



VMP-S INSTALLATION INSTRUCTIONS

Central Exhaust Ventilation System

INSTALLATION
OPERATION
MAINTENANCE
354-7-97

READ AND SAVE THESE INSTRUCTIONS

CAUTION

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

WARNING

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

- Use this unit only in the manner intended by the manufacturer. If you have any questions, contact the manufacturer.
- Before servicing or cleaning unit, switch power off at service panel and lock service panel to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.

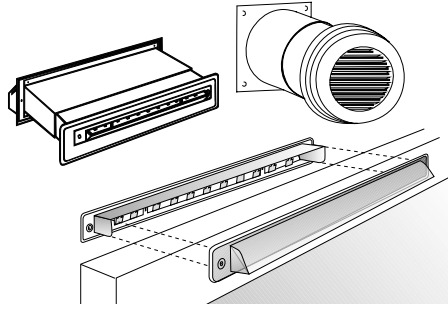
In addition to the following manufacturer's instructions, it is necessary to comply with national, state/provincial and local government codes.

The purchase of an American ALDES ventilation system represents an investment in the health and comfort of the family, as well as in the protection of the home from mold and mildew damage caused by excessive humidity levels.

The ALDES Model VMP-S central exhaust system removes stale, polluted humid air from bathrooms, kitchens, laundry and storage rooms via exhaust grilles and ducting to a central fan, which in turn exhausts to the outdoors.

Fresh Air Source

Fresh makeup air may be supplied by air infiltration through building leakage areas, or through designed makeup air systems as shown below.

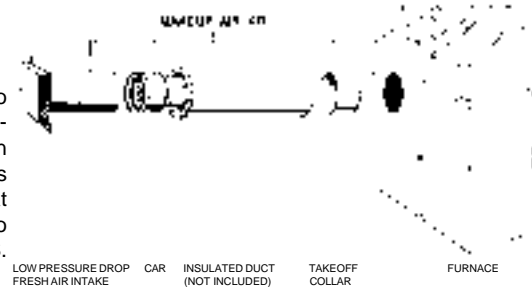


Fresh Air for Non-Forced Air Heating

These discreet air inlets are available in through-wall or window sash models, and are designed to furnish fresh air into the rooms in which they are located. They incorporate a flow regulating damper that automatically adjusts the free opening to provide a draft-free regulated amount of makeup air independent of wind pressure.

Fresh Air for Forced Air Heating

Fresh air from the outside is drawn into the home through the furnace and distributed through the duct system. An ALDES Constant Airflow Regulator is placed in the intake duct to assure that air handler when operating pulls in no more than the exhaust rate of the VMP-S.



SELECTING EXHAUST POINTS

As supplied, the standard system provides constant exhaust with 3" fittings and ducting from one to three rooms (baths, laundry, etc.), and a low and high exhaust rate with 5" duct and fittings from one room (kitchen or master bath). The 3" diameter fittings provide a constant exhaust rate because they contain Constant Airflow Controls. These devices as-

sure proper airflows if duct runs are kept to allowable lengths. The choice of which rooms are exhausted at a constant rate and which benefit from a boost rate is left to the designer.

In many cases, the kitchen will have a vented range hood or similar high speed intermittent exhaust. In such a case, the 5" exhaust on the VMP-S would be redundant in the kitchen. It might then be more desirable to utilize this high exhaust feature for a bathroom with a shower or spa (in a room with a very high humidity level for short periods of time). Should the 5" grille be used in a bath, it is recommended that a 3" fitting be used in the kitchen. It will be beneficial in removing odors and humidity at times when the range hood is not in use.

LOCATING THE FAN UNIT

The fan unit should be placed, when possible, close to the 5" grille, to limit excessive duct length that would limit the airflow. Similarly, locate the fan in a central location with respect to the other duct runs.

