Inline Duct and Sidewall Centrifugal Fans

For High Static Pressure Applications

CA-CF0211

The World's Leading Producer of Air Movement Products

Fans for Life!

Soler&Palau Ventilation Group

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POWERVENT (PV) SERIES

The POWERVENT (PV) series of direct drive centrifugal in-line duct ventilation fans consists of twelve model sizes 4”, 5”, 6”, 8”, 10” and 12.4” respectively. All models are designed for direct connection in-line with standard diameter round ducting. Airflow performance values range from 108 CFM (PV-100) up to 942 CFM (PV-315x).

All PV fan models incorporate a powerful external rotor motor that has been factory matched to a nonoverloading backward curved centrifugal fan wheel.

This powerful combination enables the PV fans to deliver exceptional airflow performances against high static pressure typically found in ducted ventilation systems. All motors within PV fans are fully speed controllable using voltage or frequency control regulators.

The PV series of duct exhaust or supply fans have been specifically designed for simple installation and many years of maintenance free operation. The PV fans can be mounted at any angle and at any point along the duct. The totally enclosed motor design allows the PV fans to operate in high moisture, lint and dust laden air. All models are manufactured with high quality materials and workmanship that is supported by a comprehensive **five (5) year warranty**.

All PV Fans feature a corrosion resistant galvanized steel casing with black baked enamel coating and are supplied with a strong mounting bracket and prewired junction box. The interconnect wiring between the fan and the junction box provides installation flexibility and permits easy access to the fan for service and maintenance.

The PV100x fans feature Class F Motor Insulation making them the ideal fans for Clothes Dryer Boosting applications. See page 8 for more details.

Applications

The PV fans are ideally suited for a wide range of residential, commercial and industrial exhaust and intake ventilation applications. Among typical applications would include the following:

Residential
- Kitchen Range Hoods
- Warm or Cool Air Transfer
- Bathrooms
- Laundry Rooms
- Radon Mitigation

Commercial
- Conference Rooms
- Offices
- Bars & Restaurants
- Cafeterias
- Locker Rooms
- Make-Up Air Applications

Industrial
- Warehouses
- Welding Fume Extraction
- Spot Ventilation
- Equipment Cooling
- Workshops & Smoking Areas

Technical Specifications

All twelve PV model sizes (PV 100, 100x, 125, 125x, 150, 150x, 200, 200x, 250, 250x, 315 and 315x) include the following specifications:

Warranty
Five (5) year limited warranty.

Casing
- Manufactured from high grade pressed galvanized steel, with black baked enamel coating.
- Extra long inlet and discharge collars make installation quick and trouble free.
- Supplied with a strong galvanized steel mounting bracket.
- Supplied with a prewired junction box.

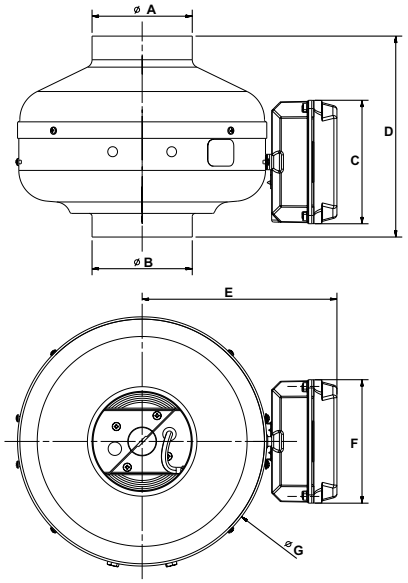
Wheel / Impeller
- Backward curved centrifugal type.
- Factory matched to an external rotor motor and dynamically balanced to eliminate vibration.

Accessories
- Available with cord set.
- A wide range of accessories is available

Motor
- Totally enclosed permanent split capacitor start and run external rotor motors.
- 115V 60Hz (single phase) electrical connection.
- Permanently sealed, self lubricating precision ball bearings.
- Safety Thermal Overload Protection Cut-Out (Automatic Reset Type).
- All Models are suitable for working airstreams up to 140° F

Code Approval
- All models have been independently safety tested by Underwriters Laboratories, Inc. and are UL and cUL Listed.
- Independently safety tested by Intertek Laboratories, and are ETL Listed.
- Independently tested for Airflow Performance. The PV range is licensed to bear the AMCA seal for Air Performance.
- The PV product range is certified by the Home Ventilating Institute (HVI) for Air Performance.

