Protector® XL™ Floor-Mounted Fume Hoods

LABCONCO®

newenglandlab®
laboratory furniture systems

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Protector® XL™ Floor-Mounted Fume Hoods

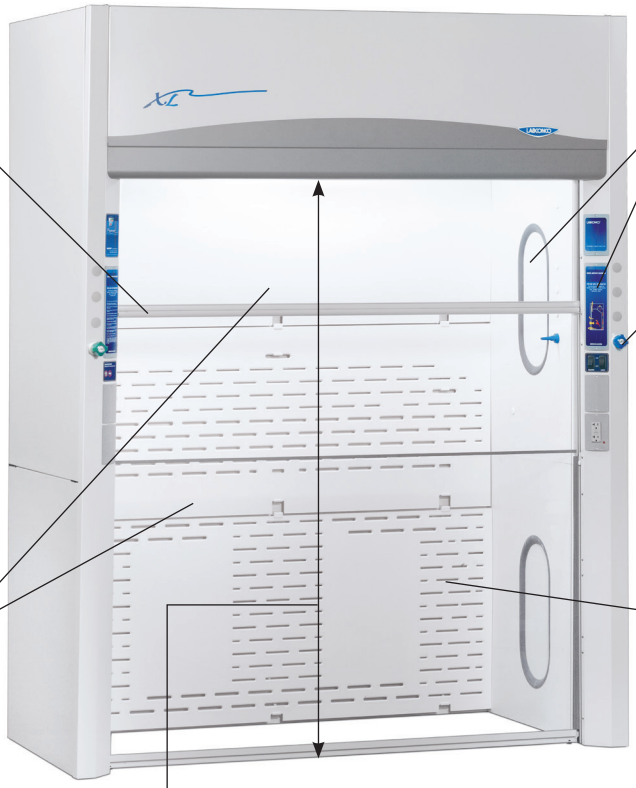
With Vertical-Rising Sashes

High performance hood tested to allow operation as low as 60 fpm.

Bright interior lighting. Energy efficient LED lights are rated for 50,000 hours. Located outside the hood interior for corrosion-resistance and easy replacement. Explosion-proof lighting available.

Chemical- and fire-resistant, composite panel liner is fiberglass-reinforced with bright white surface for excellent light reflectivity.

❇ **Clean-Sweep™ sash handle and tracks*** with openings to bleed air into the hood. Direct chemical fume concentrations away from the user's breathing zone. Slim-line radiused sash handle sweeps in airflow with minimal turbulence. Sash track slots on the corner posts enhance airflow.



❇ **Service plates and panels** give front and inside access to plumbing connections.

Color-coded service fixtures for gas, air and other services have remote controls for use regardless of sash position. Each hood is factory prepared for up to four fixtures on each side.

❇ **Two tempered safety glass sashes** with anti-racking cable and pulley. Rear sash moves from the floor midpoint where it contacts the front sash, which travels to full open. Pocket contains sash weight to counteract swing.

❇ **Opti-Zone™ baffles** with slot sizes and patterns that promote airflow speed uniformity and lower the average face velocity necessary for containment.

Pre-wired electrical components. Lights and switches are factory-wired to the hood's single point junction box. Electrical duplex(es) are also wired on some models. Factory-prepared for up to four electrical duplexes and an airflow monitor.

Maximum visibility of 73.5" high and large usable interior work depth and interior height of 84". Three working depths available: 30", 36" and 48".

ETL listed
All 115/230V, 60 Hz models carry the ETL mark signifying they are certified to UL and CAN/CSA standards for laboratory equipment.

CE marking
All 230V, 50 Hz models conform to the CE (European Community) directives.

❇ Labconco exclusive feature

*U.S. Patent No. 6,461,233

Protector® XL™ Floor-Mounted Fume Hoods

With Vertical-Rising Sashes Specifications

All models feature:

- High performance hood with by-pass airflow design
- By-pass block
- Glacier white powder-coated steel exterior
- Chemical-resistant, fiberglass-reinforced, composite panel liner and baffle
- ❇ Opti-Zone™ baffles*, removable for cleaning, with flame spread index less than 25 per ASTM E84**
- ❇ Two tempered safety glass, vertical-rising sashes with powder-coated aluminum sash handles and powder-coated steel sash tracks with Clean-Sweep slots
- ❇ Upper sash handle with Clean-Sweep openings*
- 73.5" (87 cm) high sightline from the floor to the header panel
- 63.6" (162 cm) loading height
- ❇ Removable front and side panels and front and interior service panels for access to plumbing and electrical wiring
- Pre-wired LED lighting with vapor-proof design and ADA-compliant light and blower switches. Lighting rated for 50,000 hours
- Powder-coated stainless steel, 12.8" (32.5 cm) ID exhaust connection(s)
- Shipped in multiple sections: top, bottom and sashes

Standards conformance & regulations**:

- CFR 29, Part 1910
- SEFA 1
- NFPA 45
- ASTM E84-09C
- ASHRAE 110
- ANSI Z9.5
- UL 61010-1
- CAN/CSA C22.2 No. 61010-1
- UL 1805

❇ Labconco exclusive feature

- CE Conformity Marking (230V models)
- SEFA 8

⚠**WARNING:** Cancer - P65Warnings.ca.gov (California only)

