

SIDEWALL POWER VENTER KIT

Model: SWG, SWGII & SWG Stainless Series

*Patented



TYPICAL VENTING SYSTEM COMPONENTS

- 1 - SWG Series Power Venter
- 1 - CK Series Control Kit (sold separately)

OPTIONAL SYSTEM COMPONENTS

SWG SERIES THROUGH-WALL EXTENSION KIT

For installation in wall thickness over 8 inches. Models PEK-4 through PEK-8 are available.

FOR MOST MULTIPLE HEATING EQUIPMENT SYSTEMS

One CK Series Control Kit for each appliance. Except for a 24V gas furnace or boiler and a 30mV water heater multiple venting system, use the CK-90 Series Control Kit.

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GENERAL SYSTEM INFORMATION

Designed for operation with natural gas, LP gas and #2 fuel oil appliances.

1. The thermostat (wall thermostat or aquastat) calls for heat and energizes a relay which activates the power venter. After the venter motor has come up to speed, the pressure switch closes. This closes the circuit to the burner and allows the burner to fire.
2. For millivolt controlled water heaters using the CK-20 Series Control Kit, the gas valve pressure switch activates the power venter at the same time as the burner fires.
3. After the heating requirement has been satisfied, the thermostat circuit will open and de-activate the burner and power venter circuit.
4. For venting systems equipped with a post purge device, the power venter operates for a period of time after the burner has shut off to purge remaining flue gases.

DO NOT DESTROY

THESE INSTRUCTIONS MUST REMAIN WITH EQUIPMENT



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THE VENTING SOLUTIONS COMPANY

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CONTROL KITS

- CK-20F/HWK:** For operation with 30 or 750 millivolt gas-fired water heaters, gas-fired space heaters and gas-fired pool or spa heaters with an internally mounted thermostat. Includes a fixed post purge.
- CK-21:** For operation with gas-fired instantaneous water heaters with a pressure tap port in the burner manifold.
- CK-40F/41F:** For operation with gas-fired furnaces, boilers, unit heaters and water heaters operating with a 24 VAC gas valve. For systems not equipped with factory mounted spillage switches, use the CK-41F which includes two GSK-3 spill switches. Includes a fixed post purge.
- CK-43/43F:** For draft induced 24 VAC gas valve systems. Includes a 4" MG-1 draft control and electronic post purge. The CK-43F includes a fixed post purge.
- CK-61:** For operation with oil-fired systems. Has electronic post purge.
- CK-62:** For operation with oil-fired systems. Has thermally activated post purge.
- CK-63:** For operation with oil-fired systems. Has electronic post purge. For operating venter with or without burner motor.
- CK-81:** For operation with 750 millivolt operated boilers, furnaces, water heaters, pool or spa heaters and gas-fired fireplaces when operating with remote mounted thermostat. Operated off a 24 VAC thermostat. For operation off of a 120 VAC thermostat or wall switch, use the CK-80.
- CK-91/91F:** For gas fired draft induced 24 VAC gas valve systems and a 30 millivolt operated water heater. Includes a 4" MG-1 draft control and an electronic post purge. The CK-91F includes a fixed post purge.
- CK-92*/92F:** For operation with gas-fired furnaces, boilers, unit heaters and water heaters operating with a 24 VAC gas valve and a 30 millivolt operated water heater. Includes an electronic post purge. The CK-92F includes a fixed post purge.

INSTALLATION SAFETY INSTRUCTIONS

CAUTION: *This device must be installed by a qualified installer in accordance with the manufacturer's installation instructions. Appliances should have a minimum of 75% combustion efficiency or have a maximum measured flue gas temperature of 550°F (Stainless steel units maximum temperature rating 650°F US/575°F CA) at the inlet of the power venter.*

1. The power venting system must be installed by a qualified installer. "Qualified Installer" shall mean an individual who has been properly trained or a licensed installer. The installer must write or imprint his name, phone number and date of installation on the installation tag. The tag should be attached to the power venting system control kit box or power venter unit. Recording burner and venting system initial operational information is strongly recommended as a guide for service or burner tune-up. Enter this on the back page of this manual.
2. Safety inspection of a venting system should be performed before and after installing a power venting system on an existing or new appliance. Procedures to follow are those recommended by the National Fuel Gas Code A.N.S.I.Z223.1, or refer to the General Installation Inspection section of this manual.
3. Plan the vent system layout before installation to avoid the possibility of accidental contact with concealed wiring or plumbing inside walls.
4. Single wall vent pipe (refer to Diagram B) may be used to join an appliance to the venting system, but if proper clearances cannot be maintained from combustible materials, Class B Vent Pipe should be used for gas appliances and Class L Type Vent Pipe for oil appliances. Refer to national or local codes for guidelines.
5. Disconnect power supply before making wiring connections to prevent electrical shock and equipment damage.
6. This equipment is designed to overcome minor negative pressure conditions. To ensure extreme negative pressure does not exist, follow the General Installation Inspection section of this manual.
7. Heating appliances equipped with draft hoods, such as boilers or furnaces, LP gas appliances and Natural gas appliances SHOULD have a secondary spillage switch installed. On appliances without draft hoods, it is recommended that a secondary safety switch such as a WMO-1, GSK, FTS, or TSP-1 be used. Gas-fired 30 millivolt power systems MUST be equipped with a spillage switch.
8. Air flow adjustment MUST be made to ensure appliance efficiency. This should be done at the appliance exhaust outlet with a velocity meter, draft gauge or by "match test procedure". A match test is in accordance with National Fuel Gas Code A.N.S.I.Z223.1, Section 8.6.
9. On oil-fired and gas-fired heating appliances not equipped with a draft hood, a barometric draft control MUST be installed to regulate proper air flow and fluctuations in the system's air flow during operation. Fluctuations may come from wind loads on the outlet of the power venter, house de-pressurization during windy days and the different house ventilation requirements between summer and winter operation. For gas appliances, use a Field Controls Type MG-1 Barometric Draft Control. For oil appliances use a Field Controls Type M or RC Barometric Draft Control. Gas-fired draft induced systems should have a single-acting barometric draft control installed.

