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Installation and Operation Manual

DEDPV-705

Dryer Exhaust Duct Power Ventilator (DEDPV)

IMPORTANT SAFETY INSTRUCTIONS
INSTRUCTIONS IMPOTANTES POUR LA SÉCURITÉ

SAVE THESE INSTRUCTIONS
CONSERVEZ CES INSTRUCTIONS

DEDPV-705 KIT INCLUDES:
Inline Fan with Integral Control, 1 pc
2 ft Section of Tubing, 2 pcs
FC4 Clamps, 4 pcs
Grommet for Tubing, 1 pc
Mounting Bracket and Hardware, 1 pc
Indicator Panel, 1 pc
4" x 4" Indicator Cover Plate, 1 pc
50 ft (15.4 m) Communication Cable, 1 pc
Warning Label for Indicator Cover Plate, 1 pc

Technical / Customer Support
United States: 800.747.1762

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A Dryer Exhaust Duct Power Ventilator (DEDPV) is a term used for an appliance specifically designed to assist a single residential dryer (gas or electric) in overcoming dryer performance loss caused by long or restrictive duct configurations. Dryer Exhaust Duct Ventilator differs from the term dryer booster in that the ventilator must comply with stringent application specific safety requirements.

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Safety Instructions

Note	Warning / Important note	Information	Technical information	Practical tip

Read and Save these instructions for future reference.

WARNING- TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

a. Your clothes dryer installation incorporates a dryer exhaust power ventilator (DEDPV) which may be in a different location than your dryer, such as in an attic, crawl space or basement.

b. Your clothes dryer depends on the DEDPV for its safe and efficient operation. Operating your dryer without a functional DEDPV will result in inefficient dryer operation, excess energy consumption and a possible fire hazard. See warning on the alarm notification panel.

c. The notification/annunciator panel shall be permanently installed within the space in which the clothes dryer is installed. In the case of a dryer installed in an alcove provided with a door or doors the notification/annunciator panel shall be installed within the alcove or be installed immediately adjacent to the doors of the alcove. The notification/annunciator panel shall be located where it will be readily visible after the dryer is installed without having to open any doors other than those necessary to access the dryer.

AVERTISSEMENT – POUR RÉDUIRE LE RISQUE D'INCENDIE, DE CHOC ÉLECTRIQUE OU DE BLESSURE, RESPECTER LES CONSIGNES QUI SUIVENT:

a. Votre sécheuse est équipée d'un ventilateur auxiliaire qui peut être installé loin de la sécheuse, comme dans un grenier, un vide sanitaire ou un sous-sol.

b. Le ventilateur auxiliaire est essential au fonctionnement sécuritaire de la sécheuse. Désactiver ce ventilateur nuira au fonctionnement de la sécheuse, entrainera une augmentation de la consommation d'électricité et possiblement un risqué d'incendie. Lire la mise en garde sur le panneau d'indication d'alarme.

c. Le panneau d'alarme doit être installé de façon permanente dans l'espace où se trouve la sécheuse. Si la sécheuse est installée dans une alcôve fermée par une porte, le panneau d'alarme doit être installé dans l 'alcôve ou à proximité immédiate de la porte de l 'alcôve. Le panneau d'alarme doit être visible une fois la sécheuse installée sans avoir à ouvrir une porte autre que celle donnant accès à la sécheuse.

WARNING- IF A CONTINUOUS ALARM SOUNDS OR A VISUAL ERROR INDICATOR IS PRESENT, DO NOT OPERATE THE CLOTHES DRYER. CONTACT YOUR SERVICE PERSONNEL.

AVERTISSEMENT- NE PAS UTILISER LA SÉCHEUSE SI UNE ALARME RETENTIT OU UN MESSAGE D'ERREUR VISUEL S'ALLUME. APPELEX UN RÉPARTEUR.

CAUTION:

• Do not install in exhaust ductwork of a clothes dryer whose instructions prohibit the installation of a clothes dryer booster fan (DEDPV).

• Do not install in exhaust ductwork where the equivalent duct length is < 25 ft (7.62 metres).

The DEDPV-705 is suitable to overcome an equivalent duct length of 125 feet (38 meters) of 4 inch diameter galvanized steel duct, and to maintain an air velocity of 1200 fpm (6.10 m/s).

• Do not exhaust air in excess of 167F (75C) and Do not install less than linear 5ft (1.524m) from clothes dryer exhaust outlet.

• A secondary lint trap must be installed between the clothes dryer and the (DEDPV) if the (DEDPV) is located less than 15 linear feet (4.6 linear meters) from the exhaust of the clothes dryer.

