

# OWNER'S MANUAL

Power Blowers™

Laminar Air Flow (LAF) - Electric Driven

*SPVS Series*



# INTRODUCTION

Thank you for choosing Tempest Technology Corporation for your ventilation needs. With this manual we hope to help you operate your Tempest product safely and to its full potential. Maintained according to the specifications set in this manual and the engine manufacturer’s manual, it is not uncommon to receive many years of use and operation out of your Tempest equipment.

This manual is produced solely for the use of purchasers and operators of Tempest Technology Corporation equipment. Any reproduction, retransmission, or other use of the contents of this manual without written consent of Tempest Technology Corporation is strictly prohibited.

It is the intent of this manual to provide the owner/operator of Tempest Technology Corporation products with both general and specific information regarding the safe and proper operation and maintenance of the equipment described within.

## CONTACT

If after careful review, any questions arise concerning any portion of this manual, please contact Tempest Technology Corporation for assistance:

TEMPEST TECHNOLOGY CORP.  
4708 N. BLYTHE AVENUE  
FRESNO, CA 93722

Toll Free: 800.346.2143  
t: 559.277.7577  
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response@tempest.us.com  
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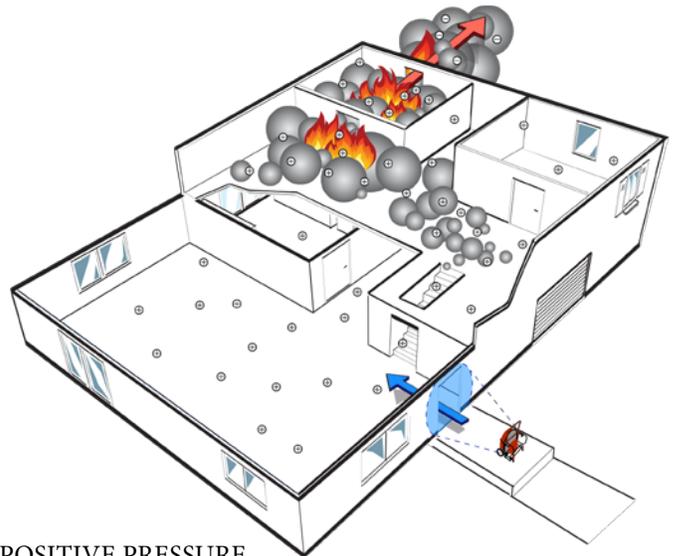
# ABOUT TEMPEST

Tempest Technology Corporation is the leading manufacturer of products and accessories for environmental management in firefighting and industrial applications.

Tempest began as a manufacturer of gasoline and electric powered blowers for the fire service. Fire departments use the **Tempest Power Blower™** to provide “Positive Pressure Ventilation / Attack” (PPV/PPA) to remove heat, gases and smoke from the interior of a burning structure.

Tempest has expanded into other industries and found new applications for its products. The **Tempest Power Blower™** and PPV/PPA are used by industrial applications to control dust, fumes and unhealthy gases like carbon monoxide, greatly improving safety in confined spaces.

Tempest Technology Corporation has earned a reputation as a leader and innovator in the air movement industry and continues in that role today.



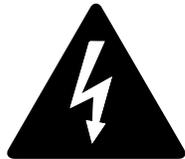
POSITIVE PRESSURE  
VENTILATION/ATTACK

## SAFETY GUIDE

Failure to follow the operating, maintenance and lubrication requirements set forth in this manual may result in serious personal injury or death and/or damage to equipment or property.

The following WARNING statements indicate potentially hazardous conditions for operators and equipment. Make certain that anyone who works on or around the blower has read and fully understands the safety precautions listed.

1. Carefully read this owner's manual before attempting to operate, service or disassemble any part of your **Tempest Power Blower™**.
2. **DO NOT** operate the unit when mentally or physically fatigued or impaired.
3. Stay away from rotating parts; avoid wearing loose jackets, shirts, and ties. Keep hands and feet away from moving parts.
4. Keep all unauthorized personnel at a safe distance from the blower.
5. Keep all guards in place. **DO NOT** make repairs while the unit is running. **DO NOT** operate if any guard or grille is not in place.
6. Always wear eye protection. Loose debris can be picked up in the air stream and flown in the air.
7. Hearing protection is required. Engine and air noise may exceed safe dB levels.
8. Always ensure proper voltage and amperage is delivered to your **Tempest Power Blower™**.
9. Only a qualified technician should perform repairs or maintenance on electric components.
10. Never operate your **Tempest Power Blower™** with electric components exposed.
11. Never operate your **Tempest Power Blower™** with damaged, exposed or frayed wiring.
12. It is the sole responsibility of the owner/operator to develop procedures for proper use of the **Tempest Power Blower™** in accordance with generally accepted ventilation techniques as well as the organization's own operating procedures, before placing the unit into service.



