



# TJERNLUND PRODUCTS, INC.

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**OWNERS  
INSTRUCTIONS  
DO NOT DESTROY**

## MODEL PS1503



The Tjernlund Duct Airstat senses positive pressure in a forced air heating and/or cooling system. The single pole, single throw, snap-acting switch is activated by a diaphragm with integral pressure probe inserted directly into the duct or plenum.

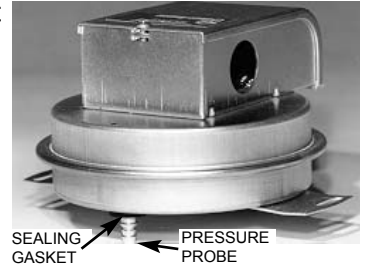
The Duct Airstat can be used to initiate such auxiliary devices as: Duct Boosters, Electronic Air Cleaners, Electrical Duct Heaters, and Humidifiers. The electrical contacts of the switch are closed upon sensing positive air pressure generated by the blower.

### LOCATION AND MOUNTING:

1. The duct Airstat **must** be mounted in a vertical position.
2. Drill a 11/32" hole in the duct or plenum to permit the insertion the pressure probe. If furnace has central air-conditioning, care must be taken so as not to drill into the cooling coil when mounting the Duct Airstat on the furnace plenum.
3. Insert the pressure probe into the drilled hole, position the Duct Airstat and mark the mounting holes. If necessary, bend the mounting feet with pliers to match the contour of the duct or plenum.
4. Remove control and drill or punch two 1/8" holes for mounting screws.
5. Using the two sheet metal screws furnished, fasten the Duct Airstat to the duct or plenum. Sealing gasket must be mounted on pressure probe to ensure minimal air leakage.

### DUCT AIRSTAT INCLUDES:

1. A fixed "fan-on" setpoint (+ .05 ± .02" W.C.)
2. Integral pressure probe
3. Sealing gasket
4. Mounting hardware

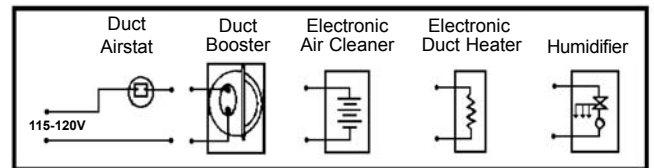


### INSTALLATION: CAUTION

1. Disconnect power supply before making wiring connections to prevent electrical shock and equipment damage.
2. All wiring must comply with applicable codes and ordinances.
3. Always conduct a thorough checkout when installation is complete.

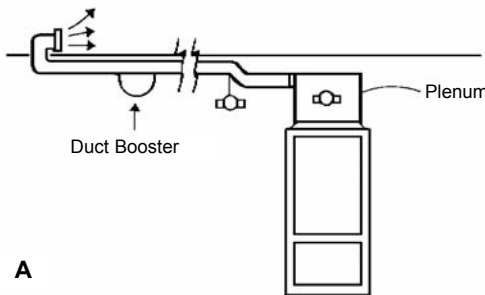
### WIRING:

All wiring must agree with applicable electrical codes and ordinances. Typical diagrams are shown below.



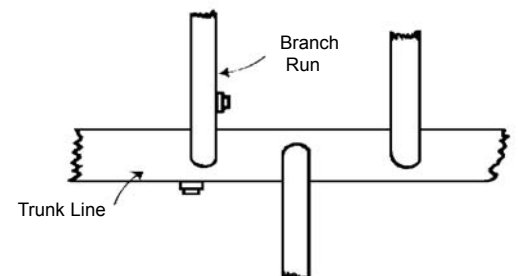
## TYPICAL MOUNTING LOCATIONS & APPLICATIONS

**SIDE VIEW**



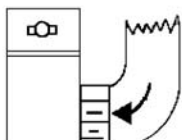
**SWITCH MUST BE MOUNTED WITH DIAPHRAGM IN VERTICAL POSITION**

**TOP VIEW**



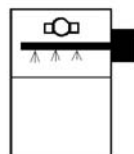
Switch activates Duct Booster by sensing positive pressure on either plenum, trunk, or branch lines as shown in Figures A and B above.

### ELECTRONIC AIR CLEANERS



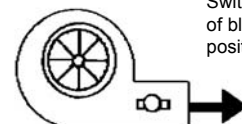
Switch actuates air cleaner by sensing positive plenum pressure.

### HUMIDIFIERS



Switch activates humidifier by sensing positive plenum pressure.

### FAN OPERATION



Switch proves operation of blower by sampling positive pressure.

## CONNECTING TO SCREW-IN TERMINALS:

To connect to screw-in terminals, use the following procedures:

1. Remove electrical box cover.
2. No. 14, 16 or 18 solid or No. 14 or 16 stranded wire may be connected to these terminals. Do not connect aluminum wire to the screw-in terminals on this device.
3. Strip insulation from wires approximately 1/2".
4. Bend each bare lead around its respective terminal in a clockwise direction and tighten terminal screw.
5. Replace the electrical box cover when connections are complete.

## TROUBLE-SHOOTING:

Installations in larger ducts or "dead spots" in duct work may not create enough positive pressure "impact" to activate the Duct Airstat. Try locating pressure probe at several points. Contact Tjernlund Products customer service @ 1-800-255-4208 or email us at fanmail@tjfans.com for further assistance.

## GENERAL SPECIFICATIONS:

### ELECTRICAL RATING:

278 VA Pilot Duty at 24 Volts AC  
300 VA Pilot Duty at 115 to 277 Volts AC  
15 AMPS Non-Inductive to 277 Volts AC

### ELECTRICAL SWITCH:

SPST, N/O, Snap Action Contacts, Non Adjustable

### OPERATING PRESSURE / POSITION:

On pressure rise at  $+.05 \pm .02$ " W.C. (Diaphragm Vertical)

### MAXIMUM PRESSURE:

1/2 PSI

### OPERATING TEMPERATURE RANGE:

-40 to 190° F.

### OPERATING POSITION:

Diaphragm must be vertical

### PRESSURE PROBE:

Self-sealing, integral pressure probe

### DIMENSIONS:

5" Diam., 5 1/2" Across Bracket, 3" High

## OTHER TJERNLUND PRODUCTS



**HIGH PRESSURE DUCT FANS**



**DUCT BOOSTER® DUCT & EXHAUST FANS**

### 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 • Fax (651) 426-9547.