



# Premium *Choice* Series



## Ventilation Solutions

Advancing Ventilation®

## S&P is CHOICES

S&P is the world's leading producer of air movement products. S&P manufactures and supplies fans, dampers, louvers and recovery ventilators (ERVs & HRVs). These products are used in various industries including residential, commercial, industrial, and institutional buildings.

One of S&P's most popular line of fans is our Premium Choice (PC) Series. The PC series was first introduced in March of 2013. There was no shortage of fan options on the market, however S&P saw a need for scalable, customizable fans. No two fan applications are alike. At S&P we wanted to ensure the end user received a fan designed for their exact needs not a fan designed for some of their needs. So we designed the Premium Choice Series as the first scalable fans on the market.

S&P's Premium CHOICE Series gives you maximum flexibility to create the ventilation system that you need. The simplicity of S&P's PC fans is in the options. While other premium fans come as lighted fans or humidity sensing fans; with a speed control or humidity sensor built-in, our Premium CHOICE 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! Our Premium CHOICE fans come with standard grilles and you have the option of a lighted grille or motion sensing grille. You pick the fan model, the grille and the controls you need. The CHOICE is yours!

## Premium *Choice* Series



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# Ventilation & IAQ

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 also a health hazard. The EPA has stated that indoor air quality is often two to five times worse than outdoor air, and that indoor air pollution is among today's top five most significant risks to public health.

Everyday activities such as showering, cooking, doing laundry, even breathing are just a few ways that moisture is generated in your home (one gallon per person, everyday). 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 corners of the home.

Healthy indoor air quality (IAQ) is key to the health of the home and it's inhabitants. A combination of both local and whole house mechanical ventilation should be utilized to insure a healthy, comfortable home.

## Local Exhaust

Local exhaust, also known as intermittent or spot ventilation, is used in rooms or localized areas to remove odors, moisture and pollutants quickly. The most common area for spot ventilation is bath or powder rooms. Other areas such as laundry rooms, closets, bedrooms, kitchens, garages, and utility rooms also benefit from air changes using mechanical ventilation to maintain good indoor air quality.

## Whole House Ventilation

Whole house, or continuous, ventilation involves exhausting air on a low, continuous basis. Whole house ventilation is currently required by many building codes or green building standards. Most of the codes and standards have adopted the ASHRAE 62.2 residential ventilation standard.



## ASHRAE 62.2

The ASHRAE 62.2 Standard applies to all residential spaces that are “intended for human occupancy” in single family homes and multi-family structures up to three stories. These spaces include living rooms, bedrooms, kitchens, bathrooms, hallways, closets, store rooms, laundry rooms, garages, and basements.

There are two components of the ASHRAE 62.2 standard that relate to ventilation fans: Whole Building Ventilation & Local Exhaust.

### Local Exhaust Requirement

A local mechanical exhaust system shall be installed in each kitchen and bathroom:

- Kitchens: 100 CFM intermittent or 5 ACH continuous (based on kitchen volume)
- Bathrooms: 50 CFM intermittent or 20 CFM continuous

Use a PC Premium Choice Bath Fan in each bathroom to meet the ASHRAE 62.2 Local Exhaust Requirement. Please note each bathroom fan counts towards meeting the ASHRAE 62.2 Whole Building Requirement.

### Whole Building Requirement

Required ventilation is based on the size of the house and number of expected occupants.

#### 1. Calculation:

$$\text{Required Rate} = 0.1 \text{ A Floor} + 7.5 (\text{Number of bedrooms} + 1)$$

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 (sq. ft.)	Number of Bedrooms				
	0-1	2-3	4-5	6-7	>7
	CFM Requirements				
<b>&lt;1500</b>	30	45	60	75	90
<b>1501-3000</b>	45	60	75	90	105
<b>3001-4500</b>	60	75	90	105	120
<b>4501-6000</b>	75	90	105	120	135
<b>6001-7500</b>	90	105	120	135	150
<b>&gt;7500</b>	105	120	135	150	165

# Bathroom Fan Sizing

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

## Fan Sizing for Bathrooms Under 100 Square Feet

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*

Bathroom is 9' x 5' (with 8' ceilings). Multiply  $9 \times 5 = 45$  sq. ft.

Bathroom area is 45 sq. ft.

At 1 CFM per square foot the minimum recommendation is a fan rated at least 45 CFM.

## Fan Sizing for Bathrooms Over 100 Square Feet

Ventilation for baths over 100 square feet is calculated based on the fixtures in the bathroom (see table to right). Add the CFM for all fixtures and you'll have the total CFM required for the bathroom.

Toilet	50 CFM
Shower	50 CFM
Bath Tub	50 CFM
Jetted Tub	100 CFM

Note: Enclosed toilet rooms must have an operable window or a fan for ventilation.

### *Example*

The bathroom is 20' x 12'. There is a tub (without jets), a shower and a toilet.

Calculation: 1 Toilet +1 Shower +1 Tub =150 CFM

### Two Solution Options:

1. Install a 50 CFM fan over the tub, one in the shower and in the water closet. This method is very effective and will provide ventilation where and when it's needed.
2. Install one 150 CFM fan. The air will then be pulled through the entire room and exhausted at a central location.

## Duration of Ventilation

HVI recommends that the fan be left on for 20 minutes after use of the bathroom. A timer is a good solution, allowing the fan to turn off automatically at the proper time. For steam showers it is best to have a separate fan in the steam room that can be turned on after use.

## Continuous Ventilation

Ventilation may also be provided on a continuous basis at other rates. This may complement the use of fans to provide the HVI recommended rates.

For more information on bath fan sizing and ventilation visit [www.hvi.org](http://www.hvi.org).

## Long Life

Permanently lubricated motors are engineered for trouble-free continuous operations for 30,000 hours on AC motors and 60,000 hours on DC motors. All PC fans have robust steel housings and attractive, sturdy grilles making the Premium Choice Series a fan you can fit and forget.

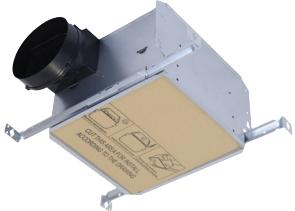
## Energy Efficient



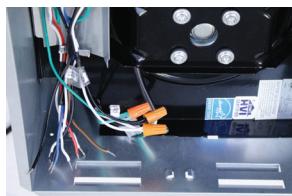
If saving money and conserving energy are concerns S&P's PC50X, PC80X, PC110X, PC150, PCLP80, PCLP100, PCV80, PCRL80, PCRL80F, PCD110X, PCD110XH, PCD110XM, PCD110XMH, PCD110XIAQS, and PCD200 fans are ENERGY STAR® qualified. Our fans come standard with high efficiency motors and lighting to reduce energy consumption without sacrificing performance. ENERGY STAR® qualification is especially important when using the PC fan 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).

## Ease of Installation

The Premium Choice Series fans are designed for easy installation for both new construction and retro-fit installation. All models come with adjustable hanger bars which allow the housing to be positioned easily and accurately between the framing. In addition most models are designed to be mounted directly to the joist or i-joist. The PC's unique wiring design allows for in-room or outside wiring. Finally, all PCs come standard with dust-guard packaging to prevent over-spray of paint or ceiling materials when units are installed in new construction applications.



PC with Dust Shield



In-Room Wiring



Outside Wiring

## Plug-&-Play Design

The controls and lighted grilles for the PC fans are "Plug-&-Play". Meaning one fan can be modified to be the exact fan needed. You even have the CHOICE to add a control or change the grille after the initial installation (see page 8 for more information).

## IAQ Sense

S&P's PC fan with the exclusive, award winning\* IAQ Sense is the most intelligent fan on the market. The IAQ sensor (PCIAQS) detects and extracts both Volatile Organic Compounds (VOCs) and humidity when installed with a Premium CHOICE (PC) Series fan. You can set the IAQ sensor to run the fan at high speed if it senses VOCs or humidity, then after a specified amount of time it will automatically adjust to run at low speed (see page 9 for more information).



## Longest Warranty

S&P's Premium Choice fans come standard with the industry's longest warranty. All AC models have a 5-year warranty, while DC models have a 6-year warranty.



## Plug-&-Play CHOICE

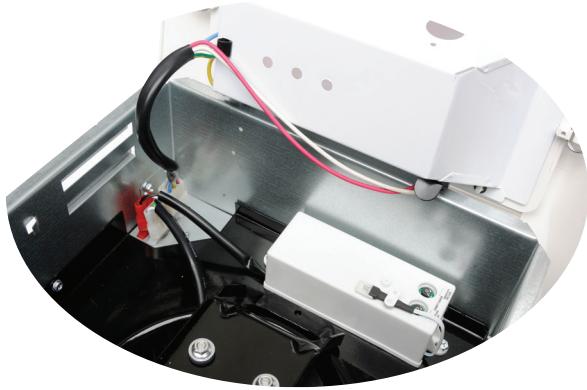
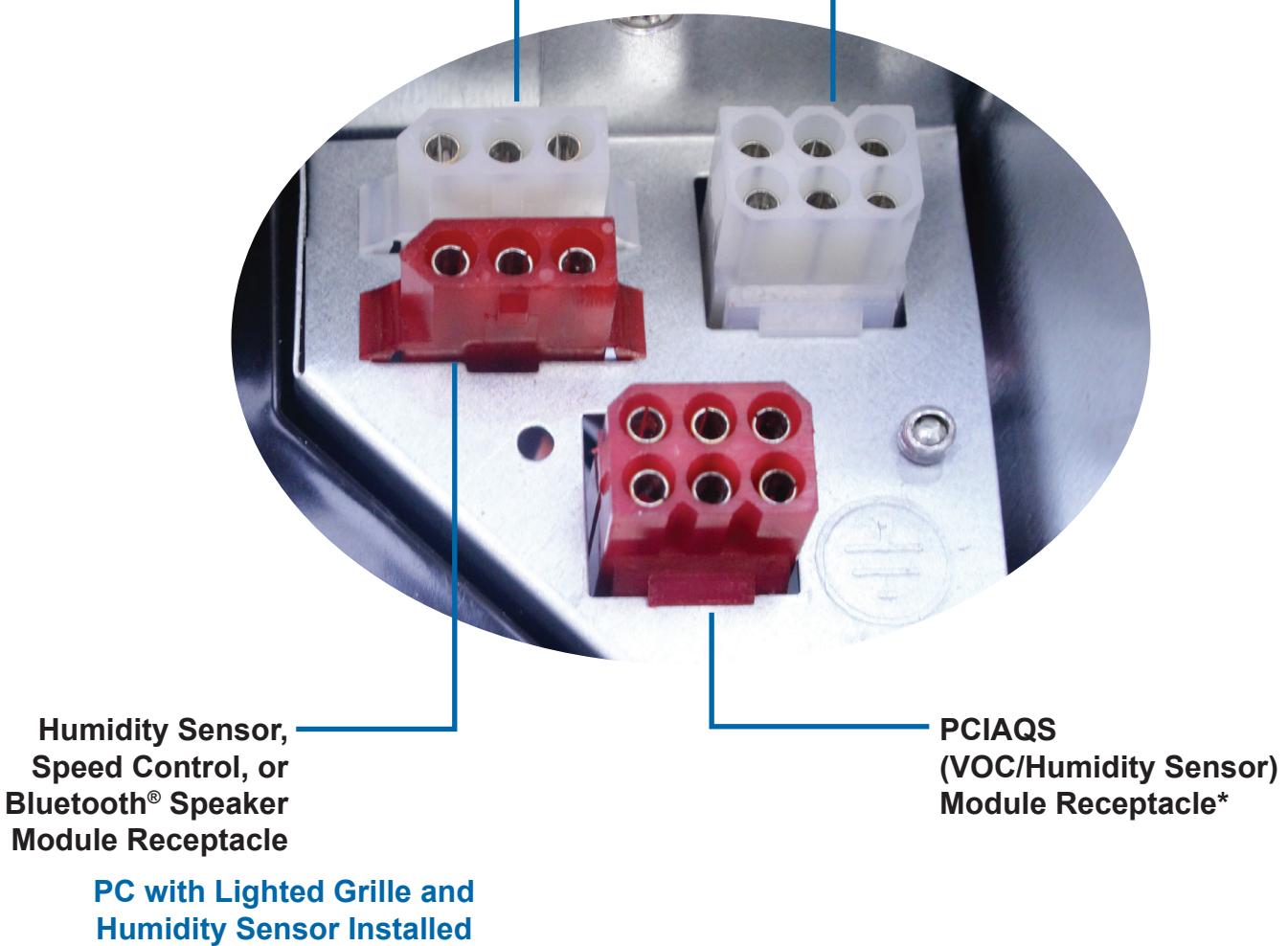
S&P's unique Plug-&-Play options make your CHOICE easy. There is a receptacle to plug-in your control CHOICE. Whether it's a Speed Control, Humidity Sensor, or VOC Sensor, the control connects to the receptacle and easily mounts into the pre-drilled holes inside the fan housing.