Fixtured models feature:

- Two pre-plumbed service fixtures with forged brass valves, lower right side with brass tubing for gas and lower left side with copper tubing for cold water. Components for converting either or both fixtures to air and vacuum are provided. **Inlet tubing is not provided**
- One pre-wired GFCI electrical duplex receptacle on lower right side and, on 8' models only, one additional pre-wired GFCI electrical duplex receptacle on lower left side

Required accessories (not included):

- Remote blower
- Ductwork

Optional accessories for on-site installation include:

- Service Fixture Kits. See page 10
- Electrical Duplex Kits. See page 11
- Guardian Airflow Monitor Kits. See page 11
- Ceiling Enclosure and Rear Finish Panel Kits
- Distillation Grid Kits

Intertek

Contact Labconco for ordering information on accessories not found in this brochure and explosion-proof hoods designed to be wired on-site per local codes.

*U.S. Patent No. 6,461,233

**See page 11 and 12 for list of regulations, standards and registered trademarks.

♿ Heights of switches and electrical receptacles meet requirements of Americans with Disabilities Act (ADA).

Protector® XL™ Floor-Mounted Fume Hoods

With Vertical-Rising Sashes Ordering Information

Catalog Number Configurator:

Use this key to configure the nine digit catalog number to order your Protector XL Floor-Mounted Laboratory Hood.

1 1 2 ☐ ☐ 7 0 ☐ ☐

Select the **WIDTH** of your fume hood. This is the fourth digit of your catalog number.

4 = 4' (122 cm)
5 = 5' (152 cm)
6 = 6' (183 cm)
8 = 8' (244 cm)

Select the **EXTERIOR DEPTH** of your fume hood. This is the fifth digit of your catalog number.

1 = 37.7" (96 cm) **2** = 43.7" (111 cm) **3** = 55.7" (141 cm)

Select the **ELECTRICAL REQUIREMENTS, SERVICE FIXTURES** and **GFCI ELECTRICAL DUPLEX RECEPTACLE** of your fume hood. These are the eighth and ninth digits of your catalog number.

Electrical Requirements	No Service Fixtures	Two Service Fixtures	Two Service Fixtures & GFCI Duplex*
100-115V, 50/60 Hz, 10 A	00	—	02
208-230V, 50/60 Hz, 5 A	20	21	—

Total Exhaust CFM and Static Pressure (top sash 64" from floor & bottom sash fully lowered)

Face Velocity (fpm)	Airflow Volumetric Rate (CFM) @ Static Pressure (inches of water)							
Top Sash @ Full Open	4' Hood		5' Hood		6' Hood		8' Hood	
	CFM	s.p.	CFM	s.p.	CFM	s.p.	CFM	s.p.
100	725	0.27	955	0.34	1180	0.46	1640	0.31
80	580	0.17	765	0.22	945	0.29	1310	0.20
60	435	0.10	575	0.12	710	0.17	985	0.11

Total Exhaust CFM and Static Pressure (top sash 54" from floor & bottom sash fully lowered)

Face Velocity (fpm)	Airflow Volumetric Rate (CFM) @ Static Pressure (inches of water)							
Top Sash @ 62.5% Open	4' Hood		5' Hood		6' Hood		8' Hood	
	CFM	s.p.	CFM	s.p.	CFM	s.p.	CFM	s.p.
100	450	0.11	595	0.13	735	0.18	1025	0.12
80	365	0.07	480	0.09	590	0.11	820	0.08
60	270	0.04	360	0.05	440	0.07	615	0.04

