

**READ AND SAVE
THESE INSTRUCTIONS**



No.: II-500
Date: October, 2007

AURA

Installation & Maintenance Instructions



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

- A. Use this unit only in the manner intended by the manufacturer. If you have any questions, contact the manufacturer.
- B. Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means 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.
- C. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
- D. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent back drafting. 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 Conditioning Engineers (ASHRAE), and local code authorities.
- E. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.

WARNING FOR FUEL BURNING EQUIPMENT:

Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent back drafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA), and American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and local code authorities.

UNCRATING

This unit was quality inspected and tested immediately prior to packaging and was in operating condition at that time. Check the shipping carton and unit for any damage that may have occurred during shipment. If damage is found, notify the shipping company immediately.

The AURA Series air door is shipped completely assembled. Remove the accessory box and the louvered discharge grille (wrapped in protective paper) from the carton. Remove the AURA Series air door from the carton. **See Figure 1.** Immediately upon unpacking the unit, verify that the rating nameplate agrees with the electric supply available.

Do NOT attach the louvered discharge grille or perforated intake grille at this time.

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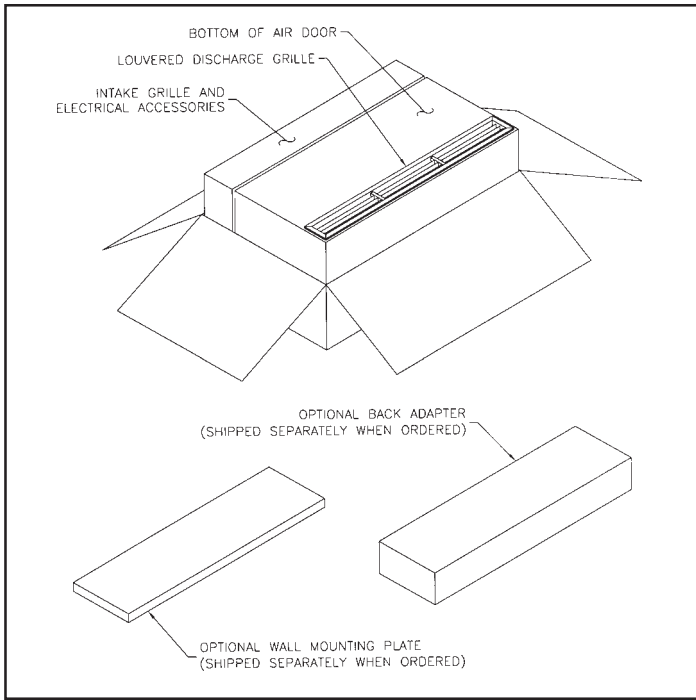


FIGURE 1 - Contents

Each AURA Series carton contains the following **pre-assembled components**:

- ✓ (1) AURA air door unit
- ✓ (1) Louvered discharge grille
- ✓ (1) Perforated intake grille
- ✓ (2) Plastic snap ring bushings
- ✓ (6) No. 6 x 3/4 Phillips head screws
- ✓ (1) Remote selector switch

Optional Accessories

- ✓ Wall mounting plate
- ✓ Perforated back adapter
- ✓ Solid back adapter
- ✓ Solid back adapter (with or without lights)

I. MOUNTING INSTRUCTIONS

(All Models)

- A. Before mounting the unit, check the supporting structure to verify that it has sufficient load-carrying capacity to support the weight of the unit(s). The mounting hardware (supplied by others) should be capable of supporting a minimum of three (3) times the weight of the unit. **See Table 1.**
- B. Nothing should interfere with the curtain of air developed when the discharge grille vanes are directed 20° toward the door opening. If the air stream strikes any obstruction (the top edge of the doorway, a door opening device, etc.), the effectiveness of the unit will be greatly reduced.

MODEL	Net Weight Ambient (lbs)	Net Weight Heated (lbs)
ARA1036	120	130
ARA1042	135	145
ARA1048	158	168
ARA1060	185	195

TABLE 1 - Unit Weight

C. For optimum performance, the bottom of the unit (discharge grille) should be a maximum of 1" above the top of the door opening with the unit mounted flush to the wall. If the unit must be mounted higher, it must be **spaced out** from the wall 3/8" for every inch the unit is above the door opening (maximum recommended mounting height of 10'). Where possible (installation site permitting), for optimum protection, any void between the air door and the wall should be sealed along the full length of the unit.

D. Do not block (obstruct) the air intake grille. Insufficient air flow can cause the unit to overheat.

E. **Electric heated units should have:**

1. A minimum clearance of at least 4" between the sides and top of the unit and any combustible material.
2. A minimum clearance of at least 6' between the bottom of the unit and the floor.

Proceed to either **Suspended or Wall Mounting Instructions**.

II. SUSPENDED MOUNTING

A. **NO BACK ADAPTOR: Figure 2**

1. Suspend the AURA Series air door on the inside of the building with the **louvered discharge grille** facing the door opening. **See Figure 2.**
2. Mount and level the air door by connecting four (4) 5/16-18 threaded rods or other suitable hardware (supplied by others) to the (4) 5/16-18 threaded inserts located on top of the unit.

