

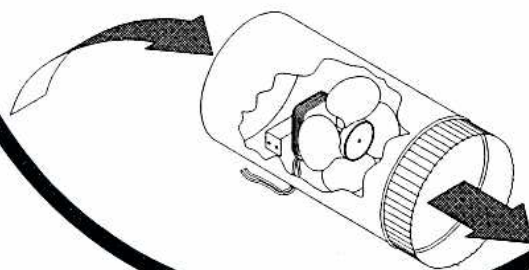


TJERNLUND PRODUCTS, INC.
ENERGY SAVING / MONEY SAVING

ENERGAIRE®

EASILY INSTALLED

OPERATES QUIETLY



INSTALLATION & OPERATION OF ENERGAIRE® MODEL NO. EA-5

GENERAL INFORMATION

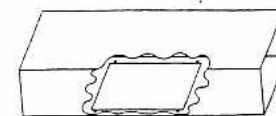
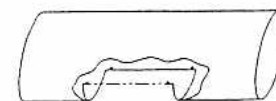
The **ENERGAIRE®** duct fan is designed to increase the flow of heated air in warm air heating systems, or cooled air in central air conditioning systems.

Its size and design limits its use to branch ducts serving individual rooms, not the main supply or "truck line" duct. The **ENERGAIRE®** can be mounted on round or flat ducts. It is frequently installed on a warm air duct of a gravity warm air furnace to provide heating for a basement area.

Do not install the **ENERGAIRE®** where temperature of air within the duct exceeds 150° F. This temperature would only rarely be found on a forced warm air system but could exist close to the furnace on a gravity warm air system. Locating the **ENERGAIRE®** near the outlet end of a duct will provide the most efficient performance.

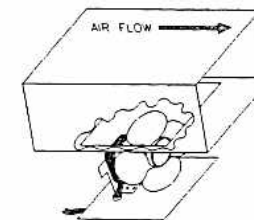
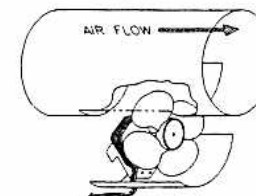
INSTALLATION

1. Apply the mounting template provided to the duct, lining up template arrows in the direction of airflow. Cut a slot of the size indicated in a position where removal of the **ENERGAIRE®** is possible for maintenance or inspection procedures.

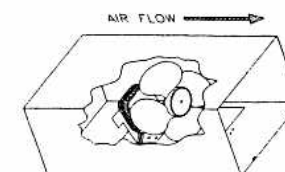
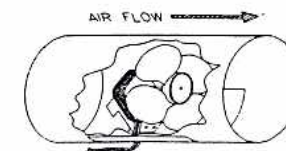


2. Insert the **ENERGAIRE®** in the slot with the fan blade nearest the problem room. The curved shroud goes outside the duct and may be easily bent to conform to the duct.

FOR FLAT DUCTS 6 inches deep or larger.



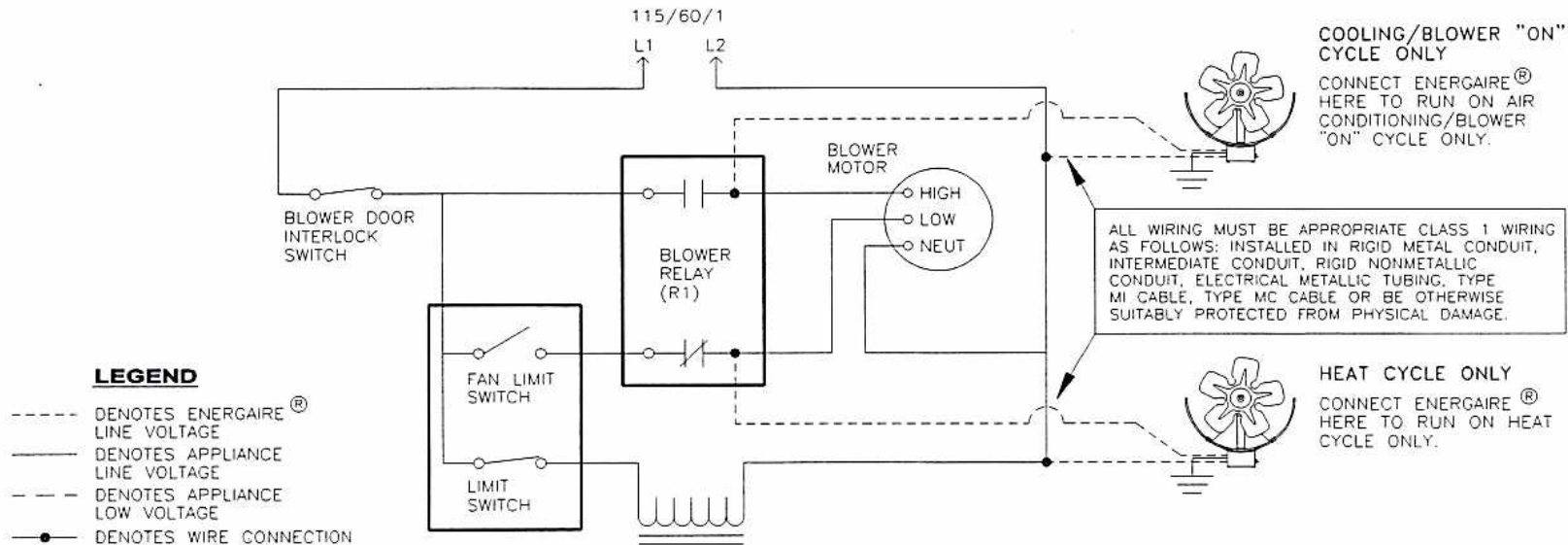
3. Adjust The **ENERGAIRE®** in the slot so the fan blade does not rub the inside surface of the duct. Mark and drill 1/8" diameter holes for sheet metal screws at each of the six screw holes in the curved shroud. Screw the **ENERGAIRE®** to the duct.



