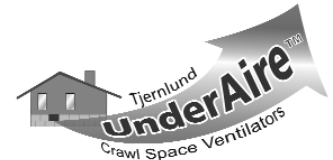




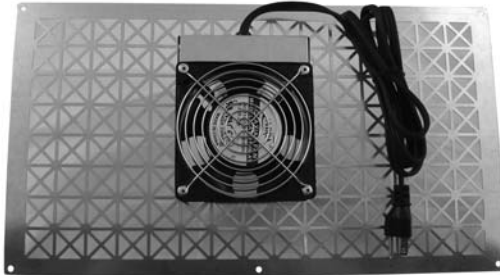
TJERNLUND PRODUCTS, INC.

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Powered Fresh Air Supply Fans for Crawl Spaces CS1, CS2

**READ OWNERS INSTRUCTIONS CAREFULLY PRIOR TO INSTALLATION.
THESE INSTRUCTIONS MUST REMAIN WITH EQUIPMENT. DO NOT DESTROY.**



MODEL CS1



MODEL CS2

DESCRIPTION

The Tjernlund UnderAire™ Series Fresh Air Supply Fans for Crawl Spaces are designed to boost fresh outdoor air underneath homes and porches. Use in conjunction with Tjernlund UnderAire™ Crawl Space Ventilators to remove moisture in Crawl Spaces with too few or undersized passive vent openings, overall lengths of over 40 feet, or in “dead spots” that are not served by existing foundation vents.

Excessive humidity levels in Crawl Spaces is the leading cause of premature rotting of support columns, joists, floors and beam supports. Humidity can promote fungus growth and increased termite activity. Humidity may also cause plumbing failures due to rust and corrosion. Constant operation helps vent radon gases, treated wood off-gassing and other odors that might migrate into living areas.

All models are equipped with a factory installed and pre-wired thermostat which will prevent operation of the fan below 35°F.

SPECIFICATIONS

MODEL CS1 Fresh Air Supply Fan:

Capacity: 110 CFM
Motor: 115 Volts ~ 50/60 Hz
0.30 amps maximum
Thermostat: On at 50°F
Off at 35°F
Dimensions: 18" x 9" x 2"
Mounting Plate Smallest
Trimmable Dimensions: 7" x 6"

MODEL CS2 Fresh Air Supply:

Capacity: 220 CFM
Motors: 2 @ 115 Volts ~ 50/60 Hz
0.60 amps maximum
Thermostat: On at 50°F
Off at 35°F
Dimensions: 18" x 9" x 2"
Mounting Plate Smallest
Trimmable Dimensions: 13" x 6"

GENERAL INFORMATION

Each UnderAire™ Powered Fresh Air Supply Fan is electrically factory line tested before shipment.

After opening carton, inspect thoroughly for shipment damage. Fan should rotate freely and all electrical wires and connections should be secured. If any damage is found, notify freight carrier and your distributor immediately and file a concealed damage claim.

RECOMMENDED APPLICATION

The CS1 & CS2 Powered Fresh Air Supply Fans are designed to be used only in conjunction with Tjernlund V-Series Crawl Spaces Ventilators (V1, V1D, V2D). Use without proper exhaust fans may limit the effectiveness of these fans and is not recommended. For optimal performance match CFM of supply fan to CFM of exhaust fan (Example: 1 CS1 per V1 or V1D and 1 CS2 per V2D).

INSTALLATION

▲ WARNING

The Fresh Air Supply Fan must be installed by a qualified installer in accordance with these instructions and all local codes or in their absence in accordance with the latest editions of the International Residential Code and International Electrical Code. Improper installation can create a hazardous condition such as fire, electric shock or personal injury. To reduce these risks significantly, use this unit only in the manner intended by the manufacturer. If you have questions, contact Tjernlund Products. Always disconnect the Fresh Air Supply Fan from its power source before installation and servicing.

CAUTION: For general ventilation use only. Do not use to exhaust hazardous or explosive materials and vapors.

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

TOOLS REQUIRED

- 5/16" Nut Runner or Flat Head Screw Driver
- Drill with 5/16" Masonry Bit if mounting on brick or foundation block
- Grounded Electrical Outlet within 6 feet of fan location.

INSTALLATION

LOCATION

Mount Fresh Air Supply Fan from the outside (remove existing vents if necessary) or inside the crawl space behind existing foundation ventilation openings. Alternately, attach to joist to act as a "dead spot" supply fan, (see diagram B).

NOTE: Crawl Space Ventilator must be mounted with the electrical control box and motor facing the interior of the crawl space.

