





Table of Contents

4	Accessories	9
6	Accessories & Telescoping Base Stands	10
7	Hydraulic Lift Base Stands	11
8	SoLo [™] Base Stands	12

Features & Benefits Specifications Ordering Information Dimensional Data

Type A or B? Type C1 does both.

Best of both worlds.

It started with a request for a Type B2 biosafety cabinet (BSC) to connect into an exhaust system with insufficient airflow. A B2 was required because the application involved high volumes of volatile chemical vapors. At the same time, the BSC's ductwork had to be shared with other cabinets. No such BSC existed. Could we combine the chemical safety capabilities of a Type B with the flexibility of a canopy-exhaust Type A2?

A Type A cabinet conserves energy because it recirculates HEPA-filtered air into the room. But it can't protect you from gaseous chemicals because vapors pass freely through the exhaust HEPA filter. When a Type A BSC is canopy connected, only a percentage of air is exhausted. The remainder is recirculated and concentrated in the cabinet. Should an exhaust failure occur, these hazardous gases can enter the room.

A Type B2 cabinet directly exhausts 100% of its air to the outside and can handle both fumes and vapors. But a B2 wastefully exhausts twice the air of an A2 and requires a dedicated exhaust blower to work properly. Both Type A and B cabinets lack flexibility and cannot be converted into another cabinet type, leaving you without future options if your exhaust needs change.

Setting a new standard.

The Type C1 Axiom bridges the gap between Type A and Type B BSCs. Only the Axiom is capable of handling every application. Three key features work together to make it possible:

- Omni-Flex[™] design
- Chem-Zone[™] work surface
- Active Protection Protocol

Maximum safety. Energy savings. Flexibility to adapt when your work changes. The Axiom has it all. Count on Labconco to get it right.

Features & Benefits

Omni-Flex[™] Design

Unlike Type A and B cabinets, the Axiom can adapt as needs change. Omni-Flex allows for installation in recirculating Type A mode or in ducted Type B mode for use with hazardous vapors. If your applications change, simply connect or disconnect Axiom from exhaust.

The Axiom can be tied into almost any existing building ventilation system with sufficient exhaust reserve. Unlike B cabinets, no costly remote blower and dedicated ductwork are required. The blower for a B cabinet must be oversized to account for an increase of 4.0" wg or greater as the exhaust HEPA filter loads. Because the total exhaust area of the Axiom is limited to the Chem-Zone, exhaust air volume is reduced to \approx 40% of a B2. The Axiom's dedicated exhaust blower delivers air to the building exhaust at \approx 0.25" wc throughout the life of the cabinet. Table 1 shows the significantly lower upfront installation cost compared to a Type B1 or B2.



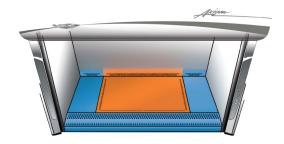
To switch from Type B to A, disconnect the cabinet from the ductwork and move the plate from the left side of the exhaust collar to the right. Use the LCD information center to program the cabinet for Type A mode and recertify. To switch from Type A to B, connect the cabinet to ductwork, move the plate from the right side to the left side and recertify.

Chem-Zone[™] Work Surface

Key to the Axiom is its unique work surface. The surface consists of three pieces—the Chem-Zone dished center and two flat sides. The surface layout promotes the proper technique of organizing your work flow from clean to dirty. The Chem-Zone middle gives you ample room to perform your critical operations while containing spills. The ends function as storage for consumables and waste.

When the Axiom is in A mode (Figure 1), the filtered air is simply recirculated back into the lab. When operated in B mode (Figure 2), all chemical vapors and particulates generated from work in the Chem-Zone area are ensured a direct path to the exhaust filter. One hundred percent of air is exhausted to the outside. Inflow air at the front grille and air from either side of the Chem-Zone are recirculated to save energy.

Table 1 outlines the lifetime savings of using Axiom versus a Type B2 BSC. The Chem-Zone reduces airflow demand, resulting in savings of more than 50%.