VMP-S	AIRFLOW TABLE (CFM)					
	LOW SPEED			HIGH SPEED		
	S2	S3	S3+	S2	S3	S3+
MAIN DUCT 5" (KITCHEN OR MASTER BATH)	1 x 25	1 x 25	1 x 25	60,70 or 80 CFM ²	60,70 or 80 CFM ²	60,70 or 80 CFM ²
SECONDARY 3" DUCTS: BATHROOMS, 1/2 BATH, SHOWER, LAUNDRY OR BACKGROUND VENTILATION FOR KITCHEN	2 x 20	2 x 20 1 x 10 ¹	3 x 20	2 x 20	2 x 20 1 x 10	3 x 20
TOTAL	65	75	85	100, 110, or 120	110, 120 or 130	120, 130 or 140

(1) Recommended for laundry room (2) The high flow rate is preset at 80 CFM; for smaller dwellings, it can be adjusted by the installer to a lower airflow—see "To Adjust Airflow..."

(See the "Table of Allowable Duct Runs")
 Avoid locating the unit over a bedroom, where transmitted noise might be objectionable when the home is otherwise very quiet.

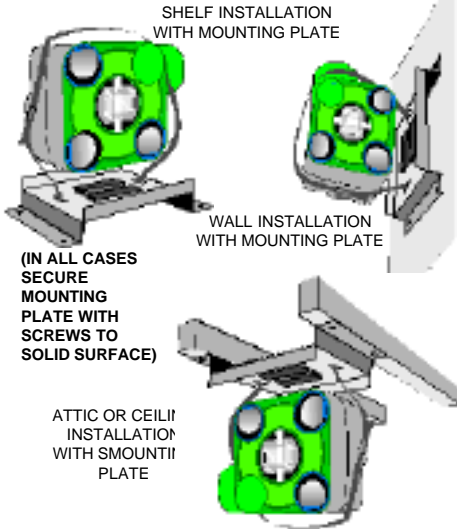
DUCTING

Ducting may be flexible or rigid, depending on local codes. It should conform to NFPA 90A and meet the requirements of the **Underwriters Laboratory** as a class 0 or class 1 duct to specification **UL 181**, (*Standard for Factory-Made Air Ducts and Duct Connectors*).

The length of the ducting should be limited to the values in the Table of Allowable Duct Runs. Otherwise reduced airflows will result from duct resistance.

When designing the ducting runs, include the effect of the elbows as follows: The 3" diameter duct run may have 2 elbows and 20 feet of straight runs. The total equivalent length is then $20 + 2 \text{ elbows} \times 2 \text{ ft. per elbow}$, or $20 + 4 = 24$ feet. That is well within the 30 foot limit for 3" flexible duct. **For a run longer than 30 equivalent feet, it is necessary to switch to smooth duct or increase the duct diameter.**

The fan may be installed on a shelf, in a basement, closet, or utility room, provided it is secured against movement due to the weight of attached ducting or slight vibration during operation.



Installation - Mounting of VMP-S with support plate. The fan is supplied with the mounting plate, vibration isolation and nylon straps. It may be mounted on a shelf, against a wall or ceiling, or on framing members in an attic. If the system is installed in an unheated space in a severe climate, the following **COLD CLIMATE PRECAUTIONS** must be observed:

- Use insulated duct with interior vapor barrier.
- Operate the fan continuously. Cycling the fan on and off may result in premature motor failure.

IMPORTANT: FAILURE TO OBSERVE THE ABOVE PRECAUTIONS WILL VOID THE WARRANTY.

IMPORTANT

AIRFLOW CONTROLS ARE LOCATED IN EACH 3" FITTING ON THE FAN

When connecting the 3" diameter duct runs to fan, care must be taken to assure that they are **attached to a duct connection on the fan with the appropriate Constant Airflow Control**. • The fan is furnished with only 20 cfm airflow regulators in the case of the S2 or S3+ fan packages. • In the S3 package, one 10 cfm and two 20 cfm CAC's are provided. *The 10 cfm control is more flexible, and has 2 small holes in the damper.*

Recommended Utilization for 10 cfm Runs :

- 1/2 Bath
- Utility/Laundry
- Bedroom
- Closets

20 cfm Runs:

- Full Bath
- Kitchen (if 5" dia. run is not used in it)