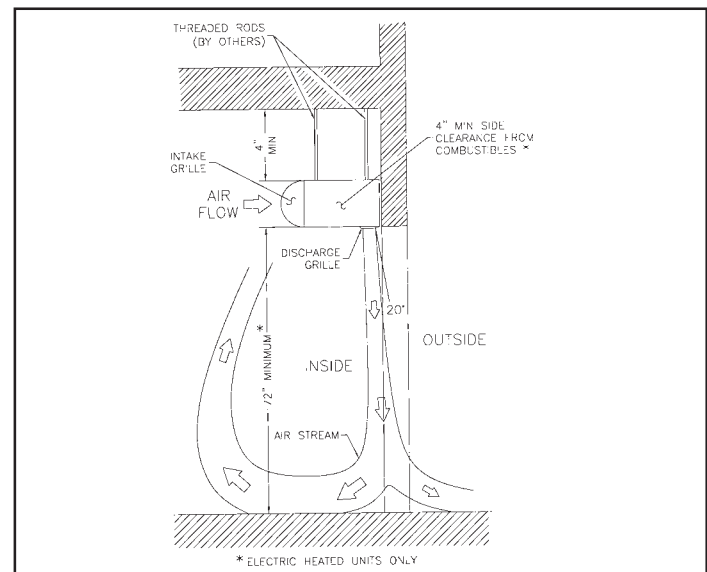


FIGURE 2 - Suspension Mount without Back Adapter

B. WITH BACK ADAPTER: Figures 3 & 4

1. The unit may be mounted with the louvered discharge grille facing toward the door opening, or the interior of the building (electric heated models only). See Figures 3 and 4.
2. **Figure 3** installation (louvered discharge grille facing interior of the building). Follow instructions A & B above.
3. **Figure 4** installation (louvered discharge grille facing interior of the building). A maximum of 6" between the wall and intake grille is required. Install the back adapter at this time. Follow instructions 2 under Item A.

