



FlaskScrubber® & SteamScrubber®

Laboratory Glassware Washers



Protecting your
laboratory environment
LABCONCO

FlaskScrubber® & SteamScrubber® Laboratory Glassware Washers

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Made in U.S.A.



FlaskScrubber® & SteamScrubber® Laboratory Glassware Washers

OVERVIEW



Left: The FlaskScrubber Vantage Series Laboratory Glassware Washer has advanced features for monitoring and controlling contaminants, including water conductivity sensor, HEPA filtered drying and RS-232 port. The washer includes a lower spindle rack with options for an upper rack.

Inset: Upper standard open and spindle racks feature side release latches allowing racks to be easily lifted out for unloading or exchanging with another upper rack.

Flexibility, durability, maximum cleanability and energy-efficiency have been engineered in to every Labconco laboratory glassware washer.

Flexibility

Labconco offers two distinct washer types for different glassware mixes: the SteamScrubber and the FlaskScrubber. Designed primarily to hold general glassware such as beakers, utensils, test tubes, Petri dishes and BOD bottles, the SteamScrubber comes with upper and lower standard open racks that accommodate a wide variety of baskets and inserts.

Designed primarily to hold narrowneck glassware such as volumetrics and Erlenmeyer flasks, the FlaskScrubber has a lower rack with 36 spindles and may be outfitted with specialized inserts to accommodate pipets. Although the SteamScrubber and FlaskScrubber are distinct in their primary uses, the standard open racks and spindle racks are *interchangeable* making these washers more flexible and versatile than ever before. If your glassware mix currently includes both narrowneck and general glassware or changes in the future, just add the racks and inserts you need to accommodate your needs.

FlaskScrubber® & SteamScrubber® Laboratory Glassware Washers

OVERVIEW



The SteamScrubber Laboratory Glassware Washer is available in undercounter and freestanding styles. Upper and lower standard racks accommodate a variety of accessory baskets and inserts for beakers and specialized glassware.



The FlaskScrubber Laboratory Glassware Washer is available in undercounter and freestanding styles. The lower spindle rack is interchangeable with a standard rack should laboratory needs change or for laboratories with a broad mix of glassware.

Flexible cycle programs give the user control in selecting the right combination of parameters including the following:

- washing time and temperature
- steam generation
- number of total and pure water rinses
- final rinse temperature
- drying time and temperature

A keypad and LCD display allow cycle programs and parameters to be easily set or changed. Memory stores preset and user set programs for reproducible protocols.

Durability

Rugged stainless steel interior, exterior, racks and inserts withstand heavy use and reduce corrosion and contaminant build-up. Internal components such as pumps and seals are laboratory-grade, engineered for long life.

Maximum Cleanability & Drying

Laboratories that conduct sensitive research demand contaminant-free glassware. Many features work together to achieve consistent, thorough cleaning:

- Powerful pump circulates water through the washer. Rated at 96 gallons/minute (363 liters/minute) on 115 volt, 60 Hz and 230 volt, 50 Hz models and 112 gallons/minute (424 liters/minute) on 230 volt, 60 Hz models.
- A separate pump drains the wash and rinse water to reduce risk of cross contamination between wash and drain water.
- Wash and rinse water temperature reaches 82° C (180° F) on 115 volt models and 93° C (199° F) on 230 volt models to better activate detergent, sanitize glassware and speed drying.
- Built-in steam generator produces hot vapor to penetrate and remove dried residue.
- Forced air drying ensures spot-free results. Drying temperature is programmable up to 70° C (158° F).

FlaskScrubber® & SteamScrubber® Laboratory Glassware Washers

OVERVIEW

Performance Testing

An outside analytical laboratory conducted visual cleanability studies on the FlaskScrubber Glassware Washer outfitted with various rack configurations. For the studies, a variety of six beakers and two Erlenmeyer flasks were soiled with a viscous mixture of iron oxide, motor oil, high vacuum grease, solid vegetable shortening, and paraffin wax. The appearance of the glassware was documented before and after washing and drying in the FlaskScrubber Laboratory Glassware Washer 4420431. The following photographs show remarkably clean glassware.



*Before washing in
FlaskScrubber with Upper
Spindle Rack 4595600 using
LabSolutions Low-Foaming
Liquid Detergent 4522000*

After



*Before washing in
FlaskScrubber with Upper
Standard Rack 4595900 using
LabSolutions Non-Foaming
Powder Detergent 4422000*

After



*Before washing in
FlaskScrubber with Upper
Spindle Rack 4595600 using
LabSolutions Low-Foaming
Liquid Detergent 4522000*

After

EPA Residue Testing

Since visibly clean glassware could still contain minute amounts of contaminants, an outside analytical laboratory tested for microscopic residue on glassware cleaned in a FlaskScrubber Laboratory Glassware Washer Model 4420431. The laboratory tested the glassware to EPA Methods 200.7, 524.2, 525.1 and 8270. Test results showed low levels, at or near the detection limits, of metals remaining in the samples. The different parameters such as detergent type, upper or lower rack, spindle or standard rack, did not affect results.

Based on results from the testing, the laboratory concluded that the FlaskScrubber is a viable option for cleaning and reuse of glassware used for trace metal, volatile organic and semi-volatile organic compounds. Results were measured as parts-per-billion and significance of the data will vary based on individual application and analysis needs. Contact Labconco at 800-821-5525 or 816-333-8811 for a copy of the full report.

Energy Efficiency & Cost Savings

Compared to hand washing, the FlaskScrubber or SteamScrubber can save on water usage. A faucet delivers approximately 3 gallons/minute of tap water. Depending on the contaminants on the glassware and type of glassware, hand washing a load of glassware could take up to 20 gallons or more. The FlaskScrubber or SteamScrubber uses as little as 13.6 gallons per load and is not dependent on the habits of the technician. The difference adds up to as much as 1664 gallons per year, saving both water and the electricity to heat it.

Labconco washers feature a delay start option to facilitate running during off-peak hours when electricity is often less expensive than during daylight hours. Aluminum-backed insulation and a fiberglass blanket surround every washer not only for quiet operation, but to retain heat inside the washer, thus conserving energy.

Take The Challenge

Labconco offers an online calculator to help you determine how much you will save using a Labconco washer compared to hand-washing. The **Glassware Washer Cost Calculator** computes the costs of labor and water to wash and rinse glassware by hand versus to wash and rinse in a FlaskScrubber or SteamScrubber.

Go to www.labconco.com/glassware-washing-cost-calculator to determine if a Labconco washer will save you money.

FlaskScrubber® & SteamScrubber® Laboratory Glassware Washers

SELECTION GUIDE

Select the Labconco glassware washer that best suits your glassware mix and level of contamination-sensitive research.

	FlaskScrubber Vantage Series	FlaskScrubber	
Primary Application	Washing and drying primarily narrowneck glassware such as volumetric flasks. Advanced features for contamination-sensitive research.	Washing and drying primarily narrowneck glassware such as volumetric flasks.	
Electrical Configuration	208/230 volts, 50/60 Hz	115 volts, 60 Hz	208/230 volts, 50/60 Hz
Undercounter Available	convertible to undercounter	●	●
Freestanding Available	●	●	●
Freestanding to Mobile Conversion	No	Yes	
Maximum Internal Water Temperature	93° C (199° F)	82° C (180° F)	93° C (199° F)
Washing	Through Spindles & Two Wash Arms	Through Spindles & Two Wash Arms	Through Spindles & Two Wash Arms
Forced Hot Air Drying	Through Spindles & Throughout Tank	Through Spindles & Throughout Tank*	Through Spindles & Throughout Tank*
ADVANCED FEATURES:			
HEPA Filtered Drying	●		
Water Conductivity Sensor	●		
RS-232 Port	●		
Automatic Liquid Detergent Dispenser	●		
Automatic Rinse Aid Dispenser	●		
Racks Included	Lower 36-spindle rack	Lower 36-spindle rack	Lower 36-spindle rack
Viewing window with light	Standard	Optional	Optional
ACCOMMODATES OPTIONAL RACKS:			
Upper Spindle Rack	●	●	●
Lower Spindle Rack	Included	Included	Included
Upper Standard Rack	●	●	●
Lower Standard Rack	●	●	●
Lower Test Tube Spindle Rack	●	●	●
ACCOMMODATES OPTIONAL BASKETS and INSERTS:			
Utensil Holder	●	●	●
Utensil Basket	●	●	●
Bulk Tube Insert	●	●	●
Culture Tube Insert	●	●	●
Labware Inserts	●	●	●
BOD Bottle Insert	●	●	●
48-Pin Insert	●	●	●
Petri Dish Insert	●	●	●
DNA Sequencing Plate Insert	●	●	●
Tray Insert	●	●	●
Pipet Insert	●	●	●

* FlaskScrubber 33 models feature forced air drying throughout tank only.

FlaskScrubber® & SteamScrubber® Laboratory Glassware Washers

FLEXIBLE CYCLE OPTIONS

Microprocessor control allows the user to select from seven preset programs or customize two different USER SET programs. FlaskScrubber Vantage Series Washers and FlaskScrubber and SteamScrubber models for 230 volt operation have three additional preset programs (INTENSE,

Program	Unit of Measure	Selectable Set Points*	Rinse Only Factory Setting	Plastic Factory Setting	Glass Factory Setting	Glass Plus Factory Setting
Delay Start	(hr)	1-8	0	0	0	0
Wash 1 Time	(min)	None	—	5	5	5
Detergent Dispense (Vantage Series Only)	(ml)	0-40	—	20	20	20
Steam	(Yes/No)	Y N	—	N	N	Y
Wash 2 Time	(min)	1-40**	—	10	10	10
Wash 2 Temperature	(° F) (° C)	100-199*** 38-93***	—	122 50	140 60	140 60
Wash 3 Time (Vantage Series Only)	(min)	0, 10, 20, 30, 40	—	—	—	—
Wash 3 Temp (Vantage Series Only)	(° F) (° C)	100-199 38-93	—	—	—	—
Detergent Dispense (Vantage Series Only)	(ml)	0-40	—	20	20	20
Total Number of Rinses		0-6	1	2	3	3
Number of Pure Rinses		0-6	0	0	0	0
Final Rinse Temperature	(° F) (° C)	100-199† 38-93†	100 38	122 50	140 60	140 60
Rinse Time	(min)	1-30††	4	4	4	4
Rinse Aid Dispense	(ml)	0-6	—	0	0	0
Dry Time	(min)	0 or 15-250	0	15	30	30
Dry Temperature	(° F) (° C)	100-158 38-70	100 38	122 50	140 60	140 60
Total Water Consumption	(gal) (liters)	up to 27.2 up to 103	3.4 12.9	13.6 51.5	17 64.4	17 64.4
Total Factory Set Time (excluding delays to heat water and air for wash, rinse and dry cycles)	(min)		10	51	86	96

Bold numbers indicate factory preset times.

