BLOWERS
and Accessories for Laboratory Ventilation Systems
Protecting your laboratory environment
LABCONCO

Completing Your Fume Removal System

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 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 indus-trial 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, 816-333-8811** or **labconco@labconco.com.**

Coated Steel and Fiberglass Blower Selection Guide

					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′**
4′ Protector® Laboratory Hood*	100%	100	725	12	7068800	7181000	7068800	7181000	7068800	7181000	7068800	7181000
4′ Protector® XStream® Hood	100%	60	425	12	7068000	7180000	7068000	7180000	7068000	7180000	7068000	7180000
4′ Protector® Laboratory Hood*	60%	100	450	12	7068000	7180000	7068000	7180000	7068000	7180000	7068000	7180000
4′ Protector® XStream® Hood	60%	60	265	12	7068000	7180000	7068000	7180000	7068000	7180000	7068000	7180000
5′ Protector® Laboratory Hood*	100%	100	955	12	7069000	7181200	7069000	7181200	7069000	7181200	7069000	7181200
5′ Protector® XStream® Hood	100%	60	560	12	7068800	7180800	7068800	7180800	7068800	7180800	7068800	7180800
5′ Protector® Laboratory Hood*	60%	100	595	12	7068800	7180800	7068800	7180800	7068800	7180800	7068800	7180800
5′ Protector® XStream® Hood	60%	60	350	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*

					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′**
6′ Protector® Laboratory Hood*	100%	100	1180	12	7069000	7181400	7069200	7181400	7069200	7181400	7069200	7181400
6′ Protector® XStream® Hood	100%	60	690	12	7068800	7181000	7068800	7181000	7068800	7181000	7068800	7181000
6′ Protector® Laboratory Hood*	60%	100	735	12	7068800	7181000	7068800	7181000	7068800	7181000	7068800	7181000
6′ Protector® XStream® Hood	60%	60	430	12	7068800	7180800	7068800	7180800	7068800	7180800	7068800	7180800
8′ Protector® Laboratory Hood*	100%	100	1640	12	7069200	7181600	7069400	7181600	7069400	7181600	7069400	7181600
8′ Protector® XStream® Hood	100%	60	960	12	7068800	7181200	7069000	7181200	7069000	7181200	7069000	7181200
8′ Protector® Laboratory Hood*	60%	100	1025	12	7069000	7181200	7069000	7181200	7069000	7181200	7069000	7181200
8′ Protector® XStream® Hood	60%	60	600	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*

Contact Labconco for blower sizing for 3′ and 7′ Protector® XL™ Laboratory Hoods.

**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, 816-333-8811** or **labconco@labconco.com.**

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
4′ Protector® ClassMate® Hood	60%	100	495	12	7068800	7180800	7068800	7180800	7068800	7180800	7068800	7180800
5′ Protector® ClassMate® Hood	60%	100	625	12	7068800	7181000	7068800	7181000	7068800	7181000	7068800	7181000
6′ Protector® ClassMate® Hood	60%	100	775	12	7069000	7181200	7069000	7181200	7069000	7181200	7069000	7181200
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	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 Labconco at 800-821-5525 or 816-333-8811 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.

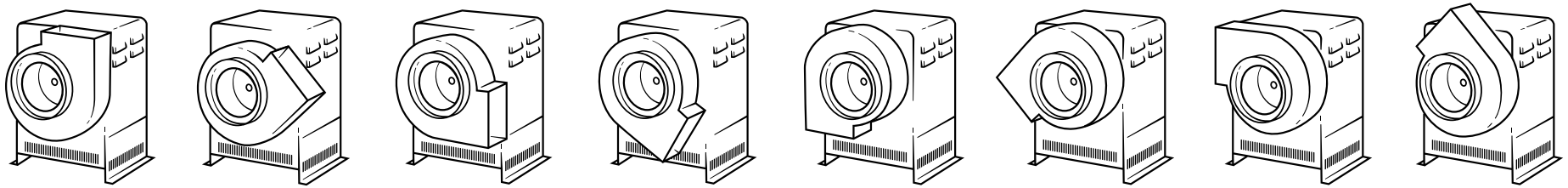
Labconco's Coated Steel Blowers have been specifically designed to meet the demanding day-to-day ventilation requirements for a wide range of hood choices. They are offered in a broad spectrum of capacities from 300 to 2150 CFM at static pressures up to 1.50" H_20. Coated Steel Blowers are recommended 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. When properly installed to ductwork, levels range from 50 to 70 dba. See page 12.
- Variable exhaust orientation adjusts to eight outlet positions for installation flexibility (vertical discharge is recommended).