## GENERAL INFORMATION

### BLOWER IDENTIFICATION

Each **Tempest Power Blower™** has a part number as well as a serial number. The part number identifies the type of unit (size, drive, etc.) while the serial number relates to information referencing the date of manufacture. This information is useful should it become necessary to contact the factory regarding your **Power Blower™**.

### SERIAL NUMBER LOCATIONS

The serial number is typically located on the frame just right of the engine mount (when viewed from behind).

Please write the Serial Number of your **Tempest Power Blower™** in the spaces below. This will aid us in identifying which model you have when assisting you.

Model (Part No.) \_\_\_\_\_

Date \_\_\_\_\_

Serial No. \_\_\_\_\_

### WARRANTY

Warranty information on your unit can be found on the back page of this manual. For further information, please contact Tempest Technology Corp.

## POWER BLOWER™ DATA

<b>TYPE:</b>	Positive Pressure Ventilation Fan, Laminar Air Flow (LAF)
<b>DRIVE:</b>	Direct-Drive Variable Speed 110-120V, 60Hz or 220-230V, 50Hz Electric Motor, GFCI Compatible, NEMA-4 Rated Drive
<b>BLADE:</b>	AirFlex Fiberglass Reinforced Polyamide Blades
<b>BUSHING:</b>	Keyed Shaft and Set or Cap Screws
<b>SHROUD:</b>	“SP” Design Tapered Aluminum w/ Durable Powder-Coat Finish
<b>FRAME:</b>	Rugged, Lightweight, Square-Steel Tubing with Powder-Coat Finish
<b>TILT MECHANISM:</b>	Foot-Operated Tilt Mechanism Six Position Tilt, +15°, +10°, +5°, 0°, -5°, -10°
<b>GRILLE:</b>	Powder Coated, Continuous Circular-Wound, Flat Spiral with 6 Tie Points for Additional Safety. Meets UL & European CE Safety Standards
<b>VIBRATION DAMPENERS:</b>	Steel-Reinforced Rubber
<b>WHEELS:</b>	8” Non-Pneumatic w/ Steel Hubs

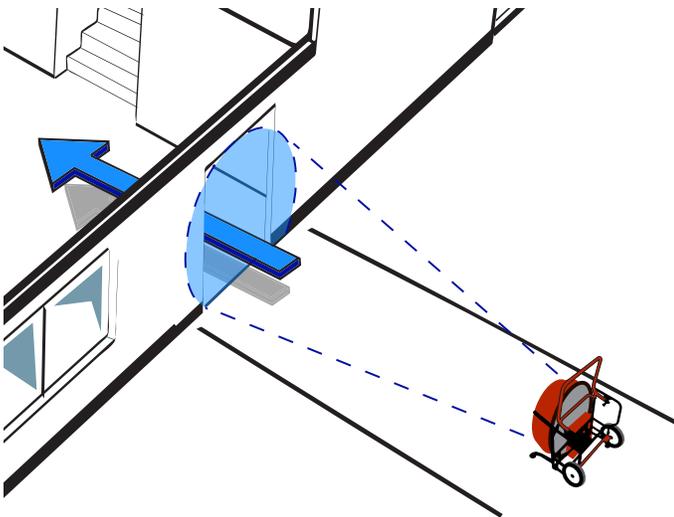
<b>SPVS (ELECTRIC) SPECIFICATIONS:</b>	<b>Model No.</b>	<b>Part No.</b>	<b>Size</b>	<b>HP</b>	<b>CFM</b>	<b>Dimensions (WxDxH)</b>	<b>Weight</b>
	SP-18-V-2.0	910-1720	18”	2.0	13,338	21.75” x 21.50” x 25.75”	105 lbs.

## POWER BLOWER™ INFORMATION

The *Tempest Power Blower™* is a high powered, portable fan used for Positive Pressure Ventilation and Attack (PPV/PPA), ventilation techniques that quickly and efficiently replace hazardous interior environments with clean, cool air.

PPV and PPA were pioneered in the firefighting industry where firefighters use the *Tempest Power Blower™* to ventilate smoke, heat, and harmful gases from buildings. This creates a safer environment for them to work in and makes it easier for them to find victims and extinguish the fire.