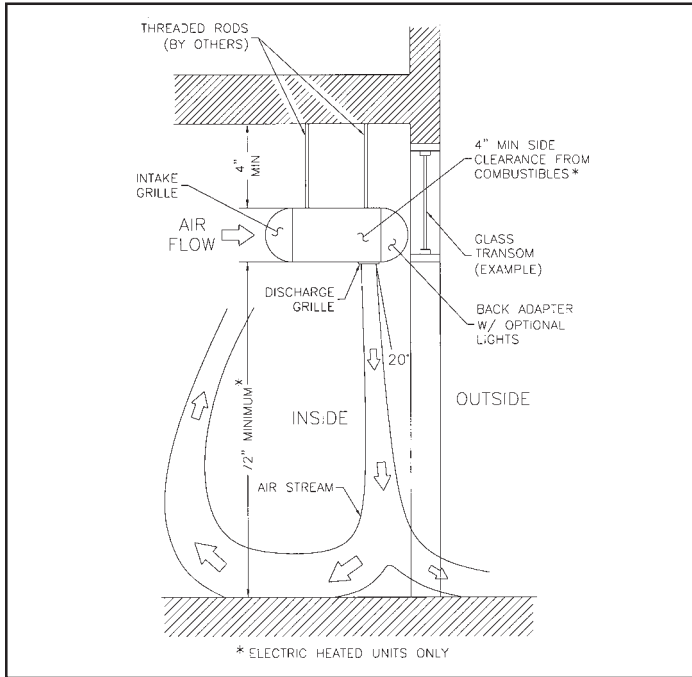


FIGURE 3 - Suspension Mount with Back Adapter

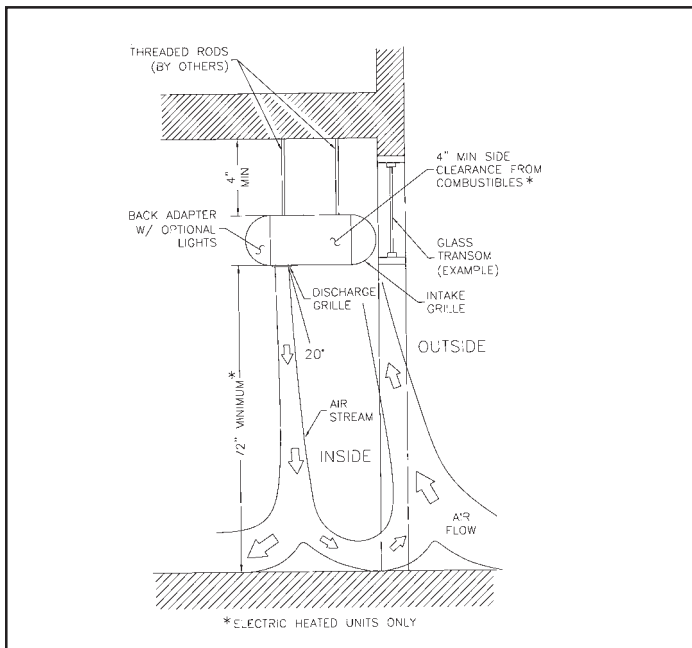


FIGURE 4 - Suspension With Back Adapter Reverse Flow

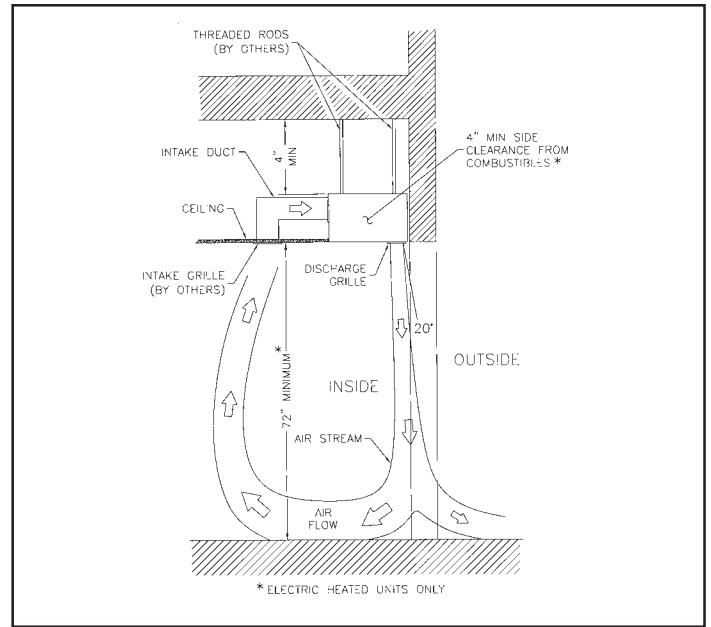


FIGURE 5 - In-Ceiling Suspension Mount Without Adapter

C. ABOVE CEILING: Figure 5

Follow instructions 1 & 2 under Item A. See Figure 5. The bottom of the unit can be exposed for easy servicing.

- D. DO NOT install the perforated intake grille or the louvered air discharge grille at this time. Proceed to Section IV ELECTRICAL CONNECTIONS.**

III. WALL MOUNTING

(Optional Wall Mounting Bracket Required)

See Figures 6-10

- When the AURA Sseries air door is for wall mounting, four 5/16" shoulder bolts will be pre-assembled on the back of the unit (opposite the perforated intake grille).
- The wall mounting plate is designed to fit flush with the back of the entire AURA door.
- Determine the exact location of the air door unit. Position the center of the wall mounting plate over the center of the door opening with the larger opening of the key hole slots facing up.

For optimum performance, the bottom of the mounting plate should be no more than 1" above the top of the door opening. **STANDARD WALL MOUNTING: Figure 7A.** The wall mounting plate thickness provides a natural 1³/₈" space which allows for mounting up to 4" above the opening.

HIGH WALL MOUNTING: If the wall mounting plate must be mounted higher than 4" above the door opening, it must be spaced out from the wall 3/8" for every inch the unit is above the door opening. See Figure 7B.

For optimum performance, do not exceed the recommended **maximum mounting height of 10'** above the finished floor. For optimum protection, any void between the mounting plate and the wall should be sealed along the full length of the mounting plate.

- D. Mark the wall in the centers of the (4) 1/2" round holes provided on the mounting plate. **See Figure 6.** If the holes on the mounting plate are not located where suitable support is available for the unit, drill new holes in the space provided on the mounting plate.
- E. Drill the four holes as marked on the wall and attach the mounting plate to the wall (mounting hardware by others).
- F. Raise the air door with the discharge opening facing down toward the floor. While holding the unit level, slide the heads of the shoulder bolts into the larger hole of the keyhole slots of the mounting plate. Lower the unit into place, keeping both ends level, allowing it to rest flush with the mounting plate. **See Figure 9.**
- G. After attaching the unit to the mounting plate, check to ensure the unit is seated and flush with the mounting plate on all four sides.
- H. Do not install the perforated intake grille or the louvered discharge grille at this time.

Proceed to Section IV - Electrical Connections.

