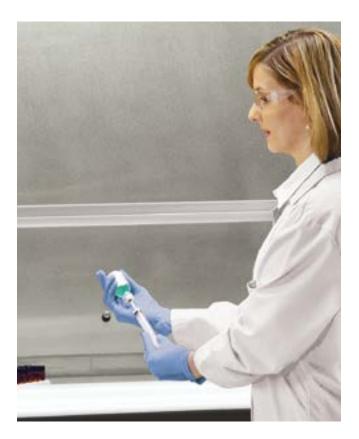
# **Protector**<sup>®</sup> Special Application Laboratory Fume Hoods







# **Protecting you.**

Unique applications require unique fume hoods. Our special application fume hoods are here to protect you. From radiochemicals to harsh acids, we have you covered.

Mining precious metals. Etching electrical wafers for everyday electronics. Creating components for rocket fuel. From radiochemicals to harsh acids, there's a Labconco hood tailored to fit your requirements.

Not sure what you need? Our ventilation specialists will analyze your application and recommend the right hood for your laboratory.

We've been taking care of customers since 1925. Let us put our experience to work for you.

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Laboratory Hoods
Features & Benefits

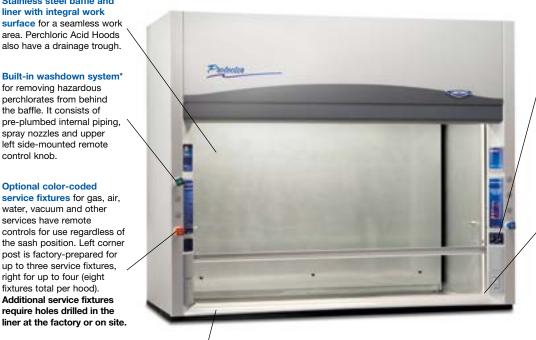
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# Protector<sup>®</sup> Stainless Steel Radioisotope & Perchloric Acid Laboratory Hoods

## Features, Benefits & Selection Guide

#### \* Clean-Sweep<sup>™</sup> sash handle and tracks

Openings on the sash handle bleed air into the hood chamber and away from the operator's breathing zone. Slots on the sash tracks enhance airflow.



\* Eco-Foil<sup>™</sup> air foil with Clean-Sweep<sup>™</sup> openings reduces energy consumption by 7-10% compared to flat air foils. Aerodynamic curve allows air to sweep the work surface for maximum containment. Air foil is durable powder-coated stainless steel.

#### **Bright interior lighting**

High-efficiency, instant start, T8 fluorescent lights are located outside the hood interior for corrosionresistance and easy replacement.

#### \* Pre-wired electrical components

Fluorescent lights and switches are factory-wired to the hood's single point junction box. Each hood is factory-prepared for up to four electrical duplexes and an airflow monitor.

#### Cord-Keeper<sup>™</sup> slots on both sides of the air foil allow the sash to close completely when electrical cords from equipment inside the hood are plugged in. Cords are kept out of the way of the operator.



	Liner Material	Washdown System	Applications	Pages
Radioisotope Hood	Type 304 stainless steel withstands high temperatures	_	Radiochemicals Nuclear medicine Micro electronics Contact Labconco for use with lead bricks or shields	4-5
Perchloric Acid Hood	Type 316 stainless steel withstands high temperatures and is less chemically reactive than Type 304 stainless steel	Includes valve, drain trough and nozzles (see page 11)	Perchloric acid	6-7

\*Washdown system and drainage trough on Perchloric Acid Hoods only.

\* Labconco exclusive feature

By-pass airflow design

for stable face velocities.

Restricted by-pass increases

air velocity above the sash.

Stainless steel baffle and

Built-in washdown system\*

pre-plumbed internal piping,

for removing hazardous

perchlorates from behind

the baffle. It consists of

spray nozzles and upper left side-mounted remote

**Optional color-coded** 

services have remote

service fixtures for gas, air,

controls for use regardless of

the sash position. Left corner

post is factory-prepared for

up to three service fixtures,

right for up to four (eight fixtures total per hood). Additional service fixtures require holes drilled in the

\* Large unobstructed sightline of 37.5" high from the work surface to the

while standing

header panel allows taller

users comfortable viewing

water, vacuum and other

control knob.

liner with integral work surface for a seamless work area. Perchloric Acid Hoods also have a drainage trough.