PHYSICAL WIRING

The **ENERGAIRE®** should be connected to a 110-120 volt power source by means of permanent wiring. A small junction box (1 1/2" x 3 3/4") should be purchased and attached to the duct where the **ENERGAIRE®** wires extend through the duct.

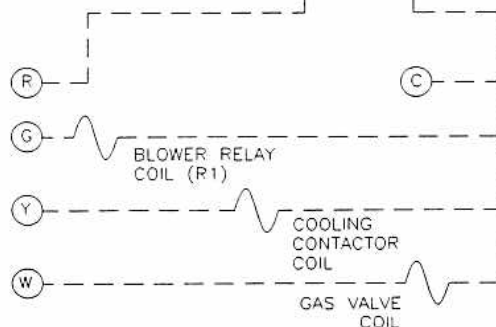
WIRING ENERGAIRE® IN PARALLEL WITH HEAT CYCLE OR COOLING/BLOWER "ON" CYCLE (DIAGRAM NO. 1)



CAUTION: THE ENERGAIRE® CANNOT BE WIRED INTO BOTH THE LOW (HEATING) AND HIGH (AIR CONDITIONING/FAN "ON") CONTACTS OF THE BLOWER RELAY. DOING SO WILL SHORT OUT THE BLOWER.

CAUTION: THE FAN/LIMIT SWITCH, FAN CENTER RELAY AND ASSOCIATED WIRING MUST BE RATED FOR THE ADDITIONAL POWER CONSUMPTION OF THE ENERGAIRE®.

NOTE: IF EA-5 ACTUATION IS NECESSARY DURING ALL BLOWER CONDITIONS, USE A TJERNLUND PRODUCTS, INC. MODEL PS1503 DUCT AIRSTAT.



CAUTION: FURNACE PHYSICAL WIRING ARRANGEMENTS MAY DIFFER FROM DIAGRAM. TO AVOID FIRE OR SHOCK HAZARD ALL INSTALLATIONS INVOLVING CONNECTION TO EXISTING FURNACE WIRING MUST BE MADE WITHIN FURNACE JUNCTION BOX.

IMPORTANT

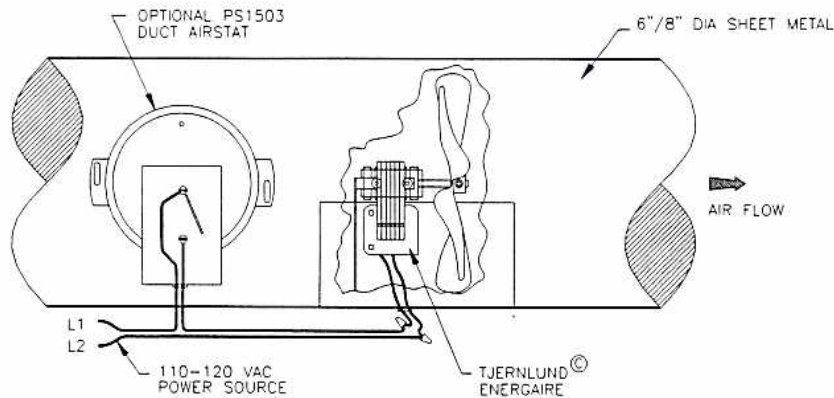
1. For electrical supply connections use wires suitable for at least 75° C when the **ENERGAIRE®** is used on a heated duct system.
2. When **ENERGAIRE®** is installed on a warm air system without filters, flexible conduit or equivalent with sufficient slack in the conduit should be employed to facilitate the cleaning of fan blade. Refer to "Maintenance" for annual cleaning.
3. Electrical conduit must be routed away from warm air system ducts. Use adequate supports if necessary.
4. The motor wires and the power source wires are connected black to black and white to white.