1. Remove existing doors or covers on ventilation openings around the perimeter of the building.
2. Position the Crawl Space Ventilator over the ventilation opening. To minimize moisture accumulation near power supply, the unit should be oriented with the cord coming out on the top side of the fan(s).
3. If installing on foundation block or brick, mark location in the six mounting locations of the metal face plate and drill 5/16" holes with masonry bit. Install wall anchors into openings and secure Fresh Air Supply Fan to the wall with six screws.

If installing on a wood header, rim joist or mesh on existing crawl space vent, secure Fresh Air Supply Fan with screws, washers and nuts in the six mounting locations of the metal face plate.

5. Plug unit(s) into electrical outlet or Tjernlund DH2P Dehumidistat Control.

DIAGRAM B: TYPICAL MODEL CS1 & CS2 MOUNTING, FOUNDATION OPENING (Model CS1 Shown)

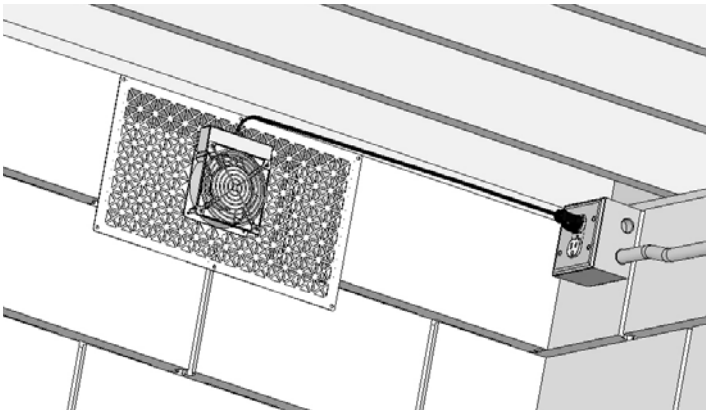
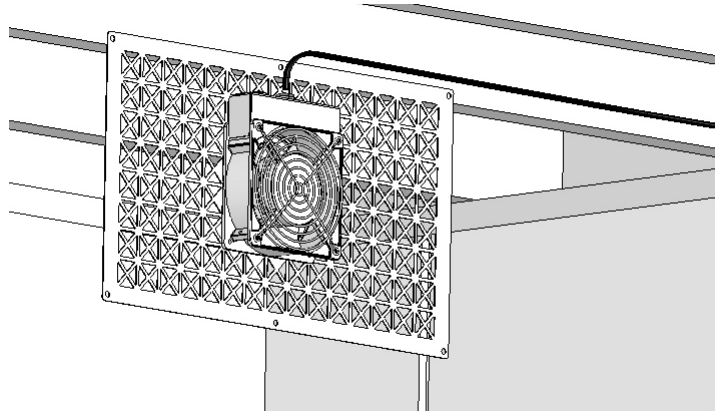


DIAGRAM B: TYPICAL MODEL CS1 & CS2 MOUNTING, JOIST INSTALLATION (Model CS1 Shown)