# Protector® Stainless Steel Radioisotope Laboratory Hoods

## **Specifications**



#### All models feature:

- By-pass airflow design and by-pass block
- · Glacier white powder-coated steel exterior
- \* Eco-Foil air foil with aerodynamic Clean-Sweep airflow openings\*
- \* Cord-Keeper slots on left and right side of air foil
- Type 304 stainless steel liner with radiused corners, integral work surface and pre-set baffle(s)
- Powder-coated aluminum sash handle with Clean-Sweep openings and Clean-Sweep slots on the powder-coated stainless steel sash tracks\*
- Tempered safety glass vertical-rising sash with cable and pulley
- Removable front and side panels, and front service panels for access to plumbing and electrical wiring
- Pre-wired T8 fluorescent lighting with vapor-proof design and ADA-compliant light and blower switches
- · Black enamel-coated hardboard supporting surface
- Type 304 stainless steel, 11.0" OD exhaust connection(s)

#### 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

\* Labconco exclusive feature

• UL 1805

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

#### Fixtured models may 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 air. Components for converting either or both fixtures to cold water 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):**

- · Dedicated remote blower
- Ductwork. Type 304 stainless steel duct is recommended. Contact Labconco for source recommendations
- Base cabinet or stand

#### **Optional accessories for on-site installation include:**

- Service Fixture Kits
- Guardian Airflow Monitor Kits
- Electrical Duplex Receptacle Kits
- Sash Stop Kits
- · Ceiling Enclosure and Rear Finish Panel Kits



#### **Total Exhaust CFM and Static Pressure**

Airflow Volumetric Rate (CFM) @ Static Pressure (inches of water)								ure
Velocity (fpm)	4' H CFM	lood s.p.	5' H CFM	lood s.p.	6' H CFM	lood s.p.	8' H CFM	ood s.p.
Sash @ Full Open (28")								
125	905	0.39"	1195	0.52"	1475	0.78"	2050	0.44"
100	725	0.25"	955	0.33"	1180	0.50"	1640	0.28"
	Sash @ 62.5% Open (18")							
125	565	0.15"	745	0.20"	920	0.31"	1280	0.17"
100	455	0.10"	595	0.13"	740	0.20"	1025	0.11"

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

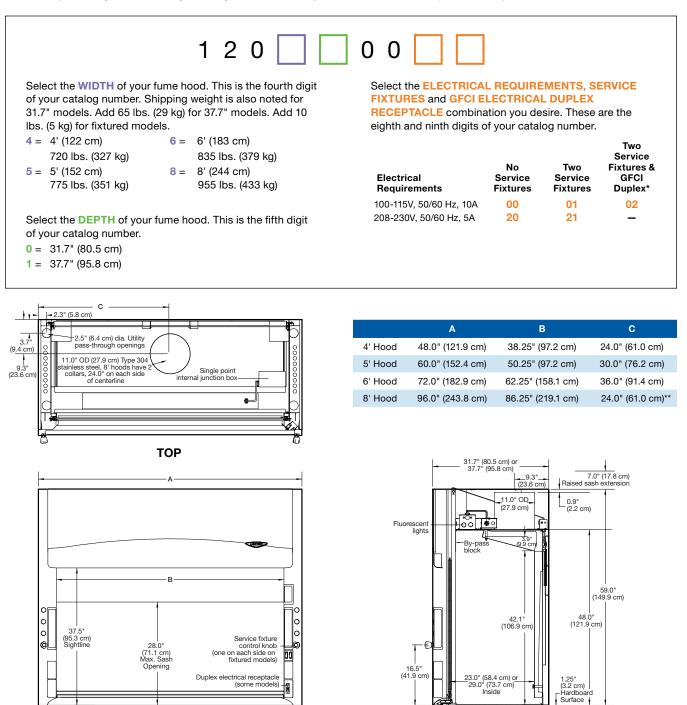
& Heights of switches, electrical receptacles and service fixtures meet requirements of Americans with Disabilities Act (ADA).

# Protector<sup>®</sup> Stainless Steel Radioisotope Laboratory Hoods

**Ordering Information & Dimensional Data** 

#### **Catalog Number Configurator:**

Use this key to configure the nine digit catalog number to order your Protector Radioisotope Laboratory Hood.



Visit labconco.com for detailed AutoCAD drawings.

