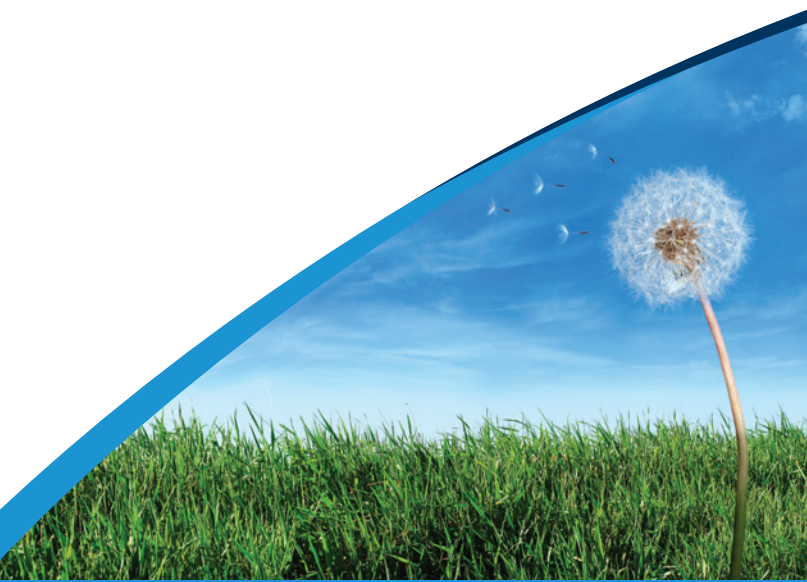




# Premium *Choice* Series Ventilation Fans





# Premium Choice Bathroom Fans

## For YOUR Family & YOUR Home

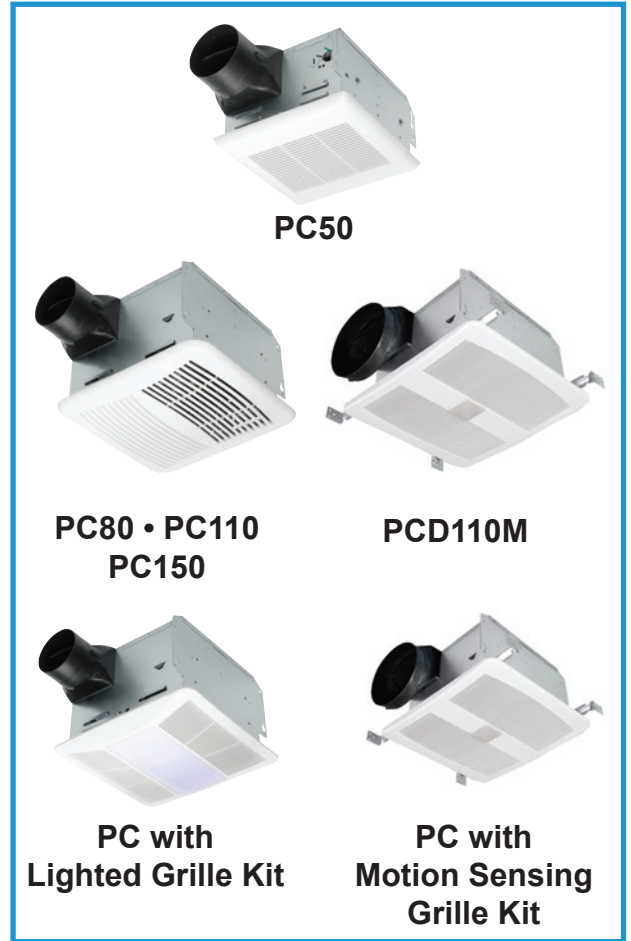
Today's homes are built to be tighter and more energy efficient than ever before. Builders and homeowners use vapor barriers, caulking, and better sealed doors and windows to reduce energy loss caused by air infiltration. Tighter homes also mean that pollutants are trapped indoors. Poor indoor air quality, caused by trapped pollutants, is not only uncomfortable to the occupants, but it is a health hazard. Volatile Organic Compounds (VOCs) like formaldehyde, as well as cigarette smoke, radon, household cleaners, and perfumes can threaten your family's well being.