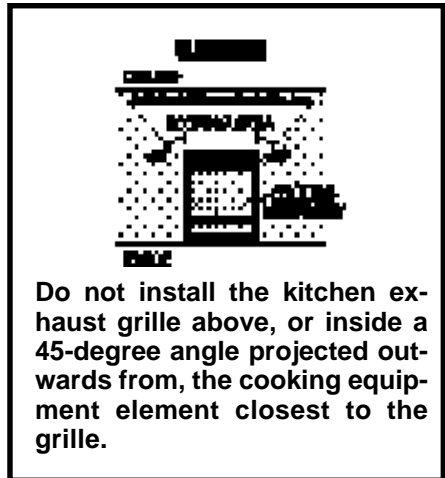
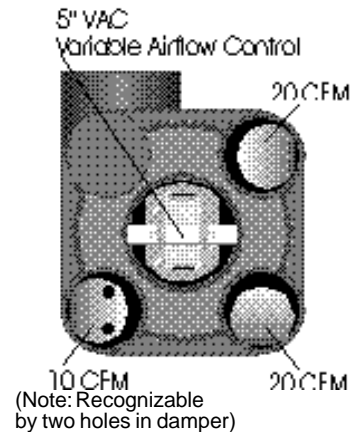
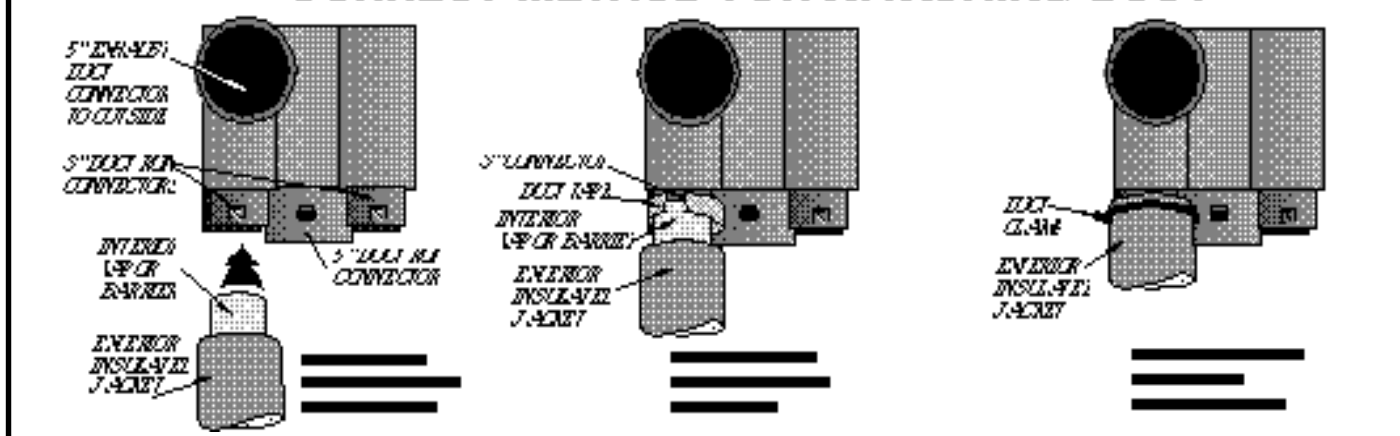


Table of Allowable Duct Runs

	Smooth Round Duct	Flexible Round Duct	90° Elbow Equiv. Length
3" from grille to fan	50 ft.	30 ft.	2 ft.
5" from 5" grille to fan	25 ft.	15 ft.	4 ft.
5" from fan to outdoors	17 ft.	10 ft.	4 ft.