INSTALLATION OF SWG POWER VENTER (See Table 1)

Table 1

| UNIT SIZING CHART | | | | | |
|---------------------------|----------------------------|---|-----------------------------------|------------------------------------|---------------------|
| OIL | GAS | MAXIMUM EQUIVALENT FEET OF VENT PIPE | | | |
| MAX* OIL GPH INPUT | MAX** BTU/HR. INPUT | AT MAX BTU/HR INPUT | AT 60% OF MAX BTU/HR INPUT | VENTING WITH VENT PIPE SIZE | MODEL |
| N/A | 70,000 | 21 | 80 | 3" | SWG-3 |
| | | 50 | 100 | 4" | |
| | | --- | --- | --- | |
| 1.10 | 170,000 | --- | 23 | 3" | SWGII-4HD SWG-4s |
| | | 35 | 100 | 4" | |
| | | 65 | 100 | 5" | |
| 1.85 | 290,000 | 16 | 44 | 4" | SWGII-5 SWG-5s |
| | | 51 | 100 | 5" | |
| | | 95 | 100 | 6" | |
| 2.65 | 416,000 | 28 | 78 | 5" | SWGII-6 SWG-6s |
| | | 68 | 100 | 6" | |
| | | 100 | 100 | 7" | |
| 3.60 | 566,000 | 28 | 78 | 6" | SWG-7 |
| | | 61 | 100 | 7" | |
| | | 90 | 100 | 8" | |
| 4.75 | 740,000 | 26 | 72 | 7" | SWG-8 |
| | | 51 | 100 | 8" | |
| | | 70 | 100 | 9" | |

*Rating at 100 psi. Sizing based on appliance maximum input rate not actual firing rate. **Do not exceed maximum BTU/HR input rating or maximum oil GPH input. For multiple venting system applications, add the input for each appliance. Category I gas-fired draft induced systems require an SWGII-4HD or larger. Category III gas-fired draft induced systems require an SWGII-5 or larger.

PROCEDURE FOR CALCULATING TOTAL EQUIVALENT PIPE LENGTH IN FEET

1. Calculate the total equivalent feet for each type of fitting used in the venting system from the chart below.
2. Calculate the total amount of feet for the straight lengths of vent pipe.
3. Add the equivalent feet for the fitting with the total amount of feet of straight lengths. This will approximate the total equivalent feet of the vent system.

Table 2

| EQUIVALENT LENGTH (FEET) OF VENT PIPE FOR VENT PIPE FITTING | | | | | | | | | | |
|--|--|---------------------------|----|----|----|----|----|----|-----|----|
| VENT PIPE FITTINGS | | VENT PIPE DIAMETER | | | | | | | | |
| | | 3" | 4" | 5" | 6" | 7" | 8" | 9" | 10" | |
| TEE | | 19 | 25 | 31 | 38 | 44 | 50 | 56 | 63 | |
| 90° ELBOW | | 5 | 7 | 9 | 11 | 12 | 14 | 16 | 18 | |
| 45° ELBOW | | 3 | 4 | 4 | 5 | 6 | 7 | 8 | 9 | |
| SUDDEN REDUCER OR INCREASER FOR 3 *RATIOS (d/D) | | d/D | | | | | | | | |
| | | 1/4 | 8 | 11 | 14 | 17 | 19 | 22 | 25 | 28 |
| | | 1/2 | 5 | 7 | 8 | 10 | 12 | 13 | 15 | 17 |
| | | 3/4 | 2 | 3 | 3 | 4 | 4 | 5 | 6 | 6 |

*Reducer or increaser ratio (d/D) small diameter divided reducer ratio is $d/D = 4/8 = 1/2$. To estimate the equivalent foot length for the fitting, use the smaller pipe diameter for the equivalent length figure. Example 4" to 8" reducer; the reducer ratio is 1/2 and the smaller pipe diameter is 4". So, from the chart, the equivalent feet would be 7 feet. (See Figure 1)

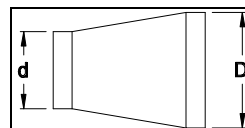


Figure 1

Example: System Pipe Size = 4"

- Step 1 Two 4" 90° elbows @ 7 feet each = 14 ft.
- Step 2 Ten 2 foot lengths of 4" pipe = 20 ft.
- Step 3 Total equivalent feet = 14 ft. + 20 ft. = 34 ft.