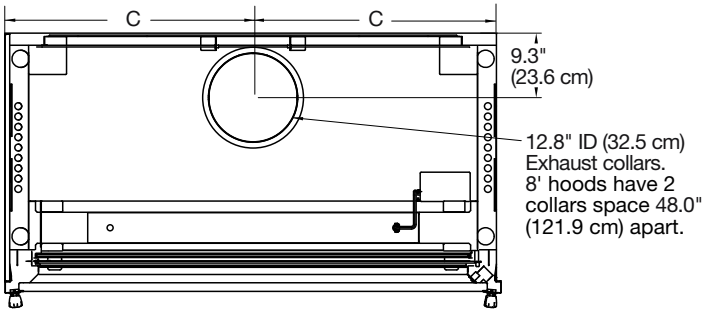
Shipping Weights

Hood Width	Description	37.7" Hood Depth	43.7" Hood Depth	55.7" Hood Depth
4'	No Service Fixtures, No GFCI Duplex	700 lbs. (318 kg)	715 lbs. (324 kg)	745 lbs. (338 kg)
4'	Two Service Fixtures, No GFCI Duplex	710 lbs. (322 kg)	725 lbs. (329 kg)	755 lbs. (342 kg)
4'	Two Service Fixtures, One GFCI Duplex	715 lbs. (324 kg)	730 lbs. (331 kg)	760 lbs. (345 kg)
5'	No Service Fixtures, No GFCI Duplex	815 lbs. (370 kg)	830 lbs. (376 kg)	860 lbs. (390 kg)
5'	Two Service Fixtures, No GFCI Duplex	825 lbs. (374 kg)	840 lbs. (381 kg)	870 lbs. (395 kg)
5'	Two Service Fixtures, One GFCI Duplex	830 lbs. (376 kg)	845 lbs. (383 kg)	875 lbs. (397 kg)
6'	No Service Fixtures, No GFCI Duplex	940 lbs. (426 kg)	955 lbs. (433 kg)	985 lbs. (447 kg)
6'	Two Service Fixtures, No GFCI Duplex	950 lbs. (431 kg)	965 lbs. (438 kg)	995 lbs. (451 kg)
6'	Two Service Fixtures, One GFCI Duplex	955 lbs. (433 kg)	970 lbs. (440 kg)	1000 lbs. (454 kg)
8'	No Service Fixtures, No GFCI Duplex	1180 lbs. (535 kg)	1195 lbs. (542 kg)	1225 lbs. (556 kg)
8'	Two Service Fixtures, No GFCI Duplex	1190 lbs. (540 kg)	1205 lbs. (547 kg)	1235 lbs. (560 kg)
8'	Two Service Fixtures, Two GFCI Duplexes	1195 lbs. (542 kg)	1210 lbs. (549 kg)	1240 lbs. (562 kg)

*Hoods with GFCI electrical duplex are rated at 20 amps. 8' hoods have two GFCI electrical duplex receptacles, one mounted on each side, 20 amps each.

Protector® XL™ Floor-Mounted Fume Hoods

With Vertical-Rising Sashes Dimensional Data



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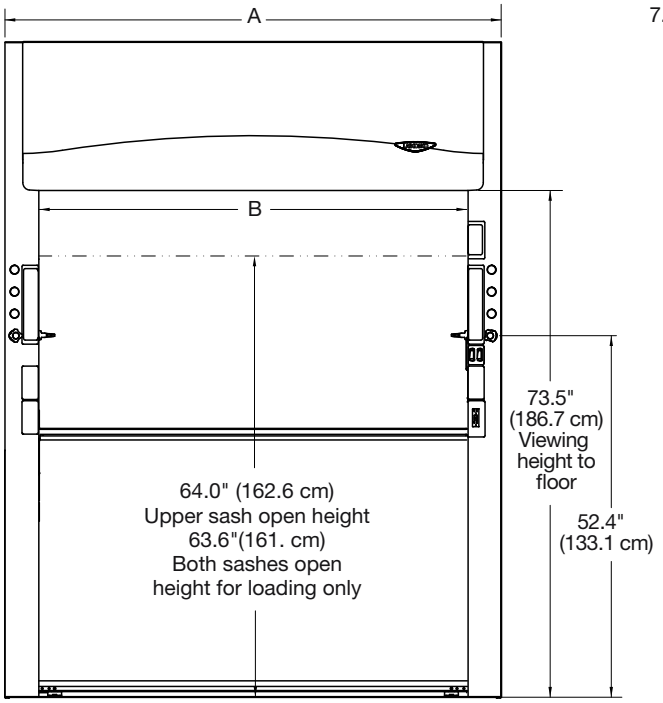

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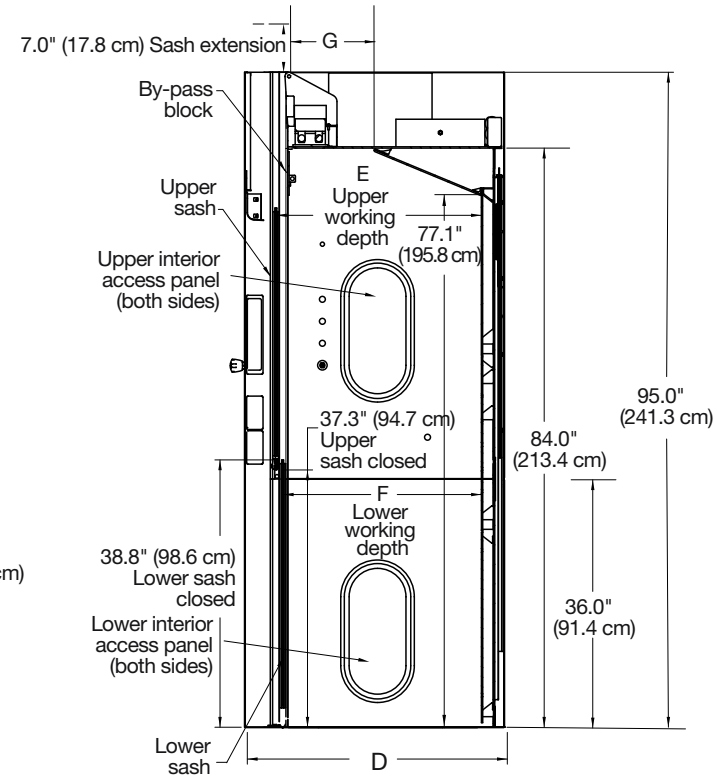


SIDE

Hood Width	A	B	C
4'	48.0" (121.9 cm)	38.1" (96.8 cm)	24.0" (61.0 cm)
5'	60.0" (152.4 cm)	50.1" (127.3 cm)	30.0" (76.2 cm)
6'	72.0" (182.9 cm)	62.1" (157.7 cm)	36.0" (91.4 cm)
8'	96.0" (243.8 cm)	86.1" (218.7 cm)	24.0" (61.0 cm)

D	E	F	G
37.7" (95.8 cm)	29.7" (75.4 cm)	28.7" (72.9 cm)	12.2" (31.0 cm)
43.7" (111.0 cm)	35.7" (90.7 cm)	34.7" (88.1 cm)	18.2" (46.2 cm)
55.7" (141.5 cm)	47.7" (121.2 cm)	46.7" (118.6 cm)	30.2" (76.7 cm)

Contact Labconco at (800) 821-5525 or (816) 333-8811 or visit labconco.com for detailed AutoCAD® drawings. See page 11 for trademark information.

