



BLOWERS

and Accessories for Laboratory Ventilation Systems





Completing Your Fume Removal System

as low as 250 CFM to blowers that can handle airflow as high as 3500 CFM. Our blowers are engineered and sized specifically for use with Labconco Laboratory Hoods. You may also utilize Labconco Blowers with other fume hoods and in other industrial applications. This brochure features product data, dimensional drawings and selection guides for all of our blowers.

Labconco offers three styles of blowers: Coated Steel, Fiberglass and PVC. Coated Steel Blowers are recommended for low to moderately corrosive applications, Fiberglass Blowers are used for moderate to highly corrosive conditions, and PVC Blowers are used for perchloric acid and other extremely corrosive atmospheres. All three types feature forward curved impellers to ensure quiet operation and optimum air delivery.

If you need additional assistance in the selection of blowers, ductwork and accessories, contact Labconco at **800-821-5525** or **816-333-8811**.

Once a laboratory hood has been selected, the next step is to select the proper blower and ductwork. It is important that these be sized correctly depending on hood size, application, CFM, and distance that needs to be ducted. A fume removal system works well only if the blower, ductwork and accessories are sized properly. This brochure is designed to make choosing the correct blower and accessories easier.

Labconco blowers are designed and manufactured to give you superior performance and long life when subjected to chemical atmospheres. They are offered in sizes that can handle airflow

Coated Steel and Fiberglass Blower Selection Guide

Hood	Sash Open	Face Velocity (fpm)	Airflow (CFM)	Duct Run Dia. (in)	Blower Type/Equivalent Duct Run [†]							
					Steel 25'	Fiberglass 25'	Steel 50'	Fiberglass 50'	Steel 75'	Fiberglass 75'	Steel 100'	Fiberglass 100'
4' Protector Laboratory Hood*	100%	100	730	12	7068800	7181000	7068800	7181000	7068800	7181000	7068800	7181000
4' Protector XStream Hood	100%	60	440	12	7068000	7180000	7068000	7180000	7068000	7180000	7068000	7180000
4' Protector Laboratory Hood*	60%	100	470	12	7068000	7180000	7068000	7180000	7068000	7180000	7068000	7180000
4' Protector XStream Hood	60%	60	280	12	7068000	7180000	7068000	7180000	7068000	7180000	7068000	7180000
5' Protector Laboratory Hood*	100%	100	960	12	7069000	7181200	7069000	7181200	7069000	7181200	7069000	7181200
5' Protector XStream Hood	100%	60	580	12	7068800	7180800	7068800	7180800	7068800	7180800	7068800	7180800
5' Protector Laboratory Hood*	60%	100	610	12	7068800	7180800	7068800	7180800	7068800	7180800	7068800	7180800
5' Protector XStream Hood	60%	60	370	12	7068000	7180000	7068000	7180000	7068000	7180000	7068000	7180000

Note: Blower performance can be fine tuned or adjusted with the use of an exhaust damper. Explosion-proof blowers not listed

Hood	Sash Open	Face Velocity (fpm)	Airflow (CFM)	Duct Run Dia. (in)	Blower Type/Equivalent Duct Run [†]							
					Steel 25'	Fiberglass 25'	Steel 50'	Fiberglass 50'	Steel 75'	Fiberglass 75'	Steel 100'	Fiberglass 100'
6' Protector Laboratory Hood*	100%	100	1180	12	7069000	7181400	7069000	7181400	7069200	7181400	7069200	7181400
6' Protector XStream Hood	100%	60	710	12	7068800	7181000	7068800	7181000	7068800	7181000	7068800	7181000
6' Protector Laboratory Hood*	60%	100	750	12	7068800	7181000	7068800	7181000	7068800	7181000	7068800	7181000
6' Protector XStream Hood	60%	60	450	12	7068800	7180800	7068800	7180800	7068800	7180800	7068800	7180800
8' Protector Laboratory Hood*	100%	100	1660	12	7069200	7181600	7069200	7181600	7069400	7181600	7069400	7181600
8' Protector XStream Hood	100%	60	1000	12	7068800	7181200	7069000	7181200	7069000	7181200	7069000	7181200
8' Protector Laboratory Hood*	60%	100	1060	12	7069000	7181200	7069000	7181200	7069000	7181200	7069000	7181200
8' Protector XStream Hood	60%	60	640	12	7068800	7180800	7068800	7180800	7068800	7180800	7068800	7180800

Note: Blower performance can be fine tuned or adjusted with the use of an exhaust damper. Explosion-proof blowers not listed

* Includes Protector Premier and XL Laboratory Hoods

[†] Equivalent resistance in feet of straight duct that consists of all factors such as elbows and transitions.



Completing Your Fume Removal System

The Blower Selection Guide, shown on pages 2 and 3, is a helpful and accurate method for selecting the Coated Steel or Fiberglass Blower to provide the proper airflow in your laboratory hood. A PVC Blower Selection Guide appears on page 9. When using the Blower Selection Guides, it is necessary to include the equivalent resistance factors for all the ductwork and accessories that are part of the fume removal

system. If these factors are not included, then the blower selected may be undersized. Please see page 12 for a blower sizing example.

For ductwork and accessory information, including nominal diameters and equivalent resistance, see pages 12-15.

If your application cannot be categorized in the guide below, such as installations that include filters, contact Labconco at **800-821-5525** or **816-333-8811**.

Coated Steel and Fiberglass Blower Selection Guide (cont.)

					Blower Type/Equivalent Duct Run [†]							
Hood	Sash Open	Face Velocity (fpm)	Airflow (CFM)	Duct Run Dia. (in)	Steel 25'	Fiberglass 25'	Steel 50'	Fiberglass 50'	Steel 75'	Fiberglass 75'	Steel 100'	Fiberglass 100'
10' Protector XL Hood	100%	100	2130	12	*	7182000	*	7182000	*	7182000	*	7182000
10' Protector XL Hood	60%	100	1360	12	*	7181400	7069000	7181400	7069200	7181400	7069200	7181400
12' Protector XL Hood	100%	100	2600	12	*	7182000	*	7182000	*	7182000	*	7182200
12' Protector XL Hood	60%	100	1660	12	*	*	7069200	7181600	7069400	7181600	7069400	7181600
16' Protector XL Hood	100%	100	3550	12	*	*	*	*	*	*	*	*
16' Protector XL Hood	60%	100	2270	12	*	*	*	*	*	*	*	*
Protector XL Vertical-Rising												
4' Floor-Mounted Hood	50%	100	680	12	7068800	7181000	7068800	7181000	7068800	7181000	7068800	7181000
5' Floor-Mounted Hood	50%	100	900	12	7069000	7181200	7069000	7181200	7069000	7181200	7069000	7181200
6' Floor-Mounted Hood	50%	100	1120	12	7069000	7181200	7069000	7181400	7069000	7181400	7069200	7181400
8' Floor-Mounted Hood	50%	100	1560	12	7069200	7181400	7069200	7181400	7069200	7181400	7069400	7181600
Protector XL Horizontal-Sliding												
8' Floor-Mounted Hood	50%	100	2200	12	*	7182000	*	7182000	*	7182000	*	7182000
10' Floor-Mounted Hood	25%	100	1360	12	*	7181400	7069200	7181400	7069200	7181400	7069200	7181400
12' Floor-Mounted Hood	25%	100	1660	12	*	7181600	7069400	7181600	7069400	7181600	7069400	7181600
16' Floor-Mounted Hood	25%	100	2260	12	*	*	*	7182000	*	7182000	*	7182000
Protector ClassMate Hood												
4' Protector ClassMate Hood	60%	100	570	8	7068200	7180200	7068200	7180200	7068200	7180400	7068400	7180400
5' Protector ClassMate Hood	60%	100	730	8	7068400	7180400	7068400	7180600	7068600	7180600	7068600	7180600
6' Protector ClassMate Hood	60%	100	890	10	7068600	7180600	7068600	7180600	7068600	7180600	7068600	7180600
Protector Radioisotope Hood												
4' Protector Radioisotope Hood	100%	100	730	12	7068800	7181000	7068800	7181000	7068800	7181000	7068800	7181000
4' Protector Radioisotope Hood	60%	100	470	12	7068000	7180800	7068000	7180800	7068000	7180800	7068000	7180800
5' Protector Radioisotope Hood	100%	100	960	12	7069000	7181200	7069000	7181200	7069000	7181200	7069000	7181200
5' Protector Radioisotope Hood	60%	100	610	12	7068800	7180800	7068800	7180800	7068800	7180800	7068800	7180800
6' Protector Radioisotope Hood	100%	100	1180	12	7069200	7181400	7069200	7181400	7069200	7181400	7069200	7181400
6' Protector Radioisotope Hood	60%	100	750	12	7068800	7181000	7068800	7181000	7068800	7181000	7068800	7181000
8' Protector Radioisotope Hood	100%	100	1660	12	7069400	7181600	7069400	7181600	7069400	7181600	7069400	7181600
8' Protector Radioisotope Hood	60%	100	1060	12	7069000	7181200	7069000	7181200	7069000	7181200	7069000	7181200
Fiberglass 30 Hood												
Basic 47 Hood	100%	100	310	6	7068000	7180000	7068200	7180200	—	—	—	—
Basic 47 Hood	100%	100	720	10	7068200	7180400	7068200	7180400	7068400	7180400	7068400	7180400
Basic 70 Hood	100%	100	1120	10	7069200	7181400	7069200	7181400	7069200	7181400	7069400	7181400

