboratory glassware and apparatus. Extension arm attaches clamp head securely and offers easy positioning in the deepest fume hoods. Clamps are constructed with round extension arms, which allow the clamps to be rotated 360°. Extension arms also allow placement of apparatus at various distances from lab-frames without compromising the integrity of your experiment. Stainless steel clamps are electro-polished and made entirely of stainless steel. They offer exceptional chemical resistance and are autoclavable. Nickel-plated zinc offers a clamp with a high tensile strength at an economical price. Supplied with non-slip vinyl sleeves and, for temperatures above 100°C, fiberglass covers.

NOTE: An additional holder must be purchased in order to attach clamps to frames or other apparatus.

## 2-Prong Single Adjust Clamps









Corrosion-resistant stainless steel clamps provide excellent chemical resistance, durability, and can be autoclaved. Nickel-plated zinc clamps offer high-tensile strength at an economical price.

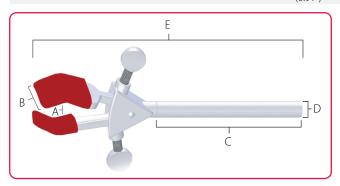
Prevent accidents in the lab—versatile multipurpose LabJaws clamps securely hold glassware and irregularly-shaped objects. Select from a variety of grip sizes, prong styles, and adjustment types. Choose from a variety of specialized LabJaws clamps with adjustable features to provide an exact fit for labware such as thermometers, thermocouples, columns, funnels, and round bottom flasks.

### 2-Prong Single Adjust Clamps

Material	Size	(A) Min. to Max Grip Size	(B) Prong Width	(C) Arm Length	(D) Arm Dia.	(E) Overall Length	Item No.	List Price (USD)
Nickel-plated zinc	Medium	0 to 78 mm (0 to 3.07")	23 mm (0.91")	127 mm (5")	11 mm (0.43")	216 mm (8.5")	30392208	40
Nickel-plated zinc	Large	0 to 92 mm (0 to 3.62")	23 mm (0.91")	127 mm (5")	11 mm (0.43")	229 mm (9.02")	30392206	43

### 2-Prong Dual Adjust Clamps

Material	Size	(A) Min. to Max Grip Size	(B) Prong Width	(C) Arm Length	(D) Arm Dia.	(E) Overall Length	Item No.	List Price (USD)
Stainless steel	Medium	0 to 75 mm (0 to 2.95")	23 mm (0.91")	127 mm (5")	11 mm (0.43")	229 mm (9.02")	30392220	96
Nickel-plated zinc	Medium	0 to 75 mm (0 to 2.95")	23 mm (0.91")	127 mm (5")	11 mm (0.43")	229 mm (9.02")	30392209	40
Stainless steel	Large	0 to 95 mm (0 to 3.74")	23 mm (0.91")	127 mm (5")	11 mm (0.43")	248 mm (9.76")	30392223	114
Nickel-plated zinc	Large	0 to 95 mm (0 to 3.74")	23 mm (0.91")	127 mm (5")	11 mm (0.43")	248 mm (9.76")	30392207	43



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#### **Swivel Clamps**

Used to hold apparatus near the lab-frame. Unlike extension clamps, the swivel clamps have an integral holder for attaching to a lab-frame or other apparatus. Built-in holder grips rods up to 19 mm (0.75") in diameter and is adjustable for forward or reverse-facing adjustment screws. Shaft wing-nut allows the holding angle of the swivel clamp to adjust through 360° of rotation and can be locked in place once desired position is achieved. Stainless steel electro-polished finish or nickel-plated zinc construction. Supplied with non-slip vinyl sleeves and, for temperatures above 100°C, fiberglass covers.

#### **Fixed-Position Clamps**

Used to hold apparatus near the lab-frame where no adjustment is required after set-up. Built-in holder grips rods up to 19 mm (0.75") in diameter Fixed-Position Clamps have an integral holder but can be rotated after attachment to a lab-frame or other apparatus. Available in 2-prong or 3-prong. Stainless steel electro-polished finish or nickel-plated zinc construction. Supplied with non-slip vinyl sleeves and, for temperatures above 100°C, fiberglass covers.



Corrosion-resistant stainless steel clamps provide

excellent chemical resistance, durability, and can

be autoclaved. Nickel-plated zinc clamps offer

high-tensile strength at an economical price.

30392229 (shown in stainless steel)



Prevent accidents in the lab—versatile multipurpose LabJaws clamps securely hold glassware and irregularly-shaped objects. Select from a variety of grip sizes, prong styles, and adjustment types.





Choose from a variety of specialized LabJaws clamps with adjustable features to provide an exact fit for labware such as thermometers, thermocouples, columns, funnels, and round bottom flasks.

### **Swivel Clamps**

Material	Description	Size	Min. to Max. Grip Size	Prong Width	Overall Length	Item No.	List Price (USD)
Stainless steel	2-Prong Single Adjust	Medium	0 to 76 mm (0 to 3")	23 mm (0.91")	163 mm (6.42")	30392226	111
Nickel-plated zinc	2-Prong Single Adjust	Medium	0 to 76 mm (0 to 3")	23 mm (0.91")	163 mm (6.42")	30392215	40
Nickel-plated zinc	2-Prong Single Adjust	Large	0 to 95 mm (0 to 3.74")	23 mm (0.91")	180 mm (7.09")	30392216	42
Stainless steel	3-Prong Dual Adjust	Medium	0 to 69 mm (0 to 2.72")	20 mm (0.79")	178 mm (7.01")	30392225	149
Nickel-plated zinc	3-Prong Dual Adjust	Medium	0 to 69 mm (0 to 2.72")	20 mm (0.79")	178 mm (7.01")	30392214	55

### **Fixed-Position Clamps**

Material	Description	Size	Min. to Max. Grip Size	Prong Width	Overall Length	Item No.	List Price (USD)
Stainless steel	2-Prong Single Adjust	Medium	0 to 77 mm (0 to 3.03")	23 mm (0.91")	133 mm (5.24")	30392230	110
Nickel-plated zinc	2-Prong Single Adjust	Medium	0 to 77 mm (0 to 3.03")	23 mm (0.91")	133 mm (5.24")	30392218	38
Stainless steel	3-Prong Dual Adjust	Medium	0 to 69 mm (0 to 2.72")	20 mm (0.79")	146 mm (5.75")	30392229	138
Nickel-plated zinc	3-Prong Dual Adjust	Medium	0 to 69 mm (0 to 2.72")	20 mm (0.79")	146 mm (5.75")	30392217	47

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#### Thermometer Swivel Clamp

Holds glass tubes and thermometers 114 mm (4.49") from support rod. Clamp features safety adjust spring plate jaws that adjust to any angle with locking wing-nut. Built-in holder grips rods up to 19 mm (0.75") in diameter. Lightweight, rust, and corrosion-resistant. Nickel-plated construction.

Min. to Max. Grip Size	Overall Length	Item No.	List Price (USD)
6 to 8 mm (0.24 to 0.32")	159 mm (6.26")	30392238	47



### Thermometer / Thermocouple Extension Clamp

Lightweight clamp holds glass tubing, thermometers or thermocouples up to 178 mm (7") from support rod. Tightening wing-nut applies tension to the nickel-plated jaws.

**NOTE**: An additional holder must be purchased in order to attach clamps to frames or other apparatus.

Min. to Max. Grip Size	Ext. Arm Length	Arm Dia.	Overall Length	Item No.	List Price (USD)
6 to 12 mm (0.24 to 0.47")	127 mm (5")	11 mm (0.43")	210 mm (8.27")	30392239	41



#### Wall Clamp

Ideal for securing fermentation tubes, burets or other small objects to walls where no frames are available. Integral self-tapping screw secures clamp to wall. Nickel-plated construction.

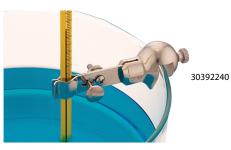
Min. to Max. Grip Size	Overall Length	Item No.	List Price (USD)
5 to 10 mm (0.2 to 0.39")	80 mm (3.15")	30392244	36



#### **Water Bath Clamps**

Holds a variety of apparatus, including glass tubes and thermometers onto glass water bath walls. Built-in holder grips walls of varying thickness, up to 9 mm (0.35"). Knurled thumbscrew tightens jaws to hold objects firmly. Nickel-plated zinc construction. Large water bath clamp is supplied with non-slip vinyl sleeves and, for temperatures above 100°C, fiberglass covers.

Size	Min. to Max. Grip Size	Prong Width	Overall Length	Item No.	List Price (USD)
Small	5 to 10 mm (0.2 to 0.39")	N/A	89 mm (3.5")	30392240	35
Large	0 to 46 mm (0 to 1.81")	11 mm (0.43")	117 mm (4.61")	30392241	52





A LabJaws Clamp for Every Application—Choose From Over 85 Options to Hold Everything In Your Lab

For the items listed below an additional holder must be purchased in order to attach clamps to frames or other apparatus.

#### **Chain Clamps**

Holds large round or irregular shaped objects firmly, yet gently, to lab-frames and rods. Quick and secure slip-on chain connection with large, easy-to-turn adjusting knob. Extension arm allows user to vary distance from the frame. Available as stainless steel clamp, constructed entirely of stainless steel with electro-polished finish or nickel-plated zinc clamp with strong, chromed-brass chain.

#### Stainless Steel

Size	Min. to Max. Dia.	Ext. Arm Length	Arm Dia.	Overall Length	Item No.	List Price (USD)
Large-5	35 to 280 mm (1.38 to 11.02")	127 mm (5")	13 mm (0.51")	206 mm (8.11")	30392224	238



30392224 (shown in stainless steel)

#### Nickel-Plated Zinc

Size	Min. to Max. Dia.	Ext. Arm Length	Arm Dia.	Overall Length	Item No.	List Price (USD)
Small	35 to 170 mm (1.38 to 6.69")	127 mm (5")	13 mm (0.51")	188 mm (7.4")	30392235	67
Large-5	35 to 280 mm (1.38 to 11.02")	127 mm (5")	13 mm (0.51")	206 mm (8.11")	30392259	97
Large-12	35 to 280 mm (1.38 to 11.02")	305 mm (12")	13 mm (0.51")	384 mm (15.12")	30392260	103

#### **Column Clamps**

These sturdy, easily adjusted, multi-purpose clamps are ideal for holding large cylindrical glassware and similar objects. A large, flat thumbscrew/worm-drive permits maximum tightening or removal in minimum time. Clamp is constructed of corrosion-resistant stainless steel. Ideal for chromatography columns.

Size	Min. to Max. Dia.	Ext. Arm Length	Arm Dia.	Overall Length	Item No.	List Price (USD)
Small	65 to 89 mm (2.56 to 3.5")	211 mm (8.31")	11 mm (0.43")	282 mm (11.1")	30392314	78
Medium	91 to 114 mm (3.58 to 4.49")	211 mm (8.31")	11 mm (0.43")	315 mm (12.4")	30392315	80
Large	64 to 140 mm (2.52 to 5.51")	211 mm (8.31")	11 mm (0.43")	338 mm (13.31")	30392316	81
X-Large	92 to 165 mm (3.62 to 6.5")	211 mm (8.31")	11 mm (0.43")	368 mm (14.49")	30392317	81



A LabJaws Clamp for Every Application—Choose From Over 85 Options to Hold Everything In Your Lab

For the items listed below an additional holder must be purchased in order to attach clamps to frames or other apparatus.

#### **Nester Extension Clamps**

Securely holds large or small glass distillation columns and odd-shaped glassware. Constructed of stainless steel with strong, chromed-brass band and chain.

Min. to Max. Dia.	Ext. Arm Length	Arm Dia.	Overall Length	Item No.	List Price (USD)
50 to 102 mm (1.97 to 4")	152 mm (5.98")	10 mm (0.39")	262 mm (10.32")	30392318	104



#### **PVC Coated Open Extension Rings**

Ideal for supporting funnels, round bottom flasks, reaction vessels, and other apparatus that require lower support. Opening in PVC coated aluminum ring allows for easy removal of sample container. PVC coating protects glassware. Long extension arm permits depth adjustment of the open ring from the lab-frame or ring stand.

Ring Dia.	Ext. Arm Length	Arm Dia.	Overall Length	Item No.	List Price (USD)
76 mm (3")	254 mm (10")	9 mm (0.35")	328 mm (12.91")	30392346	73
102 mm (4")	305 mm (12")	9 mm (0.35")	404 mm (15.91")	30392347	82
127 mm (5")	305 mm (12")	11 mm (0.43")	427 mm (16.81")	30392348	109



#### **Open Rings**

Lightweight rings mount funnels, boiling flasks, and other irregular shaped objects to lab-frames. Open ring section allows items to pass in and out of support area easily, reducing risk of breakage. Aluminum construction.

Ring Dia.	Ext. Arm Length	Arm Dia.	Overall Length	Item No.	List Price (USD)
76 mm (3")	58 mm (2.28")	9 mm (0.35")	132 mm (5.2")	30392343	35
102 mm (4")	58 mm (2.28")	9 mm (0.35")	158 mm (6.22")	30392344	45
127 mm (5")	61 mm (2.4")	11 mm (0.43")	183 mm (7.2")	30392345	62



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#### **Buret Holders**

Stainless steel electro-polished finish or nickel-plated zinc construction. Double Buret Clamp holds any size buret from micro to 100 mL capacity. Simply compress the scissor-like mechanism, insert buret and gently release to grip. Numbers and graduation on buret remain easy to read. For height adjustments, recompress mechanism and slide buret up or down and gently release. Clamp unit with built-in reinforced hook connector attaches to optional standard support rod. Adjusting nut faces forward for easy use. Stainless steel or aluminum support rod attaches to optional porcelain base.

**Support Rod** (Dia.  $\times$  L): 13  $\times$  578 mm (0.51  $\times$  22.76")

Porcelain Base (L  $\times$  W  $\times$  H): 178  $\times$  330  $\times$  25 mm (7  $\times$  13  $\times$  1")

#### Stainless Steel

Description	Item No.	List Price (USD)
Double Buret Clamp (only)	30392227	190
Support Rod (only)	30392233	43
Support Stand with Rod	30392232	213
Double Buret Clamp & Support Stand with Rod (complete)	30392231	391

#### Nickel-Plated Zinc

Description	Item No.	List Price (USD)
Double Buret Clamp (only)	30392234	70
Support Stand with Rod	30392312	196
Double Buret Clamp & Support Stand with Rod (complete)	30392313	273

#### **Kettle Clamps**

Holds flask and cover together firmly. Three insulated spring-activated clamping arms. Stainless steel springs. For use on reaction kettles.

Flask Size	Inside Dia.	Item No.	List Price (USD)
500 mL, 1000 mL	125 mm (4.92")	30392365	187
2000 mL, 3000 mL, 4000 mL	142 mm (5.59")	30392366	189

#### **Electrode Support Clamp**

Permits suspension of electrodes over beaker for potentiometric titrations. Holds any electrode clamp at desired level. Built-in nickel-plated zinc holder grips rods up to 19 mm (0.75") in diameter.

	Overall Length	Item No.	List Price (USD)
178 mm (7")		30392242	74

#### Suspension Clamp

Holds thermometers, potash bulbs or drying tubes 114 mm (4.49") from support rod. Machine tapered, nickel-plated brass hook won't bend, rust, or corrode. Built-in holder grips rods up to 19 mm (0.75") in diameter.

	Overall Length	Item No.	List Price (USD)
137 mm (5.39")		30392243	36

#### **Support Clamp**

Supports electrolysis apparatus, glass rods or tubing at any angle. Arms are nickel-plated brass with vinyl coating. Easily supports cylindrical objects up to 19 mm (0.75") in diameter. Built-in holder grips rods up to 19 mm (0.75") in diameter.

Overall Length	Prong Width	Item No.	List Price (USD)
152 mm (5.99")	25 mm (1")	30392237	95







30392242 Electrode holder not included





A LabJaws Clamp for Every Application—Choose From Over 85 Options to Hold Everything In Your Lab

#### **Ultra Flex Support Systems**

Ultra Flex Support Systems have unique flexible arms that are extremely versatile and can be placed in virtually any position or angle. Ultra Flex comes in three different systems; base plate, lab-frame connector, and bench clamp. Each system includes a 2-Prong Clamp Head, 3-Prong Clamp Head, Spring Clamp Head, nickel-plated flex arm in 305 mm (12") or 457 mm (18") length, and utility wrench. 2-prong and 3-prong clamp heads also supplied with non-slip vinyl sleeves and, for temperatures above 100°C, fiberglass covers.