Protector® XL™ Floor-Mounted Fume Hoods

With Horizontal-Sliding Sashes

Four tempered safety glass sashes slide horizontally for access to the interior.

Bright interior lighting. Energy efficient LED lights are rated for 50,000 hours. Located outside the hood interior for corrosion-resistance and easy replacement. Explosion-proof lighting available.

Chemical- and fire-resistant, fiberglass-reinforced composite panel liner with bright white surface for excellent light reflectivity.

Color-coded service fixtures for gas, air and other services have remote controls for use regardless of sash position. Each hood is factory prepared for up to four fixtures on each side.

❇ **Service access plates and panels** give front and inside access to plumbing connections.

❇ **Opti-Zone™ baffles** with slot sizes and patterns that promote airflow speed uniformity and lower the average face velocity necessary for containment.

Pre-wired electrical components. Lights and switches are factory-wired to the hood's single point junction box. Electrical duplex(es) are also wired on some models. Factory-prepared for up to four electrical duplexes and an airflow monitor.

Maximum visibility of 73.5" high and large usable interior working depth and interior height of 84". Three working depths available: 30", 36" and 48".

ETL listed
All 60 Hz models carry the ETL mark signifying they are certified to UL and CAN/CSA standards for laboratory equipment.

CE marking
All 230V, 50 Hz models conform to the CE (European Community) directives.

❇ Labconco exclusive feature

*U.S. Patent No. 6,461,233

Protector® XL™ Floor-Mounted Fume Hoods

With Horizontal-Sliding Sashes Specifications

All models feature:

- By-pass airflow design
- By-pass block
- Glacier white powder-coated steel exterior
- Chemical-resistant, fiberglass-reinforced, composite panel liner and baffle
- ❇ Opti-Zone™ baffles*, removable for cleaning, with flame spread index less than 25 per ASTM E84**
- Four tempered safety glass horizontal-sliding sashes
- 73.5" (87 cm) high sightline and loading height from the floor to the header panel
- ❇ Removable front and side panels and front and interior service panels for access to plumbing and electrical wiring
- Pre-wired LED lighting with vapor-proof design and ADA-compliant light and blower switches. Lighting rated for 50,000 hours
- Powder-coated stainless steel, 12.8" (32.5 cm) ID exhaust connection(s)
- Shipped in multiple sections: top, bottom and sashes

Standards conformance & regulations**:

- CFR 29, Part 1910
- SEFA 1
- NFPA 45
- ASTM E84-09C
- ASHRAE 110
- ANSI Z9.5
- UL 61010-1
- CAN/CSA C22.2 No. 61010-1
- UL 1805
- CE Conformity Marking (230V models)
- SEFA 8

⚠**WARNING:** Cancer - P65Warnings.ca.gov (California only)

Fixtured models feature:

- Two pre-plumbed service fixtures with forged brass valves, lower right side with brass tubing for gas and lower left side with copper tubing for cold water. Components for converting either or both fixtures to air and vacuum are provided. **Inlet tubing is not provided**
- Two pre-wired GFCI electrical duplex receptacles, one on lower right side and one on lower left side

Required accessories (not included):

- Remote blower
- Ductwork

Optional accessories for on-site installation include:

- Service Fixture Kits. See page 10
- Electrical Duplex Kits. See page 11
- Guardian Airflow Monitor Kits. See page 11
- Ceiling Enclosure and Rear Finish Panel Kits
- Distillation Grid Kits

Contact Labconco for ordering information on accessories not found in this brochure and explosion-proof hoods designed to be wired on-site per local codes.

❇ Labconco exclusive feature

Intertek

*U.S. Patent No. 6,461,233

**See pages 11 and 12 for list of regulations, standards and registered trademarks.

♿ Heights of switches and electrical receptacles meet requirements of ADA.

Protector® XL™ Floor-Mounted Fume Hoods

With Horizontal-Sliding Sashes Ordering Information

Catalog Number Configurator:

Use this key to configure the nine digit catalog number to order your Protector XL Floor-Mounted Laboratory Hood.

1 1 2 ☐ ☐ 6 0 ☐ ☐

Select the **WIDTH** of your fume hood. This is the fourth digit of your catalog number.

8 = 8' (244 cm)
0 = 10' (305 cm)
1 = 12' (366 cm)
2 = 16' (488 cm)

Select the **EXTERIOR DEPTH** of your fume hood. This is the fifth digit of your catalog number.

1 = 37.7" (96 cm) **2** = 43.7" (111 cm) **3** = 55.7" (141 cm)

Select the **ELECTRICAL REQUIREMENTS, SERVICE FIXTURES** and **GFCI ELECTRICAL DUPLEX RECEPTACLE** of your fume hood. These are the eighth and ninth digits of your catalog number.

