

## 1000 Series Air Curtain Installation Manual



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

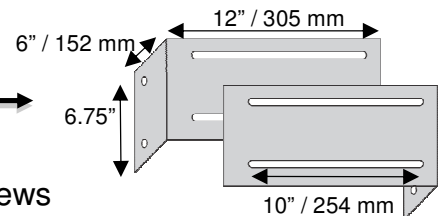
1. Read all instructions before installing or using this air curtain.
2. Use this unit only in the manner intended by the manufacturer and described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons. If you have any questions, contact the manufacturer.
3. 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.
4. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable local and national codes having jurisdiction, including fire-rated construction. See page 9 WIRING DIAGRAMS (NEC Code ANSI/NFPA No. 70; CEC Part 1 CSA C22.1).
5. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
6. 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.
7. 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.
8. Extreme caution is necessary when any air curtain is used by or near children or invalids, and whenever the air curtain is left operating unattended.
9. Do not operate any air curtain after malfunction. Disconnect power at the service panel and have the air curtain inspected and repaired by a qualified electrician before reusing.
10. To disconnect the air curtain, turn controls to "off", and turn off power to the air curtain circuit at main disconnect panel. Lock-out or tag the power service disconnect.
11. 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.
12. To prevent a possible fire, do not block the air intake or discharge of the air curtain in any manner.

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### **Package Contents:**

- Air Curtain Unit with 7.5 ft 3-Prong Electrical Cord
- Wall Mounting Plate (attached to back of unit)
- Extension Brackets (2) for installation to door-side mullions or side walls
- Magnetic Proximity Sensor Switch with mounting screws
  - Senses door movement to activate air curtain On/Off



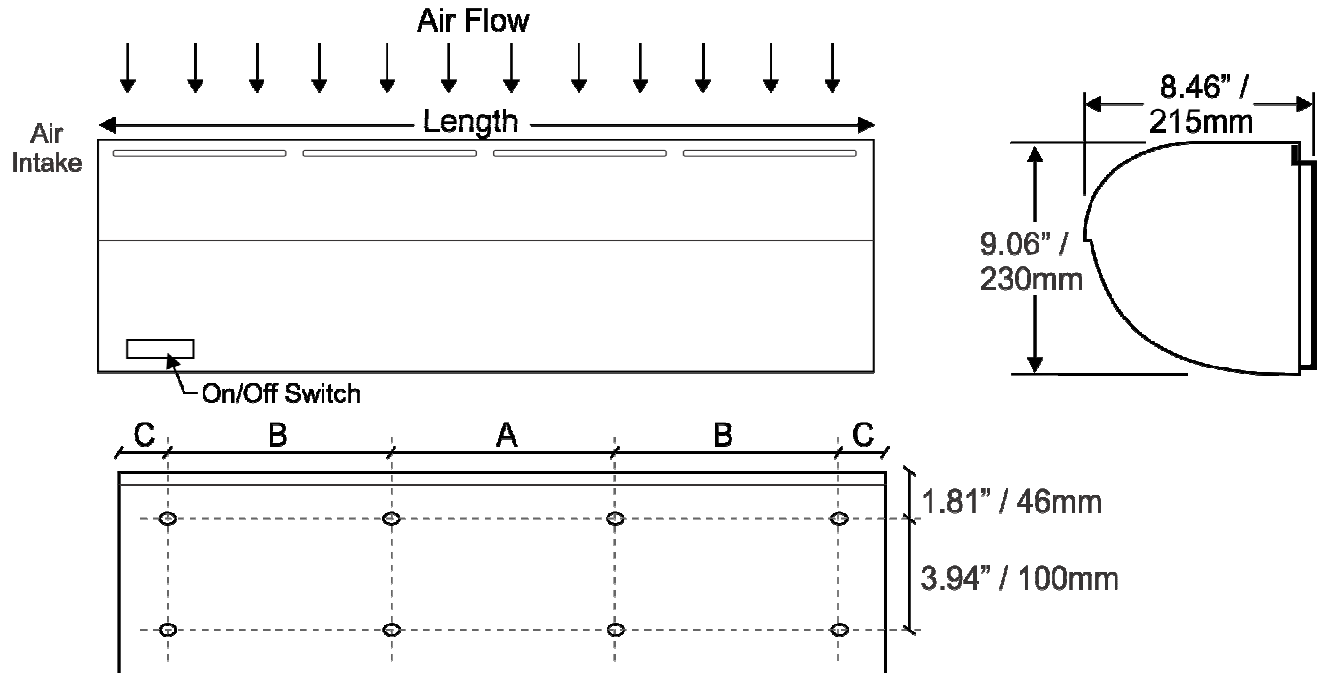
### **Tools Required for Installation:**