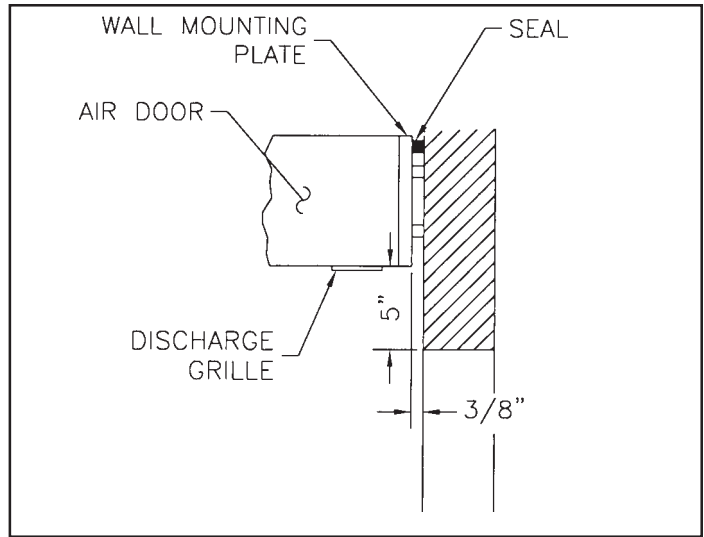


FIGURE 7B - High Wall Mounting

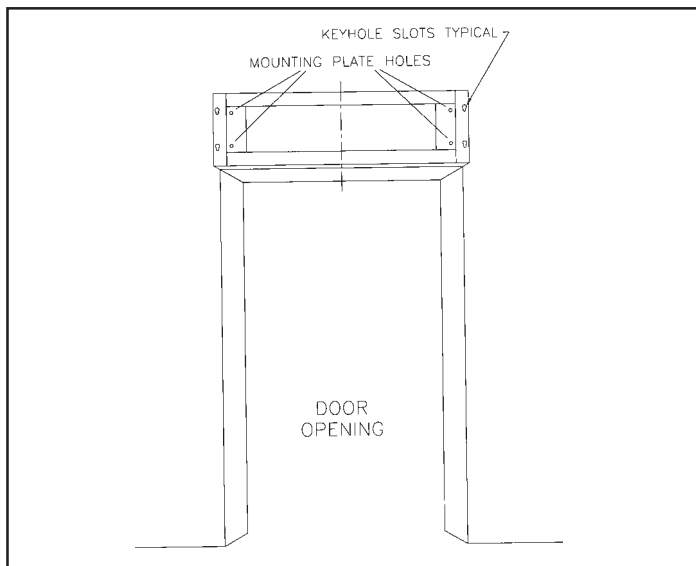


FIGURE 6 - Wall Mounting Plate, Wall Marking

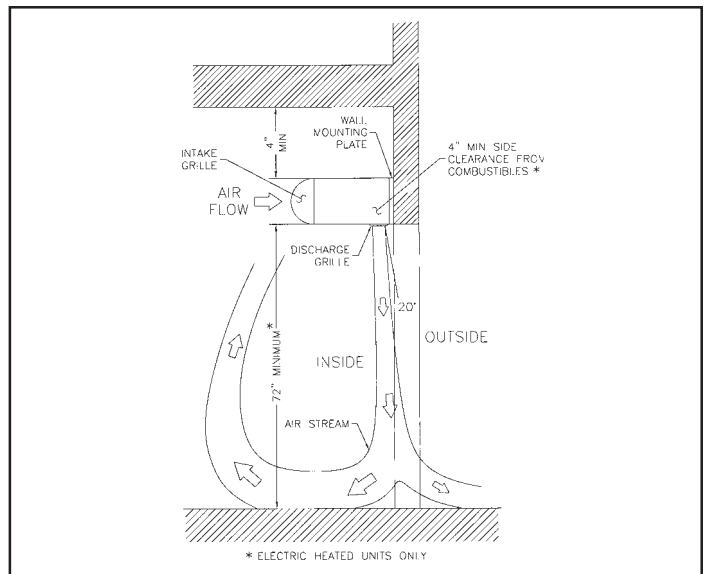


FIGURE 8 - Wall Mount With Optional Wall Plate

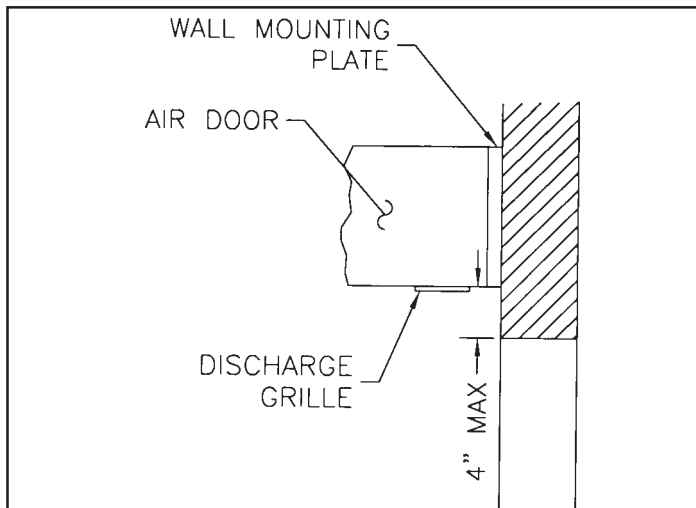


FIGURE 7A - Standard Wall Mounting

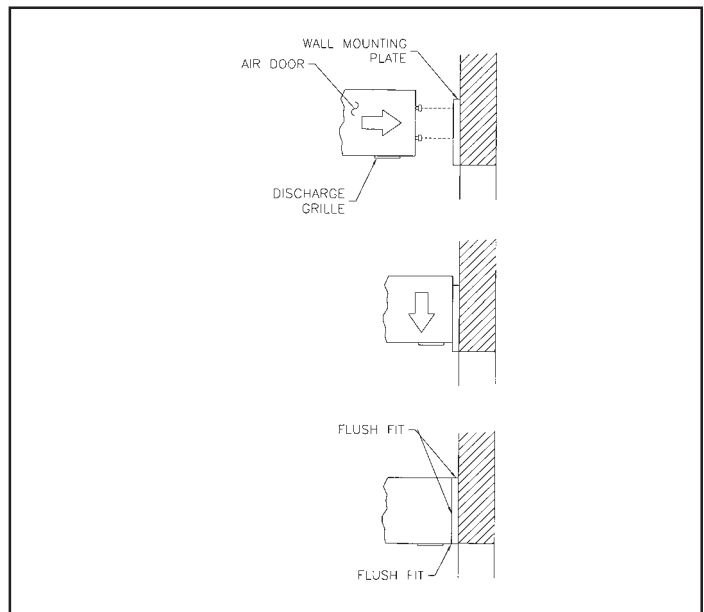


FIGURE 9 - Mounting to Wall Plate

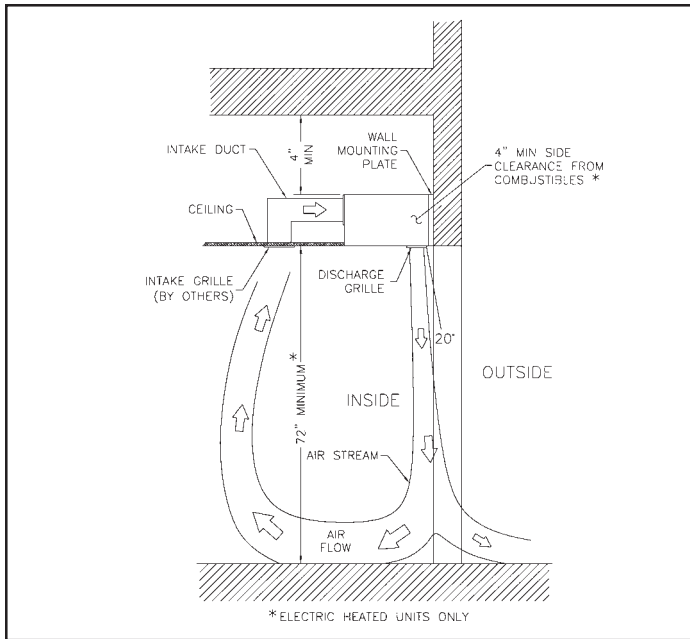


FIGURE 10 - In-Ceiling Mount With Optional Wall Plate

IV. ELECTRICAL CONNECTIONS

A. All electrical wiring and connections **MUST** be performed by qualified personnel in accordance with the National electrical Code ANSI/NFPA No. 70 (latest edition) or, in Canada, the Canadian Electrical Code, Part 1-C.S.A. Standard C22.1 and local codes and regulations.
WARNING: DO NOT OPERATE THIS FAN WITH ANY SOLID STATE SPEED CONTROL DEVICE.

B. Check the rating nameplate on the top of the unit, or inside the bottom access cover, for supply voltage and current requirements. **See Figure 11.** A separate line voltage supply with a suitable branch circuit protection device should be run directly from the main electrical panel of the unit. A disconnect switch for each branch circuit is a required part of this installation.