Shown in orange, the Chem-Zone is dished and delineated by airflow slots. Chem-Zone provides the primary working area for critical operator actions. The surfaces on either side of the Chem-Zone serve as staging areas.

Table 1

15 Year Costs*	Type A2	Type A2 With		Type B2	Axiom Type C1	
		Canopy			In A Mode	In B Mode
Upfront Installation	\$300	\$400	\$5,150	\$5,150	\$300	\$400
Lifetime maintenance	\$4,500	\$4,500	\$4,500	\$4,500	\$4,500	\$4,500
Lifetime operation	N/A	\$40,500	\$40,500	\$87,000	N/A	\$42,000
ESTIMATED TOTAL COST	\$4,800	\$45,400	\$50,150	\$96,650	\$4,800	\$46,900

*Upfront installation costs include labor, ductwork, blower (where applicable) and electrical hook up. Lifetime maintenance costs include HEPA filters and annual certification. Lifetime operation cost is cost of exhausted air of \$8/year/CFM for 15 years.

Features & Benefits

Figure 1 - Type A mode

When operated in Type A mode, room air is drawn into the inlet grille and directed below the plenum of the work surface where it mixes with air that has passed over the areas on either side of the Chem-Zone. This contaminated air mixture is drawn through the back plenum where it is recirculated through the supply HEPA filter and back over the work area. Air passing over the Chem-Zone is directed through the exhaust HEPA filter and returned to the room.

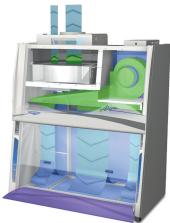






Figure 2 - Type B mode

When operated in Type B mode, 100% of the air passing over the Chem-Zone is directed through the exhaust HEPA filter and delivered to the ductwork where house exhaust can take over. Air passing over the areas on either side of the Chem-Zone is recirculated through the cabinet.

Recirculated air

Directly exhausted air



Active Protection Protocol

The Axiom's dual ECM motors use Constant Airflow Profile™ (CAP) to ensure accurate and precise airflow. With CAP, the Axiom actively maintains airflow even during an exhaust failure.

CAP knows that remote blower failure has occurred by detecting increasing exhaust system resistance (static pressure). This event triggers Active Protection Protocol, which maintains a safe inflow and downflow for up to five minutes (Figure 3). You have time to evacuate without risking exposure.

Active Protection Protocol is capable of overcoming considerable static pressure while maintaining safe airflow (Table 2). The 4' Axiom can exceed a static pressure of 1.5" wc, which equates to 2,100' of straight 10" dia. duct. The 6' Axiom handles up to 1.0" wc, which equates to 650' of straight 10" dia. duct.

Figure 3

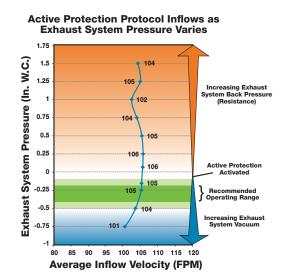


Table 2 - Active Protection Protocol Exhaust Volumes

	4' Axiom		6' Axiom	
10" Diameter Duct	Exhaust CFM*	Equivalent Feet of Straight Duct	Exhaust CFM*	Equivalent Feet of Straight Duct
8" Sash Opening	283	3,250	423	1000
10" Sash Opening	354	2,100	529	650

*Exhaust volumes are for BSCs in Active Protection Protocol. See page 7 for exhaust volumes for BSCs in normal exhaust conditions.

