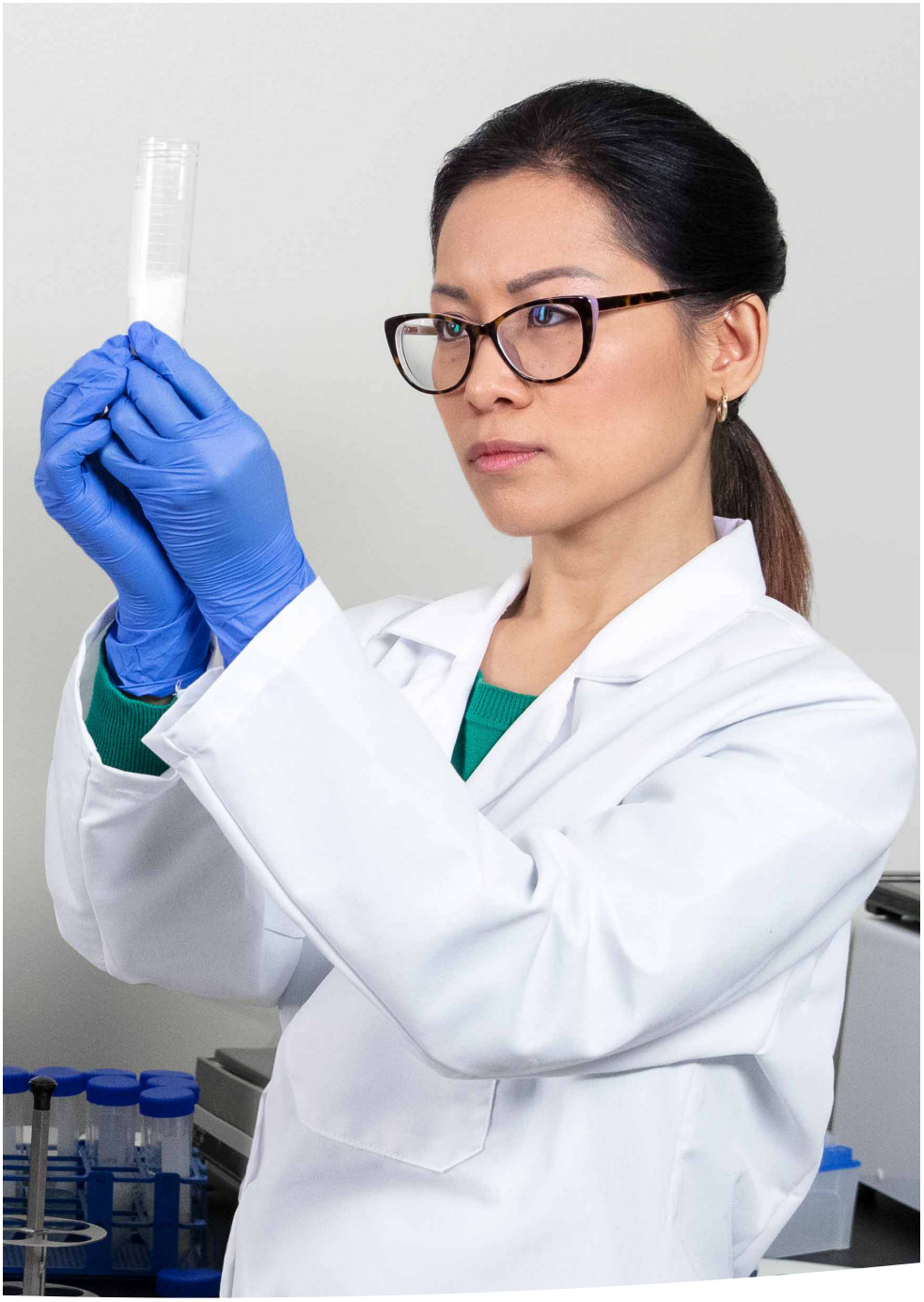
LABCONCO®

Labconco Sustainability Initiatives



Find it at **fishersci.com** and **fishersci.ca**

fisher scientific
part of **Thermo Fisher Scientific**

Labconco Sustainability Committee

Initiatives and Actions

- United States Green Building Council Member
- Arbor Day Partner
- Laser Printing & Additive Manufacturing
- Recycling & Waste Diversion Program
- Packaging Program
- ASHRAE 110 Alternative Gas
- Facilities Energy Efficient Water Usage
- Facilities Energy Efficient LED Lighting
- Reduced Paper Usage Program
- Lean Manufacturing
- Reclaimed Paint Program
- Freight Optimization

Watch on demand

Sustainability Today for the Lab of Tomorrow

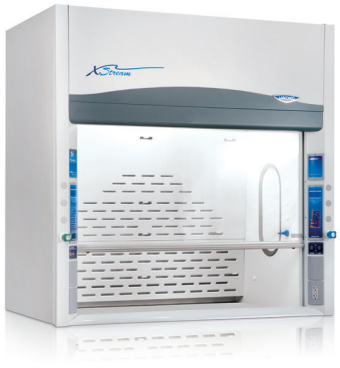
Green Labs Digital Summit More information

Contact us.