Variable Exhaust Orientation



Coated Steel Blowers

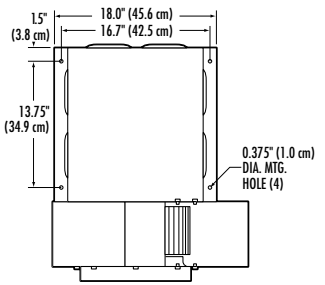
SPECIFICATIONS/PERFORMANCE DATA

	Catalog Numbers		Motor Data			CFM & RPM Ranges at Static Pressure — inches H_2O											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-	92/42
		7068100	1/6		3.15	500 @ 650	540 @ 800	410 @ 800									807	100/45
	7068200		1/4	115V/60 Hz/1Ø	4.4		540 @ 800	410 @ 800	350 @ 870	390 @ 970	430 @ 1060						752-	92/42
		7068300	1/4		4.5		720 @ 950	760 @ 1050	710 @ 1060	620 @ 1060							1067	100/45
	7068400		1/3	115V/60 Hz/1Ø	6.1			760 @ 1050	710 @ 1060	620 @ 1060	430 @ 1060	460 @ 1150	500 @ 1220				929-	86/39
		7068500	1/3		6.4			850 @ 1130	825 @ 1160	790 @ 1190	770 @ 1220	740 @ 1260	640 @ 1260				1260	94/43
	7068600		1/2	115V/60 Hz/1Ø	8.4				825 @ 1160	790 @ 1190	770 @ 1220	740 @ 1260	640 @ 1260	530 @ 1290	555 @ 1360		1073-	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	96/44
	7068800		1/3	115V/60 Hz/1Ø	6.1	540 @ 380	450 @ 470	550 @ 569									373-	90/41
		7068900	1/3		6.4	1000 @ 510	900 @ 570										569	90/41
12" Inlet	7069000		1/2	115V/60 Hz/1Ø	8.4		900 @ 570	550 @ 575	640 @660	710 @ 730							532-	96/44
		7069100	1/2	115/230V/60 Hz/1Ø	9.0/4.5		1380 @ 730	1305 @ 750	1100 @ 750	850 @ 750							753	104/47
	7069200		3/4	115/230V/60 Hz/1Ø	11.6/5.8			1305 @ 750	1100 @ 750	850 @ 750	780 @ 805	830 @ 870					667-	96/44
		7069300	3/4		11.4/5.7			1700 @ 946	1680 @ 946	1550 @ 946	1350 @ 920	1200 @ 930					946	100/47
	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-	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	108/49
	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-	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	122/55

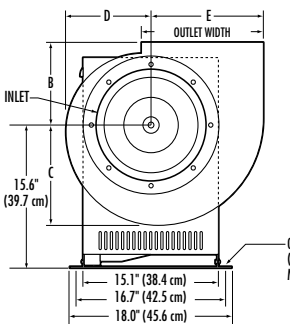
NOTE: *CFM @ RPM entries are recommended minimum and maximum operating values for either standard or explosion-proof models.*

Dimension	Models 7068000-7068700	Models 7068800-7069700
A	7.2" (18.2 cm)	8.6" (21.7 cm)
B	7.0" (17.8 cm)	9.0" (22.9 cm)
C	8.1" (20.7 cm)	10.5" (26.7 cm)
D	6.8" (17.3 cm)	9.0" (22.9 cm)
E	9.25" (23.5 cm)	12.5" (31.8 cm)
Inlet	10.9" (27.6 cm) ID	12.25" (31.1 cm) OD
Outlet	5.5" (14.0 cm) D x 10.0" (25.4 cm) W	7.0" (17.8 cm) D x 13.5" (34.3 cm) W
Wheel	9.2" (23.3 cm) Dia. x 4.25" (10.8 cm) W	12.2" (31.0 cm) Dia. x 5.25" (13.3 cm) W