Specifications



All models feature:

- Omni-Flex[™] two mode design (Type A and B mode) and two programmable working sash heights (8" and 10")^{**}
- · Intrinsically safe negative pressure design
- Fully scannable 99.99+% supply and exhaust HEPA filters (99.999% ULPA filters available)
- * Dual Electronically Commutated Motors (ECM)
- Constant Airflow Profile™ (CAP) Technology airflow monitoring system
- Active Protection Protocol that operates the cabinet's exhaust blowers for for up to five minutes, in the event of exhaust system failure, preventing the flow of air into the laboratory**
- Low static pressure and volumetric rate exhaust requirements when in Type B mode. No dedicated exhaust system per BSC required
- * Air-Wave[™] Entry System* at access opening to enhance containment
- Contain-Air[™] Negative Pressure Channel* at top of sash to enhance containment
- * MyLogic[™] Operating System and interior-mounted, line-of-sight, full color, easy-to-understand LCD information center with:
 - Smart-Start[™] System for start up and shut down operations
 - Night-Smart[™] System for idling the blower when the sash is fully closed (while in Type A mode only)
 - "Filter Life Remaining" bar graph for each HEPA filter
 - Status line for alarm conditions and alerts to warn when filter life diminishes to 20% and 0%
- Interval/elapsed timer for experiment monitoring, fluorescent light or UV light control (on models with UV light)
- Bright, 90-150 footcandle, glare-free fluorescent lighting located outside the contaminated work area

- Electronic security lock (optional activation) that requires access code to operate the cabinet
- Two electrical duplex receptacles with flush-mounted stainless steel soft-close covers. Single outlets on 230V models one on each side (GFCI on 115V models only)
- 10° angled fully-closing. 1/4" tempered safety glass sash with counterbalanced, anti-racking, easy-to-lift mechanism
- Curved waterfall design stainless steel inlet grille with Reserve-Air[™] Secondary Airflow Slots*
- · Leak-tight stainless steel interior. Powder-coated steel exterior
- 22.6" (58 cm) maximum sash opening height and 27.0" (69 cm) viewing height
- Chem-Zone[™] work surface with dedicated direct exhaust for use with hazardous vapors or radionuclides**
- Removable, type 304 stainless steel 3-piece work surface (dished Chem-Zone in center and two flat sides) with lift out knobs and clearly delineated working area (when handling chemicals)**
- * Touchpad on right-hand side post controls blower, light(s), timer, electrical receptacles, audible alarm mute and menu selection
- · Five year limited warranty
- Nominal inflow velocity of 105 feet per minute (fpm) (0.53 m/sec)
- Nominal downflow velocity of 65 fpm (0.33 m/sec) for 4' models and 55 fpm (0.28 m/sec) for 6' models

Models conform and/or are listed to the following standards:

- ETL listed
- NSF International Standard 49 Listed
- CE Conformity Marking (230V models)
- ISO 5 conditions per ISO 14644-1 and 2
- Americans with Disabilities Act Standard (ADA) for height of controls and receptacles

Required accessory:

· Supporting base if unassembled stand option is not selected

Options include:

- Unassembled, NSF-Approved, powder-coated steel non-welded telescoping base stand with feet
- Accessory Package: UV lamp (254 nm), service fixture(s) with ball-type valve(s) and Vacu-Pass[™] Cord & Cable Portal
- 10" diameter stainless steel manual damper for Type B mode
- Bag-In/Bag-Out Package: Exhaust Filter for use with radionuclides or harmful chemicals