PPV and PPA rely on two principles, (1) an air pattern capable of creating an effective door seal, and (2) pressure. To accomplish Positive Pressure Ventilation or Attack, the blower is placed on the outside of the structure. It is positioned so that the air pattern created by the blower completely seals the entrance opening, or at least 2/3 of it. When this seal is achieved, the air pressure is increased equally at all points inside the structure. When an exhaust opening is created, all of the interior air moves in one mass towards it. The result is fast, efficient ventilation of the entire structure.



NOTE: The *Tempest Power Blower™* is the most efficient tool for PPV and PPA for two reasons. First, the exclusive Tempest SP tapered shroud design creates a narrow, high pressure, laminar air pattern. Second, the airflex impeller used on all Tempest blowers is designed to create high pressure. These two features working together make the *Tempest Power Blower™* a highly effective and efficient ventilation tool.

As with any new technique, Positive Pressure Ventilation requires training and education in order to be implemented properly and safely. Tempest offers access to a complete line of training materials, which cover many applications for this powerful ventilation technique. For more information visit [www.tempest.us.com](http://www.tempest.us.com), [www.positivepressuretraining.com](http://www.positivepressuretraining.com) or contact us at 800.346.2143 or [response@tempest.us.com](mailto:response@tempest.us.com).

## OPERATING PROCEDURES

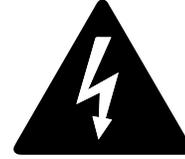
### PRE-OPERATION

After receiving and unpacking your blower, be sure to carefully inspect it for any damage that might have occurred during shipping. Should you find any damage: PLEASE NOTIFY TEMPEST TECHNOLOGY CORP. IMMEDIATELY AT 800.346.2143 OR [RESPONSE@TEMPEST.US.COM](mailto:RESPONSE@TEMPEST.US.COM).

### OPERATION

#### SET-UP, STARTING AND STOPPING

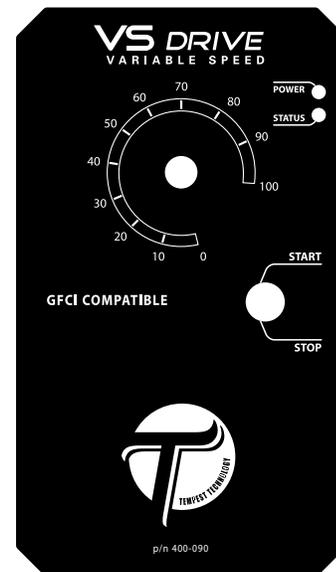
Assuming the previous Pre-Operation and safety instructions have been followed the blower is now ready to run.



**WHEN USING A GENERATOR, IT IS IMPERATIVE THAT THE GENERATOR BE RUNNING AT FULL CAPACITY BEFORE PLUGGING IN ANY ELECTRIC BLOWER. ALWAYS VERIFY SUFFICIENT GENERATOR OUTPUT BEFORE USE. IMPROPER VOLTAGE SUPPLY MAY DAMAGE UNIT AND VOID WARRANTY.**

**CAUTION: DO NOT MOVE THE BLOWER WHILE IT IS IN OPERATION. SEVERE PERSONAL INJURY IS POSSIBLE AS WELL AS DAMAGE TO THE BLOWER.**

**ALWAYS SHUT-DOWN THE BLOWER PRIOR TO MOVING.**



SPVS DRIVE

## SET-UP

Position the blower in the desired location, making sure it is placed on a flat, hard and debris free surface.

## STARTING

1. Check that the toggle switch is set to STOP.
2. Plug the blower cord into power source receptacle. If power is properly brought to the control, the "POWER" LED and the "STATUS" LED indicators will be lit.
3. Engage START toggle. The toggle is momentary switch to start. The center position is the run location.
4. Adjust the rheostat knob to the desired speed/load.

## STOPPING

1. Stop unit before unplugging from power source. Make sure toggle is set to STOP.

NOTE: SPVS GFCI systems are set to run on the cord length and size specified at the time of purchase (options listed below). If you wish to run the unit on a different size/length cord than originally requested, the fan's drive may need to be reset. For information on how to adjust the set cord length and size, please contact Tempest Technology Corp.

- A) 15' of 12 AWG
- B) 200' of 10 AWG
- C) 200' of 12 AWG
- D) 200' of 14 AWG

## MAINTENANCE PROCEDURES

Although Tempest *SPVS Power Blowers™* are designed to eliminate most maintenance issues, it is imperative that the blowers be inspected before startup on each use. Please review the following list before using this product.