OPERATION

The **ENERGAIRE®** can be operated and controlled in several manners:

1. By means of a standard ON/OFF switch.
2. By using the optional Tjernlund Products, Inc. Model PS1503 **DUCT AIRSTAT** pressure switch, sold separately. The **DUCT AIRSTAT** will automatically control the operation of the **ENERGAIRE®** in both heating and cooling systems. When the air handler supplies warm or cool air, the **DUCT AIRSTAT** senses positive pressure and starts the **ENERGAIRE®**. The **DUCT AIRSTAT** can be mounted on the furnace plenum, trunk or branch line. A typical **DUCT AIRSTAT** installation is shown in Diagram No. 2.

DIAGRAM NO. 2



3. By wiring the **ENERGAIRE®** in parallel with a gas or oil-fired central furnace blower motor. (Feasible only if the furnace blower motor is electrically rated at 120 VAC, 1 phase, 60 cycles.)

IMPORTANT: This method for operating and controlling the **ENERGAIRE®** is limited to the following conditions: Refer to Diagram No. 1.

- A. The gas or oil-fired central furnace may include refrigerant cooling coils, however, it **must** be equipped with 120 VAC single phase blower motors. The **ENERGAIRE®** **SHOULD NOT BE WIRED IN PARALLEL WITH 240 VAC BLOWER MOTORS.**
- B. The basic furnace wiring and components should not be disturbed except for wiring interconnection of the **ENERGAIRE®** and furnace blower motor at a splice box in the furnace.
- C. The rating of furnace blower motor controller must be adequate to control blower motor and the **ENERGAIRE®** motor. The **ENERGAIRE®** motor is rated 0.5 amps. **Note:** Blower motor controller should not be a variable speed tap type, solid state speed control or any other type not suitable for dual motor control.

D. The existing short circuit and ground fault protection for the furnace blower motor should be of a size and type which will adequately protect the **ENERGAIRE®** motor. Refer to Section 430-53 of the National Electrical Code.

E. The wiring from the furnace to the **ENERGAIRE®** must be 14 AWG and the furnace should be protected by over-current protection (fuses or circuit breakers) rated at 15 amperes or less, (as applicable for 14 AWG conductors).

F. IMPORTANT: Refer to Section 430-53(d) and Table 310-16 of the National Electrical Code for additional limitations.

MAINTENANCE

If installed on a forced warm air or cooling system where filters are properly installed and maintained no cleaning of the **ENERGAIRE®** fan and motor should be required.

If installed on a gravity warm air heating system which does not include filters, the **ENERGAIRE®** should be removed from the duct and cleaned at the start of each heating season.

EA-5 REPLACEMENT PARTS LIST

MOTOR KIT	950-0416
FAN BLADE KIT	950-0417

TJERNLUND LIMITED ONE YEAR WARRANTY

Tjernlund Products, Inc. warrants to the original purchaser of this product that the product will be free from defects due to faulty material or workmanship for a period of (1) year from the date of original purchase or delivery to the original purchaser, whichever is earlier. Remedies under this warranty are limited to repairing or replacing, at our option, any product which shall, within the above stated warranty period, be returned to Tjernlund Products, Inc. at the address listed below, postage prepaid. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF, AND TJERNLUND PRODUCTS, INC. EXPRESSLY DISCLAIMS LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF THIS PRODUCT. THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES AND NO AGENT IS AUTHORIZED TO ASSUME FOR US ANY LIABILITY ADDITIONAL TO THOSE SET FORTH IN THIS LIMITED WARRANTY. IMPLIED WARRANTIES ARE LIMITED TO THE STATED DURATION OF THIS LIMITED WARRANTY. Some states do not allow limitation on how long an implied warranty lasts, so that limitation may not apply to you. In addition, some states do not allow the exclusion or limitation of incidental or consequential damages, so that above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which may vary from State to State. Send all inquiries regarding warranty work to Tjernlund Products, Inc. 1601 9th Street, White Bear Lake, MN 55110-6794. Phone (651) 426-2993 • (800) 255-4208 • Fax (651) 426-9547.