In addition to pollutants, moisture from showers, baths and spas create foggy mirrors, steamy windows and damp walls. Moisture that is trapped in your home can lead to structural damage. Signs of structural damage include heavy condensation on windows, water damage on window sills and molds forming in cold corners of the home.

## The Fan of YOUR Choosing

To protect the two most valuable investments of your life, your home and your family, improving indoor air quality is key. S&P PC fans remove air quickly, quietly and efficiently, extracting pollutants and moisture before they wreak havoc on your home.

S&P's Premium Choice Series gives you maximum flexibility to create the bath ventilation system that you need. Our Premium Choice bath fans come with standard grilles and you have the option of a lighted grille or motion sensing grille. You pick the size you need, lighted or unlighted and the controls you need. The choice is yours!



# Continuous Ventilation/Whole-House Ventilation

## ASHRAE 62.2 Residential Ventilation Standard

To ventilate today's tighter homes many codes call for relatively constant and controlled lower levels of ventilation. S&P PC fans are designed to meet or exceed ASHRAE 62.2 requirements with nearly silent continuous ventilation. Some of the programs that reference ASHRAE 62.2 Standards are LEED, ENERGY STAR® for Homes, and California Title 24.

Required ventilation is based on the size of the building and number of expect occupants. There are 2 ways to determine the CFM requirements:

1. Calculation:

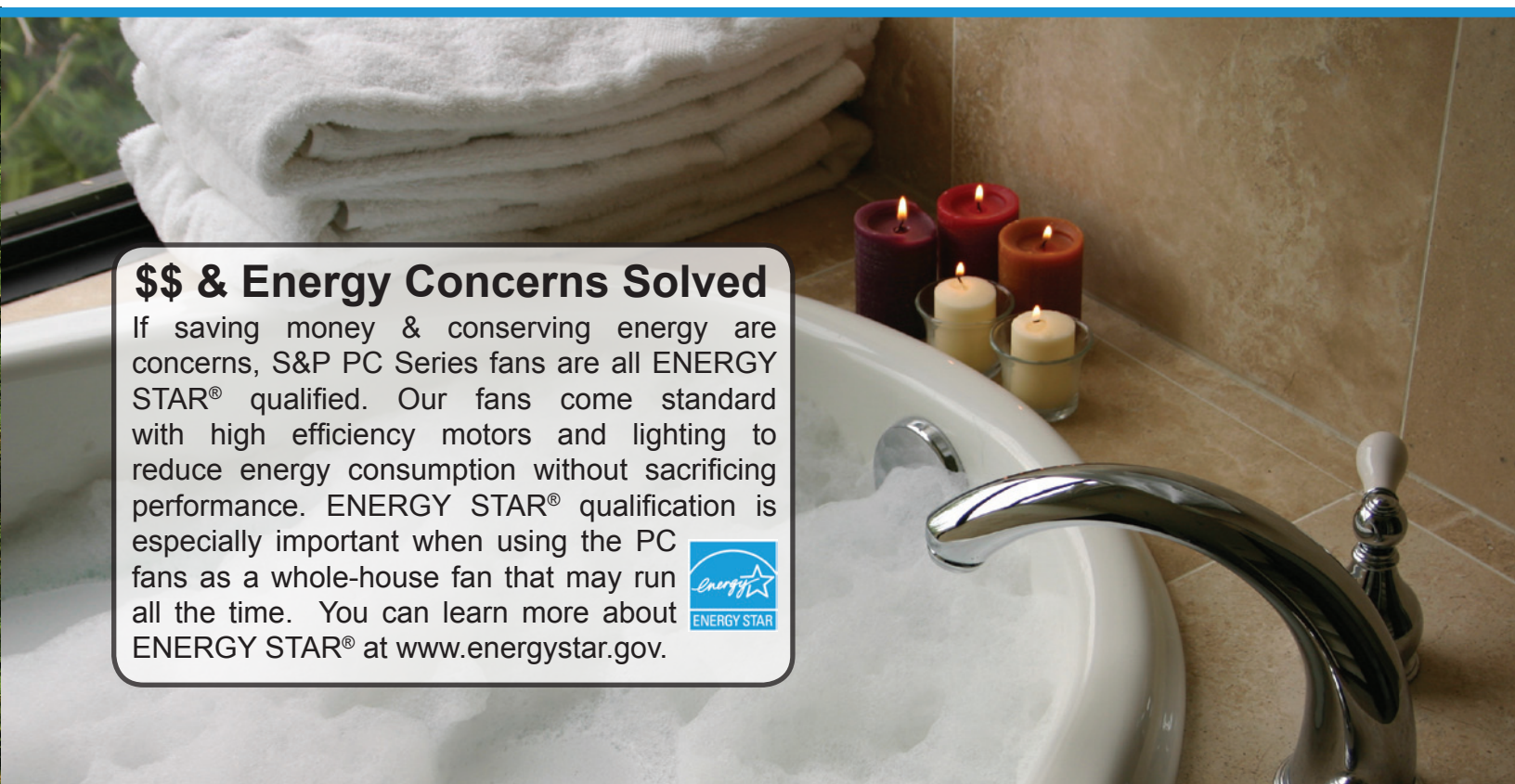
- Required Rate = **Floor Area / 100 + (Number of Bedrooms + 1) x 7.5**
- If the number of occupants exceeds the assumed 2 persons for the first bedroom and 1 for each additional room, increase the ventilation rate as follows:  
**Number of additional occupants x 7.5 CFM**