*U.S. Patent No. 6,368,206 **Patent pending

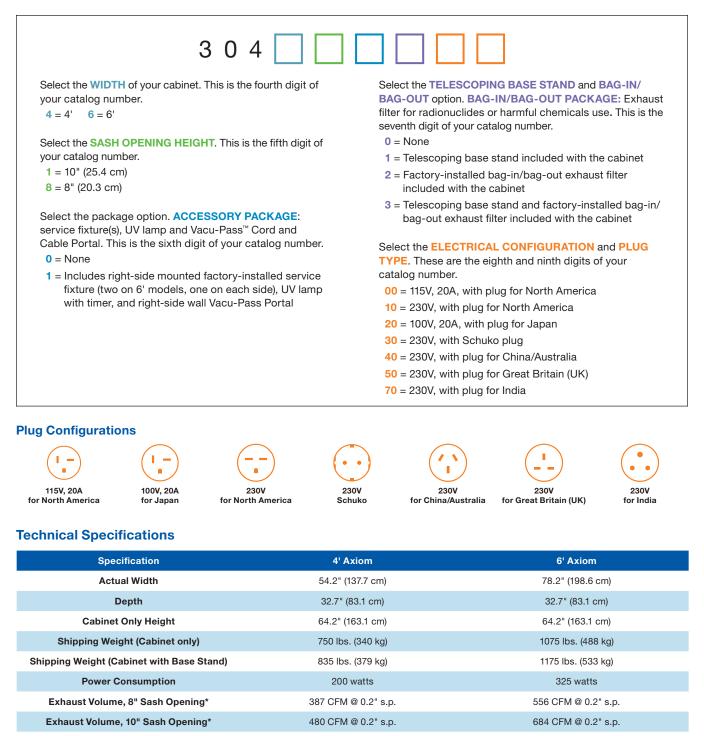


* Labconco exclusive feature

Ordering Information

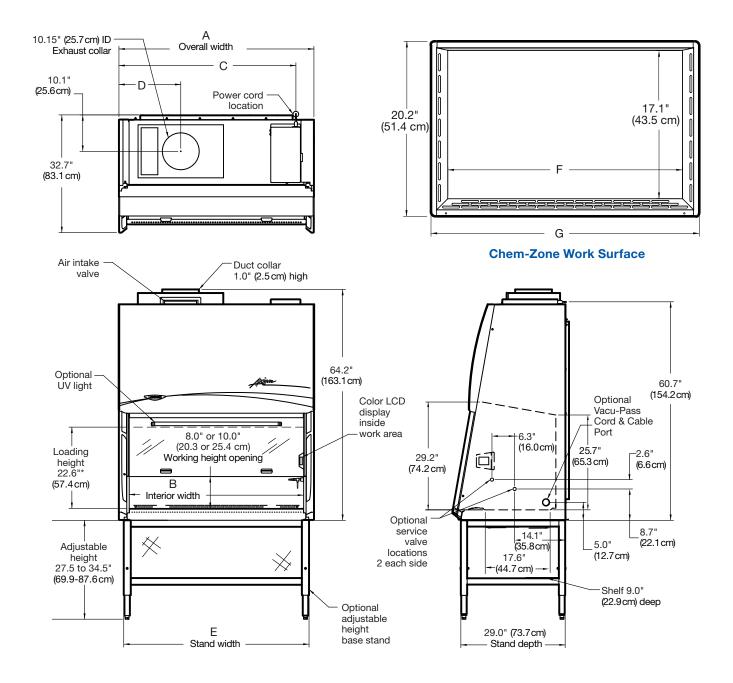
Catalog Number Configurator:

Use this key to configure the nine digit catalog number to order your Purifier Axiom Class II, Type C1 Biosafety Cabinet.



*Concurrent balance value

Dimensional Data



Nominal Width	A Inches (cm)	B Inches (cm)	C Inches (cm)	D Inches (cm)	E Inches (cm)	F Inches (cm)	G Inches (cm)
4'	54.2 (137.7)	49.5 (125.7)	49.2 (125.0)	17.2 (43.7)	51.5 (131.8)	27.1 (68.9)	31.0 (78.8)
6'	78.2 (198.6)	72.5 (184.2)	73.2 (185.9)	28.2 (71.6)	75.5 (191.8)	42.1 (107.0)	46.0 (116.9)

*Loading height with Bag-In/Bag-out Package is 13.6" (34.5 cm).

Accessories

3405500—Inflow and Downflow Sensor Kit. Allows display of inflow and downflow velocities on LCD screen. Includes sensor, wiring harness and hardware. **Not for use with Axiom in Type B mode. Installation and certifier calibration required**. Shipping weight 3.0 lbs. (1.0 kg)

IV Bar Kits. Include IV bar, mounting hardware and four hangers. Installation required.



RS 232 Connection Kits. Connects biosafety cabinet to data recorder or building monitoring system. Includes PC board, cable and hardware.