Note: Blower performance can be fine tuned or adjusted with the use of an exhaust damper.

Explosion-proof blowers not listed

*Two blowers may be required. Contact 1 for blower sizing assistance.

[†] Equivalent resistance in feet of straight duct that consists of all factors such as elbows and transitions.



Coated Steel Blowers

Coated Steel Blowers are durable and easy to maintain.

Labconco's Coated Steel Blowers have been specifically designed to meet the demanding day-to-day ventilation requirements for a wide range of hood choices. They are offered in a broad spectrum of capacities from 300 to 2150 CFM at static pressures up to 1.50" H₂O. Coated Steel Blowers are recommended for low to moderately corrosive applications. For greater corrosion protection, refer to the Fiberglass Blowers and PVC Blowers.

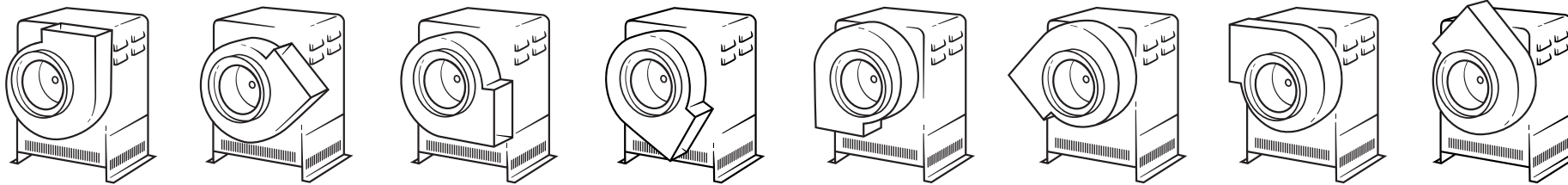
Coated Steel Blower Features:

- Phenolic coating on impeller and housing is corrosion resistant.
- Dry powder epoxy-coated base and weather cover provide long life in extreme weather.
- Explosion-proof models have non-sparking aluminum impellers and UL listed explosion-proof motors for maximum safety.
- Belt-driven with adjustable sheave saves energy and allows you to fine tune air volumes.



- Flow-through vent holes and louvers allow air circulation that cools the motor, thus prolonging motor life.
- Removable weather cover allows easy access for lubrication and sheave alignment to enhance performance and provide longer life.
- Self-adjusting gravity belt tightener insures consistent performance because belt is held taut by weight of motor. Motor mount keeps the motor in place should the belt ever fail.
- Forward curved impellers are balanced to ensure quiet operation and optimum air delivery.
- Factory lubricated pillow block bearings reduce maintenance and increase life.
- Blowers have low RPM for quiet operation.
- Sound decibel levels generally range between 64 and 88 dba depending on blower size.
- Variable exhaust orientation adjusts to eight outlet positions for installation flexibility (vertical discharge is recommended).