Electrical Requirements	No Service Fixtures	Two Service Fixtures	Two Service Fixtures & GFCI Duplexes*
100-115V, 50/60 Hz, 10 A	00	—	02
208-230V, 50/60 Hz, 5 A	20	21	—

Total Exhaust CFM and Static Pressure

Face Velocity (fpm)	Airflow Volumetric Rate (CFM) @ Static Pressure (inches of water)							
	8' Hood (2 Sashes Full Open)		10' Hood (1 Sash Full Open)		12' Hood (1 Sash Full Open)		16' Hood (1 Sash Full Open)	
	CFM	s.p.	CFM	s.p.	CFM	s.p.	CFM	s.p.
100	2150	0.53	1450	0.22	1765	0.30	2400	0.18
80	1720	0.34	1160	0.14	1410	0.19	1920	0.12

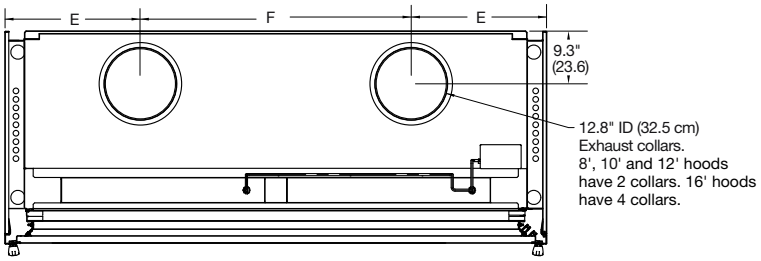
Shipping Weights

Hood Width	Description	37.7" Hood Depth	43.7" Hood Depth	55.7" Hood Depth
8'	No Service Fixtures, No GFCI Duplex	1130 lbs. (513 kg)	1160 lbs. (526 kg)	1190 lbs. (540 kg)
8'	Two Service Fixtures, No GFCI Duplex	1140 lbs. (517 kg)	1170 lbs. (531 kg)	1200 lbs. (544 kg)
8'	Two Service Fixtures, Two GFCI Duplexes	1145 lbs. (519 kg)	1175 lbs. (533 kg)	1205 lbs. (547 kg)
10'	No Service Fixtures, No GFCI Duplex	1375 lbs. (624 kg)	1390 lbs. (630 kg)	1420 lbs. (644 kg)
10'	Two Service Fixtures, No GFCI Duplex	1385 lbs. (628 kg)	1410 lbs. (640 kg)	1440 lbs. (653 kg)
10'	Two Service Fixtures, Two GFCI Duplexes	1390 lbs. (630 kg)	1420 lbs. (644 kg)	1450 lbs. (658 kg)
12'	No Service Fixtures, No GFCI Duplex	1645 lbs. (746 kg)	1660 lbs. 753 kg)	1690 lbs. (767 kg)
12'	Two Service Fixtures, No GFCI Duplex	1655 lbs. (751 kg)	1670 lbs. (757 kg)	1700 lbs. (771 kg)
12'	Two Service Fixtures, Two GFCI Duplexes	1660 lbs. (753 kg)	1675 lbs. (760 kg)	1705 lbs. (773 kg)
16'	No Service Fixtures, No GFCI Duplex	2085 lbs. (946 kg)	2100 lbs. (953 kg)	2130 lbs. (966 kg)
16'	Two Service Fixtures, No GFCI Duplex	2095 lbs. (950 kg)	2110 lbs. (957 kg)	2140 lbs. (971 kg)
16'	Two Service Fixtures, Two GFCI Duplexes	2100 lbs. (953 kg)	2115 lbs. (959 kg)	2145 lbs. (973 kg)

*Hoods with GFCI electrical duplexes are rated at 20 amps each.

Protector® XL™ Floor-Mounted Fume Hoods

With Horizontal-Sliding Sashes Dimensional Data



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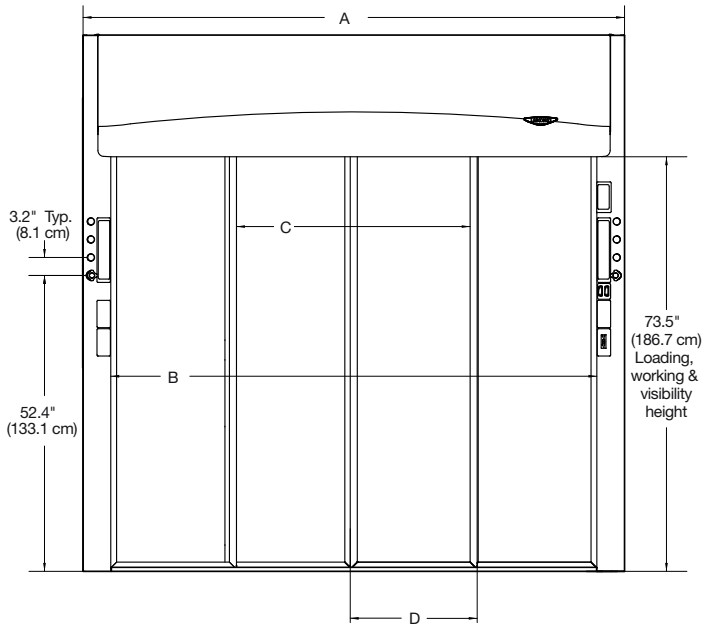