FRONT

\*Hoods with GFCI electrical duplex are rated at 20 amps. 8' hoods have two GFCI electrical duplex receptacles, on mounted on each side, rated at 20 amps each. \*\*8' model has two exhaust collars, 24.0" on each side of centerline.

1.7" (4.3 cm)

SIDE

# Protector® Stainless Steel Perchloric Acid Laboratory Hoods

## **Features & Benefits**



#### All models feature:

- · By-pass airflow design and by-pass block
- · Glacier white powder-coated steel exterior
- \* Eco-Foil air foil with aerodynamic Clean-Sweep airflow openings\*
- \* Cord-Keeper slots on left and right side of air foil
- Type 316 stainless steel liner with radiused corners, integral work surface, drainage trough and pre-set baffle(s)
- \* Powder-coated aluminum sash handle with Clean-Sweep openings and Clean-Sweep slots on the powder-coated stainless steel sash tracks\*
- Tempered safety glass vertical-rising sash with cable and pulley
- · Removable front and side panels, and front service panels for access to plumbing and electrical wiring
- · Pre-wired T8 fluorescent lighting with vapor-proof design and ADA-compliant light and blower switches
- · Built-in washdown system with internal piping and spray nozzles (see specifications on page 11)
- · Black enamel-coated hardboard supporting surface
- Type 316 stainless steel, 11.0" OD exhaust connection(s)

#### 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

#### Fixtured models may 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 air. Components for converting either or both fixtures to cold water and vacuum are provided. Inlet tubing is not provided
- One pre-wired GFCI electrical duplex receptacle on lower right side and, on 8' models, one additional pre-wired GFCI electrical duplex receptacle on lower left side

#### **Required accessories (not included):**

- Dedicated remote PVC blower
- · Wash rings and other ductwork
- · Base cabinet or stand

#### **Optional accessories for on-site installation include:**

- Service Fixture Kits
- · Washdown Valve Kit
- Guardian Airflow Monitor Kits
- Electrical Duplex Receptacle Kits
- Sash Stop Kits
- · Ceiling Enclosure and Rear Finish Panel Kits



#### **Total Exhaust CFM and Static Pressure**

Airflow Volumetric Rate (CFM) @ Static Pressure (inches of water)								ure
Velocity (fpm)	4' H CFM	lood s.p.	5' H CFM	ood s.p.	6' H CFM	lood s.p.	8' H CFM	ood s.p.
Sash @ Full Open (28")								
125	905	0.39"	1195	0.52"	1475	0.78"	2050	0.44"
100	725	0.25"	955	0.33"	1180	0.50"	1640	0.28"
	Sash @ 62.5% Open (18")							
125	565	0.15"	745	0.20"	920	0.31"	1280	0.17"
100	455	0.10"	595	0.13"	740	0.20"	1025	0.11"

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

\* Labconco exclusive feature

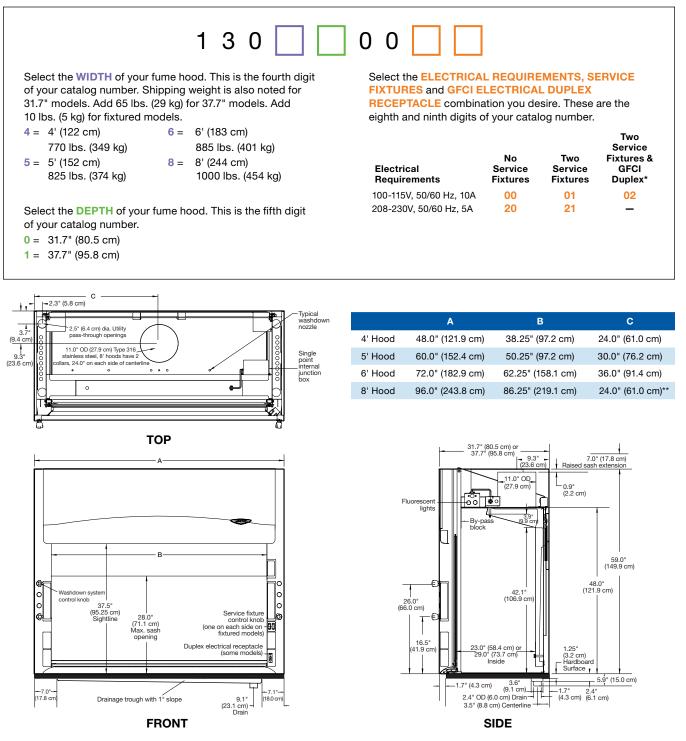
& Heights of switches, electrical receptacles and service fixtures meet requirements of Americans with Disabilities Act (ADA).