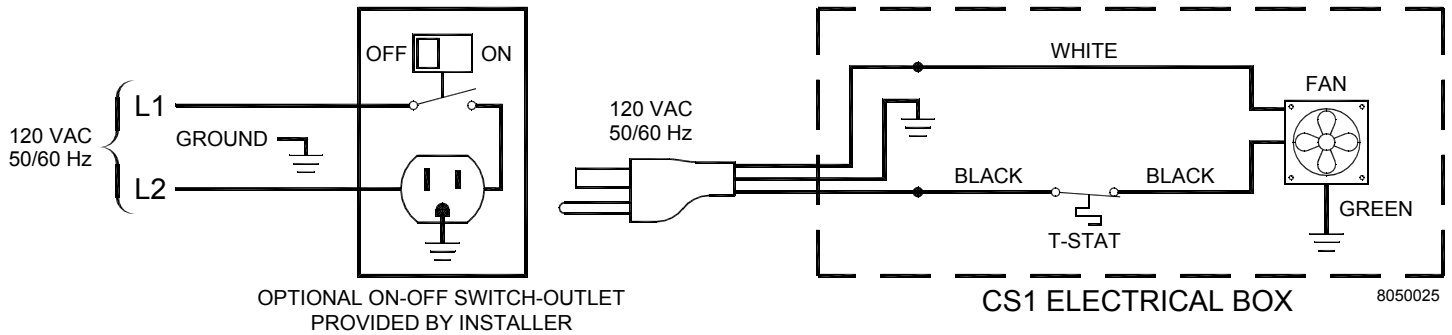


REPLACEMENT PARTS

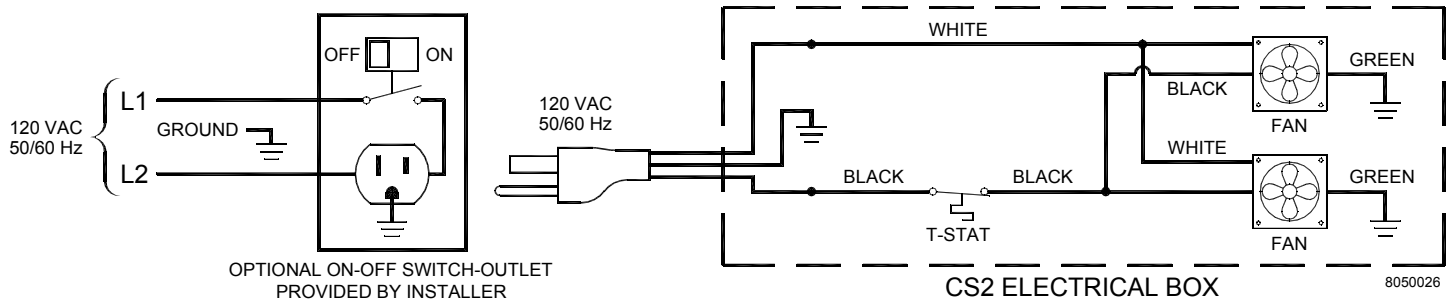
<u>Component</u>	<u>Part Number</u>
Thermostat	950-8302
Fan	950-0020

WIRING

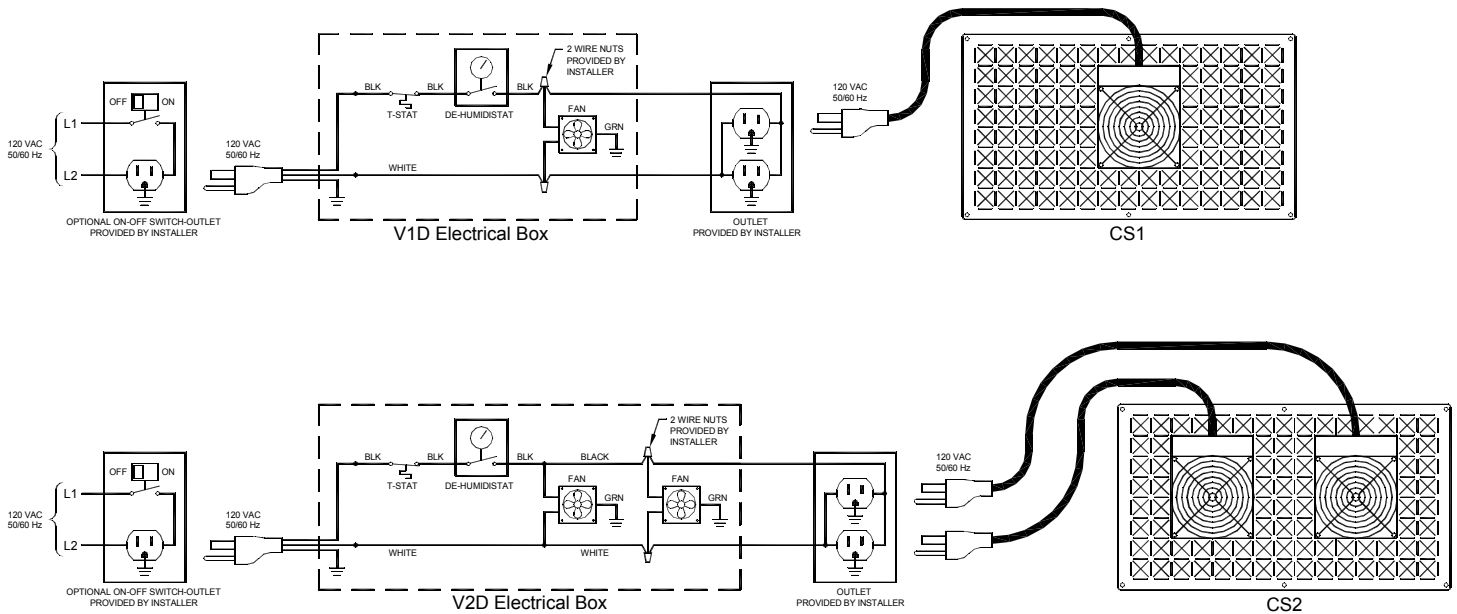
MODEL CS1 INTERNAL WIRING



MODEL CS2 INTERNAL WIRING



CONTROLLING CS1 OR CS2 WITH V1D OR V2D



WARRANTY

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 • Email fanmail@tjfans.com.