

# IMPORTANT INSTRUCTIONS



Saving energy and creating healthy, comfortable environments

**READ AND SAVE  
THESE INSTRUCTIONS**

No.  
Date

II-480  
January, 2015



**SANITATION  
CERTIFIED**

**Low Profile 7**

AIR CURTAIN SERIES SLC07

**COMMERCIAL**

**Low Profile 8**

AIR CURTAIN SERIES CLC08



ANSI/NSF 37  
Air Curtain Fans  
for Customer Entry  
max.mounting  
height is 7'  
SLC07

## Installation & Maintenance Instructions

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

- A. Read all instructions before installing or using this air curtain.
- B. Use this unit only in the manner intended by the manufacturer and described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons. If you have any questions, contact the manufacturer.
- C. 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.
- D. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable national and local codes having jurisdiction, including fire-rated construction. See page 3, ELECTRICAL CONNECTIONS (NEC Code ANSI/NFPA No. 70).
- E. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
- F. To reduce the risk of fire, do not store or use gasoline or other flammable vapors and liquids in the vicinity of the air curtain.
- G. This air curtain is hot when in use. To avoid burns, do not let bare skin touch hot surfaces. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, etc. and curtains at least 1 inch from the top, back, front, sides and at least 6 feet from the discharge of the air curtain.
- H. Extreme caution is necessary when any air curtain is used by or near children or invalids, and whenever the heater is left operating unattended.
- I. Do not operate any air curtain after it malfunctions. Disconnect power at the service panel and have the air curtain inspected by a reputable electrician before reusing.
- J. To disconnect the air curtain, turn controls to "off", and turn off power to the air curtain circuit at main disconnect panel.
- K. Do not insert or allow foreign objects to enter any ventilation or discharge opening as this may cause an electric shock or fire, or damage the air curtain.
- L. To prevent a possible fire, do not block the air intake or discharge of the air curtain in any manner.
- M. The air curtain has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable vapors or liquids are used or stored.
- N. This heater may include an audible or visual alarm to warn that parts of the heater are getting excessively hot. If the alarm sounds (or illuminates), immediately turn the heater off and inspect for any objects on or adjacent to the heater that may have blocked the airflow or otherwise caused high temperatures to have occurred.  
DO NOT OPERATE THE HEATER WITH THE ALARM SOUNDING (OR ILLUMINATING).

## I. UNCRATING THE AIR CURTAIN UNIT

Carefully examine the carton(s) for damage before opening. If the carton is damaged, immediately notify the shipping company. If the unit(s) were shipped on wooden skids, remove protective wood and banding straps securing the carton(s) to the skid. Open the carton(s) and remove all protective packaging. Remove the plastic cover housing by lifting vertically. Remove and discard four (4) nuts and washers holding the motor/blower section to the bottom of the carton. Remove motor/blower section from the carton.

**CAUTION: ONLY LIFT THE UNIT BY GRASPING INLET RINGS ON THE BLOWER HOUSING WITHOUT TOUCHING BLOWER WHEELS.**

Immediately verify that the electrical rating nameplate located on the cover matches electrical power supply available. Retain the shipping carton(s) until the unit(s) are installed and properly operating.

**ACCESSORIES:** If the unit(s) were ordered with optional electrical accessories (door switch, control panel, etc.), the accessories may be found in the carton containing the unit or in a separate carton(s) accompanying the unit(s). Check all of the cartons/skids for accessories before discarding.

## II. MOUNTING INSTRUCTIONS (General)

The Certified Low Profile 7/Commercial Low Profile 8 air curtain is designed to be an effective barrier against cold drafts in the winter and hot air in the summer, flying insects and airborne contaminants. To achieve optimum protection, the unit should be mounted on the inside of the building, flush to the wall and as close to the top of the door opening as possible. To ensure peak performance, keep air stream free of obstructions.