Description	Туре	Dimension
Arm Length	Ultra Flex 12 Ultra Flex 18	305 mm (12") 457 mm (18")
Arm Diameter		13 mm (0.51")
Max. Grip Size	2-Prong Clamp Head 3-Prong Clamp Head Spring Clamp Head	75 mm (2.95") 69 mm (2.72") 13 mm (0.51")







### Ultra Flex Support System with Base Plate

OHAUS Ultra Flex Support System with Base Plate is constructed of all metal and designed with a stable, painted steel base plate with chemical resistant black finish that fits easily on bench tops or in fume hoods. Base plate measures  $127 \times 127 \times 12.7 \, \text{mm} (5 \times 5 \times 0.5")$ .

Description	Item No.	List Price (USD)
Ultra Flex 12 with Base Plate	30400011	309
Ultra Flex 18 with Base Plate	30400014	371



### Ultra Flex Support System with Lab-Frame Connector

Ultra Flex Support System with Lab-Frame Connector securely attaches to support stands, lab-frames, or any support rod up to 19 mm (0.75") in diameter. Ideal for use in fume hoods. Lab-frame connector is made of cast alloy.

Description	Item No.	List Price (USD)
Ultra Flex 12 with Lab-Frame Connector	30400013	238
Ultra Flex 18 with Lab-Frame Connector	30400016	284



### Ultra Flex Support System with Bench Clamp

Ultra Flex Support System with Bench Clamp easily attaches to the side of your lab bench or counter top, which helps utilize more space in your lab. Bench clamp is constructed of aluminum.

Description	Item No.	List Price (USD)
Ultra Flex 12 with Bench Clamp	30400012	274
Ultra Flex 18 with Bench Clamp	30400015	326



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#### **Bench Clamp**

Aluminum bracket with arm fastens quickly and firmly to any convenient shelf. Accepts 13 mm (0.51") rods vertically and horizontally, to which ordinary rings and clamps attach, leaving bench surface clear for apparatus.

Description	Clamp Opening	Depth of Grip	Overall Length	Item No.	List Price (USD)
Bench Clamp	1.7" (43 mm)	2" (51 mm)	7.75" (197 mm)	30392311	249



#### **Thumbscrew Knob**

Thumbscrew tightening knob features a 32 mm (1.25") slot in the center of a nylon disc that will accept thumbscrews supplied with the LabJaws and UltraJaws Multi-Purpose Clamps, excluding the stainless steel version. Makes tightening of clamps easier on the hands and wrists.

Description	Overall Diameter	Thumbscrew Slot	Item No.	List Price (USD)
Thumbscrew Knob	64 mm (2.5")	32 mm (1.25")	30392192	49



#### **Double Jaw Utility Clamp**

Swivels 360° and locks securely in desired position. These 2-prong clamps have a medium and a large clamp on each end. Nickel-plated zinc construction. Supplied with non-slip vinyl sleeves and, for temperatures above 100°C, fiberglass covers.

Description	Min. to Max. Grip Size	Prong Width	Overall Length	Item No.	List Price (USD)
Medium 2-Prong	0 to 76 mm (0 to 3")	23 mm (0.91")	222 mm (8.74")	30392236	50



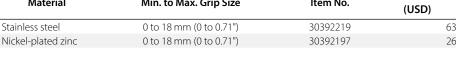
30392236

LabJaws Ensures Secure Support for Holding Your Labware and Apparatus with Over 130 Options

#### Regular Holder

Stainless steel electro-polished finish or nickel-plated zinc construction. Ideal for holding clamps to lab-frames. Use wherever clamping at 90° is required.

Material	Min. to Max. Grip Size	Item No.	List Price (USD)
Stainless steel	0 to 18 mm (0 to 0.71")	30392219	63
Nickel-plated zinc	0 to 18 mm (0 to 0.71")	30392197	26



#### Jumbo Holder

Stainless steel electro-polished finish or aluminum construction. Ideal for holding clamps to labframes or ring stands.

Material	Min. to Max. Grip Size	Item No.	List Price (USD)
Stainless steel	0 to 21 mm (0 to 0.83")	30392357	63
Aluminum	0 to 21 mm (0 to 0.83")	30392196	38



For mounting stirrers and other apparatus. Holder is constructed of strong aluminum alloy; fitted with oversized knobs for very secure positioning. Rods supported on 102 mm (4") long surface to avoid vibration and wobble.

Material	Min. to Max. Grip Size	Item No.	List Price (USD)
Aluminum	6 to 24 mm (0.24 to 0.95")	30400045	106

#### **Swivel Holder**

Two rod holders with center swivel capacity allow tilting of clamps at any angle in parallel planes. Outside adjustment screw allows close proximity between items being held. Stainless steel electro-polished or nickel-plated zinc construction.

Material	Min. to Max. Grip Size	Item No.	List Price (USD)
Stainless steel	0 to 19 mm (0 to 0.75")	30392228	100
Nickel-plated zinc	0 to 19 mm (0 to 0.75")	30392213	35

#### All-Position Clamp Holder

Surpasses standard holding capabilities. The all-position clamp holder permits adjustment at any angle in any plane. Holders are set at 90° to each other, connected by a 90° connector, allowing 360° rotation. Nickel-plated zinc construction.

Material	Min. to Max. Grip Size	Item No.	List Price (USD)
Nickel-plated zinc	0 to 19 mm (0 to 0.75")	30392248	68

#### Clamp Holder

Clamp is ideal for gripping 2 rods at 90 °. Oversized thumbscrews make securing rods fast and easy.

Material	Min. to Max. Grip Size	Overall Length	Item No.	List Price (USD)
Aluminum	0 to 17 mm (0 to 0.66")	70 mm (2.75")	30392195	24





30392357 (shown in stainless steel)









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#### **Hook Connector**

Stainless steel electro-polished finish or nickel-plated zinc construction. Simple, versatile, and easy-to-use. Hook connectors allow one-handed assembly of two components with one adjustment screw.

Material	Min. to Max. Grip Size	Item No.	List Price (USD)
Stainless steel	0 to 13 mm (0 to 0.51")	30392358	36
Nickel-plated zinc	0 to 13 mm (0 to 0.51")	30392258	15



30392358 (shown in stainless steel)

#### **End-to-End Connector**

Extend the length of lab-frame rods. Strong aluminum alloy connector permits end-to-end joining of rods. Precision boring of connector ensures perfect alignment of rods. Corrosion resistant. Comes with two set screws.

Material	Min. to Max. Grip Size	Item No.	List Price (USD)
Aluminum	0 to 13 mm (0 to 0.51")	30392264	27



#### **Rod End Connector**

Holds rods firmly at 90°. Use when semi-permanent installations are required. Comes with two set screws and is precision bored for close fit. Stainless steel electro-polished finish or nickel-plated zinc construction.

Material	Min. to Max. Grip Size	Item No.	List Price (USD)
Stainless steel	0 to 13 mm (0 to 0.51")	30392222	41
Nickel-plated zinc	0 to 13 mm (0 to 0.51")	30392256	18



30392222 (shown in stainless steel)

#### **S-Connector**

Stainless steel electro-polished finish or nickel-plated zinc construction. Clamp is ideal for constructing lab-frames or other supports requiring the connection of two perpendicular rods. Clamp connects two 13 mm (0.51") rods at a 90° angle and features separate adjustment screws for each rod location.

Material	Min. to Max. Grip Size	Item No.	List Price (USD)
Stainless steel	0 to 13 mm (0 to 0.51")	30392355	38
Nickel-plated zinc	0 to 13 mm (0 to 0.51")	30392257	25



30392355 (shown in stainless steel)

#### Frame Connector (Pack of 12)

Improved contour delivers simplicity and strength. Angled adjustment screws allow easy set-up and prevents misalignment. Smooth, rounded surfaces are easy-to-clean. Small size maximizes lab-frame space. Bright dipped aluminum finish sealed with silicon for maximum protection against corrosion.

Material	Min. to Max. Grip Size	Item No.	List Price (USD)
Aluminum	0 to 13 mm (0 to 0.51")	30392255	231



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#### **Universal Stirrer Mounting Bracket**

Use to mount stirrers and other devices to lab-frames. Aluminum mounting bracket with attachment screws.

Max. Weight Mounted	Min. to Max. Grip Size	Item No.	List Price (USD)
2.27 kg (5 lbs)	0 to 20 mm (0 to 0.78")	30392265	12



#### **Multi-Rod Connector**

Maximum adjustment capability within one connector. Two adjustment rods fit into the oval hole in the connector, preventing turning when tightened. Side and front 13 mm (0.51") holes allow creation of a variety of configurations. Nickel-plated zinc construction.

Min. to Max. Rod Size	Item No.	List Price (USD)
0 to 13 mm (0 to 0.51")	30392262	41



#### Wrench

Special adjusting wrench is for use with lab-frame items with set screws.

	Length	Item No.	List Price (USD)
79 mm (3.11")		30392270	59



#### Channel Connector

Special connector fastens lab-frame rod to steel 41 mm (1.61") channels. Loosen the connector and slide up or down for easy adjustment of rod position.

Dimensions	Item No.	List Price (USD)
33 × 40 mm (1.3 × 1.58")	30392261	26



### Horizontal Mounting Bars with Coupler

Threaded end for direct installation into channels. Comes with spring coupler for use in steel 41 mm (1.61") channels. Locking nut included. Use with steel channel frames.

	Bar Length	Item No.	List Price (USD)
51 mm (2")		30392266	32
102 mm (4")		30392267	35
152 mm (6")		30392268	38
203 mm (8")		30392269	41



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#### **Lab Frame Foot**

Stainless steel electro-polished finish or nickel-plated zinc construction. Strong, durable lab-frame foot is designed for mounting lab-frames permanently to bench tops, fume hoods, walls, and floors. Spilled fluids roll right off the smooth body contour, minimizing contamination and easing clean-ups. Features a set screw and includes three 19 mm (0.75") mounting screws.

Material	Min. to Max. Grip Size	Dimensions (Dia. × H)	Item No.	List Price (USD)
Stainless steel	0 to 0.51" (0 to 13 mm)	2.3 × 1.25" (58 × 32 mm)	30392356	55
Nickel-plated zinc	0 to 0.51" (0 to 13 mm)	2.3 × 1.25" (58 × 32 mm)	30392263	28



30392356 (shown in stainless steel)

#### Frame Rods

Everything you need to customize a lab-frame to your laboratory space. Quality construction throughout. Frame rods are available in many lengths and materials.

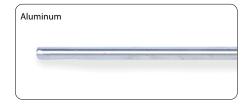
#### **Aluminum**

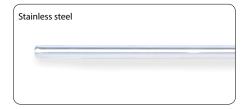
Center-less ground for a precise fit. These hard aluminum rods provide a smooth fit with lab-frames. Corrosion resistant with chamfered ends for easy location.

#### Stainless Steel

Heavy-duty, top-of-the-line rods provide maximum strength and durability. Constructed of 303 stainless steel.

Material	Rod Diameter	Rod Length	Item No.	List Price (USD)
Stainless Steel	0.51" (13 mm)	1.61" (41 mm)	30392293	12
Stainless Steel	0.51" (13 mm)	2" (51 mm)	30392294	12
Stainless Steel	0.51" (13 mm)	6" (152 mm)	30392295	15
Stainless Steel	0.51" (13 mm)	12" (305 mm)	30392296	25
Stainless Steel	0.51" (13 mm)	18" (457 mm)	30392297	33
Stainless Steel	0.51" (13 mm)	24" (610 mm)	30392298	41
Stainless Steel	0.51" (13 mm)	36" (914 mm)	30392299	56
Stainless Steel	0.51" (13 mm)	48" (1219 mm)	30392300	71
Stainless Steel	0.51" (13 mm)	60" (1524 mm)	30392301	83
Stainless Steel	0.51" (13 mm)	72" (1829 mm)	30392302	99
Stainless Steel	0.51" (13 mm)	96" (2438 mm)	30392303	129
Aluminum	0.51" (13 mm)	1.61" (41 mm)	30392271	8
Aluminum	0.51" (13 mm)	2" (51 mm)	30392272	11
Aluminum	0.51" (13 mm)	6" (152 mm)	30392273	13
Aluminum	0.51" (13 mm)	12" (305 mm)	30392274	19
Aluminum	0.51" (13 mm)	18" (457 mm)	30392275	20
Aluminum	0.51" (13 mm)	24" (610 mm)	30392276	25
Aluminum	0.51" (13 mm)	36" (914 mm)	30392277	27
Aluminum	0.51" (13 mm)	48" (1219 mm)	30392278	42
Aluminum	0.51" (13 mm)	60" (1524 mm)	30392279	48
Aluminum	0.51" (13 mm)	72" (1829 mm)	30392280	53
Aluminum	0.51" (13 mm)	96" (2438 mm)	30392281	67





LabJaws Ensures Secure Support for Holding Your Labware and Apparatus with Over 130 Options

LabJaws offers the widest choice of standard lab frames available, plus the accessories to custom-fit any laboratory with the right frame for the job. Standard Lab-Frame sets are available in five sizes. Options of traditional center-less ground aluminum, non-corroding fiberglass, or tough stainless steel rods are available. Nickel-plated zinc connectors and lab-frame feet are standard with all kits.

Corrosion-resistant lab-frames, rods, and connectors are available in premium stainless steel offering high chemical-resistance and durability. Aluminum offers reliable strength at a lighter weight.

Simplify lab set up—13 lab-frame kit options are available with four designed to fit in fume hoods. Build your own support system choosing from a wide selection of rods, bases, and connectors.

Lab-lifts are convenient adjustable lifting platforms. Exceptional strength and durability for holding small lab equipment such as glassware, hot plates, and water baths at different heights.

#### **Small Lab-Frame**

Vertical mounting, great for glassware set-ups in small laboratories or where space is limited. Frame measures  $24 \times 24$ " (610  $\times$  610 mm). Base is 18" (457 mm) wide for stability. Base may be permanently mounted to bench top with screws (included).

#### Components:

- (8) 2" (51 mm) Rods
- (2) 18" (457 mm) Rods
- (8) 24" (610 mm) Rods
- (18) S-Connectors
- (4) Rod End Connectors
- (4) Lab-Frame Feet

3	

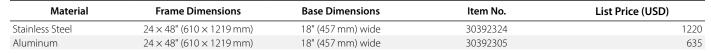
Material	Frame Dimensions	Base Dimensions	Item No.	List Price (USD)
Stainless Steel	24 × 24" (610 × 610 mm)	18" (457 mm) wide	30392323	860
Aluminum	$24 \times 24$ " (610 × 610 mm)	18" (457 mm) wide	30392304	505

#### **Medium Lab-Frame**

Horizontal or vertical mounting, convenient for distillation or general set-up. Frame measures  $24 \times 48$ " (610  $\times$  1219 mm). Base is 18" (457 mm) wide for stability.

#### Components:

- (8) 2" (51 mm) Rods
- (2) 18" (457 mm) Rods
- (7) 24" (610 mm) Rods
- (4) 48" (1219 mm) Rods
- (35) S-Connectors
- (4) Rod End Connectors
- (4) Lab-Frame Feet





LabJaws Ensures Secure Support for Holding Your Labware and Apparatus with Over 130 Options

### Large Lab-Frame

This  $\overline{48} \times 48$ " (1219  $\times$  1219 mm) frame is ideal for complex glassware set-ups. Base is 18" (457 mm) wide for stability.

#### Components:

- (10) 2" (51 mm) rods
- (3) 18" (457 mm) rods
- (2) 36" (914 mm) rods
- (10) 48" (1219 mm) rods
- (38) S-Connectors
- (4) Rod End Connectors
- (6) Lab-Frame Feet



Material	Frame Dimensions	Base Dimensions	Item No.	List Price (USD)
Stainless Steel	48 × 48" (1219 × 1219 mm)	18" (457 mm) wide	30392325	1715
Aluminum	$48 \times 48$ " (1219 $\times$ 1219 mm)	18" (457 mm) wide	30392306	980

### Extra-Large Lab-Frame

Versatile, adaptable Extra-Large Lab-Frame measures  $48 \times 72$ " (1219  $\times$  1829 mm) and may be used either horizontally or vertically.

#### Components:

- (6) 2" (51 mm) rods
- (6) 12" (305 mm) rods
- (2) 24" (610 mm) rods
- (7) 48" (1219 mm) rods
- (5) 72" (1829 mm) rods
- (45) S-Connectors
- (4) Rod End Connectors
- (8) Lab-Frame Feet



Material	Frame Dimensions	Stainless Steel Item No.	List Price (USD)
Stainless Steel	48 × 72" (1219 × 1829 mm)	30392326	1885
Aluminum	$48 \times 72$ " (1219 × 1829 mm)	30392307	1355

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#### Heavy-Duty Lab-Frame

Floor mounted, free-standing unit is specifically designed for heavy-duty work such as pilot plant set-ups. Outside frame is constructed of a strong, but lightweight steel channel. Interior lattice uses a horizontal channel connector; one end accommodates the rod, the other end fits into the channel and locks tightly with a bolt. Loosen the bolt, and the connector slides easily along the channel track for simple lattice adjustment. Entire apparatus is supported on sturdy, counter-weighted cast iron feet, which may be bolted to the floor for added stability required in top-heavy installations.