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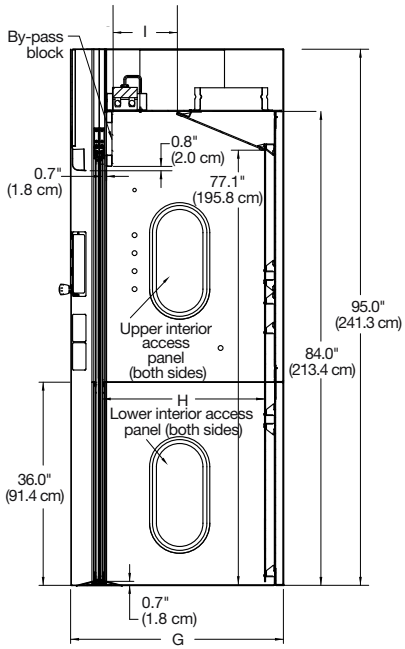


SIDE

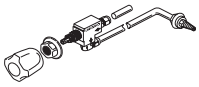
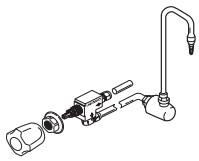
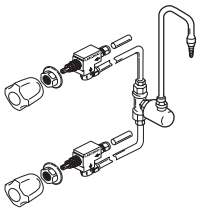
Hood Width	A	B	C	D	E	F
8'	96.0" (243.8 cm)	86.1" (218.7 cm)	41.6" (105.7 cm)	22.5" (57.2 cm)	24.0" (61.0 cm)	48.0" (121.9 cm)
10'	120.0" (304.8 cm)	110.1" (279.7 cm)	53.6" (136.2 cm)	28.5" (72.4 cm)	35.0" (88.9 cm)	50.0" (127.0 cm)
12'	144.0" (360.0 cm)	134.1" (340.6 cm)	65.6" (166.6 cm)	34.5" (87.6 cm)	41.0" (104.1 cm)	62.0" (157.5 cm)
16'	192.0" (487.7 cm)	182.1" (462.5 cm)	89.6" (227.6 cm)	46.5" (118.1cm)	24.0" (61.0 cm)	48.0" (121.9 cm)

G	H	I
37.7" (95.8 cm)	28.7" (72.9 cm)	12.2" (31.0 cm)
43.7" (111.0 cm)	34.7" (88.1 cm)	18.2" (46.2 cm)
55.7" (141.5 cm)	46.7" (118.6 cm)	30.2" (76.7 cm)

Contact Labconco at (800) 821-5525 or (816) 333-8811 or visit labconco.com for detailed AutoCAD® drawings. See page 11 for trademark inf

Accessories

Service Fixture Kits. Include one remotely-controlled service fixture with valve, color-coded fixture knob and hose connector.* **Inlet tubing is not included**. Not for use with 43.7" and 55.7" exterior depth hoods. Except for vacuum, the maximum allowable pressure is 200 psi with a working pressure of 40 psi.

Kit	Catalog Number	Service Type	Tubing Material & Dia.	Valve	Knob Color	Maximum Flow Rate	Working Pressure**	Shipping Weight
	**9808300**	Cold Water (CW)	Copper. 0.25"	Brass	Green	3.5 GPM (13.2 LPM)	40 psi	4.0 lbs. (1.8 kg)
	9808400	Air (AIR)	Copper, 0.25"	Brass	Orange	23.7 CFM	40 psi	4.0 lbs. (1.8 kg)
	9808500	Vacuum (VAC)	Copper, 0.25"	Brass	Yellow	8.6 CFM	14.7 psi	4.0 lbs. (1.8 kg)
	9808700	Gas (GAS)	Brass, 0.25"	Brass	Blue	29.0 CFM (441 BTU/sec)	40 psi	4.0 lbs. (1.8 kg)
	9808800	Argon (ARG)	Copper, 0.25"	Brass	Gray	20.2 CFM	40 psi	4.0 lbs. (1.8 kg)
	9808900	Hot Water (HW)	Copper, 0.25"	Brass	Red	3.5 GPM (13.2 LPM)	40 psi	4.0 lbs. (1.8 kg)
	9809100	Deionized (DI)/ Distilled Water (DW)	Stainless Steel, 0.25"	Nickel-Plated & Stainless Steel	White	3.5 GPM (13.2 LPM)	40 psi	4.0 lbs. (1.8 kg)
	9809200	Steam (STM)	Copper, 0.25"	Brass	Black	0.5 LBM/min	40 psi	4.0 lbs. (1.8 kg)
	9809300	Nitrogen (NIT)	Copper, 0.25"	Brass	Brown	24.1 CFM	40 psi	4.0 lbs. (1.8 kg)
	9809700*†	Oxygen (OXY)	Copper, 0.25"	Brass with Oxygen-Compatible Lubricant	Light Green	22.6 CFM	40 psi	4.0 lbs. (1.8 kg)
	**9827900**	Cold water (CW) green epoxy-coated brass gooseneck	Copper, 0.375"	Brass	Green	3.5 GPM	40 psi	10 lbs. (5 kg)
	9857700†	Cold water (CW) gray PVC rigid gooseneck	Copper, 0.375"	Brass	Green	3.5 GPM	40 psi	10 lbs. (5 kg)
	9853400†	Deionized (DI)/ distilled water (DW) gray PVC rigid gooseneck	Stainless Steel, 0.25"	Stainless Steel	White	3.5 GPM	40 psi	10 lbs. (5 kg)
	**9828000**	Hot (HW) & cold water (CW) mixing white epoxy-coated gooseneck	Copper, 0.25"	Brass	Green & Red	3.5 GPM	40 psi	11 lbs. (5 kg)