Dimensions in inches/mm



Model	A	B	C	D	E	F	G	Weight lbs(kgs)
PV-100	3 13/16 97.5	3 13/16 97.5	4 3/4 120	7 11/16 196	7 1/2 190	4 3/4 120	9 9/16 243	7 3.0
PV-100x	3 13/16 97.5	3 13/16 97.5	4 3/4 120	7 11/16 196	7 1/2 190	4 3/4 120	9 9/16 243	7 3.0
PV-125	4 13/16 122.5	4 13/16 122.5	4 3/4 120	7 13/16 198	7 1/2 190	4 3/4 120	9 9/16 243	7 3.0
PV-125x	4 13/16 122.5	4 13/16 122.5	4 3/4 120	7 13/16 198	7 1/2 190	4 3/4 120	9 9/16 243	7 3.0
PV-150	5 13/16 147	5 13/16 147	4 3/4 120	8 7/16 214	9 5/16 236	4 3/4 120	13 1/8 334	11 5.0
PV-150x	5 13/16 147	5 13/16 147	4 3/4 120	8 7/16 214	9 5/16 236	4 3/4 120	13 1/8 334	11 5.0
PV-200	7 13/16 198	7 13/16 198	4 3/4 120	8 3/4 223	9 5/16 236	4 3/4 120	13 1/8 334	11 5.0
PV-200x	7 13/16 198	7 13/16 198	4 3/4 120	8 3/4 223	9 5/16 236	4 3/4 120	13 1/8 334	11 5.0
PV-250	9 3/4 248	9 3/4 248	4 3/4 120	8 1/16 205	9 5/16 236	4 3/4 120	13 1/8 334	13 6.0
PV-250x	9 3/4 248	9 3/4 248	4 3/4 120	8 1/16 205	9 5/16 236	4 3/4 120	13 1/8 334	13 6.0
PV-315	12 5/16 312	12 5/16 312	4 3/4 120	9 3/16 233	10 9/16 269	4 3/4 120	15 13/16 401	21 10.0
PV-315x	12 5/16 312	12 5/16 312	4 3/4 120	9 3/16 233	10 9/16 269	4 3/4 120	15 13/16 401	21 10.0

Air Performance

Trade Name	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”		
Power Vent-100	PV-100	1400	115	57	108	100	92	85	78	66	52	33	18	1.70	4”
Power Vent-100x	PV-100x	2880	115	84	153	142	130	120	111	96	80	63	34	1.85	4”
Power Vent-125	PV-125	2350	115	58	128	104	85	74	63	47	32	15	-	1.43	5”
Power Vent-125x	PV-125x	2745	115	85	206	190	170	153	135	110	88	62	33	1.77	5”
Power Vent-150	PV-150	2750	115	78	245	205	177	157	129	93	59	-	-	1.20	6”
Power Vent-150x	PV-150x	2700	115	130	390	367	340	312	285	233	193	153	110	2.05	6”
Power Vent-200	PV-200	3100	115	130	402	375	350	327	296	239	179	135	85	1.94	8”
Power Vent-200x	PV-200x	2930	115	180	544	515	485	446	415	360	312	273	230	2.64	8”
Power Vent-250	PV-250	3000	115	200	587	555	525	495	472	412	355	312	270	2.61	10”
Power Vent-250x	PV-250x	3045	115	214	618	595	570	540	510	450	390	340	297	2.80	10”
Power Vent-315	PV-315	2600	115	170	654	605	570	525	487	408	333	265	203	2.21	12.4”
Power Vent-315x	PV-315x	2650	115	370	942	905	859	811	762	622	508	440	390	3.90	12.4”

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.

Soler & Palau 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.

*PV 150x and larger ENERGY STAR® qualified.

The PV-POWERVENT Series fans are California Title 24 compliant and meet ASHRAE 62.2 when installed with 3 way switch and remotely mounted speed control.

Sound

Fan sound levels are measured in sones. At this time there are no sone level test standards available through HVI due to the fact that remote mounted fan noise levels are in proportion to the following: type of duct, length of duct, fan distance from the intake source and other random factors. It is generally accepted that remote mounted venting is usually quieter than standard (in room) venting.