### Components:

- (5) 48" (1219 mm) rods
- (3) 72" (1829 mm) rods
- (15) S-Connectors
- (16) Channel Connectors
- (24) Clamping Nuts
- (2) 21.7" (551 mm) Cast Iron Feet
- (1) Frame Kit
- (1) Wrench



Material	Frame Dimensions	Overall Dimensions	Item No.	List Price (USD)
Stainless Steel	48 × 72" (1219 × 1829 mm)	75 × 72" (1905 × 1829 mm)	30392328	3660
Aluminum	$48 \times 72$ " (1219 × 1829 mm)	$75 \times 72$ " (1905 × 1829 mm)	30392309	1960

#### **Fume Hood Kits**

Choose from four kits specifically designed to fit within laboratory fume hoods. All components are constructed of stainless steel with the exception of the Frame Connectors which are made of aluminum with a silicon finish.

4' (1.22 m) Fume Components: • (8) 2" (51 mm) rd		5' (1.52 m) Fume Hood Kit Components: • (8) 2" (51 mm) rods	6' (1.83 m) Fume Hood Kit Components: • (8) 2" (51 mm) rods	8' (2.44 m) Fume Hood Kit Components: • (10) 2" (51 mm) rods
• (2) 12" (305 mm)	) rods	• (2) 12" (305 mm) rods	• (2) 12" (305 mm) rods	• (3) 12" (305 mm) rods
• (2) 18" (457 mm)	) rods	• (2) 18" (457 mm) rods	• (2) 18" (457 mm) rods	• (2) 18" (457 mm) rods
• (4) 36" (914 mm)	) rods	• (5) 36" (914 mm) rods	• (6) 36" (914 mm) rods	• (8) 36" (914 mm) rods
• (4) 38" (965 mm)	) rods	• (4) 50" (1270 mm) rods	• (4) 62" (1575 mm) rods	• (4) 86" (2184 mm) rods
• (30) Frame Conn	• (30) Frame Connectors • (34) Frame Connector		• (38) Frame Connectors	• (45) Frame Connectors
• (4) Rod End Connectors • (4) Rod End Connec		• (4) Rod End Connectors	• (4) Rod End Connectors	• (4) Rod End Connectors
• (4) Lab-Frame Fe	eet	• (4) Lab-Frame Feet	• (4) Lab-Frame Feet	• (6) Lab-Frame Feet
Frame: 36 × 38" (914	1 × 965 mm)	Frame: 36 × 50" (914 × 1270 mm)	Frame: 36 × 62" (914 × 1575 mm)	Frame: 36 × 86" (914 × 2184 mm)
Base: 12" (305 mm) wide Base: 12" (305 mm) wide		Base: 12" (305 mm) wide	Base: 12" (305 mm) wide	
Item No.	30392329	30392330	30392331	30392332
List Price (USD)	1100	1195	1285	1470

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#### **Support Stands**

Support Stands are made entirely of 303 stainless steel. They have a durable base that can accommodate vessels up to 18" (457 mm) in diameter within the "U". The base area is 17.75" (451 mm) across  $\times$  10.5" (267 mm) deep overall. The stainless steel support rod is 0.63" (16 mm) in diameter and is screwed to the support base. Two additional threaded holes in the base legs accommodate rods, enabling the stand to support two mixers. The "U" shape of the base should be turned from the mixing apparatus when the two outside rods are in use. This balances the weight, preventing the base from tipping.

Description	Item No.	List Price (USD)
Support Stand with 23" (584 mm) Rod	30400030	334
Support Stand with 28" (711 mm) Rod	30400031	351
Support Stand with 36" (914 mm) Rod	30400032	403
Support Stand with 40" (1016 mm) Rod	30400033	425
Support Stand with 48" (1219 mm) Rod	30400034	448
Support Stand with 60" (1524 mm) Rod	30400035	496



### Support Stand Stabilizer Knobs

Support Stand Stabilizer Knobs can be added to the two additional threaded holes in the base legs to secure the stand to a bench top.

Description	Item No.	List Price (USD)
Support Stand Stabilizer Knobs (2 per pack)	30400044	68



### **Heavy-Duty Support Stands**

Heavy-Duty Support Stands have a four point cast iron base with stainless steel support rod. They are designed to accommodate vessels up to 12" (30.5 cm) in diameter to sit close to the support rod. They have rubber cushions on each of the four corners. The base area is 16.5" (41.9 cm) across  $\times$  12" (30.5 cm) deep overall. They are ideal for Heavy-Duty Mixers, page 162-163.

Description	Item No.	List Price (USD)
Heavy-Duty Support Stand with 18" (457 mm) Rod	30392334	329
Heavy-Duty Support Stand with 23" (584 mm) Rod	30392335	368
Heavy-Duty Support Stand with 28" (711 mm) Rod	30392336	388
Heavy-Duty Support Stand with 36" (914 mm) Rod	30392337	443
Heavy-Duty Support Stand with 40" (1016 mm) Rod	30392338	470
Heavy-Duty Support Stand with 48" (1219 mm) Rod	30392339	493
Heavy-Duty Support Stand with 60" (1524 mm) Rod	30392340	550



## Replacement Support Rods

Description	Diameter	Item No.	List Price (USD)
57 mm) Stainless Steel Rod	0.63" (16 mm)	30400036	112
84 mm) Stainless Steel Rod	0.63" (16 mm)	30400037	123
11 mm) Stainless Steel Rod	0.63" (16 mm)	30400038	136
14 mm) Stainless Steel Rod	0.63" (16 mm)	30400039	172
016 mm) Stainless Steel Rod	0.63" (16 mm)	30400040	197
219 mm) Stainless Steel Rod	0.63" (16 mm)	30400041	217
11 mm) Stainless Steel Rod 14 mm) Stainless Steel Rod 016 mm) Stainless Steel Rod	0.63" (16 mm) 0.63" (16 mm) 0.63" (16 mm)	30400038 30400039 30400040	

Replacement Support Rods

LabJaws Ensures Secure Support for Holding Your Labware and Apparatus with Over 130 Options

#### **Cast Iron Support Stands**

Cast iron support stand bases are constructed with black enamel finish for chemical resistance and durability. All bases feature a built-in support rod holder with locking knob that accepts a 0.51" (13 mm) diameter support rod. U-shaped base features three built-in support rod holders and accommodates vessels up to 5" (127 mm) in diameter.

**NOTE:** Support rods are not included.

#### Rectangular Base Support Stand, Cast Iron

Description	Dimensions	Item No.	List Price (USD)
Rectangular Base (only)	4 × 6" (102 × 152 mm)	30392359	46
Rectangular Base (only)	$5 \times 8$ " (127 × 203 mm)	30392360	73
Rectangular Base (only)	$6 \times 9$ " (152 × 229 mm)	30392361	95
Rectangular Base (only)	$8 \times 10$ " (203 $\times$ 254 mm)	30392362	138

### Tripod Base Support Stand, Cast Iron

Description	Overall Footprint Diameter	Item No.	List Price (USD)
Tripod Base (only)	14.75" (375 mm)	30392363	88

### U-Shaped Base Support Stand, Cast Iron

Description	Dimensions	Item No.	List Price (USD)
U-Shaped Base (only)	7 × 7" (178 × 178 mm)	30392364	46

### **Aluminum Support Rods**

Description	Diameter	Item No.	List Price (USD)
12" (305 mm) Aluminum Rod	0.51" (13 mm)	30392274	19
18" (457 mm) Aluminum Rod	0.51" (13 mm)	30392275	20
24" (610 mm) Aluminum Rod	0.51" (13 mm)	30392276	25
36" (914 mm) Aluminum Rod	0.51" (13 mm)	30392277	27

### **Stainless Steel Support Rods**

Description	Diameter	Item No.	List Price (USD)
12" (305 mm) Stainless Steel Rod	0.51" (13 mm)	30392296	25
18" (457 mm) Stainless Steel Rod	0.51" (13 mm)	30392297	33
24" (610 mm) Stainless Steel Rod	0.51" (13 mm)	30392298	41
36" (914 mm) Stainless Steel Rod	0.51" (13 mm)	30392299	56







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#### **Round Support Plate**

Aluminum plate supports beakers, mantles and petri dishes. Fits standard lab-frames using connectors or holders, shown on pages 192-194.

Description	Distance from Rod	Item No.	List Price (USD)
6" (152 mm)	2.6" (66 mm)	30392342	84



#### **Support Plates**

Designed to hold hotplates, stirrers, hotplate-stirrers, and other apparatus to lab-frames or ring stands. Aluminum construction offers strength and durability. Support plates include a non-skid rubber mat and a built-in holder that grips rods up to 0.75" (19 mm) in diameter.

Size	Plate Dimensions	Distance from Rod	Item No.	List Price (USD)
Small	9.5 × 6.5" (241 × 165 mm)	1.9" (48 mm)	30392349	153
Medium	12.75 × 9" (324 × 229 mm)	1.9" (48 mm)	30392350	245
Large	15.75 × 12" (400 × 305 mm)	1.9" (48 mm)	30392351	306



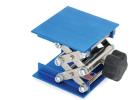
#### **OHAUS Aluminum Lab-Lifts**

Lab-lifts are convenient adjustable lifting platforms. Exceptional strength and durability for holding small lab equipment such as glassware, hot plates, and water baths at different heights.

Aluminum Lab-Lifts provide stable height adjustment for various items in the lab such as flasks, baths, and small equipment. Top and bottom decks are constructed of anodized aluminum. Internal supports and drive screws are constructed of stainless steel. Oversized sure-grip adjustment knobs provide smooth and accurate height adjustment. Lab-Lifts accept optional Support Rod Kit which mounts to the upper deck.

Deck Size	Min. to Max. Height	Max. Load*	Item No.	List Price (USD)
4 × 4" (102 × 102 mm)	2.5 to 5" (64 to 127 mm)	66 lbs (29.94 kg)	30400007	188
6 × 6" (152 × 152 mm)	3 to 9.75" (76 to 248 mm)	132 lbs (59.87 kg)	30400008	231
8 × 8" (203 × 203 mm)	3 to 9.75" (76 to 248 mm)	176 lbs (79.83 kg)	30400009	277
10 × 10" (254 × 254 mm)	3.5 to 13" (89 to 330 mm)	186 lbs (84.37 kg)	30400010	364







#### **OPTIONAL ACCESSORIES**

### 17" Support Rod Kit

Ideal for creating an adjustable support stand for mounting various items such as thermometer clamps, temperature probes, flask and column clamps. This kit allows you to mount a 17" (432 mm) threaded vertical support rod to the upper deck of a  $6 \times 6$ ",  $8 \times 8$ ",  $10 \times 10$ ",  $12 \times 12$ " or  $16 \times 16$ " Lab-Lift by screwing the rod into the pre-drilled hole.

### 17" Support Rod Kit includes:

- 1 17" (432 mm) Stainless Steel Rod
- 1 Jam Nut
- 1 Flat Washer

Description	<b>Rod Diameter</b>	Item No.	List Price (USD)
17" Support Rod Kit	0.51" (13 mm)	30400050	37



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#### **OHAUS Heavy-Duty Lab-Lifts**

These Heavy-Duty, Stainless Steel Lab-Lifts are ultra-stable lifting platforms with exceptional strength and durability. Constructed of stainless steel, Lab-Lifts are designed for use in extreme environments and high load applications. Equipped with oversized, sure-grip adjustment knobs that provide extra leverage for easy height adjustments. Durable construction allows lifts to be autoclaved or chemically cleaned. Ideal for use in fume hoods or bench tops and holds a variety of items such as glassware, hotplates, baths, and magnetic stirrers.

Deck Size	Min. to Max. Height	Max. Load*	Item No.	List Price (USD)
3 × 3" (76 × 76 mm)	2.5 to 5" (64 to 127 mm)	100 lbs (45.36 kg)	30400000	202
$4 \times 4$ " (102 × 102 mm)	2.5 to 5" (64 to 127 mm)	100 lbs (45.36 kg)	30400001	246
6 × 6" (152 × 152 mm)	3 to 9.75" (76 to 248 mm)	133 lbs (60.33 kg)	30400002	253
8 × 8" (203 × 203 mm)	3 to 9.75" (76 to 248 mm)	227 lbs (102.97 kg)	30400003	340
10 × 10" (254 × 254 mm)	3.5 to 13" (89 to 330 mm)	247 lbs (112.04 kg)	30400004	369
12 × 12" (305 × 305 mm)	4 to 19.5" (102 to 495 mm)	100 lbs (45.36 kg)	30400005	975
16 × 16" (406 × 406 mm)	4 to 19.5" (102 to 495 mm)	100 lbs (45.36 kg)	30400006	1725









#### **OPTIONAL ACCESSORIES**

#### 17" Support Rod Kit

Ideal for creating an adjustable support stand for mounting various items such as thermometer clamps, temperature probes, flask and column clamps. This kit allows you to mount a 17" (432 mm) threaded vertical support rod to the upper deck of a  $6 \times 6$ ",  $8 \times 8$ ",  $10 \times 10$ ",  $12 \times 12$ " or  $16 \times 16$ " Lab-Lift by screwing the rod into the pre-drilled hole.

#### 17" Support Rod Kit includes:

- 1 17" (432 mm) Stainless Steel Rod
- 1 Jam Nut
- 1 Flat Washer

Description	Rod Diameter	Item No.	List Price (USD)
17" Support Rod Kit	0.51" (13 mm)	30400050	37

#### **Ratchet Tool**

Designed to add extra leverage to your  $12 \times 12$ " or  $16 \times 16$ " Lab-Lift. This recommended Ratchet Tool easily attaches to the actuating rod to allow easy, accurate adjustments.

Description	Item No.	List Price (USD)
Ratchet Tool	30400049	73



# RODS, FRAMES, & SUPPORTS

LabJaws Ensures Secure Support for Holding Your Labware and Apparatus with Over 130 Options

#### Cylinder Bench Clamps

Rugged cast aluminum clamps safely secure gas cylinders to benches, tables or other flat surfaces up to 2.5" (64 mm) thick. The 1" (25 mm) wide, 54" (1372 mm) long nylon strap features a nickel-plated, non-slip spring catch and buckle for easy adjustment around cylinders from 4 to 14" (102 to 356 mm) in diameter. Models 711 and 716 available with or without a "Secure Cylinder" safety message strap.

#### Model 711 Bench Clamp

This bench clamp has a large tightening handle for mounting to any flat surface up to 2.5" (64 mm) thick. A nylon pad prevents damage to the bench or table surface. Two tapered mounting screw holes are provided for permanent attachment to bench-top.





Safety Message Strap

Description	Dimensions L $\times$ W $\times$ H (closed)	Cylinder Diameter	Item No.	List Price (USD)
Model 711 Bench Clamp with Strap	3.25 × 5.25 × 6.5" (83 × 133 × 165 mm)	4 to 14" (102 to 356 mm)	30400020	75
Model 711 Bench Clamp with Safety Message Strap	3.25 × 5.25 × 6.5" (83 × 133 × 165 mm)	4 to 14" (102 to 356 mm)	30400021	88

#### Model 716 Bench Clamp

This bench clamp is similar to Model 711, but includes a sturdy safety chain for extra security. Chain measures 49" (1245 mm).





Safety Message Strap

Description	Dimensions L × W × H (closed)	Cylinder Diameter	Item No.	List Price (USD)
Model 716 Bench Clamp with Strap & Chain	3.25 × 5.25 × 6.5" (83 × 133 × 165 mm)	4 to 14" (102 to 356 mm)	30400026	81
Model 716 Bench Clamp with Safety Message Strap & Chain	3.25 × 5.25 × 6.5" (83 × 133 × 165 mm)	4 to 14" (102 to 356 mm)	30400027	97

#### Model 712 Heavy-Duty Bench Clamp

This bench clamp has two screw clamps to tighten for extra firm mounting to any flat surface up to 1.75" (45 mm) thick with a 1.25" (32 mm) overhang. Especially convenient for temporary storage situations. Rugged cast aluminum bench clamp features a 1" (25 mm) wide, 54" (1372 mm) long nylon strap with nickel-plated, non-slip spring catch buckle to hold cylinders from 4 to 14" (102 to 356 mm) in diameter. This clamp is not available with a safety message strap.