INSTALLATION

CAUTION: Failure to install, maintain and/or operate the power venting system in accordance with manufacturer's instructions will result in conditions which may produce bodily injury and/or property damage.

1. Remove power venter from box and inspect unit for damage. If the carton has been crushed or mutilated, check unit very carefully for damage. Rotate blower wheel to insure that the motor and blower wheel rotate freely. DO NOT install if any damage is apparent. Refer to unit sizing chart to check proper venting sizing.
2. Location of the termination of the venting system should be installed in accordance with the National Fuel Gas Code A.N.S.I.Z223.1, manufacturer's recommendations and/or local codes which are applicable. See requirements below or refer to installation location, Diagram A, for typical locations.
 - a. The exit termination of mechanical draft systems shall not be less than 7' above grade when located adjacent to public walkways.
 - b. A venting system shall terminate at least 3' above any forced air inlet located within 10'.
 - c. The venting system of other than a direct vent appliance shall terminate at least 4' below, 4' horizontally from or 1' above any door, window or gravity air inlet into the building.
 - d. The vent termination of a direct vent appliance with an input of 50,000 BTU's per hour or less, shall be located at least 9" from any opening through which vented gases could enter the building. With an input over 50,000 BTU's per hour, a 12" termination clearance shall be required.
 - e. The vent termination point shall not be installed closer than 3' from an inside corner of an L-shaped structure.
 - f. The vent termination should not be mounted directly above, or within 3' horizontally from an oil tank vent or gas meter.
 - g. The bottom of the vent terminal shall be located at least 12" above finished grade.