• Do not install less than 5 linear feet (1.52 linear meters) or more than 40 linear feet (2.2 linear meters) from clothes dryer exhaust outlet.

• Insulated dryer duct shall not be used upstream of the ventilator.

• The ventilator must not be used in conjunction with high output dryers.

• For General Ventilating Use Only. Do Not Use To Exhaust Hazardous or Explosive Materials and Vapors.

• The installation must comply with local electrical and mechanical building codes, and must be inspected and accepted by local authorities having jurisdiction.

ATTENTION:

• NE PAS INSTALLER DANS LE CONDUIT D'EVACUATION DE LA SECHEUSE SI LES INSTRUCTIONS INTERDISENT L'INSTALLATION D'UN VENTILATEUR AUXILIAIRE.

• NE PAS INSTALLER DANS UN CONDUIT D'EVACUATION MESURANT 7.62 MÉTRES (25 PI) DE LONGUEUR OU MOINS.

Le DEDPV-705 est adapté pour surmonter une longueur équivalente de conduit de 125 pieds (38 mètres) de conduit en acier galvanisé de 4 pouces de diamètre, et pour maintenir une vitesse de l'air de 1200 pi / min (6,10 m / s).

• Ne pas évacuer l'air au-dessus de 167F (75C) et ne pas installer à moins de 5 pieds (1,524 m) linéaire de la sortie d'échappement de la sécheuse.

• Un piège à charpie secondaire doit être installé entre le sèche-linge et le (DEDPV) si le (DEDPV) est situé à moins de 15 pieds linéaires (4,6 mètres linéaires) de l'échappement du sèche-linge.

• N'installez pas moins de 5 pieds linéaires (1,52 mètres linéaires) ou plus de 40 pieds linéaires (2,2 mètres linéaires) de la sortie d'évacuation de la sécheuse.

• Le conduit de sécheuse isolé ne doit pas être utilisé en amont du ventilateur.

• Le ventilateur ne doit pas être utilisé avec des séchoirs à haut rendement.

• Pour une utilisation générale de la ventilation uniquement. Ne pas utiliser pour évacuer des matières et des vapeurs dangereuses ou explosives.

• L'installation doit être conforme aux codes de construction électriques et mécaniques locaux et doit être inspectée et acceptée par les autorités locales compétentes

Installation

This is a cord connected appliance; not intended to be field wired. Accessing or tampering with the electrical enclosure voids the UL marking and manufacturer's warranty. Use this product in the manner intended by the manufacturer. For additional questions, contact Fantech Technical Services.

Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.

Dryer exhaust must always be vented to the outdoors.

Calculating Duct Length (STEP 1)

To calculate the length of your planned duct run, measure from the dryer to the external venting point in roof or wall. Add up the total number of elbows in the exhaust duct. Using the table below, calculate the equivalent duct length of the fittings and add to the measured duct length.

DRYER EXHAUST DUCT FITTING EQUIVALENT LENGTH

DRYER EXHAUST DUCT FITTING TYPE	EQUIVALENT LENGTH
45-degree elbow	2-1/2 feet
90-degree elbow	5 feet

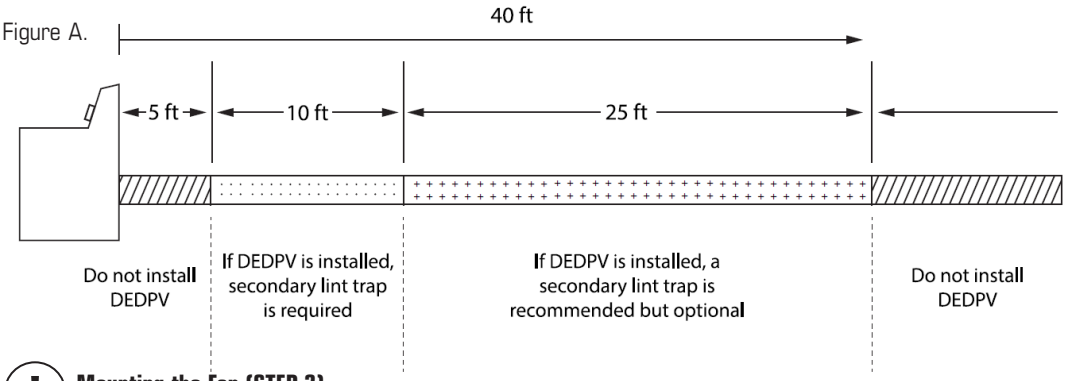
Source: IRC-2018 Table M1502.4.5.1

Elevation	Max. Eq. Duct Length (ft)
Sea Level	125
2000	114
4000	106
6000	98
8000	92
10,000	85
12,000	80

Fan Mounting Location (STEP 2)

The DEDPV-705 can be mounted a minimum of 5 linear feet, maximum linear 40 ft, down-stream of the dryer outlet connection. If the DEDPV is installed less than 15 ft downstream of the dryer exhaust, a secondary lint trap is required to be installed between the dryer and DEDPV. Beyond 15ft, a secondary lint trap is considered optional but recommended for extending routine maintenance intervals.