Description	Dimensions L × W × H (closed)	Cylinder Diameter	Item No.	List Price (USD)
Model 712 Heavy-Duty Bench Clamp with Strap	$3.25 \times 6 \times 4.5$ " (83 × 152 × 114 mm)	4 to 14" (102 to 356 mm)	30400022	78

# RODS, FRAMES, & SUPPORTS

LabJaws Ensures Secure Support for Holding Your Labware and Apparatus with Over 130 Options

#### Model 715 Wall Bracket

Cylinder wall-mount brackets are constructed of cast aluminum and contoured to allow cylinders to fit firmly along the support edge. Recessed screw holes at each side of the bracket allow for easy wall mounting. Features a 1" (25 mm) wide, 54" (1372 mm) long nylon strap with nickel-plated, non-slip spring catch and buckle for fast, easy adjustment. Available with or without a "Secure Cylinder" safety message strap. For cylinders from 4 to 14" (102 to 356 mm) in diameter.





Safety Message Strap

Description	Dimensions L × W × H	Cylinder Diameter	Item No.	List Price (USD)
Model 715 Wall Bracket with Strap	1.88 × 8.13 × 4.63" (48 × 206 × 118 mm)	4 to 14" (102 to 356 mm)	30400024	67
Model 715 Wall Bracket with Safety Message Strap	1.88 × 8.13 × 4.63" (48 × 206 × 118 mm)	4 to 14" (102 to 356 mm)	30400025	81

#### Model 717 Wall Bracket

This wall bracket is similar to Model 715, but includes a sturdy safety chain for extra security. Chain measures 49" (1245 mm).





Safety Message Strap

Description	Dimensions L $\times$ W $\times$ H	Cylinder Diameter	Item No.	List Price (USD)
Model 717 Wall Bracket with Strap & Chain	1.88 × 8.13 × 4.63" (48 × 206 × 118 mm)	4 to 14" (102 to 356 mm)	30400028	75
Model 717 Wall Bracket with Safety Message Strap & Chain	$1.88 \times 8.13 \times 4.63$ " (48 × 206 × 118 mm)	4 to 14" (102 to 356 mm)	30400029	92

# RODS, FRAMES, & SUPPORTS

LabJaws Ensures Secure Support for Holding Your Labware and Apparatus with Over 130 Options

#### Model 701 PVC Coated Stand

The PVC coated stand has a flat bottom support so it can't "ride up" on the cylinder. Includes an adjustable 1" (25 mm) wide, 54" (1372 mm) long nylon strap with nickel-plated, non-slip spring catch and buckle for fast, easy adjustment to keep the cylinder safely in place against upper support bar. Lower support bar stops cylinder shift. The PVC coating prevents marring of the cylinder surface. This clamp is not available with a safety message strap.



Description	Dimensions $L \times W \times H$	Cylinder Diameter	Item No.	List Price (USD)
Model 701 PVC Coated Stand	17.25 × 17.25 × 10.75" (438 × 438 × 273 mm)	7 to 10" (178 × 254 mm)	30400017	520

#### Model 703 Stand

This cast aluminum stand hinges open and has 4 thumbscrews to tightly grip cylinders from 8 to 9" (203 to 229 mm) in diameter.



Description	Dimensions (Dia. × H)	Cylinder Diameter	Item No.	List Price (USD)
Model 703 Stand	18.25 × 6" (464 × 152 mm)	8 to 9" (203 × 229 mm)	30400018	394

#### Model 704 Adjustable Stand

Heavy-duty, cast aluminum stand with adjustable "L" brackets hold cylinders from 6 to 9.25" (152 to 235 mm) in diameter. Hinges open for installation without lifting the cylinder or disturbing connections. Prevents accidental tipping. Hinges open for easy, no-lifting installation.



Description	Dimensions (Dia. $\times$ H)	Cylinder Diameter	Item No.	List Price (USD)
Model 704 Adjustable Stand	$18.5 \times 7.5$ " (470 × 191 mm)	6 to 9.25" (152 × 235 mm)	30400019	457

#### Model 713 Portable Stand

This cast iron portable cylinder stand offers a sturdy cylinder stand and a convenient cylinder dolly all-in-one. This cylinder stand is designed in two interlocking halves and can be installed without lifting the tank. Built-in rubber wheels for easy mobility. Three thumbscrews tightly grip cylinder.



Description	Dimensions (Dia. × H)	Cylinder Diameter	Item No.	List Price (USD)
Model 713 Portable Stand	15.5 × 3" (394 × 76 mm)	7 to 9.25" (178 × 235 mm)	30400023	446

## FLOW CONTROL CLAMPS

LabJaws Ensures Secure Support for Holding Your Labware and Apparatus with Over 130 Options

LabJaws flow control devices offer selection and quality. They are finely machined to deliver accurate regulation or interruption of fluid flow. Every flow control device resists corrosion and rust. Hosecocks offer easy one-hand operation. Convex bearing surfaces and rounded edges protect tubing. Pinchcocks are designed to quickly start and stop flow and provide complete closure without damaging tubing. Operated with a simple squeeze. Nickel-plated construction (unless otherwise noted).

#### Regular Hosecock

Adjustment screw with oversized head for accurate regulation. Built-in side lugs for foot mounting. Tubing retainer screw.

#### **Stainless Steel**

Min. to Max. Grip	Dimensions (W × H - open)	Item No.	List Price (USD)
0 to 17 mm (0 to 0.67")	$37 \times 62 \text{ mm} (1.46 \times 2.44")$	30392221	69

#### Nickel-Plated Zinc

Min. to Max. Grip	Dimensions (W $\times$ H - open)	Item No.	List Price (USD)
0 to 17 mm (0 to 0.67")	37 × 62 mm (1.46 × 2.44")	30392210	28



Similar to regular hosecock but with 145 mm (5.7") bottom mounted extension rod for attachment to frames and rods.

Min. to Max. Grip	Arm Length	Arm Dia.	Overall Length	Item No.	List Price (USD)
0 to 17 mm (0 to 0.67")	145 mm (5.71")	8 mm (0.32")	175 mm (6.89")	30392212	56

#### Hosecock Foot

Add this option to Regular Hosecock (916062 or 916361) for bench or table mounting. Includes two mounting screws.

	Diameter	Item No.	List Price (USD)
27 mm (1.06")		30392211	10

#### Heavy-Duty Pinchcock

Equipped with heavy-duty spring for tough jobs. Ensures complete closure.

Min. to Max. Grip	Clamp Height	Item No.	List Price (USD)
0 to 11 mm (0 to 0.43")	48 mm (1.89")	30392246	29



30392221







## MISC. NON-ELECTRICAL PRODUCTS

LabJaws Ensures Secure Support for Holding Your Labware and Apparatus with Over 130 Options

#### **Inoculating Turntables**

OHAUS hand-operated inoculating turntables produce almost concentric circles of bacterial colonies that are evenly distributed across petri dishes. Cast iron turntables are coated with gray baked acrylic enamel.

The 76 mm (3") high, small turntable accommodates 100 mm petri dishes. It has a tripod base to bring work approximately to eye level. It has a center disk covered with non-skid rubber lining. The large turntable accommodates 100 mm or 150 mm petri dishes. It has a height of only 32 mm (1.26"), ideal for steadying a forearm on the work surface while plating. The large turntable contains two circular sections. The top section has a raised gripper lip as well as a recessed center disk covered with non-skid rubber lining.

Description	Dimensions (Dia. × H)	Item No.	List Price (USD)
Small Turntable	4.49 × 3.03" (114 × 77 mm)	30400046	181
Large Turntable	$5.91 \times 1.26$ " (150 × 32 mm)	30400047	216





#### Slide Staining Rack

Constructed of stainless steel, the OHAUS Slide Staining Rack will resist corrosion under normal use. Adjustable to fit trays or sinks up to 533 mm (21") inside.

Description	Dimensions (L × W)	Item No.	List Price (USD)
Slide Staining Rack	23.74 × 3.5" (603 × 89 mm)	30400048	76

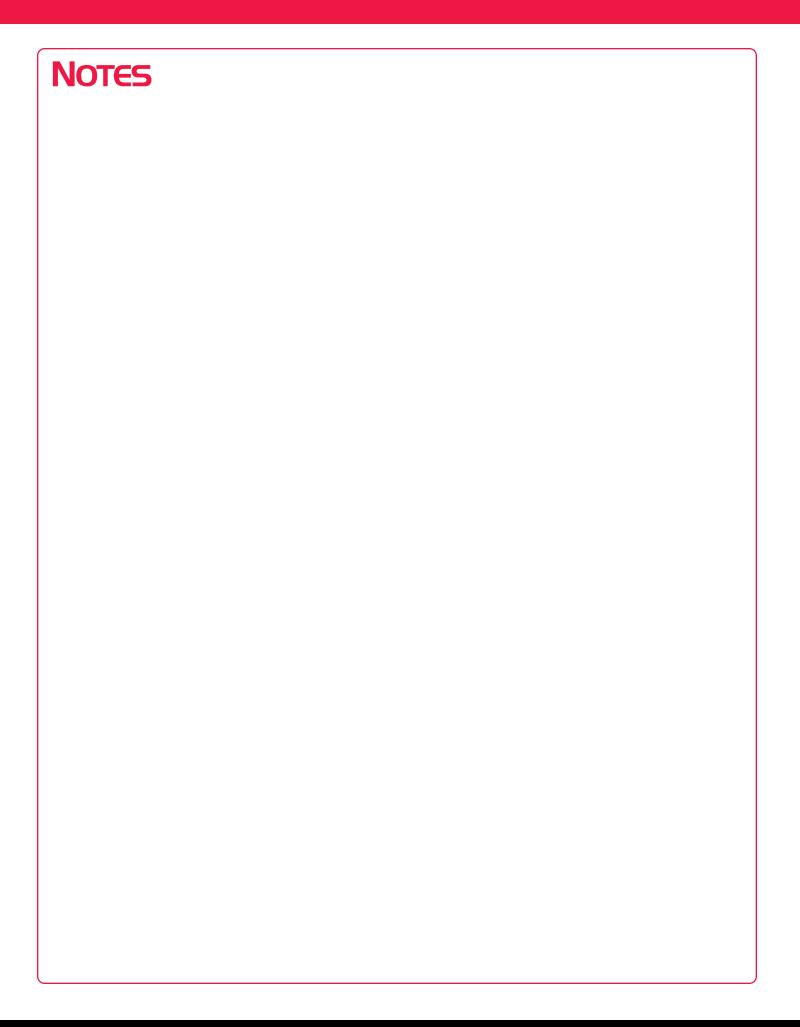


#### **Airejector**

Rapid air removal evacuates 1 liter of air to 711 mm (28") of vacuum in 30 seconds. Works with compressed air sources to 60 psi. Nickel-plated construction.

Description	Length	Item No.	List Price (USD)
Airejector	5.51" (140 mm)	30392367	122







Streamline your water quality analysis applications using the intuitive OHAUS Starter Series line of bench, portable, and pen meters. With the ability to handle applications from pH to Dissolved Oxygen—and everything in between—the Starter Series boasts powerful performance that goes where you go.



	Start Mete	ter Ser	ies Be	ench		Stari	Starter Series Portable Meters						or Sar	ies Per	. Met	arc		
	Mete					Start	iei se		or calore			Start	ei sei	ies r ei	INEC			
	Starter 5000	Starter 3100M	Starter 3100	Starter 3100C	Starter 2100	Starter 300	Starter 300C	Starter 300D	Starter ST400	Starter ST400M	Starter ST400D	pH meters	ORP meters	Conductivity meters	DO meters	Salinity meters	TDS meters	Multi meters
Measurement Range	-2.000 to 20.000 pH -30°C to 130 °C	–2.00 to 20.00 pH 0.0 µS/cm to 199.9mS/cm -5°C to 110 °C	-2.00 to 16.00 pH -5 °C to 110 °C	00.0 μS/cm to 199.9 mS/cm 0 °C to 100 °C	-2.00 to 16.00 pH 0 °C to 100 °C	0.00 to 14.00 pH 0 °C to 100 °C	0.0 µS/cm to 199.9 mS/cm 0 °C to 100 °C	0.0 to 199.9%; 200 to 400% 0 °C to 50 °C	-2.00~16.00 pH -1999~1999 mV -5 °C~110 °C	pH - 2 16.00 pH ORP - 1999 1999 mV Conductivity 0.0 µS/cm 199.9 mS/cm TDS 0.1 mg/l 199.9 g/l Salinity 0.0 99.9 psu Resistivity 0 20MΩ-cm Temperature - 5 ° C 110 ° C	0.0 to 200.0% 0 °C to 50 °C	0.00 to 14.00 pH*	-1000mV to 1000mV	0.0 to 199.9 µs/cm*	0.0 to 19.9 mg/L	0.0 to 80.0 ppt*	0 to 1000 mg/L*	0.00 to 14.00 pH, 0-1999 µS/cm, 0-19.99 mS/cm, 0-1000 mg/L, 0.0-10.0 ppt
Input	BNC	BNC Mini- Din	BNC	Mini- Din	BNC	BNC	Mini- Din	BNC	BNC	BNC	Mini- DIN							
Automatic Temp. Compensation	•	•	•	•	•	•	•	•	•	•	•	•*	•*	•*	•*	•*	•*	•
Manual Temp. Compensation	•	•	•		•	•		•	•	•								
Battery Power						•	•	•	•	•	•	•	•	•	•	•	•	•
1 Pt. Calibration	•	•	•	•	•	•	•	•	•	•	•	•*	•*	•*	•*	•*	•*	•
2 Pt. Calibration	•	•	•		•	•		•	•	•	•	•*						
≥3 Pt. Calibration	•	•	•			•			•	•		•*						•
Memory	•	•	•	•		•	•	•	•	•	•							
Backlit LCD	•	•	•	•					•	•	•							
LCD					•	•	•	•				•	•	•	•	•	•	•
Touchscreen	•																	
Mechanical Keys		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
USB	•								•	•								
RS232	•	•	•	•														
USB Host	•												•					
GLP / Time / Date	•					•												
Multi Languages	•								•	•								
IP Protection	IP54					IP54	IP54	IP54	IP67	IP67	IP54	IP67	IP67	IP67	IP67	IP67	IP67	IP67
Stand-alone Electrode Holder	•	•	•	•														
Quick Reference Operation Guide	•	•	•	•	•													
In-Use Cover	•	•	•	•														
Hold Function					•	•	•	•	•	•	•	•*	•	•	•	•	•	•
Auto Shut Off									•	•		•	•	•	•	•	•	•
Page No.	223	224	225	226	227	228	229	230	231	232	233	234	234	234	234	234	234	234

<sup>\*</sup> on specific models

	Bench Meters Portable Meters						Pen Meters																	
	ST5000	ST3100M	ST3100	ST3100C	ST2100	ST400	ST400M	ST400D	ST300	ST300C	ST300D	ST10	ST20	ST20M-B	ST20M-C	ST10C	ST20C	ST10T	ST20T	ST10S	ST20S	ST10R	ST20R	ST20D
pН	•	•	•		•	•	•		•			•	•	•	•									
Conductivity		•		•			•			•				•	•	•	•							
TDS		•		•			•			•				•				•	•					
ORP	•	•	•		•	•	•		•													•	•	
Salinity		•		•			•								•					•	•			
Resistivity		•					•																	
DO								•			•													•
Temperature	•	•	•	•	•	•	•	•	•	•	•		•	•	•		•		•		•		•	•

## STARTER 5000 PH BENCH

High Performance Bench Meter for Universal pH Applications

#### **Display**

Backlit liquid crystal display (LCD), touchscreen

#### Communication

RS232 and USB (included), GLP/GMP data output with real-time clock

#### Construction

ABS housing, standalone electrode holder, replaceable in-use cover

#### **Design Features**

3 endpoint modes, continuous measurement mode, up to 9 point calibration, 1,000 measurement memory





A 1000-item library allows for easy recall from data storage. Flexible pH analysis from 10 sensors for calibration storage, 1 self-defined and 8 predefined buffer groups, 3 endpoint modes & GLP

A user-friendly bench meter with an innovative design, including an adjustable standalone electrode holder and large touch-screen, backlit LCD display.

Featuring a USB port, IP54 housing and in-usecover, this flexible and smooth-operating bench meter is built to last.