CORRECT METHOD FOR ATTACHING DUCT

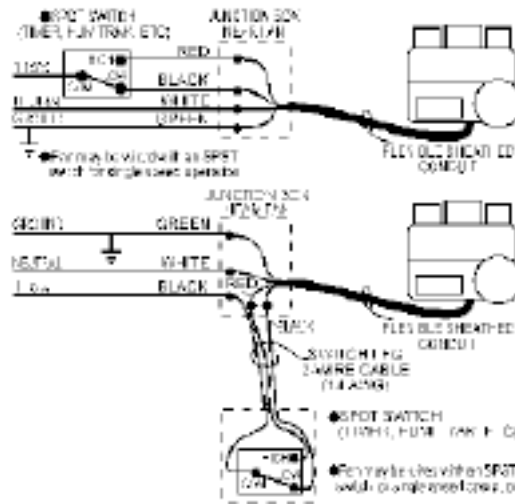


ELECTRICAL DATA

115 Volts AC, 60 Hz, single phase, 1 AMP.

Standard Wiring

The VMP-S is designed to run at two speeds, low continuously, and in high for a timed period, suitable for kitchen or master bathroom use, at 60 to 80 CFM. The switching of speed is accomplished by a single pole double throw switch. The ALDES 0-2 hr. timer switch, part no. #29020, or Humitrak as humidity control #28992 is recommended. The fan resumes low speed automatically at the end of the timed period. Switches are UL listed and CSA certified.



WARNING

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

- Installation Work and Electrical Wiring Must Be Done By Qualified Person(s) In Accordance With All Applicable Codes And Standards, Including Fire-Rated Construction.
- 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 guideline and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Con-

ditioning Engineers (ASHRAE), and the local code authorities.

- When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
- Ducted fans must always be vented to the outdoors.
- If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application.
- NEVER place a switch where it can be reached from a tub or shower.

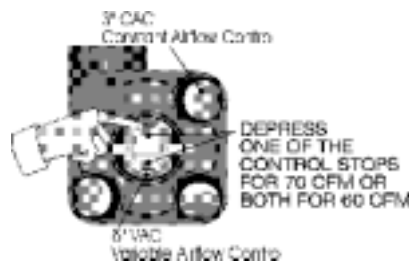
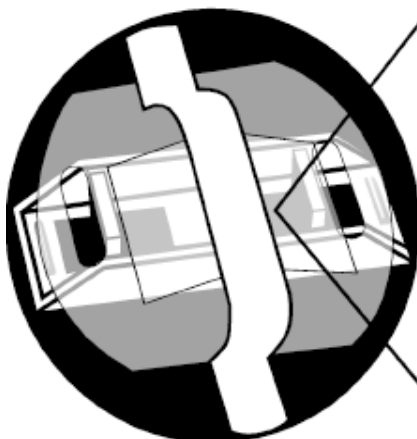
WARNING

To reduce risk of fire or electric shock, do not use this fan with any solid-state fan speed control device.

TO ADJUST AIRFLOW ON MAIN DUCT

The airflow at high speed can be adjusted to 60, 70 or 80 CFM. It is delivered preset to 80 CFM. It can be lowered to 70 or 60 cfm by adjusting the position of control stops located under the 5" VAC. (See accompanying diagrams.)

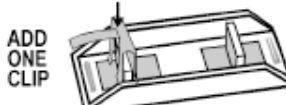
5" VARIABLE AIRFLOW CONTROL



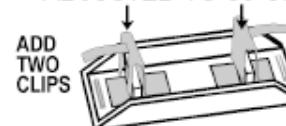
PRESET @ 80 CFM



ADJUSTED TO 70 CFM



ADJUSTED TO 60 CFM



WALL CAP OR ROOF JACK

The exhaust duct from the fan must be connected to a wall cap or roof jack by a collar. The wall jack or roof cap must not create a pressure drop greater than 0.02 in. w.g. at 100 CFM.

CHECK LIST FOR A GOOD INSTALLATION

Understanding the VMP-S

- The fan is designed to operate continuously and must be used in this manner in cold climates. It uses less than 75 watts on low speed.
- Insulated duct must be used in unheated spaces. Respect duct lengths indicated in table of allowable duct runs. Excessively long duct runs will result in low airflows and possibly moisture accumulation in the duct.
- Only the airflow on the 5" diameter duct run may be boosted. The airflows on the 3" diameter runs always remain constant because of the Constant Airflow Controls (CAC's) located in the 3" duct connections on the fan.
- The Constant Airflow Controls (CAC's) are of two types; 10 or 20 cfm. Each is marked with a label indicating the airflow. Duct connections with 10 cfm CAC's are for duct runs to half baths and laundries. Duct connections with 20 cfm CAR's are for duct runs to full baths. If the 5" exhaust point is used in a bath, then the kitchen also should be exhausted with 20 cfm.
- The use of a good low pressure drop wall cap or roof jack with a lot of free area is essential to a good installation. Reducing to less than a 5" diameter at the discharge point will hinder the performance of the VMP-S.