**The air curtain will not perform properly if negative air pressure exists in the building. Under these conditions, a means for make-up air to the building must be provided so that the air pressure on both sides of the opening is in balance.**

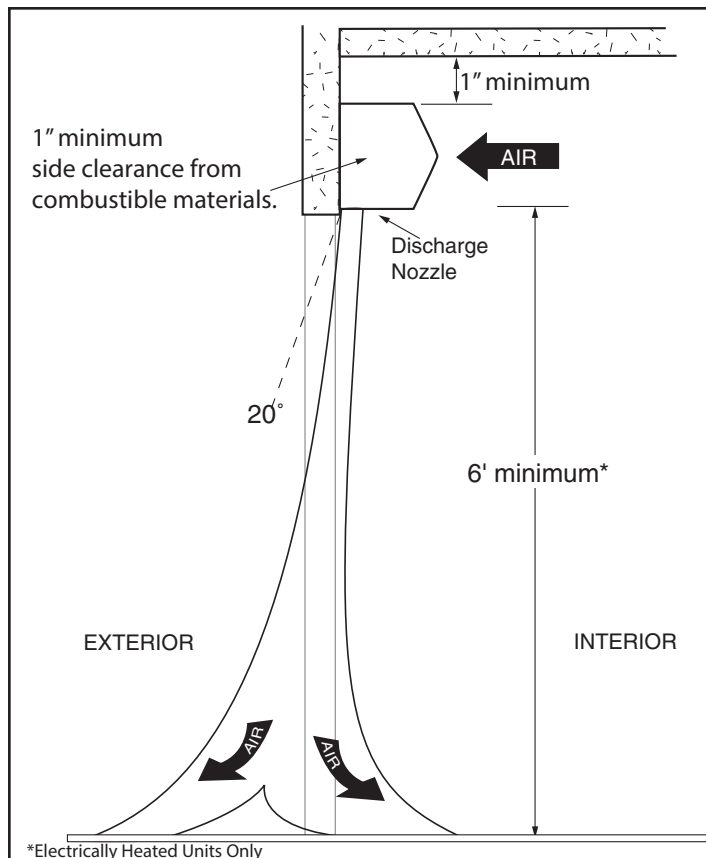


FIGURE 1 - Air Stream

MODEL	Net Weight (lbs)			
	SLC07 Ambient	CLC08 Ambient	CLC08 Electric	CLC08 St/Hw
SLC07-1036, CLC08-1036	35	41	48	67
SLC07-1042, CLC08-1042	38	45	53	74
SLC07-1048, CLC08-1048	42	48	58	80
SLC07-1060, CLC08-1060	49	56	67	94
SLC07-1072, CLC08-1072	56	64	77	107
SLC07-2084, CLC08-2084	76	90	105	138
SLC07-2096, CLC08-2096	84	98	115	152
SLC07-2108, CLC08-2108	91	105	123	164
SLC07-2120, CLC08-2120	98	113	137	177

TABLE 1 - Weight Chart

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.**

- When determining the mounting location for the unit(s), make sure that nothing interferes with the curtain of air developed when the discharge vanes are directed from 0° to 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. **See FIGURE 1.**
- For optimum performance, the bottom of the unit (discharge nozzle) should be no more than 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. Any void between the air curtain and the wall should be sealed along the full length of the unit. **See FIGURE 2.**
- Proceed to: **Section III-WALL MOUNTING** or **Section IV-SUSPENDED MOUNTING**