SWG SERIES POWER VENTER INSTALLATION LOCATIONS

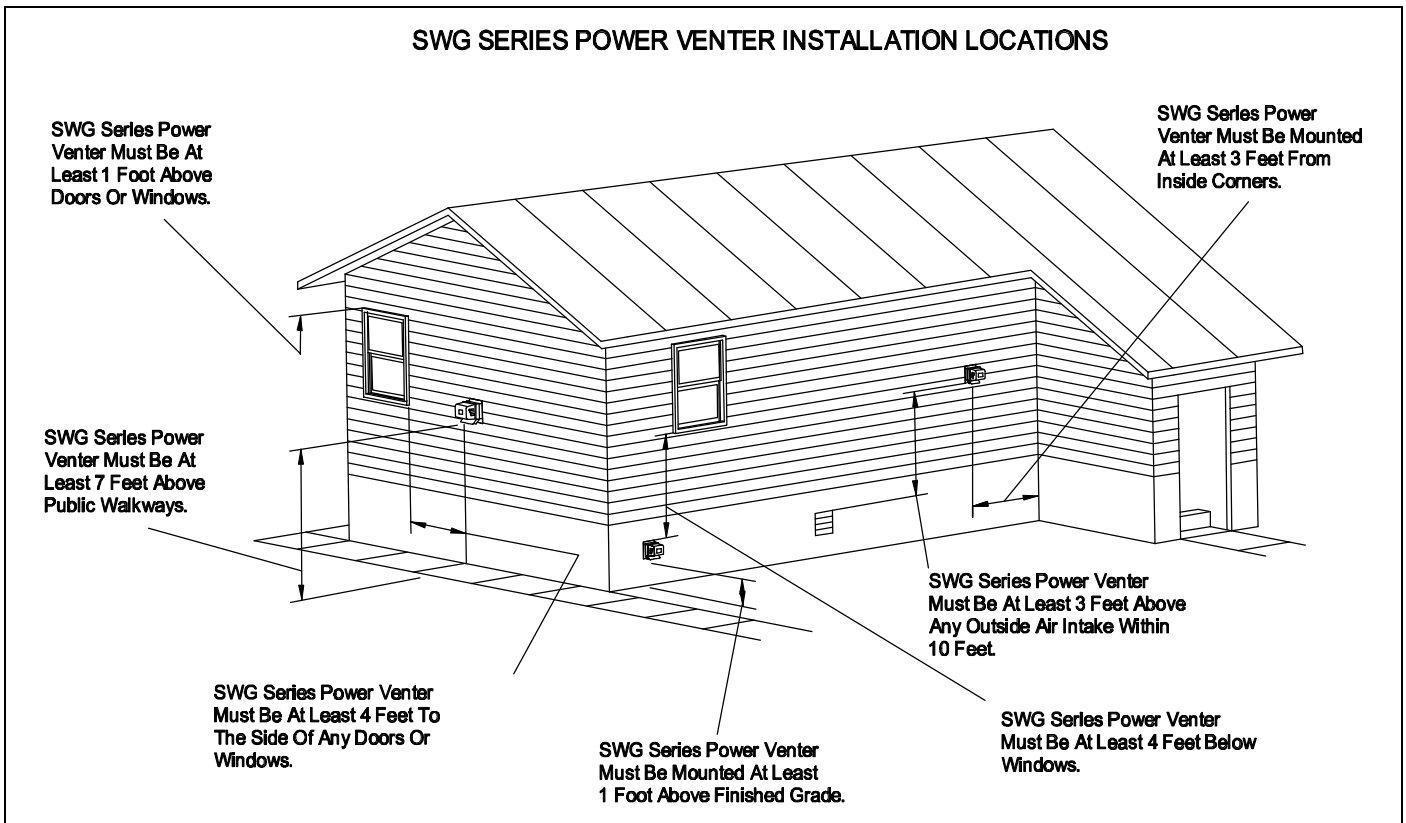


Diagram A

- After determining the location of the venting system termination point (see Diagram A), cut a square hole through the wall 1" larger than the outer pipe diameter of the power venter. Mount the power venter through the wall, keeping the outer pipe centered in the hole. (See Figure 3) Fasten the power venter to the outside wall with appropriate fasteners. Seal the edges of the power venter base plate to the wall with a high temperature silicone sealant. DO NOT enclose the spaced plates on the power venter body. This will result in reduced cooling of the power venter body. Wood or vinyl siding should be cut so that the unit mounts directly on the wall board to provide a stable support. If the siding is greater than 1/2" thick use a spacer plate or board behind the power venter mounting plate. (See Figure 2)

NOTE: If mounting the power venter through a combustible wall material and the flue gas temperature is above 400°F at the power venter inlet, line the square hole with a piece of corrosion resistant sheet metal or non-combustible material. The liner piece should be the same width as the wall section. (See Figure 3) The power venter has a maximum flue gas temperature of 550°F at the venter inlet. For installation in wall thicknesses over 8 inches, use an SWG Series Though Wall Extension Kit, Model PEK.

- Remove the end pipe cover screws on the sides of the outside pipe and remove end pipe cover. Then mount the backing plate over the outer pipe and route the flexible conduit and pressure switch tube (if applicable) through the holes provided in the backing plate. Fasten the backing plate to the inside wall with appropriate fasteners. (See Figure 4) Re-install end pipe cover and screws.

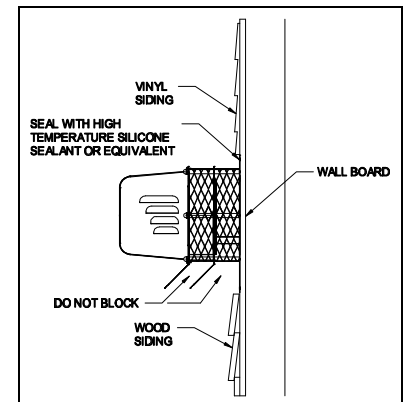


Figure 2

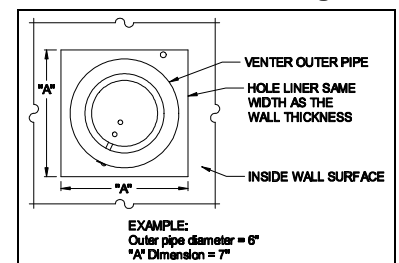


Figure 3

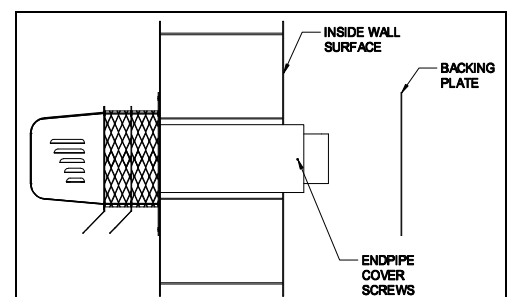


Figure 4

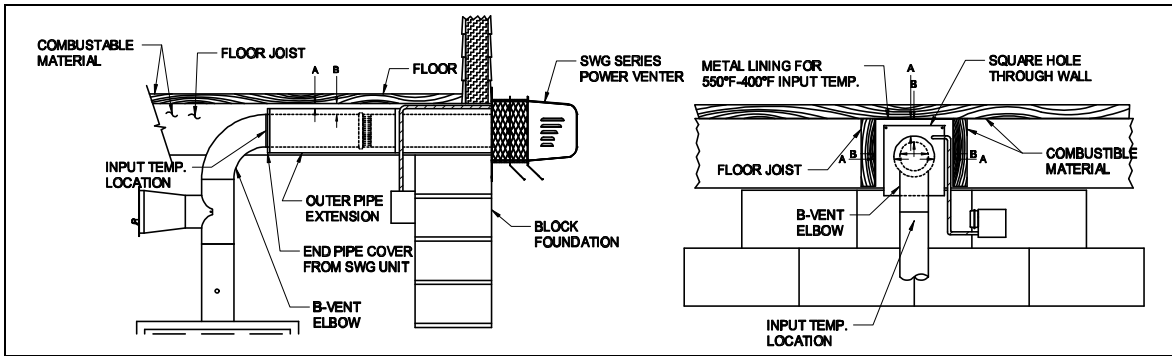


Diagram B

CONNECTING POWER VENTER TO APPLIANCE

Venting system should be installed and supported in accordance with the National Fuel Gas Code A.N.S.I.Z223.1, or in accordance with any local codes. A vent pipe connector shall be supported for the design and weight of the material employed, to maintain clearances, prevent physical damage and separation of joints. A vent pipe increaser or reducer may be required for connecting the power venter to the vent system. If needed, place the reducer close to the power venter. Smaller vent pipe sizes than a chimney-vented system may be used for the vent system.