Accessories

BOC
Interior
Air Valve

CAR
Backdraft
Damper

ACOP-VENT
Antivibrating
coupling

SIL
Sound
Attenuator

PER
Plastic louver
shutter

SC 15
Variable speed
control

MFL
Filtration
Box

SWF-SIDEWALL FAN (SWF) SERIES

The SWF series utilizes the same powerful (high static) motor found in the popular PV Series fans, yet the SWF series is encased in an exterior mounted housing. The outdoor rated exterior housing provides easy access from the outside of a building or dwelling. This makes the SWF a great solution for installations where attic space or easy indoor access is difficult and not suitable for traditional PV style in-line mounting. The Sidewall Fan Series (SWF) of direct drive centrifugal ventilation fans consists of five model sizes ranging from 4-8". All models are designed for direct connection in-line with standard diameter round ducting. Airflow performance values range from 119 CFM up to 416 CFM.

All SWF series models incorporate a powerful external rotor motor that has been factory matched to a nonoverloading backward curved centrifugal fan wheel.

This powerful combination enables the SWF to deliver exceptional airflow performances against high static pressure typically found in ducted ventilation systems. All motors within the SWF series are fully speed controllable using voltage or frequency control regulators.

The SWF series has been designed for easy through the wall installation. The totally enclosed motor design allows for the SWF to operate in high moisture, lint and dust laden air. All models are manufactured with high quality materials and workmanship that is supported by a comprehensive **five (5) year warranty.**

The SWF series features a corrosion resistant galvanized steel casing with a baked enamel coating that can be painted to match the exterior wall. The unit also includes a built-in backdraft damper and an extended opening exhaust grille. The larger grille allows for the easy exhaust of "dirty" or lint laden air while the spring-loaded backdraft damper helps prevent insects, etc. from entering duct work.

The SWF100x fans feature Class F Motor Insulation making them the ideal fans for Clothes Dryer Boosting applications. See page 8 for more details.

Applications

The SWF series is ideally suited for a wide range of residential, commercial and industrial exhaust and intake ventilation applications. Typical applications would include the following:

Residential
- •Bathrooms
- •Laundry room
- •Kitchen Range Hoods
- •Apartments or Townhouses

Commercial
- •Conference Rooms
- •Offices
- •Bars & Restaurants

Industrial
- •Welding Fume Extraction
- •Spot Ventilation
- •Workshops & Smoking Areas

Technical Specifications

All five SWF models sizes (SWF-100, 100x, 150, 150x & 200) include the following specifications:

Warranty
Five (5) year limited warranty.

Casing
- Manufactured from high grade pressed galvanized steel, with baked enamel coating.
- Removable top for easy access to motor for cleaning or inspection.
- Large grille opening for easy passing of lint and other potentially clogging materials.
- Includes prewired terminal box.

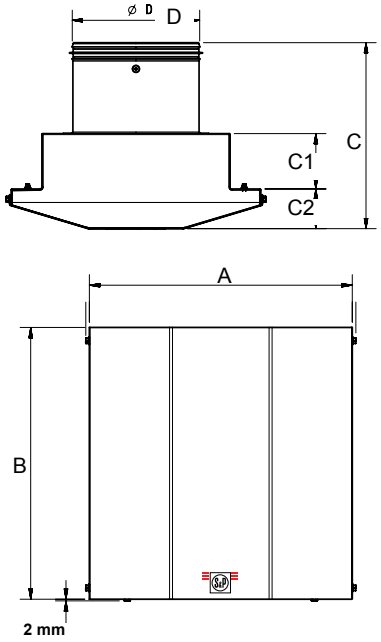
Wheel/Impeller
- Backward curved centrifugal type.
- Factory matched to an external rotor motor and dynamically balanced to eliminate vibration.

Accessories
- A wide range of accessories is available to complete the most demanding installation.

Motors
- Totally enclosed permanent split capacity start and run external rotor motors.
- 115V 60Hz (single phase) electrical connection.
- Permanently sealed, self lubricating precision ball bearings.
- Safety Thermal Overload Protection Cut-Out (Automatic Reset Type).
- All models are suitable for working airstreams up to 140ºF.

Code Approval
- All models have been independently safety tested by Underwriters Laboratories, Inc. and are UL and cUL listed.
- The SWF product range is certified by the Home Ventilating Institute (HVI) for Air Performance.