Variable Exhaust Orientation





Coated Steel Blowers

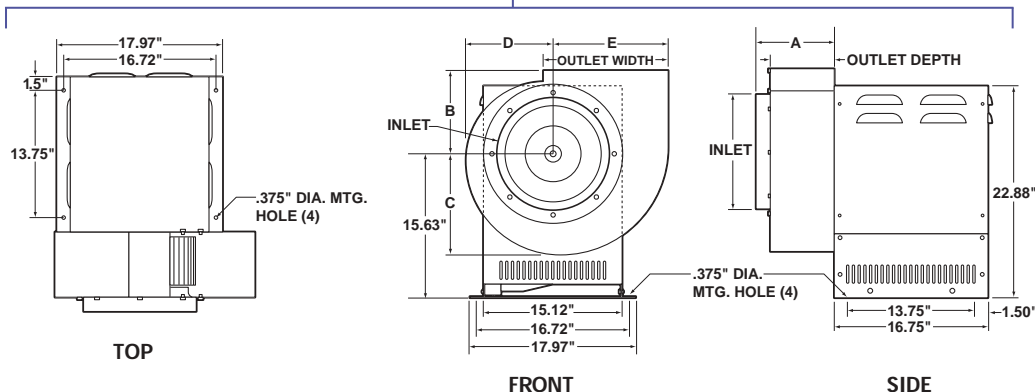
SPECIFICATIONS/PERFORMANCE DATA

	Catalog Numbers		Motor Data		CFM & RPM Ranges at Static Pressure – inches H ₂ O											RPM Range Available	Ship. Wt. lbs./kg			
	Std.	E.P.	HP	Electrical Requirements	F.L. Amps	.12 CFM@RPM	.25 CFM@RPM	.38 CFM@RPM	.50 CFM@RPM	.62 CFM@RPM	.75 CFM@RPM	.88 CFM@RPM	1.00 CFM@RPM	1.12 CFM@RPM	1.25 CFM@RPM			1.50 CFM@RPM		
10" Inlet	7068000		1/6	115V/60 Hz/1Ø	4.0	370 @ 530	300 @ 635	308 @ 760									529-807	92/42		
	7068100		1/6		3.15	500 @ 650	540 @ 800	410 @ 800										807	92/42	
	7068200		1/4	115V/60 Hz/1Ø	4.4		540 @ 800	410 @ 800	350 @ 870	390 @ 970	430 @ 1060						752-1067	92/42		
	7068300		1/4		4.5		720 @ 950	760 @ 1050	710 @ 1060	620 @ 1060							1067	92/42		
	7068400		1/3	115V/60 Hz/1Ø	6.1			760 @ 1050	710 @ 1060	620 @ 1060	430 @ 1060	460 @ 1150	500 @ 1220					929-1260	86/39	
	7068500		1/3		6.4			850 @ 1130	825 @ 1160	790 @ 1190	770 @ 1220	740 @ 1260	640 @ 1260					1260	86/39	
7068600		1/2	115V/60 Hz/1Ø	8.4				825 @ 1160	790 @ 1190	770 @ 1220	740 @ 1260	640 @ 1260	530 @ 1290	555 @ 1360			1073-1456	88/40		
7068700		1/2	115/230V/60 Hz/1Ø	9.0/4.5				970 @ 1265	950 @ 1305	920 @ 1330	890 @ 1375	875 @ 1405	840 @ 1430	780 @ 1456			1456	98/44		
12" Inlet	7068800		1/3	115V/60 Hz/1Ø	6.1	540 @ 380	450 @ 470	550 @ 569									373-569	90/41		
	7068900		1/3		6.4	1000 @ 510	900 @ 570										569	90/41		
	7069000		1/2	115V/60 Hz/1Ø	8.4		900 @ 570	550 @ 575	640 @ 660	710 @ 730							532-753	96/44		
	7069100		1/2	115/230V/60 Hz/1Ø	9.0/4.5		1380 @ 730	1305 @ 750	1100 @ 750	850 @ 750							753	102/46		
	7069200		3/4	115/230V/60 Hz/1Ø	11.6/5.8			1305 @ 750	1100 @ 750	850 @ 750	780 @ 805	830 @ 870						667-946	100/45	
	7069300		3/4		11.4/5.7			1700 @ 946	1680 @ 946	1550 @ 946	1350 @ 920	1200 @ 930						946	108/49	
	7069400		1	115/230V/60 Hz/1Ø	13.6/6.8				1680 @ 946	1550 @ 946	1350 @ 920	1200 @ 930	900 @ 930	950 @ 980	1000 @ 1029			828-1173	100/45	
	7069500		1	115/230V/60 Hz/1Ø	13.6/6.8				1900 @ 1020	1870 @ 1040	1840 @ 1070	1800 @ 1090	1760 @ 1120	1725 @ 1130	1660 @ 1150	1405 @ 1173			1173	114/52
	7069600		1-1/2	115/230V/60 Hz/1Ø	20.4/10.2						1840 @ 1070	1800 @ 1090	1760 @ 1120	1725 @ 1130	1660 @ 1150	1100 @ 1130			920-1303	114/52
	7069700		1-1/2	230/460V/60 Hz/3Ø	4.8/2.4						2150 @ 1180	2120 @ 1205	2100 @ 1230	2060 @ 1250	2040 @ 1270	1960 @ 1303			1303	114/52

NOTE: CFM @ RPM entries are recommended minimum and maximum operating values for either standard or explosion-proof models.

Coated Steel Blower Dimensions

Dimension	Models 7068000-7068700	Models 7068800-7069700
A	7.16"	8.56"
B	7.00"	9.00"
C	8.13"	10.50"
D	6.81"	9.00"
E	9.25"	12.50"
Inlet	10.87" ID	12.25" OD
Outlet	5.5" D x 10.00" W	7.0" D x 13.50" W
Wheel	9.19" Dia. x 4.25" W	12.19" Dia. x 5.25" W





Fiberglass Blowers

Fiberglass Blowers provide superior corrosion resistance.

Labconco's Fiberglass Blowers are ideal for fume hood exhaust systems in moderate to highly corrosive conditions. They are offered in a broad range of capacities from 250 to 3500 CFM at static pressures up to 4.0". Fiberglass Blowers are not recommended for use with perchloric acid. Please refer to PVC Blowers for perchloric acid use.

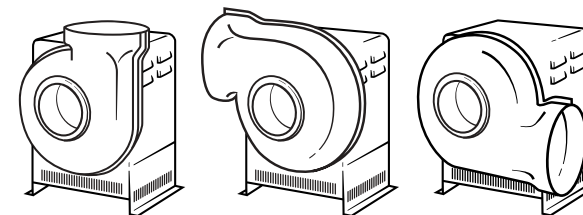
Fiberglass Blower Features:

- Housings are made from molded fiberglass reinforced polyester for durability and long life.
- Impellers are made of injection-molded polypropylene to resist corrosive atmospheres.
- Dry powder epoxy-coated base and weather cover provide long life in extreme weather.
- Inlet and discharge diameters are sized to receive rigid PVC ducting material directly for easy installation. Blowers are available with 10", 12" and 16" inlet/outlet connections.
- Sheaves are adjustable to allow for air volume adjustment.
- Blowers operate at low RPMs for quiet operation.



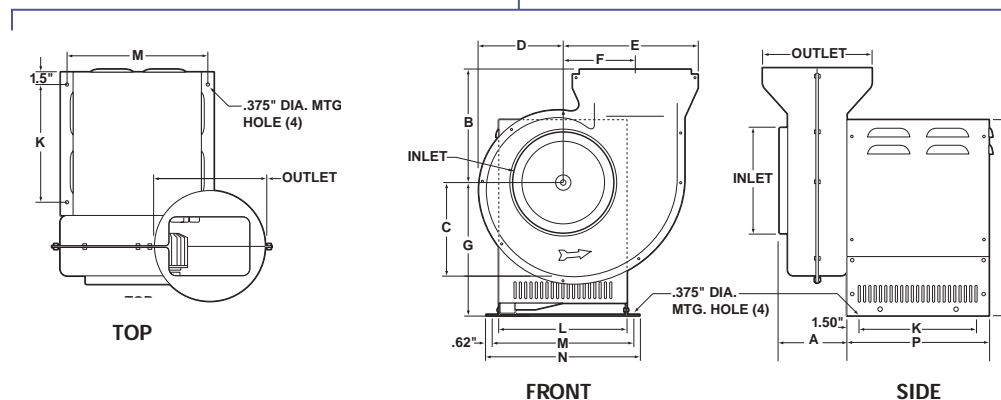
- Flow-through vent holes and louvers allow air circulation that cools the motor, thus prolonging motor life.
- Self-adjusting gravity belt tightener insures consistent performance because belt is held taut by weight of motor. Motor mount keeps the motor in place should the belt ever fail.
- Sound decibel levels for Fiberglass Blowers with 10" and 12" diameter inlets generally range between 64 and 88 dba, depending on blower size.
- Variable exhaust orientation adjusts to eight outlet positions for installation flexibility (vertical discharge is recommended).
- Explosion-proof models have non-sparking polypropylene impellers and UL listed explosion-proof motors for maximum safety.