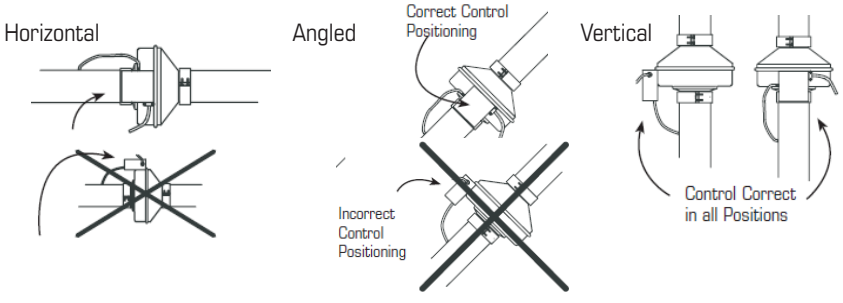
Figure A.



Mounting the Fan (STEP 3)

A mounting bracket and hardware pack is included and should be used to rigidly mount the fan to a wall stud, rafter, or joist.

Electrical box must be mounted in the vertical plane for correct pressure sensing



If mounted horizontally, a 1/8 inch weep hole may need to be drilled in the bottom of the fan in order to prevent water from accumulating at the lowest point

a) Hold the mounting bracket against the surface it is to be mounted.
b) Mark the location of the two most useful key slots and remove the bracket. Using the provided ¾" long wood screws, attach screws into the structure leaving 1/8" space between the screw head and mounting surface.
c) Using the provided self-tapping screws, attach the bracket to the fan as shown.

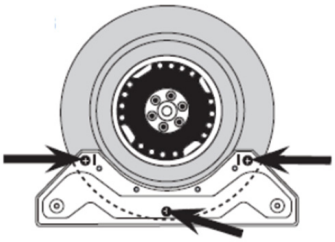
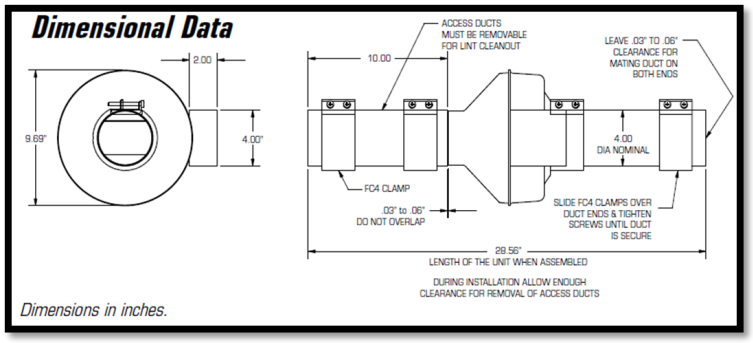


Figure. B

d) Holding the new assembled fan and bracket, align the key slots with the mounting screws and lock them into place.

Duct Installation (STEP 4)

Leave adjoining dryer duct a minimum of 10-1/8" away from fan inlet and outlet. Install the 10" long cleanout duct using the FC4 duct clamps. See dimensional data below.



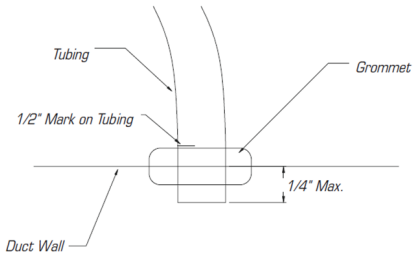
Pressure Switch Connection (STEP 5)

Do not connect the tubing in such a manner as to allow condensation from the duct to collect in the tubing

Drill a 3/8 inch diameter hole in the duct wall 6 to 8-inches from the inlet of the fan. Carefully insert the grommet into the hole.

Drilling into a metal duct may produce sharp burrs. Needle nose pliers can be used to remove or flatten sharp edges.

a) Attach one end of the clear pressure tubing to the pressure sensor located on the electrical box.
b) Mark the opposite end of the pressure tubing ½ inch from the edge and insert into the grommet until the marking is reached.