If mounting venting system near combustible materials, refer to Diagram B for allowable installation clearances. Clearances are based on an installation using single wall galvanized steel vent pipe. For metal thickness of galvanized steel pipe connectors, refer to NFPA 211 or NFPA 54 Standards for guidelines. If manufactured double wall vent pipe is required or used for the installation, clearance should be based on the vent pipes rated clearance. Always check local code requirements for code restrictions.

Route the vent pipe from the appliance to the power venter using a minimum number of elbows as possible. The horizontal section of the vent pipe should have a slight upward slope from the appliance to the power venter. For clearances to combustible materials, multiple appliance venting and other installation requirements, refer to the National Fuel Gas Code A.N.S.I.Z223.1, and/or any applicable local codes or appliance manufacturer's installation instructions.

INSTALLATION USING SINGLE WALL VENT PIPE (See Table 3)

Table 3

| INSTALLATION CLEARANCE WITH SINGLE WALL VENT PIPE | | | | | |
|---|---------------------------------------|-------------------------------------|---|---------------------------------------|-----------------------------------|
| DOUBLE PIPE SYSTEM | | | SINGLE PIPE SYSTEM | | |
| Allowable inlet temperature SWG Stainless Steel | Allowable inlet temperature SWG/SWGII | Clearance (A) | Allowable inlet temperature SWG Stainless Steel | Allowable inlet temperature SWG/SWGII | Clearance (B) |
| 400°F or less | 400°F or less | 1/2" minimum | 400°F or less | 400°F or less | 3" minimum |
| 400°F to 650°F US/575°F CA | 400°F to 550°F | 1" minimum | 400°F to 650°F US/575°F CA | 400°F to 550°F | 4" minimum |
| 400°F to 650°F US/575°F CA | 400°F to 550°F | 1/2" minimum with sheet metal liner | 400°F to 650°F US/575°F CA | 400°F to 550°F | 3" minimum with sheet metal liner |

Use a PEK series extension kit or follow installation method below for a double pipe system. To install an outer pipe extension to the SWG power venter, the end pipe cover on the power venter must be removed. Then, cut a 1-inch square notch into the vent pipe extension before attaching the power venter. (See Figure 5) This allows clearance for the adjustment damper. Install the needed pipe extensions and terminate the outer pipe extension with the end pipe cover (see Diagram B). The table above shows minimum allowable clearances when using single or double pipe systems. When the outer pipe is extended over the inner pipe, use the double pipe guidelines when determining clearances. Figure 6 shows how the airflow pattern through an SWG reduces the required clearances to combustibles. **NOTE: Vent pipe joints should be secured with at least (3) three sheet metal screws.**

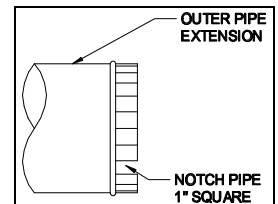


Figure 5

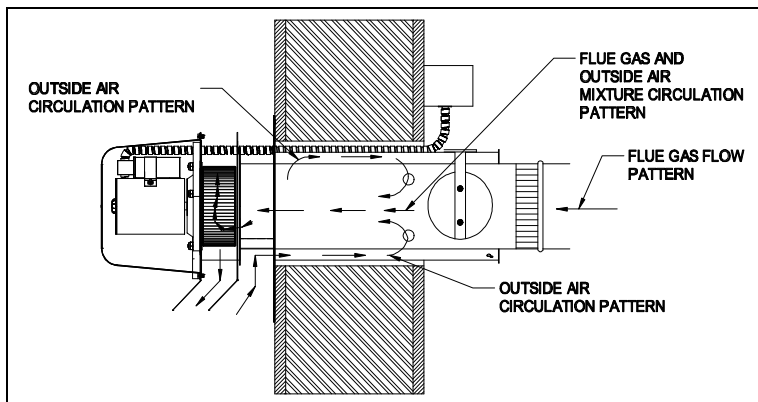


Figure 6

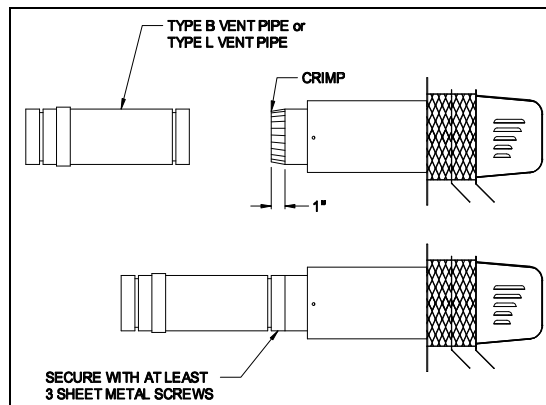


Figure 7

CLASS B AND CLASS L DOUBLE WALL VENT PIPE INSTALLATION

(Follow vent pipe manufacturer's listed or recommended clearances from combustible material)

1. Using a hand crimper or a like device, crimp the inner pipe of the SWG power venter approximately 1" long. (See Figure 7)
2. Attach the vent pipe over the crimped end of the SWG power venter inner pipe.
3. Secure the vent pipe to the SWG power venter inner pipe with at least (3) three #8 sheet metal screws. Pre-drilling the holes through both pipes will allow easier fastening.