Variable Exhaust Orientation



Dimension	Models 7180000-7180700	Models 7180800-7181700	Models 7182000-7182300
A	7.13"	8.00"	9.00"
B	12.69"	13.19"	15.75"
C	10.50"	12.00"	15.50"
D	8.75"	10.00"	12.81"
E	13.88"	15.88"	20.81"
F	7.50"	8.50"	11.69"
G	15.63"	15.63"	21.38"
H	22.88"	22.88"	29.88"
K	13.75"	13.75"	18.00"
L	15.12"	15.12"	17.62"
M	16.72"	16.72"	19.22"
N	17.97"	17.97"	20.47"
P	16.75"	16.75"	21.00"
INLET	10.38" OD	12.38" OD	15.63" OD
OUTLET	10.75" ID	12.75" ID	16.00" ID
WHEEL	9.94" Dia. x 3.31" W	11.81" Dia. x 4.25" W	14.56" Dia. x 4.88" W

Fiberglass Blower Dimensions





Fiberglass Blowers

SPECIFICATIONS/PERFORMANCE DATA

Catalog Numbers		Motor Data			CFM & RPM Ranges at Static Pressure – inches H ₂ O										RPM Range Available	Ship. Wt. lbs./kg				
Std.	E.P.	HP	Electrical Requirements	F.L. Amps	.12 CFM@RPM	.25 CFM@RPM	.38 CFM@RPM	.50 CFM@RPM	.62 CFM@RPM	.75 CFM@RPM	.88 CFM@RPM	1.00 CFM@RPM	1.12 CFM@RPM	1.25 CFM@RPM			1.50 CFM@RPM			
10" Inlet	7180000		1/6	115V/60 Hz/1Ø	4.0	325 @ 630	250 @ 750	305 @ 920									630-	92/42		
	7180100		1/6		3.15	500 @ 840	520 @ 962	400 @ 962										962	92/42	
	7180200		1/4	115V/60 Hz/1Ø	4.4		520 @ 962	400 @ 962	350 @ 1050								828-	92/42		
	7180300		1/4		4.5		700 @ 1173	640 @ 1173	560 @ 1173									1173	92/42	
	7180400		1/3	115V/60 Hz/1Ø	6.1			640 @ 1173	560 @ 1173	390 @ 1150	430 @ 1270	410 @ 1370						1073-	86/39	
	7180500		1/3		6.4			840 @ 1400	820 @ 1450	780 @ 1456	710 @ 1456	610 @ 1456						1456	86/39	
	7180600		1/2	115V/60 Hz/1Ø	8.4			840 @ 1400	820 @ 1450	780 @ 1456	710 @ 1456	610 @ 1456	500 @ 1470	520 @ 1540	550 @ 1630			1305-	88/40	
	7180700		1/2	115/230V/60 Hz/1Ø	9.0/4.5			890 @ 1460	960 @ 1600	940 @ 1630	920 @ 1670	890 @ 1690	870 @ 1725	840 @ 1750	780 @ 1772			1772	98/44	
12" Inlet	7180800		1/6	115V/60 Hz/1Ø	4.0	370 @ 373	450 @ 530											373-	90/41	
	7180900		1/6		3.15	720 @ 569	550 @ 569												569	90/41
	7181000		1/4	115V/60 Hz/1Ø	4.4	720 @ 569	550 @ 569	550 @ 670										532-	96/44	
	7181100		1/4	115/230V/60 Hz/1Ø	4.5	960 @ 720	900 @ 753	760 @ 753										753	102/46	
	7181200		1/2	115/60 Hz/1Ø	8.4			900 @ 753	760 @ 753	640 @ 770	710 @ 860							690-	100/45	
	7181300		1/2	115/230V/60 Hz/1Ø	9.0/4.5			1200 @ 978	1120 @ 978	1020 @ 978	900 @ 978							978	108/49	
	7181400		3/4	115/230V/60 Hz/1Ø	11.6/5.8			1200 @ 978	1120 @ 978	1020 @ 978	900 @ 978	780 @ 1010	840 @ 1080	900 @ 1140	950 @ 1210	1000 @ 1250			920-	100/45
	7181500		3/4		11.4/5.7			1400 @ 1100	1640 @ 1303	1570 @ 1303	1505 @ 1303	1430 @ 1303	1360 @ 1303	1280 @ 1303	1200 @ 1303	1080 @ 1303			1303	114/52
	7181600		1-1/2	115/230V/60 Hz/1Ø	20.4/10.2				1640 @ 1303	1570 @ 1303	1505 @ 1303	1430 @ 1303	1360 @ 1303	1280 @ 1303	1200 @ 1303	1080 @ 1303	1100 @ 1400		1207-	114/52
	7181700		1-1/2	230/460V/60 Hz/3Ø	4.8/2.4				1700 @ 1330	1960 @ 1560	2030 @ 1639	1960 @ 1639	1900 @ 1639	1850 @ 1639	1820 @ 1639	1750 @ 1639	1650 @ 1639		1639	114/52

Catalog Numbers		Motor Data			CFM & RPM Ranges at Static Pressure – inches H ₂ O						RPM Range Available	Ship. Wt. lbs./kg							
Std.	E.P.	HP	Electrical Requirements	F.L. Amps	1.00 CFM@RPM	1.50 CFM@RPM	2.00 CFM@RPM	2.50 CFM@RPM	3.00 CFM@RPM	4.00 CFM@RPM									
16" Inlet	7182000		2	208-230/460V/60 Hz/3Ø	6.8/3.4	1800 @ 1083	1260 @ 1100	1460 @ 1270	1630 @ 1420								1083-	290/132	
	7182100		2	208-230/460V/60 Hz/3Ø	6.0/3.0	2900 @ 1469	2640 @ 1469	2300 @ 1469	1880 @ 1469									1469	345/156
	7182200		3	208-230/460V/60 Hz/3Ø	9.7/4.85	2900 @ 1469	2640 @ 1469	2300 @ 1469	1880 @ 1469	1780 @ 1550								1309-	365/166
	7182300		3	230/460V/60 Hz/3Ø	8.4/4.2	3250 @ 1600	3500 @ 1777	3300 @ 1777	3060 @ 1777	2800 @ 1777	2050 @ 1777							1777	370/168

NOTE: CFM @ RPM entries are recommended minimum and maximum operating values for either standard or explosion-proof models



PVC Blowers

PVC Blowers handle highly corrosive applications.

Labconco's PVC Blowers provide optimum chemical resistance and are made specifically to handle extremely corrosive atmospheres produced by high order oxidizers such as perchloric acid. They are offered with capacities from 390 to 1900 CFM at static pressures up to 1.50". These blowers have a drain connection on the lower portion of the housing so that a washdown system can be utilized.

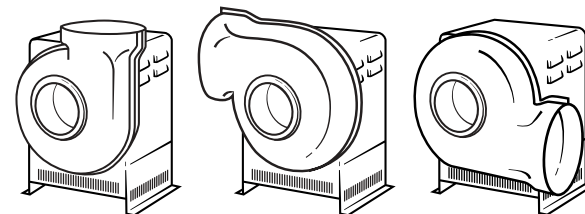
PVC Blower Features:

- Housings are vacuum formed from unplasticized Type I polyvinyl chloride for complete corrosion protection.
- Impellers are made of injection molded PVDF to resist highly corrosive atmospheres.
- Dry powder epoxy-coated base and weather cover provide long life in extreme weather.
- Inlet and discharge diameters are sized to receive rigid PVC ducting material directly for easy installation. Blowers are available with 10" and 12" inlet/outlet connections.
- Sheaves are adjustable to save energy and to allow for air volume adjustment.
- Blowers operate at low RPMs for quiet operation.