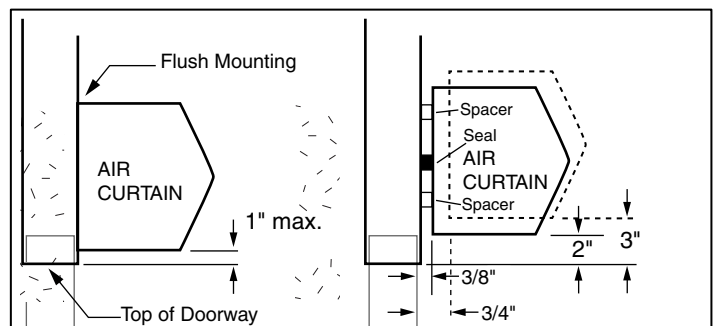
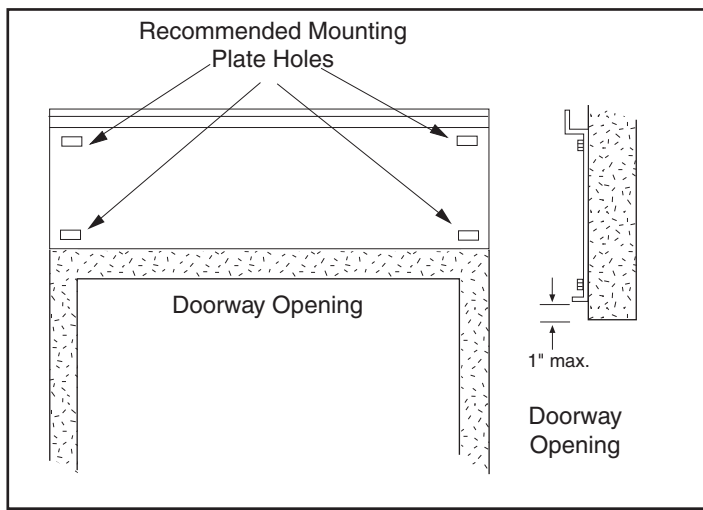


FIGURE 2 - Positioning of Air Curtain

## III. WALL MOUNTING

- Determine the location on the wall above the opening where the air curtain will be mounted. This location should center the unit over the opening and provide suitable mounting support. It is recommended to use at least four locations that correspond to the outer corners of the wall mounting plate. **See FIGURE 3.**



**FIGURE 3 - Positioning of Mounting Plate**

- B. Prepare the wall as necessary for the wall mounting plate anchors (by others).
- C. Drill holes in the wall mounting plate to correspond to the locations on the wall.
- D. Anchor the wall mounting plate over the door opening with the mounting tabs pointing upwards.
- E. Raise the unit over the door (air nozzle facing down) and onto the mounting plate. Tilt the unit upward, matching the holes in the frame with the tabs on the mounting plate.

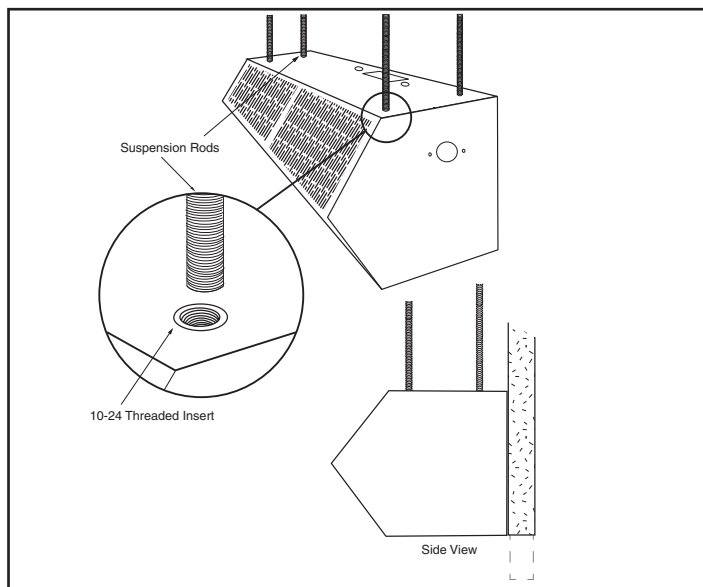
**See FIGURE 4.**

- F. Lower the unit into place allowing it to rest on the mounting plate. The unit flange should rest above the mounting plate flange.
- G. After the unit is securely seated to the mounting plate, install the locking screws along the bottom flange. **See FIGURE 4.**
- H. Proceed to **Section V-ELECTRICAL CONNECTIONS**