Steam adds 10 minutes to total program time. Each rinse adds 4 minutes to total program time. Rinse time increases by 1.5 minutes for each pure water rinse. Each rinse adds 3.4 gallons (12.9 liters) to total water consumption.

*Selectable set points do not apply to all programs.

**Vantage Series models select from 10, 20, 30 or 40 minutes.

***Maximum temperature is 180° F (82° C) on FlaskScrubber and SteamScrubber models for 115 volt operation.

† Maximum temperature is 140° F (60° C) for Rinse Only and Plastic Programs. Maximum temperature is 180° F (82° C) for all other programs on FlaskScrubber and SteamScrubber models for 115 volt operation.

†† Selectable on User 2 program on FlaskScrubber and SteamScrubber only.

Select from factory set and user set programs with the flexibility to easily change multiple parameters on the intuitive LCD.

LCD. Displays at-a-glance program selection or details of the program. Provides feedback during program customization.



DISPLAY SCROLL BUTTONS.

Press to scroll through the display screen.

DISPLAY. Press to change the display. When starting a cycle program, press to show the available cycle programs. When modifying program parameters, press to show program parameters that may be altered.

RUN/CANCEL. Initiates program selected. Terminates cycle in progress.

PARAMETER CHANGE BUTTONS. Press to change a set point parameter.

FlaskScrubber® & SteamScrubber® Laboratory Glassware Washers

FLEXIBLE CYCLE OPTIONS

INTENSE PLUS and EXTREME). Selectable set point parameters allow the programs to be altered by the user. Parameters selected by the user are stored in memory for future recall.

Science Factory Setting	Science Plus Factory Setting	Dry Only Factory Setting	User 1 Factory Setting	User 2 Factory Setting	Intense Factory Setting	Intense Plus Factory Setting	Extreme Factory Setting
0	0	—	0	0	0	0	0
5	5	—	5	5	10	10	10
20	20	—	20	20	20	20	20
N	Y	—	N	N	N	Y	Y
20	20	—	10	10	30	30	40
158	158	—	140	180	180	180	199
70	70	—	60	82	82	82	93
—	—	—	0	0	30	30	40
—	—	—	140	180	180	180	199
—	—	—	60	82	82	82	93
20	20	—	20	20	20	20	20
4	4	—	2	2	5	5	6
0	0	—	0	0	0	0	0
158	158	—	140	180	180	180	199
70	70	—	60	82	82	82	93
4	4	—	4	4	4	4	4
0	0	—	0	0	0	0	0
40	40	60	15	15	50	50	60
140	140	140	140	140	140	140	140
60	60	60	60	60	60	60	60
20.4	20.4	0	13.6	13.6	23.8	23.8	27.2
77.2	77.2	0	51.5	51.5	90.1	90.1	103
116	126	60	62	62	150	160	190

FlaskScrubber Vantage Series and
FlaskScrubber and SteamScrubber
208/230 Volt Models only

FlaskScrubber® Vantage® Series Laboratory Glassware Washers

FEATURES & BENEFITS

For washing and drying primarily narrowneck glassware used in contamination-sensitive research.

Alarms sound and/or display on the LCD to alert the user to abnormal or unsafe events such as HOT GLASS and OVERFLOW.

User-set delayed start (up to 8 hours) may be programmed so that the washer operates during off-peak hours when electricity may be less expensive and more plentiful.

Dual pumps, one for washing and one for draining, reduce the potential for cross contamination.

Up to 6 pure water rinses may be programmed. A built-in purified water pump draws from a storage tank or pressurized source for final rinses.

Water conductivity monitoring. Sensor measures the level of dissolved inorganics such as calcium and ferrous ions in the tank water, providing validation of water cleanliness, hardness and rinsing thoroughness. Confirms that detergent, rinse aid and purified water have been properly dispensed.

Quiet, energy-efficient operation at 58 decibels. Aluminum-backed, sound-deadening insulation and fiberglass blanket absorb noise and optimize internal tank temperature to conserve energy.

360° rotating upper and lower wash arms distribute water and detergent.

HEPA-filtered forced air drying system through the spindles. Hot air is blown through the spindles to the interior of narrowneck glassware for complete dryness. No separate dryer or oven is needed. A HEPA filter, 99.97% efficient on particulates 0.3 micron, traps dust, lint and other particles in the air introduced during drying.

INCLUDES Lower stainless steel spindle rack with 36 detachable spindles, 18 glassware holders, 36 height adjustment clips and 10 additional interchangeable small spindles. Large volumes of water are propelled through the spindles and into the bulb of each flask for high-powered cleaning. Tall spindles hold flasks from 50 ml to 2000 ml; small spindles from 1 ml to 25 ml.

Sanitizing high heat. Water temperature reaches 93° C (199° F) to sanitize glassware and for enhanced washing, rinsing and faster drying.

Automatic rinse aid dispenser. A peristaltic pump automatically draws a programmed amount of LabSolutions Neutralizing Acid Rinse or other rinse aid during the rinse cycle. In addition, a manual-fill dispenser is located in the door.

Automatic liquid detergent dispenser. A peristaltic pump automatically draws a programmed amount of LabSolutions Liquid Detergent or other automatic washer liquid detergent during wash cycles. In addition, a manual-fill dispenser for liquid or powder detergent is located in the door.

Powerful pump recirculates water at a high rate to dislodge dried contaminants for thorough cleaning. Rated at 96 gal/min (363 liters/min) on 230 Volt, 50 Hz models and 112 gal/min (424 liters/min) on 230 Volt, 60 Hz models.

Steam generator. Produces hot vapor to penetrate and soften dried contaminants for more effective cleaning.

RS-232 port. May be used to transmit data such as temperature, cycle phase, water level alarm and conductivity to a user-supplied computer or chart recorder.

CE Mark. Washers conform to the CE (European Community) requirements for electrical safety and electromagnetic compatibility.

Attractive and durable Type 304 stainless steel sides, top, door and tank.

Versatile rack options. Spindles on the lower rack may be easily detached and plugged so that the rack may accommodate accessory inserts for a variety of beakers and specialized glassware. An optional 30-spindle upper rack increases washer capacity. Optional racks, including interchangeable Upper and Lower Standard Racks, and accessory inserts are sold separately. See pages 18 and 19.

Clear tempered safety glass viewing window with LED interior light allows observation of the cycle in progress.

Full two year warranty. Is provided against defects in materials and workmanship.

ETL-listed. Washers carry the ETL mark signifying they are certified to UL* Standard 61010-1 and CAN/CSA C22.2 No. 61010.1.



Made in U.S.A.

Exclusive Labconco feature

*UL® is a registered trademark of Underwriters Laboratories, Inc., Northbrook, IL.

FlaskScrubber® Vantage® Series Laboratory Glassware Washers

SPECIFICATIONS & ORDERING INFORMATION



FlaskScrubber Vantage Series Laboratory Glassware Washer 4540031 is shown with Base Stand 4595500.



- Alarms with display for HOT GLASS, PLEASE WAIT, WATER LOW, OVERFLOW, LIQ DETER, RINSE AID, DRAIN FAIL and LOW TEMP. Audible alarms self cancel after one minute.
- User-set delayed start (up to 8 hours)
- Type 304, stainless steel exterior sides, top, door, tank, upper and lower wash arms
- Clear tempered safety glass viewing window
- LED interior light that illuminates when door is latched
- One-piece, stainless steel, fine mesh particle drain filter
- Four leveling feet
- 3/8" Female NPT inlet fitting for hot tap water connection
- Factory-installed drain hose and band clamp
- Two year warranty on parts and labor
- Made in the U.S.A.
- IQ/OQ available. Visit www.labconco.com or call 800-821-5525.