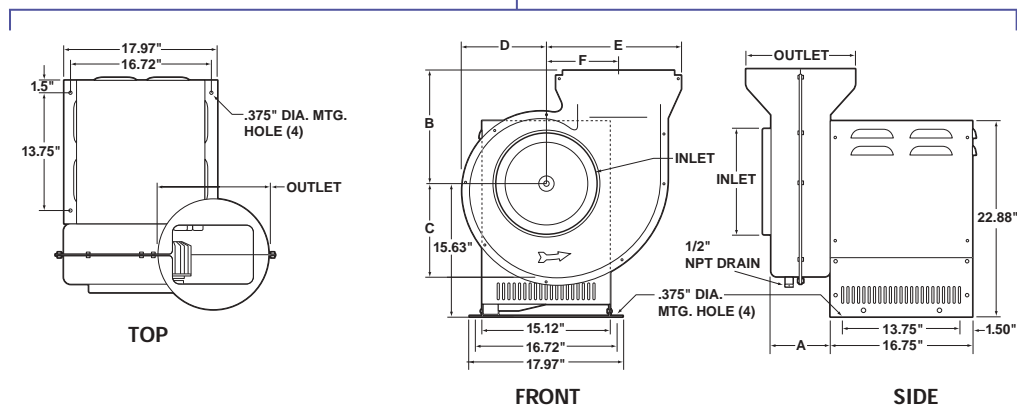
- Flow-through vent holes and louvers allow air circulation that cools the motor, thus prolonging motor life.
- Self-adjusting gravity belt tightener insures consistent performance because belt is held taut by weight of motor. Motor mount keeps the motor in place should the belt ever fail.
- Convenient access to impeller assembly provides for easy maintenance.
- Sound decibel levels generally range between 64 and 88 dba depending on blower size.
- Variable exhaust orientation adjusts to eight outlet positions for installation flexibility (vertical discharge is recommended).

Variable Exhaust Orientation



Dimension	Models	
	7183000	7183100-7183200
A	7.13"	8.00"
B	12.69"	13.19"
C	10.50"	12.00"
D	8.75"	10.00"
E	13.88"	15.88"
F	7.50"	8.50"
INLET	10.38" OD	12.38" OD
OUTLET	10.75" ID	12.75" ID
WHEEL	9.94" Dia. x 3.31" W	11.81" Dia. x 4.25" W

PVC Blower Dimensions





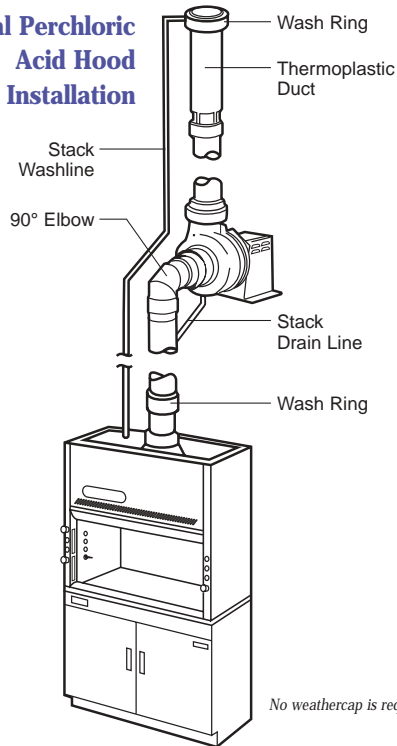
PVC Blowers

SPECIFICATIONS/PERFORMANCE DATA

Inlet/Outlet	Catalog Numbers	Motor Data			CFM & RPM Ranges at Static Pressure – inches H ₂ O										RPM Range Available	Ship. Wt. lbs./kg
		HP	Electrical Requirements	F.L. Amps	.25 CFM@RPM	.38 CFM@RPM	.50 CFM@RPM	.62 CFM@RPM	.75 CFM@RPM	.88 CFM@RPM	1.00 CFM@RPM	1.12 CFM@RPM	1.25 CFM@RPM	1.50 CFM@RPM		
10"	7183000	1/2	115V/60 Hz/1Ø	8.4	680 @ 1150 720 @ 1190	610 @ 1150 890 @ 1460	520 @ 1150 910 @ 1561	390 @ 1160 865 @ 1561	430 @ 1270 815 @ 1561	465 @ 1380 750 @ 1561	495 @ 1470 655 @ 1561				1150-1561	90/41
12"	7183100	1/2	115V/60 Hz/1Ø	8.4	1130 @ 881 1400 @ 1100	1020 @ 881 1490 @ 1220	920 @ 881 1450 @ 1220	770 @ 881 1400 @ 1230	780 @ 1005 1330 @ 1248	840 @ 1080 1240 @ 1248	900 @ 1150 1150 @ 1248	950 @ 1220 1040 @ 1248			881-1248	90/41
	7183200	1	115/230V/60 Hz/1Ø	13.6/6.8		1490 @ 1200 1700 @ 1340	1450 @ 1250 1900 @ 1510	1400 @ 1230 1880 @ 1540	1330 @ 1248 1850 @ 1550	1240 @ 1248 1800 @ 1560	1150 @ 1248 1760 @ 1570	1040 @ 1248 1730 @ 1590	1000 @ 1270 1690 @ 1600	1100 @ 1405 1600 @ 1615	1208-1639	100/45

NOTE: CFM @ RPM entries are recommended minimum and maximum operating values.

Typical Perchloric Acid Hood Installation



PVC Blower Selection Guide

Hood	Duct Size	FPM	CFM	Equivalent Duct Length			
				25'	50'	75'	100'
4' Protector Stainless Steel Perchloric Acid Hood	10"	100	730	7183000	7183000	7183000	7183000
5' Protector Stainless Steel Perchloric Acid Hood	10"	100	960	7183100	7183100	7183100	7183100
6' Protector Stainless Steel Perchloric Acid Hood	10"	100	1180	7183100	7183100	7183100	7183200
8' Protector Stainless Steel Perchloric Acid Hood	10"	100	1660	7183200	7183200	7183200	7183200
4' Protector PVC Perchloric Acid Hood	12"	100	730	7183000	7183000	7183000	7183000
6' Protector PVC Perchloric Acid Hood	12"	100	1180	7183100	7183100	7183100	7183100
8' Protector PVC Perchloric Acid Hood	12"	100	1660	7183200	7183200	7183200	7183200
4' Protector PVC Acid Digestion Hood	12"	100	730	7183000	7183000	7183000	7183000
6' Protector PVC Acid Digestion Hood	12"	100	1180	7183100	7183100	7183100	7183100
8' Protector PVC Acid Digestion Hood	12"	100	1660	7183200	7183200	7183200	7183200



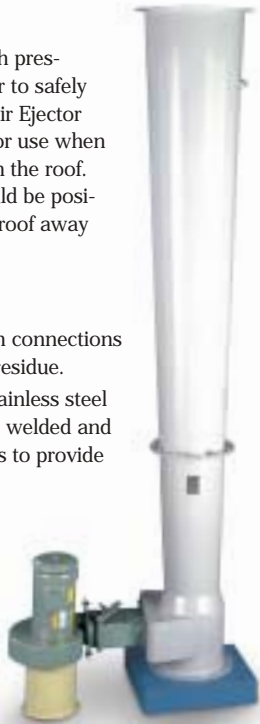
Perchloric Acid Air Ejectors

Perchloric Acid Air Ejectors are designed for long duct runs.

Labconco Air Ejectors combine a high pressure blower assembly and air eductor to safely exhaust perchloric acid fumes. The Air Ejector is an alternative to the PVC Blower for use when long duct runs are necessary to reach the roof. Because of its loud operation, it should be positioned in an isolated location on the roof away from the work area.

Air Ejector Features:

- Water washdown and drain system connections eliminate collection of hazardous residue.
- The housing is fabricated of 316 stainless steel with polyurethane coating and has welded and polished seams and gasketed joints to provide long life.
- Motor/blower assembly is totally enclosed and isolated from fume contact. It is provided with a polyurethane coating and an integral drain sleeve for extended service.



- Specifically designed for easy roof installation.
- Vertical extension 10 feet above roof-line promotes dispersion of vapors to atmosphere.