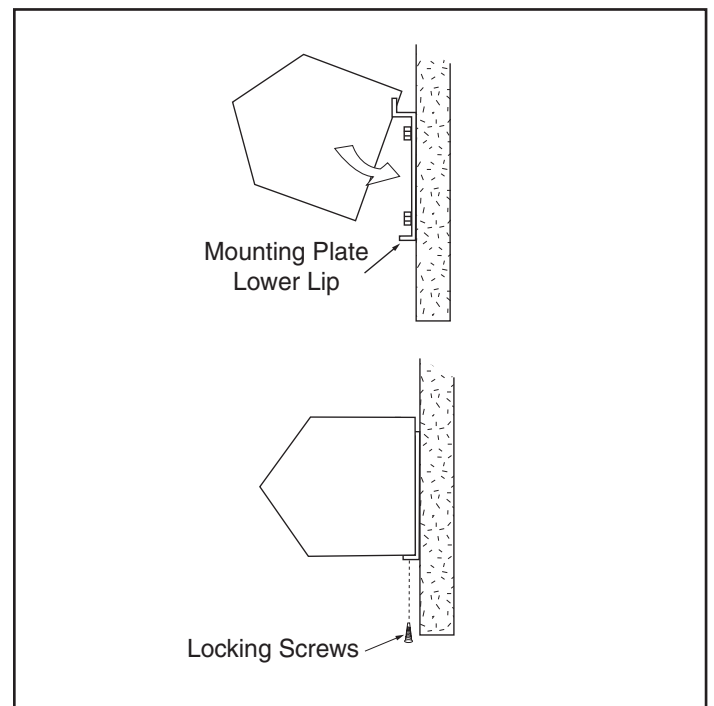
## IV. SUSPENDED MOUNTING

(Ceiling Suspension)

- A. When the unit is top mounted, the wall mounting plate is designed to store on the back of unit for future use.
- B. Four (4) factory installed #10-24 threaded inserts are located on the top of the unit for top suspension mounting. **See FIGURE 5.**
- C. Determine the exact mounting location of the air curtain.



**FIGURE 5 - Suspended Mounting**



**FIGURE 4 - Attaching Unit to Mounting Plate**

- D. The top of the unit is provided with an electrical knockout for power connection. Remove the wiring tray compartment cover. Remove the knockout and attach necessary electrical hardware. Save the wiring diagram found inside of wiring tray.
- E. Attach #10-24 threaded rods, or other suitable hardware to the top mounted threaded inserts.
- F. Proceed to **Section V-ELECTRICAL CONNECTIONS**

## V. ELECTRICAL CONNECTIONS

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. **See TABLES 2 & 4.**

- A. Check the electrical rating nameplate on the top of the air curtain for supply voltage and current requirements. A separate line voltage supply with a suitable branch circuit protection device should be run directly from the main electrical panel to the air curtain. A disconnect switch for each branch circuit is a required part of this installation.
- B. All field wiring must be copper with a minimum insulation of 60° C within approved conduit. If any of the wire supplied with the air curtain must be replaced, it must be replaced with copper wiring with a minimum insulation of 90° C.
- C. Remove the wiring tray cover; on air curtains that are comprised of modules, remove the wiring tray cover that is located closest to the electrical rating nameplate (if it has not already been done). **See FIGURE 6.**
- D. The top of the air curtain has two knockouts on each side of the air curtain, allowing for a left hand or right hand power connection. Remove the required knockout if it has not already been done and connect the power supply to the air curtain. Connect all supply and control circuit wires according to the wiring diagram provided.

SLC07 / CLC08 MOTOR DATA					
Model	#Motors @HP	Total Motor Amps			
		120V	208/240V	480V	600V
SLC07-1036 CLC08-1036	1 @ 1/5	3.4	1.7	0.9	0.6
SLC07-1042 CLC08-1042	1 @ 1/5	3.4	1.7	0.9	0.6
SLC07-1048 CLC08-1048	1 @ 1/5	3.4	1.7	0.9	0.6
SLC07-1060 CLC08-1060	1 @ 1/5	3.4	1.7	0.9	0.6
SLC07-1072 CLC08-1072	1 @ 1/5	3.4	1.7	0.9	0.6
SLC07-2084 CLC08-2084	2 @ 1/5	6.8	3.4	1.8	1.2
SLC07-2096 CLC08-2096	2 @ 1/5	6.8	3.4	1.8	1.2
SLC07-2108 CLC08-2108	2 @ 1/5	6.8	3.4	1.8	1.2
SLC07-2120 CLC08-2120	2 @ 1/5	6.8	3.4	1.8	1.2

