



INSTALLATION & MAINTENANCE INSTRUCTIONS

DVK DRYER BOOSTER KIT WITH POSITIVE PRESSURE SWITCH

READ AND SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE



DVK100B-P KIT INCLUDES:

- **DVK100B** fan with mounting brackets
- **PST120V** pressure switch with 10 minute integral time delay / 2 mounting screws
- 36" length of clear tubing x 3/8"OD / 1/4"ID
- One probe assembly / 2 mounting screws

Note:

Do not use the DVK100B-P in systems where the duct length is 25' or less. The DVK100B-P is suitable for use in equivalent duct runs up to 110'.

BEFORE INSTALLATION

IMPORTANT NOTICE!

DVK100B fans are not explosion proof and should not be used when a potentially explosive situation exists. Do not use where temperatures will exceed 140 F/60 C.

1. Ensure that the electrical service to the fan is locked in the "OFF" position. Do not re-establish power supply until fan and activation device are completely installed.
2. **DVK100B** fans are not suitable for outdoor use.
3. This unit has rotating parts! Safety precautions must be exercised during installation, operation and maintenance. Turn centrifugal impeller by hand to make sure it rotates freely.
4. **CAUTION:** For general ventilation use only. Do not use to exhaust hazardous or explosive materials and vapors.
5. **WARNING:** To reduce the risk of fire, electric shock, or injury to persons – observe the following:
 - a) Use this unit only in the manner intended by the manufacturer. If you have questions, contact the factory.
 - b) A qualified person(s) must perform installation work and electrical wiring in accordance with all applicable codes and standards, including fire-rated construction.
 - c) The combustion airflow needed for safe operation of fuel burning equipment may be affected by this unit's operation. Follow the heating equipment manufacturer's guidelines and safety standards as published by the National Fire Protection Association (NFPA), the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE), and local code authorities.
 - d) When cutting or drilling into walls or ceilings, take care not to damage electrical wires or other hidden utilities.
 - e) Ducted fans must always be vented to the outdoors when used to exhaust moist/humid air.
6. **WARNING:** Check voltage at the fan to see that it corresponds to the motor nameplate.

FAN & PRESSURE SWITCH INSTALLATION

STEP 1. FAN LOCATION

For optimum performance, fan should be mounted a minimum of 15' from the dryer outlet, up to a maximum of 110'. However, when selecting a location for the fan, it is important to consider the location of the **PST120V** pressure switch. The pressure switch must be located between the fan and dryer, and within 25' of the dryer. If the pressure switch is mounted at a distance greater than 25' from the dryer, it may fail to operate properly. To calculate duct length, measure from the dryer outlet to the termination point, and add 5' for each bend or elbow.

Sufficient access to the fan should be provided to perform recommended maintenance.

Note: To minimize lint build up in the system, an auxiliary lint trap (LT100) is recommended.

STEP 2. INSTALL FAN

Attach mounting brackets to the fan housing. Secure the fan to a support at the selected location. The fan may be mounted in any position; however, vertical orientation is recommended to reduce condensation build-up in the fan. The terminal box should be positioned for easy access. Please note the airflow direction arrow located on the box cover.

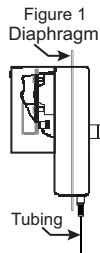
STEP 3. CONNECT DUCT

Rigid duct is recommended to optimize fan performance, and should be installed in as straight a line as possible. If using flex duct, it should be stretched as smooth as possible. For duct runs in unheated spaces, insulated duct is recommended to reduce the effects of condensation.

Connect duct to the inlet and outlet ends of the fan housing by means of mounting clamps or duct tape. Duct connections must be properly sealed to prevent air leakage and loss of fan performance.

STEP 4. PRESSURE SWITCH LOCATION

Select a mounting location that is free from vibration. The PST120V air pressure sensing switch must be mounted with the diaphragm in a vertical plane (Figure 1).



STEP 5. INSTALL PRESSURE SWITCH

Surface mount the pressure switch.

STEP 6. PROBE LOCATION

Locate the probe in the duct within 36 inches of the pressure switch and greater than 16 inches from the fan inlet.

Note: For proper operation of the system, the pressure switch and probe must be located between the dryer and the fan.

STEP 7. INSTALL PROBE

1. Drill a 1/4" hole in the duct.
2. Insert the beveled open end of the probe shaft into the duct. For positive pressure sensing, the arrow on the fixing plate must point in the direction of the airflow and align parallel to the duct.
3. Secure the probe in the duct using the two small screws provided. Seal area around probe fixing plate to prevent air leakage.
4. Cut tubing to required length. Attach one end of the tubing to the exposed probe post, and the other to the nipple on the sensor switch.

STEP 8. WIRING PROCEDURE

Refer to wiring diagram below.

Note: The PST120V is an air pressure sensing switch with an integral 10 minute time delay. Cycle will reinitiate after 15 seconds if the dryer is still in operation. It is especially suitable for surface mounting in areas where internal access is limited.