All models feature:

- Freestanding design, convertible to undercounter
- Lower spindle rack, of Type 304 stainless steel, with 36 detachable large spindles, 18 glassware holders, 36 clips and 10 additional interchangeable small spindles
- Water conductivity sensor with display (μs)
- Water temperature to 93° C (199° F)
- LCD information center, Display button, Run/Cancel button, scroll buttons and selection buttons to program and monitor cycles
- Pump rated at 96 gal/min (363 liters/min) when operated on 230 Volt, 50 Hz and 112 gal/min (424 liters/min) on 230 Volt, 60 Hz
- Drain pump to evacuate over 7 gal/min (26 liters/min)
- Purified water pump to bring non-pressurized or pressurized purified water into the tank for up to six pure water rinses
- Steam generator that produces hot vapor before the WASH 2 cycle (RINSE ONLY and PLASTIC programs excluded)
- Aluminum-backed insulation and fiberglass blanket for thermal and sound insulation
- Operation at 58 decibels
- Automatic liquid detergent dispenser with peristaltic pump
- Automatic rinse aid dispenser with peristaltic pump
- Manual-fill detergent dispenser for powder or liquid detergent
- Manual-fill rinse aid solution dispenser
- HEPA-filtered forced air drying through the spindles programmable up to 250 minutes and from 38-70° C (100-158° F). HEPA filter is 99.97% efficient on particulates 0.3 micron.
- Ten factory-set cycle programs: RINSE ONLY, PLASTIC, GLASS, GLASS PLUS, SCIENCE, SCIENCE PLUS, INTENSE, INTENSE PLUS, EXTREME and DRY ONLY
- Two user-set cycle programs

All models conform to:

- UL* 61010-1
- CAN/CSA C22.2 No. 61010.1
- CE Conformity Marking

All models require:

- 20 amp circuit breaker
- Recommended inlet water temperature 60° C (140° F)
- Minimum optional purified water pressure 0 psi
- Water consumption per fill 3.4 gallons (13 liters)
- Hot tap water pressure at the washer 20-120 psi (138-827 KPa)
- Hot tap water flow rate 1.25 gallons (4.7 liters) per minute
- 3/8" OD copper tubing for connection to the water inlet valve
- Purified water with supply piping minimum 3/8" ID to permit at least 0.9 gallon (3.4 liters) per minute flow

Optional accessories and companion products on pages 18 - 22 include:

- Base Stand
- Upper Spindle Rack
- Upper and Lower Standard Racks
- Lower Test Tube Spindle Rack
- Baskets and Inserts
- Glassware Holders
- Drain Water Cooling Kit
- LabSolutions Detergents and Rinse
- ScrubberMate Cart, Glassware Carts and Carboy Caddy
- WaterPro RO Stations and accessories

Catalog #	Style	Electrical Requirements†	Maximum Internal Water Temperature	Viewing Window and Light	Overall Dimensions with Door Closed	Shipping Weight
4540031	Freestanding**	208/230 Volts, 50/60 Hz, 11 Amps	93° C (199° F)	Yes	32.2" w x 27.5" d x 34.2-36.2" h	294 lbs. (133 kg)

*UL® is a registered trademark of Underwriters Laboratories, Inc., Northbrook, IL.

**Convertible to undercounter

†20 amp circuit breaker is required.

FlaskScrubber® Laboratory Glassware Washers

FEATURES & BENEFITS

For washing and drying primarily narrowneck glassware.

Steam generator. Produces hot vapor to penetrate and soften dried contaminants for more effective cleaning.

User-set delayed start (up to 8 hours) may be programmed so that the washer operates during off-peak hours when electricity may be less expensive and more plentiful.

Attractive and durable Type 304 stainless steel door and tank. Free-standing models also have stainless steel sides and top.

Detergent dispenser for powder or liquid detergent. Releases a manually premeasured amount ensuring clean labware.

INCLUDES Lower stainless steel spindle rack with 36 detachable spindles, 18 glassware holders, 36 height adjustment clips and 10 additional interchangeable small spindles. Large volumes of water are propelled through the spindles and into the bulb of each flask for high-powered cleaning. Tall spindles hold flasks from 50 ml to 2000 ml; small spindles from 1 ml to 25 ml.

Low profile FlaskScrubber 33 undercounter models available. Minimum height of 32.9" allows installation under ADA*-height cabinetry.

Dual pumps, one for washing and one for draining, reduce the potential for cross contamination.

Up to 6 pure water rinses may be programmed. A built-in purified water pump draws from a storage tank or pressurized source for final rinses.

Alarms sound and/or display on the LCD to alert the user to abnormal or unsafe events such as HOT GLASS and OVERFLOW.

360° rotating upper and lower wash arms distribute water and detergent.

Powerful pump recirculates water at a high rate to dislodge dried contaminants for thorough cleaning. Rated at 96 gal/min (363 liters/min) on 115 Volt, 60 Hz and 230 Volt, 50 Hz models and 112 gal/min (424 liters/min) on 230 Volt, 60 Hz models.

Versatile rack options. Spindles on the lower rack may be easily detached and plugged so that the rack may accommodate accessory inserts for a variety of beakers and specialized glassware. An optional 30-spindle upper rack increases washer capacity. Optional racks, including interchangeable Upper and Lower Standard Racks, and accessory inserts are sold separately. See pages 18 and 19.

Rinse solution dispenser. Allows manual addition of mildly acidic rinse to alter pH and eliminate alkaline detergent carry-over. The dispenser holds approximately 170 milliliters, enough for 40 or more cycles.

Full two year warranty. Is provided against defects in materials and workmanship.

Sanitizing high heat. Water temperature reaches 93° C (199° F) on 230 Volt models to sanitize glassware and for enhanced washing, rinsing and faster drying.



Quiet, energy-efficient operation at 58 decibels. Aluminum-backed, sound-deadening insulation and fiberglass blanket absorb noise and optimize internal tank temperature to conserve energy.

Forced air drying system. Hot air is blown into the tank to dry glassware. Except for FlaskScrubber 33 models, air is also blown through the spindles to the interior of the glassware. No separate dryer or oven is needed.

Optional clear tempered safety glass viewing window with LED interior light allows observation of the cycle in progress. Available standard on some models.

ETL-listed. Washers carry the ETL mark signifying they are certified to UL† 61010-1 and CAN/CSA C22.2 No. 61010.1.

CE Mark. Washers conform to the CE (European Community) requirements for electrical safety and electromagnetic compatibility.



Made in U.S.A.



Exclusive Labconco feature

*Americans with Disabilities Act

†UL® is a registered trademark of Underwriters Laboratories, Inc., Northbrook, IL.

FlaskScrubber® Laboratory Glassware Washers

SPECIFICATIONS & ORDERING INFORMATION



FlaskScrubber Laboratory Glassware Washer 4420430 includes a viewing window and light.



All models feature:

- Lower spindle rack, of Type 304 stainless steel, with 36 detachable large spindles, 18 glassware holders, 36 clips and 10 additional interchangeable small spindles
- LCD information center, Display button, Run/Cancel button, scroll buttons and selection buttons to program and monitor cycles
- Pump rated at 96 gal/min (363 liters/min) when operated on 115 Volts, 60 Hz and 230 Volts, 50 Hz and 112 gal/min (424 liters/min) on 230 Volts, 60 Hz
- Drain pump to evacuate over 7 gal/min (26 liters/min)
- Purified water pump to bring non-pressurized or pressurized purified water into the tank for up to six pure water rinses
- Steam generator that produces hot vapor before the WASH 2 cycle (RINSE ONLY and PLASTIC programs excluded)
- Aluminum-backed insulation and fiberglass blanket for thermal and sound insulation
- Operation at 58 decibels
- Manual-fill detergent dispenser for powder or liquid detergent
- Manual-fill rinse aid solution dispenser
- Forced air drying into the tank programmable up to 250 minutes and from 38-70° C (100-158° F)
- Seven factory-set cycle programs: RINSE ONLY, PLASTIC, GLASS, GLASS PLUS, SCIENCE, SCIENCE PLUS, and DRY ONLY. All 208/230 Volt models have three additional programs for a total of ten: INTENSE, INTENSE PLUS and EXTREME.
- Two user-set cycle programs
- Programs may be locked to prevent unauthorized changes
- Alarms with display for HOT GLASS, PLEASE WAIT, WATER LOW, WATER HIGH, OVERFLOW, LIQ DETER, RINSE AID, DRAIN FAIL and LOW TEMP. Audible alarms self cancel after one minute.
- User-set delayed start (up to 8 hours)

- Type 304, stainless steel top, door, tank, upper and lower wash arms. Freestanding models also have stainless steel exterior sides and top.
- One-piece, stainless steel, fine mesh particle drain filter
- Four leveling feet
- 3/8" Female NPT inlet fitting for hot tap water connection
- Factory-installed drain hose and band clamp
- Two year warranty on parts and labor
- Made in the U.S.A.
- IQ/OQ available. Visit www.labconco.com or call 800-821-5525.

All models conform to:

- UL** 61010-1
- CAN/CSA C22.2 No. 61010.1
- CE Conformity Marking (208/230 Volt models only)

All models require:

- 20 amp circuit breaker
- Recommended inlet water temperature 60° C (140° F)
- Minimum optional purified water pressure 0 psi
- Water consumption per fill 3.4 gallons (13 liters)
- Hot tap water pressure at the washer 20-120 psi (138-827 KPa)
- Hot tap water flow rate 1.25 gallons (4.7 liters) per minute
- 3/8" OD copper tubing for connection to the water inlet valve
- Purified water with supply piping minimum 3/8" ID to permit at least 0.9 gallon (3.4 liters) per minute flow

Standard models also feature:

- Forced air drying through the spindles

FlaskScrubber 33 models also feature:

- Minimum 32.9" height to fit under ADA*-height cabinetry

Options include:

- Standard freestanding and undercounter styles, FlaskScrubber 33 undercounter styles
- Water temperature to 82° C (180° F) on 115 Volt models and 93° C (199° F) on 230 Volt models
- Clear tempered safety glass viewing window and 25-watt interior light that illuminates when door is latched

Optional accessories and companion products on pages 18-22 include:

- Base Stand • Upper Spindle Rack • Lower Test Tube Spindle Rack
- Upper and Lower Standard Racks • Baskets and Inserts
- Glassware Holders • Freestanding-to-Mobile Conversion Kits
- Drain Water Cooling Kit • LabSolutions Detergents and Rinse
- ScrubberMate Cart, Glassware Carts and Carboy Caddy
- WaterPro RO Stations and accessories