2. Use the Whole Building Ventilation Requirements CFM chart from the ASHRAE 62.2 Standard:

Floor Area (ft <sup>2</sup> )	Bedrooms				
	0-1	2-3	4-5	6-7	>7
<1500	30	45	60	75	90
1501-3000	45	60	75	90	105
3001-4500	60	75	90	105	120
4501-6000	75	90	105	120	135
6001-7500	90	105	120	135	150
>7500	105	120	135	150	165

### \$\$ & Energy Concerns Solved

If saving money & conserving energy are concerns, S&P PC Series fans are all ENERGY STAR® qualified. Our fans come standard with high efficiency motors and lighting to reduce energy consumption without sacrificing performance. ENERGY STAR® qualification is especially important when using the PC fans as a whole-house fan that may run all the time. You can learn more about ENERGY STAR® at [www.energystar.gov](http://www.energystar.gov).





# PC Series - ASHRAE 62.2 Standard Fan Sizing

Use the chart below to determine the best PC fan to meet the ASHRAE 62.2 Whole Building Requirement.

Floor Area (sq. ft.)	Number of Bedrooms				
	0-1	2-3	4-5	6-7	>7
	CFM Requirements/Recommended PC*				
<1500	30	45	60	75	90
	PC50	PC50	PC80	PC80	PC110
	PCD110M				
1501-3000	45	60	75	90	105
	PC50	PC80	PC80	PC110	PC110
	PCD110M				
3001-4500	60	75	90	105	120
	PC80	PC80	PC110	PC110	PC150
	PCD110M				
4501-6000	75	90	105	120	135
	PC80	PC110	PC110	PC150	PC150
	PCD110M				
6001-7500	90	105	120	135	150
	PC110	PC110	PC150	PC150	PC150
	PCD110M				
>7500	105	120	135	150	165
	PC110	PC150	PC150	PC150	PC150
	PCD110M				

\*PC recommended based on performance at .1 in. WG.

## Additional Fan Sizing Considerations

For the most effective bathroom ventilation, the Home Ventilating Institute (HVI) recommends eight air changes per hour. Fans should be installed as close to the shower as possible and, if marked as suitable for this location, directly over it to capture the moisture as directly as possible. Your fan should have a control or sensor that will allow the fan to run at least 20 to 30 minutes after each shower.