C. All field wiring must be copper with a minimum insulation of 60°C within approved conduit. If any of the wire supplied with the unit must be replaced, it must be replaced with copper wiring with a minimum insulation of 90°C.

D. Access the wiring compartment, **See Figure 11**, by lowering the bottom **hinged access cover**. Remove the two 1/4" bolts located on the intake side of the unit and the access cover will swing down to rest in the vertical position exposing the wiring compartment. If desired, the access cover may be removed by grasping both sides of the access cover and pressing in on the spring loaded hinges. **See Figure 11.**

E. The top of the unit has two knockouts on each side allowing for a left hand or right hand power connection. Remove the required knockout and connect the power supply to the unit.

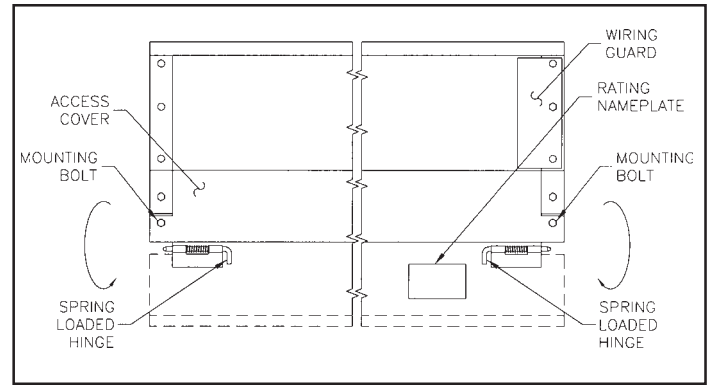


FIGURE - 11 Access Cover Removal

F. A wiring guard, **See Figure 12**, is mounted on the right of the air intake of the unit. The wiring guard is reversible, so it may be mounted on either side of the unit. Remove the 1/4" mounting bolt. Clearance holes enable the wiring guard to be removed without disturbing the 1/4" shoulder bolts.