Catalog #	Style	Electrical Requirements†	Max. Water Temperature	Viewing Window and Light	Forced Air Dry Through Spindles	Overall Dimensions with Door Closed	Shipping Weight
4420320	Std. Undercounter	115 Volts, 60 Hz, 16 Amps	82° C (180° F)	No	Yes	24.1" w x 27.4" d x 34.1-36.1" h	206 lbs. (93 kg)
4420321	Std. Undercounter	208/230 Volts, 50/60 Hz, 11 Amps	93° C (199° F)	No	Yes	24.1" w x 27.4" d x 34.1-36.1" h	206 lbs. (93 kg)
4420330	Std. Undercounter	115 Volts, 60 Hz, 16 Amps	82° C (180° F)	Yes	Yes	24.1" w x 27.4" d x 34.1-36.1" h	206 lbs. (93 kg)
4420331	Std. Undercounter	208/230 Volts, 50/60 Hz, 11 Amps	93° C (199° F)	Yes	Yes	24.1" w x 27.4" d x 34.1-36.1" h	206 lbs. (93 kg)
4578120	33 Undercounter	115 Volts, 60 Hz, 16 Amps	82° C (180° F)	No	No	24.1" w x 27.4" d x 32.9-34.9" h	206 lbs. (93 kg)
4578121	33 Undercounter	208/230 Volts, 50/60 Hz, 11 Amps	93° C (199° F)	No	No	24.1" w x 27.4" d x 32.9-34.9" h	206 lbs. (93 kg)
4578130	33 Undercounter	115 Volts, 60 Hz, 16 Amps	82° C (180° F)	Yes	No	24.1" w x 27.4" d x 32.9-34.9" h	206 lbs. (93 kg)
4578131	33 Undercounter	208/230 Volts, 50/60 Hz, 11 Amps	93° C (199° F)	Yes	No	24.1" w x 27.4" d x 32.9-34.9" h	206 lbs. (93 kg)
4420420	Std. Freestanding	115 Volts, 60 Hz, 16 Amps	82° C (180° F)	No	Yes	24.2" w x 27.5" d x 34.2-36.2" h	239 lbs. (108 kg)
4420421	Std. Freestanding	208/230 Volts, 50/60 Hz, 11 Amps	93° C (199° F)	No	Yes	24.2" w x 27.5" d x 34.2-36.2" h	239 lbs. (108 kg)
4420430	Std. Freestanding	115 Volts, 60 Hz, 16 Amps	82° C (180° F)	Yes	Yes	24.2" w x 27.5" d x 34.2-36.2" h	239 lbs. (108 kg)
4420431	Std. Freestanding	208/230 Volts, 50/60 Hz, 11 Amps	93° C (199° F)	Yes	Yes	24.2" w x 27.5" d x 34.2-36.2" h	239 lbs. (108 kg)

Exclusive Labconco feature *Americans with Disabilities Act

**UL® is a registered trademark of Underwriters Laboratories, Inc., Northbrook, IL

†20 amp circuit breaker is required.

SteamScrubber® Laboratory Glassware Washers

FEATURES & BENEFITS

For washing and drying primarily beakers and other wide-mouth or specialized glassware.

Steam generator. Produces hot vapor to penetrate and soften dried contaminants for more effective cleaning.

User-set delayed start (up to 8 hours) may be programmed so that the washer operates during off-peak hours when electricity may be less expensive and more plentiful.

Attractive and durable Type 304 stainless steel door and tank. Free-standing models also have stainless steel sides and top.

Detergent dispenser for powder or liquid detergent. Releases a manually premeasured amount ensuring clean labware.

Quiet, energy-efficient operation at 58 decibels. Aluminum-backed, sound-deadening insulation and fiberglass blanket absorb noise and optimize internal tank temperature to conserve energy.

Low profile SteamScrubber 33 undercounter models available. Minimum height of 32.9" allows installation under ADA*-height cabinetry.

Forced air drying system. Hot air is blown into the tank to dry glassware. No separate dryer or oven is needed.

Up to 6 pure water rinses may be programmed. A built-in purified water pump draws from a storage tank or pressurized source for final rinses.

Dual pumps, one for washing and one for draining, reduce the potential for cross contamination.

360° rotating upper, middle and lower wash arms distribute water and detergent.

Powerful pump recirculates water at a high rate to dislodge dried contaminants for thorough cleaning. Rated at 96 gal/min (363 liters/min) on 115 Volt, 60 Hz and 230 Volt, 50 Hz models and 112 gal/min (424 liters/min) on 230 Volt, 60 Hz models.

Versatile rack options. The standard open racks are interchangeable with optional upper and lower spindle racks. Additional racks are sold separately. See page 18.

Full two year warranty. Is provided against defects in materials and workmanship.

INCLUDES Upper and lower stainless steel standard open racks. Accommodate a variety of accessory inserts holding the broadest range of glassware. Inserts are sold separately. See pages 18 and 19.

Sanitizing high heat. Water temperature reaches 93° C (199° F) on 230 Volt models to sanitize glassware and for enhanced washing, rinsing and faster drying.



Rinse solution dispenser. Allows manual addition of mildly acidic rinse to alter pH and eliminate alkaline detergent carry-over. The dispenser holds approximately 170 milliliters, enough for 40 or more cycles.

Alarms sound and/or display on the LCD to alert the user to abnormal or unsafe events such as HOT GLASS and OVERFLOW.

Optional clear tempered safety glass viewing window with LED interior light allows observation of the cycle in progress. Available standard on some models.

ETL-listed. Washers carry the ETL mark signifying they are certified to UL† Standard 61010-1 and CAN/CSA C22.2 No. 61010.1.

CE Mark. Washers conform to the CE (European Community) requirements for electrical safety and electromagnetic compatibility.



Made in U.S.A.



Exclusive Labconco feature

*Americans with Disabilities Act

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SteamScrubber® Laboratory Glassware Washers

SPECIFICATIONS & ORDERING INFORMATION



SteamScrubber Laboratory Glassware Washer 4400330 is shown with 48-Pin Insert 4591601, Petri Dish Insert 4589701, Bulk Tube Insert 4542100, Utensil Holder 4542500 and BOD Bottle Insert 4589201.



All models feature:

- Upper and lower standard open racks of Type 304 stainless steel
- LCD information center, Display button, Run/Cancel button, scroll buttons and selection buttons to program and monitor cycles
- Pump rated at 96 gal/min (363 liters/min) when operated on 115 Volts, 60 Hz and 230 Volts, 50 Hz and 112 gal/min (424 liters/min) on 230 Volts, 60 Hz
- Drain pump to evacuate over 7 gal/min (26 liters/min)
- Purified water pump to bring non-pressurized or pressurized purified water into the tank for up to six pure water rinses
- Steam generator that produces hot vapor before the WASH 2 cycle (RINSE ONLY and PLASTIC programs excluded)
- Aluminum-backed insulation and fiberglass blanket for thermal and sound insulation
- Operation at 58 decibels
- Manual-fill detergent dispenser for powder or liquid detergent
- Manual-fill rinse aid solution dispenser
- Forced air drying programmable up to 250 minutes and from 38-70° C (100-158° F)
- Seven factory-set cycle programs: RINSE ONLY, PLASTIC, GLASS, GLASS PLUS, SCIENCE, SCIENCE PLUS, and DRY ONLY. All 208/230 Volt models have three additional programs for a total of ten: INTENSE, INTENSE PLUS and EXTREME.
- Two user-set cycle programs
- Programs may be locked to prevent unauthorized changes
- Alarms with display for HOT GLASS, PLEASE WAIT, WATER LOW, WATER HIGH, OVERFLOW, LIQ DETER, RINSE AID DRAIN FAIL and LOW TEMP. Audible alarms self cancel after one minute.
- User-set delayed start (up to 8 hours)
- Type 304, stainless steel top, door, tank, upper, middle and lower wash

- arms. Freestanding models also have stainless steel exterior sides and top.
- One-piece, stainless steel, fine mesh particle drain filter
- Four leveling feet
- 3/8" Female NPT inlet fitting for hot tap water connection
- Factory-installed drain hose and band clamp
- Two year warranty on parts and labor
- Made in the U.S.A.
- IQ/OQ available. Visit www.labconco.com or call 800-821-5525.

All models conform to:

- UL* 61010-1
- CAN/CSA C22.2 No. 6 1010.1
- CE Conformity Marking (208/230 Volt models only)

All models require:

- 20 amp circuit breaker
- Recommended inlet water temperature 60° C (140° F)
- Minimum optional purified water pressure 0 psi
- Water consumption per fill 3.4 gallons (13 liters)
- Hot tap water pressure at the washer 20-120 psi (138-827 KPa)
- Hot tap water flow rate 1.25 gallons (4.7 liters) per minute
- 3/8" OD copper tubing for connection to the water inlet valve
- Purified water with supply piping minimum 3/8" ID to permit at least 0.9 gallon (3.4 liters) per minute flow

SteamScrubber 33 models also feature:

- Minimum 32.9" height to fit under ADA*-height cabinetry

Options include:

- Standard freestanding and undercounter styles, SteamScrubber 33 undercounter styles
- Water temperature to 82° C (180° F) on 115 Volt models and 93° C (199° F) on 230 Volt models
- Clear tempered safety glass viewing window and 25-watt interior light that illuminates when door is latched

Optional accessories and companion products on pages 18 - 22 include:

- Base Stand
- Upper and Lower Spindle Racks
- Lower Test Tube Spindle Rack
- Baskets and Inserts
- Freestanding-to-Mobile Conversion Kits
- Drain Water Cooling Kit
- LabSolutions Detergents and Rinse
- ScrubberMate Cart, Glassware Carts and Carboy Caddy
- WaterPro RO Stations and accessories