Indicator Panel (STEP 6)

The DEDPV-705 is equipped with a remote mount, low voltage, operation indicator panel. This wall-mounted indicator panel contains a blue LED that is intended to visually alert the occupant of any detected faults. The panel must be mounted in a 2 gang decora switch plate with a warning label (decora plate and label provided). Refer to page 3, paragraph C for the required mounting location.

Connecting Indicator Panel (STEP 7)

Connect the end of the 50-foot cable that has a mating two-position connector to the receptacle located on the dryer booster fan control box.

SEQUENCE OF OPERATION

1. Apply power to the DEDPV-705

The blue light on the indicator panel only illuminates when the DEDPV-705 is operating.

2. The DEDPV-705 turns ON approximately 10 seconds after the dryer has started by sensing the pressure inside the exhaust duct. A blue LED will illuminate (solid) on the indicator panel when the DEDPV is operating.
3. Once ON, the DEDPV-705 will run continuously for 5 minutes.
4. After 5 minutes, the fan will temporarily turn off to verify the status of the dryer. If the dryer is still running and positive pressure is sensed within the exhaust duct, the DEDPV-705 will re-energize and run another 5-minute cycle. The indicator panel will remain lit during this verification step.

The verification check takes approximately 30 seconds.

5. If after a complete 5 minute run cycle the DEDPV does not sense pressure from the dryer, the DEDPV-705 will engage in a final 5-minute cool-down cycle before turning OFF.

RECOMMENDED MAINTENANCE

Since fan bearings are sealed and provided with an internal lubricating material, no additional lubrication is necessary.

Fan impeller may accumulate lint. Periodic inspection, based upon dryer usage, should be performed to ensure that the fan impeller is not obstructed or loaded with lint. Under normal conditions, fan should be inspected a minimum once a year.

Excessive noise or vibration may be an indication of lint buildup on the impeller

To inspect and clean the impeller:
A. Disconnect the incoming power supply at the source.
B. Loosen the 4 fast clamps and remove the 10-inch extender ducts from the fan inlet and outlet; remove any lint buildup on the impeller and near the outlet.
C. Reconnect the duct to the fan. Turn power supply on.

TROUBLESHOOTING

No Indicator Light | DEDPV not operating when dryer runs

Check that the pressure tube is free of moisture, cracks, and properly inserted into the exhaust duct upstream of the fan.

Solution: The DEDPV-705 is interlocked to the dryer by sensing the pressure inside the exhaust duct when the dryer turns on. Replace the tubing if damage is observed

Verify that the low voltage wiring is properly plugged into the DEDPV-705.

Solution: The Indicator LED is polarity sensitive. Check that the RED wire is connected to the positive terminal and the BLACK wire is connected to the negative terminal.

The DEDPV-705 has a non-resettable thermal fuse link which will trigger when exhaust temperatures exceed 196°F. This is a safety feature designed to prevent the DEDPV from operating during abnormal/dangerous drying conditions. Call Technical Support for authorization before opening the electrical compartment; check resistance across the thermal overload protector.

Solution: Dryers are equipped with operating temperature controls that monitor drying temperatures. Normal exhaust temperatures should not exceed 167°F. If the safety thermal fuse in the DEDPV-705 trips, the dryer is operating outside its limits. Contact the dryer manufacture and replace the DEDPV-705.

Single Flash | DEDPV fan wheel is locked or rotation not detected

Remove DEDPV and check for lint or debris that may have accumulated at both the inlet and outlet side of DEDPV-705. A double flash would most likely be a pre-curser to the symptom.

Solution: Routine maintenance on all dryer exhaust systems are necessary to ensure lint is not accumulating and creating blockages.

A hall effect sensor integral to the motor is used to sense the rotation of the fan wheel. A loose connection within the fan electrical box can cause the system to think there is no rotation.

Solution: Call Technical Support for authorization to open the electrical box and check connection (H1, H2, H3).

Double Flash | DEDPV abnormal operation; less than standard speed

If lint or debris is accumulating near the inlet of the motor wheel there may be a reduction in detected RPM. This could be an indicator that maintenance is required.

Solution: Loosen the 4 fast clamps and remove the extender tubes. Cleanout all debris and lint from both inlet and outlet side of the fan.

Triple Flash | Low Airflow (Restrictive)

Only available on models identified as 46005 & 46006.

As the pressure inside the exhaust duct increase, the fan speed inherently also increases. Building codes require a minimum air velocity of 1200 ft/min; limits have been put in place to alert the occupant when the exhaust system is performing below this requirement.