Catalog Number	Description	Shipping Weight
3858310	Kit contains cable with 9-pin connection	1.0 lb. (0.5 kg)
3858311	Kit contains cable with 25-pin connection	1.0 lb. (0.5 kg)

3744000—Ergonomic Chair with Armrests. 6-way

articulating seat for personalized comfort. Seat height adjusts from 18.25" to 25.75" (46 x 65 cm). Five-leg reinforced composite base with ball-bearing casters and aluminum support ring. Removable armrests. Black vinyl upholstery. **△WARNING:** Cancer - P65Warnings.ca.gov (California only). Shipping weight 35 lbs. (16 kg)



3746000-Adjustable

Footrest. Ergonomic design reduces strain and fatigue while working. 18.5" w x 11.5" d x 8.0" h (47 x 29 x 20 cm). Shipping weight 6.0 lbs. (3.0 kg)

3859000-Interior Shelf.

Stainless steel shelf, 8.0" w x 5.0" d (20 x 13 cm), mounts to rear grille. Weight capacity: 2.2 lbs. (1 kg). Shipping weight 3.0 lbs. (1.0 kg)

3852000 – Turntable. "Lazy Susan" rotates 360° to bring items within easy reach. Stainless steel surface and ball bearings. 12" (30 cm) dia. Autoclavable. Shipping weight 5.0 lbs. (2.0 kg)







 Catalog Number
 For Use With
 Shipping Weight

 3858601
 4' Axiom
 4.0 lbs. (2.0 kg)

 3858603
 6' Axiom
 6.0 lbs. (3.0 kg)

Ultraviolet Lamp Kits. Include UV lamp (254 nm) and ballast. Installation required.

Catalog Number	Description	Shipping Weight
3858500	115V Axiom	5.0 lbs. (2.0 kg)
3858501	100V Axiom	5.0 lbs. (2.0 kg)
3858502	230V Axiom	5.0 lbs. (2.0 kg)



3402800—Vacu-Pass[™] Cord & Cable Portal Kit.

NSF-approved port allows passage of a cable through right-side wall. Accommodates cords/cables with dia. of 1/8", 1/4", 3/8" and 1/2", and blank plug. **Installation required.** Shipping weight 2.0 lbs. (1.0 kg)

3859100 – Cord Manager. Includes three each stainless steel mounting hooks and carabiners. Hooks mount to rear grille. Shipping weight 3.0 lbs. (1.0 kg)



3747500 – Service Fixture Kit. Includes serrated hose tip with ball valve, quarter turn control handle and hardware. Mounts on left or right side interior. Cabinets are factory-prepared for up to four fixtures. Shipping weight 4.0 lbs. (2.0 kg)



Accessories & Telescoping Base Stands



Remote Blowers. Required for Type C1 cabinets operated in Type B mode unless house exhaust is used. Phenolic-coated impeller and housing, powder-coated steel base and weather cover, belt-drive motor with adjustable sheave and self-adjusting gravity belt tightener. Inlet: 10.9" (27.6 cm) ID. Outlet: 5.5" d x 10.0" w (14 x 25 cm).

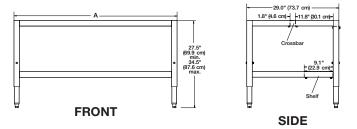
Require Blower Transition Adapter 4722401 for connection to 10" dia. duct. Contact Labconco for additional blower sizes.

Catalog Number	For use with	Electrical Requirements	HP	Shipping Weight
7068000	4' Axiom	115V, 60 Hz, 1 phase, 4.0A	1/6	92 lbs. (42 kg)
7068200	6' Axiom	115V, 60 Hz, 1 phase, 4.4A	1/4	92 lbs. (42 kg)

Telescoping Base Stands (Non-Welded). NSF-approved. ADA-compliant height. Support loads up to 4,000 lbs. (1,814 kg). Durable 1.75" tubular, powder-coated steel frame with back panel support and 9" (23 cm) shelf. Telescoping legs are adjustable to eight height positions at installation in 1" (2.5 cm) increments to provide a working height from 30" (76 cm) to 37" (94 cm)*. Four fixed leveling feet provided. **Assembly required**. Easy to assemble with simple hand tools.