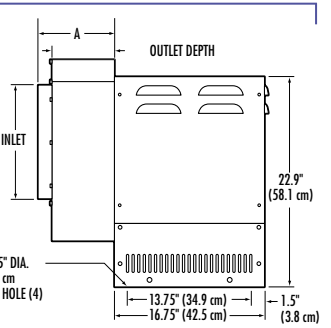
Coated Steel Blower Dimensions



TOP



FRONT



SIDE

Fiberglass Blowers

Fiberglass Blowers provide superior corrosion resistance.

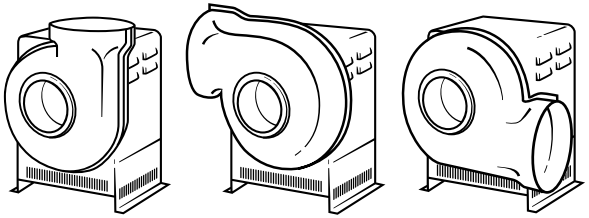
Labconco's Fiberglass Blowers are ideal for fume hood exhaust systems in moderate to highly corrosive conditions. They are offered in a broad range of capacities from 250 to 3500 CFM at static pressures up to 4.0". Fiberglass Blowers are not recommended for use with perchloric acid. Please refer to PVC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

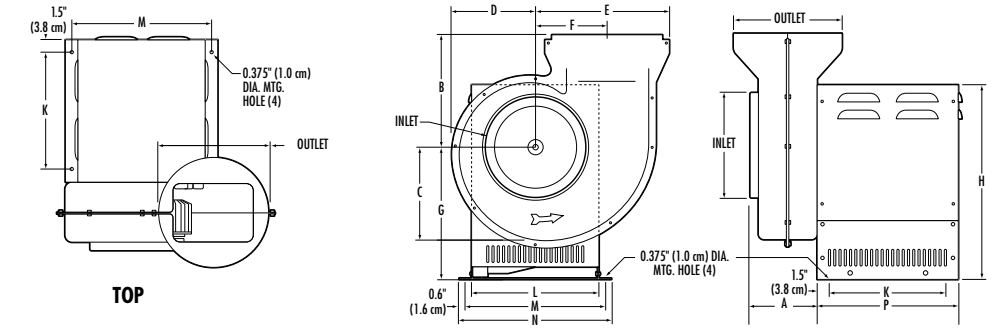
- Flow-through vent holes and louvers allow air circulation that cools the motor, thus prolonging motor life.
- Self-adjusting gravity belt tightener insures consistent performance because belt is held taut by weight of motor. Motor mount keeps the motor in place should the belt ever fail.
- Sound decibel levels for Fiberglass Blowers with 10" and 12" diameter inlets generally range between 64 and 88 dba, depending on blower size. When properly installed to ductwork, levels range from 50 to 70 dba. See page 12.
- 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	7.1" (18.1 cm)	8.0" (20.3 cm)	9.0" (23.0 cm)
B	12.7" (32.2 cm)	13.2" (33.5 cm)	15.75" (40.0 cm)
C	10.5" (26.7 cm)	12.0" (30.5 cm)	15.5" (39.4 cm)
D	8.75" (22.2 cm)	10.0" (25.4 cm)	12.8" (32.5 cm)
E	13.9" (35.3 cm)	15.9" (40.3 cm)	20.8" (52.9 cm)
F	7.5" (19.1 cm)	8.5" (21.6 cm)	11.7" (29.7 cm)
G	15.6" (39.7 cm)	15.6" (39.7 cm)	21.4" (54.3 cm)
H	22.9" (58.1 cm)	22.9" (58.1 cm)	29.9" (75.9 cm)
K	13.75" (34.9 cm)	13.75" (34.9 cm)	18.9" (45.7 cm)
L	15.1" (38.4 cm)	15.1" (38.4 cm)	17.6" (44.8 cm)
M	16.7" (42.5 cm)	16.7" (42.5 cm)	19.2" (48.8 cm)
N	18.0" (45.6 cm)	18.0" (108.0 cm)	20.5" (52.0 cm)
P	16.75" (42.6 cm)	16.75" (42.6 cm)	21.0" (53.3 cm)
INLET	10.4" (26.4 cm) OD	12.4" (108.2 cm) OD	15.6" (39.7 cm) OD
OUTLET	10.75" (27.3 cm) ID	12.75" (32.4 cm) ID	16.0" (40.6 cm) ID
WHEEL	9.9" (25.2 cm) Dia. x 3.3" (8.4 cm) W	11.8" (30.0 cm) Dia. x 4.25" (10.8 cm) W	14.6" (37.0 cm) Dia. x 4.9" 12.4 cm) W