Catalog #	Style	Electrical Requirements†	Max. Water Temperature	Viewing Window and Light	Overall Dimensions with Door Closed	Shipping Weight
4400320	Std. Undercounter	115 Volts, 60 Hz, 16 Amps	82° C (180° F)	No	24.1" w x 27.4" d x 34.1-36.1" h	206 lbs. (93 kg)
4400321	Std. Undercounter	208/230 Volts, 50/60 Hz, 11 Amps	93° C (199° F)	No	24.1" w x 27.4" d x 34.1-36.1" h	206 lbs. (93 kg)
4400330	Std. Undercounter	115 Volts, 60 Hz, 16 Amps	82° C (180° F)	Yes	24.1" w x 27.4" d x 34.1-36.1" h	206 lbs. (93 kg)
4400331	Std. Undercounter	208/230 Volts, 50/60 Hz, 11 Amps	93° C (199° F)	Yes	24.1" w x 27.4" d x 34.1-36.1" h	206 lbs. (93 kg)
4578020	33 Undercounter	115 Volts, 60 Hz, 16 Amps	82° C (180° F)	No	24.1" w x 27.4" d x 32.9-34.9" h	206 lbs. (93 kg)
4578021	33 Undercounter	208/230 Volts, 50/60 Hz, 11 Amps	93° C (199° F)	No	24.1" w x 27.4" d x 32.9-34.9" h	206 lbs. (93 kg)
4578030	33 Undercounter	115 Volts, 60 Hz, 16 Amps	82° C (180° F)	Yes	24.1" w x 27.4" d x 32.9-34.9" h	206 lbs. (93 kg)
4578031	33 Undercounter	208/230 Volts, 50/60 Hz, 11 Amps	93° C (199° F)	Yes	24.1" w x 27.4" d x 32.9-34.9" h	206 lbs. (93 kg)
4400420	Std. Freestanding	115 Volts, 60 Hz, 16 Amps	82° C (180° F)	No	24.2" w x 27.5" d x 34.2-36.2" h	235 lbs. (107 kg)
4400421	Std. Freestanding	208/230 Volts, 50/60 Hz, 11 Amps	93° C (199° F)	No	24.2" w x 27.5" d x 34.2-36.2" h	235 lbs. (107 kg)
4400430	Std. Freestanding	115 Volts, 60 Hz, 16 Amps	82° C (180° F)	Yes	24.2" w x 27.5" d x 34.2-36.2" h	235 lbs. (107 kg)
4400431	Std. Freestanding	208/230 Volts, 50/60 Hz, 11 Amps	93° C (199° F)	Yes	24.2" w x 27.5" d x 34.2-36.2" h	235 lbs. (107 kg)

■ Exclusive Labconco feature

†20 amp circuit breaker is required.

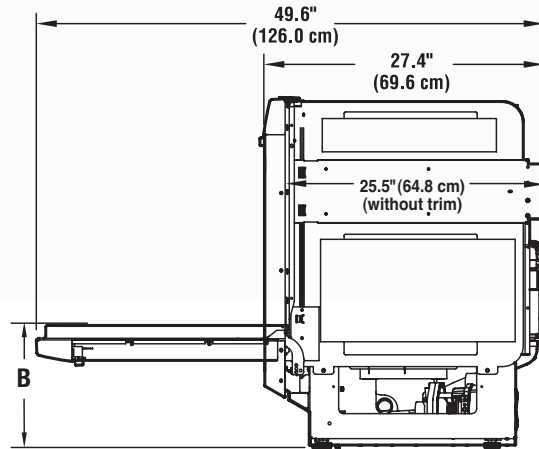
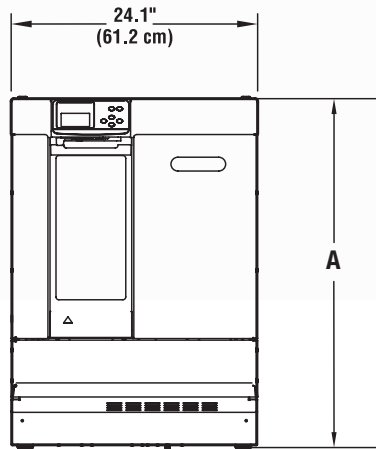
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FlaskScrubber® & SteamScrubber® Laboratory Glassware Washers

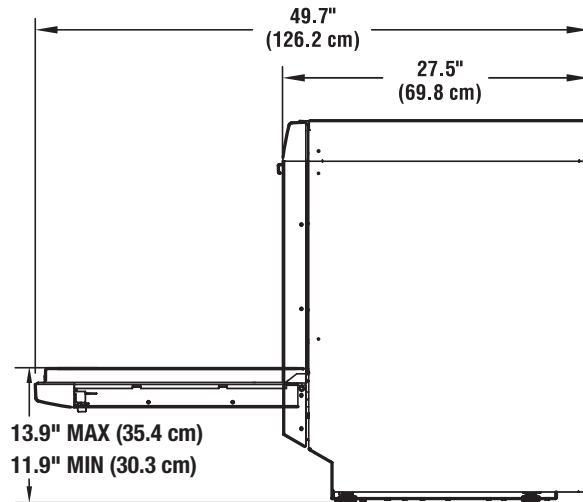
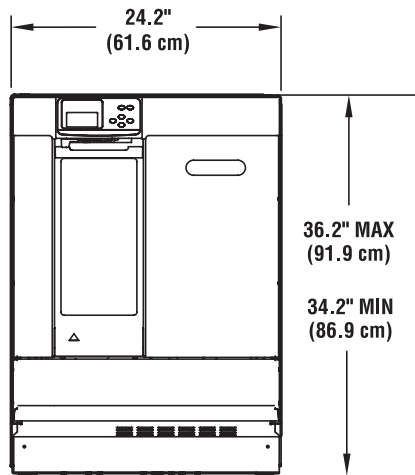
DIMENSIONAL DATA

Undercounter FlaskScrubber & SteamScrubber

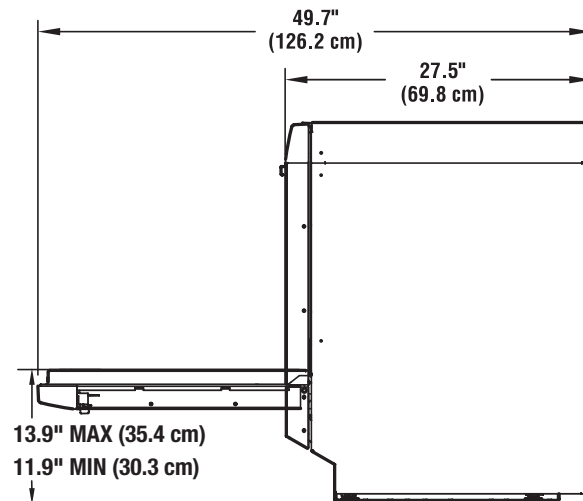
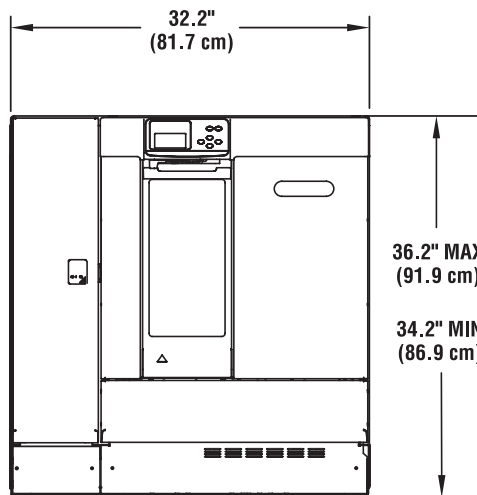
Style	Min. A	Max. A
Std.	34.2" (86.6 cm)	36.2" (91.7 cm)
33	32.9" (83.6 cm)	34.9" (88.6 cm)
B		
Std.	11.9" (30.3 cm)	13.9" (35.4 cm)
33	10.9" (27.8 cm)	12.9" (32.8 cm)