There is also a receptacle for your grille CHOICE. Need a lighted fan? Choose the fluorescent or LED Lighted Grille Kits. Or need a motion sensing fan? Choose the Motion Sensing Grille Kit. Either grille easily plugs into the grille receptacle to give you the fan of your CHOICE!

PC Fan models include receptacles based on compatibility. Please refer to the specific model in this brochure for module and grille compatibility.

**Motor Receptacle**

**Grille Receptacle**



### Learn More



Scan the code to the left to enroll in S&P University's class on the PC Plug-&-Play Product Line!

\*The receptacle for the PCIAQS is field installed.

# Premium Sound from a Surprising Source!

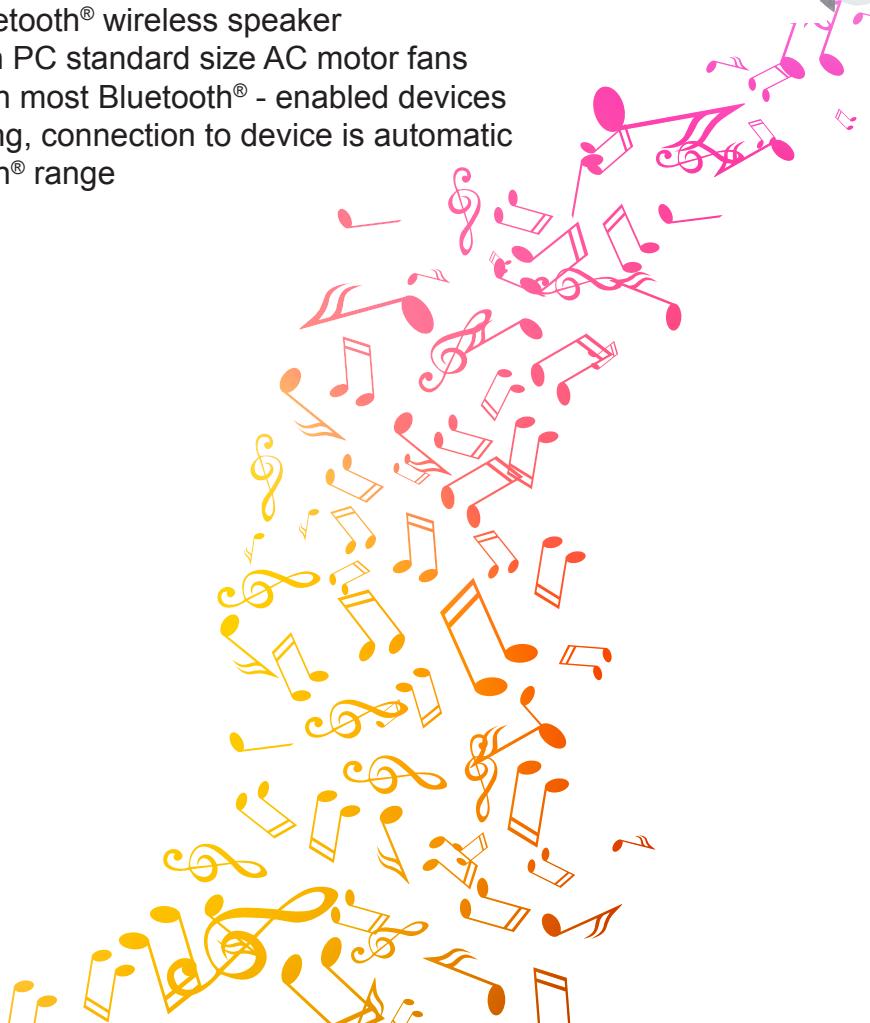


## PCBTS

Premium Choice Plug-&-Play Bathroom Fan Speaker Module

Add our Bluetooth® Speaker Module (PCBTS) to turn our popular PC fan into your personal audio system!

- High quality Bluetooth® wireless speaker
- Plug-&-Play with PC standard size AC motor fans
- Easy pairing with most Bluetooth® - enabled devices
- After initial pairing, connection to device is automatic
- 30 foot Bluetooth® range
- 5-year warranty



## IAQ Sense Plug-in

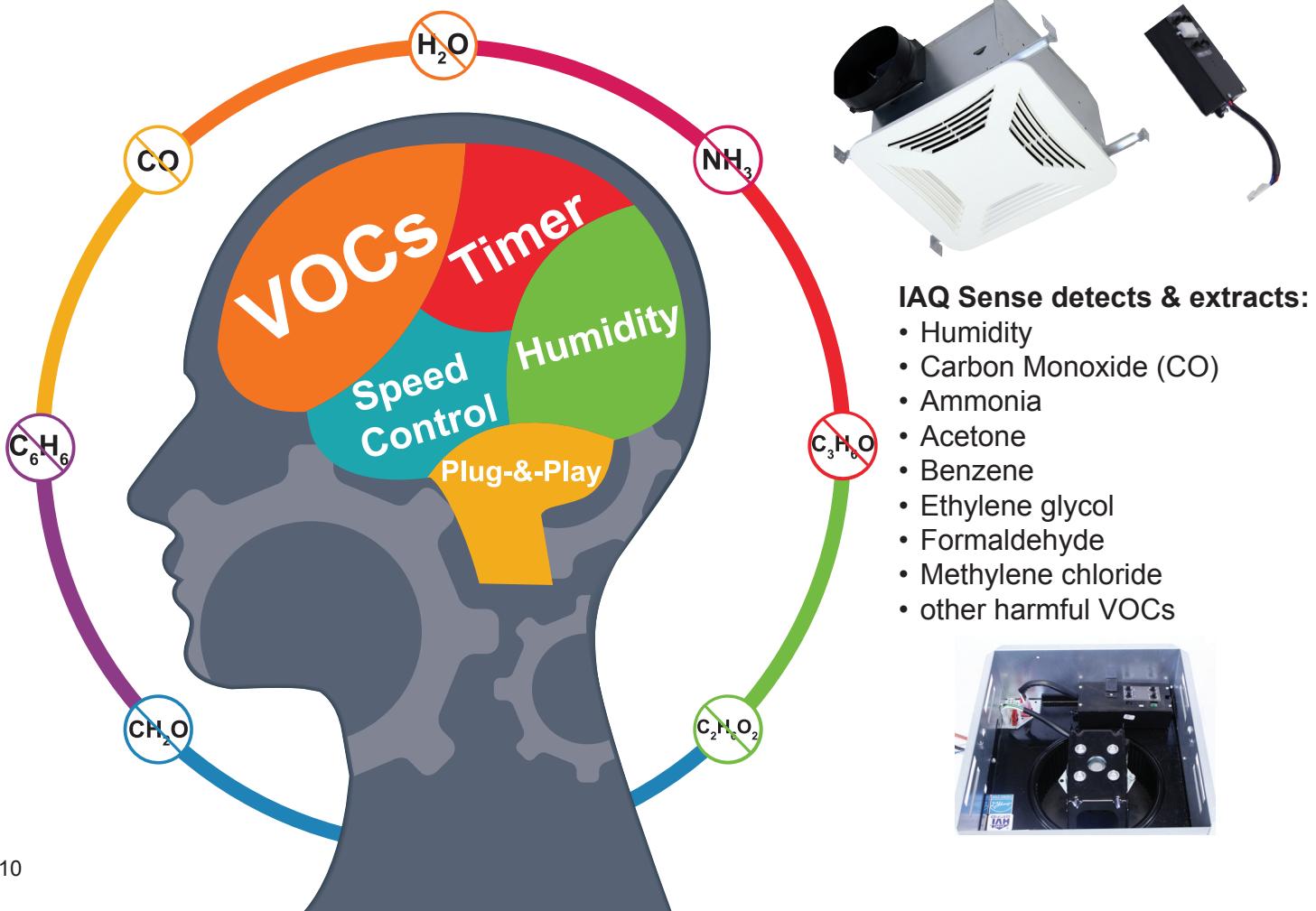
The products in your home, even the building materials inside your house, likely contain harmful chemicals. For example, the antifreeze and windshield washer fluid in your garage contain ethylene glycol which can cause respiratory issues if inhaled. Formaldehyde is in a wide range of products including some furniture, composite core doors, laminate floors, foam insulation, disinfectants, cleaners, air fresheners, carpets, toothpaste, body wash, and more. Oils, furniture refinisher, paint, varnish, car and floor polish, pesticides, herbicides, insect repellent, plastics, leather, and many other products contain harmful vapors like the chemicals listed below. It's important to ventilate these chemicals to reduce acute and long term health risks.