### MAINTENANCE SCHEDULE

#### EVERY USE

- INSPECT BLOWER FOR DAMAGE AND FIX IF ANY
- TIGHTEN/REPLACE ANY LOOSE OR MISSING PARTS

#### EVERY MONTH OR 10 HOURS

- INSPECT & CLEAN SHROUD & GRILLES

IMPORTANT: Always operate the blower in an area free of debris which may be pulled into the unit's blades. If you suspect the fan's blade may have contacted a hard object, thorough inspection of the blade assembly should be conducted immediately to ensure safety. You may contact Tempest Technology Corp. in order to find out how to properly inspect the blade assembly.

## **POWER BLOWER™ TROUBLESHOOTING**

Various factors can contribute to or be the sole cause of problems for electric power blowers. This section will identify some of these problems and provide solutions to correct them.

### **IF THE “POWER” AND THE “STATUS” LEDS DO NOT LIGHT UP**

- Makes sure unit is connected to power source.
- Confirm that adequate power is being supplied to blower. If power supply is adequate, **DISCONNECT BLOWER FROM POWER SOURCE** and check for loose or faulty wiring on blower electrical system and have a qualified professional perform repairs if needed.
- Connect blower to power source and attempt restarting. If blower still does not run, contact Tempest at 800.346.2143 or [response@tempest.us.com](mailto:response@tempest.us.com).

### **BLOWER SURGES WHEN RUNNING ON GENERATOR**

- Check that the generator meets the proper voltage output to operate the blower.
- If blower is still surging, contact Tempest at 800.346.2143 or [response@tempest.us.com](mailto:response@tempest.us.com).

### **BLOWER MOVEMENT OR “WALKING”**

- Blowers may walk if not running at full speed, make sure the blower is running at full speed.
- Make sure the blower is sitting flat and not on small rocks or other objects.
- If blower is still walking, contact Tempest at 800.346.2143 or [response@tempest.us.com](mailto:response@tempest.us.com).