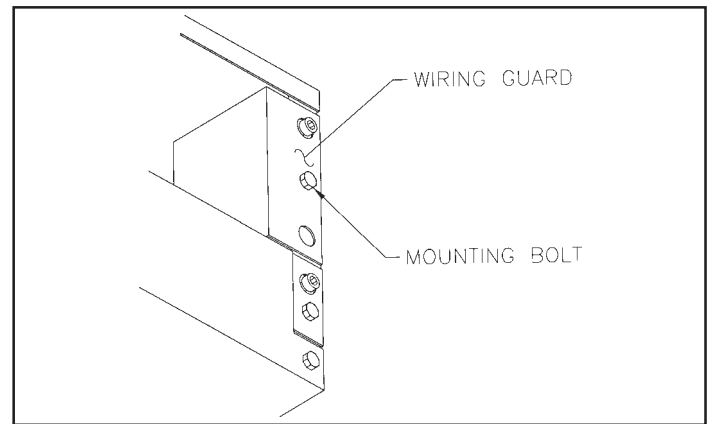


FIGURE 12 - Wiring Guard

G. The wiring tray, directly below the power supply connection, also has two knockout slugs. Remove the required knockouts and insert one plastic snap ring bushing into each hole created.

H. Install the **Remote Selector Switch** in accordance with the directions furnished with the selector switch. Each switch is capable of operating up to three units at 120 VAC and up to six units at 208/240 VAC. Make the switch connections according to the applicable wiring diagram..

I. Connect all power and control circuit wires to the terminal strip located on the right hand side of the wiring tray. Refer to the wiring diagram.

J. If your unit was provided with a Time Delay-Off Relay, it will be factory set at 15 seconds. If a longer delay-off is desired, adjust the rotary dial clockwise with a small screwdriver to preferred time setting. Each hashmark stands for 60 seconds with a maximum setting of up to 300 seconds. **See Figure 13.**

K. Reinstall the wiring guard so that it covers all of the wires used to make the connections to the terminal strip. Reinstall the 1/4" mounting bolt. **See Figure 12.**

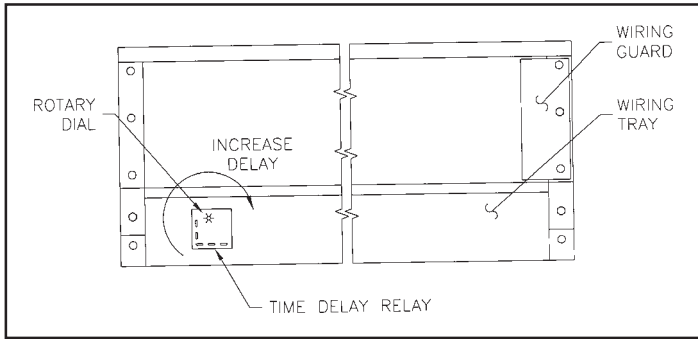


FIGURE 13 - Time Delay Adjustment

- L. Reinstall the hinged access cover by positioning one hinge into the corresponding catch located on the unit. Raise the other hinge to the unit, when the catch is located press in the hinge and release it into the catch. Swing the access cover into place and align the mounting holes with the threaded inserts on the unit. Reinstall the two 1/4" bolts. **See Figure 11.**
- M. Attach the perforated intake grille on the 1/4" shoulder bolts of the unit. **See Figure 15.** While holding the grille level with the unit, align the keyhole slots with the shoulder bolts. Press the grille firmly against the unit and push down until the grille rests flush with the bottom of the unit.
- N. Attach the louvered discharge grille to the unit with the six (6) No. 6 x 3/4" phillips head screws provided. **See Figure 14.**
- O. Switch on the power at the service disconnect. Turn on the unit at the selector switch and check the sequence of operation against that provided on the wiring diagram. **Proceed to Section V: Operation and Air Flow Adjustment.**

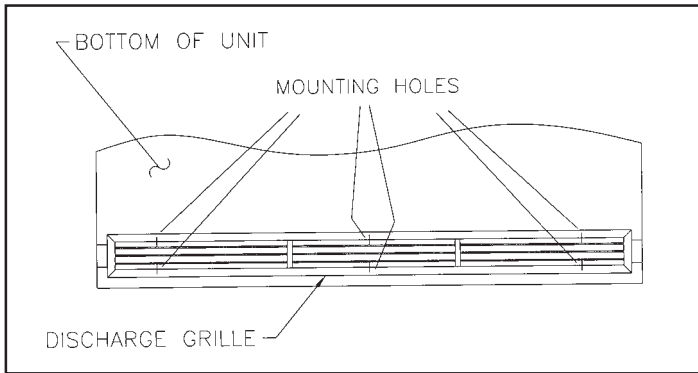


FIGURE 14 - Louvered Discharge Grille Installation

V. OPERATION AND AIR FLOW ADJUSTMENT

- A. With the air curtain operating on high speed, and the door in its full open position, check to see that nothing is obstructing the air flow at the louvered discharge grille.
- B. Find the air stream "split" location. Hold a handkerchief, by its top corners, approximately 12" above the floor. Gently move the handkerchief back and forth in the doorway. Make sure the air is being directed to both the inside and the outside. The split locations indicated when the handkerchief is vertical with minimal flutter.