- Drill or Hammer Drill
- Drill bit of diameter to meet requirements of lag bolts / lag shields
- Socket wrench & socket to fit field supplied lag bolts
- Level
- Slot screwdriver

### **Field Supplied Hardware Required:**

- Wood wall mount: Lag Bolts: 1/4" x 3" (Qty 6 for Model 1003; Qty 8 for Models 1004, 1006)
- Concrete wall Mount: Lag shields: 1/4" x 3" for (same quantity as bolts)
- Standard washers (quantity and size to fit lag bolts)
- Lock washers (quantity and size to fit lag bolts)
- Mullion Mount of Mounting Plate Extension Brackets: Qty 4 x 5/16" bolts and nuts (site determined length to extend through mullion)
  - + 2 Washers & 1 lock washer for each bolt

## 1. 1000 SERIES: INSTALLATION DIMENSIONS



Model	Length	A	B	C	Weight	Hardware Rating
1003	35.43" / 900 mm	-	13.68" / 347.5 mm	3.74" / 95 mm	35 lb / 16 kg	105 lb / 48 kg
1004	47.24" / 1200 mm	11.61" / 295 mm	13.68" / 347.5 mm		40 lb / 18 kg	120 lb / 54 kg
1006	70.87" / 1800 mm	7.48" / 190 mm	27.36" / 695 mm		57 lb / 26 kg	170 lb / 78 kg

## 2. INSTALLATION GUIDE

Adhere to the following instruction guide to install the 1000 Series Air Curtain:

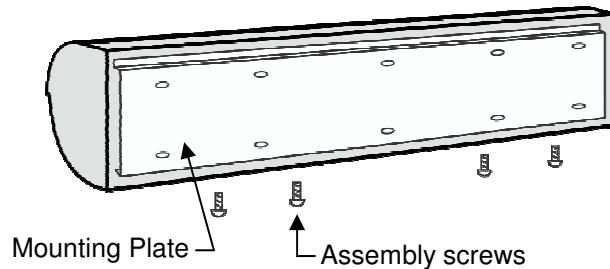
<p><b>2.1</b> Secure the unit to a sturdy structural member to avoid vibration. (ie: solid beam above the door)</p> <p>Structural Header</p> <p>Doorway Opening</p>	<p><b>2.2</b> Do Not install outdoors.</p> <p>Install the unit indoors with clearance above for air intake:</p> <p>2" / 50 mm minimum clearance.</p> <p>INDOOR</p> <p><del>OUTDOOR</del></p>
<p><b>2.3</b> Do Not install where unit may be splashed by liquid, exposed to excessive steam, or explosive / corrosive gas</p>	<p><b>2.4</b> When an entrance is wider than a unit, two or more units are recommended. Provide a gap of 0.75" to 1.5" [20 - 40 mm] between units.</p> <p>0.75" - 1.5" / 20 - 40 mm</p>

### 3: INSTALLATION

Fastening hardware is field supplied by others to suit site conditions. It is the installers responsibility to ensure that the structure and fastening hardware is of the strength and integrity to support the weight of the air curtain (refer to Table previous page for unit weight and fastening hardware rating).