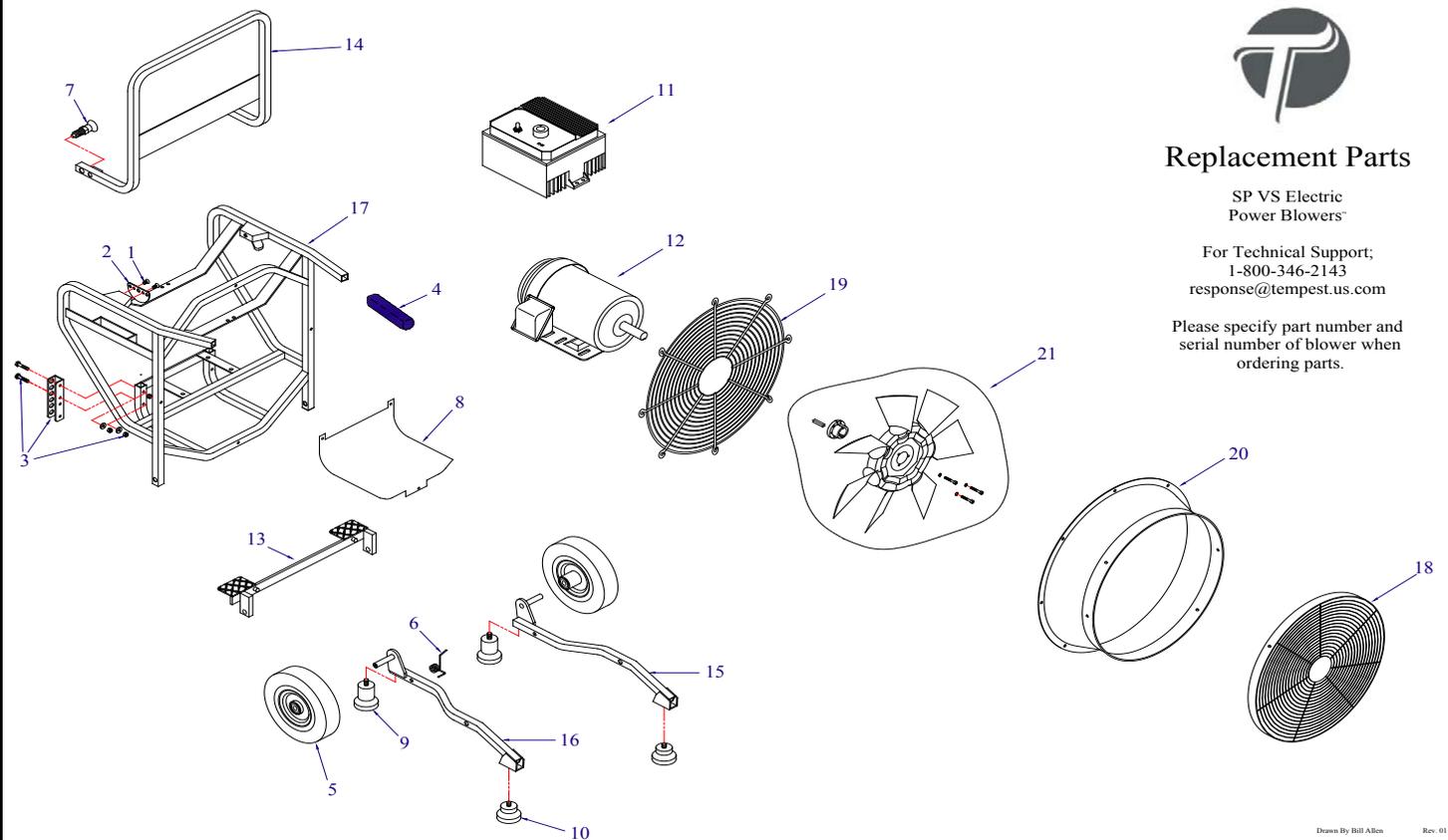


## Replacement Parts

SP VS Electric  
Power Blowers™

For Technical Support;  
1-800-346-2143  
response@tempest.us.com

Please specify part number and  
serial number of blower when  
ordering parts.



Drawn By Bill Allen Rev: 0116\_01A

SP-18-V-2.0  
910-1720

Item #	Description	Part No.
1	1/4 X 1/2 FLAT SOC C/S ZINC	100-079
2	HANDLE BRACKET SP18/21	220-069
3*	HEIGHT ADJUST BRACKET SST	220-074K
4	GRIP BASIC BLOWER HANDLE	220-248
5	WHEEL 8" x 2" OFFSET FLAT FREE	240-012
6	SPRING TORSION LHW RIGHT	300-018
7	SPRING PLUNGER LOCK	300-170
8	DEBRIS GUARD SP	300-206
9	FOOT PAD 2.23 X 2.50 REAR	580-012
10	FOOT PAD 2.23 X 1.50 FRONT	580-015
11*	VS DRIVE	581-182K
12*	ELECTRIC MOTOR ASSEMBLY	600-144
13*	WIN STEP SP	600-454K
14*	HANDLE SP	600-455K
15*	LEG ASY SP LEFT	610-1025K
16*	LEG ASY SP RIGHT	610-1026K
17*	FRAME SP-18-V	610-1327K
18*	A/S GRILLE SP	610-1423K
19	GRILLE HP REAR	610-1426
20*	SHROUD SP RED	705-012
21*	BLADE ASSEMBLY SP	705-252

\* denotes item includes necessary hardware for installation

NI Not Illustrated

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Information and Material Subject to Change Without Notice







## **WARRANTY INFORMATION**

Except as otherwise set forth below, any claim by Customer with reference to the Goods sold shall be deemed waived by the Customer unless submitted in writing to Tempest within the earlier of (i) five (5) business days following the date Customer discovered, or by reasonable inspection should have discovered, any claimed breach of the foregoing warranty, or (ii) thirty (30) calendar days following the date of shipment. Any cause of action for breach of the foregoing warranty shall be brought within one (1) year from the date the alleged breach was discovered or should have been discovered, whichever occurs first.

### **Limited Power Blower Warranty**

Tempest warrants to the original purchaser that all Tempest gasoline and electric powered blowers (except the engine or motor and drive) will be free from original defects in workmanship and material, under normal-use conditions, and Tempest will replace any defective power blower part (except the engine or motor and drive) if returned during the applicable warranty period, for the time frame indicated below:

Firefighting Industry:

Five (5) years from date of shipment

Industrial/Rental Industry:

One (1) year from date of shipment

### **Blower Engine / Motor & Drive Warranty**

The engines manufactured by Honda® and Briggs & Stratton® are covered by a separate manufacturer's warranty for a period of two (2) years. Electric motors manufactured by Magnetek, Marathon, Baldor, Franklin Electric and Multi-Fan are covered by a separate manufacturer's warranty for a period of one (1) year.

**Note: Unauthorized repair or modification of the factory assembly or parts voids the warranty.**

All information provided in this operations manual is subject to change without notice. Please refer to our website for the most recent sales terms and conditions.



### **Tempest Technology Corporation**

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