MAINTENANCE

The VMP-S can maintain its effectiveness and airflow characteristics if it is maintained regularly. The maintenance schedule follows:

Every 6 months:

1. Clean the exhaust grilles in the kitchen, bathrooms, etc. The grille is held by friction in its sleeve. A gentle pull is sufficient to remove it.
2. If the home is equipped with fresh air inlets in the bedrooms and living rooms, they should be cleaned with a soft damp cloth. Through wall inlets are often equipped with filters, which need to be washed or replaced, so it is necessary to remove the interior grille to access the filter. If the home has a forced air system, the air intake vent should be checked to make sure it is not blocked with debris, pollen, leaves, etc. The furnace filter should be replaced at this time, as well.

The VMP-S motor needs no maintenance during its lifetime.

Failure to observe these rules can result in:

1. Degradation of the home, moisture damage, etc.
2. Loss of air quality in your home.
3. Loss of manufacturer's warranty, and then the cost of shipment and replacement of defective materials.

Annually:

Be sure to disconnect power to the fan before servicing. Clean the blower wheel with a brush. To gain access to the blower wheel, it is possible to disconnect the discharge duct and use a long handled brush to clean the wheel. Alternatively, the blower wheel may be accessed by separating the two halves of the fan housing as shown above.

DISCLAIMER: IT IS THE RESPONSIBILITY OF THE INSTALLER TO DETERMINE THE SUITABILITY OF THIS EQUIPMENT WITH RESPECT TO THE POTENTIAL FOR BACKDRAFTING NATURALLY VENTED FLUE DEVICES AND/OR AFFECTING RADON ENTRY.

BACKDRAFTING

In especially tight homes heated with naturally vented devices, an exhaust fan may produce sufficient negative pressure to induce backdrafting of flue gases. This is a common occurrence, with conventional exhaust systems, such as vented range exhaust fans or clothes dryers. In the case of continuous exhaust, despite lower airflows, the potential for backdrafting a flue or fireplace does exist. The NATIONAL FUEL GAS CODE, available from the American Gas Association, Appendix H, provides a Recommended Procedure for Safety Inspection of an Existing Appliance Installation. This procedure should be followed to determine the adequacy of combustion air while all exhaust fans are operating at maximum speed and all doors and windows are closed.

In the event that backdrafting occurs, steps must be taken to provide sufficient combustion air to the furnace or boiler, following the guidelines of the National Fuel Gas Code and all state and local codes. In addition the draft hood may be fitted with a thermal switch to disable the exhaust fan under backdrafting conditions.

RADON

In recent years radon gas has been found to be of concern in some homes. While ventilation may be effective in reducing radon concentrations in the liv-

ing space, the negative pressure induced also increases the rate of radon entry into the home. In most cases, ventilation reduces radon levels, but in some cases the level of radon may be increased.

If sub-slab ducting has been installed in the basement, or if the soil under the slab is sufficiently porous, one or more of the three-inch connections on the VMP-S fan may be used to depressurize the sub-slab or crawl space in accordance with the Environmental Protection Agency's recommended procedures. Properly installed, the VMP-S fan may provide efficient radon control. Since a variety of mitigation methods are available and provide differing degrees of effectiveness, a specialist in radon mitigation must be consulted to determine the most effective method for the specific situation.

WARRANTY The entire unit is guaranteed for 3 years, from date of shipment, against all manufacturing defects provided the material has been installed and operated per manufacturer's instructions and under normal conditions. Warranty is limited to the repair or replacement of the material upon its return freight paid to our factory.
This warranty is not transferable and is limited to the original end user.



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