If you have any questions or would like to learn more about our action plan, contact us. We are interested to learn more about your interests and how we can support you. **labconco@sustainability.com**

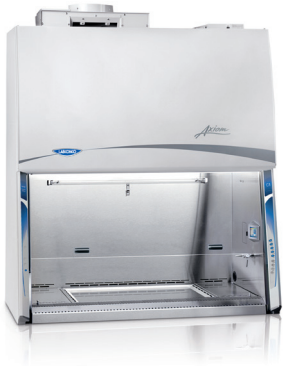
Labconco Sustainability Products

LEED Credits and Projects



Fume Hoods

Requires 45% less air than conventional fume hoods



Biosafety Cabinets

Uses 60% less energy and emits far less heat than similar cabinets

Glassware Washers

Reduces potable water usage over hand washing

LEED Category	LEED Credit	Fume Hoods	Biosafety Cabinets	Glassware Washers
Energy & Atmosphere (EA)	Optimize Energy Performance	•	•	
Materials & Resources (MR)	Recycled Content	•	•	•
	Regional Materials*	•	•	•
Innovation (ID)	Innovation in Design	•	•	•

Average Recycled Content

	Fume Hoods	Biosafety Cabinets	Glassware Washers	Freeze Dryers
Pre-Consumer	7%	8.5%	6.6%	5.4%
Post-Consumer	38.1%	53.1%	48.2%	45.2%
Total*	41.6%	57.3%	51.4%	47.9%
Recyclable Content	70.1%	94.9%	77.6%	85%

LEED green projects.

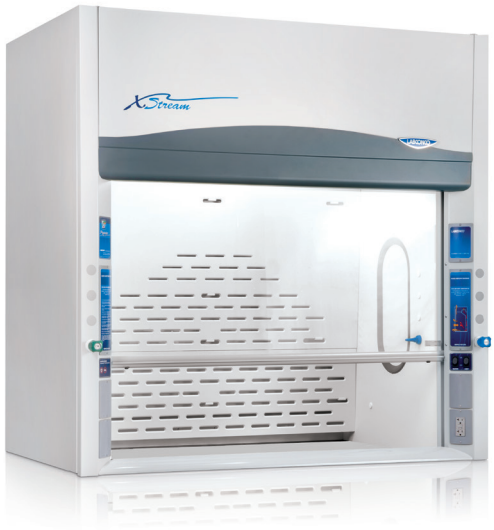
Working on a LEED green project? Our LEED green associates are here to help with sustainability practices, equipment, recycled materials details and more. **labconco@sustainability.com**

*(Total = Post-Consumer + Pre-Consumer/2). The sum of post-consumer recycled content plus one-half of the post-industrial content

*If project is located within 500 miles of Labconco. **Recyclable content measured in accordance with USGBC guidelines. Labconco fume hoods, biosafety cabinets, freeze dryers and glassware washers are built from at least 40% recycled* materials, with their recyclable content at least 70% of finished product weight (LEED Program by USGBC).

Fume Hoods

Energy Usage & Cost Comparison



Ducted Fume Hoods

- Annual energy savings up to $3,920
- Built with over 40% recycled materials
- Unique patented design drastically lowers energy cost

Ductless Fume Hoods

- Annual energy savings up to $8,457 per hood
- Recirculate 100% of tempered room air - no exhaust to the exterior
- Integral blower further reduces energy cost