Freestanding FlaskScrubber & SteamScrubber



FlaskScrubber Vantage Series*



*Freestanding model
may be converted
to undercounter

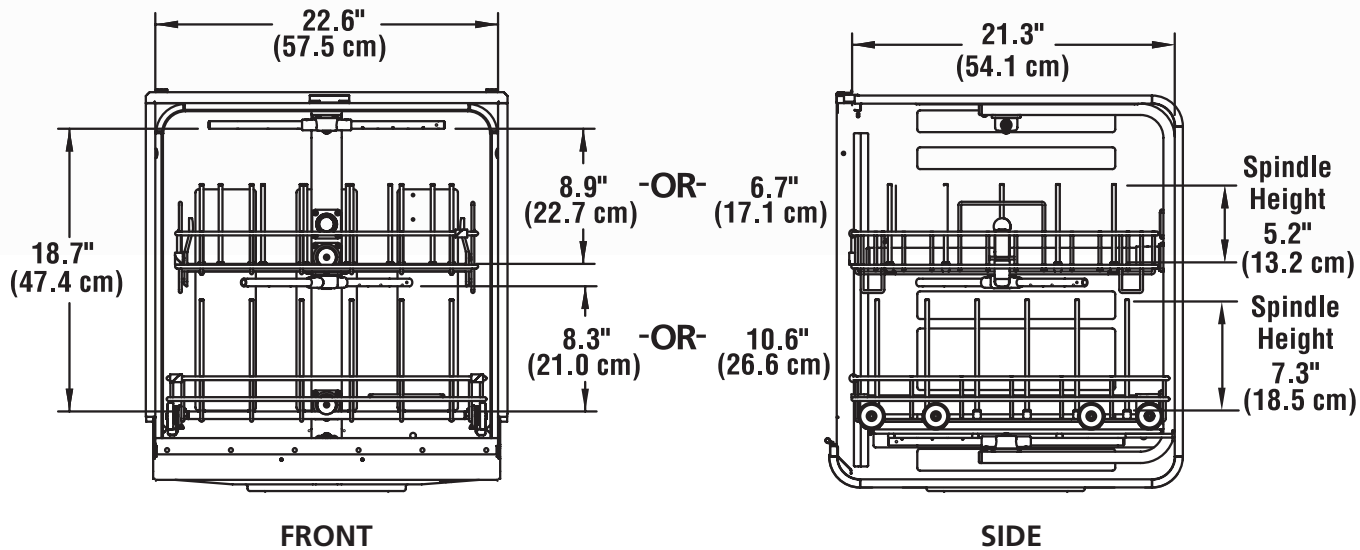
FRONT

SIDE

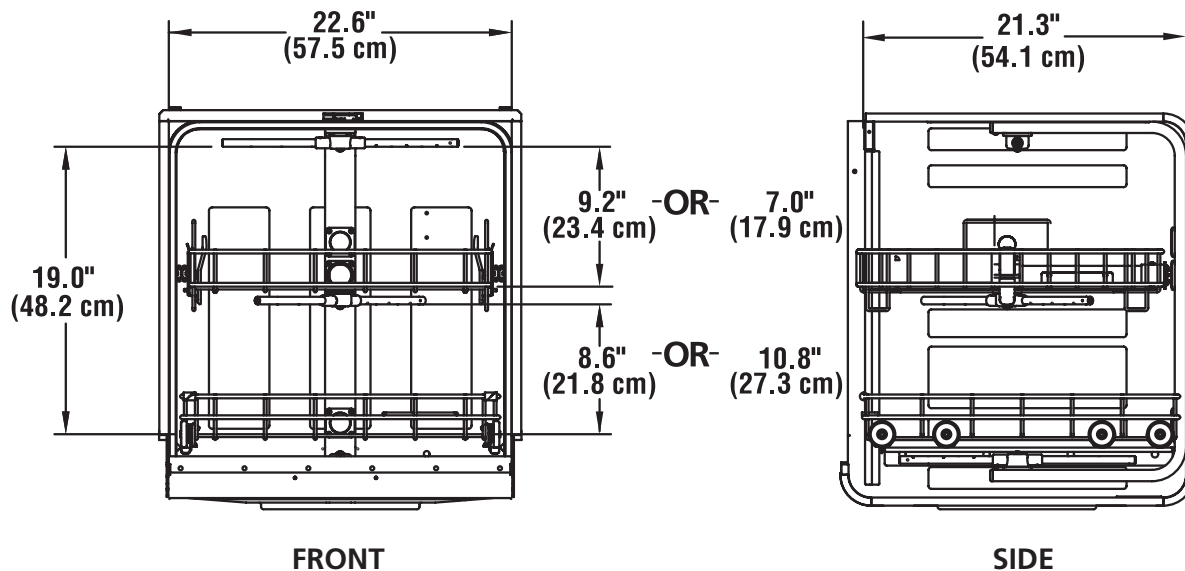
FlaskScrubber® & SteamScrubber® Laboratory Glassware Washers

DIMENSIONAL DATA

Inside Dimensions with Lower and Upper Spindle Racks (all models)



Inside Dimensions with Lower and Upper Standard Racks (all models)



FlaskScrubber® & SteamScrubber® Laboratory Glassware Washers

ACCESSORIES

Guide to Accessories

Use the icon key below to select accessories that fit your washer. Racks can accommodate a maximum of two inserts except Utensil Holders and Utensil Baskets; racks can hold a maximum of five Utensil Holders* or four Utensil Baskets.



For use in SteamScrubber



For use in FlaskScrubber



For use in FlaskScrubber Vantage Series



Fits in Upper Standard Rack



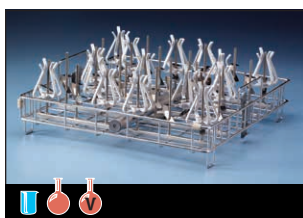
Fits in Lower Standard Rack



Fits in Lower Spindle Rack with spindles removed and plugged



Fits in Upper Spindle Rack with spindles removed and plugged

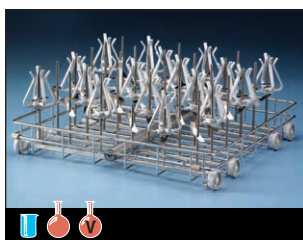


Upper Spindle Racks

Constructed of Type 304 stainless steel. Include side release latches, 30 removable spindles, 30 adjustable height clips, 10 small spindles, 15 plastic glassware holders, tool to remove spindles, 30 nylon plugs, and wash arm. Spindles

may be removed and plugged to accommodate accessory inserts (sold separately). Spindle dimensions: 5.2" high x 1/4" OD (13.2 x 0.6 cm). Overall dimensions: 20.0" w x 20.9" d x 7.2" high (51 x 53 x 18 cm). Accommodate glassware up to 8.9" high (22.6 cm).

Catalog #	Description	Shipping Wt.
4595600	Upper Spindle Rack for FlaskScrubber and FlaskScrubber Vantage Series Glassware Washers. Includes side rails for tank side wall installation. Provides direct injection cleaning and forced air drying through the spindles.	20 lbs. (9 kg)
4595800	Upper Spindle Rack for SteamScrubber Glassware Washers. Provides direct injection cleaning through the spindles.	16 lbs. (7 kg)



Lower Spindle Rack 4595700

One is included with every FlaskScrubber and FlaskScrubber Vantage Series Glassware Washer. May be used in place of the Lower Standard Rack in any SteamScrubber. Constructed of Type 304 stainless steel. Includes 36 removable spindles, 36 adjustable height clips,

10 small spindles, 18 plastic glassware holders, tool to remove spindles and 36 nylon plugs. Spindles may be removed and plugged to accommodate accessory inserts (sold separately). Spindle dimensions: 7.3" high x 1/4" OD (18.5 x 0.6 cm). Overall dimensions: 21.1" w x 21.0" d x 8.6" high (54 x 53 x 22 cm). Accommodate glassware up to 18.7" (47 cm) high without upper rack in place. Accommodate glassware up to 10.6" (27 cm) high with upper rack in place. Shipping weight 20 lbs. (9 kg).



Lower Test Tube Spindle Racks

May be used in place of the Lower Standard Rack in any SteamScrubber or the Lower Spindle Rack in any FlaskScrubber or FlaskScrubber Vantage Series Washer. Hold test tubes, vials and other laboratory glassware containers up to 10 mm in diameter. Water and detergent are injected through the spindles to clean and rinse the inside of the tubes. In addition, when used in a FlaskScrubber or FlaskScrubber Vantage Series Washer, hot air is forced through the spindles to dry the inside of the test tubes. Constructed of Type 304 stainless steel. Include 150 each spindles, 2.0" h x 1/8" OD (5 cm x 3 mm) with nylon fasteners and riser. The riser, when placed on top of the spindles, elevates tubes 3/4" (19 mm) from the bottom of the spindles to allow for proper drainage.

Catalog#	Description	Shipping Wt.
4546000	Test Tube Spindle Rack. Includes rack, 150 spindles and riser. Dimensions: 21.0" w x 21.5" d x 5.0" h (53.3 x 54.6 x 12.7 cm)	20 lbs. (9 kg)
4546001	Test Tube Spindle Rack Conversion Kit. Includes 150 spindles and riser. Requires Lower Standard Rack 4588500 (not included). Dimensions: 17.5" w x 12.7" d x 4.2" h (44.5 x 32.3 x 10.7 cm)	15 lbs. (7 kg)

Test Tube Holders

For use with Test Tube Spindle Racks. Keep tubes upright. Constructed of Type 304 stainless steel. Holders 4546200 and 4546300 are stackable so that two Holders in any combination may be installed in a Test Tube Spindle Rack at the same time for double capacity. Washers using stacked Holders can not accommodate an upper rack.



Test Tube Holder 4546200 is stacked atop Test Tube Holder 4546300 (sold separately). See page 19.

* Four Utensil Holders maximum in FlaskScrubber and FlaskScrubber Vantage Series Washers.

FlaskScrubber® & SteamScrubber® Laboratory Glassware Washers

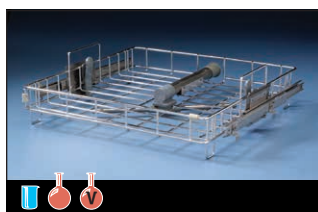
ACCESSORIES



Above left: Test Tube Holder 4546100
Above right: Test Tube Holder 4546200
Left: Test Tube Holder 4546300



Catalog#	Description	Shipping Wt.
4546100	Test Tube Holder accommodates 150 each 10-13 mm OD tubes. Dimensions: 14.3" w x 10.6" d x 6.0" h (36.2 x 27.0 x 15.2 cm).	10 lbs. (5 kg)
4546200	Test Tube Holder accommodates 75 each (7 kg) 14-20 mm OD tubes. Dimensions: 14.3" w x 10.6" d x 5.5" h (36.2 x 27.0 x 14.0 cm). When tubes are 125 mm or shorter, Holder may be stacked with either 4546200 or 4546300 (sold separately).	15 lbs. (7 kg)
4546300	Test Tube Holder accommodates 75 each 20-25 mm OD tubes. Dimensions: 14.3" w x 10.6" d x 7.3" h (36.2 x 27.0 x 18.4 cm). When tubes are 150 mm or shorter, Holder may be stacked with either 4546300 or 4546200 (sold separately).	15 lbs. (7 kg)

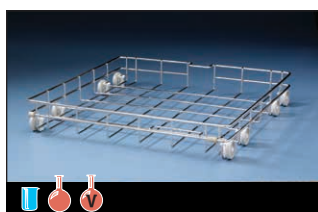


Upper Standard Racks

One rack is included with every SteamScrubber. May be used in any FlaskScrubber or FlaskScrubber Vantage Series. Constructed of Type 304 stainless steel. Include side release latches and wash arm. Add accessory

inserts suit your glassware mix (sold separately). Dimensions: 20.2" w x 20.9" d x 6.0" h (51 x 53 x 15 cm).

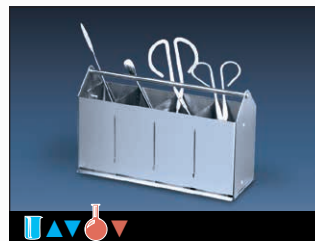
Catalog #	Description	Shipping Wt.
4595900	Upper Standard Rack for FlaskScrubber and FlaskScrubber Vantage Series Glassware Washers. Includes side rails for tank side wall installation.	16 lbs. (7 kg)
4587000	Upper Standard Rack for SteamScrubber Glassware Washers.	12 lbs. (5 kg)



Lower Standard Rack 4588500

One is included with every SteamScrubber. May be used in any FlaskScrubber or FlaskScrubber Vantage Series. Constructed of Type 304 stainless steel. Add accessory

inserts to suit your glassware mix (sold separately). Dimensions: 21.1" w x 21.0" d x 3.5" h (54 x 53 x 9 cm). Shipping weight 10 lbs. (5 kg).