Model	Included Electrode	Measurement Range	Measurement Resolution	Item No.	List Price (USD)
ST5000-B	N/A	pH −2.00020.000 ORP −2000.00+2000.00 mV Temperature -30 °C130 °C	pH 0.1/0.01/0.001 ORP 1/0.1/0.01 mV Temperature 0.1 °C	30129895	1335
ST5000-F	ST350	pH -2.00020.000 ORP -2000.00+2000.00 mV Temperature -30 °C130 °C	pH 0.1/0.01/0.001 ORP 1/0.1/0.01 mV Temperature 0.1 °C	30129896	1420

Accessories	Item No.	List Price (USD)
Holder, Stand Alone, Electrode	30058733	88
Adapter, 9 Pin-9 Pin, PC-SF40A	30059316	39
Printer, Impact, SF40A, AM	30064203	990
pH electrolyte	30059255	34
pH electrode protection	30059256	27
In-Use Cover, ST5000	30129897	28

Accessories	Item No.	List Price (USD)
Buffer pH1.68 250 ml	30100424	22
Buffer pH4.01 250 ml	30100425	18
Buffer pH6.86 250 ml	30100426	18
Buffer pH7.00 250 ml	30100427	18
Buffer pH9.18 250 ml	30100428	18
Buffer pH10.01 250 ml	30100429	18
Buffer pH12.45 250 ml	30100440	22
Buffer Powder pH4.01; 7.00; 10.01	83033971	24





















# **STARTER 3100M BENCH**

The Versatile Multi-Parameter Bench Meter

#### Display

Backlit liquid crystal display (LCD)

#### Communication

RS232 Interface Kit (Included)

#### Construction

ABS housing, standalone electrode holder, disposable in-use cover

#### **Design Features**

A 99-item memory for pH and/or conductivity measurements makes for efficient data documentation. RS232 interface allows for connection to external devices for data storage or transfer





Combining all of the features from the benchtop pH and conductivity meter into one multi-meter, makes testing pH, ORP, conductivity, salinity, TDS, resistivity, temperature a seamless process.

A user-friendly bench meter with an innovative design, including an adjustable standalone electrode holder and large backlit LCD display.

A 99-item memory for pH and/or conductivity measurements makes for efficient data documentation. RS232 interface allows for connection to external devices for data storage or transfer.

Model	Included Electrode	Measurement Range	Measurement Resolution	Item No.	List Price (USD)
ST3100M-B	N/A	pH $-2$ to 20 pH Conductivity 00.0 μS/cm $-$ 199.9 mS/cm TDS 0.1mg/l199.9 g/l ORP $-2000+2000$ mV Salinity 0-100 psu Resistivity 020 $M\Omega$ -cm Temperature -5 °C $-$ 110 °C	pH 0.01 pH Conductivity 0.01 μS/cm TDS 0.01 mg/L ORP 1mV Salinity 0.01 psu Resistivity 0.01 Ω•cm Temperature 0.1 °C	30276082	815
ST3100M-F	ST310, STCON3	Same as ST3100M-B	Same as ST3100M-B	30276083	970
ST3100M-N	ST230, STTEMP30, STCON3	Same as ST3100M-B	Same as ST3100M-B	30332140	970

Accessories	Item No.	List Price (USD)
Holder, Stand Alone, Electrode	30058733	88
Printer, Impact, SF40A, AM	30064203	990
RS232 Kit, STX SPX ST3100M	30268982	167
USB Kit, Device, STX SPX ST3100M	30268984	116
pH electrolyte	30059255	34
pH electrode protection	30059256	27
In-Use-Cover, STARTER	30058734	24
Standard Conduct 10µs/cm 250 ml	30100441	22
Standard Conduct 84µs/cm 250 ml	30100442	22
Standard Conduct 1413µs/cm 250 ml	30100443	22
Standard Conduct 12.88mS/cm 250 ml	30100444	22

Accessories	Item No.	List Price (USD)
Buffer pH4.01 250 ml	30100425	18
Buffer pH6.86 250 ml	30100426	18
Buffer pH7.00 250 ml	30100427	18
Buffer pH9.18 250 ml	30100428	18
Buffer pH10.01 250 ml	30100429	18
Buffer pH12.45 250 ml	30100440	22
Buffer pH1.68 250 ml	30100424	22
Buffer Powder pH4.01;7.00;10.01	83033971	24















# **STARTER 3100 PH BENCH**

Smart pH Bench Meter for Standard Laboratory Applications

#### Display

Backlit liquid crystal display (LCD)

#### Communication

RS232 (Included)

#### Construction

ABS housing, standalone electrode holder, replaceable in-use cover

#### **Design Features**

99 measurement memory, automatic and manual endpoint functions, automatic and manual temperature compensation, quick reference guide





Auto buffer recognition with three different buffer groups makes it easy to avoid errors during the calibration process.

A user-friendly bench meter with an innovative design, including an adjustable standalone electrode holder and large backlit LCD display.

A 99-item memory for pH and/or conductivity measurements makes for efficient data documentation. RS232 interface allows for connection to external devices for data storage or transfer.

Model	Included Electrode	Measure	ment Range	Measurement Resolution	Item No.	List Price (USD)
ST3100-B	N/A	ORP -19	to 16.00 pH 999 to 1999 e -5 °C – 110 °C	pH 0.01 pH ORP 1 mV Temperature 0.1 °C	30057497	630
ST3100-F	ST310	ORP -19	to 16.00 pH 999 to 1999 e -5 °C – 110 °C	pH 0.01 pH ORP 1 mV Temperature 0.1 °C	30058489	715
	Accessories	Item No.	List Price (USD)	Accessories	Item No.	List Price (USD)
Holder, Stand	Alone, Electrode	30058733	88	Buffer pH1.68 250 ml	30100424	22
Adapter, 9 Pin-	-9 Pin, PC-SF40A	30059316	39	Buffer pH4.01 250 ml	30100425	18
Printer, Impact	t, SF40A, AM	30064203	990	Buffer pH6.86 250 ml	30100426	18
pH electrolyte		30059255	34	Buffer pH7.00 250 ml	30100427	18
pH electrode p	orotection	30059256	27	Buffer pH9.18 250 ml	30100428	18
In-Use-Cover,	STARTER	30058734	24	Buffer pH10.01 250 ml	30100429	18
				Buffer pH12.45 250 ml	30100440	22
				Buffer Powder pH4.01;7.00;10.01	83033971	24





STARTER 3100C CONDUCTIVITY BENCH

Smart Conductivity Bench Meter for Standard Laboratory Applications

#### Display

Backlit liquid crystal display (LCD)

#### Communication

RS232 Interface Kit (Included)

#### Construction

ABS housing, standalone electrode holder, disposable in-use cover

#### **Design Features**

Auto Temperature Compensation, manual and auto end points, 99-item memory for pH and conductivity measurements



Four-pole linear electrode with temperature sensor safeguards the unit from polarization and pollution effects to ensure accurate readings.

A user-friendly bench meter with an innovative design, including an adjustable standalone electrode holder and large backlit LCD display.

99-item memory for conductivity measurements makes for efficient data documentation. RS232 interface allows for connection to external devices such as a printer or computer for data storage/transfer.

Model	Included Electrode	Measurement Range	<b>Measurement Resolution</b>	Item No.	List Price (USD)
ST3100C-B	N/A	Conductivity 00.0 µS/cm – 199.9 mS/cm Salinity 0.00 – 19.99 psu TDS 0.0 – 19.9 mg/L Temperature 0 – 100°	Conductivity 0.01 µS/cm Salinity 0.01 psu TDS 0.1 mg/L Temperature 0.1 °C	30058730	710
ST3100C-F	STCON3	Conductivity 00.0 µS/cm – 199.9 mS/cm Salinity 0.00 – 19.99 psu TDS 0.0 – 19.9 mg/L Temperature 0 – 100°	Conductivity 0.01 µS/cm Salinity 0.01 psu TDS 0.1 mg/L Temperature 0.1°C	30058731	570

Accessories	Item No.	List Price (USD)
Holder, Stand Alone, Electrode	30058733	88
In-Use-Cover, STARTER	30058734	24
Printer, Impact, SF40A, AM	30064203	990
Standard Conduct 10µs/cm 250 ml	30100441	22
Standard Conduct 84µs/cm 250 ml	30100442	22
Standard Conduct 1413µs/cm 250 ml	30100443	22
Standard Conduct 12.88mS/cm 250 ml	30100444	22











## **STARTER 2100 PH BENCH**

Economical pH Bench Meter for Basic Laboratory Applications

#### Display

Liquid crystal display (LCD)

#### Construction

ABS housing, built-in electrode holder

#### **Design Features**

Auto buffer recognition, two point calibration, quick reference guide



Auto buffer recognition with three different buffer groups makes it easy to avoid errors during the calibration process.

A user-friendly bench meter with an innovative design, including an adjustable standalone electrode holder and large backlit LCD display.

A 99-item memory for pH and/or conductivity measurements makes for efficient data documentation. RS232 interface allows for connection to external devices for data storage or transfer.

Model	Included Electrode	Measurement Range	Measurement Resolution	Item No.	List Price (USD)
ST2100-B	N/A	pH −2 to 16 pH ORP -1999 − 1999 mV Temperature 0 − 100 °C	pH 0.01 pH ORP 1 mV Temperature 0.1 °C	30057494	373
ST2100-E	ST210	pH −2 to 16 pH ORP -1999 − 1999 mV Temperature 0 − 100 °C	pH 0.01 pH ORP 1 mV Temperature 0.1 ℃	30057495	395
ST2100-F	ST210;STTEMP30	pH −2 to 16 pH ORP -1999 − 1999 mV Temperature 0 − 100 °C	pH 0.01 pH ORP 1 mV Temperature 0.1 °C	30057496	425

Accessories	Item No.	List Price (USD)
Holder, Stand Alone, Electrode	30058733	88
pH electrolyte	30059255	34
pH electrode protection	30059256	27
Buffer pH1.68 250 ml	30100424	22
Buffer pH4.01 250 ml	30100425	18
Buffer pH6.86 250 ml	30100426	18
Buffer pH7.00 250 ml	30100427	18
Buffer pH9.18 250 ml	30100428	18
Buffer pH10.01 250 ml	30100429	18
Buffer pH12.45 250 ml	30100440	22
Buffer Powder pH4.01;7.00;10.01	83033971	24







## **STARTER 300 PH PORTABLE**

Convenient Portable pH Meter for Wherever Your Work Takes You

#### **Display**

Liquid crystal display (LCD)

#### Construction

ABS housing, wrist strap

#### **Design Features**

30 measurement memory, automatic and manual endpoint functions, automatic and manual temperature compensation





Auto buffer recognition with four different buffer groups makes it easy to avoid errors during the calibration process.

Easy-to-use and accurate with a simple calibration process, automatic temperature compensation and fast results. Ideal for secure field use with a meter stand, wrist strap and durable IP54 housing.

The 30-measurement library stores data for future reference and allows the user to easily recall the last calibration data with one quick touch.

Model	Included Electrode	Measurement Range	Measurement Resolution	Item No.	List Price (USD)
ST300-B	N/A	pH 0.00 – 14.00 ORP -1999 – 1999 mV Temperature 0 – 100 °C	pH 0.01 pH ORP 1 mV Temperature 0.1 °C	83033962	321
ST300	ST320	pH 0.00 – 14.00 ORP -1999 – 1999 mV Temperature 0 – 100 °C	pH 0.01 pH ORP 1 mV Temperature 0.1 °C	83033961	425
ST300-G*	ST320	pH 0.00 – 14.00 ORP -1999 – 1999 mV Temperature 0 – 100 °C	pH 0.01 pH ORP 1 mV Temperature 0.1 °C	30219114	444

<sup>\*</sup> Includes field portable bag

Accessories	Item No.	List Price (USD)
pH electrolyte	30059255	34
pH electrode protection	30059256	27
Portable Bag STARTER	30031635	61
Buffer pH1.68 250 ml	30100424	22
Buffer pH4.01 250 ml	30100425	18
Buffer pH6.86 250 ml	30100426	18
Buffer pH7.00 250 ml	30100427	18
Buffer pH9.18 250 ml	30100428	18
Buffer pH10.01 250 ml	30100429	18
Buffer pH12.45 250 ml	30100440	22
Seal kit, STARTER portables	83032962	47
Buffer Powder pH4.01;7.00;10.01	83033971	24











# **STARTER 300C CONDUCTIVITY PORTABLE**

Convenient Portable Conductivity Meter for Wherever Your Work Takes You

#### Display

Liquid crystal display (LCD)

#### Construction

ABS housing, wrist strap

#### **Design Features**

Automatic temperature compensation, adjustable temperature coefficient





Four-pole linear electrode with temperature sensor safeguards the unit from polarization and pollution effects to ensure accurate readings.

Easy-to-use and accurate with a simple calibration process, automatic temperature compensation and fast results.

The 30-measurement library stores data for future reference and allows the user to easily recall the last calibration data with one quick touch.

Model	Included Electrode	Measurement Range	Measurement Resolution	Item No.	List Price (USD)
ST300C-B	N/A	Conductivity 00.0 µS/cm − 199.9 mS/cm; TDS 0.1 mg/L − 199.9 g/L Temperature 0 − 100 °C	Conductivity 0.01 µS/cm TDS 0.1 mg/L Temperature 0.1 °C	30092000	392
ST300C	STCON3	Conductivity 00.0 µS/cm – 199.9 mS/cm; TDS 0.1 mg/L – 199.9 g/L Temperature 0 – 100 °C	Conductivity 0.01 µS/cm TDS 0.1 mg/L Temperature 0.1 °C	83033964	486
ST300C- G*	STCON3	Conductivity 00.0 µS/cm − 199.9 mS/cm; TDS 0.1 mg/L − 199.9 g/L Temperature 0 − 100 °C	Conductivity 0.01 µS/cm TDS 0.1 mg/L Temperature 0.1 °C	30219115	520

<sup>\*</sup> Includes field portable bag

Accessories	Item No.	List Price (USD)
Portable Bag STARTER	30031635	61
Standard Conduct 10µs/cm 250 ml	30100441	22
Standard Conduct 84µs/cm 250 ml	30100442	22
Standard Conduct 1413µs/cm 250 ml	30100443	22
Standard Conduct 12.88mS/cm 250 ml	30100444	22
Seal kit, STARTER portables	83032962	47











Low Battery

# **STARTER 300D DO PORTABLE**

Convenient Portable Dissolved Oxygen Meter for Wherever Your Work Takes You

#### Display

Liquid crystal display (LCD)

#### Construction

ABS housing, wrist strap

#### **Design Features**

30 measurement memory





The galvanic electrode can be used immediately after being powered on without the typical wait time associated with dissolved oxygen meters.

Easy-to-use and accurate with a simple calibration process, automatic temperature compensation and fast results.

The 30-measurement library stores data for future reference and allows the user to easily recall the last calibration data with one quick touch.

Model	Included Electrode	Measurement Range	Measurement Resolution	Item No.	List Price (USD)
ST300D-B	N/A	DO 0.0 to 199.9%; 200 to 400% Temperature 0 to 50 °C	DO 0.1%; 1% Temperature 0.1 °C	30031656	379
ST300D	STDO11;STTEMP30	DO 0.0 to 199.9%; 200 to 400% Temperature 0 to 50 °C	DO 0.1%; 1% Temperature 0.1 °C	30031655	670
ST300D-G*	STDO11; STTEMP30	DO 0.0 to 199.9%; 200 to 400% Temperature 0 to 50 ℃	DO 0.1%; 1% Temperature 0.1 °C	30219116	720

<sup>\*</sup> Includes field portable bag

Accessories	Item No.	List Price (USD)
Portable Bag STARTER	30031635	61
Zero Oxygen Chemicals, STARTER	30059257	23
Seal kit, STARTER portables	83032962	47









# **STARTER 400 PH PORTABLE**

Durable, Waterproof Battery-Operated pH Meters Ideal for Field Testing

#### Display

Backlit Liquid crystal display (LCD)

#### Communication

Built-in micro-USB port

#### Construction

IP67 waterproof plastic housing, IP67 probes, rubber cover

#### **Design Features**

Data storage of up to 1000 items





Built with IP67 waterproof housing as well as a rubber cover and IP67 probes, the ST400 is ideal for prolonged use in any field environment.

Rechargeable lithium battery provides 40 hours of uninterrupted use and more than 300 charge cycles—eliminating the need to change out batteries often.

The ST400 features intuitive software which guides the user through operation. All necessary information to run tests successfully such as electrode condition is displayed clearly on the large LCD.