An enclosed toilet should have its own exhaust fan. Bathroom doors need to have at least 3/4" clearance to the finished floor to allow entry of makeup air. For steam showers, we recommend a separate fan in the steam room that you can turn on after use. Bathroom (continuous ventilation) should be available on a continuous basis at a minimum of 20 CFM in lieu of an intermittent 50 CFM fan.

# Bath Fan Sizing - Spot Ventilation

PC fans not only meet whole-house ventilation needs but also the spot or local ventilation needs that are typically associated with fans. Spot ventilation remove excess shower humidity or bathroom odors.

## Fan Sizing for Bathrooms Under 100 SQ. FT.

The following recommendations follow the Home Ventilating Institute (HVI) guidelines:

### FAN SIZING FOR BATHROOMS UNDER 100 Sq. Ft.

The standard rule for bathrooms 100 square feet or smaller is one CFM per square foot of the bathroom. To find the square footage multiply the length of the bathroom by the width.

Example:

10' x 10' bathroom = 100 square feet.

**You will need a 100 CFM fan for this bathroom.**



## Fan Sizing for Bathrooms Over 100 SQ. FT.

The following recommendations follow the Home Ventilating Institute (HVI) guidelines:

Ventilation for baths over 100 square feet is calculated based on the fixtures in the bathroom. Allow 50 CFM for each standard toilet, shower, steam shower or tub. Whirlpool, garden and hot tubs are calculated at 100 CFM each. Add the CFM for all fixtures and you'll have the total CFM required for the bathroom.

**Step 1:** Calculate Bathroom Size:

20' x 10' Bathroom = 200 square feet

**Step 2:** 1 Toilet + 1 Shower + 1 Tub = 150 CFM

**Result:** You will need a 150 CFM fan for this bathroom.



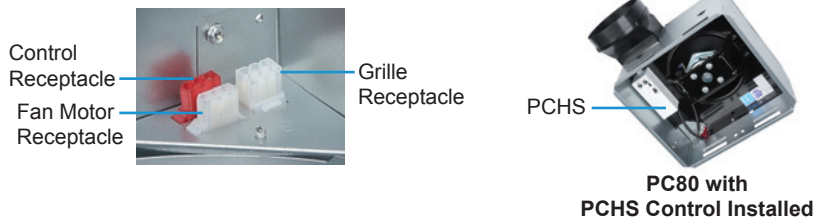
# PC - Premium CHOICE Series

## Features & Construction

- Extremely quiet operation <0.3 to 1.1 Sones
- Totally enclosed condenser motor for long life - rated for 30,000 hours continuous on
- Built-in backdraft damper
- Robust steel housing
- Attractive, sturdy grille
- Options: Lighted or Motion Sensing Grilles, Speed Control, Humidity Sensor, Radiation Dampers
- ETL Listed, ENERGY STAR® qualified and HVI Certified
- 5 year warranty



### Plug-&-Play Flexibility



## Performance

Model	CFM	Static Pressure (in W.G.)	Energy Efficiency (CFM/Watts)*	Watts	Power (V/Hz)	Sones	Amps
PC50	50/31	0.1/0.25	3.1	16	120/60	0.6	.13
PC80**	80/60	0.1/0.25	3.0	32	120/60	0.3	.27
PC110**	110/93	0.1/0.25	3.2	36	120/60	0.6	.30
PC150**	150/110	0.1/0.25	3.8	41	120/60	1.1	.34

\* Energy Star qualified data based on tested air flow and power consumption.

\*\*Air Performance test performed with 4" duct.