- C. Adjust the air directional vanes in the louvered discharge grille so the split location is approximately 3" outside the doorway.

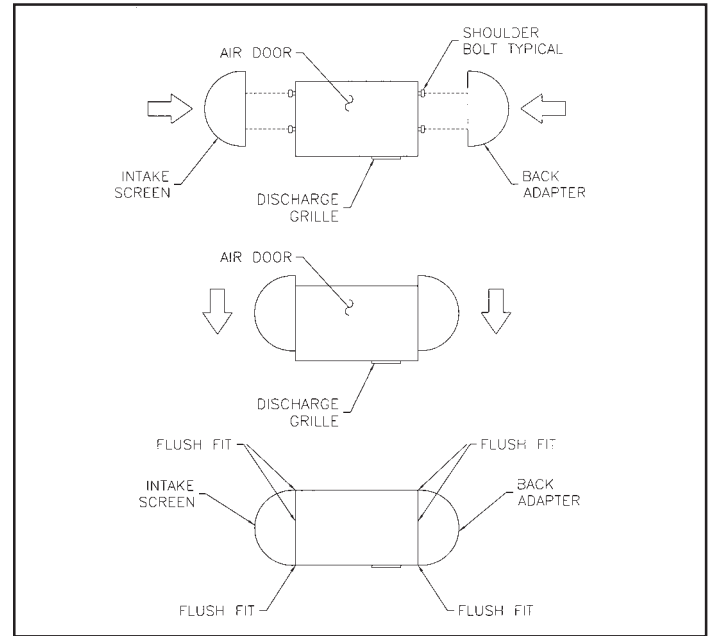


FIGURE 15 - Attaching Intake Screen or Back Adapter

VI. PREVENTIVE MAINTENANCE & SERVICE

- A. **CAUTION: ELECTRIC SHOCK HAZARD Disconnect power whenever servicing unit. More than one disconnect may be required to de-energize unit.**

Any service performed on the AURA Series air door **MUST** be done by qualified personnel.

Berner air doors require very little servicing. All parts are easily accessible for periodic inspection and maintenance. Units should be cleaned at least twice a year. Your particular application (the amount of dirt and dust in the air) and location of the unit(s) will determine how often your unit(s) will need to be cleaned and serviced. All motors have permanently lubricated, sealed, sleeve bearings and require no maintenance.

- B. **TO PERFORM PREVENTIVE MAINTENANCE, REMOVE THE LOUVERED DISCHARGE GRILLE, THE PERFORATED INTAKE GRILLE AND THE BOTTOM ACCESS COVER.**

1. Remove the discharge grille by unscrewing the six (6) Phillips head screws located on the inside edge of the grille. **See Figure 14.**
2. Remove the intake grille by lifting up on both sides with equal force. Once the grille is detached, pull the grille away from the unit until it clears the shoulder bolts. This will expose the bottom access cover mounting bolts and the heating coils (if applicable).
3. Remove the bottom two 1/4" mounting bolts on the intake side of the unit. Swing the access cover to rest in the vertical position. Grasp both sides of the access cover and press in on the spring loaded hinge. This will release the access cover from the unit and expose the blower mounting plate. **See Figure 11.**

4. Use an industrial vacuum or compressed air to remove dirt build-up from the inside of the access cover, air inlet grille, blower wheels/housings, interior of the unit, and heating coils (if applicable). Remove the dirt build-up from the blower wheels through the discharge openings on the blower plate.
5. If the unit is extremely dirty the blower plate (containing the motor and fan wheels) may be removed to further access the internals.

C. TO REMOVE THE BLOWER PLATE:

1. Unplug the wiring harness from the motor.
2. Blower plate removal - Remove the four (4) ¼” bolts located on the four corners of the blower mounting plate. This will release the blower plate from the unit. Remove the blower plate by lowering it straight down and out of the unit. All internals are attached to the blower plate allowing for service or repair to be done on the ground away from the unit.
3. To reassemble the unit reverse steps 1 through 5.

WARRANTY

Berner International warrants all new equipment to be free of defects in workmanship and material for a period of five years (5 years) on unheated models and two years (2 years) on heated models from the original date of shipment, provided the equipment has been properly cared for, installed and operated in accordance with the limits specified on the nameplate and The Company’s instructions.