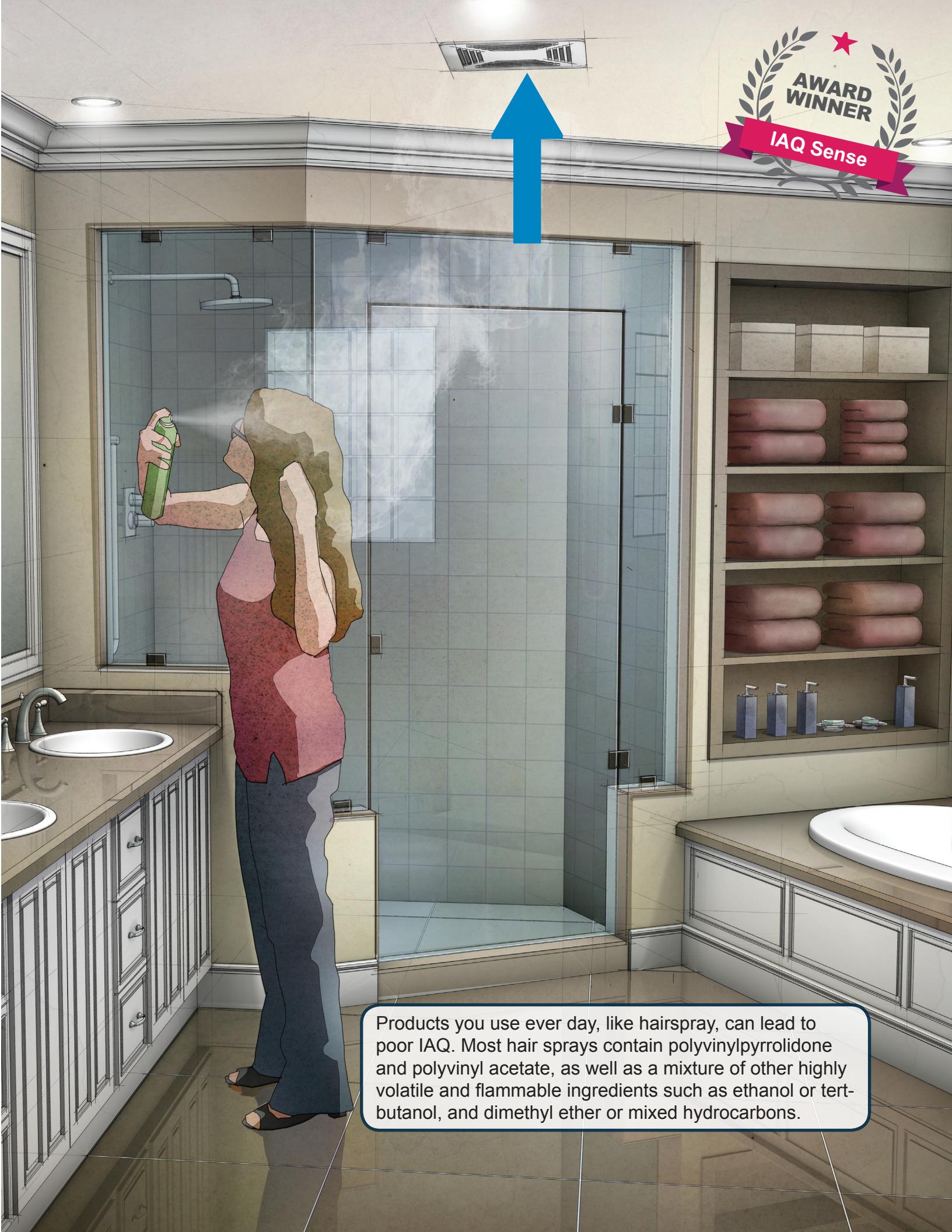
# IAQsense

### A Fan That Thinks!

S&P's IAQ sensor (PCIAQS) is the first thinking fan. A PC fan with IAQ Sense detects and extracts both Volatile Organic Compounds (VOCs) and humidity when installed with a Premium CHOICE (PC) Series fan.

The VOC sensor has an adjustment knob to set the sensing range based on the concentration of particles (ppm). The humidity sensor detects rapid increases in moisture at the ceiling level where steam and humidity naturally rise, and automatically turns on the fan. You can set the IAQ sensor to run the fan at high speed if it senses VOCs or humidity, then after a specified amount of time it will automatically adjust to run at low speed. The IAQ sensor also includes a speed control to adjust the fan at a percentage of full speed so the fan can be run continuously to meet code requirements. A PC fan with a PCIAQS is a fan you can trust to keep you, your family, and your home safe.





Products you use ever day, like hairspray, can lead to poor IAQ. Most hair sprays contain polyvinylpyrrolidone and polyvinyl acetate, as well as a mixture of other highly volatile and flammable ingredients such as ethanol or tert-butanol, and dimethyl ether or mixed hydrocarbons.

# AC Standard Models



## Features & Construction

- Extremely quiet operation <0.3 to 1.1 sones
- Totally enclosed condenser motor for long life
- Motor rated for 30,000 hours continuous on
- 120V/60Hz, 230V/60Hz, or 230V/50Hz motors
- PC50X includes 4" duct connector with built-in backdraft damper
- PC80X & PC110X include 4 and 6" duct connectors with built-in backdraft damper
- PC150 includes 6" duct connector with built-in backdraft damper
- Robust steel housing
- Attractive, sturdy grille
- UL Listed
- cETLus Listed
- All models are ENERGY STAR® qualified
- HVI Certified
- AMCA Air & Sound Certified
- 5-year warranty

## Options & Accessories

- Lighted Grilles
- Motion Sensing Grilles
- Speed Control
- Humidity Sensor
- Bluetooth® Speaker
- IAQ Sense
- Contractor Packs
- Radiation Dampers & Kits
- Metal Grille

## HVI Certified Performance

Model	Duct Size	CFM	Static Pressure (in W.G.)	Energy Efficiency (CFM/Watts)	Watts	Power (V/Hz)	Sones*	Amps
PC50X	4"	50/45	0.1/0.25	3.5	16	120/60	0.9	.17
PC80X	4"	80/61	0.1/0.25	3.3	24.3	120/60	1	.27
	6"	90/64		3.9	24.4		0.5	
PC110X	4"	110/91	0.1/0.25	4.0	27.3	120/60	0.9	.30
	6"	130/109		4.7	27.6		0.9	
PC150	6"	150/131	0.1/0.25	3.4	43.2	120/60	1.1	.34



CALGreen

## AMCA Certified Performance

120V, 60Hz Models					
Model	Duct Size	Static Pressure	CFM	Sones*	RPM
PC80X	4"	0	102	1.3	800
	4"	0.1	86	1.6	800
	4"	0.25	59	2.4	800
	6"	0	119	1.0	800
	6"	0.1	89	1.3	800
	6"	0.25	66	2.4	800
PC110X	4"	0	114	1.5	850
	4"	0.1	100	1.7	850
	4"	0.25	76	2.3	850
	6"	0	134	1.4	850
	6"	0.1	112	1.5	850
	6"	0.25	86	2.0	850
PC150	6"	0	159	2.3	1000
	6"	0.1	140	2.2	1000
	6"	0.25	117	2.5	1000

230V, 60Hz Models					
Model	Duct Size	Static Pressure	CFM	Sones*	RPM
PC80X-60-230V	4"	0	96	2.3	900
	4"	0.1	85	2.6	900
	4"	0.25	64	3.2	900
	6"	0	110	1.3	850
	6"	0.1	91	1.4	850
	6"	0.25	66	2.1	850
PC110X-60-230V	4"	0	113	2.6	1000
	4"	0.1	101	2.4	1000
	4"	0.25	83	2.9	1000
	6"	0	126	1.7	950
	6"	0.1	112	1.9	950
	6"	0.25	93	2.4	950
PC150-60-230V	6"	0	158	2.9	1050
	6"	0.1	144	2.7	1050
	6"	0.25	124	2.8	1050

230V, 50Hz Models					
Model	Duct Size	Static Pressure	CFM	Sones*	RPM
PC80X-50-230V	4"	0	95	2.0	850
	4"	0.1	82	2.3	850
	4"	0.25	60	2.8	850
	6"	0	108	1.3	800
	6"	0.1	93	1.4	800
	6"	0.25	69	1.8	800
PC110X-50-230V	4"	0	112	2.1	950
	4"	0.1	101	2.2	950
	4"	0.25	79	2.9	950
	6"	0	128	1.7	900
	6"	0.1	114	1.8	900
	6"	0.25	90	2.3	900
PC150-50-230V	6"	0	165	3.2	1000
	6"	0.1	153	3.0	1000
	6"	0.25	133	3.0	1000



S&P USA Ventilation Systems, LLC., Div. of Soler & Palau Ventilation Group, certifies that the Models PC shown herein are licensed to bear the AMCA Seal. The ratings shown are based on test and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirement of the AMCA Certified Ratings Program.

The performance ratings include the effects of inlet grille and backdraft damper in the airstream. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings are loudness values in fan sones at 5' (1.5m) in a hemispherical free field calculated per AMCA Std. 301. Values shown are for Installation Type B: Free inlet hemispherical sone levels. Air performance shown is for Installation Type B: Free inlet, Ducted outlet.

\*The difference between sone values certified by HVI for residential use and by AMCA for commercial/industrial use is mainly due to the ANSI S3.4 procedures used to convert measured sound to perceived sound, and because HVI and AMCA have different rules for rounding sone values. ANSI S3.4 specifies a procedure for calculating loudness as perceived by a typical listener under specific conditions. HVI establishes values in a spherical free field at a distance of 5 feet from the fan. AMCA establishes values in a hemispherical free field at a distance of 5 feet from the fan. It is not possible to achieve an exact comparison of HVI and AMCA sone values.

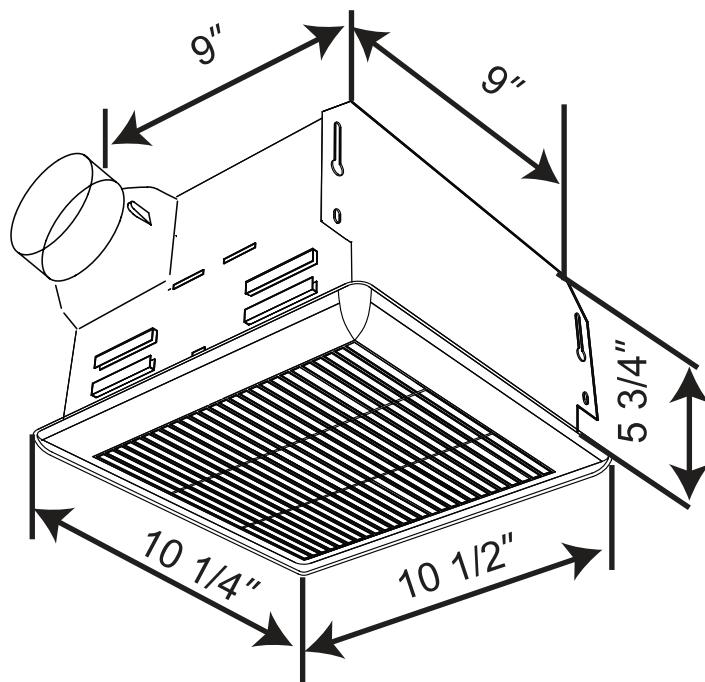
## What is a Sone?