## Dimensions

Model	Duct Dia.	Grille Size (Sq. in inches)	Cabinet Size (in Inches)			Unit Wgt. (lbs)
			W	D	H	
PC50	4"	10-1/4 x 10-1/2	9	9	5-3/4	7
PC80	6"	13 x 14	11-3/8	10-1/2	7-5/8	11
PC110	6"	13 x 14	11-3/8	10-1/2	7-5/8	11
PC150	6"	13 x 14	11-3/8	10-1/2	7-5/8	13

# Premium CHOICE with DC Motor

## Features & Construction

- Extremely quiet operation 0.5 Sones
- Brushless DC Motor for long life - rated for 60,000 hours continuous on
- Built-in motion sensor
- LED Night Light
- High/Low speed delay timer
- Built-in backdraft damper
- Robust steel housing
- Attractive, sturdy grille
- ETL Listed
- ENERGY STAR® qualified and HVI Certified
- 6 year warranty on DC Motor, 5 year warranty on balance of unit



## You CHOOSE Your Airflow!

The built-in **Toggle Switches** and duct connector options allow you to set the PCD110M to the needed airflow:

**Integrated Controls**

Switch position								
Airflow (CFM)	80	90	110	120	90	110	120	140
Duct diameter (inches)	4"	4"	4"	4"	6"	6"	6"	6"

1 & 2: Airflow • 3: Duct size  
Factory setting is 110 CFM with 6" duct



		PCM110D			
CFM @ 0.1" SP	4" Duct	80	90	110	120
	6" Duct	90	110	120	140
Sones	4" Duct	0.7	0.7	1.0	1.2
	6" Duct	0.3	0.5	0.8	1.1
Watts	4" Duct	5.5	7	11.5	13
	6" Duct	5.5	10	11.5	14.5
Energy Efficiency (CFM/Watt)	4" Duct	14.5	12.9	9.6	9.2
	6" Duct	16.4	11	10.4	9.7
Amps		.16	.18	.22	.23
ENERGY STAR Qualified		Yes			
Duct Connector Diameter (in)		4" or 6"			
Grille Size (in)		13" x 14"			
Dimensions (w x d x h) (in)		11-3/8" x 10-1/2" x 7-5/8"			



# Premium CHOICE Series Options Overview

The simplicity of S&P's Premium CHOICE Series comes in the options. While other premium bath fans come as lighted fans or motion sensing fans; with a speed control or humidity sensor built in, our Premium Choice bath fans give you the flexibility to choose your grille and control separately. Our fans even allow you to change your mind after you install them!

Use the chart below to determine the options available with each Premium Choice Fan:

Option	Premium Choice Fan			
	PC50	PC80	PC110	PC150
<b>With Standard Grille</b>				
Intermittent High Speed	✓	✓	✓	✓
Continuous 62.2 Speed Only	✓	✓	✓	✓
Continuous 62.2 Speed, Intermittent High Speed	✓	✓	✓	✓
Intermittent Reduced Speed	✓	✓	✓	✓
Humidity Sensing Only	✓	✓	✓	✓
Humidity Sensing and Intermittent High Speed	✓	✓	✓	✓
Contractor Pack		✓	✓	
<b>With Optional Lighted Grille Kit</b>				
Intermittent High Speed		✓	✓	✓
Continuous 62.2 Speed Only		✓	✓	✓
Continuous 62.2 Speed, Intermittent High Speed		✓	✓	✓
Intermittent Reduced Speed		✓	✓	✓
Humidity Sensing Only		✓	✓	✓
Humidity Sensing and Intermittent High Speed		✓	✓	✓
<b>With Optional Motion Sensing Grille Kit</b>				
Intermittent High Speed		✓	✓	✓
Continuous 62.2 Speed Only		✓	✓	✓
Continuous 62.2 Speed, Intermittent High Speed		✓	✓	✓
Intermittent Reduced Speed		✓	✓	✓
Humidity Sensing Only		✓	✓	✓
Humidity Sensing and Intermittent High Speed		✓	✓	✓



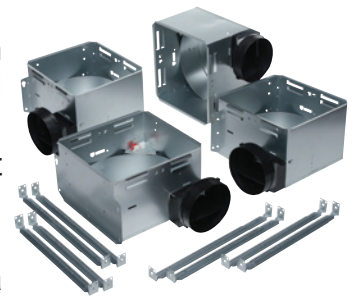
## Premium CHOICE Series Contractor Packs

### **Contractor Packs**

For simple installation, PC80 and PC110 are available as 4 packs with the fan housings ready for installation first, then after the drywall and painting are complete the motor and grilles are available to finish the job. The housing kit includes the housing and hanger bars, while the finish kit includes the motor plate, motor, wheel and grille.