Catalog Number	Nominal Width	Actual Width	Shipping Weight
3401004	4'	50.5" (128.3 cm)	125 lbs. (57 kg)
3401006	6'	74.5" (189.2 cm)	149 lbs. (68 kg)





3776800—Air-Tight Damper.

Recommended. Mounts atop the duct collar to adjust exhaust airflow and closes for decontamination procedures. Manually adjustable. Type 304 stainless steel. 10" (25.4 cm) high with 10" (25.4 cm) OD inlet and outlet. Shipping weight 13 lbs. (6 kg)

3730500-Caster Kit.

Converts Telescoping Base Stand to mobile stand. Includes four 5" dia., non-marking polyurethane casters with toe locks. Stands



with casters support loads up to 1,000 lbs. (454 kg). Adds 11" (28 cm) to the overall stand depth. **Installation required**. Shipping weight 10 lbs. (5 kg)

3857000-Seismic Bracket Kit. For

securing the base stand to the floor in earthquake-prone regions. Includes four stainless steel brackets and hardware for attachment to stand. **Hardware to attach** to the floor and installation are required. Shipping weight 10 lbs. (5 kg)



Laptop Computer Arms. Support a laptop. Mount to front leg of Telescoping Base Stands or front of SoLo[™] Base Stand

(see back cover). Articulating arm raises, lowers and pivots. Include powder-coated steel arm and support surface with cloth loop fasteners and mounting hardware. Not for use with Hydraulic Lift Base Stands on page 11. Installation required.



For Use With	Shipping Weight
Telescoping Base Stand	12 lbs. (5.0 kg)
SoLo Hydraulic Lift Base Stand	12 lbs. (5.0 kg)
	Telescoping Base Stand

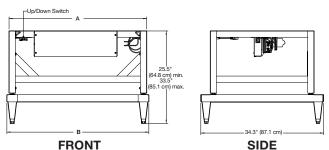
Contact Labconco for ordering information on other remote blowers and welded telescoping base stands.

*Height selection and adjustment are required **before** the biosafety cabinet is installed on the stand.

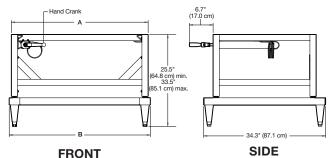
Electric & Manual Hydraulic Lift Base Stands

- Height is infinitely adjustable from 25.5" (64.8 cm) to 33.5" (85.1 cm)
- Accommodates persons of different heights and wheelchairbound users
- · Meet NSF Standard for stability and construction
- Support loads up to 1,000 lbs. (454 kg)
- · ADA-compliant height
- Durable 1.75" (4.4 cm) tubular, powder-coated steel frame with rear crossbar supports. Sub-frame has 2.0" (5.1 cm) x 3.0" (7.6 cm) rectangular tubing
- · Include four powder-coated, die-cast feet with levelers
- Include front-accessible up/down switch (Electric Lift models)
- Include front-accessible hand crank (shown at right). Handle may be disengaged and folded under, out of the way, when not in use. (Manual Lift models)
- · Shipped fully assembled

Electric Lift



Manual Lift



Catalog Numbers	Nominal Width	Α	В
3780101, 3780104, 3780201	4'	50.5"	51.7"
3780102, 3780105, 3780202	6'	74.5"	75.7"

Catalog Number	Nominal Width	Description	Shipping Weight
3780101	4'	Electric 115V, 60 Hz, 2.4A	185 lbs. (84 kg)
3780104*	4'	Electric 230V, 50/60 Hz, 0.8A	185 lbs. (84 kg)
3780201	4'	Manual	185 lbs. (84 kg)
3780102	6'	Electric 115V, 60 Hz, 2.4A	225 lbs. (102 kg)
3780105*	6'	Electric 230V, 50/60 Hz, 0.8A	225 lbs. (102 kg)
3780202	6'	Manual	225 lbs. (102 kg)