TABLE 2 - Motor Amp Ratings

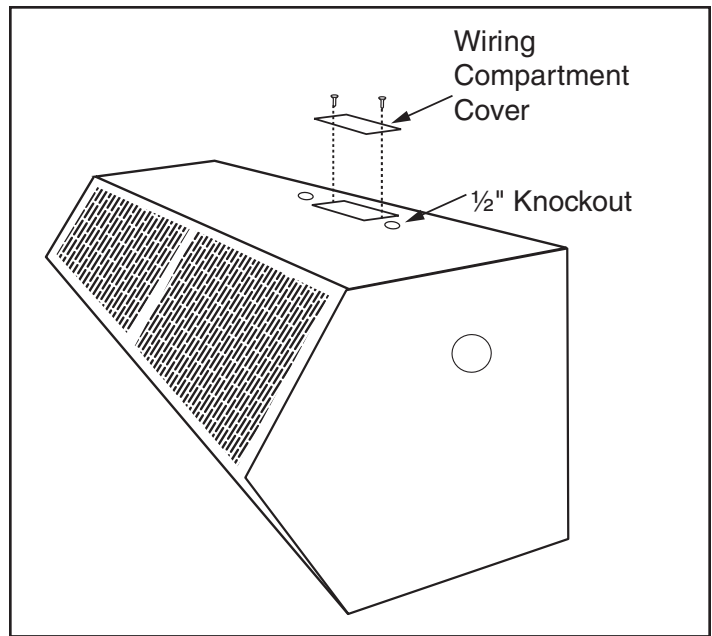


FIGURE 6 - Electrical Connections

CLC08 Available kW's and Resulting Amp Draws (does not include motor amp draws)							
	Heater kW	208/1	240/1	208/3	240/3	480/3	600/3
CLC08-1036E CLC08-1042E	10.0	48.1(2)	41.7(1)	27.8(1)	24.1(1)	12.0(1)	10.0(1)
	7.5	36.1(1)	31.3(1)	20.8(1)	18.0(1)	9.0(1)	N/A
	5.5	26.4(1)	22.9(1)	15.3(1)	13.2(1)	N/A	N/A
CLC08-1048E CLC08-1060E	14.4	69.2(2)	60.0(2)	40.0(1)	34.6(1)	17.3(1)	14.5(1)
	11.0	52.9(2)	45.8(1)	30.5(1)	26.5(1)	13.2(1)	N/A
	8.0	38.5(1)	33.3(1)	22.2(1)	19.2(1)	N/A	N/A
CLC08-1072E CLC08-2084E	20.0	N/A	N/A	55.5(2)	48.1(2)	24.1(1)	20.1(1)
	15.0	72.1(2)	62.5(2)	41.6(1)	36.1(1)	18.0(1)	N/A
	11.0	52.9(2)	45.8(1)	30.5(1)	26.5(1)	N/A	N/A
CLC08-2096E CLC08-2120E	28.8	N/A	N/A	79.9(2)	69.3(2)	34.6(1)	28.9(1)
	22.0	N/A	N/A	61.1(2)	52.9(2)	26.5(1)	N/A
	16.0	76.9(2)	66.7(2)	44.4(1)	38.5(1)	N/A	N/A

TABLE 3 - Electric Heater Amp Draws

NOTE: If the number of electric circuits specified is greater than one, it shall not be assumed that all circuits are equally divided. Consult factory for wiring diagram.