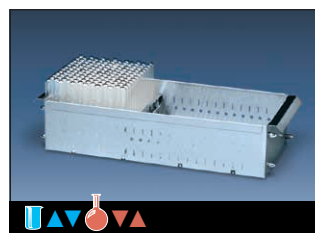
Utensil Holder 4542500

For spatulas, spoons, scoops and other miscellaneous utensils. Utensils fit vertically in four compartments, 2.75" w x 3.5" d x 4.9" h (7 x 9 x 12 cm). Type 304 stainless steel. Dimensions: 10.8" w x 4.1" d x 6.6" h (27 x 11 x 17 cm). Shipping weight 4 lbs. (2 kg).



Utensil Basket 4402201

For miscellaneous labware such as stoppers, spatulas and other small lightweight items that will not pass through No. 4 mesh sides and bottom. Retainer top is required and included. Type 304 stainless steel. Dimensions: 8.0" w x 8.0" d x 4.0" h (20 x 20 x 10 cm). Shipping weight 2 lbs. (1 kg).



Bulk Tube Insert 4542100

Quick loading. For vertically-positioned test tubes. Holds up to 600 each 13 mm tubes or 244 each 20 mm tubes. Bottom, grate size 0.38" (9.5 mm), allows water to drain from inverted tubes. When insert is less than fully loaded, the divider may be adjusted to keep

tubes upright. Type 304 stainless steel. Smallest divided compartment size: 1.8" w x 8.1" d x 4.2" h (4 x 21 x 11 cm). Overall interior dimensions (without divider): 18.7" w x 8.1" d x 4.2" h (48 x 21 x 11 cm) Dimensions: 21.0" w x 8.3" d x 4.4" h (53 x 21 x 11 cm). Shipping weight 5 lbs. (2 kg).



Culture Tube Inserts

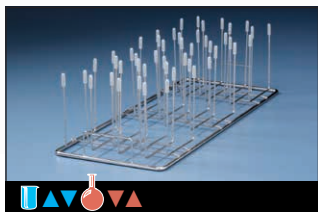
Choose from three inserts designed to hold tubes from 10 to 24 mm OD. Type 304 stainless steel.

Catalog #	Description	Dimensions	Grid Size	Shipping Wt.
4588600*	240 tubes, 10 mm to 12 mm	18.0" w x 8.6" d x 4.5" h (46 x 22 x 11 cm)	16.8 mm x 16.8 mm	4 lbs. (2 kg)
4402001	144 tubes, 15 mm to 18 mm	18.0" w x 7.8" d x 6.4" h (46 x 20 x 16 cm)	23.8 mm x 23.8 mm	3 lbs. (1 kg)
4402101	105 tubes, 20 mm to 24 mm	18.0" w x 8.3" d x 9.9" h (46 x 21 x 25 cm)	26.5 mm x 26.5 mm	3 lbs. (1 kg)
4401401	Retainer Top	18.5" w x 8.3" d x 0.3" h (47 x 21 x 1 cm)	—	2 lbs. (1 kg)

*Includes 4401401 Retainer Top

FlaskScrubber® & SteamScrubber® Laboratory Glassware Washers

ACCESSORIES



48-Pin Insert 4591601

Forty-eight pins accommodate a variety of labware. Type 304 stainless steel. Stainless steel pins have plastic tips to protect glassware from scratching. Dimensions: 7.8" w x 19.3" d x 5.2" h (20 x 49 x 13 cm). Shipping weight 2 lbs. (1 kg).



Labware Inserts

Pins hold a variety of wider-mouth flasks, beakers and other labware in inverted position. Retainer Top is recommended for use with plastic and lightweight glassware. Inserts and Retainer Top of Type 304 stainless steel.



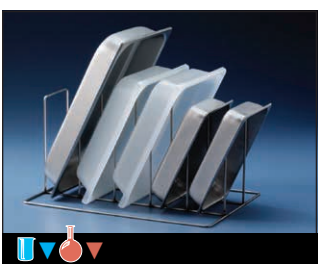
Stainless steel pins have plastic tips to

Catalog #	Description	Dimensions	Shipping Wt.
4401501	10-Pin Insert	19.3" w x 8.8" d x 8.0" h (49 x 22 x 20 cm)	3 lbs. (1 kg)
4401801	32-Pin Insert	19.3" w x 8.8" d x 6.0" h (49 x 22 x 20 cm)	3 lbs. (1 kg)
4401901	Retainer Top	18.5" w x 8.0" d x 0.3" h (47 x 20 x 1 cm)	2 lbs. (1 kg)



BOD Bottle Insert 4589201

Type 304 stainless steel. Capacity: 18 bottles. Grid size: 70 mm x 70 mm. Dimensions: 19.5" w x 8.8" d x 6.0" h (49.5 x 22.2 x 15.2 cm). Shipping weight 2 lbs. (1 kg).



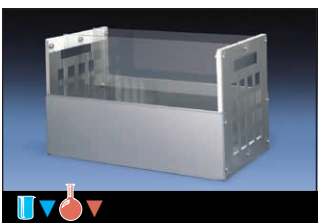
Tray Insert 4598401

For pans, instrument trays, multi-purpose trays and other shallow containers. Capacity: 5 trays. Type 304 stainless steel. Dimensions: 18.2" w x 12.2" d x 9.1" h (46 x 31 x 23 cm). Shipping weight 2 lbs. (1 kg).



Petri Dish Insert 4589701

For Petri dishes, watch glasses and microtiter plates. Capacity: 24 plates. Grid size: 22 mm x 140 mm. Type 304 stainless steel. Dimensions: 19.2" w x 8.6" d x 5.9" h (49 x 22 x 15 cm). Shipping weight 2 lbs. (1 kg).



DNA Sequencing Plate Insert 4591500

For electrophoresis plates, 10" x 16.6". Capacity: 6 plates. Type 304 stainless steel with plastic glides. Dimensions: 17.1" w x 8.5" d x 9.9" h (43 x 22 x 25 cm). Shipping weight 6 lbs. (3 kg).



Pipet Inserts

Permit direct injection cleaning of pipets. Self-sealing silicone check valves allow washing of partial or full loads. Type 304 stainless steel. FlaskScrubber and FlaskScrubber Vantage Series Washers hold up to four 4494200 or two 4595200 Inserts.



Catalog #	Description	Shipping Wt.
4494200	Holds 8 pipets, 1 ml to 10 ml. Includes one 1.25" mounting spindle.	2 lbs. (1 kg)
4595200	Holds 16 pipets, 1 ml to 50 ml. Includes two 1.25" mounting spindles and PVC-coated holder.	3 lbs. (1 kg)



Glassware Holders

Grip glassware over spindles.

Catalog #	Description	Shipping Wt.
4424600	4.0" h (10 cm) vinyl-coated Type 304 stainless steel wire with height adjustment screw	0.4 lb. (0.2 kg)
4424800	6.0" h (15 cm) vinyl-coated Type 304 stainless steel wire with height adjustment screw	0.4 lb. (0.2 kg)
4585204*	3.9" h (10 cm) plastic with Type 304 stainless steel height adjustment clip	0.4 lb. (0.2 kg)

*Eighteen 4585204 Glassware Holders are included with every FlaskScrubber and FlaskScrubber Vantage Series Glassware Washer.

Small Spindles with Clips 4596000

Included with every FlaskScrubber and FlaskScrubber Vantage Series Glassware Washer. Type 304 stainless steel. Spindles may be used in any spindle location on any Upper or Lower Spindle Rack to provide direct injection cleaning of small narrowneck glassware. Each spindle is 4.3" h x .12.0" OD. Package of 10 small spindles with 10 height adjustment clips, tool to remove large spindles, 36 nylon plugs and 18 height adjustment clips for large spindles. Shipping weight 3 lbs. (1 kg).

Drain Water Cooling Kits

Provide plumbing components, solenoid valve and electrical connections necessary to mix cold tap water with hot drain water so that water <60° C (<140° F) is directed to the house drain system. When the washer's drainage pump is activated, the solenoid valve opens releasing the flow of cold tap water to the drain.

Catalog #	Description	Shipping Wt.
4591900	Cold Water Drain Kit, 115 volt, 60 Hz operation	8 lbs. (4 kg)
4591901	Cold Water Drain Kit, 230 volt, 50/60 Hz operation	8 lbs. (4 kg)

FlaskScrubber® & SteamScrubber® Laboratory Glassware Washers

ACCESSORIES & DETERGENT



Freestanding-to-Mobile Conversion Kits

Add mobility to freestanding SteamScrubber and FlaskScrubber Glassware Washers. Allow washers to be plugged into a 20 amp electrical wall outlet and connected to a standard laboratory sink faucet. Include four 2-inch diameter rubber casters, two aerator adapters for connection to standard 55/64"-27 male and 15/16"-27 female laboratory faucets, drain hose and installation instructions. Not for use with under-counter washers or FlaskScrubber Vantage Series Glassware Washers.

Catalog #	Description	Shipping Wt.
4596100	Mobile Conversion Kit, for 115 volt operation. Includes 10' power cord with NEMA 5/20 plug.	60 lbs. (27 kg)
4596101	Mobile Conversion Kit, for 230 volt operation. Includes 8.2' power cord with NEMA 6/20 plug.	60 lbs. (27 kg)



Base Stands

Elevate washers 17" (43.2 cm) for washer loading convenience and storage of supplies. Type 304 stainless steel stationary stand, fully assembled with leveling feet and instructions.