# Protector® Stainless Steel Perchloric Acid Laboratory Hoods

**Ordering Information & Dimensional Data** 

#### **Catalog Number Configurator:**

Use this key to configure the nine digit catalog number to order your Protector Stainless Steel Perchloric Acid Laboratory Hood.



Visit labconco.com for detailed AutoCAD drawings.

\*Hoods with GFCI electrical duplex are rated at 20 amps. 8' hoods have two GFCI electrical duplex receptacles, on mounted on each side, rated at 20 amps each. \*\*8' model has two exhaust collars, 24.0" on each side of centerline.

# Protector® PVC Perchloric Acid & Acid Digestion Laboratory Hoods

## Features, Benefits & Selection Guide

#### \* Clean-Sweep<sup>™</sup> sash handle and tracks

for stable face velocities. Restricted by-pass increases air velocity above the sash.

By-pass airflow design

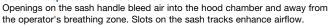
#### **Corrosion-resistant baffle** and liner of Type 1 unplasticized PVC with integral work surface is crevice-free and withstands surface temperatures up to 140° F (60° C).

#### Built-in washdown system

facilitates the removal of hazardous perchlorates from behind the baffle. It consists of pre-plumbed internal piping, spray nozzles and upper left side-mounted remote control knob.

#### **Optional color-coded**

service fixtures for gas, air, water, vacuum and other services have remote controls for use regardless of the sash position. Left corner post is factory-prepared for up to three service fixtures, right for up to four (eight fixtures total per hood). Additional service fixtures require holes drilled in the liner at the factory or on site.





**≵ Eco-Foil™ air foil with Clean-Sweep™ openings** reduces energy consumption by 7-10% compared to flat air foils. Aerodynamic curve allows air to sweep the work surface for maximum containment. Air foil is durable powder-coated stainless steel.

## High-efficiency, instant

**Bright interior lighting** 

start, T8 fluorescent lights are located outside the hood interior for corrosionresistance and easy replacement.

#### \* Pre-wired electrical components

Fluorescent lights and switches are factory-wired to the hood's single point junction box. Each hood is factory-prepared for up to four electrical duplexes and an airflow monitor.

#### \* Large unobstructed sightline of 37.5" high from the work surface to the header panel allows taller users comfortable viewing while standing.

#### \* Cord-Keeper<sup>™</sup> slots on both sides of the air foil allow the sash to close completely when electrical cords from equipment inside the hood are plugged in. Cords are kept out of the way of the operator.



	Liner Material	Sash Material	Applications	Pages
Perchloric Acid Hood	Type 1 PVC	Tempered safety glass	Perchloric acid and other inorganic chemicals that do not involve high temperatures	9-10
Acid Digestion Hood	Type 1 PVC	Lexan* (polycarbonate)	Hydrofluoric acid and other mineral acids that do not involve high temperatures Not for use with perchloric acid	9-10

\*Lexan is a registered trademark of SABIC Innovative Plastics.

\* Labconco exclusive feature

## Protector® PVC Perchloric Acid & Acid Digestion Laboratory Hoods

## **Specifications**



#### All models feature:

- · By-pass airflow design and by-pass block
- Glacier white powder-coated steel exterior
- \* Eco-Foil air foil with aerodynamic Clean-Sweep airflow openings\*
- \* Cord-Keeper slots on left and right side of air foil
- Heat-welded Type 1 unplasticized PVC liner with integral work surface, drainage trough and pre-set baffle(s). PVC withstands maximum continuous operating temperature of 140° F (60° C) and has a flame spread less than 25 per ASTM E84
- Powder-coated aluminum sash handle with Clean-Sweep openings and Clean-Sweep slots on the powder-coated stainless steel sash tracks\*
- Removable front and side panels, and front access panels for access to plumbing and electrical wiring
- Pre-wired T8 fluorescent lighting with vapor-proof design and ADA-compliant light and blower switches
- Built-in washdown system with internal piping and spray nozzles (see page 11 for specifications)
- Black enamel-coated hardboard supporting surface
- PVC, 12.75" OD exhaust connection(s)