Fiberglass Blower Dimensions



Fiberglass Blowers

SPECIFICATIONS/PERFORMANCE DATA

	Catalog Numbers		Motor Data			CFM & RPM Ranges at Static Pressure — inches H_2O										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	100/45
	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	100/45
	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	94/43
	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	96/44
12" Inlet	7180800		1/6	115V/60 Hz/1Ø	4.0	370 @ 373	450 @ 530									373-	96/44
		7180900	1/6		3.15	720 @ 569	550 @ 569									569	104/47
	7181000		1/4	115V/60 Hz/1Ø	4.4	720 @ 569	550 @ 569	550 @ 670								532-	96/44
		7181100	1/4		5.4	960 @ 720	900 @ 753	760 @ 753								753	104/47
	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	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	1639	122/55

	Catalog Numbers		Motor Data			CFM & RPM Ranges at Static Pressure — inches H_2O						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.

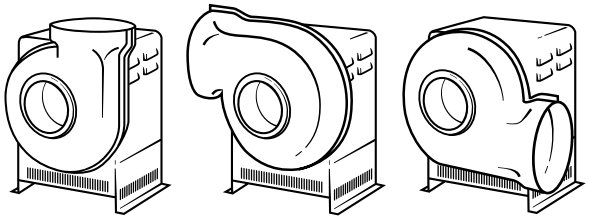
Labconco's PVC Blowers provide optimum chemical resistance and are made specifically to handle extremely corrosive atmospheres produced by high order oxidizers such as perchloric acid. They are offered with capacities from 390 to 1900 CFM at static pressures up to 1.50". These blowers have a drain connection 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.

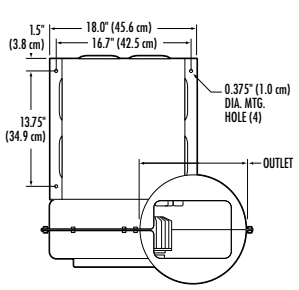
- Flow-through vent holes and louvers allow air circulation that cools the motor, thus prolonging motor life.
- Self-adjusting gravity belt tightener insures consistent performance because belt is held taut by weight of motor. Motor mount keeps the motor in place should the belt ever fail.
- Convenient access to impeller assembly provides for easy maintenance.
- Sound decibel levels generally range between 64 and 88 dba depending on blower size. When properly installed to ductwork, levels range from 50 to 70 dba. See page 12.
- Variable exhaust orientation adjusts to eight outlet positions for installation flexibility (vertical discharge is recommended).