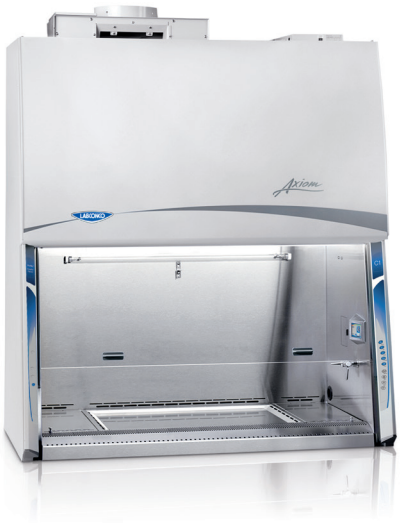
	Typical 6'	Labconco 6'		Echo 6'
Constant Air Volume (CAV) Mechanical System Sash at 28"				**Filtered System**
Face Velocity (fpm)	100	100	60	Variable
Airflow Volume in Cubic Feet per Minute (CFM)	1250	1150	690	Variable
Annual Energy Cost*	$8,750	$8,050	$4,830	$293
15-Year Lifetime Cost*	$131,250	$120,750	$72,450	$4,395
Annual Energy Cost Savings*	—	$700	$3,920	$8,457
15-Year Lifetime Cost Savings*	—	$10,500	$58,800	$126,855
Constant Air Volume (CAV) Mechanical System Sash at 18"				**Filtered System**
Face Velocity (fpm)	100	100	60	Variable
Airflow Volume in Cubic Feet per Minute (CFM)	785	735	430	Variable
Annual Energy Cost*	$5,495	$5,145	$3,010	$293
15-Year Lifetime Cost*	$82,425	$77,175	$45,150	$4,395
Annual Energy Cost Savings*	—	$350	$2,485	$5,202
15-Year Lifetime Cost Savings*	—	$5,250	$37,275	$78,030
Variable Air Volume (VAV) Mechanical System				**Filtered System**
Face Velocity (fpm)	100	100	60	Variable
Airflow Volume at 18" in Cubic Feet per Minute (CFM)	785	735	430	Variable
Annual Energy Cost**	$4,037	$3,803	$2,380	$293
15-Year Lifetime Cost**	$60,550	$57,050	$35,700	$4,395
Annual Energy Cost Savings**	—	$234	$1,657	$3,744
15-Year Lifetime Cost Savings**	—	$3,500	$24,850	$56,160

*Based on average annual dollars per CFM of $7.00, fume hood operating 24 hours a day and 5 days per week (6240 hours per year). Average annual dollars per CFM range from $5.00 to $12.00 depending on geographic location.

**Based on 8 hours per day at 18" sash opening and remaining time with sash closed. Closed sash air volume is based on 200 air changes per hour (ACH) and $0.0000187/ft^3 air.

Biosafety Cabinets

Energy Usage & Cost Comparison



- Lifetime energy savings average more than $2,000 each
- Built with over 55% recycled materials
- 95% of materials can be recycled after the product's useful life

	A	B	Labconco
		Annual Energy Costs*	
Motor Type/Technology	AC PSC	AC-3Ø	DC ECM
Energy Use (kW h/yr) at 8 Hours/Day	1,206	861	603
Energy Used (kWh/yr) at 24 Hours/Day	5,067	3,617	2,533 (803**)
Annual Cost Industrial at 8 Hours/Day	$81	$58	$41
Annual Cost Industrial at 24 Hours/Day	$341	$243	$170 ($54**)
		15-Year Lifetime Costs†	
Energy Cost at 8 Hours/Day	$1,217	$869	$609
Energy Cost at 24 Hours/Day	$5,115	$3,651	$2,557 ($811**)
Total Operational Cost at 8 Hours/Day	$3,467	$3,119	$2,859
Total Operational Cost at 24 Hours/Day	$7,365	$5,901	$4,807 ($3,061**)
		Maintenance Costs	
HEPA Filter Costs	$1,600	$1,600	$800
Service Costs††	$3,450	$3,450	$3,000
Replacement Parts	$1,100	$1,100	$700
Total	$3,900	$3,900	$2,250
Total Lifetime Cost at 8 Hours/Day	$7,367	$7,019	$5,109
Total Lifetime Cost at 24 Hours/Day	$11,265	$9,801	$7,057 ($5,311**)

*Using an industrial energy use cost of $0.0673/kW h.

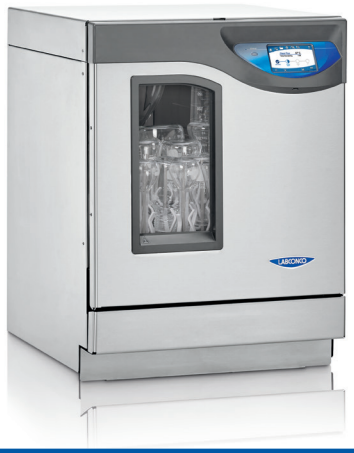
**Continuous operation of cabinet utilizing Night-Smart™ reduced flow setback mode. Calculations based on using Night-Smart™ idle setback 16 hours a day for 5 days per weeks and 24 hours a day for 2 days per week, 52 week calendar year.