WIRING

NOTE: Refer to appropriate control kit for proper installation instructions.

Wire the power venter motor and controls in accordance with the National Electric Code and applicable local codes. UNIT MUST BE GROUNDED. Check ground circuit to make certain that the unit has been properly grounded. The wiring should be protected by an over-current circuit device rated at 15 amperes. CAUTION MUST be taken to ensure that the wiring does not come in contact with any heat source. All line voltage and safety control circuits, between the power venter and the appliance, MUST be wired in accordance with the National Electrical Code for Class 1 wiring or equivalent.

AIR FLOW ADJUSTMENTS

In order to obtain proper system draft, the power venter has an airflow adjustment damper built in. When used in a system with a barometric draft control, this damper should be used to make coarse draft adjustments while the barometric should be used for finer adjustments. Loosen the locking screw on the air flow adjustment damper on the outer pipe of the power venter. (See Figure 8) Adjust the damper to the full open position. Follow appliance manufacturer's procedures for starting the heating appliance. Then adjust the thermostat to call for "Heat". After the system has operated for several minutes to stabilize flue gas temperatures, check for negative draft or up-draft at the heating appliance outlet or air flow into the draft hood. Use a draft gauge, velocity meter or match test procedure. Adjust the adjustment damper closed to obtain the minimum air flow required to maintain draft. Then increase air flow slightly (10% over minimum air flow rate) to ensure proper venting. For oil-fired or gas-fired power burners, adjust draft to proper over-fired draft.

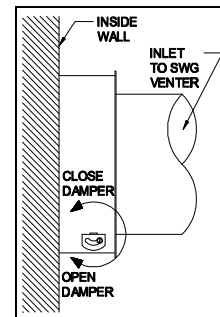


Figure 8

If proper draft has been established, tighten the adjustment locking screw. For gas-fired systems, shut off thermostat and check for residual heat spilling from draft hood. If this occurs, a post purge timer may be required. If so, use a Field Controls PPC-5 Electronic Post Purge or a Control Kit which includes one. Before installing, refer to the General Installation Inspection to check for negative pressure problems in the building. If sufficient combustion air for the burner is not provided, a flow reversal during the off cycle could occur within the venting system. This may cause combustion problems as well as condensation that could block the air pressure sensing tube. It may also contribute to premature motor failure. Combustion, and/or make-up air, should be supplied from outside the structure and the air inlet should be on the same wall as the power venter discharge. For example, tightly constructed homes and homes retro-fitted from electric heated systems are more likely to experience combustion and/or make-up air problems. For further information consult "The Field Report-Effects of insufficient combustion air on draft and heating systems". Refer to the appropriate control kit installation instructions for pressure switch adjustment procedure and system checkout procedures before operating continuously. **NOTE:** After proper venting has been established, it is recommended that a combustion test on gas and oil units, a check for CO levels on gas units, and a smoke test on oil systems be performed to ensure maximum burner efficiency. Oil burner air adjustments should be set at a zero to a trace smoke at the highest or recommended CO₂% setting set by heating equipment manufacturer.

GENERAL INSTALLATION INSPECTION

Recommended procedures for safety inspection of an appliance in accordance with the National Fuel Gas Code A.N.S.I.Z223.1. The following procedure will help evaluate the venting system. It is intended as a guide to aid in determining that the venting system is properly installed and is in a safe condition for continuous use. This procedure should be recognized as a generalized procedure which cannot anticipate all situations. Accordingly, in some cases, deviation from this procedure may be necessary to determine safe operation of the equipment. If it is determined that a condition exists which could result in unsafe operation, the appliance should be shut off and the owner advised of the unsafe condition. Corrections must be made before the appliance is put into continuous operation. The following steps should be followed in making a safety inspection.