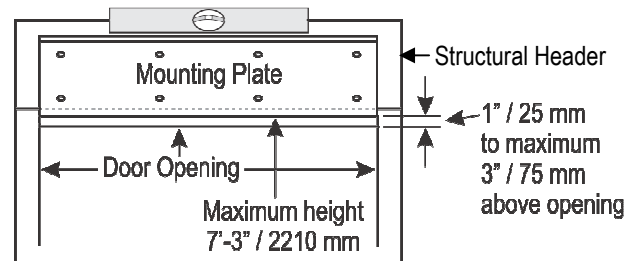
If structural members do not align with exiting fastener holes in the mounting plate, drill new holes in the plate

3.1 Remove the mounting plate from the back of the air curtain by removing the assembly screws at the bottom flange. Retain the assembly screws



3.2 Use the mounting plate as a template to mark the wall for fastener locations.

Locate mounting plate: level and centered on the opening. The bottom of the plate should be 1" to maximum 3" [25 to 75 mm] above the door opening, and a maximum of 7'-3" [2210 mm] above the floor.

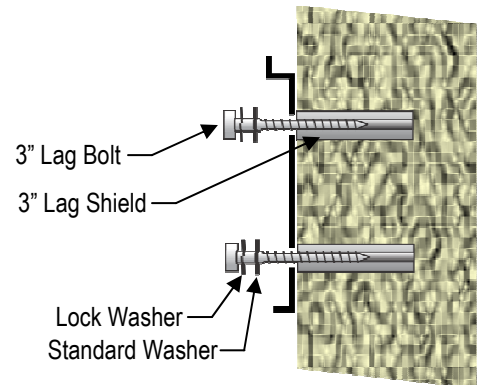


#### 3.3 Installing on a Concrete Wall:

**Use 1/4" x 3" lag shields and lag bolts**

Drill holes for 1/4" lag shields at the fastener locations .  
(Refer to lag shield instructions for proper hole diameter).

Install a lock washer, then a standard washer onto the lag bolt. The standard washer will fit against the mounting plate, and the lock washer between the bolt head and the standard washer.



#### 3.3 Installing on a wood beam or stud wall:

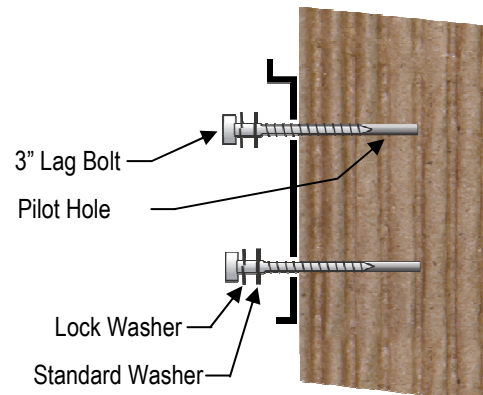
**Use 1/4" x 3" lag bolts**

If structural members do not align with existing fastener holes in the mounting plate, drill new holes in the plate to align to the structural member(s).

Drill pilot or lead hole of the proper diameter for 1/4" lag bolt at each fastener location in the beam or stud.  
(Typically 5/32" pilot hole in medium density wood).

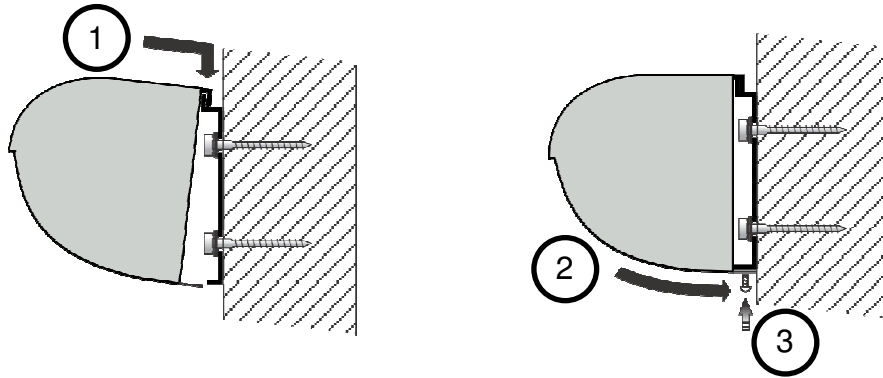
Soap or similar lubricant can be used on the bolts to facilitate penetration in the pilot hole.