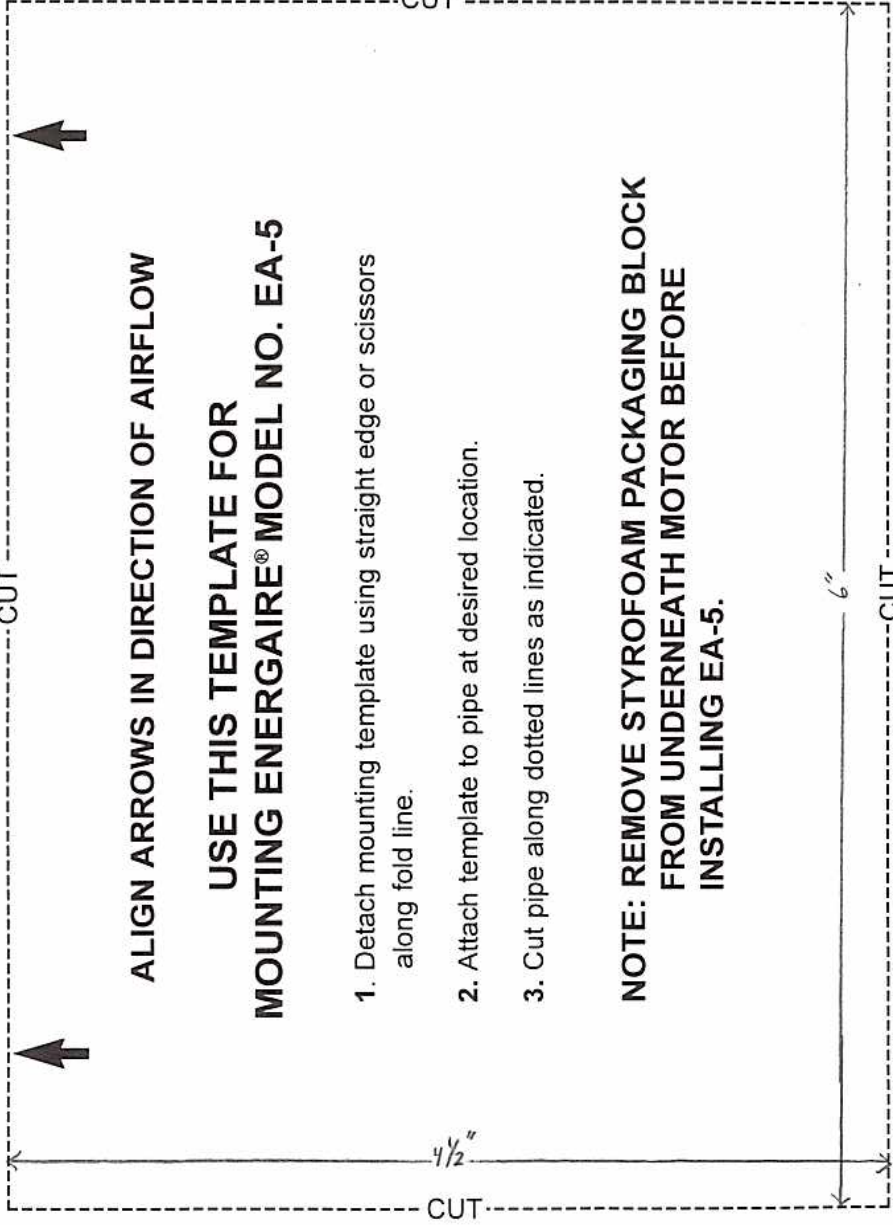
TJERNLUND PRODUCTS, INC.

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WEB ADDRESS • www.tjernlund.com

FOLD LINE

DETACH HERE

FOLD LINE



ALIGN ARROWS IN DIRECTION OF AIRFLOW

**USE THIS TEMPLATE FOR
MOUNTING ENERGAIRE® MODEL NO. EA-5**

1. Detach mounting template using straight edge or scissors along fold line.
2. Attach template to pipe at desired location.
3. Cut pipe along dotted lines as indicated.

**NOTE: REMOVE STYROFOAM PACKAGING BLOCK
FROM UNDERNEATH MOTOR BEFORE
INSTALLING EA-5.**

1/2"

6"