Catalog #	Description	Shipping Wt.
4595400	Stand for Freestanding FlaskScrubbers or SteamScrubbers, 24.2" w x 27.5" d x 17.0" h (61 x 70 x 43 cm), includes one storage compartment with hinged door	80 lbs. (36 kg)
4595500	Stand for FlaskScrubber Vantage Series, 32.2" w x 27.5" d x 17.0" h (82 x 70 x 43 cm), includes two storage compartments with hinged doors	105 lbs. (48 kg)



Liquid Detergent Dispenser Kit 4587500

Connects to any SteamScrubber or FlaskScrubber Glassware Washer during installation to automate liquid detergent dispensing. Includes peristaltic pump, float switch, tubing, one gallon plastic container and installation instructions. Detergent is not included. Not for use with FlaskScrubber Vantage Series Glassware Washers. Shipping weight 10 lbs. (5 kg).



LabSolutions Liquid Detergent 4522000, Neutralizing Acid Rinse 4522200, and Powder Detergent 4422100 and 4422000

LabSolutions™ Non-Foaming Powder Detergent

Specially formulated for Labconco glassware washers. Removes lab contaminants such as grease, agar, blood and protein digestates. Rinses completely. Non-foaming formula does not promote leaks. A 1% solution has a pH of approximately 12.5. Contains phosphates. Non-hazardous formula may be shipped anywhere.

Catalog #	Description	Shipping Wt.
4422000	Powder Detergent, small pail for approximately 140 loads	10 lbs. (5 kg)
4422100	Powder Detergent, large pail for approximately 400 loads	28 lbs. (13 kg)

LabSolutions™ Low-Foaming Liquid Detergent

Specially formulated for Labconco glassware washers. Removes a wide range of laboratory contaminants. Rinses completely. Non-corrosive formula won't degrade stainless steel, glass or plastic. Phosphate-free for environmentally-safe disposal. Chlorine-free and tissue culture-safe. May be used in hot or cold water.

Catalog #	Description	Shipping Wt.
4522000	Low-Foaming Liquid Detergent for approximately 180 loads. 1 gallon (3.8 liters)	12 lbs. (5 kg)

LabSolutions™ Neutralizing Acid Rinse

Specially formulated for rinse aid reservoir in Labconco glassware washers. Mild acid corrects pH reducing alkaline detergent residue. Removes hard water deposits, mineral deposits, accumulated lime scale that can cloud glassware. Rinses completely.

4522200	Neutralizing Acid Rinse, fills reservoir approximately 6 times. 34 ounces (1 liter)	3 lbs. (1 kg)
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For MSDS information, visit our website at www.labconco.com or call customer service at 800-821-5525 or 816-333-8811.

FlaskScrubber® & SteamScrubber® Laboratory Glassware Washers

COMPANION PRODUCTS



ScrubberMate Glassware & Rack Cart 8027000



Sixteen combs, each with three pins, may be placed in sixteen positions in the upper drawer and sixteen positions in the lower drawer.



Upper and lower drawers hold two inserts each and pull out for easy access. An upper rack may be stored on the top; a lower rack below.

ScrubberMate™ Glassware & Rack Cart 8027000

Designed for Labconco glassware washers. Provides convenient storage and transport of extra Labconco washer racks, inserts or miscellaneous glassware. Accommodates up to two Labconco washer racks or four wire inserts. Alternatively, 48 adjustable and removable pins, 0.5" wide x 4.75" high (1.3 cm x 12.1 cm), may be arranged in the drawers to hold inverted flasks, beakers and other glassware. Rails are provided to allow a lower washer rack to slide directly onto the cart from the washer. In addition, the lower drawer pulls out for simple loading of inserts or individual glassware. An upper washer rack may be docked above the upper drawer. The upper drawer accommodates two wire inserts and is removable so that tall glassware may be loaded in the lower drawer. Durable and chemical-resistant, high density polyethylene construction. Includes 2.5" diameter casters with toe locks. Dimensions: 23.3" w x 22.6" d x 31.6" h (59.2 x 57.4 x 80.3 cm). Fully assembled. Shipping weight 70 lbs. (32 kg).



Glassware Cart 8032500



Glassware Cart 8045000

Glassware Carts

Safely transport clean and dirty labware. Come with two large or four small interchangeable vinyl-coated wire baskets and removable drip pan below the baskets to catch spills. Include 4" diameter casters (two with toe locks). Constructed of welded 1-inch square tubular steel coated with mar-resistant epoxy. Dimensions: 34.9" w x 19.0" d x 36.4" h (88.6 x 48.3 x 92.4 cm). Fully assembled. Lifetime warranty.

Catalog #	Description	Shipping Wt.
8032500	2-Basket Glassware Cart	43 lbs. (20 kg)
8045000	4-Basket Glassware Cart	43 lbs. (20 kg)
8040100	Large Basket, 32.0" w x 18.0" d x 4.0" h (81.3 x 45.7 x 10.2 cm)	5 lbs. (2 kg)
8040200	Small Basket, 16.0" w x 18.0" d x 4.0" h (40.6 x 45.7 x 10.2 cm)	2 lbs. (1 kg)



Carboy Caddy 8000300

Provides safe way to move a large container of purified water without heavy lifting. Includes 3" diameter casters that elevate the support shelf only 4.25" above the floor. Shelf constructed of phenolic board with a melamine high-pressure laminate surface. Frame constructed of welded 1-inch square tubular steel coated with mar-resistant epoxy. Handle dimensions: 38.5" high x 19.0" wide (97.8 x 48.3 cm). Shelf

dimensions: 20.0" x 23.6" (50.8 x 60.0 cm). Supports loads up to 360 pounds (163 kg). Fully assembled. Lifetime warranty. Shipping weight 35 lbs. (16 kg).

FlaskScrubber® & SteamScrubber® Laboratory Glassware Washers

COMPANION PRODUCTS



WaterPro RO Stations

Connect to Labconco glassware washers to provide purified water for the rinse cycles. Deliver 1 liter/minute of reverse osmosis purified, Type III water when feedwater purity is 100 µs or better. For wall mounting. Powder-coated steel cabinet with Type 304 stainless steel front panel. Three bowls made of white polypropylene. Includes integral

17 liter polyethylene storage tank with outlet port for connection to washer; ON/OFF switch; µS, TEMP ° C, TIME DISP. and TANK FULL indicator lights; and DISPENSE switch. If TIME DISP. is activated, water dispensing from the valve automatically shuts off once user-set time has elapsed. LED display shows actual water quality from 1 to 999 microsiemens (µS), actual water temperature in ° C or dispense time in minutes. **Requires Prefilter/Carbon Filter Kit 9067201 and Reverse Osmosis Membrane 9078700 for operation.** Dimensions: 31.1" w x 7.9" d x 30.4" h (79 x 20 x 77 cm).

Catalog #	Electrical Requirements	Shipping Wt.
9075000	For 115 volts, 60 Hz, 12 amp AC operation. Includes 8-foot, 3-wire cord and plug.	100 lbs. (45 kg)
9075002*	For 230 volts, 50 Hz, 6 amp AC operation. Includes 8-foot, 3-wire cord. An electrical plug is required.	100 lbs. (45 kg)

Prefilter/Carbon Filter Kit 9067201 Required for operation. Includes Prefilters (3) and Carbon Filters (3), for initial start-up and two filter changes. Shipping weight 10 lbs. (5 kg).

Reverse Osmosis Membrane 9078700 Required for operation. Shipping weight 6 lbs. (3 kg).



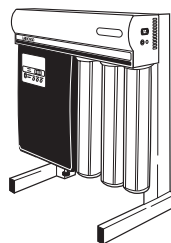
70 Liter Storage Tanks

Connect to the WaterPro RO Station to provide additional storage capacity for RO-purified water and means to deliver it from three outlets to destinations such as a polishing station and glassware washer. Use a gravity feed system for water delivery. The 70 liter polyethylene tank has one 3/4 NPT female port and two 3/8" ball valves with 3/8" female fittings. The tank includes 6 feet of polyurethane tubing for

connection to the WaterPro RO Station, a 0.3 micron vent filter to help prevent airborne bacterial contamination of the tank, a float switch to prevent the WaterPro RO Station from overflowing the tank, a fill valve wired in series with the float switch that activates when a drop in water level is detected, and two check valves that direct water to drain if the water level exceeds normal level. The tank has a powder-coated steel support stand so that it may stand alone up to 6 feet away from the WaterPro RO Station. Dimensions: 32.8" w x 14.4" d x 26.0" h (83.5 x 36.5 x 66.0 cm).

Catalog #	Electrical Requirements	Shipping Wt.
9100000	For 115 volts, 60 Hz, 1 amp AC operation. Includes 8-foot, 3-wire cord and plug.	80 lbs. (36 kg)
9100001*	For 230 volts, 50 Hz, 6 amp AC operation. Includes 8-foot, 3-wire cord. An electrical plug is required.	80 lbs. (36 kg)

* International electrical configuration



Support Stand 9077400

For converting wall-mounted WaterPro RO Station to bench mounted. Rests on countertop or other horizontal surface. Powder-coated steel. Dimensions (with WaterPro RO Station attached): 31.1" w x 16.1" d x 35.3" h (79 x 41 x 90 cm). Shipping weight 20 lbs. (9 kg).

Contact Labconco for more information about these quality products for your laboratory.



Water Purification Systems



Fume Hoods & Carbon-Filtered Enclosures



Biological Safety Cabinets



Safety Enclosures & Clean Benches



Laboratory Animal Research Stations



Balance & Bulk Powder Enclosures



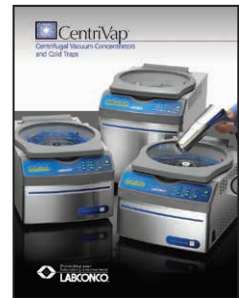
Glove Boxes



Forensic Enclosures



Freeze Dry Systems



Vacuum Concentrators & Cold Traps



Multiple Sample Evaporation Systems



Agricultural Chemistry Products



Laboratory Carts & Benches



Blood Drawing Chairs



Vacuum Desiccator



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