GPM=gallons per minute LPM=liters per minute CFM=cubic feet per minute BTU/sec=British thermal unit per second LBM/min=pounds mass per minute

*Contact Labconco for ordering information on chrome-plated brass hose connectors for stainless steel hoods.

**Recommended working pressure

†Requires 1.375" dia. drill hole in liner

Accessories & Registered Trademarks

Duplex Electrical Receptacle Kit
9851500

Electrical Receptacle Kits. For mounting in left or right side of any 4', 5', 6', 7' or 8' Protector XL Floor-Mounted Hood. Include electrical receptacle, cover plate, wiring and junction box. **Requires hard wiring and unique circuit.** International GFCI Switch is mountable in one corner post location above or below any single outlet. Contact Labconco for ordering information on kits for Protector Hoods with widths of 10', 12' or 16'.

Catalog Number	Kit	Outlet Type	Shipping Weight
9851100	115V, 20A AC, 60 Hz	Duplex, U.S.	4.0 lbs. (1.8 kg)
9851500	115V, 20A AC, GFCI, 60 Hz	Duplex, U.S.	4.0 lbs. (1.8 kg)
9854200	230V, 20A AC, 60 Hz	Duplex, U.S.	4.0 lbs. (1.8 kg)
9412500	230V, 13A AC, 50 Hz	Single, British (UK)	4.0 lbs. (1.8 kg)
9412700	230V, 16A AC, 50 Hz	Single, Schuko	4.0 lbs. (1.8 kg)
9412900	230V, 10A AC, 50 Hz	Single, China	4.0 lbs. (1.8 kg)
9413100	230V, 10A AC, 50 Hz	Single, Australia	4.0 lbs. (1.8 kg)
9413900	230A, 6-16A AC, 50 Hz	Single, India-South Africa	4.0 lbs. (1.8 kg)
9414100	International GFCI Switch, 16A	Not applicable	4.0 lbs. (1.8 kg)

115V, 60 Hz, 20A for North America

230V, 20A, 60 Hz for North America

230V, 50 Hz for Great Britain (UK)

230V, 50 Hz Schuko

230V, 50 Hz for China/Australia

230V, 50 Hz for India/South Africa

Guardian™ Airflow Monitors. Sense and alert you to low airflow conditions. From the monitor's face plate, you can easily select and calibrate a set point between 30 and 250 fpm using a velocity meter and a screwdriver. Audible/visual alarm. Include night setback, external alarm and alarm mute functions. Flush-mount design. **Requires field calibration.**

Catalog Number	Electrical Requirements	Shipping Weight
9413300	100-115V, 50/60 Hz	6.0 lbs. (2.7 kg)
9413301*	208-230V, 50/60 Hz	6.0 lbs. (2.7 kg)

Guardian™ Digital Airflow Monitors. Sense and alert you to low airflow conditions. LCD displays actual airflow in fpm or m/sec. Audible/visual alarm alerts you to sustained low velocity condition. LCD displays calibration instructions. Contact Labconco for optional temperature sensor or optional RS-485 port for Modbus** RTU communication. Flush-mount design. **Requires field calibration.**

Catalog Number	Electrical Requirements	Shipping Weight
9413400	100-115V, 50/60 Hz	6.0 lbs. (2.7 kg)
9413401*	208-230V, 50/60 Hz	6.0 lbs. (2.7 kg)

4852600—Side-Mount Oval Polypropylene Cupsink. Mounts on side wall of Protector XL Floor-Mounted Hoods. 6.0" x 3.0" (15.2 x 7.6 cm) cupsink. 1.5" NPSM* thread. **Requires 1.875" dia. drill hole in liner.** Shipping weight 4.0 lbs. (1.8 kg)

Contact Labconco for information on other accessories.

Registered Trademarks

AutoCAD® is a registered trademark of AutoDesk. • ANSI® is a registered trademark of American National Standards Institute.

SEFA® is a registered trademark of Scientific Equipment and Furniture Association. • UL® is a registered trademark of UL, LLC.

*International electrical configuration

**Modbus is a registered trademark of Schneider Automation

Standards

Key aspects of standards and codes as they relate to laboratory ventilation are summarized below.

ASHRAE 110 Method of Testing Performance of Laboratory Fume Hoods (ANSI Approved)

Evaluates fume hood's containment characteristics.