1. Visually inspect the venting system for proper size and determine that there is no flue gas spillage, blockage, restriction, leakage, corrosion or other deficiency which could cause an unsafe operation.
2. Insofar as practical, close all building doors, fireplace dampers, windows and all doors in area in which the appliance is located. Turn on clothes dryers, any exhaust fans, such as range hoods and bathroom exhausters so they operate at maximum speed. Do not operate a summer exhaust fan. If, after completing Steps 3 through 7 it is believed sufficient combustion air is not available, refer to the National Flue Gas Code A.N.S.I.Z223.1, or any applicable local codes for guidance.
3. Place in operation the appliance being inspected. Follow the lighting instructions and adjust thermostat so appliance will operate continuously.
4. Determine that the pilot or burner is operating properly and that the main burner ignition operates satisfactorily, by interrupting and re-establishing the electrical power of the appliance in any convenient manner. Test the pilot or burner safety device to determine if it is operating properly by extinguishing the pilot or disconnecting the flame safety circuit and pressure switch sensing tube from the pressure switch.
5. Visually determine that the main burner is burning properly; i.e., no floating, lifting or flashbacks. When performing smoke test on oil-fired systems, the burner should operate at a zero to a trace smoke. This can indicate reduced available combustion air to burner.
6. If appliances are equipped with high and low flame control or flame modulation, check for proper main burner operation at low flame.
7. Test for spillage at draft hood or barometric draft control opening and burner inlet air location after 5 minutes of main burner operation. Use a draft gauge, flame of a match or candle, smoke from a cigarette, cigar or pipe. If spillage occurs, adequate air is not available. Shut off heating appliance thermostat and check for spillage around the draft hood, barometric draft control or burner inlet air location after power venter has stopped operation. If a flow reversal is noticed, house de-pressurization is occurring and make up air is required. For oil-fired systems, this may be noticed by oil fume smell after post purge cycle.
8. Turn on all fuel burning appliances within the same room so that they will operate at their maximum input. Then repeat Steps 5 through 7.
9. Return doors, windows, exhaust fans, fireplace dampers and any other fuel-burning appliances to their previous condition of use.

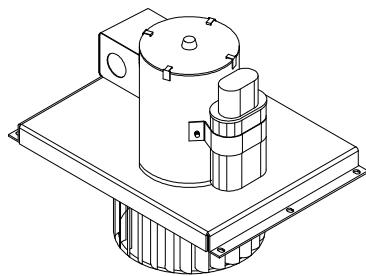
MAINTENANCE

1. **Motor:** Inspect the motor once a year - motor should rotate freely. To prolong the life of the motor, it must be lubricated with six drops of SWG Superlube, Part # 46226200, annually.
2. **Wheel:** Inspect the power venter wheel annually to clear any soot, ash or coating which inhibits either rotation or air flow. Remove all foreign materials before operating.
3. **Vent System:** Inspect all vent connections annually for looseness, for evidence of corrosion and for flue gas leakage. Replace, seal or tighten pipe connections if necessary. Check the power venter choke plate to insure it is secured in place. Check the barometric draft control, if installed, to insure the gate swings freely.
4. **System Safety Devices:** With the heating system operating, disconnect the pressure sensing tube from the pressure switch on the CK Kit. This will stop the burner operation. Re-connecting the tube will relight the burner. For 30 millivolt operating systems, disconnect one lead of the spill switch circuit from the thermocouple junction block. This will shut off the pilot and the burner. Re-connection will allow relighting the pilot.

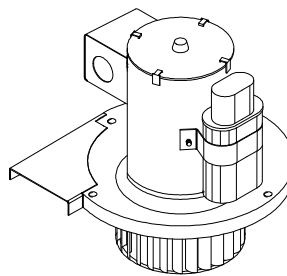
REPLACEMENT PARTS

Should the motor or blower wheel need replacing, the following replacement items are available. The Repair Motor Assembly contains the Motor and Blower Wheel factory assemble to a mounting bracket.

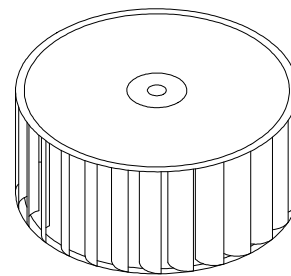
| MODEL | PART NUMBERS | |
|-------------------------|-----------------------|--------------|
| | REPAIR MOTOR ASSEMBLY | BLOWER WHEEL |
| SWG-3 | 46196601 | 46131800 |
| SWG/SWGII-4HD SWG-4s | 46234800 | 46310400 |
| SWG/SWGII-5 SWG-5s | 46234900 | 46213800 |
| SWG/SWGII-6 SWG-6s | 46235000 | 46385800 |
| SWG-7 | 46152401 | 46154700 |
| SWG-8 | 46460101 | 46154800 |



**SWG Repair
Motor Assembly**



**SWGII Repair
Motor Assembly**



**Blower
Wheel**

REMOVAL AND INSTALLATION OF THE SWG SERIES POWER VENTER MOTOR ASSEMBLY

REMOVAL

1. Remove the screws securing the motor enclosure cover. (See Figure 9)
2. Remove the screws securing the motor assembly. Rotate the motor assembly counter-clockwise and slide the assembly into the center. Then pull the motor assembly out of the unit. (See Figure 10)
3. Clean off any build-up inside the blower wheel housing and the blower wheel.
CAUTION: Avoid applying excess pressure on the blower wheel when cleaning off any build-up of material. This will cause an imbalance of the blower wheel which will result in excessive vibration and premature motor failure.
4. If replacing the motor assembly with a new assembly, disconnect the conduit from the old motor and cut the wires close to the motor. The new motor assembly will have an electrical box and connector for the conduit.