Contractor packs can be ordered with the PCLK Lighted Kits to make a lighted fan pack or PCMK Motion Sensing Kits to make a motion sensing fan pack (order 4 grille packs with the Motor & Grille pack).

Pack Part #	Description
PCH	PC80 & PC110 Contractor Pack Housings (4 pk)
PC80F	PC80 Contractor Pack Motor and Grille (4 pack)
PC110F	PC110 Contractor Pack Motor and Grille (4 pk)



Housing Pack



Motor & Grille Pack

## PCMK - Premium CHOICE Series Motion Sensor Kits

### **Motion Sensing Grille Kits**

S&P offers Premium Choice Series Motion Sensing Kits so you can have worry free bathroom ventilation. This kit fits the PC80, 110 & 150. The motion sensing grille includes a motion sensor, a speed control and a LED night light.



## PCLK - Premium CHOICE Series Light Kits

### **Grille Light Kits**

S&P offers Premium Choice Series Light Kits so you can choose a fan with lights now or later. This kit fits the PC80, 110 & 150. The lighted grilles come standard with a 13 watt GU24 fluorescent bulb and a 4 watt night light.



## Premium CHOICE Series Controls

### ***Humidity Sensor (PCHS)***

Using a PC fan with S&P's humidity sensing control is a worry free solution to fighting excess humidity and possible mold problems. The sensor easily mounts inside the fan housing utilizing 2 pre-drilled holes and a standard receptacle. With the sensor at ceiling level it detects rapid increases in moisture where steam and humidity naturally rise, and automatically turns on the fan. The humidity sensor features an automatic shut off to save worry and money. The humidity sensor is the perfect solution to "fit & forget" the bath fan, especially in high traffic bathrooms, kids' bathrooms, or households on-the-go that must leave the house without properly venting humidity. S&P's PC fan with optional Humidity Sensor helps prevent cosmetic and possible mold issues associated with excess moisture.

#### **Features**

- Detects rapid rise in humidity
- Simple plug into receptacle in fan housing
- Auto-shut off timer
- Accessible sensitivity adjustment
- Humidity is sensed at the ceiling
- Can be installed with new fan or as an add-on later if needed

### ***Speed Control (PCSC)***

Using a PC fan with S&P's speed control is simple solution to for intermittent and continuous ventilation. The sensor easily mounts inside the fan housing utilizing 2 pre-drilled holes and a standard receptacle.

#### **Features**

- Simple plug into receptacle in fan housing
- Accessible sensitivity adjustment
- Can be installed with new fan or as an add-on later if needed
- Allows for adjustable continuous speed for ASHRAE 62.2
- High speed override



## Premium CHOICE Series Controls - ASHRAE 62.2



### **FT622 - ASHRAE 62.2 Bath Fan Ventilation Control**

The FT622 is designed to replace bathroom fan and light switches and provide both functions with one easy operation. By using a microprocessor to monitor and control operation, the FT622 delivers a precise amount of ventilation, and is a simple solution to meet ASHRAE 62.2 in conjunction with an S&P fan, specifically a TD-MIXVENT or PC Premium Choice Fan.

There are only two settings on the FT622: VENTILATION and DELAY. The VENTILATION setting allows the user to set the number of minutes per hour the fan should run. The DELAY setting allows the user to set the number of minutes the fan should run after the bathroom light has been turned off. The DELAY setting provides additional run time for the fan to complete the remaining necessary ventilation after use.

#### **Features**

- Programmable DELAY and VENTILATION settings
- Excess manual and/or delay operation is subtracted from the next hour's programmed ventilation time
- Works with ALL incandescent, CFL, fluorescent and LED lights up to 450 watts
- Earn LEED and ENERGY STAR points for enhanced exhaust ventilation



### **FT247 - Programmable Fan Timer**

S&P offers the FT247 with easy programming for your bathroom fan ventilation needs. Simply set what time you want the fan to turn on and off and what day or days you want the fan to run. S&P recommends using the FT247 with a TD-MIXVENT Fan or PC Premium Choice Fan.