- Three part test: Smoke generation, face velocity profile, tracer gas release @ 4 liters per minute
- Rated As Manufactured (AM), As Installed (AI) and As Used (AU)

American Society of Heating, Refrigerating and Air-Conditioning Engineers

1791 Tullie Circle NE
Atlanta, GA 30329
(404) 636-8400
ashrae.org

ANSI Z9.5 Standard — Laboratory Ventilation

Covers entire laboratory ventilation system.

- Vertical stack discharge @ 2000-3000 fpm
- New and remodeled hoods shall have a monitoring device
- Ductless hoods should only be used with non-hazardous materials

American Industrial Hygiene Association

2700 Prosperity Avenue, Suite 250
Fairfax, VA 22031
(703) 849-8888
aiha.org

Federal Register 29 CFR Part 1910

Occupational exposure to hazardous chemicals in laboratories

National Research Council Recommendations Concerning Chemical Hygiene in Laboratories (Non-mandatory) from "Prudent Practices"

- Fume hoods should have a continuous monitoring device
- Face velocities should be between 60-100 linear feet per minute (lfpm)
- Average 2.5 linear feet of hood space per person

Occupational Safety & Health Administration U.S. Department of Labor

200 Constitution Avenue, NW
Washington, DC 20210
(800) 321-6742
osha.gov

ASTM E84-09C Standard Test Method for Surface Burning Characteristics of Building Materials

Determines the relative burning behavior of the material by observing the flame spread along the specimen.

- Measures the flame spread and smoke development
- Material is exposed to flaming fire for 10 minutes and the results measured and recorded
- Results are compared to the indexes of mineral fiber cement board (flame spread and smoke development of zero) and red oak flooring (smoke development of 100)

ASTM International

100 Barr Harbor Drive
P.O. Box C700
West Conshohocken, PA 19428-2959
(610) 832-9585
astm.org

NFPA 45: Standard on Fire Protection for Laboratories Using Chemicals

- Laboratory hoods should not be relied on for explosion protection
- Fume hood exhaust air should not be recirculated
- Services should be external to the hood
- Materials of construction should have flame spread of 25 or less

National Fire Protection Association

1 Batterymarch Park
Quincy, MA 02169-7471
(800) 344-3555 or (617) 770-3000
nfpa.org

NIH - Section 15991 Onsite Testing for Constant Volume Hoods - June 2006

- Follows ASHRAE test methods except for the following:
  1. 6 L tracer gas release rate instead of 4 L
  2. Hood is loaded with boxes and cans
  3. Rapid walk-by test

National Institutes of Health

9000 Rockville Pike
Bethesda, MD 20892
(301) 496-4000
nih.gov

SEFA 1 Laboratory Fume Hoods Recommended Practices

- High performance fume hood definition: hood with sash fully open and operating at 60 fpm contains at 4.0 AM 0.05
- Covers design, installation, testing, maintenance and safe use of laboratory fume hoods

SEFA 8 Recommended Practices For Metal Laboratory Grade Furniture, Casework, Shelving and Tables, 8.0 Cabinet Surface Finish Tests

Defines test methods for evaluating the finish of laboratory furniture.

- Laboratory grade paint finishes shall withstand chemical exposure, hot water, and impact from a one-pound ball dropped from 12"
- Paint coating shall sufficiently adhere to the substrate
- Paint shall be resistant to scratches

Scientific Equipment & Furniture Association

1205 Franklin Avenue, Suite 320
Garden City, NY 11530
(516) 294-5424
sefalabs.com

UL 61010-1 Electrical Equipment for Laboratory Use

Specifies the general safety requirements for electrical equipment.

- Based on International Electrotechnical Commission (IEC) Publication 61010-1 with differences noted for U.S. use
- Tests for protection against electrical shock, mechanical hazards, spread of fire, radiation, liberated gases, explosion and implosion
- Tests for resistance to shock, vibration, impact, heat, moisture and liquids

Underwriters Laboratories Inc.

333 Pfingsten Road
Northbrook, IL 60062-2096
(847) 272-8800
ul.com

CAN/CSA Standard C22.2 No. 6010-1 Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use

Specifies general safety requirements for electrical equipment.

- Design and methods of construction should provide adequate protection to the operator and the surrounding area against shock or burn, mechanical hazards, excessive temperature, spread of fire from the equipment, gas liberation, explosion or implosion

Canadian Standards Association

55 Metcalfe Street, Suite 600
Ottawa, On
K1P 6L5, Canada
(613) 238-3222
csagroup.org

ETL listing

ETL Testing Laboratories is a Nationally Recognized Testing Laboratory (NRTL). The ETL mark signifies that a product conforms to the following:

- UL Standard 61010-1 in the U.S.
- CAN/CSA Standard C22.2 No. 61010.1 in Canada
- Products that bear the ETL mark are subjected to a comprehensive safety program that includes testing, listing, labeling and quarterly follow-up inspections

Intertek Group

intertek.com

CE Marking

Indicates an electrical apparatus conformity to all safety and other directives/specifications presently required by the Council of European Communities.

- Electrical safety
- Electromagnetic emissions testing — interference signals being output by the product
- Electromagnetic immunity testing — the product does not respond to outside electromagnetic interference signals

European Union

europa.eu

ISO 9001 CERTIFIED

Made in the U.S.A.

LABCONCO CORPORATION

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Kansas City, MO 64132

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labconco.com

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