**NOTE: For Electrically Heated air curtain(s) provided with the optional remote thermostat: mount and wire the thermostat according to instructions and wiring diagram.**

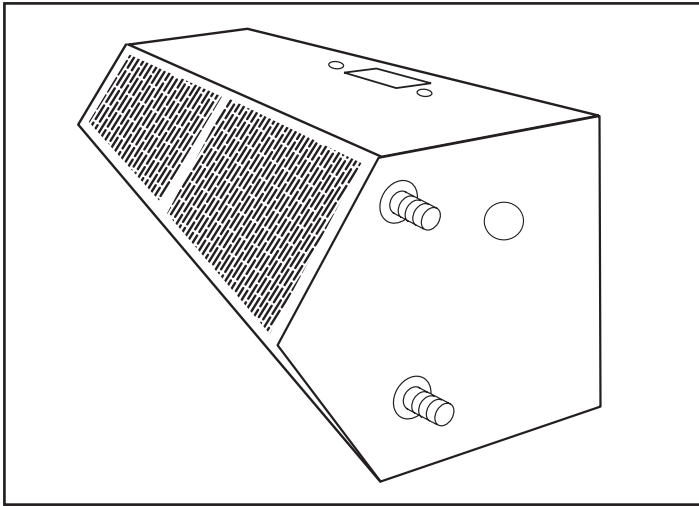
## VI. MECHANICAL CONNECTIONS

### A. ELECTRICALLY HEATED MODELS

The heater circuit may be controlled by a combination of a remote thermostat and the fan/off/fan & heat rocker switch. Overheating protection is provided by auto reset thermal cutouts built into the heater coil assembly (see the wiring diagram, located in wiring tray).

### B. STEAM OR HOT WATER HEATED MODELS

Piping should be done in accordance with local codes, regulations and standard practices. Connect the building system supply and return to the 3/4" MPT nipples on the heating coil. **See FIGURE 7.**



**FIGURE 7 - Steam/Hot Water Connections**

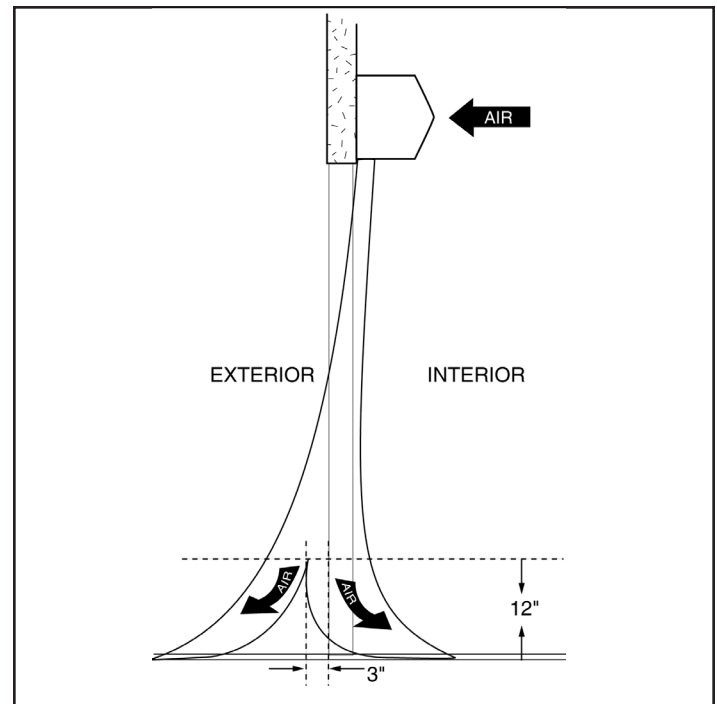
## VII. OPERATING INSTRUCTIONS

### A. GENERAL OPERATION

1. The air curtain can be directly operated by using the rocker switches located on the bottom of the unit. The air curtain may also be automatically operated by a combination of the rocker switches and a remote door switch and/or thermostat (See the wiring diagram).
2. Rocker switch positions are labeled on the air curtain cabinet.
3. Unheated units have one rocker switch that turns the unit on or off. The other rocker switch selects fan speed.
4. Heated units have one rocker switch that determines whether the unit is off, energizes only the fans, or energizes both the fans and the method of heat. The other rocker switch selects fan speed.