Solution: On existing systems, if this is the first time such an indicator is observed, have the exhaust system inspected and cleaned from dryer to the exterior termination. This is an indicator that a blockage is forming either upstream or downstream of the DEDPV-705.

Solution: On new construction, this may be an indicator that the overall exhaust duct layout is too restrictive. Review STEP 1 of the installation manual to ensure duct length has been calculated properly.

If the flashing occurs ONLY during the DEDPV-705 final 5 minute cool down cycle, there is no safety concern

WARRANTY

Five (5) Year Warranty

This warranty supersedes all prior warranties

DURING ENTIRE WARRANTY PERIOD:

Fantech will repair or replace any part which has a factory defect in workmanship or material. Product may need to be returned to the Fantech factory, together with a copy of the bill of sale and identified with RMA number.

FOR FACTORY RETURN YOU MUST:

- Have a Return Materials Authorization (RMA) number. This may be obtained by calling Fantech either in the USA at 1.800.747.1762 or in Canada at 1.800.565.3548. Please have bill of sale available.
- The RMA number must be clearly written on the outside of the carton or the carton will be refused.
- All parts and/or product will be repaired/replaced and shipped back to buyer, no credit will be issued.

OR

The Distributor may place an order for the warranty part and/or product and is invoiced. The Distributor will receive a credit equal to the invoice only after product is returned, prepaid, and verified to be defective.

FANTECH WARRANTY TERMS DO NOT PROVIDE FOR REPLACEMENT WITHOUT CHARGE PRIOR TO INSPECTION FOR A DEFECT. REPLACEMENTS ISSUED IN ADVANCE OF DEFECT INSPECTION ARE INVOICED AND CREDIT IS PENDING INSPECTION OF RETURNED MATERIAL. DEFECTIVE MATERIAL RETURNED BY END USERS SHOULD NOT BE REPLACED BY THE DISTRIBUTOR WITHOUT CHARGE TO THE END USER, AS CREDIT TO DISTRIBUTORS ACCOUNT WILL BE PENDING INSPECTION AND VERIFICATION OF ACTUAL DEFECT BY FANTECH.

THE FOLLOWING WARRANTIES DO NOT APPLY:

- Damages from shipping, either concealed or visible. Claim must be filed with freight company.
- Damages resulting from improper wiring or installation.
- Damages or failure caused by acts of God, or resulting from improper consumer procedure, such as:
    1. Improper maintenance.
    2. Misuse, abuse, abnormal use, or accident, and
    3. Incorrect electrical voltage current.
- Removal or any alteration made on the Fantech label control number or date of manufacture.
- Any other warranty, expressed, implied or written, and to any consequential or incidental damages, loss or property, revenues, or profit, or costs of removal, installation or reinstallation, for any breach of warranty.

WARRANTY INVALIDATION

The user must keep a copy of the bill of sale to verify purchase date.

These warranties give you specific legal rights, and are subject to an applicable consumer protection legislation. You may have additional rights which vary from state to state.

LIMITATION OF WARRANTY AND LIABILITY

This warranty does not apply to any Fantech product or part which has failed as a result of faulty installation or abuse, incorrect electrical connections or alterations made by others, or use under abnormal operating conditions or misapplication of the product or parts. We will not approve for payment any repair not made by us or our authorized agent without prior written consent. The foregoing shall constitute our sole and exclusive warranty and our sole exclusive liability, and is in lieu of any other warranties, whether written, oral, implied or statutory. There are no warranties which extend beyond the description on the page hereof. In no event, whether as a result of breach of contract, or warranty or alleged negligence, defect incorrect advice or other causes, shall Fantech be liable for special or consequential damages, including , but not limited to, loss of profits or revenue, loss of use of equipment or any other associated equipment, cost of capital, cost of substitute equipment, facilities or services, downtime costs, or claims of customers of purchase for such damages. Fantech neither assumes or authorizes any person to assume for it any other liability in connection with the sale of product(s) or part(s). Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages so the above limitations and exclusions may not apply to you.

WARNING

Fantech products are designed and manufactured to provide reliable performance, but they are not guaranteed to be 100% free form defects. Even reliable products will experience occasional failures and this possibility should be recognized by the user. If these products are used in a life support ventilation system where failure could result in loss of injury , the user should provide adequate backup ventilation, supplementary natural ventilation, failure alarm system, or acknowledge willingness to accept the risk of such loss or injury.

Fantech reserves the right to make technical changes.
For updated documentation please refer to www.fantech.net

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