#### Standards conformance & regulations:

- CFR 29, Part 1910
- SEFA 1
- NFPA 45
- ASTM E84-09C
- ASHRAE 110
- ANSI Z9.5

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

\* Labconco exclusive feature

- 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)

#### **Protector PVC Perchloric Acid Hoods feature:**

 3/16" thick tempered safety glass vertical-rising sash with cable and pulley. Designed for perchloric acid use

#### **Protector PVC Acid Digestion Hoods feature:**

 1/4" thick Lexan poycarbonate vertical-rising sash with cable and pulley. Designed for hydrofluoric acid use

#### Fixtured models may feature:

- Two pre-plumbed service fixtures with forged brass valves, lower right side with brass tubing and plastic serrated hose connector for gas and lower left side with copper tubing and gray PVC swivel gooseneck faucet for cold water. Components for converting the lower right fixture to air or vacuum are provided. Inlet tubing is not provided
- One pre-wired GFCI electrical duplex receptacle on lower right side and, on 8' models, one additional pre-wired GFCI electrical duplex receptacle on lower left side

#### **Required accessories (not included):**

- Dedicated remote PVC blower
- Wash rings and other ductwork
- Base cabinet or stand

#### **Optional accessories for on-site installation include:**

- Service Fixture Kits
- Guardian Airflow Monitor Kits
- Electrical Duplex Receptacle Kits
- Sash Stop Kits
- · Ceiling Enclosure and Rear Finish Panel Kits



## **Total Exhaust CFM and Static Pressure**

Airflow Volumetric Rate (CFM) @ Static Pressure (inches of water)							ure	
Velocity (fpm)	4' H CFM	lood s.p.	5' H CFM	ood s.p.	6' H CFM	lood s.p.	8' H CFM	ood s.p.
	Sash @ Full Open (28")							
125	905	0.27"	1195	0.44"	1475	0.59"	2050	0.35"
100	725	0.17"	955	0.28"	1180	0.38"	1640	0.22"
	Sash @ 62.5% Open (18")							
125	565	0.11"	745	0.17"	920	0.23"	1280	0.13"
100	455	0.07"	595	0.11"	740	0.15"	1025	0.09"

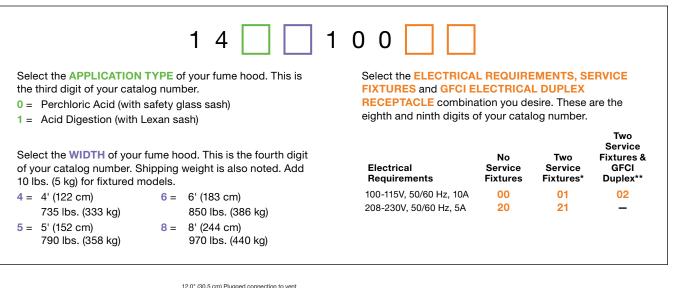
& Heights of switches, electrical receptacles and service fixtures meet requirements of Americans with Disabilities Act (ADA).

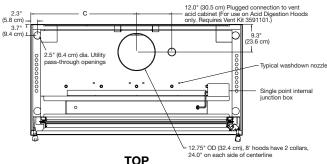
# **Protector**<sup>®</sup> PVC Perchloric Acid & Acid Digestion Laboratory Hoods

## **Ordering Information & Dimensional Data**

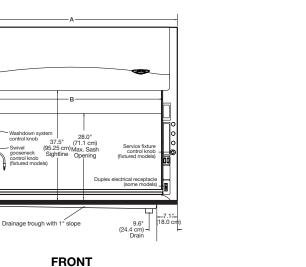
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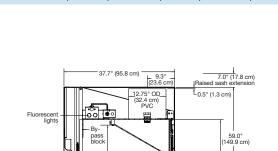
Use this key to configure the nine digit catalog number to order your Protector PVC Laboratory Hood.