### B. AIR STREAM SPLIT ADJUSTMENT

1. With the air curtain operating and the door in its full open position, check to see that nothing is obstructing the air flow at the discharge nozzle vanes.



**FIGURE 8 - Air Flow Adjustment**

2. Find the air stream split location. Hold a handkerchief, by its 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 location is indicated where the handkerchief is vertical with minimal or no fluttering. **See FIGURE 8.**
3. Adjust the discharge nozzle vanes so the split location is approximately 3" outside the doorway. This is accomplished by first de-energizing the unit. Remove the cover housing, loosen the nozzle vane locking screws and adjust vanes.

## VIII. MAINTENANCE AND CLEANING

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

Keep your air curtain operating at peak efficiency by cleaning the blower wheels, motor(s) and intake grille. Buildup of dust on the blower wheels can cause vibration, noise and excessive wear on the motor bearings. The frequency of cleaning will depend on the environment in which the unit is operating.

Dirty, dusty or greasy environments could require a cleaning schedule of once every two months. If the environment is not that dirty, the unit(s) should be scheduled for cleaning a minimum of once every (6) months. To access the interior of the unit:

- A. Disconnect the power to the unit.
- B. Remove the intake grille by removing all phillips head screws around edge. **See FIGURE 9.**
- C. Vacuum and scrape (if necessary) to remove the buildup of dirt and debris. The motor(s) are permanently lubricated and require no additional lubrication. Reinstall the cover and intake grille.
- D. Reconnect the power, and turn on after cleaning. **CAUTION: STAND CLEAR OF THE UNIT OR WEAR SAFETY GOGGLES AS LOOSE DEBRIS MAY BE PRESENT AND MAY EXIT THROUGH THE NOZZLE.**

## IX. SERVICE

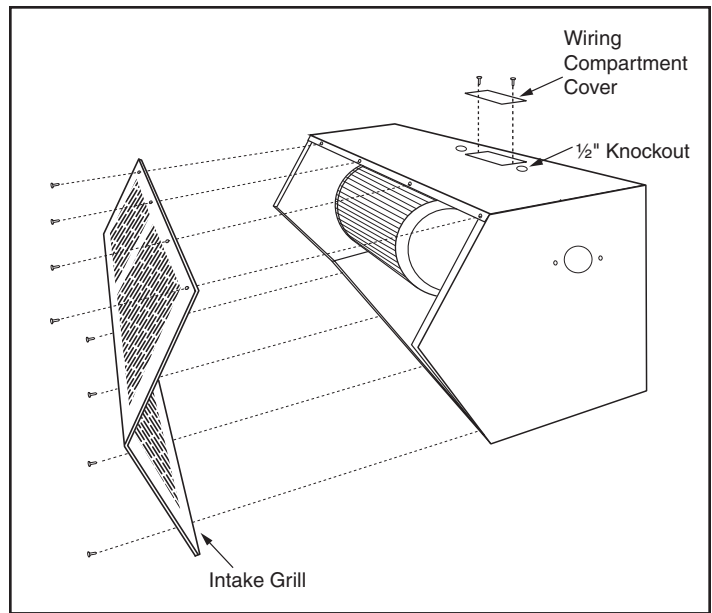
**CAUTION: ELECTRIC SHOCK HAZARD** Disconnect power whenever servicing air curtain unit. More than one disconnect may be required to de-energize unit.

Any service performed on the Certified Low Profile 7/Commercial Low Profile 8 air curtain **MUST** be done by qualified personnel.

Berner air curtains 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.

### A. FAN AND MOTOR REMOVAL

1. Disconnect power to the unit.
2. Remove the intake grille by removing all phillips head screws around edge. **See FIGURE 9.**
3. Unplug motor harness from motor and remove necessary wiring.
4. Using a  $\frac{1}{8}$ " Allen wrench, loosen each set screw attaching fan(s) to motor.
5. While holding the motor in place, loosen and remove the motor clips.
6. Slide the fans toward the motor so that the ball bearings on the outer fan shaft are exposed.
7. Slowly roll the motor out of the motor mount cradle forward and down. The hubs of the fans are flexible enough to allow the motor to move before the fans' outer ball bearings pull out of the unit.
8. Reinstall in reverse order of removal.