Model	Included Electrode	Measurement Range	Measurement Resolution	Item No.	List Price (USD)
ST400-B	_	pH -2 16.00 pH ORP -19991999 mV Temperature -5 °C 110 °C	pH 0.01 pH ORP 1 mV Temperature 0.1 ℃	30468964	477
ST400-F	ST320 IP67 3m Probe	pH -2 16.00 pH ORP -19991999 mV Temperature -5 °C 110 °C	pH 0.01 pH ORP 1 mV Temperature 0.1 ℃	30468965	555
ST400-G*	ST320 IP67 3m Probe	pH -2 16.00 pH ORP -19991999 mV Temperature -5 °C 110 °C	pH 0.01 pH ORP 1 mV Temperature 0.1 °C	30468966	585

<sup>\*</sup> Includes field portable bag

Accessories	Item No.	List Price (USD)
pH electrolyte	30059255	34
pH electrode protection	30059256	27
Portable Bag STARTER	30031635	61
Buffer pH1.68 250 ml	30100424	22
Buffer pH4.01 250 ml	30100425	18
Buffer pH6.86 250 ml	30100426	18
Buffer pH7.00 250 ml	30100427	18
Buffer pH9.18 250 ml	30100428	18
Buffer pH10.01 250 ml	30100429	18
Buffer pH12.45 250 ml	30100440	22
Seal kit, STARTER portables	83032962	47
Buffer Powder pH4.01;7.00;10.01	83033971	24













## STARTER 400M PORTABLE

Durable, Waterproof Battery-Operated Multi-Parameter Meters Ideal for Field Testing

#### **Display**

Backlit Liquid crystal display (LCD)

#### Communication

Built-in micro-USB port

#### Construction

IP67 waterproof plastic housing, IP67 probes, rubber cover

#### **Design Features**

Data storage of up to 1000 items





Built with IP67 waterproof housing as well as a rubber cover and IP67 probes, the ST400 is ideal for prolonged use in any field environment.

Rechargeable lithium battery provides 40 hours of uninterrupted use and more than 300 charge cycles—eliminating the need to change out batteries often.

The ST400M features intuitive software which guides the user through operation. All necessary information to run tests successfully such as electrode condition is displayed clearly on the large LCD.

Model	Included Electrode	Measurement Range	Measurement Resolution	Item No.	List Price (USD)
ST400M-B	N/A	pH -2 16.00 pH ORP -1999 1999 mV Conductivity 0.0 μS/cm 199.9 mS/cm TDS 0.1 mg/l 199.9 g/l Salinity 0.0 99.9 psu Resistivity 0 20ΜΩ•cm Temperature -5 °C 110 °C	pH 0.01 pH ORP 1 mV Conductivity 0.1 μS/cm, Auto-range TDS 0.01 mg/l, Auto-range Salinity 0.01 psu, Auto-range Resistivity 0.01 Ω•cm, Auto-range Temperature 0.1 °C	30468990	740
ST400M-F	ST320 IP67 3m and STCON3 IP67 3m probes	pH -2 16.00 pH ORP -1999 1999 mV Conductivity 0.0 μS/cm 199.9 mS/cm TDS 0.1 mg/l 199.9 g/l Salinity 0.0 99.9 psu Resistivity 0 20MΩ-cm Temperature -5 °C 110 °C	pH 0.01 pH ORP 1 mV  Conductivity 0.1 μS/cm, Auto-range TDS 0.01 mg/l, Auto-range Salinity 0.01 psu, Auto-range Resistivity 0.01 Ω·cm, Auto-range Temperature 0.1 °C	30468991	920
ST400M-G*	ST320 IP67 3m and STCON3 IP67 3m probes	pH -2 16.00 pH ORP -1999 1999 mV Conductivity 0.0 μS/cm 199.9 mS/cm TDS 0.1 mg/l 199.9 g/l Salinity 0.0 99.9 psu Resistivity 0 20MΩ•cm Temperature -5 °C 110 °C	pH 0.01 pH ORP 1 mV Conductivity 0.1 μS/cm, Auto-range TDS 0.01 mg/l, Auto-range Salinity 0.01 psu, Auto-range Resistivity 0.01 Ω•cm, Auto-range Temperature 0.1 °C	30468992	950

<sup>\*</sup> Includes field portable bag

Accessories	Item No.	List Price (USD)
Portable Bag STARTER	30031635	61
Zero Oxygen Chemicals, STARTER	30059257	23
Seal kit, STARTER portables	83032962	47





















# **STARTER 400D DO PORTABLE**

Dissolved Oxygen (DO) Meter with Optical Technology

#### Display

Backlit Color Liquid Crystal Display (LCD)

#### Construction

ABS housing, wrist strap

#### **Design Features**

99 measurement memory, last calibration data recall, auto barometric pressure measurement, auto temperature compensation with manual salinity compensation





Optical DO probe requires minimal maintenance and offers immediate measurement readings. No warm up or sample preparation needed.

Large backlit LCD screen provides easy to read results—even in low light environments. Ideal for secure field use with a meter stand, wrist strap and durable IP54 housing.

The 99-measurement library stores data for future reference and allows for easy one-touch recall of the last calibration data.

Model	Included Electrode	Measurement Range	Measurement Resolution	Item No.	List Price (USD)
ST400D-B	_	DO 0.00 – 20.0 mg/L (ppm) Temperature 0 – 50 °C	DO 0.01 mg/L; 0.1% Temperature 0.1 °C	30378541	585
ST400D	STDO21	DO 0.00 – 20.0 mg/L (ppm) Temperature 0 – 50 $^{\circ}$ C	DO 0.01 mg/L; 0.1% Temperature 0.1 °C	30378543	1380
ST400D-G*	STDO21	DO 0.00 – 20.0 mg/L (ppm) Temperature 0 – 50 °C	DO 0.01 mg/L; 0.1% Temperature 0.1 °C	30378542	1415

<sup>\*</sup> Includes field portable bag

Accessories	Item No.	List Price (USD)
Seal kit, STARTER portables	83032962	47
Zero Oxygen Chemicals, STARTER	30059257	23
DO Probe Cap, STD021	30253566	189
Portable Bag STARTER	30031635	61









## STARTER PEN METERS

Accurate Electrochemistry Measurement At Your Fingertips

#### **Display**

Liquid crystal display (LCD) display with secondary information line (on select models)

#### Construction

**ABS** Housing

#### **Design Features**

Easily replaceable electrodes, automatic shut off feature





Small, economical pen meters offer simple, fast, and straightforward operation.

With durable IP67 waterproof ABS housing, protective sensor cap, and an automatic shutdown feature that preserves battery life, OHAUS pen meters can endure consistent use in rough, wet environments.

Equipped with a wrist strap to prevent accidental drop and damage.

Model	Meter Type	Measurement Range	Measurement Resolution	Temperature Display	Item No.	List Price (USD)
ST10	рН	0.00 – 14 pH	0.1 pH	Not Available	30073970	61
ST20	рН	0.00 − 14 pH ; 0.0 − 99.0 °C	0.01 pH	Yes	30073971	104
ST20M-B	Multi	pH 0-14 Conductivity 0 1999 μS/cm TDS 0 1000 mg/L Temperature 0-99.0 °C	pH 0.01 pH Conductivity 1µS/cm TDS 1 mg/L NA Temperature 0.1 °C	Yes	30393199	129
ST20M-C	Multi	pH 0-14 Conductivity 0 19.99 mS/cm Salinity 0.0-10.0 ppt Temperature 0-99.0°C	pH 0.01pH Conductivity 0.01mS/cm Salinity 0.1 ppt Temperature 0.1°C	Yes	30393200	129
ST10C-A	Conductivity	0.00 – 199.9 μs/cm	0.1 μs/cm	Not Available	30073972	81
ST10C-B	Conductivity	0 – 1999 μs/cm	1µs/cm	Not Available	30073973	81
ST10C-C	Conductivity	0.00 – 19.99 ms/cm	10 μs/cm	Not Available	30073974	81
ST20C-A	Conductivity	0.00 − 199.9 µs/cm ; 0.0 − 99.0 °C	0.1 μs/cm	Yes	30073975	119
ST20C-B	Conductivity	0 − 1999 μs/cm; 0.0 − 99.0 °C	1μs/cm	Yes	30073976	119
ST20C-C	Conductivity	0.00 – 19.99 ms/cm; 0.0 – 99.0 °C	10 μs/cm	Yes	30073977	119
ST10T-A	TDS	0.0 – 100.0 mg/L	0.1 mg/L	Not Available	30073978	92
ST10T-B	TDS	0.0 – 1000 mg/L	1 mg/L	Not Available	30073979	92
ST20T-A	TDS	0.0 − 100.0 mg/L; 0.0 − 99.0 °C	0.1 mg/L	Yes	30073980	119
ST20T-B	TDS	0.0 − 1000 mg/L; 0.0 − 99.0 °C	1 mg/L	Yes	30073981	119
ST10S	Salinity	0.0 – 10.0 ppt	0.1 ppt	Not Available	30073982	81
ST20S	Salinity	0.0 − 80.0 ppt; 0.0 − 99.0 °C	0.1 ppt	Yes	30073983	119
ST10R	ORP	-1000 – 1000 mV	1 mV	Not Available	30073984	133
ST20R	ORP	-1000 − 1000 mV; 0.0 − 99.0 °C	1 mV	Yes	30073985	178
ST20D	Dissolved Oxygen	0.0 – 80.0 ppt	0.1 mg/L	Yes	30073986	415

Accessories	Item No.	List Price (USD)
Zero Oxygen Chemicals, STARTER	30059257	23
Buffer pH4.01 250 ml	30100425	18
Buffer pH7.00 250 ml	30100427	18
Buffer pH10.01	30100429	18

Accessories	Item No.	List Price (USD)
Standard Conduct 84µs/cm 250 ml	30100442	22
Standard Conduct 1413µs/cm 250 ml	30100443	22
Standard Conduct 12.88mS/cm 250 ml	30100444	22
Membrane Kit Replaceable, ST20D	30222084	105





















# STARTER ELECTRODES

OHAUS Precision Powers the Starter Electrodes

#### Construction

Glass, plastic or metal

#### **Design Features**

Can be used in conjunction with all Starter bench and portable meters



All sturdy and durable electrodes are constructed of either plastic or glass shafts and built to withstand daily use.

All electrodes include a temperature sensor, which powers automatic temperature compensation and ensures accurate measurements.

All electrodes fit perfectly in the electrode holders on OHAUS bench meters and electrode clips on all OHAUS portable meters.

Model	ST5000, ST3100, ST2100, & ST300	ST3100M	ST3100C & ST300C	ST300D	ST400	ST400M	ST400D	Temperature	Shaft Material	ltem No.	List Price (USD)
ST230	•	•							Glass	83033968	126
ST260	•	•							Glass	30129357	168
ST270	•	•							Glass	30240974	299
ST350	•	•						•	Glass	30129354	179
STMICR05	•	•							Glass	30087566	257
STMICR08	•	•							Glass	30087569	275
STPURE	•	•							Glass	83033969	140
STREF1	•	•							Glass	30059253	149
STORP2	•	•							Glass	30038553	253
STORP1	•	•							Plastic	30038555	95
ST210	•	•							Plastic	83033966	67
ST272	•	•							Plastic	30393265	175
ST310	•	•						•	Plastic	83033965	144
ST320	•	•						•	Plastic	83033967	144
STSURF	•	•							Plastic	30129470	163
STCON3		•	•					•	Plastic	83033972	306
STCON7		•	•					•	Plastic	30080693	550
STD011				•					Plastic	30031639	372
STD021, 1m							•	•	Plastic	30378544	1135
STD021, 5m							•	•	Plastic	30378545	1155
STTEMP30	•	•		•				•	S.Steel	83033970	82
ST320 IP67					•	•			Plastic	30468960	185
STCON3 IP67						•			Plastic	30468962	405















# **EQUIPMENT & INSTRUMENT ACCESSORIES**

## **Bead Mill Homogenizer Accessories**

Accessories	Item No.	List Price (USD)
White, Bacteria, 2mL tube, 100/box	30391402	333
Yellow, Yeast, 2mL Tube, 100/box	30391404	333
Blue, Fungi, 2mL Tube, 100/box	30391405	333
Orange, Soft Sample, 2mL Tube, 100/box	30391406	333
Green, Plant, 2mL Tube, 100/box	30391408	333
Red, Animal Tissue, 2mL Tube, 100/box	30391409	333
Brown, Environmental, 2mL Tube, 100/box	30391410	340
Tube Rack, 25 × 2ml Tubes, 2 per pack	30391431	13
Sample Tube Kit, 14 Tubes	30391433	39

### **Centrifuge Tube Adapters**

Accessories	Item No.	List Price (USD)
Adapter, D6mm, 0.2/0.4ml Tubes × 6	30130884	98
Adapter, D8mm, 0.5ml Tubes $\times$ 6	30130885	98
Adapter, D11mm, 1.5/2.0ml Tubes $\times$ 6	30130886	192
Adapter, D12.6mm, 1.0ml Cryo × 6	30130887	305
Adapter, D12.6mm, 1.8ml Cryo × 6	30130888	305
Adapter, D13.5mm, 7ml Tubes $\times$ 2	30130889	116
Adapter, D13.5mm, 5ml Tubes × 2	30130890	106
Adapter, D26mm, 30ml Tubes $\times$ 2	30130891	242
Adapter, D18mm, 16ml Tubes × 2	30130892	242
Adapter, D17mm, 15ml Tubes $\times$ 2	30130893	242
Adapter, D17mm, 15ml RB Tubes × 2	30130894	169
Adapter, 9 × 1.5/2.0ml D11mm, 2/pk	30304368	286
Adapter, 8 × 1.5ml D11mm, 2/pk	30304369	267
Adapter, 5 × 10ml D16mm RB, 2/pk	30304370	267
Adapter, 4 × 15ml D17mm FA, 2/pk	30304371	267
Adapter, 2 × 30ml D26mm RB, 2/pk	30304372	267
Adapter, 1 × 50ml D30mm RB, 2/pk	30304373	267
Adapter, 1 × 50ml D30mm FA, 2/pk	30304374	267
Adapter, 48 × 1.5/2.0ml D11mm, 2/pk	30314891	815
Adapter, 1 × 15ml D17.5mm FA, 2/pk	30314892	207
Adapter, 1 × 15ml D17mm RB, 2/pk	30314893	184
Adapter, 1 × 30ml D25mm RB, 2/pk	30314894	184
Adapter, 1 × 50ml D29mm RB, 2/pk	30314895	184
Adapter, 1 × 50ml D29mm FA, 2/pk	30314896	184
Adapter, 1 × 15ml D17mm FA, 2/pk	30314897	184
Adapter, 2 × 15ml D17mm RB, 2/pk	30314898	184
Adapter, 1 × 16ml D18mm RB, 2/pk	30314899	184
Adapter, $1 \times 1.5$ ml for over $16000 \times g$ , $6/pk$	30314900	100

### **Dry Block Heater Accessories**

Accessories	Item No.	List Price (USD)
Test Tube Combination	30400156	147
Centrifuge Tube Combination	30400193	147
Micro-Tube Combination	30400194	147
12 × 15mL Conical Tube	30400172	147
$5 \times 50$ mL Conical Tube	30400168	147
$2 \times (12)$ 12.5 mm Cuvettes	30400161	176
2 Block Cover	30400179	131
4 Block Cover	30400180	127
6 Block Cover	30400181	138
$30 \times 0.5$ mL Tube	30400157	147
$20 \times 1.5$ mL Tube	30400159	147
20 × 1.5 mL Eppendorf™ Tube	30400162	147
20 × 2 mL Eppendorf™ Tube	30400191	147
20 × 2 mL Corning™ Tube	30400192	147
2 × 96-well PCR Plate	30400171	330
10 × 8 Tube Strips	30400169	163
64 × Individual PCR Tubes	30400170	163
Solid Block, Single	30400160	147
Solid Block, Double	30400166	215
$30 \times 6$ mm Tube	30400158	147
$24 \times 10 \text{ mm Tube}$	30400151	147
$20 \times 12/13$ mm Tube	30400152	147
16 × 12/13 mm Tube	30400165	147
$12 \times 15/16$ mm Tube	30400153	147
12 × 17/18 mm Tube	30400195	147
$8 \times 20  \text{mm}  \text{Tube}$	30400154	147
$6 \times 25$ mm Tube	30400155	147
$4 \times 35$ mm Tube	30400167	147
Sand Bath, 1 Block Dry Block Heater	30400173	316
Sand Bath, 2 Block Dry Block Heater	30400174	329
Sand Bath, 4 Block Dry Block Heater	30400175	352
Sand Bath, 6 Block Dry Block Heater	30400176	365
Sand, 1 lb (0.45 kg)	30400177	90
Stainless Steel Shot, 1 lb (0.45 kg)	30400178	110
Titer Plate	30400164	301