NOTE: The Labconco Perchloric Acid Air Ejector is not equipped with inlet water controls. It is recommended that this ejector be plumbed into the hood and duct washdown system to incorporate the manual washdown control provided on Labconco Perchloric Acid Hoods.

Accessories for Air Ejectors

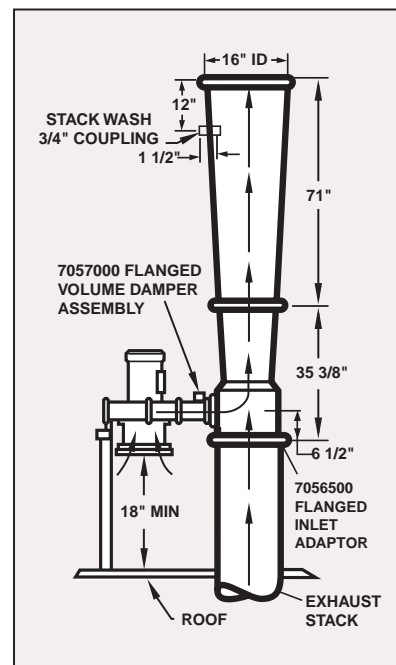
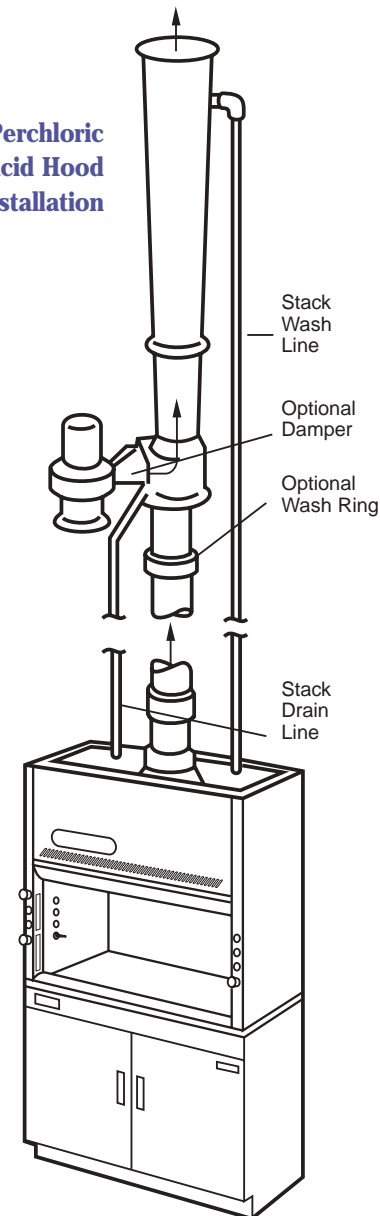
7056500 Flanged Inlet Adaptor

Flanged PVC coupling for connecting Air Ejector to 10" PVC duct. Nominal diameter is 10". Fits all models. Shipping weight 10 lbs. (4.5 kg)

7057000 Flanged Volume Damper Assembly

Polyurethane coated stainless steel damper with positive lock for adjusting the volume of exhausted air and for minimizing noise levels. **Required to assure appropriate hood face velocities.** Shipping weight 35 lbs. (15.9 kg)

Typical Perchloric Acid Hood Installation



Perchloric Acid Air Ejector Dimensions

Catalog Numbers	HP	Electrical Requirements	Full Load Amps	CFM @ Static Pressure — inches H ₂ O										Ship. Wt. lbs./kg
				.5	.75	1.0	1.25	1.5	1.75	2.0	2.25	2.5		
7055000	1	230/460V 60 Hz/3Ø	4.0	2000	1200	750	—	—	—	—	—	—	—	197/89
7055100	2	230/460V 60 Hz/3Ø	5.6	—	—	—	2000	1000	500	—	—	—	—	198/90
7055200	3	230/460V 60 Hz/3Ø	8.5	—	—	—	—	—	2500	1250	750	450	—	203/92



Swirlaway® Fume Scrubbers

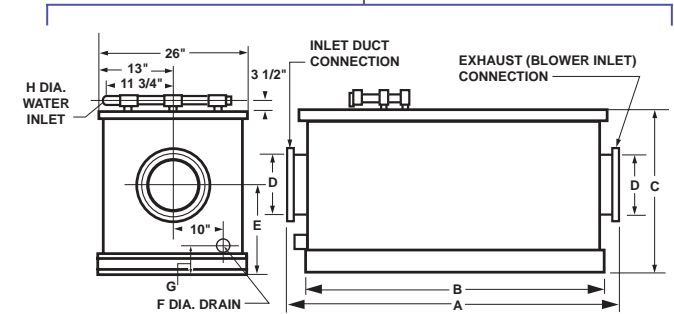
Swirlaway Fume Scrubbers exhaust clean, dry air to atmosphere.

The Labconco Swirlaway is an efficient, compact and easily installed scrubber designed specifically for use with laboratory hoods. When connected to the exhaust system, the Swirlaway removes particulates and other water soluble contaminants so that clean, dry air is exhausted to the atmosphere. The durable PVC construction and low profile make it ideal for roof mounting. The Swirlaway has no moving parts and is virtually maintenance free. Labconco provides engineering assistance to help in the selection of a Swirlaway and blower system. Contact Labconco or your laboratory supply dealer for additional scrubber options.

The Swirlaway requires a separate blower for operation.



Swirlaway Fume Scrubber Dimensions



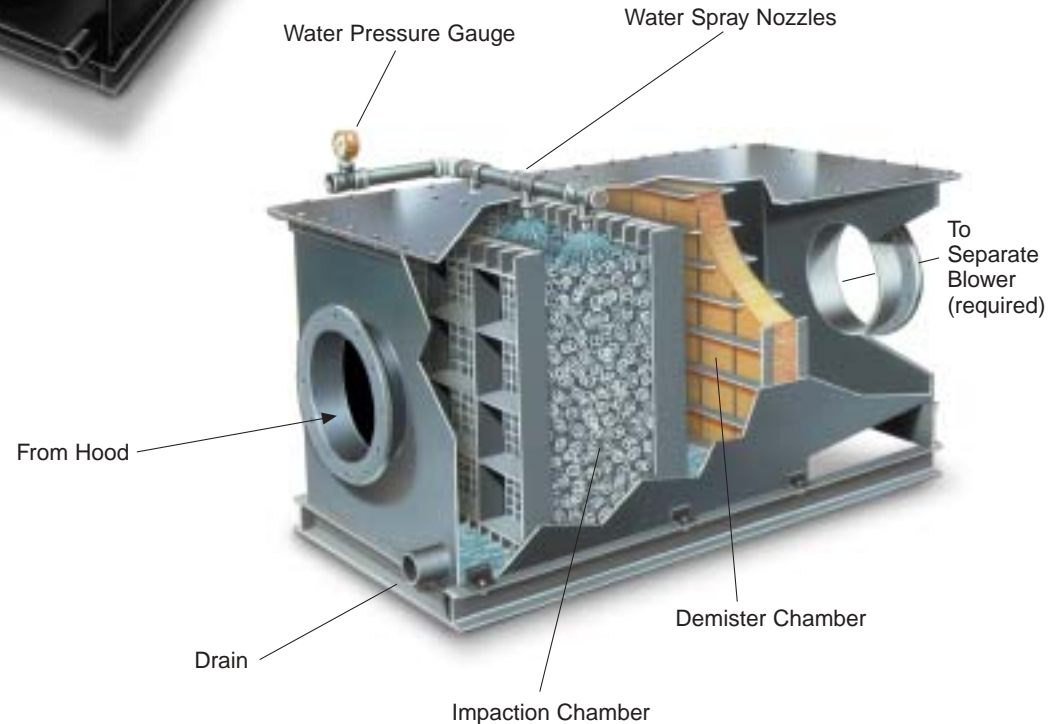
Dimensional Data

Catalog Number	A	B	C	D	E	F	G	H
5621500	57.75"	51.75"	27.75"	10"	12.13"	2.38"	1.44"	1"
5621600	76.75"	70.75"	39.75"	12"	18"	3.5"	1.75"	1.5"