**FIGURE 9**

# X. TROUBLESHOOTING

SYMPTOMS	CAUSE	REMEDY
<b>NO AIR</b>	<ul style="list-style-type: none"> <li>• Electrical Power supply line open (no power)</li> <li>• Fuse blown/circuit breaker tripped</li> <li>• Motor overload tripped</li>   <li>• Failed switch</li> </ul>	<ul style="list-style-type: none"> <li>• Check power source, check method of control is in "ON" position</li> <li>• Replace fuse(s)/reset breaker</li> <li>• Internally protected motor - should reset automatically after cool-down, if not, replace motor.</li> <li>• Replace switch</li> </ul>
	<b>MOTOR RUNNING/FANS ARE NOT ROTATING</b>	
	<ul style="list-style-type: none"> <li>• Broken fan hub</li> <li>• Shaft rotating inside fan</li> <li>• Broken / Loose coupling</li> </ul>	<ul style="list-style-type: none"> <li>• Replace fan</li> <li>• Tighten set screws/tighten fan on shaft</li> <li>• Replace / Tighten coupling</li> </ul>
	<b>ELECTRICAL CONTROLS NOT FUNCTIONING WHEN DOOR IS OPEN</b>	
	<ul style="list-style-type: none"> <li>• Selector switch is in "OFF" position</li> <li>• Door limit switch not operating</li> </ul>	<ul style="list-style-type: none"> <li>• Turn switch to "ON" position</li> <li>• Repair or replace limit switch</li> </ul>
<b>MINIMUM AIR</b>	<ul style="list-style-type: none"> <li>• Air directional discharge vanes misadjusted</li> <li>• Inadequate intake clearance</li> <li>• Blower motor operates below speed</li> <li>• Fan rubbing against housing</li> <li>• Fan wheels clogged with dirt</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust vanes to proper position; see installation instructions</li> <li>• Move air curtain or remove obstruction Provide adequate space for air curtain</li> <li>• Improper voltage</li> <li>• Free fan from housing</li> <li>• Clean and vacuum fan wheels</li> </ul>
<b>AIR IS NOT HITTING FLOOR</b>	<ul style="list-style-type: none"> <li>• Air stream too weak</li> <li>• Air steam hits obstruction</li> <li>• Negative pressure</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust nozzle to proper position, adjust motor speed; see installation instructions</li> <li>• Remove obstruction or reposition air curtain (move out 3/8" for every 1" up from the door)</li> <li>• Relieve negative pressure by providing makeup air</li> </ul>
<b>UNEVEN AIR</b>	<ul style="list-style-type: none"> <li>• Shaft rotating inside fan</li> </ul>	<ul style="list-style-type: none"> <li>• Tighten set screws/Replace fan</li> </ul>
<b>EXCESSIVE AIR MOVEMENT AT DOORWAY</b>	<ul style="list-style-type: none"> <li>• Nozzle not angled out far enough</li> <li>• Air movement too cold</li> <li>• Pushing air outside building</li> </ul> <p>SEE: AIR IS NOT HITTING FLOOR</p>	<ul style="list-style-type: none"> <li>• Adjust nozzle angle to outside</li> <li>• Add auxiliary heat to overcome wind chill</li> <li>• Adjust nozzle angle towards door threshold</li> </ul>

# XI. WARRANTY

Berner International Corp. "The Company" 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 HERE OF 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 NUMBER	MODEL NUMBER	DATE PURCHASED
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*Saving energy and creating healthy, comfortable environments*

**BERNER INTERNATIONAL CORPORATION**  
**New Castle, Pennsylvania**

**724-658-3551 • 1-800-245-4455 • [www.berner.com](http://www.berner.com) • [airdoors@berner.com](mailto:airdoors@berner.com)**

*Berner reserves the right to alter specifications without prior notice.*