A sone is a unit of how loud a sound is perceived. The sone scale is linear. Doubling the perceived loudness doubles the sone value. The lower the sone value, the more comfortable the listening environment. One sone is equivalent to a quiet refrigerator. The quietest possible sone rating is <0.3 sones.

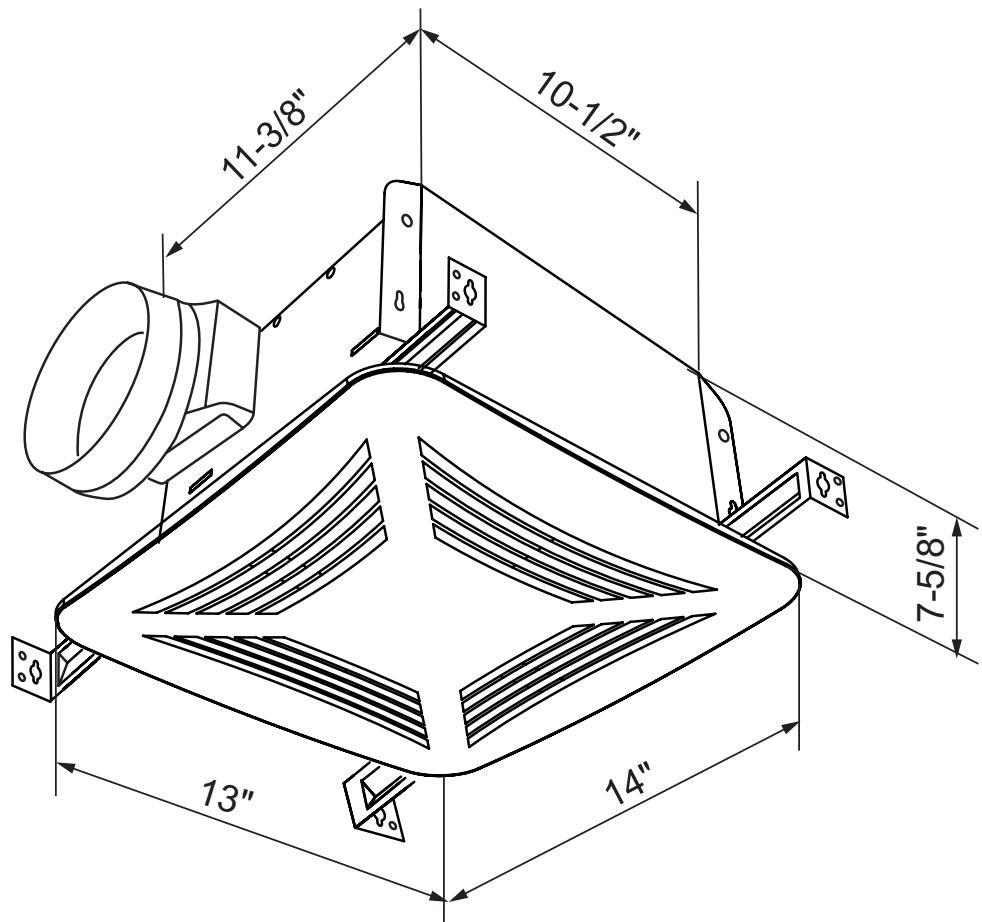
# AC Standard Models

## Dimensions

PC50X



PC80X, 110X, 150



## Plug-&-Play Grille Options

### Grille Light Kit (PCLK or PCLEDK)

#### PCLK

- 13 watt GU24 bulb
- 2700K/900 lumens
- 4 watt night light bulb
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



#### PCLEDK

- 11 watt LED light
- 4100K/1100 lumens
- 2 watt LED night light setting
- 200 lumens
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



### Motion and Humidity Sensing Grille Kits (PCMHK or PCLMHK)

#### PCMHK

- Automatically turns on fan when motion and/or humidity is sensed
- Adjustable time delay shut-off from 3 to 30 minutes
- Adjustable speed reduced up to 50%
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



#### PCLMHK

- 13 watt GU24 bulb
- 2700K/900 lumens
- 4 watt night light bulb
- Automatically turns on fan when motion and/or humidity is sensed
- Adjustable time delay shut-off from 3 to 30 minutes
- Adjustable speed reduced up to 50%
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



### Motion Sensing Grille Kit (PCMKG or PCLMK)

#### PCMKG

- Automatically turns on fan when motion is sensed
- Adjustable time delay shut-off from 3 to 30 minutes
- Adjustable speed reduced up to 50%
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



#### PCLMK

- 13 watt GU24 bulb
- 2700K/900 lumens
- 4 watt night light bulb
- Automatically turns on fan when motion is sensed
- Adjustable time delay shut-off from 3 to 30 minutes
- Adjustable speed reduced up to 50%
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



### Metal Grille

#### PCMG

- 13 x 14" Metal Grille
- Ideal for commercial applications



### Grille Light Kits for PC50X (PCVLK or PCVLEDK)

#### PCVLK

- 13 watt GU24 bulb
- 2700K/900 lumens
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



#### PCVLEDK

- 13 watt LED light
- 4100K/1100 lumens
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



## Plug-&-Play Modules

### Humidity Sensor (PCHS)

- Detects rapid rise in humidity
- Auto-shut off timer
- Accessible sensitivity adjustment
- Humidity is sensed at the ceiling
- Meets CALGreen bathroom fan requirement
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



### Speed Control (PCSC)

- Accessible speed adjustment
- High speed override
- Allows for adjustable continuous speed to meet ASHRAE 62.2
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



### Bluetooth® Speaker (PCBTS)

- High quality Bluetooth® wireless speaker
- Easy pairing with most Bluetooth® - enabled devices
- After initial pairing, connection to device is automatic
- 30 foot Bluetooth® range
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



### IAQ Sense, VOC/Humidity Sensor (PCIAQS)

- Detects VOCs and/or rapid rise in humidity
- Semiconductor gas sensor, detecting a wide range of VOCs
- Monitoring range is 400-2000 ppm equivalent CO<sub>2</sub>
- Continuous speed control to run fan continuously
- Integrated control switch to turn features on/off
- Field adjustable humidity sensitivity with 50-100% range. Factory setting is 75%
- Humidity is sensed at the ceiling
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan
- Meets CALGreen bathroom fan requirement

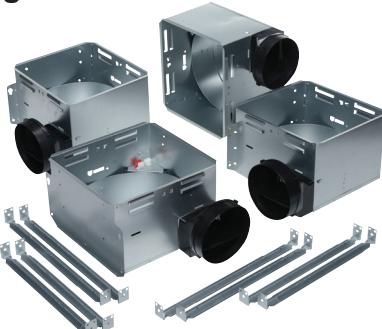


## Contractor Packs

For simple installation the PC80X and PC110X are available as four 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. The motor and grille kit includes the motor plate, motor, wheel and standard grille.

Part #	Description (Packs of 4)
PCH	PC80X & PC110X Contractor Pack Housings
PC80F	PC80X Contractor Pack Motor and Grille
PC110F	PC110X Contractor Pack Motor and Grille

### Housing Pack



### Motor & Grille Pack



## Radiation Dampers & Kits

### Radiation Damper (PCRD, PCRD-P2, & PCVRD)

- 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
- PCRD-P2 is an extended radiation damper to allow lighted grille fit
- PCVRD is compatible with PC50X



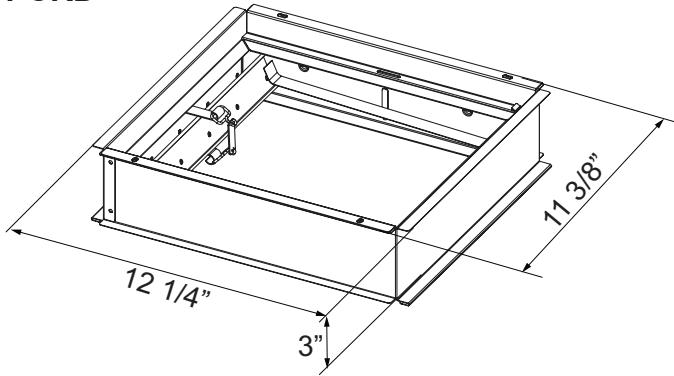
### Radiation Damper Kits

Radiation Damper kits included a radiation damper and plug-and-play grille kit. Wiring extenders

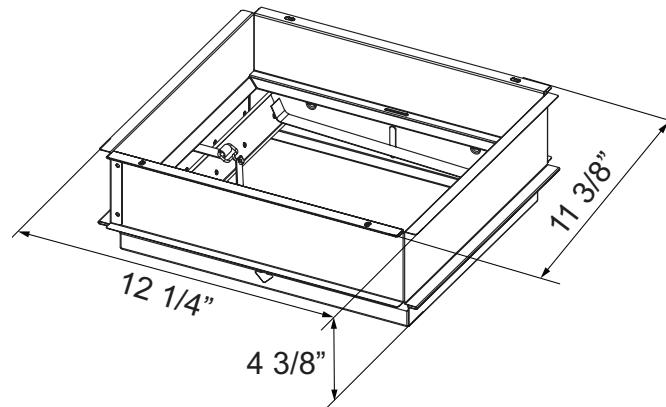
Radiation Damper Kit	Radiation Damper	Grille	Wiring Extender
PCLKRD	PCRD-P2	PCLK	Included
PCLEDKRD	PCRD-P2	PCLEDK	Included
PCMKRD	PCRD	PCMKG	N/A
PCLMKRD	PCRD-P2	PCLMK	Included
PCMHKRD	PCRD	PCMHK	N/A
PCLMHKRD	PCRD-P2	PCLMHK	Included
PCMGRD	PCRD	PCMGR	N/A
PCVLEDKRD	PCVRD	PCVLEDK	Included

### Radiation Damper Dimensions

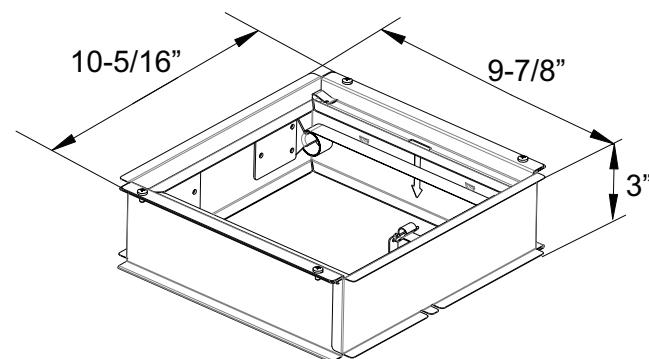
PCRD



PCRD-P2



PCVRD



## AC Standard Models

## Options & Accessories

### PC Standard AC Fan & Accessory Compatibility

The chart below indicate which plug-&-play or other PC accessories are compatible with each PC Standard AC Model.