Specifications/Performance Data

Catalog Number	Rated CFM	Internal Static Pressure Drop at Rated CFM	Water Usage-GPM	Nozzles	Ship. Wt. lbs./kg
5621500	750	.75" H ₂ O	1.3 GPM optimum @ approx. 2 psig*	3-each rated .71 GPM @ 5 psig*	324/147
5621600	1200	1.4" H ₂ O	2.8 GPM optimum @ approx. 3 psig*	5-each rated .71 GPM @ 5 psig*	522/237

*Working pressure indicated on integral pressure gauge.

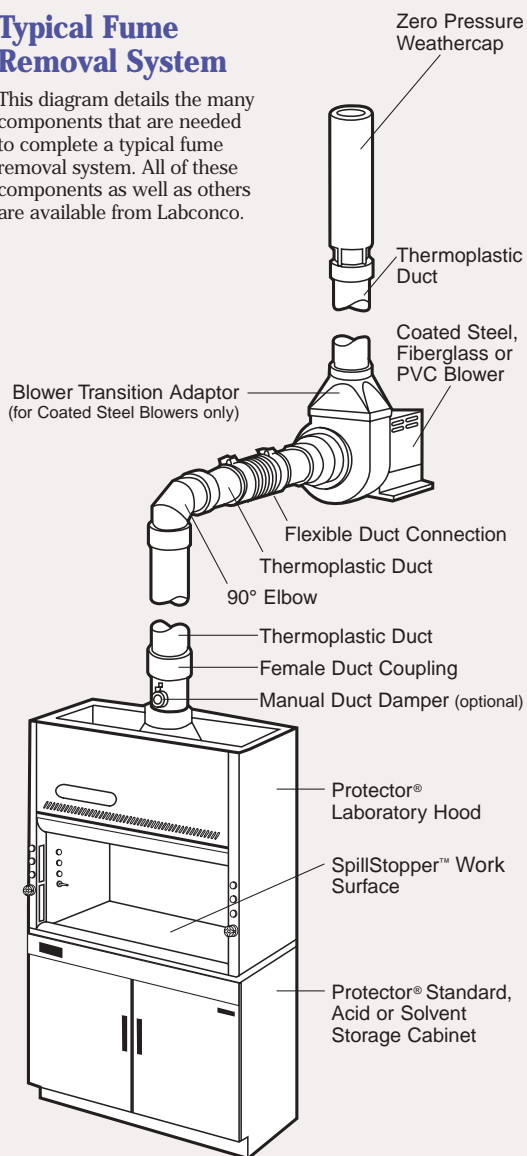




Ductwork and Accessories

Typical Fume Removal System

This diagram details the many components that are needed to complete a typical fume removal system. All of these components as well as others are available from Labconco.



How to Calculate Equivalent Resistance.

When using the Blower Selection Guides on pages 2, 3 and 9, it is necessary to include the equivalent resistance factors for all the ductwork and accessories needed to complete the fume removal system. If these factors are not included, then the blower selected may be undersized. The diagram at left provides details of the components found on a typical fume removal system. The "equivalent resistance in feet of straight duct" is provided for each component on the pages that follow. Below is an example of how to determine the total equivalent resistance for a fume removal system.

Example: You have selected a 4' Protector Premier Laboratory Hood to run at 730 CFM. The exhaust collar of this hood is sized to directly receive 12" diameter PVC duct.* In this example, your fume removal system requires 30 feet of straight duct, two 90° Elbows and one Zero Pressure Weathercap. Since you will be handling low to moderately corrosive materials, you have selected a Coated Steel Blower.

Each 12" diameter 90° Elbow has the equivalent resistance of 25 feet of straight duct (see p. 13). The Zero Pressure Weathercap has 5 feet of equivalent resistance (see p. 13). The total equivalent feet for the system is:

feet of straight duct	30 feet
2 elbows @ 25 feet each	50 feet
1 zero pressure weathercap @ 5 feet	5 feet
	85 feet

The Blower Selection Guide on page 2 recommends Coated Steel Blower 7068800 for the 4' Protector Premier Laboratory Hood with 85 feet of total equivalent resistance.

*Duct made of other materials may require adaptors.



Thermoplastic Duct

PVC exhaust duct is Type I, unplasticized, schedule 40, lightweight and corrosion-resistant. A Female Duct Coupling is required to join two sections. Connections can be made using solvent cement. PVC is rigid and may be cut without the use of special tools. Comes in 10' lengths.

Nominal Diameter/Inches	6	8	10	12	16
Catalog Number	4708600	4718900	7027200	5602000	5605000
Actual OD/inches	6.625	8.625	10.750	12.750	16.000
Actual ID/inches	6.250	8.250	10.375	12.375	15.625
Shipping Weight lbs./kg	25/11	35/16	50/23	65/29	80/86



Duct Couplings, Female

PVC coupling makes connections between two sections of thermoplastic duct quick and easy.

Nominal Diameter/Inches	6	8	10	12	16
Catalog Number	4708900	4719200	7027500	5602300	5605300
Shipping Weight lbs./kg	4/2	5/2	5/2	6/3	7/3
Equivalent Resistance in feet of Straight Duct	0	0	0	0	0



Duct Couplings, Male

PVC duct in 6" lengths facilitates connections between Blowers and Elbows, Thermoplastic Duct Reducers and Weathercaps.

Nominal Diameter/Inches	6	8	10	12
Catalog Number	2144700	4719900	7027800	7067300
Actual OD/inches	6.625	8.625	10.750	12.750
Actual ID/inches	6.250	8.250	10.375	12.375
Shipping Weight lbs./kg	3/1	4/2	5/2	6/3



Ductwork and Accessories

Elbows

PVC elbows, both 45° and 90°, are compatible with thermoplastic duct. Designed and engineered for quick installation and minimum pressure losses, they feature belled end connections to receive PVC duct directly.



Nominal Diameter/Inches	6	8	10	12	16	
90° Elbow	Catalog Number	4708700	4719000	7027300	5602100	5605100
	Approx. Height/Inches	13.625	17.313	20.375	24.188	29.000
	Shipping Weight lbs./kg	8/4	10/5	12/5	14/6	17/8
	Equivalent Resistance in feet of Straight Duct	12	15	20	25	36

Nominal Diameter/Inches	6	8	10	12	16	
45° Elbow	Catalog Number	4708800	4719100	7027400	5602200	5605200
	Approx. Height/Inches	8.75	10.75	12.5	15	17.5
	Shipping Weight lbs./kg	8/4	10/5	12/5	14/6	17/8
	Equivalent Resistance in feet of Straight Duct	6	7.5	10	12.5	18

Thermoplastic Duct Reducers

PVC coupling type reducers are designed for connecting thermoplastic duct of different diameters. Compare your blower inlet size with your duct size to see if one is necessary.