3784000 – Caster Kit. Includes four 5" (13 cm) dia., non-marking polyurethane casters with toe locks and bearings. Load rating for each caster is 250 lbs. (113 kg). Casters replace the fixed feet and add 11" (28 cm) to the overall depth of the base stand. **Installation required**.** Shipping weight 10 lbs. (5 kg)

4028600 – Support Shelf. Provides a work surface to support remote equipment. Powder-coated steel shelf mounts to left-side tubular frame of base stand. 12.0" w x 22.0" d (26 x 30 cm). **Installation required**. Shipping weight 23 lbs. (10 kg)



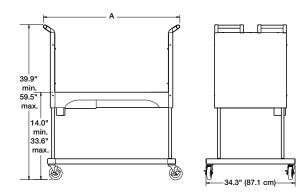
*International electrical configuration

** Enclosures supported by mobile Base Stands will require special modifications to incorporate flexible ducting, wiring and plumbing when applied.

SoLo" Hydraulic Lift Base Stands



- Allow BSC to be rolled through a standard doorway as low as 78" (198 cm) high
- Meet NSF Standard for stability and construction
- ADA-compliant height and knee clearance
- Durable powder-coated steel construction
- Support loads up to 1,000 lbs. (454 kg)
- Remote control-operated, built-in hydraulic lift
- Infinitely adjustable height provides work surface heights from 17.2" (43.7 cm) to 36.8" (93.5 cm) and overall enclosure height as low as 76.2" (193.5 cm)
- 5" (13 cm) dia., toe-locking, non-marking polyurethane casters with bearings for quiet operation
- · Handle bars of durable PVC-coated steel tubes
- · Shipped fully assembled



Nominal Width	Actual Width (A)	Catalog Number	Electrical Requirements	Plug Type	Additional Load Capacity*	Shipping Weight
4'	65.5"	3780311	115V, 60 Hz, 2A	115V, 15A	600 lbs. (272 kg)	435 lbs. (197 kg)
4'	65.5"	3780315	230V, 50/60 Hz, 3A	230V for North America	600 lbs. (272 kg)	435 lbs. (197 kg)
4'	65.5"	3780331	230V, 50/60 Hz, 3A	230V for Great Britain (UK)	600 lbs. (272 kg)	435 lbs. (197 kg)
4'	65.5"	3780335	230V, 50/60 Hz, 3A	230V Schuko	600 lbs. (272 kg)	435 lbs. (197 kg)
4'	65.5"	3780339	230V, 50/60 Hz, 3A	230V for China/Australia	600 lbs. (272 kg)	435 lbs. (197 kg)
6'	89.5"	3780313	115V, 60 Hz, 2A	115V, 15A	350 lbs. (159 kg)	600 lbs. (272 kg)
6'	89.5"	3780317	230V, 50/60 Hz, 3A	230V for North America	350 lbs. (159 kg)	600 lbs. (272 kg)
6'	89.5"	3780333	230V, 50/60 Hz, 3A	230V for Great Britain (UK)	350 lbs. (159 kg)	600 lbs. (272 kg)
6'	89.5"	3780337	230V, 50/60 Hz, 3A	230V Schuko	350 lbs. (159 kg)	600 lbs. (272 kg)
6'	89.5"	3780341	230V, 50/60 Hz, 3A	230V for China/Australia	350 lbs. (159 kg)	600 lbs. (272 kg)

*Maximum weight of equipment loaded in cabinet. Excludes weight of the cabinet.

LABCONCO CORPORATION

8811 Prospect Avenue Kansas City, MO 64132 (800) 821-5525 | (816) 333-8811

labconco.com



©2019 LABCONCO CORPORATION Printed in the U.S.A. Product design subject to change without notice.

2-20-6/14/19