Variable Exhaust Orientation

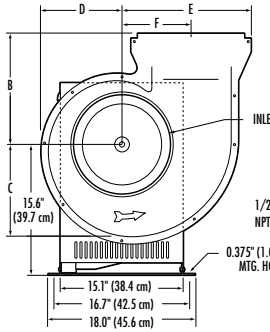


Dimension	Model 7183000	Models 7183100-7183200
A	7.1" (18.1 cm)	8.0" (20.3 cm)
B	12.7" (32.2 cm)	13.2" (33.5 cm)
C	10.5" (26.7 cm)	12.0" (30.5 cm)
D	8.75" (22.2 cm)	10.0" (25.4 cm)
E	13.9" (35.3 cm)	15.9" (40.3 cm)
F	7.50" (19.1 cm)	8.50" (21.6 cm)
INLET	10.4" (26.4 cm) OD	12.4" (31.4 cm) OD
OUTLET	10.75" (27.3 cm) ID	12.75" (32.4 cm) ID
WHEEL	9.9" (25.2 cm) Dia. x 3.3" (8.4 cm) W	11.8" (30.0 cm) Dia. x 4.25" (10.8 cm) W

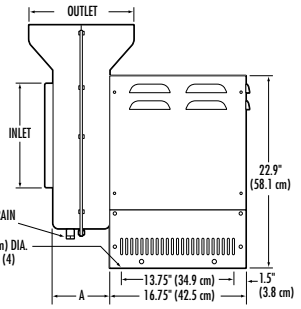
PVC Blower Dimensions



TOP



FRONT



SIDE

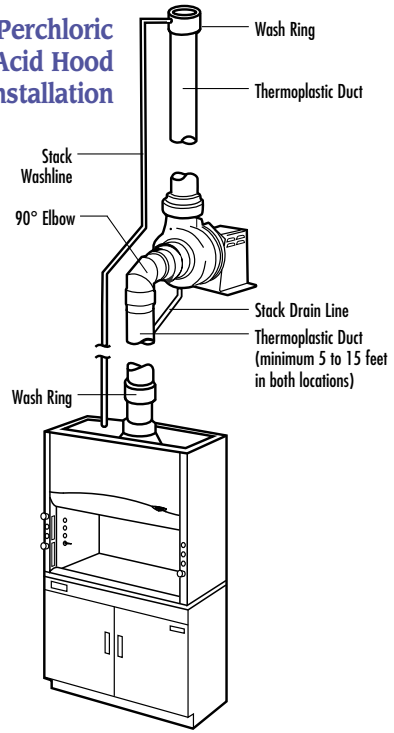
PVC Blowers

SPECIFICATIONS/PERFORMANCE DATA

Inlet/ Outlet	Catalog Numbers	Motor Data			CFM & RPM Ranges at Static Pressue — inches H_2O										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	96/44
	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

Remote Blowers

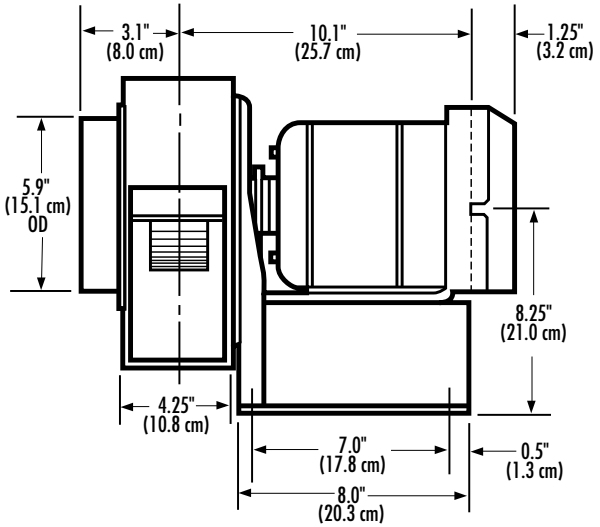
Remote Blowers are sized for smaller enclosures.

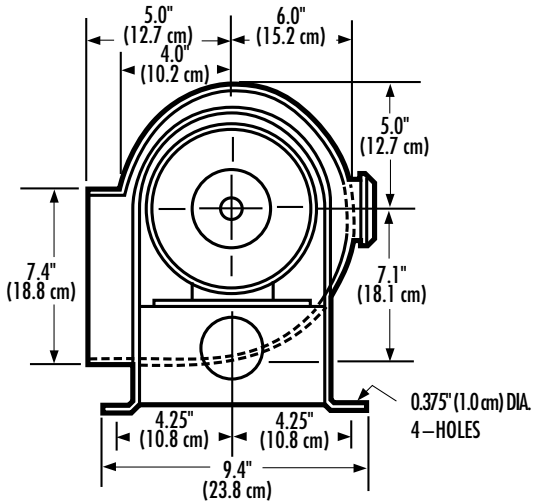
These economical Remote Blowers provide the lower exhaust capacities and static pressure losses needed for small enclosures. Protector® XVS™ Ventilation Stations, Protector® Demonstration Hoods and Protector® Work Stations that are ducted to the outside are examples of enclosures that are ideal for these blowers.