## **Dry Block Heater Accessories**

Accessories	Item No.	List Price (USD)
20 × 12 mm Vial	30400182	147
$20 \times 15$ mm Vial	30400183	147
16 × 16 mm Vial	30400190	147
$12 \times 17$ mm Vial	30400184	147
12 × 19 mm Vial	30400185	147
$9 \times 21 \text{ mm Vial}$	30400186	147
$8 \times 23$ mm Vial	30400187	147
$8 \times 25$ mm Vial	30400188	147
$6 \times 28$ mm Vial	30400189	147

# Extreme Environment and Heavy Duty Shaker Accessories

Accessories	Item No.	List Price (USD)
18 × 18" (45.7 × 45.7 cm) Culture Platform	30400066	374
$18 \times 24$ " (45.7 × 61 cm) Culture Platform	30400067	390
13 × 13" (33 × 33 cm) Dedicated Platform / 125 mL Flask Clamp	30400075	590
$13 \times 13$ " (33 $\times$ 33 cm) Dedicated Platform / 250 mL Flask Clamp	30400076	590
$13 \times 13$ " (33 $\times$ 33 cm) Dedicated Platform / 500 mL Flask Clamp	30400077	590
$13 \times 13$ " (33 × 33 cm) Dedicated Platform / 1 L Flask Clamp	30400078	590
$18 \times 18$ " (45.7 $\times$ 45.7 cm) Dedicated Platform / 125 mL Flask Clamp	30400079	650
$18 \times 18$ " (45.7 $\times$ 45.7 cm) Dedicated Platform / 250 mL Flask Clamp	30400080	650
$18 \times 18$ " (45.7 $\times$ 45.7 cm) Dedicated Platform / 500 mL Flask Clamp	30400081	650
$18 \times 18$ " (45.7 $\times$ 45.7 cm) Dedicated Platform / 1 L Flask Clamp	30400082	650
18" (45.7 cm) Adjustable Bar (with Mounting Hardware)	30400083	630
Two-Tier Braces (set of 4)	30400051	119

## Frontier Multi Pro Centrifuge Accessories

Accessories	Price USD	List Price (USD)
Bucket, 100ml w/o Cap, 2/pk	30314860	321
Bucket, 100ml w/ Cap, Sealable, 2/pk	30314861	386
Screw Cap, 100ml Bucket, Sealable, 2/pk	30314862	113
O-ring, 100ml Bucket, Sealable, 10/pk	30314863	54
Bucket, $2 \times 50$ ml D29mm FA, w/ Rack, 2/pk	30314881	500
Bucket, $3 \times 15$ ml D17mm FA, w/ Rack, 2/pk	30314882	505
Bucket, $3 \times MTP$ , $2/pk$	30314890	3080
Rack, $8 \times 4$ -10ml D16mm Vac, $2/pk$	30304367	311
Rack, $4 \times 50$ ml D29mm FA, $2/pk$	30304375	421
Rack, $10 \times 15$ ml D17mm FA, 2/pk	30314583	421
Rack, 14 × 5-7ml D13mm Vac/Sar, 2/pk	30314584	421
Rack, $12 \times 4$ -10ml D16mm Vac/Sar, 2/pk	30314585	421
Rack, $1 \times 100$ ml D46mm RB, $2/pk$	30314842	263
Rack, $1 \times 85$ ml D38mm RB, $2$ /pk	30314843	263
Rack, 1 $\times$ 50ml D34mm RB, 2/pk	30314844	263
Rack, $1 \times 50$ ml D29mm RB, $2/pk$	30314845	263
Rack, $1 \times 50$ ml D29mm FA, $2/pk$	30314846	263
Rack, $1 \times 50$ ml D29mm Rim, $2/pk$	30314847	263
Rack, $1 \times 30$ ml D25mm Rim, $2/pk$	30314848	263
Rack, $1 \times 25$ ml D25mm RB, $2$ /pk	30314849	263
Rack, $2 \times 15$ ml D17mm FA, $2$ /pk	30314850	263
Rack, $1 \times 15$ ml D17mm Rim, $2$ /pk	30314851	263
Rack, $7 \times 15$ ml D17mm RB, 2/pk	30314852	263
Rack, $9 \times 5$ -7ml D13mm RB, $2/pk$	30314853	263
Rack, $10 \times 1.5$ ml D11mm, $2/pk$	30314854	263
Rack, $9 \times 4.5$ ml D12mm FB, $2/pk$	30314855	263
Rack, $7 \times 5$ -7ml D13mm RB, 2/pk	30314856	263
Rack, $7 \times 5$ -7ml D13mm Vac, 2/pk	30314857	263
Rack, $5 \times 4$ -10ml D16mm Sar, $2/pk$	30314858	263
Rack, $1 \times 100$ ml D40mm RB, $2/pk$	30314864	236
Rack, 1 × 85ml D38mm RB, 2/pk	30314865	236
Rack, 1 $\times$ 50ml D34mm RB, 2/pk	30314866	236
Rack, $1 \times 50$ ml D29mm RB, $2/pk$	30314867	236
Rack, 1 $\times$ 50ml D29mm FA, 2/pk	30314868	236
Rack, $1 \times 50$ ml D29mm Rim, $2/pk$	30314869	236
Rack, $1 \times 30$ ml D25mm Rim, $2/pk$	30314870	236
Rack, $1 \times 25$ ml D25mm RB, $2$ /pk	30314871	242
Rack, $1 \times 15$ ml D17mm FA, $2$ /pk	30314872	242
Rack, $2 \times 15$ ml D17mm FA, $2$ /pk	30314873	242
Rack, $2 \times 15$ ml D17mm Rim, $2$ /pk	30314874	242
Rack, $4 \times 15$ ml D17mm RB, $2$ /pk	30314875	242
Rack, $7 \times 5$ -7ml D13mm RB, 2/pk	30314876	242
Rack, $5 \times 1.5$ ml D11mm, $2/pk$	30314877	242
Rack, $3 \times 10$ ml D17mm Sar, $2/pk$	30314878	242
Rack, $4 \times 5$ -7ml D13mm RB, $2/pk$	30314879	242
Rack, $4 \times 10$ ml D17mm Vac, $2/pk$	30314880	236

### Frontier Multi Pro Centrifuge Accessories

Accessories	Item No.	List Price (USD)
Screw Cap, Rack of 250ml Rotor, 2/pk	30314901	128
O-ring, Rack of 250ml Rotor, 10/pk	30314902	66
Rack, 1x250ml D62mm FB, 2/pk	30314903	302
Rack, 1x100ml D41mm RB, 2/pk	30314904	302
Rack, 3x50ml D29mm RB, 2/pk	30314905	302
Rack, 3x50ml D29mm FA, 2/pk	30314906	302
Rack, 1x50ml D34mm RB, 2/pk	30314907	302
Rack, 2x50ml D29mm Rim, 2/pk	30314908	302
Rack, 1x50ml D29mm Rim, 2/pk	30314909	302
Rack, 5x25ml D24.5mm RB, 2/pk	30314910	302
Rack, 3x25ml D24.5mm Rim, 2/pk	30314911	302
Rack, 9x15ml D17mm RB, 2/pk	30314912	302
Rack, 7x15ml D17mm FA, 2/pk	30314913	302
Rack, 7x15ml D17mm Rim, 2/pk	30314914	302
Rack, 8x10ml D16mm RB, 2/pk	30314915	302
Rack, 14x5-7ml D13mm RB, 2/pk	30314916	302
Rack, 10x1.6-7ml D13mm Vac, 2/pk	30314917	302

## **Heavy Duty Shaker Accessories**

Accessories	Item No.	List Price (USD)
4-bar Large Vessel Carrier Platform	30400070	1360
4-bar Large Vessel Carrier Platform	30400071	1425
5-bar Large Vessel Carrier Platform	30400072	1825

### **Heavy Duty Vortex Mixer Accessories**

Accessories	Item No.	List Price (USD)
Foam insert for 0.5 mL microtubes	30400216	44
Foam insert for 1.5 to 2.0 mL microtubes	30400217	44
Foam insert for 12-13 mm test tubes	30400220	44
Foam insert for 15-18 mm test tubes	30400221	44
Foam insert for 19-21 mm test tubes	30400222	44
Foam insert for 22-25 mm test tubes	30400223	44
Foam insert for 26-29 mm test tubes	30400224	44

### **Heavy Duty Vortex Mixer Accessories**

Accessories	Item No.	List Price (USD)
Flat Foam Insert	30400209	44
Large Vessel Holder	30400211	53
Microplate Single Holder	30400215	63
Microplate Double Holder	30400213	71
Microplate Quad Holder	30400214	143
Small Vessel Holder	30400218	53
Universal Holder	30400226	65
Universal Holder Cover	30400225	23
Stackable Microplate Holder	30400212	134

## **Incubating Cooling Thermal Shaker Accessories**

Accessories	Item No.	List Price (USD)
24 × 2.0 mL Cryotubes	30400133	850
$30 \times 0.5$ mL Microtubes	30400129	850
$24 \times 1.5$ mL Microtubes	30400130	850
$24 \times 2.0$ mL Microtubes	30400131	850
$24 \times 5$ -7 mL Tubes	30400132	850
Microplate Thermal Block with Lid	30400126	1120
384 Well Plate Thermal Block with Lid	30400127	1120
0.2 mL PCR Plate Thermal Block with Lid	30400128	1120
5 mL Eppendorf Tube Block	30400134	850
15 mL Conical Tubes	30400135	850
50 mL Conical Tubes	30400136	850

### **Light Duty Shaker Accessories**

Accessories	Item No.	List Price (USD)
8.6" (21.8 cm) Adjustable Bar(with Mounting Hardware)	30400122	49
18" (45.7 cm) Adjustable Bar (with Mounting Hardware)	30400073	65
2-bar Adjustable Platform	30400121	535
4-bar Adjustable Platform	30400068	570
4-bar Adjustable Platform	30400069	815
18" (45.7 cm) Adjustable Bar (with Mounting Hardware)	30400073	65
24" (61 cm) Adjustable Bar (with Mounting Hardware)	30400074	81
Dilution Cup Tray	30400125	240
Universal Harness	30400123	44

#### Mini Vortex Mixer Accessories

Accessories	Item No.	List Price (USD)
Single Tube Holder	30400202	184
Cup Head	30400210	43
Cup Head	30400235	43
Micro-Tube Holder (0.5 mL)	30400204	80
Microtube Holder (1.5 mL to 2.0 mL)	30400205	80
9 to 13 mm Tube Holder (2 pack)	30400229	35
14 to 19 mm Tube Holder (2 pack)	30400230	35
20 to 25 mm Tube Holder (2 pack)	30400231	35
3" (7.6 cm) Rubber Head Cover	30400196	59
3" (7.6 cm) Head	30400236	43
3" (7.6 cm) Head with Rubber Cover	30400237	43
15 to 17 mm Ampule Tube Holder	30400207	136
10 to 17 mm Ampule Tube Holder	30400208	191
Adapter Plate For Vortex-Genie® Mixer	30400203	94
Flat Foam Insert (2 pack)	30400234	33
Insert Retainer	30400227	142
Foam Insert Variety Pack	30400201	64
Microplate Holder (2 pack)	30400233	73
Micro-Tube Holder (2 pack)	30400232	73
Micro-Tube & Microplate Holder Kit	30400198	126
Microtube Kit with /Retainer	30400200	126
Microwell Kit with Retainer	30400199	126
Rack For $30 \times 0.5$ mL Tube Block	30400250	44
Rack For 24X1.5 / 24X2.0 mL Tube Blocks	30400251	44
Cover For 0.5mL/1.5mL/2.0mL Tube Blocks	30400252	30
Microtube Holder	30400206	292
Vessel Harness (2 pack)	30400228	12
Tube Holder Kit	30400197	215

#### **Multi-Tube Vortex Mixer Accessories**

Accessories	Item No.	List Price (USD)
50 × 10 mm Test Tube Foam Rack	30400238	39
50 × 12 mm Test Tube Foam Rack	30400239	38
50 × 13 mm Test Tube Foam Rack	30400240	38
50 × 16 mm Test Tube Foam Rack (for 15 mL centrifuge tubes)	30400241	50
28 × 25 mm Test Tube Foam Rack	30400243	50
15 × 29 mm Test Tube Foam Rack (for 50 mL centrifuge tubes)	30400242	50
Replacement Tray Pad Set (upper & lower)	30400245	56
Post Extension Kit	30400244	195

## Open Air and Incubating Shaker Accessories

Accessories	Item No.	List Price (USD)
11 × 13 Platform (4 Microplate Clamps)	30400052	220
$13 \times 13$ Platform (6 Microplate Clamps)	30400053	313
$18 \times 18$ Platform (12 Microplate Clamps)	30400054	375
Universal Platform, $18 \times 18$ cm, S/S I-IR	30400055	365
18 × 24 Platform (18 Microplate Clamps)	30400056	422
18 × 30 Platform (21 Microplate Clamps)	30400057	1000
24 × 24 Platform (24 Microplate Clamps)	30400058	960
24 × 36 Platform (36 Microplate Clamps)	30400059	1280
Microplate Clamp	30400104	64
Stacking Tray, 12.75 $\times$ 10" (32.4 $\times$ 25.4 cm)	30400114	170
10 mL Erlenmeyer Flask Clamp	30400084	39
25 mL Erlenmeyer Flask Clamp	30400085	39
50 mL Erlenmeyer Flask Clamp	30400086	41
125 mL Erlenmeyer Flask Clamp	30400087	41
250 mL Erlenmeyer Flask Clamp	30400088	41
500 mL Erlenmeyer Flask Clamp	30400089	45
1 L Erlenmeyer Flask Clamp	30400090	60
2 L Erlenmeyer Flask Clamp	30400091	94
2.8 L Fernbach Flask Clamp	30400092	125
3 L Fernbach Flask Clamp	30400093	169
4 L Erlenmeyer Flask Clamp	30400094	155
5 L Erlenmeyer Flask Clamp	30400095	188
$11 \times 13$ " (27.9 × 33 cm) Rubber Mat	30400060	63
$13 \times 13$ " (33 × 33 cm) Rubber Mat	30400061	76
$18 \times 18$ " (45.7 × 45.7 cm) Rubber Mat	30400062	109
18 × 24" (45.7 × 61 cm) Rubber Mat	30400063	120
$24 \times 24$ " (61 × 61 cm) Rubber Mat	30400064	142
24 × 36" (61 × 91.4 cm) Rubber Mat	30400065	157
6 L Erlenmeyer Flask Clamp	30400096	184
500 mL Media Bottle Clamp	30400097	116
1 L Media Bottle Clamp	30400098	126
125 mL Erlenmeyer Flask Clamp	30400099	44
250 mL Erlenmeyer Flask Clamp	30400100	45
500 mL Erlenmeyer Flask Clamp	30400101	51
1 L Erlenmeyer Flask Clamp	30400102	57
2 L Erlenmeyer Flask Clamp	30400103	95

## Open Air and Incubating Shaker Accessories

Accessories	Item No.	List Price (USD)
1.5 to 2 mL Micro-Tube Rack Half Size, Stationary	30400114	170
10 to 13 mm Test Tube Rack Half Size, Stationary	30400115	187
14 to 16 mm Test Tube Rack Half Size, Stationary	30400116	187
18 to 20 mm Test Tube Rack Half Size, Stationary	30400117	187
22 to 25 mm Test Tube Rack Half Size, Stationary	30400118	187
15 mL Centrifuge Tube Rack Half Size, Stationary	30400119	194
50 mL Centrifuge Tube Rack Half Size, Stationary	30400120	194
10 to 14 mm Test Tube Rack Full Size, Stationary	30400110	368
16 to 20 mm Test Tube Rack Full Size, Stationary	30400111	368
21 to 25 mm Test Tube Rack Full Size Stationary	30400112	368
50 mL Centrifuge Tube Rack Full Size, Stationary	30400113	386
13 mm Test Tube Rack Full Size, Pivoting	30400105	328
16 mm Test Tube Rack Full Size, Pivoting	30400106	328
20 mm Test Tube Rack Full Size, Pivoting	30400107	328
25 mm Tube Rack Full Size, Pivoting	30400108	328
30 mm Tube Rack Full Size, Pivoting	30400109	328
$11 \times 13$ " (27.9 $\times$ 33 cm) Universal Platform	30400052	220
$13 \times 13$ " (33 $\times$ 33 cm) Universal Platform	30400053	313
$18 \times 18$ " (45.7 $\times$ 45.7 cm) Universal Platform	30400054	375
$18 \times 24$ " (45.7 × 61 cm) Universal Platform	30400056	422
$24 \times 24$ " (61 $\times$ 61 cm) Universal Platform	30400057	1000
$18 \times 30$ " (45.7 × 76.2 cm) Universal Platform	30400058	960
$24 \times 36$ " (61 $\times$ 91.4 cm) Universal Platform	30400059	1280
Two-Tier Braces (set of 4)	30400051	119