#### **Features**

- Provides 7 ON and 7 OFF events per day
- LCD display
- Rechargeable battery back-up
- Push button activation
- **Note:** Do not use with fluorescent lamp ballasts

## Additional CHOICES

### **3-Switch Controls (PC3S)**

The PC3S allows you to control three (3) features of a PC fan with one switch. Designed for PC fans with Grille Option and Plug & Play Control.



### **Additional Accessory CHOICES**

4" duct collar: PCDC4

Metal Grille: PCMG

### **Radiation Damper (PCRD)**

- 3-hour rating ceiling radiation dampers
- UL Listed Link (165°F Standard)
- UL Approved flexible fire blanket
- Ceramic fiber with fiberglass cover
- Roll-formed frame 22 g. galvanized steel





# Also Available from S&P

## TD-SILENT Fans



### Meet ASHRAE 62.2 when noise is an Extreme Concern!

As the name suggests these fans are extremely quiet, low profile "Mixed-flow" fans. Manufactured in plastic material with an external connection box, the body is easily dismantled with a two speed controllable 115V 60Hz motor. Sound waves are directed through the perforated inner skin and absorbed by a layer of sound-absorbent insulation. Plus the TD-SILENT is fitted with rubber gaskets on the inlet and outlet to absorb vibrations.

### Air Performance

All models include a direct two speed motor connection.

Model	Duct Dia. Ins.	Nom. RPM	Volts	Max. Watts	Speed	CFM v Static Pressure (SP) Ins. WG							Max. SP	Max operating temp. (°F)	Wgt. (lbs)
						0"	0.125"	0.25"	0.375"	0.5"	0.75"	1.0"			
TD-100XS	4"	2000	120	21	LS	108	82	48	-	-	-	-	0.4	104	11.9
	4"	2500	120	35	HS	143	121	91	59	23	-	-	0.6	104	
	5"	2000	120	21	LS	147	110	63	-	-	-	-	0.4	104	
	5"	2500	120	36	HS	203	175	138	84	33	-	-	0.6	104	
TD-150S	6"	2200	120	55	LS	239	209	181	154	120	62	-	0.95	140	13.2
	6"	2700	120	65	HS	333	315	286	271	257	178	77	1.2	140	
TD-200S	8"	2000	120	115	LS	409	367	333	306	271	183	46	1.2	140	19.2
	8"	2200	120	122	HS	530	503	472	443	415	349	204	1.2	140	



The TD-SILENT Models 100XS and 150S are California Title 24 compliant and meet ASHRAE 62.2 when installed with a CVC and other TD models are compliant when installed with a 3 way switch and remotely mounted speed control.

## PV-100XPS - Clothes Dryer Boosting



### The easiest to install, most economical option!

If you have a dryer with long or complicated duct runs, S&P offers the perfect solution to increase dryer efficiency: the PV100x Dryer Booster Fan. The PV-100x offers a fully enclosed motor with **Class F insulation** which ensures a long, trouble free life; thus making it the right choice for enhancing the performance of your clothes dryer.

S&P's PV-100xps utilizes a compact pressure sensor and run timer enclosed within the junction box and mounted to the fan housing. The pressure sensor is also available as an accessory.



### Air Performance

Model No.	Nom. RPM	Volts	Max. Watts	CFM v Static Pressure (SP) Ins. WG									Max. SP	Duct Dia. Ins.
				0"	0.125"	0.25"	0.375"	0.5"	0.75"	1.0"	1.25"	1.5"		
PV-100x	2880	115	84	153	142	130	120	111	96	80	63	34	1.85	4"

Performance certified is for installation type D-Ducted inlet, Ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Speed (RPM or RPS) shown is nominal. Performance is based on actual speed of test.

S&P USA certifies that the PV range shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.



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