Remote Blower Features:

- Phenolic coating on impeller and housing is corrosion resistant.
- Explosion-proof model has non-sparking aluminum impeller and UL listed explosion-proof motor for maximum safety.
- Direct drive motor has totally enclosed fan cooled motor.

Catalog #	Electrical Requirements	Shipping Wt. lbs./kg
4863500	115 volts, 60 Hz, 4.4 amps	35/16
4863501*	115/230 volts, 50 Hz, 5.6/2.8 amps	35/16
7053501**	115 volts, 60 Hz 4.4 amps	40/18





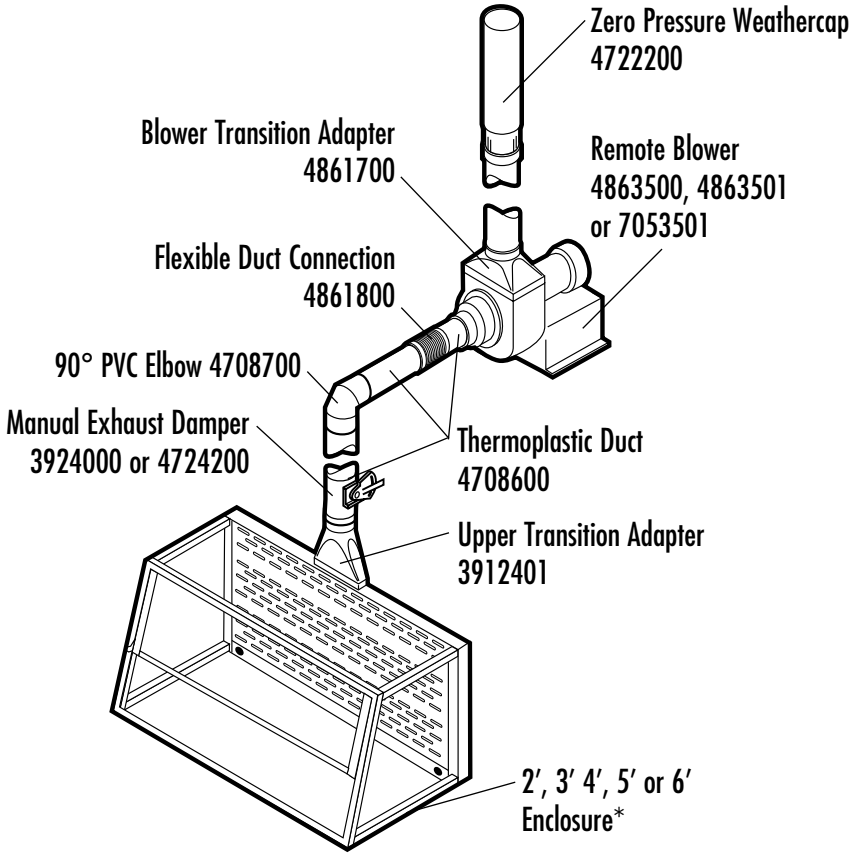
CFM @ Static Pressure–Inches of H_2O						
S.P.	0.0″	0.125″	0.25″	0.50″	0.75″	0.87″
CFM	595	560	515	420	300	167