Option	PC Standard AC Model			
	PC50X	PC80X	PC110X	PC150
PCLK	-	✓	✓	✓
PCLEDK	-	✓	✓	✓
PCLMK	-	✓	✓	✓
PCMKG	-	✓	✓	✓
PCVLK	✓	-	-	-
PCVLEDK	✓	-	-	-
PCHS	✓	✓	✓	✓
PCSC	✓	✓	✓	✓
PCIAQS	-	✓	✓	✓
PCRD	-	✓	✓	✓
PCVRD	✓	-	-	-
PCMGS	-	✓	✓	✓

The chart below indicates which plug-&-play or other PC accessories can be used together. Note for radiation damper kits the compatibility is based on the grille kit included.

	Std. Grille	PCLK	PCLEDK	PCVLK	PCVLEDK	PCMKG	PCLMK	PCMHK	PCLMHK	PCHS	PCSC	PCIAQS	PCMGS
Std. Grille	-	-	-	-	-	-	-	-	-	✓	✓	✓	-
PCLK	-	-	-	-	-	-	-	-	-	✓	✓	✓	-
PCLEDK	-	-	-	-	-	-	-	-	-	✓	✓	✓	-
PCVLK	-	-	-	-	-	-	-	-	-	✓	✓	-	-
PCVLEDK	-	-	-	-	-	-	-	-	-	✓	✓	-	-
PCMKG	-	-	-	-	-	-	-	-	-	-	-	-	-
PCLMK	-	-	-	-	-	-	-	-	-	-	-	-	-
PCMHK	-	-	-	-	-	-	-	-	-	-	-	-	-
PCLMHK	-	-	-	-	-	-	-	-	-	-	-	-	-
PCMGS	-	-	-	-	-	-	-	-	-	✓	✓	✓	-
PCHS	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	✓
PCSC	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	✓
PCIAQS	✓	✓	✓	-	-	-	-	-	-	-	-	-	✓
PCRD	✓	-	-	-	-	✓	-	✓	-	✓	✓	✓	✓
PCRD-P2	-	✓	✓	-	-	-	✓	-	✓	-	-	-	-
PCVRD	✓	-	-	-	✓	-	-	-	-	✓	✓	-	-



## Features & Construction

- Extremely quiet operation 0.3 to 1.2 sones
- Brushless DC motor for long life
- Motor rated for 60,000 hours continuous on
- High/Low speed delay timer
- 6" duct connector with built-in backdraft damper
- Robust steel housing
- Attractive, sturdy grille
- cETLus Listed
- HVI Certified
- 6-year warranty

## Options & Accessories

- Lighted Grilles
- Motion Sensing Grilles
- Radiation Dampers & Kits
- Metal Grille

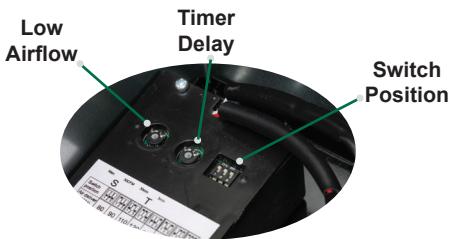
## Standard Features Per Model

Model	Built-in Control	Grille
PCD110X	-	Standard
PCD110XH	Humidity Sensor	Standard
PCD110XM	-	Motion Sensing
PCD110XMH	Humidity Sensor	Motion Sensing
PCD110XIAQS	IAQ Sense	Standard

## You CHOOSE Your Airflow!

The built-in **Toggle Switches** and duct connector options allow you to set the PCD fan to the required airflow:

### Integrated Controls



Switch position	1	2	3	4
Airflow (CFM)	90	110	120	140
Duct diameter (inches)	6"	6"	6"	6"

1 & 2: Airflow • Factory setting is 110 CFM

# DC Motor Models

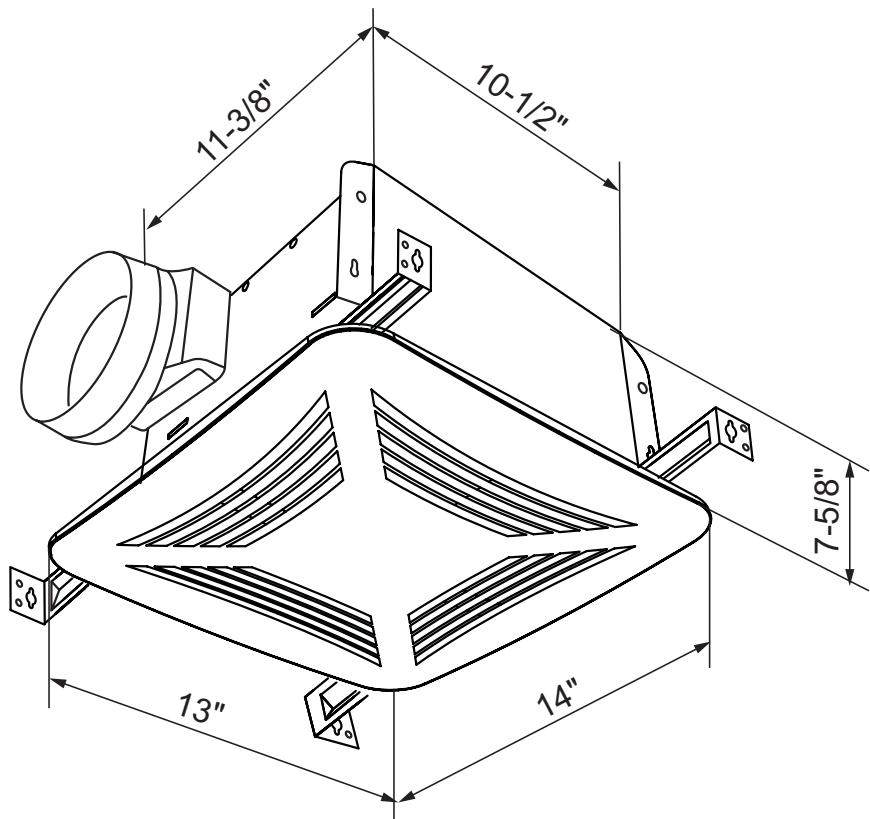
## HVI Certified Performance (6" Duct)

PCD110X, PCD110XM, PCD110XH, PCD110XMH, & PCD110XIAQS						
CFM @ Static Pressure	0.1" SP	40	90	110	120	140
	0.25 SP	-	51	78	91	113
Sones @ 0.1" Static Pressure	0.1" SP	<0.3	0.5	0.9	1.2	1.5
	0.25 SP	-	7.9	10.3	12.5	15.7
Watts	0.1" SP	4.2	8.1	10.3	12.2	15.6
	0.25 SP	-	7.9	10.3	12.5	15.7
Energy Efficiency (CFM/Watt)	0.1" SP	9.5	11.1	10.7	9.8	9.0
	0.25 SP	-	6.5	7.6	7.3	7.2
Amps @ 0.1"SP		.16	.18	.22	.23	.23



CA/Green

## Dimensions



## Plug-&-Play Grille Options

### Grille Light Kit (PCLK or PCLEDK)

#### PCLK

- 13 watt GU24 bulb
- 2700K/900 lumens
- 4 watt night light bulb
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



#### PCLEDK

- 11 watt LED light
- 4100K/1100 lumens
- 2 watt LED night light setting
- 200 lumens
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



### Motion Sensing Lighted Grille Kit (PCDLMG)

#### PCDLMG

- 13 watt GU24 bulb
- 2700K/900 lumens
- 4 watt night light bulb
- Automatically turns on fan when motion is sensed
- Adjustable time delay shut-off from 3 to 30 minutes
- Adjustable speed reduced up to 50%
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



### Metal Grille

#### PCM

- 13 x 14" Metal Grille
- Ideal for commercial applications



## Radiation Dampers & Kits

### Radiation Damper (PCRD & PCRD-P)

- 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
- PCRD-P2 is an extended radiation damper to allow lighted grille fit



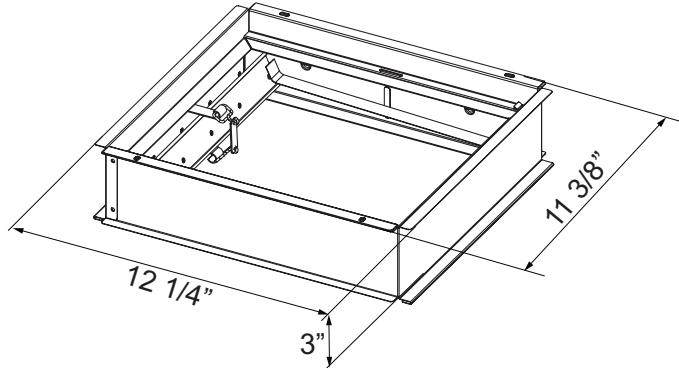
### Radiation Damper Kits

Radiation Damper kits included a radiation damper and plug-and-play grille kit. Wiring extenders are included in kit when needed. The chart below outlines the kits available.

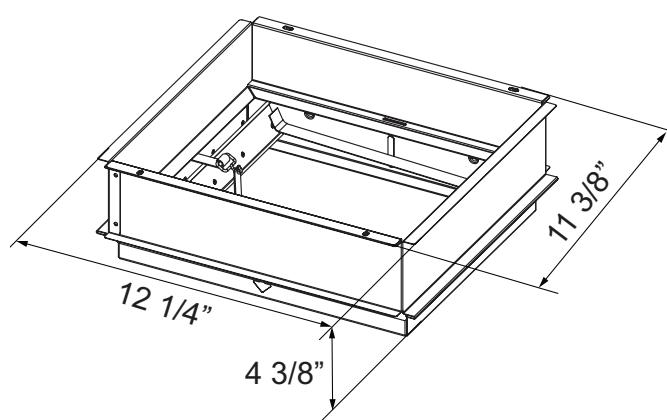
Radiation Damper Kit	Radiation Damper	Grille	Wiring Extender
PCLKRD	PCRD-P2	PCLK	Included
PCLEDKRD	PCRD-P2	PCLEDK	Included
PCD110MRD	PCRD	Standard with Fan	N/A
PCDLMGRD	PCRD-P2	PCDLMG	Included
PCMGRD	PCRD	PCM	N/A

## Radiation Damper Dimensions

PCRD



PCRD-P2



## PC DC Fan & Accessory Compatibility

The chart below indicate which plug-&-play or accessories are compatible with each PC DC Model.