The Company will correct by repair or replacement, at its option and expense, any proven defects in said apparatus, subject to the above conditions, provided that immediate written notice of such defects is given to the Company. The warranty does not include any labor incurred for the removal or installation of defective part(s). The Company reserves the right to inspect, or have inspected by a qualified representative, any apparatus at the place of installation before authorizing repair or replacement. Repair or replacement will be made F.O.B. factory with any applicable transportation charges to be borne by the customer. Merchandise not of the Company’s manufacture supplied in piece, or in component assemblies, is not covered by the above warranty, but the Company will give the customer the benefit of any adjustment as made with the Manufacturer.

This warranty is void if the apparatus has been tampered with in any way or shows evidence of misuse.

The Company will not assume any expense or liability for repairs made outside its factory without proper written consent from its service manager, nor for any transportation charges on apparatus returned to the factory without written authorization by the Company.

Nothing in the above warranty provisions, however, shall impose any liability or obligation of any type, nature or description upon Berner International if Berner has not received payment in full for the apparatus in question.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

LIMITATION OF DAMAGES

Notwithstanding anything to the contrary above, customer’s exclusive remedy for any and all losses or damages resulting from the sale of The Company’s equipment under this agreement, including but not limited to, any allegations of breach of warranty, breach of contract, negligence or strict liability, shall be limited, at The Company’s option, to either the return of the purchase price or the replacement of the particular equipment for which a claim is made and proved. In no event shall The Company be liable for any special, consequential, incidental or indirect losses or damages from the sale of The Company’s equipment under this agreement.

Serial No. _____ Model No. _____ Date of Purchase _____



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TROUBLESHOOTING

SYMPTOMS	CAUSE	REMEDY
NO AIR	<ul style="list-style-type: none"> • Power supply line open (no power) • Fuse blown/circuit breaker tripped • Motor overload tripped 	<ul style="list-style-type: none"> • Check power source, check method of control in ON position • Replace fuse(s)/reset breaker • Internally protected motor - should reset automatically after cool-down, if not replace motor. • Replace switch
	MOTOR RUNNING/FANS ARE NOT ROTATING	
	<ul style="list-style-type: none"> • Broken or flexible hub • Shaft rotating inside fan • Belt driven units/belt broken 	<ul style="list-style-type: none"> • Replace fan sleeve/reengage coupling • Tighten set screws/tighten fan on shaft • Replace belts
MINIMUM AIR	ELECTRICAL CONTROLS NOT FUNCTIONING WHEN DOOR IS OPEN	
	<ul style="list-style-type: none"> • Selector switch is in off position • Door limit switch not operating 	<ul style="list-style-type: none"> • Turn switch to "ON" position • Repair or replace limit switch
AIR IS NOT HITTING FLOOR	<ul style="list-style-type: none"> • Air directional discharge vanes misadjusted • Inadequate intake clearance • Blower motor operates below speed • Fan rubbing against housing • Fan wheels clogged with dirt 	<ul style="list-style-type: none"> • Adjust vanes to proper position, see instructions • Move air curtain or remove obstruction • Provide adequate space for air curtain • Improve voltage • Free fan from housing • Clean and vacuum fan wheels
UNEVEN AIR	<ul style="list-style-type: none"> • Air stream to weak • Air stream hits obstruction • Negative pressure 	<ul style="list-style-type: none"> • Adjust nozzle to proper position, adjust motor speed; see installation instructions • Remove obstruction or reposition air curtain (move out $\frac{3}{8}$" for every 1" up from the door) • Relieve negative pressure by providing make-up air
EXCESSIVE AIR MOVEMENT AT DOORWAY	<ul style="list-style-type: none"> • Shaft rotating inside fan • One motor not operating 	<ul style="list-style-type: none"> • Tighten set screws • Repair or replace motor
EXCESSIVE AIR MOVEMENT AT DOORWAY	<ul style="list-style-type: none"> • Nozzle not angled out far enough • Unit too powerful • Air movement too cold • Pushing air outside building <p style="text-align: center;">SEE AIR IS NOT HITTING FLOOR SYMPTOMS</p>	<ul style="list-style-type: none"> • Adjust nozzle angle to outside • Adjust motor speed • Add auxiliary heat to overcome wind chill factor • Adjust discharge angle back into building, adjust motor speed
ELECTRICALLY HEATED MODELS		
NO HEAT	<ul style="list-style-type: none"> • Switch turned to "ON" position • Thermostat not set properly • Coils burned out due to lack of air • Automatic reset thermal cutout failed in open position • Manual reset thermal cutout tripped 	<ul style="list-style-type: none"> • Replace switch or check wiring • Change thermostat setting • Correct airflow problem; replace coils • Replace automatic thermal cutout • Reset manual thermal cutout
NOT ENOUGH HEAT	<ul style="list-style-type: none"> • Thermostat in wrong location - thermostat too close to discharge • Improper voltage • Thermostat not set properly 	<ul style="list-style-type: none"> • Move thermostat away from air stream • Supply proper voltage • Change temperature setting
TOO MUCH HEAT	<ul style="list-style-type: none"> • Thermostat in wrong location • Thermostat not set properly • Insufficient air over coil • Improper voltage 	<ul style="list-style-type: none"> • Move thermostat closer to air stream • change temperature setting • Remove restriction on intake • Supply proper voltage