†Costs of HEPA filters, service and replacement parts are approximations, not an estimate or guarantee of any kind. Value does not include annual certification fee of $2,250.

††Service cost includes annual certification ($150 per year), decontamination ($450 per incident), and incidentals.

Glassware Washers

Energy Usage & Cost Comparison



- Built with about 51% recycled materials
- 78% of materials can be recycled after the product's useful life

	Hand Washing	A	B	Labconco
Water Use Costs				
Gallons of Water Consumed	40	16.6	18.6	17
Tap/DI Water Cost	$0.40	$0.11	$0.12	$0.13
DI Water Cost	$1.98	$1.83	$2.05	$1.12
Labor Cost†	$28	$1.75	$1.75	$1.75
Detergent Cost	$0.88	$0.44	$0.44	$0.44
Energy to Heat Water Cost	$0.48	$0.10	$0.22	$0.20
Total Operational Cost**	$31.74	$4.23	$4.58	$3.65
10-Year Lifetime Costs†				
Gallons of Water Consumed	104,000	43,160	48,360	44,200
Tap Water Cost	$1,040	$286	$312	$348
DI Water Cost	$5,148	$4,753	$5,320	$2,917
Labor Cost	$72,800	$4,550	$4,550	$4,550
Detergent Cost	$2,288	$1,144	$1,144	$1,144
Energy to Heat Water Cost	$1,248	$259	$572	$530
Total Operational Cost**	$82,524	$10,993	$11,898	$9,490
Maintenance Costs				
Qualification Document	n/a	$4,000††	$4,000††	No Charge
Qualification Validation	n/a	Included	Included	$3,000††
Service Cost	n/a	$750	$750	$750
Replacement Parts	n/a	$200	$200	$200
Total Maintenance Costs	$0	$5,100	$5,100	$4,100
Cost Savings				
Total Lifetime Cost (Operational + Maintenance)	$82,524	$16,093	$16,998	$13,590

*All percentages are based on weight of components vs total weight of a single undercounter FlaskScrubber.

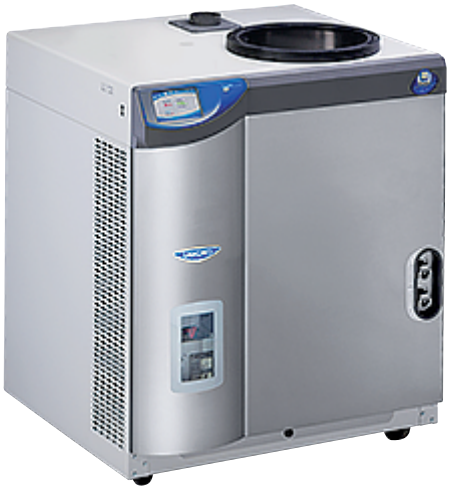
**Water consumption based washing 60 pieces of labware using the "Glass" Factory setting on a Labconco FlaskScrubber or using related cycles from other brands. Cold tap water rate at $0.01 per gallon. Pure water (DI) rate at ($0.33 per gallon).

†Technician pay of $14/hour (roughly $30,000 annually)

††Optional services for Installation, Operation, and Performance Qualification Document Pack and/or Validation Service based on several quotes from third party agencies.

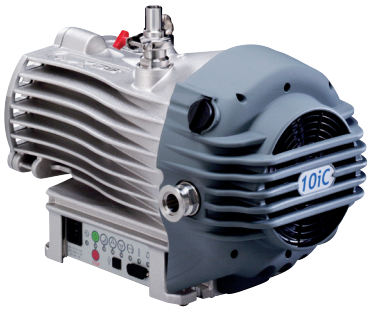
Freeze Dryers

Energy Efficiencies & Responsible Refrigerants



- Built with over 47% recycled materials
- Uses CFC and HCFC free refrigerants
- Preserves samples for storage at room temperature. Saving up to $1,000 per year vs running an ULT freezer

- Shelf-stable freeze dried samples eliminate the need for ultra low temperature freezers, saving $750 to $1,000 in energy consumption per year.
- End point detection prevents excessive run times per batch providing an energy savings along with more efficient use of equipment.
- A cold trap captures environmental contaminants instead of exhausting them into the environment.
- High-quality materials result in extended service life.



Scroll pumps consume ~50% of the power and generate ~50% of the heat when compared to other popular vacuum pump types. It eliminates potential hydrocarbons from contaminating samples in the room, and does not require the consumable oils that other pumps use.

LABCONCO

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LABCONCO CORPORATION

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5/00/23

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