Option	PC Models with DC Motor				
	PCD110X	PCD110XH	PCD110XM	PCD110XMH	PCD110XIAQS
PCLK	✓	✓	-	-	✓
PCLEDK	✓	✓	-	-	✓
PDLMG	-	-	✓	✓	-
PCMGS	✓	✓	-	-	-
PCRD	✓	✓	-	-	✓
PCLKRD	✓	✓	-	-	✓
PCLEDKRD	✓	✓	-	-	✓
PCDLMGRD	-	-	✓	✓	-
PCD110MRD	-	-	✓	✓	-

The chart below indicates which plug-&-play or other PC accessories can be used together. Note for radiation damper kits the compatibility is based on the grille kit included.

	Std. Grille	PCLK	PCLEDK	PCDLMG	PCMGS
Std. Grille	-	-	-	-	-
PCLK	-	-	-	-	-
PCLEDK	-	-	-	-	-
PCDLMG	-	-	-	-	-
PCMGS	-	-	-	-	-
PCRD	✓	-	-	-	✓
PCRD-P2	-	✓	✓	✓	-

## DC Motor Models



ENERGY STAR



## High Volume Fan

### Features & Construction

- Quiet operation, certified at 2.4 sones
- Brushless DC motor for long life
- Motor rated for 60,000 hours continuous on
- 6" duct connector with built-in backdraft damper
- Robust galvanized steel housing
- Attractive, sturdy grille
- cETLus Listed
- ENERGY STAR® qualified
- HVI Certified
- AMCA Air & Sound certified
- 6-year warranty

### Options & Accessories

- Humidity Sensor (PCHS)

### HVI Certified Performance

PCD200		
Static Pressure (inches w.g.)	0.1	0.25
CFM	220	189
Sones	2.5	N/A
Watts	31.3	
Energy Efficiency (CFM/Watt)	7.0	
Power (V/Hz)	120/60	



CALGreen

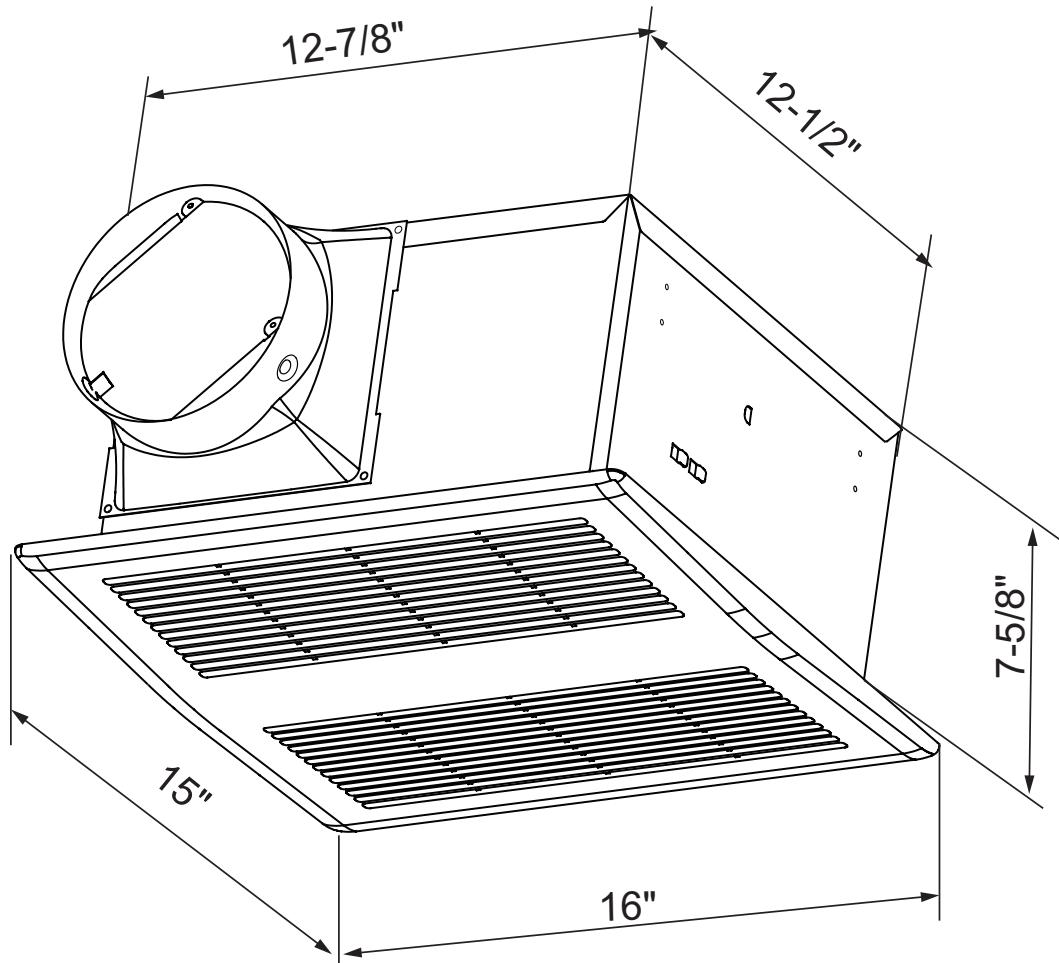
### AMCA Certified Performance

PCD200												
Speed (RPM)	CFM @ Static Pressure (in. w.g.)											
	0.00	0.10	0.15	0.25	0.375	0.45	0.50	0.60	0.70	0.80	0.90	1.00
1,050	244	210	198	177	162	153	142	113	90	71	47	11

The performance ratings include the effects of inlet grille and backdraft damper in the airstream. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings are loudness values in fan sones at 5' (1.5m) in a hemispherical free field calculated per AMCA Std. 301. Values shown are for Installation Type B: Free inlet hemispherical sone levels. Air performance shown is for Installation Type B: Free inlet, Ducted outlet.



S&P USA Ventilation Systems, LLC., Div. of Soler & Palau Ventilation Group, certifies that the Model PCD200 shown herein are licensed to bear the AMCA Seal. The ratings shown are based on test and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirement of the AMCA Certified Ratings Program.

**Dimensions**

## Value Series Models



### Features & Construction

- Quiet operation 1.5 to 2.5 sones
- 50 and 80 CFM models
- 4" duct connector with built-in backdraft damper
- Robust steel housing
- Attractive, sturdy grille
- Thermally protected motor
- UL Listed
- cETLus Listed
- HVI Certified
- Model PCV80 is ENERGY STAR® qualified
- 5-year warranty

### Options & Accessories

- Lighted Grilles
- Humidity Sensor
- Speed Control
- Contractor Packs
- Radiation Damper

### HVI Certified Performance

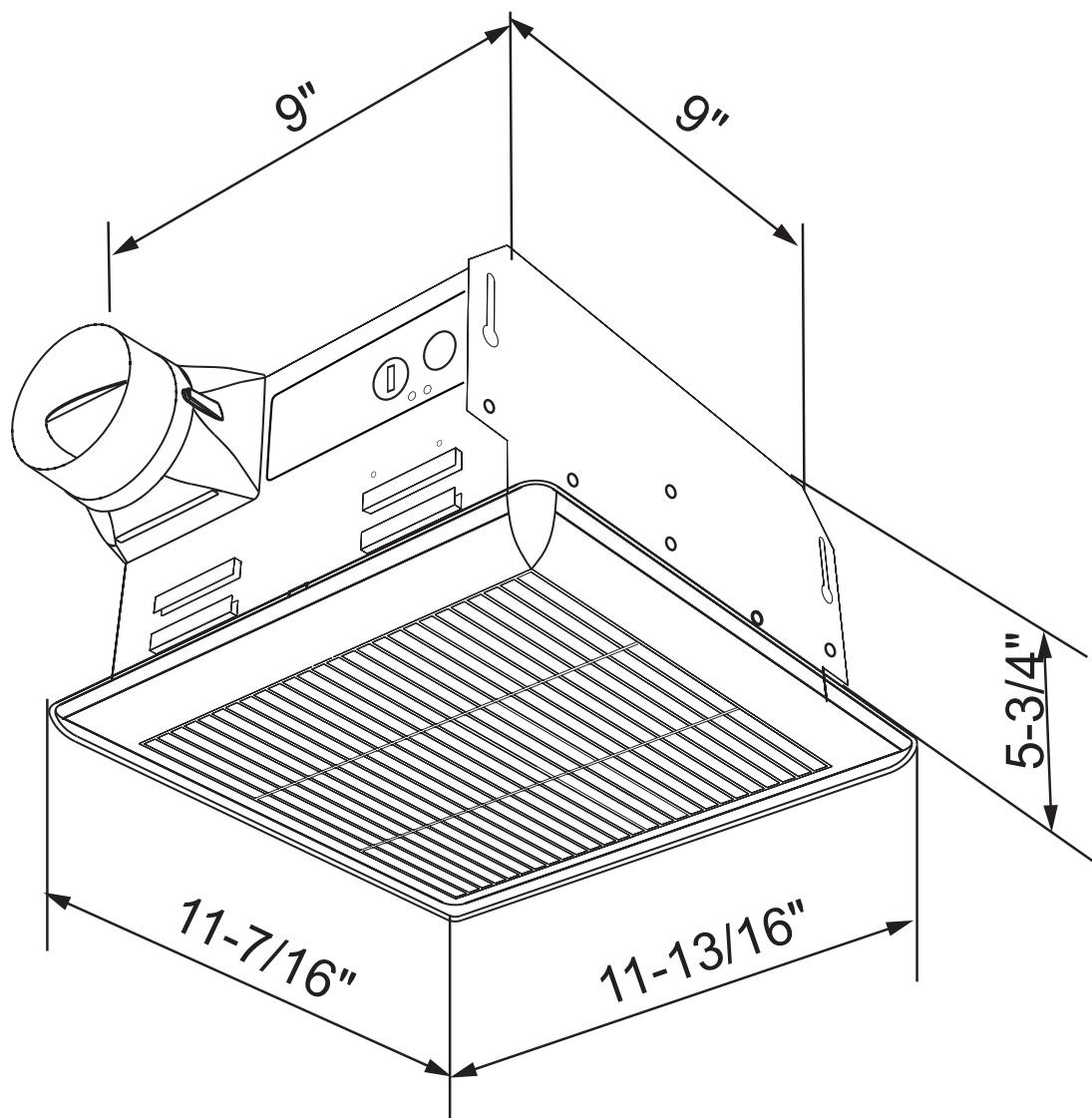
Model	Duct Size	CFM @ Static Pressure (in. w.g.)		Watts	Power (V/Hz)	Sones @ 0.1" SP
		0.1	0.25			
PCV50*	4"	50	-	48.9	120/60	2.5
PCV80**	4"	80	60	23.8	120/60	1.5



CALGreen

\*PCV50 is not ENERGY STAR qualified

\*\*PCV80 is ENERGY STAR qualified

**Dimensions**

## Contractor Packs

For simple installation, the PCV50 and PCV80 are available as four 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. The motor and grille kit includes the motor plate, motor, wheel and standard grille.