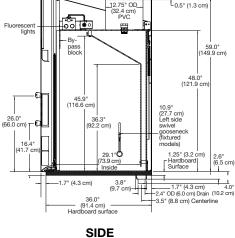




	А	В	С
4' Hood	48.0" (121.9 cm)	38.25" (97.2 cm)	24.0" (61.0 cm)
5' Hood	60.0" (152.4 cm)	50.25" (97.2 cm)	30.0" (76.2 cm)
6' Hood	72.0" (182.9 cm)	62.25" (158.1 cm)	36.0" (91.4 cm)
8' Hood	96.0" (243.8 cm)	86.25" (219.1 cm)	24.0" (61.0 cm)†







Visit labconco.com for detailed AutoCAD drawings

Swivel

7 0'

17.8 c

\*Left side service fixture is a Swivel Gooseneck Faucet. Right side service fixture is serrated hose connector.

\*\*Hoods with GFCI electrical duplex are rated at 20 amps. 8' hoods have two GFCI electrical duplex receptacles, on mounted on each side, rated at 20 amps each. †8' model has two exhaust collars, 24.0" on each side of centerline.

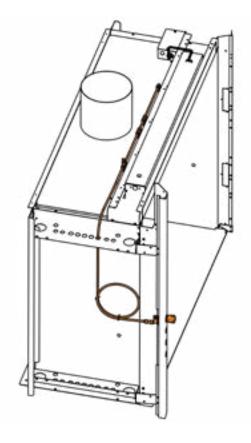
## Protector<sup>®</sup> Stainless Steel & PVC Laboratory Hoods

## Washdown System Specifications

Rinsing the fume hood prevents the accumulation of reactive perchlorate salts.

#### Hoods with washdown feature:

- Built-in washdown system with internal piping and spray nozzles with maximum flow rate from 0.5 1.0 GPM
- Include upper left side-mounted remote control fixture with forged brass valve with maximum flow rate of 3 GPM and maximum working pressure ranging from 10 to 40 psi depending on number of hood's spray nozzles
- Valve is capable of supplying water to hood's spray nozzles and one wash ring (wash rings not included) on 4', 5' and 6' models.
  Valve is capable of supplying water to hood's spray nozzles on 8' models
- Washdown fitting located on top of hood to facilitate connection to external wash rings (wash rings not included)



### Washdown System Flow Rates for Protector Stainless Steel Laboratory Hoods

	Number of Spray Nozzles	Flow @ 10 psi	Flow @ 40 psi
4' Hood	3	0.6 gpm	1.2 gpm
5' Hood	4	0.8 gpm	1.6 gpm
6' Hood	4	0.8 gpm	1.6 gpm
8' Hood	6	1.2 gpm	2.4 gpm

#### Washdown System Flow Rates for Protector PVC Laboratory Hoods

	Number of Spray Nozzles	Flow @ 10 psi	Flow @ 40 psi
4' Hood	3	1.56 gpm	3.0 gpm
5' Hood	4	2.08 gpm	4.0 gpm*
6' Hood	4	2.08 gpm	4.0 gpm*
8' Hood	6	3.12 gpm	6.0 gpm*

\*Each washdown valve can only produce up to 3.5 gallons per minute at 40 psi. These operational points require an additional Washdown Valve Kit (9808310).

# **Everything you need to succeed.**

## Ventilated Enclosures & Exhausters

Fume Hoods & Enclosures Filtered Fume Hoods Ductless (Carbon-Filtered) Enclosures Biological Safety Cabinets & Enclosures Clean Benches PCR Enclosures Balance, Bulk Powder & Equipment Enclosures Nanotechnology Enclosures Laboratory Animal Research Stations Non-ventilated Enclosures Remote Blowers & Exhausters

## Sample Preparation Equipment

Freeze Dryers Nitrogen Blow Down Dry Evaporators Vacuum Dry Evaporators Vacuum Concentrators Cold Traps Vacuum Pumps

#### **Glassware Washers**

## Water Purification Systems

#### **Glove Boxes & Gas Purifiers**

Controlled Atmosphere Glove Boxes Filtered Glove Boxes Combination Glove Boxes

### **Forensic Enclosures**

### Kjeldahl, Fat & Crude Fiber Apparatus

#### **Other Products**

Laboratory Carts, Tables & Benches Blood Drawing Chairs Vacuum Desiccator Base Stands, Base Cabinets & Work Surfaces Filters & Prefilters Vacuum Pumps Freeze Dryer Accessories Ventilation Product Accessories



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#### LABCONCO CORPORATION

8811 Prospect Avenue Kansas City, MO 64132

(800) 821-5525 | (816) 333-8811

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