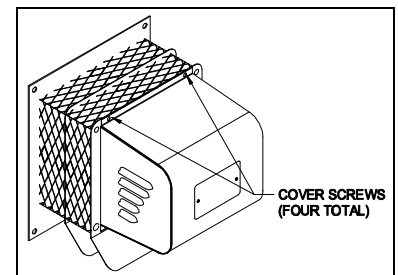


Figure 9

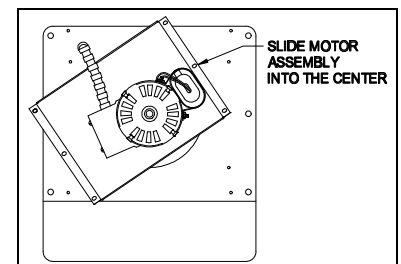


Figure 10

INSTALLATION

1. Insert the blower wheel through the hole in the front plate of the power venter housing. (See Figure 11)
2. Using two nails or awls, align the two center holes of the motor mount bracket and cover plate. Locate the motor assembly into position by sliding the assembly over the mounting holes in the front plate. Use the nails or awls to hold the assembly in position. Secure motor assembly into position at the four corners, then secure center two holes. (See Figure 12)
3. Re-attach the flexible conduit and wires to the motor and secure the cover on the electrical box.
4. Seal the top edge of the motor mount bracket against the front plate with a high temperature silicone sealant.
5. Install motor cover with side louvers pointing down.

REMOVAL AND INSTALLATION OF THE SWGII SERIES POWER VENTER MOTOR ASSEMBLY

REMOVAL

1. Remove the motor enclosure cover by loosening the four screws. (See Figure 9)
2. Open the electrical box on the motor and disconnect the conduit and wires from the motor. (See Figure 13)
3. Remove the four nuts securing the motor assembly, and pull the motor assembly straight off of the unit. (See Figure 14)
4. Clean off any build-up inside the blower wheel housing and the blower wheel.
CAUTION: *Avoid applying excess pressure on the blower wheel when cleaning off any build-up of material. This will cause an imbalance of the blower wheel which will result in excessive vibration and premature motor failure.*

INSTALLATION

1. Align the holes in the circular cover plate with the holes in the motor mount bracket on the motor assembly. (See Figure 14)
2. Slide the motor assembly onto the protruding threaded studs on the power venter body with the exhaust chute pointing downward, and replace the four nuts securely to the threaded studs. (See Figure 14)
3. Re-attach the flexible conduit and wires to the motor and secure the cover on the electrical box.
4. Install the motor cover with the side louvers pointing downward.

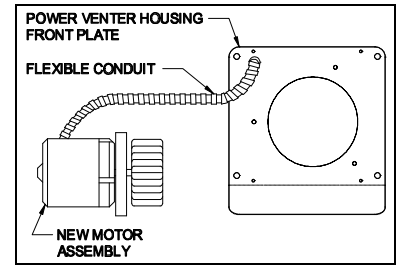


Figure 11

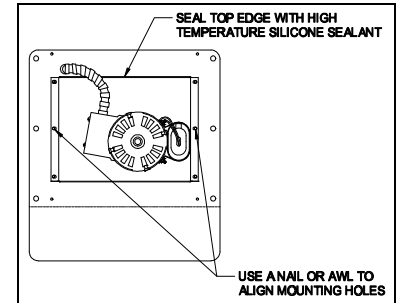


Figure 12

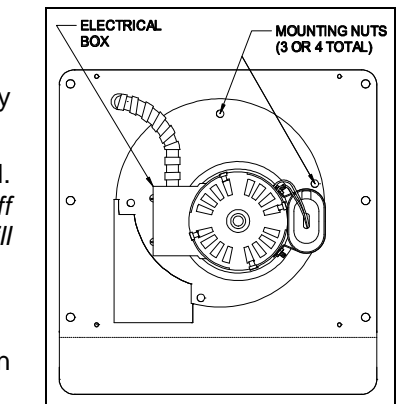


Figure 13

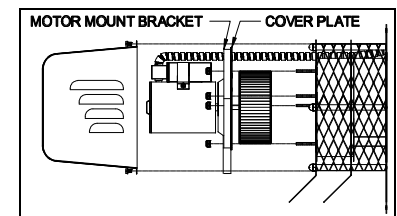


Figure 14

INITIAL BURNER AND VENTING SYSTEM OPERATIONAL INFORMATION

List the following for each operating appliance on the sidewall venting system, as a guide for tune-up or service information annually.

| | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|
| DATE: | | | | | | | | | |
| FOR GAS FIRED EQUIPMENT | | | | | | | | | |
| Heating Appliance BTU/HR Input | | | | | | | | | |
| Gas Valve Operation Pressure | | | | | | | | | |
| Vent System Draft Above Draft Hood or Before Barometric Draft Control | | | | | | | | | |
| CO ₂ Measurement | | | | | | | | | |
| CO Measurement | | | | | | | | | |
| Equipment Outlet Flue Gas Temperature | | | | | | | | | |
| | | | | | | | | | |
| FOR OIL FIRED EQUIPMENT | | | | | | | | | |
| Oil Burner Nozzle Size | | | | | | | | | |
| Oil Burner Operating Pressure | | | | | | | | | |
| Pump Operating Vacuum Pressure | | | | | | | | | |
| Smoke Number | | | | | | | | | |
| Over-fire Draft | | | | | | | | | |
| Equipment Outlet Flue Gas Temperature | | | | | | | | | |
| CO ₂ Measurement | | | | | | | | | |