** International electrical configuration.* ***Explosion-proof*

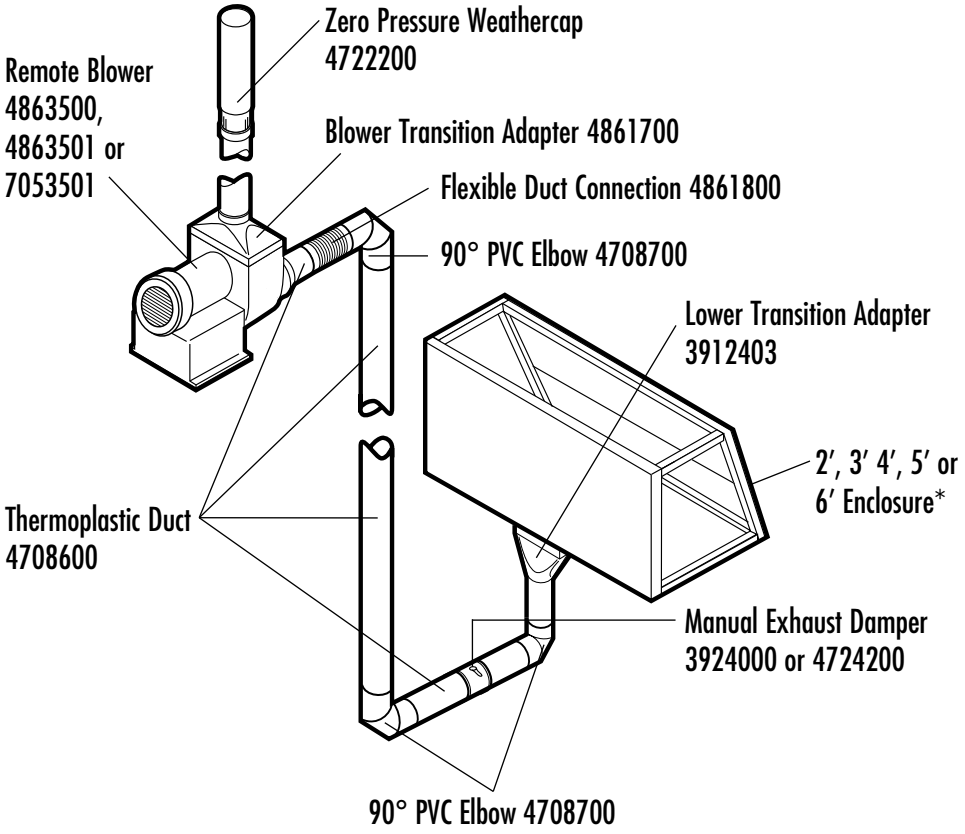
Remote Blowers

DUCTING OPTIONS

From Top



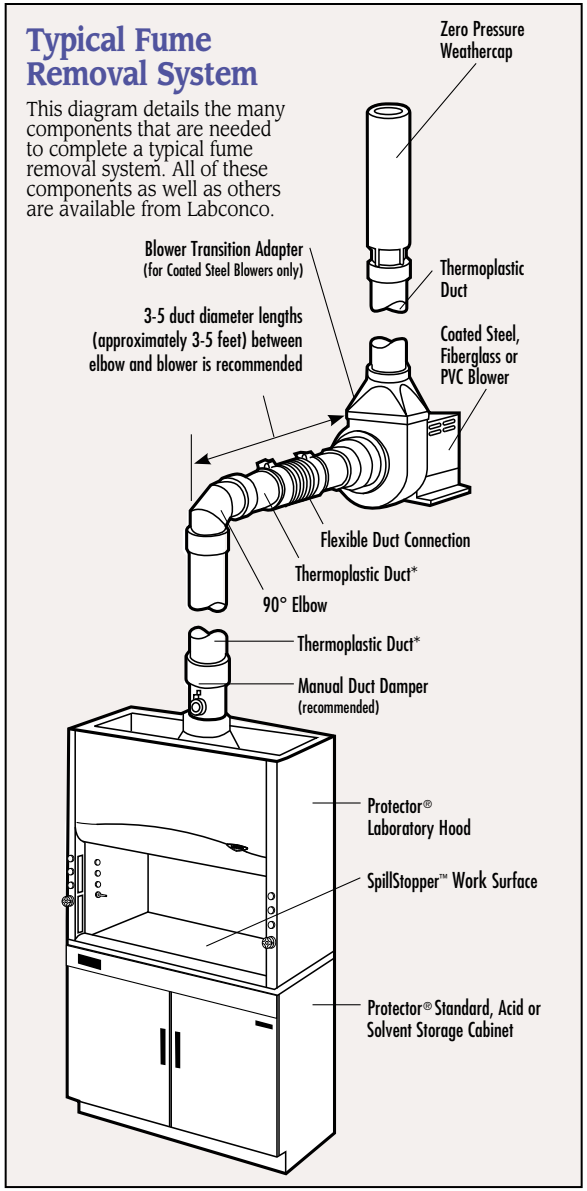
From Bottom



** Includes Protector® XVS™ Ventilation Stations, XPert® Balance Enclosures, Protector® Demonstration Hoods and Protector® Work Stations.*

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.



*Minimum of 5 to 15 feet of duct in both locations is recommended for noise reduction.

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 725 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.

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. Flame spread <10.†

Nominal Diameter/Inches	6	8	10	12	16
Catalog Number	4708600	4718900	7027200	5602000	5605000
Actual OD/inches	6.625	8.625	10.75	12.75	16.0
Actual ID/inches	6.25	8.25	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	10.75	12.75
Actual ID/inches	6.25-	8.25-	10.375	12.375
Shipping Weight lbs./kg	3/1	4/2	5/2	6/3

**Duct made of other materials may require adapters.
† ASTM E-84-09C, modified for round material.

Elbows

PVC elbows, both 45º and 90º, 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	17.3	20.375	24.2	29.0
	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.			

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 into the fume hood collar.

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 neoprene-impregnated polyester connection reduces vibration between the blower and PVC ductwork. Supplied with two clamps for easy installation. 12″ length.

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 Adapters

This epoxy-coated steel transition adapter fits all Labconco Coated Steel Blowers. This adapter 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 adapter 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