Nominal Size/Inches	6 x 8	8 x 10	10 x 12	12 x 16
Catalog Number	5605900	5606000	5606100	5630700
Shipping Weight lbs./kg	2/1	5/2	6/3	8/4
Equivalent Resistance in feet of Straight Duct	0	0	0	0

Zero Pressure Weathercaps

The Zero Pressure Weathercap is made of strong, corrosion-resistant PVC. The cap adds little static pressure to the exhaust system and allows for vertical discharge of the effluent air for dispersion away from the building.



Nominal Diameter/Inches	6	8	10	12	16
Catalog Number	4722200	4722300	7095100	5622100	5622200
Height/Inches	36	40	48	56	72
Shipping Weight lbs./kg	20/9	25/11	30/14	35/16	40/18
Equivalent Resistance in feet of Straight Duct	5	5	5	5	5

Spiral Tube

This spiral tube simplifies temporary installations. It is corrosion-resistant, neoprene-impregnated fiberglass reinforced with steel wire. Includes rigid duct connector and two clamps. Length is ten feet.



Nominal Diameter/Inches	7" for use with 6" fittings	9" for use with 8" fittings	11" for use with 10" fittings	13" for use with 12" fittings
Catalog Number	1965100	4719400	7027700	5622300
Shipping Weight lbs./kg	10/5	15/7	20/9	25/11
Equivalent Resistance in feet of Straight Duct	Because this ductwork is flexible and may conform to various configurations, it is not possible to know the precise equivalent resistance.			



Ductwork and Accessories

Manual Duct Dampers

This damper fitting allows you to balance airflow. It may be used with exhaust and auxiliary-air ducts, and is usually placed directly above the fume hood.



Nominal Diameter/Inches	6	8	10	12	16
Catalog Number	4724200	4741300	5983400	5981200	4726400
Shipping Weight lbs./kg	10/5	12/5	15/7	20/9	25/11
Approx. Height/inches	14	19.125	19.5	19.67	24

Flexible Duct Connections

This flexible connection reduces vibration between the blower and PVC ductwork. It is supplied with two clamps for easy installation.



Nominal Diameter/Inches	9" for use with 8" fittings	11" for use with 10" fittings	13" for use with 12" fittings
Catalog Number	4726500	7034200	5621400
Shipping Weight lbs./kg	5/2	5/2	5/2

Blower Transition Adaptors

This epoxy-coated steel transition adaptor fits all Labconco Coated Steel Blowers. This adaptor allows you to connect round thermoplastic duct to the exhaust side of the blower to create an exhaust stack. Nominal size PVC duct fits inside the adaptor opening.



Nominal Diameter/Inches	8	10	12
Catalog Number	4722400	4722401	7003400
Shipping Weight lbs./kg	3/1	4/2	4/2
For use with Labconco Blowers	7068000-7068700	7068000-7068700	7068800-7069700

Auxiliary-Air Transition Adaptor

The Auxiliary-Air Transition Adaptor is the same construction as the Blower Transition Adaptor but is designed to allow you to connect round thermoplastic duct to the rectangular auxiliary-air collar of Protector Fume Hoods.



Nominal Diameter/Inches	10
Catalog Number	4889300
Shipping Weight lbs./kg	4/2

T and Y Connections

PVC fittings shaped in T and Y configurations. Compatible with thermoplastic duct. End connections receive PVC pipe directly. Contact Labconco for help in sizing blowers with these accessories.



Nominal Diameter/Inches	10 x 10 x 12
T's Catalog Number	5630400
T's Shipping Weight lbs./kg	20/9
T's Approx. Height/Inches	19



Nominal Diameter/Inches	10 x 10 x 12	12 x 12 x 16
Y's Catalog Number	5630100	5630500
Y's Shipping Weight lbs./kg	19/9	20/9
Y's Approx. Height/Inches	12.75	23.75

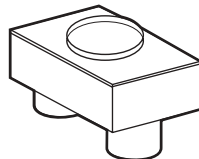


Ductwork and Accessories

Accessory for ClassMate Applications

Dual Exhaust Adaptor

This Type 304 stainless steel adaptor allows two Protector ClassMate Hoods mounted back-to-back to be exhausted from a single 12" nominal diameter duct.



Nominal Diameter/Inches	8 x 8 x 12
Catalog Number	6987000
Shipping Weight lbs./kg	20/9
Approx. Height/inches	19"

Accessory for Perchloric Acid Applications

Wash Rings

Wash rings are suitable for use in perchloric acid duct systems. Each features a wide angle conical spray nozzle and wash water connector nipple fabricated into a PVC coupling for use with 10" or 12" nominal duct.



Nominal Diameter/Inches	10	12
Catalog Number	4746000	4746100
Shipping Weight lbs./kg	5/2	6/3

Accessories for Particulates, Organic Vapors and Odor Control Applications

HEPA Filter Packs

High Efficiency Particulate Air Filter for non-radioactive particulate applications. Rated for 1000 CFM airflow with initial 1.0" static pressure drop. Replaceable HEPA filter media removes 99.97% of all particles 0.3 micron or greater. Furnished with clamping frame and duct connections. Unit measures 28" x 28" x 25" high. Not suitable for outside mounting.



Nominal Diameter/Inches		8	10	12
HEPA Filter	Catalog Number	2240000	2240100	2244200
	Shipping Weight lbs./kg	100/45	100/45	100/45
Charcoal Filter	Catalog Number	2243000	2243100	2244100
	Shipping Weight lbs./kg	100/45	100/45	100/45

Carbon Filter Packs

Activated Carbon Filter for non-radioactive organic vapors and odor control. Rated for 1000 CFM airflow with 0.2" static pressure drop. Unit measures 28" x 28" x 25" high. Not suitable for outside mounting.

Backdraft Dampers

Designed for use in buildings under negative pressure to keep outside air from entering the lab through the hood ventilation system. Damper is weighted to stay in down/resting position when the hood is not in use, and rises from the airflow exhausting when the blower is on. Mounts vertically on blower outlet. Made of Type I, unplasticized, schedule 40 PVC duct.

Nominal Diameter/Inches	8	10	12
Catalog Number	S304508	S304510	S304512
Shipping Weight lbs./kg	15/7	18/8	20/9



Ductwork and Accessories

Sizes and Pressure Losses in Thermoplastic Duct

When your selection is not categorized in the Blower Selection Guides, the chart to the right may be used. The chart provides static pressure losses for 10' duct lengths of various diameters over a range of airflows in CFM for use in sizing hood/blower combinations.

Nominal Diameter/Inches	6	8	10	12	16
Actual OD/inches	6.625	8.625	10.750	12.750	16.000
Actual ID/inches	6.250	8.250	10.375	12.375	15.625
Catalog Number	4708600	4718900	7027200	5602000	5605000
Shipping Weight lbs./kg	25/11	35/16	50/23	65/29	80/86
Airflow/CFM	Static Pressure Loss/Inches H ₂ O for Each 10 ft. of Duct Length				
250	.039	.011	.003	.001	—
500	.147	.037	.013	.005	.001
750	.321	.079	.026	.011	.003
1000	.557	.140	.043	.018	.005
1250	.855	.210	.066	.027	.008
1500	—	.300	.095	.039	.012
1750	—	.380	.130	.053	.016
2000	—	.485	.155	.067	.020
2500	—	—	.245	.109	.031
3000	—	—	—	.145	.042
4000	—	—	—	.240	.074
5000	—	—	—	—	.120



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