Dimensions inches/mm



Model	A	B	C	C1	C2	D
SWF-100	13 1/4 / 337	13 1/4 / 337	9 / 228	3 / 76	2 7/16 / 62	4 / 100
SWF-100x	13 1/4 / 337	13 1/4 / 337	9 / 228	3 / 76	2 7/16 / 62	4 / 100
SWF-150	15 1/2 / 394	13 1/4 / 337	10 3/16 / 256	3 / 76	2 7/16 / 62	6 / 150
SWF-150x	15 1/2 / 394	16 1/16 / 408	10 / 254	3 3/16 / 81	2 7/16 / 62	6 / 150
SWF-200	15 1/2 / 394	16 1/16 / 408	11 7/16 / 290	3 3/8 / 87	2 7/16 / 62	8 / 200

Performance

Model	RPM	Volts	Frequency	Current	Watts	CFM vs. Static Pressure (SP) Ins. WG								
						0”	0.125”	0.25”	0.375”	0.5”	0.75”	1.0”	1.25”	1.5”
SWF-100	2200	120	60 Hz	0.52 A	57	119	106	92	78	64	44	26	-	-
SWF-100X	2600	120	60 Hz	0.8 A	90	171	162	152	142	118	90	66	46	28
SWF-150	2600	120	60 Hz	0.8 A	90	235	221	197	181	168	122	81	60	27
SWF-150X	2800	120	60 Hz	1.0 A	115	354	332	310	287	266	230	192	147	96
SWF-200	2800	120	60 Hz	1.0 A	115	416	395	368	341	324	287	233	184	132

Sound

Fan sound levels are measured in sones. At this time there are no sone level test standards available through HVI due to the fact that remote mounted fan noise levels are in proportion to the following: type of duct, length of duct, fan distance from the intake source and other random factors. It is generally accepted that remote mounted venting is quieter than standard (in room) venting.

Accessories

SC 15
Variable speed control

BOC/BOR
Interior Air Valve

SPT-100x
Pressure Switch

CS-325
Current Sensor

MFL
Filter Box

Clothes Dryer Boosting with Centrifugal Fans

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 PV100x has been specifically designed to handle dryer boosting applications when overcoming long or complicated duct runs. This system helps save on drying time, moisture build-up, wear and tear on your dryer, and helps save on your electric bill. The centrifugal blade design is able to overcome extreme resistance from the most challenging installations. 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.

The PV-100x fan is available separately or as part of a kit that includes everything necessary for a hands-free operation. Once the system is installed you will no longer waste time, energy or unnecessary wear and tear on your dryer. The next step is to select which activation best fits your needs.

NOTE
The PV-100x Dryer Booster fan is suitable for use with duct runs of up to 105 linear feet of 4" rigid duct or a maximum of 6 elbows and 80 feet.

How to activate the PV-100x fan for clothes dryer boosting

PV-100xps

Pressure Switches

Pressure switches are a viable method of fan activation and a good solution for many installations. The pressure switch senses the pressure differential in the duct created by the dryer operation, thus activating the fan. Conversely, when the dryer is deactivated, the pressure switch senses this differential and the fan is deactivated. 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.

DBM-100xc

Current Sensors

Current sensors are S&P's "preferred" method of activation. They are "fail-safe", as there is no maintenance required on the current sensor and they're easy to install. The current sensing device can be installed at the outlet (where the dryer plugs into the wall) or at the circuit breaker box. When the device senses current going to the dryer, it activates the fan and vice-versa. No thought! No maintenance! Our choice!

IL-115/230

Interlocks

Interlocks, like Current Sensors, are another "fail-safe" method of clothes dryer booster activation. The interlocks senses when the fan is running and activates the dryer. Used as a safety feature, if the fan is not running or if there is a problem with the fan the dryer will not turn on.

All 3 activation methods are available as accessories or in the S&P's all inclusive dryer booster kits.

SWF - Sidewall Mount Exhaust Fan for Dryer Boosting

SWF100x

The sidewall unit can be paired with a current sensor or pressure switch when interior duct access in a home, apartment or townhouse is limited or difficult. The expanded exhaust grille allows for the easy passing of lint laden air. The SWF utilizes the same powerful motor as the PV-100x and is also suitable for duct runs up to 105 feet or up to 80 feet with 6 elbows. The low profile SWF fan is easy to install with an epoxy coating that can be painted to match the exterior of the building. The SWF also offers the same trusted 5 year warranty.

Soler & Palau USA
6393 Powers Ave.
Jacksonville, FL 32217
P. 800.961.7370
F. 800.961.7379
www.solerpalau-usa.com

Soler & Palau Canada
5600 Ambler Drive
Mississauga, ON L4W 2K9
P. 866.733.0233
F. 866.358.5346
www.solerpalaucanada.com