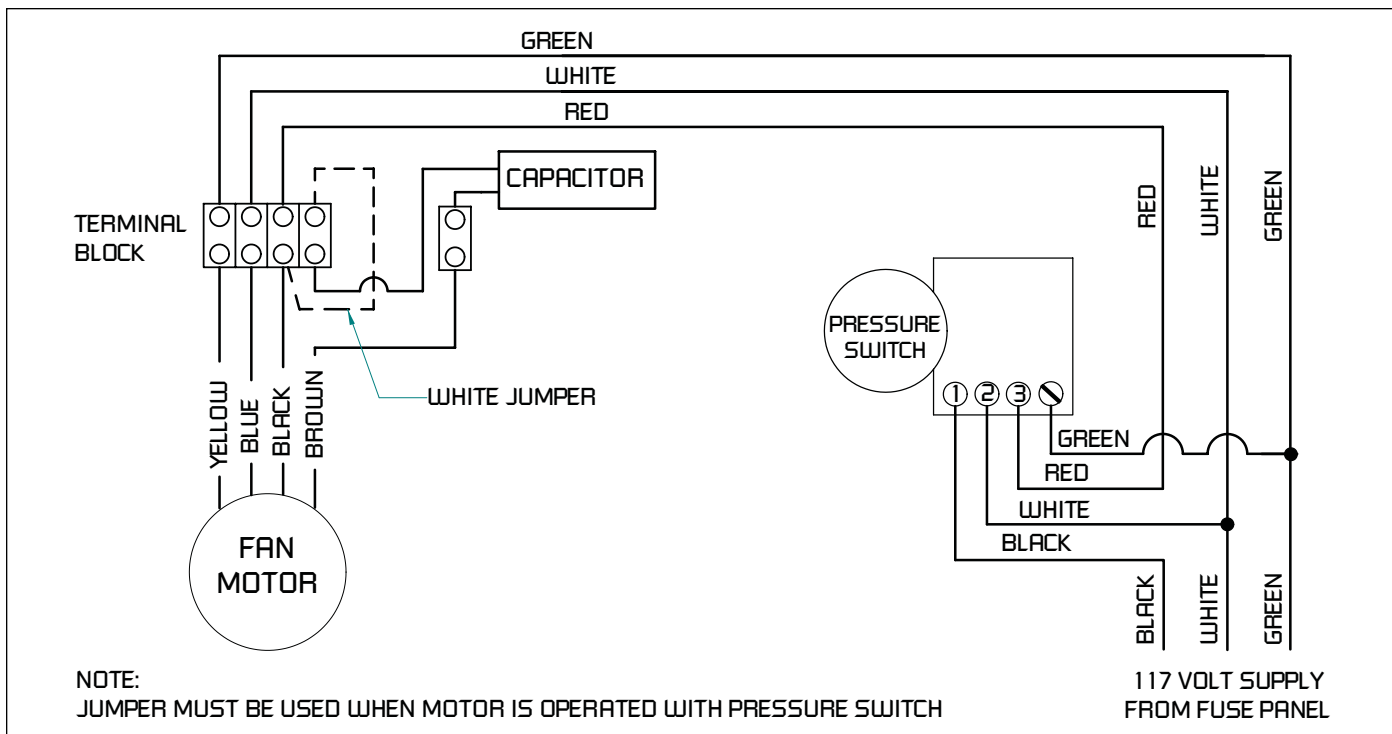
TROUBLESHOOTING

If the fan fails to start:

1. Check the incoming supply for proper voltage.
2. Ensure that the electrical service to the fan is locked in the "OFF" position.
3. Refer to wiring diagram to ensure proper connection.
4. Turn power supply and dryer on.
5. Check to see if fan starts.
6. If fan still fails to start:
 - a) Verify that the pressure switch diaphragm is vertical.
 - b) Verify that the tubing is not crimped.
 - c) With the electrical supply on, remove the probe from the duct, clear any obstructions, and blow gently into it.
7. If fan fails to start after blowing into the probe:
 - a) Ensure that the electrical service to the fan is locked in the "OFF" position.
 - b) Remove the pressure switch from the circuit.
 - c) Connect the incoming power supply directly to the fan motor.
 - d) Turn power supply on.
8. If fan fails to start, please contact factory.

RECOMMENDED MAINTENANCE

1. Fan bearings are sealed. No additional lubrication is necessary.
2. Periodic inspection (minimum six (6) months) should be performed to ensure that the fan impeller is not obstructed.
3. Excessive fan noise or vibration may indicate an obstruction.
4. To inspect and clean the fan impeller:
 - a) Ensure that the electrical service to the fan is locked in the "OFF" position.
 - b) Remove the duct from the fan inlet and remove any obstruction from the impeller and probe.
 - c) Reconnect the duct to the fan.
 - d) Turn power supply on.



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