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	12 x 12 x 12
T's	Catalog Number	5630400	5630401
	Shipping Weight lbs./kg	20/9	20/9
	Approx. Height/Inches	19	19

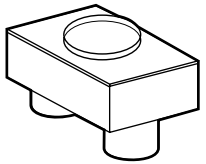
	Nominal Diameter/Inches	10 x 10 x 12	12 x 12 x 16
Y's	Catalog Number	5630100	5630500
	Shipping Weight lbs./kg	19/9	20/9
	Approx. Height/Inches	12.75	23.75

	Nominal Diameter/Inches	12 x 12 x 12
Y's	Catalog Number	5630101
	Shipping Weight lbs./kg	20/9
	Approx. Height/Inches	22.75

Accessory for ClassMate® Applications

Dual Exhaust Adapter

The Type 304 stainless steel common exhaust adapter allows two Protector ClassMate hoods mounted back-to-back to be exhausted from a single 12″ (12.75″ OD pipe) nominal diameter duct. It extends above the ClassMate Hood by 12.6″.



Nominal Diameter/Inches	12 x 12 x 12
Catalog Number	9595100
Shipping Weight lbs./kg	20/9
Approx. Height/inches	21.0″

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 standard PVC connector nipple with 3/4″ male threads, fabricated into a PVC female 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. Each filter contains 45 lbs. (20 kg) of activated carbon. 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
Length/Inches	12	18	18
Shipping Weight lbs./kg	15/7	18/8	20/9

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_2O for Each 10 ft. of Duct Length				
250	0.039	0.011	0.003	0.001	—
500	0.147	0.037	0.013	0.005	0.001
750	0.321	0.079	0.026	0.011	0.003
1000	0.557	0.140	0.043	0.018	0.005
1250	0.855	0.210	0.066	0.027	0.008
1500	—	0.300	0.095	0.039	0.012
1750	—	0.380	0.130	0.053	0.016
2000	—	0.485	0.155	0.067	0.020
2500	—	—	0.245	0.109	0.031
3000	—	—	—	0.145	0.042
4000	—	—	—	0.240	0.074
5000	—	—	—	—	0.120

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