Part #	Description (Packs of 4)
PCV50H	PCV50 Contractor Pack Housings
PCV50F	PCV50 Contractor Pack Motor and Grille
PCV80H	PCV80 Contractor Pack Housings
PCV80F	PCV80 Contractor Pack Motor and Grille

### Housing Pack



### Motor & Grille Pack



## Plug-&-Play Modules

### Humidity Sensor (PCHS)

- Detects rapid rise in humidity
- Auto-shut off timer
- Accessible sensitivity adjustment
- Humidity is sensed at the ceiling
- Meets CALGreen bathroom fan requirement
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



### Speed Control (PCSC)

- Accessible speed adjustment
- High speed override
- Allows for adjustable continuous speed to meet ASHRAE 62.2
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



## Plug-&-Play Grille Options

### Grille Light Kits for (PCVLK or PCVLEDK)

#### PCVLK

- 13 watt GU24 bulb
- 2700K/900 lumens
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



#### PCVLEDK

- 13 watt LED light
- 4100K/1100 lumens
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



## Radiation Dampers & Kits

### Radiation Damper

- 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

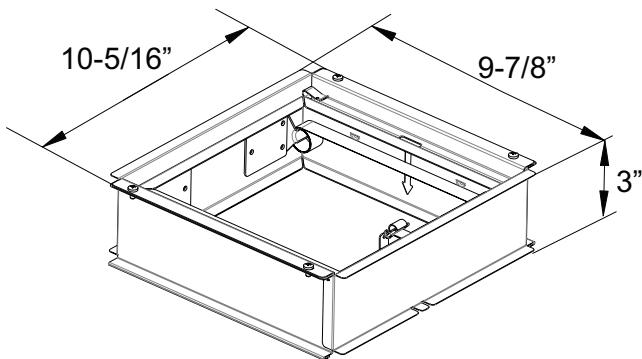


### Radiation Damper Kits

Radiation Damper kits included a radiation damper and plug-and-play grille kit. Wiring extenders are included in kit when needed. The chart below outlines the kits available.

Radiation Damper Kit	Radiation Damper	Grille	Wiring Extender
PCVLEDKRD	PCVRD	PCVLEDK	Included

### Radiation Damper Dimensions



### PCV Value Series Fan & Accessory Compatibility

The chart below indicate which plug-&-play or other PC accessories are compatible with each PCV Value Model.

Option	PCV Value Model	
	PCV50	PCV80
PCVLK	✓	✓
PCVLEDK	✓	✓
PCHS	✓	✓
PCSC	-	✓
PCVRD	✓	✓

The chart below indicates which plug-&-play or other PCV accessories can be used together. Note for radiation damper kits the compatibility is based on the grille kit included.

	Std. Grille	PCVLK	PCVLEDK	PCHS	PCSC	PCVRD
Std. Grille	-	-	-	✓	✓	✓
PCVLK	-	-	-	✓	✓	-
PCVLEDK	-	-	-	✓	✓	✓
PCHS	✓	✓	✓	-	-	✓
PCSC	✓	✓	✓	-	-	✓
PCVRD	✓	-	✓	✓	✓	-

## Low Profile Models



### Features & Construction

- Low profile housing design
- Quiet operation 1.2 to 2.0 sones
- Totally enclosed condenser motor for long life
- Motor rated for 30,000 hours continuous on
- 4" oval duct connector with built-in backdraft damper
- Robust steel housing
- Attractive, sturdy grille
- cETLus Listed
- ENERGY STAR® qualified
- HVI Certified
- 5-year warranty

### HVI Certified Performance

	PCLP80	PCLP100
CFM @ Static Pressure	0.1"	80
	0.25"	62
Sones @ 0.1" Static Pressure	1.2	2.0
Watts @ 0.1" Static Pressure	25.9	24.6
Energy Efficiency (CFMs/Watts)	3.1	4.1
Amps	.35	.40
Bathroom Size (up to ft <sup>2</sup> )	75	95



CA/Green

### Options & Accessories

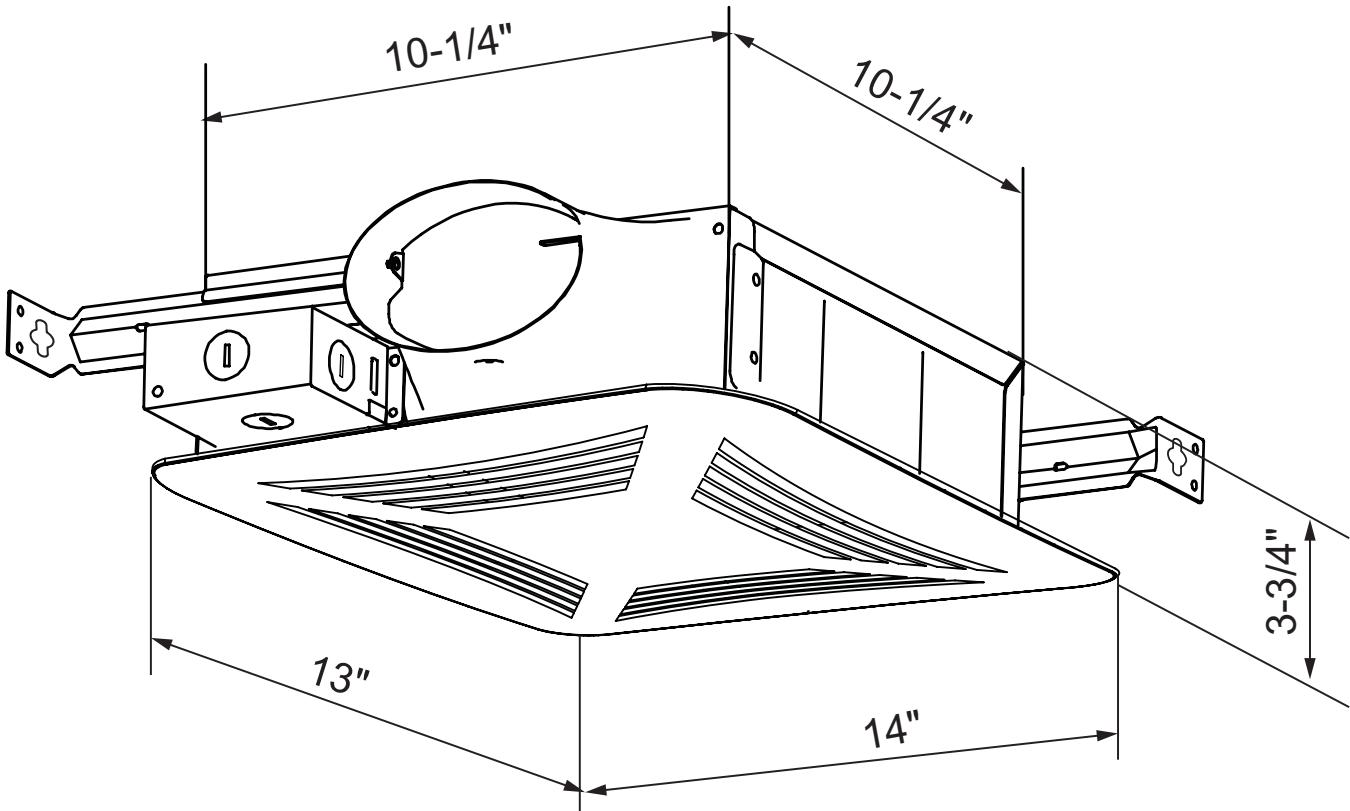
- Lighted Grilles
- Humidity Sensor
- Speed Control

### Low Profile - 3/4" high



Suitable for sidewall mounting

## Dimensions



## Contractor Packs

For simple installation, the PCLP80 and PCLP100 are available in four 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. The motor and grille kit includes the motor plate, motor, wheel and standard grille.

Part #	Description (Packs of 4)
PCLPH	PCLP80 Contractor Pack Housings
PCLP80F	PCLP80 Contractor Pack Motor and Grille
PCLP100F	PCLP100 Contractor Pack Motor and Grille

Housing Pack



Motor & Grille Pack



## Plug-&-Play Grille Options

### Grille Light Kit (PCLPLEDK)

PCLPEDK

- 11 watt LED light
- 4100K/1100 lumens
- 2 watt LED night light setting
- 200 lumens
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



## Plug-&-Play Modules

### Humidity Sensor (PCLPHS)

- Detects rapid rise in humidity
- Auto-shut off timer
- Accessible sensitivity adjustment
- Humidity is sensed at the ceiling
- Meets CALGreen bathroom fan requirement
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



### Speed Control (PCLPSC)

- Accessible speed adjustment
- High speed override
- Allows for adjustable continuous speed to meet ASHRAE 62.2
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



## PCLP Fan & Accessory Compatibility

The chart below indicate which plug-&-play or accessories are compatible with each PCLP Model.

Option	PCLP Model	
	PCLP80	PCLP100
PCLPLEDK	✓	✓
PCLPHS	✓	✓
PCLPSC	✓	✓

The chart below indicates which plug-&-play or other PCLP accessories can be used together.

	Std. Grille	PCLPLEDK	PCLPHS	PCLPSC
Std. Grille	-	-	✓	✓
PCLPLEDK	-	-	✓	✓
PCLPHS	✓	✓	-	-
PCLPSC	✓	✓	-	-



## Features & Construction

- Designed to look like a recessed can light
- Quiet operation 1.2 sones
- PCRL80 has a E26 bulb base (bulb sold separately)
- PCRL80F has a GU24 bulb base (CFL spiral bulb included)
- Totally enclosed condenser motor for long life
- Motor rated for 30,000 hours continuous on
- Galvanized housing with black polyester powder coat finish
- Universal 4 or 5" metal duct adaptor with built-in backdraft damper
- 14-24" adjustable hanging bars
- Fits 2x8 construction
- cETLus Listed
- ENERGY STAR® qualified
- HVI Certified
- 5-year warranty

## Options & Accessories

- Light Cover
- Humidity Sensor
- Speed Control

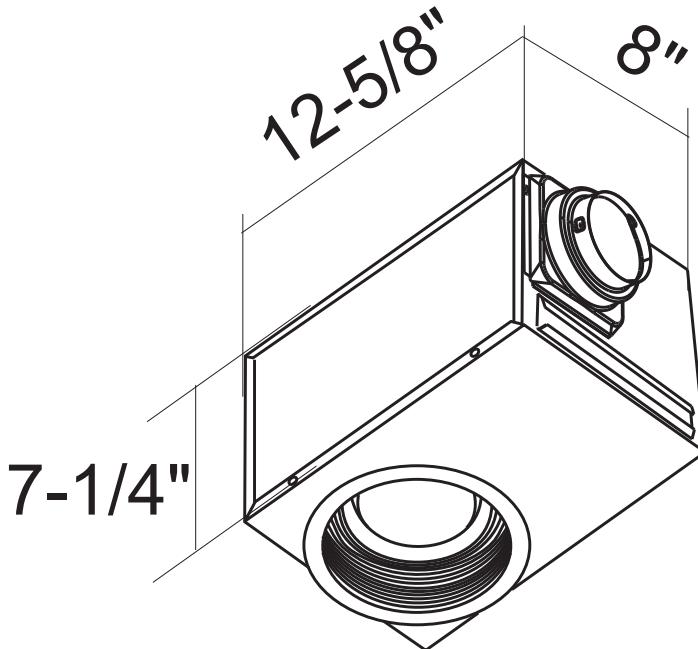
## HVI Certified Performance

PCRL80 & PCRL80F					
CFM @ Static Pressure		Watts	Energy Efficiency (CFM/Watt)	Sones @ .1" SP	Amps
0.1"	0.25"				
80	50	19.7	4.1	1.2	.27



# Recessed Vent Light

## Dimensions



## Options & Accessories

### Light Cover Option

#### PCRL80LC

The Light Cover (PCRL80LC) comes standard with PCRL80F and is optional with PCRL80. The light cover disguises a spiral or non-PAR30 bulb to keep the recessed can look.