### **Laboratory Instrument Accessories**

Accessories	Item No.	List Price (USD)
Pen Meter Electrode pH10 ST	30087992	39
Pen Meter Electrode pH20 ST	30087993	69
Pen Meter Electrode ST20M-B	30393203	63
Pen Meter Electrode ST20M-C	30393204	63
Pen Meter Electrode CT10A ST	30087994	56
Pen Meter Electrode CT10B ST	30087995	56
Pen Meter Electrode CS10C ST	30087996	56
Pen Meter Electrode CT20A ST	30087997	56
Pen Meter Electrode CT20B ST	30087998	56
Pen Meter Electrode CS20C ST	30087999	56
Pen Meter Electrode R10 ST	30088020	84
Pen Meter Electrode R20 ST	30088021	110
Pen Meter Electrode ST20D	30222083	236
pH electrolyte (KCl saturated AgCl, 30ml)	30059255	34
pH electrode protection solution(3M KCl)	30059256	27
pH sensor protect bottle(10 in bag)	30064800	47
Zero Oxygen Chemicals, STARTER	30059257	23
Buffer pH1.68 250 ml	30100424	22
Buffer pH4.01 250 ml	30100425	18
Buffer pH6.86 250 ml	30100426	18
Buffer pH7.00 250 ml	30100427	18
Buffer pH9.18 250 ml	30100428	18
Buffer pH10.01 250 ml	30100429	18
Buffer pH12.45 250 ml	30100440	22
Standard Conduct 10 µs/cm 250 ml	30100441	22
Standard Conduct 84 µs/cm 250 ml	30100442	22
Standard Conduct 1413 µs/cm 250 ml	30100443	22
Standard Conduct 12.88 mS/cm 250 ml	30100444	22
Buffer Powder pH4.01; 7.00; 10.01	83033971	24

## Rocking and Waving Shaker Accessories

Accessories	Item No.	List Price (USD)
Dimpled Mat, 12.75 × 10" (32.4 × 25.4 cm)	30400140	59
Dimpled Mat, 11.75 × 8.75" (29.9 × 22.2 cm)	30400142	59
Dimpled Mat, $10 \times 7.5$ " (25.4 × 19.1 cm)	30400141	59
Dimpled Mat, $9.25 \times 7.25$ " (23.5 × 18.4 cm)	30400143	59
Dimpled Mat, 11.75 × 8.75" (29.9 × 22.2 cm)	30400124	56
Dimpled Mat, $14 \times 11$ " (35.6 × 27.9 cm)	30400144	68
Stacking Tray, 12.75 $\times$ 10" (32.4 $\times$ 25.4 cm)	30400137	141
Stacking Tray, 11.75 × 8.75" (29.9 × 22.2 cm)	30400138	172
Stacking Tray, $14 \times 11$ " (35.6 × 27.9 cm)	30400139	125

# **OHAUS Resources**

## TERMS AND CONDITIONS OF SALE

#### U.S. and Canada

Terms are net 30 days, FOB Worthington, Ohio USA, a service charge of 1.5% will be applied on invoice amounts past due 30 days • All orders for immediate release • No cancellations within 48 hours of acknowledged ship date • Prices, terms & specifications subject to change without prior notice • Drop shipments not available in Canada • OHAUS Corporation's products are warranted against defects in materials & workmanship from date of delivery through duration of the warranty period. During the warranty period OHAUS will repair, or, at its option, replace any component(s) that proves to be defective at no charge, provided that the product is returned, freight prepaid, to OHAUS Corporation. All other approved returns require issuance of a Return Order number from Parsippany, NJ, USA and may be subject to a 20% restocking fee. This warranty does not apply if the product has been damaged by accident or misuse, exposed to radioactive or corrosive materials, has foreign material penetrating to the inside of the product, or as a result of service or modification by other than the OHAUS Corporation or an authorized OHAUS Regional Service Center. This warranty only covers products shipped within the United States and to Canada by OHAUS Corporation to the dealer within the United States and in Canada. The warranty period for OHAUS products shall begin at the date of shipment to the end-user, or 3 months from the date of shipment to the dealer by OHAUS Corporation, whichever occurs first. A properly completed Warranty Registration Form must be received by OHAUS Corporation or product may be registered at www.ohaus.com within 30 days from the date of purchase to initiate coverage under the warranty. No other expressed or implied warranty is given by OHAUS Corporation. OHAUS Corporation shall not be liable for any consequential damages.

#### Outside U.S. and Canada

Payment terms: As per agreement • All prices Ex-Factory, Worthington, Ohio USA • Service charge of 1.5% will be applied on invoice amounts past due • All approved returns require issuance of a Return Order number from Parsippany, NJ, USA • Restocking fee 20% of dealer net • Minimum order: \$50.00 • All orders for immediate release • No cancellations within 48 hours of acknowledged ship date • Prices, terms & specifications subject to change without prior notice.

#### **Business Partner Code of Conduct**

OHAUS is committed to conducting its business ethically, legally and in a socially responsible manner. We expect our business partners and Dealers to share this commitment and we have therefore developed this Business Partner Code of Conduct. It covers Ethical Conduct, Fair Competition, Environment, Health and Safety, as well as Labor Practices. This code applies to all your activities in your business relationship with us. It defines the minimum standards of business conduct we expect you to comply with in your business relationship with OHAUS. You must also comply with all applicable laws, regulations, and codes of the countries in which you operate. We encourage you to work with your own business partners to ensure they also strive to meet the principles of this code, or equivalent principles. For more information and to view the whole code, please visit ohaus.com/business-partner.

	6 Month Warranty		3 Year Warranty
Starter Series Electrodes		Harvard Junior® Balances	
	1 Year Warranty		TJ611 Balance
Accessories	Frontier Mini Centrifuge	Scale Bases, all models	5 Year Warranty
Aviator® Scales	Hand Held Scales	SD & Catapult Scales	All Other Mechanical Balances
CKW Scales	Indicators, all models	Spring Scales	10 Year Warranty
CX & CR Scales	JE Emerald & JR Ruby Scales	Starter Series Meters	Triple Beam Pro® Balances
D500 Beam Scales	MB23 with MB27	TAJ Scales	
Defender® Scales	Navigator® Scales	Valor® Scales	
Drum & VN/VX Floor Scales	Primer® Balance	Weights & Weight Sets	
ES Scales	PS Scales	Y Series Scales	
FD Scales	Ranger® Scales		
	2 Year Warranty		
Adventurer® Balances	Homogenizers	Pioneer® Balances	
Dry Block Heaters	Incubating & Incubating Cooling Shakers	PR Series Balances	
Explorer® Balances	Labjaws Clamps & Supports	Scout® STX , SPX & SJX Balances	
Frontier Micro & Multi Centrifuges	MB90 & MB120	Specialty Stirrers	
Guardian™ Hotplates & Stirrers	Open Air Shakers	Vortex Mixers	
Heavy Duty Incubating/Cooling Shakers	Achiever™ Overhead Stirrers		

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## **OHAUS MINIMUM ADVERTISED PRICE (MAP) POLICY**

#### Section 1. Purpose and Applicability:

- a) OHAUS Corporation ("OHAUS") has adopted this Minimum Advertised Price (MAP) policy to protect the reputation of its brand name, better serve our customers, and to properly position the OHAUS brand in the marketplace. OHAUS products which are subject to this MAP policy are defined in the Appendix.
- b) This Policy has been unilaterally adopted and will be enforced strictly and uniformly.
- c) The minimum advertised prices (MAPs) effective January 1, 2021 are set forth in the schedule below, exclusive of all state and local taxes.

#### Section 2. Geographic Scope and Modification:

- a) OHAUS has unilaterally established this Minimum Advertised Price ("MAP") Policy and it is applicable to its United States and Canadian based resellers. It may be modified at any time by OHAUS, and the minimum advertised price may be affected by promotional periods designated by OHAUS.
- b) No dealer's consent or agreement to this Policy is sought and no such consent or agreement will be accepted by OHAUS. OHAUS is providing this Policy to dealers strictly as notice.

#### Section 3. Minimum Advertised Pricing Rules and Violations:

- a) Resellers shall not post OHAUS products for sale in any online or other marketplace if such a posting will result in the advertisement, by the Reseller or by the marketplace, of prices below the MAPs set by OHAUS.
- b) Resellers are free to establish their own resale prices; however, they should not advertise OHAUS products below the minimum advertised prices (MAP) set by OHAUS.
- c) Advertising includes any form of providing information about pricing that is not associated with the act of purchasing or negotiating the purchase of a product. Examples of advertising include, but are not limited to, signage, catalogs, displays, mailings, flyers, internet advertisements, internet price lists, and internet "click here" links or pop-ups and similar web-based techniques. For purposes of this policy, advertising does not include responses to email inquiries, verbal communications, or prices displayed in internet "shopping carts" or "baskets."
- d) It is a violation of this MAP policy for any reseller to state or suggest in advertising or on a web site that a price lower than the MAP for an OHAUS product may be available during an online checkout or purchase process, including but not limited to the following: "click here for lower price," "add to cart for discounted price," "price too low to advertise", or a line through the price which indicates a lower price is available. If the customer moves a product to the online shopping cart and establishes the intent to purchase, then those further negotiations are outside this MAP Policy.
- e) It is not a violation of this MAP Policy to advertise that a customer may "call for price" or "email for price," "Request a Quote", specifically with respect to MAP Products, so long as no price is listed below MAP level.
- f) OHAUS will monitor the resale market to ensure dealers are in compliance with the MAPs set by OHAUS.
- g) This Policy does not apply to refurbished or discontinued OHAUS products.

#### Section 4. Penalties and Administration:

- a) Upon verification that a dealer has advertised any of OHAUS Corporation's products at a price less than the minimum advertised price established and announced by OHAUS Corporation, OHAUS will, without assuming any liability, take unilateral action including but not limited to: (1) sending warning letters to notify dealers of violations; (2) revoking buying privileges for products in violation of this policy for 30 days, 90 days and up to one year based on number of warnings (3) and indefinitely refusing to accept any new orders from any reseller. OHAUS may take any of these actions in any order.
- b) If a reseller with multiple websites or store locations violates this MAP Policy at any one website or store location, OHAUS will consider this to be a violation by the reseller.
- c) OHAUS has established an internal MAP manager. All communication regarding MAP Policy should be directed to <a href="mailto:ohaus.com">ohaus.com</a> and not to any other representative of OHAUS. The Manager is responsible for monitoring pricing and for MAP enforcement. OHAUS will not respond to any communication reporting a violation of this policy.
- d) In addition to other methods, OHAUS may use a third party to monitor pricing on the internet. Any third party who monitors OHAUS pricing has no authority to make any decisions about enforcement or application of this Policy or any other OHAUS business

#### Appendix

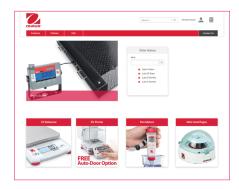
• The minimum advertised prices (MAPs) effective January 1, 2021 are set forth below, exclusive of all state and local taxes.

Product Series	MAP Price % off List Price
Valor® 7000	15%
Ranger® 7000	20%
Defender® 5000 (D52 Models)	10%
Defender® 3000 (DFD Models)	30%
Explorer®	15%
Adventurer®	15%
Pioneer™	15%
PR Series	15%
Moisture Analyzers (MB Series)	15%
Scout® (SKX Series Only)	30%

Download the complete MAP Product Listing

www.OHAUS.com/MAP-Policy

## **DEALER RESOURCES**







### **OHAUS Partner Shop**

The OHAUS Partner Shop is purposefully aimed at delivering a better shopping experience. We've added some great new features, making it easier to use and quicker to navigate. With advanced search capabilities, a convenient comparison function, and an order template designed to help you anticipate and quickly execute all of your ordering needs, the OHAUS Partner Shop was designed with you and your customers in mind.

#### Why Use OHAUS Partner Shop?

- Online Ordering
- View Product Availability and Pricing
- View Order Status
- Track Shipments
- · View Invoices

Contact your OHAUS representative today to experience our Partner Shop!

#### **Contact Us**

#### Orderina

We welcome your orders however you choose to place them!

- Email your order to sales@ohaus.com or
- Order online through the <u>OHAUS Partner Shop</u>

#### **Dealer Support**

We are here to support your sales! Our Customer Service Team is happy to help with any of your questions.

- Email your inquiries to cs@ohaus.com or
- Call us at 1-800-672-7722 and press 1 to reach a Customer Service Representative

#### **Technical Support**

Having technical trouble or questions on how to operate your OHAUS equipment?

Contact one of our Technical Support Specialists to assist you with your technical needs.

- Call us at 1-800-672-7722 and press 3 for Technical Support, or
- Email your question to <u>TechSupport@OHAUS.com</u>

## **DEALER SUPPORT**

#### **Dealer Zone**

OHAUS.com's Dealer Zone is your one-stop resource center for marketing, sales, and service support designed to help you grow your business. Featuring a comprehensive collection of e-launch kits, product information and photos, service and support assistance, promotions, events, and much more, the OHAUS Dealer Zone is a fully-loaded, constantly updated website that allows access to every kind of marketing support. From customizable marketing email templates to product pricing and specifications, the OHAUS Dealer Zone takes the guesswork out of your sales and marketing experience, and gives you the tools you need to keep your own OHAUS materials as up-to-date and effective as possible.

### Why Use OHAUS Dealer Zone?

#### Update your website and catalog with simple access to

- Product photos in a variety of formats (jpg, tif, 360° spins)
- · Web banners for products and promotions
- · Product videos for both overview tutorials as well as popular applications
- The OHAUS Magic Spreadsheet for in-depth product specifications

#### Downloadable content for marketing assistance, such as

- Promotional flyers
- · Customizable email templates to send your customers
- Product-related infographics for a wide range of industries and applications
- Up-to-date OHAUS catalogs and brochures

#### One-click access to essential documents, including

- · Service and instruction manuals
- Up-to-date documents and software for OHAUS products
- Service and support FAQ
- Comprehensive adapter lists and cable guides for OHAUS products

## **OHAUS Service Training Seminars**

Several times a year, OHAUS offers its authorized dealers a Service Training Seminar, held at our facility in Parsippany, NJ. The seminar lasts three days and covers a mix of troubleshooting, load cell repair / replacement, solutions to common problems and access to available service resources. The emphasis will be placed on the practical side of equipment repair.

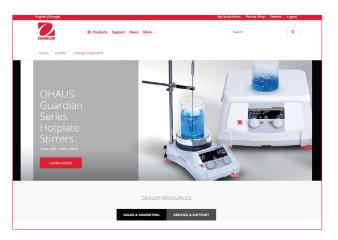
As our weighing and non-weighing portfolio continues to expand, this is also a refresher for those who have attended past seminars, or latest training for any new service personnel.

If you are interested in finding out more about these training seminars, please contact us at  $\underline{\textbf{TechSupport@OHAUS.com}}$ 

## **OHAUS Webinar Series**

The OHAUS Webinar Series features a variety of brief webinars designed to cover a broad range of products and topics. Courses are added continuously, and offer real-time expertise with OHAUS professionals across a variety of features, industries, and applications.

If you are interested in finding out more about our Webinar Series, please contact your regional OHAUS representative.



### **Applications**



Weighing



Checkweighing



ivity



Density Differential Weighing Determination



Display Hold



Dissolved Oxygen



Dynamic Weighing





Formulation



G/N/T



Ingredient Čosting



Moisture **Analysis** 



Oxygen Reduction Potential



рΗ Measurement



Parts Counting



mulation ation



Specific Ġravity



SQC



Percent Weighing



Temperature



Peak Hold



Percent Moisture Regain



Percent Moisture



Percent Solid



Pipette Calibration



Salinity



Total Dissolved Solids

GLP

**GLP Data** 

Output

#### **Features**



Audible Alerts

Software



Auto Shut-Off

Stability

Indicatór



Auto Standby



**Backlight** 



Battery Power



Environmental **Filters** 



**Touchless** Sensors



Weigh Below Hook

External

Analog

Base Input





Multi-Language





Hinged

Cover



1

Security

Bracket



Overload

Protection



Calibration





Stackable



weighing

Indicator

Time/Date





Indicator

Touch

Screen



Leveling Feet



Low **Battery** Indicator



 $\mathsf{GMP}$ 

**GLP** 

GMP/GLP

Overload/ Underload Indicators



able

**Battery** 

**Approvals** 



Measurement

Canada

Approved

















Laboratory Weighing



Laboratory Equipment



Laboratory Instruments



**Industrial** Weighing



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