### Plug-&-Play Modules

#### Humidity Sensor (PCHS)

- Detects rapid rise in humidity
- Auto-shut off timer
- Accessible sensitivity adjustment
- Humidity is sensed at the ceiling
- Meets CALGreen bathroom fan requirement
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



#### Speed Control (PCSC)

- Accessible speed adjustment
- High speed override
- Allows for adjustable continuous speed to meet ASHRAE 62.2
- Simple plug-in receptacle in fan housing
- Can be installed with new or pre-installed fan



## PC Recessed Vent Light Fan & Accessory Compatibility

The chart below indicates which plug-&-play or other PC accessories are compatible with each PCRL Model.

Option	PC Low Profile Models	
	PCRL80	PCRL80F
PCRL80LC	✓	Included
PCHS	✓	✓
PCSC	✓	✓

## PC3S

### *3-Switch Control*

The PC3S allows you to control three features of a PC fan with one switch. Designed for PC fans with a Plug-&-Play grille and control option installed. Includes matching wall plate.



### Specifications

Grounding	Non-Grounding
Switch Type	Single Pole / Single Pole / Single Pole
Amperage	15 Amp
Voltage	120 Volt
Termination	Quickwire Push-In
Standards & Certifications	UL/CSA

## FLTD-60

### *Fan/Light Delay Timer Switch*

### Features

- One switch controls fan and light
- Digital timing circuit
- Saves energy by automatically turning exhaust fan off
- Adjustable fan turn off time
- Fits single switch outlet box
- Simple wire nut hook-up
- Cover plate and hardware provided



### Specifications

Time Delay	
Adjustment	On-board Trimpot
Range	1 to 60 minutes
Input	
Voltage	120 Volt
Frequency	50/60 Hz
Standards & Certifications	cULus

## SRT-30

### *Rotary Spring Wound Timer*

### Features

- Hold feature enables user to override the automatic shut-off function
- Supplied time dial plates are designed to fit either toggle (FF) or decorator style (FD) switch plates
- Single or multi-gang with no field modifications required
- Time saving up front terminal connection with teeter-type terminals
- Press-on knob design ensures quick and easy installation
- CFL Compatible



# Wall Control Options

## EPBT-60

*Electronic Push Button Timer*

### Specifications

Switch Type	Single Pole
Timer Type	Four Preset
Style	Decora
Type	Electronic
Time Range	10-20-30-60 Minutes
Load Type	Incandescent / Inductive
Load Rating	1000W / 20A 1HP-120V
Voltage	120 Volt AC 60 Hz
Wire	3
Neutral	Required
Color	White



## 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 a S&P 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.

### 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



## PER-W

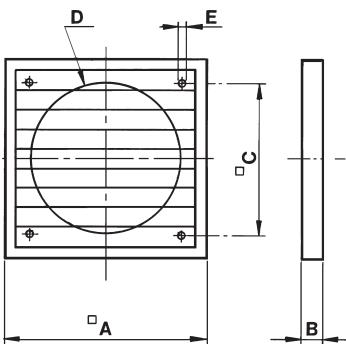
*Plastic Louvered Shutter*



Louvered backdraft shutters manufactured totally from UV stabilized plastic material.

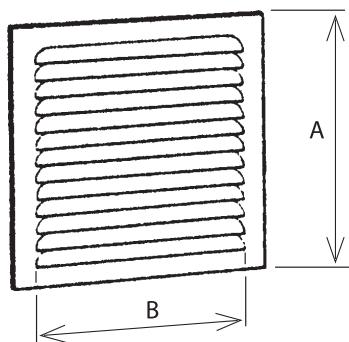
Dimensions in inches/mm

Model	A	B	C	D	E
PER-100W	5 <sup>15/16</sup> 151	5/8 16	5 <sup>1/2</sup> 140	4 <sup>3/16</sup> 106	3/16 5
PER-150W	8 203	9/16 14	7 <sup>1/2</sup> 191	6 152	3/16 5



## GRA

*Aluminum Exterior Fixed Grilles*



Dimensions inches/mm

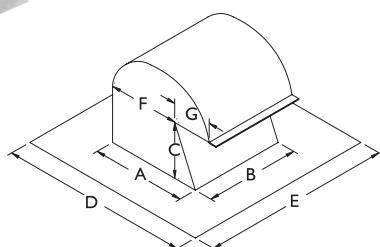
Model	A (External Dimensions)	B (Grill Area)
GRA-100	5.12 x 5.12 130 x 130	3.94 x 3.94 100 x 100
GRA-150	7.48 x 7.48 190 x 190	5.91 x 5.91 150 x 150

## RC

*Roof Cap*



Galvanized steel roof caps with damper flap closure.



Dimensions in inches/mm

Model	A	B	C	D	E	F	G	Wgt. (lbs)
RC-4	6 150	6 150	3 1/2 90	12 300	12 300	4 1/2 115	2 1/2 60	1
RC-6	8 200	8 200	4 100	14 355	14 355	5 125	4 100	1

# Ducting Accessories

## PCDC

### *Duct Collars*

Plastic duct collars with built-in backdraft dampers.

4" duct collar: PCDC4

6" duct collar: PCDC6



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## DC

### *Duct Connector*

4" duct connector: DC-4

6" duct connector: DC-6



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## WC

### *Worm Clamp*

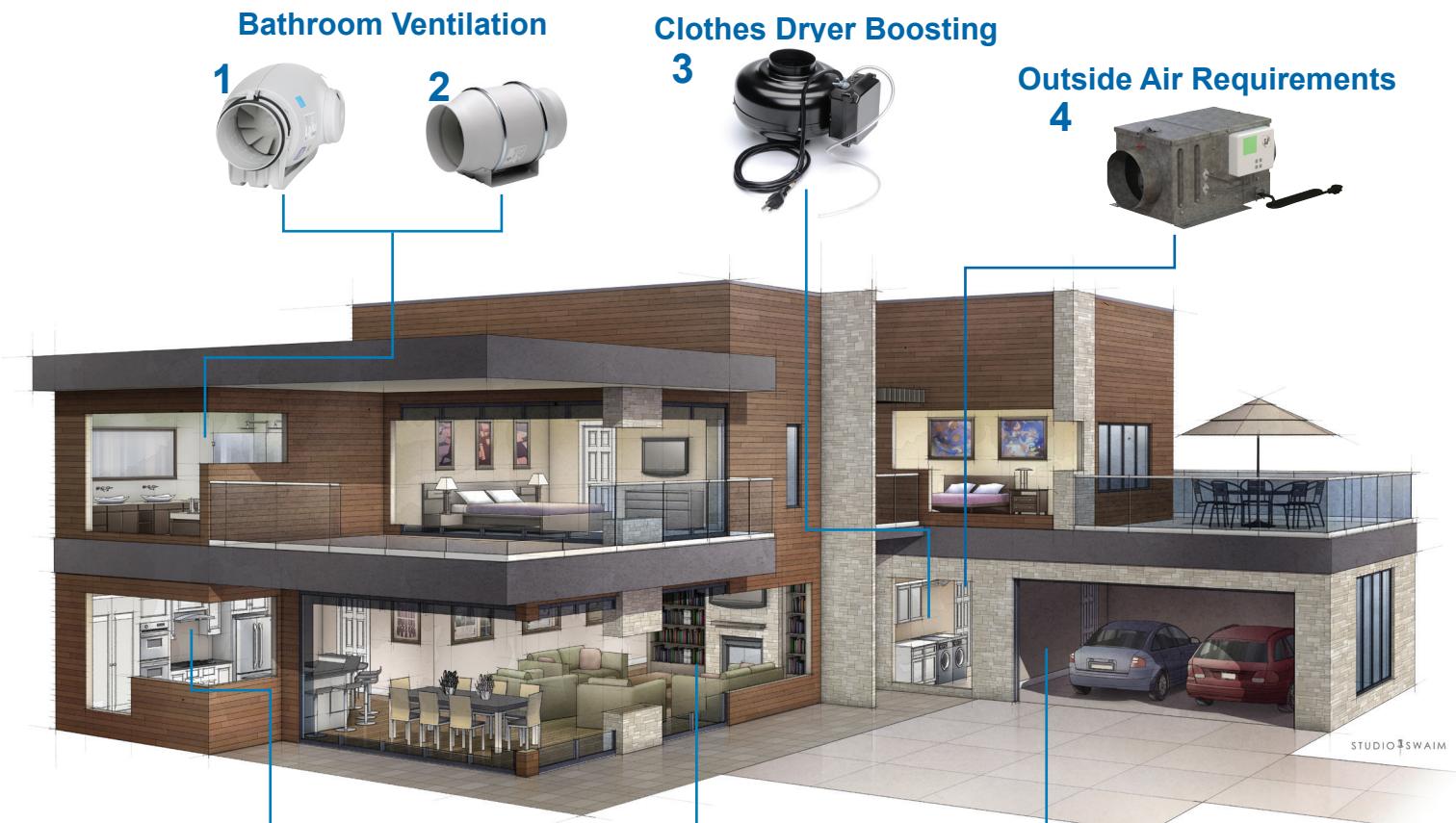
4" worm clamp: WC-4

6" worm clamp: WC-6



## Additional Products

S&P offers a comprehensive line of residential/light commercial fans in addition to the Premium Choice Series. Please refer to our website [www.solerpalau-usa.com](http://www.solerpalau-usa.com) for information on all products shown below as well as additional products not shown.



### Product Legend

1. TD-SILENT Series
2. TD-MIXVENT Series
3. Clothes Dryer Boosting Kits featuring PV-100X
4. ReFresh Series
5. PV-POWERVENT Series
6. TR - Energy Recovery Ventilators
7. SWF-SIDEWALL Series
8. PRF-Radon Mitigation Fans

### Balanced Ventilation Systems



**Radon Mitigation**





**S&P USA Ventilation Systems, LLC    S&P Canada Ventilation Products, Inc.**

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