Install a lock washer, then a standard washer onto the lag bolt. The standard washer will locate against the mounting plate, and the lock washer between the bolt head and



### 3.4 Install 1000 Series Air Curtain Unit on to Mounting Plate:

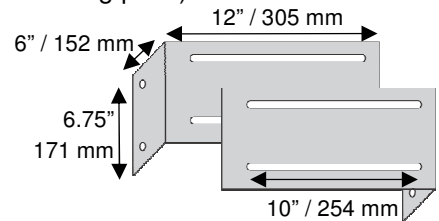
1. Tilt unit and clip top bracket on to mounting plate.
2. Rotate bottom of unit to wall - unit bottom bracket fits under mounting plate.



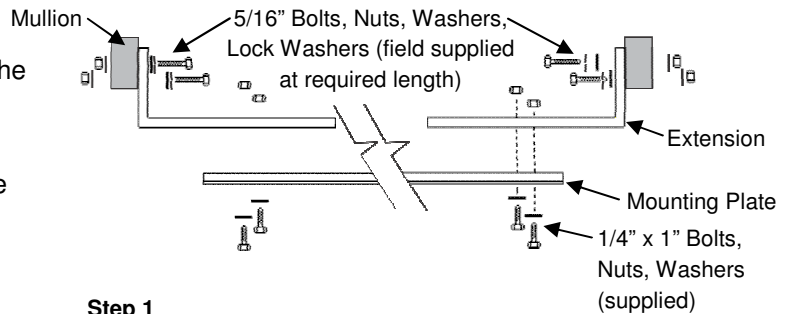
### 3.5 Installation to Door Mullions: (glass above door/ no wall to fasten mounting plate)

Two Mounting Plate Extension Brackets are supplied with the unit.  
Install one Extension Bracket each side of the door to the mullion.

**NOTE:** For every inch above the door header, move the Air Curtain 1/2" into the building .

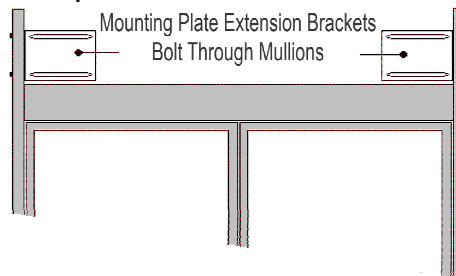


1. Drill holes for 5/16" bolts in the mullions to align with the 2 holes in the short side of the Extension Bracket.  
Use two 5/16" bolts (field supplied at length required to extend through the mullion) to fasten each extension bracket to the mullion. Washers and lock washers are recommended.



2. Use two 1/4" x 1" bolts (supplied) at each end of mounting plate to fasten the mounting plate to each plate extension.

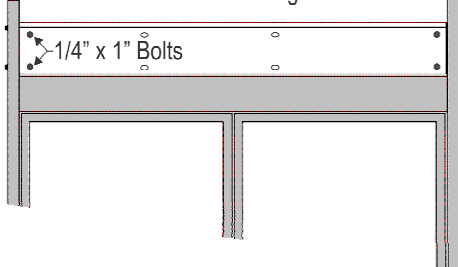
**Step 1**



3. Install air curtain unit to the mount-

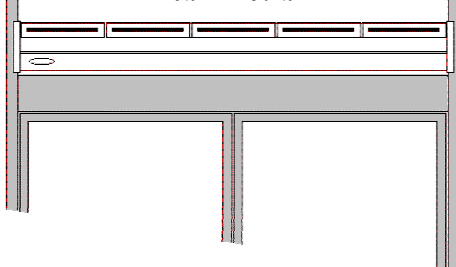
**Step 2**

Install Mounting Plate

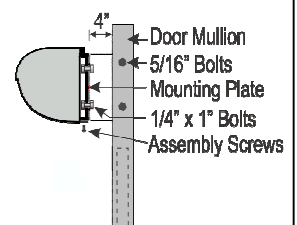


**Step 3**

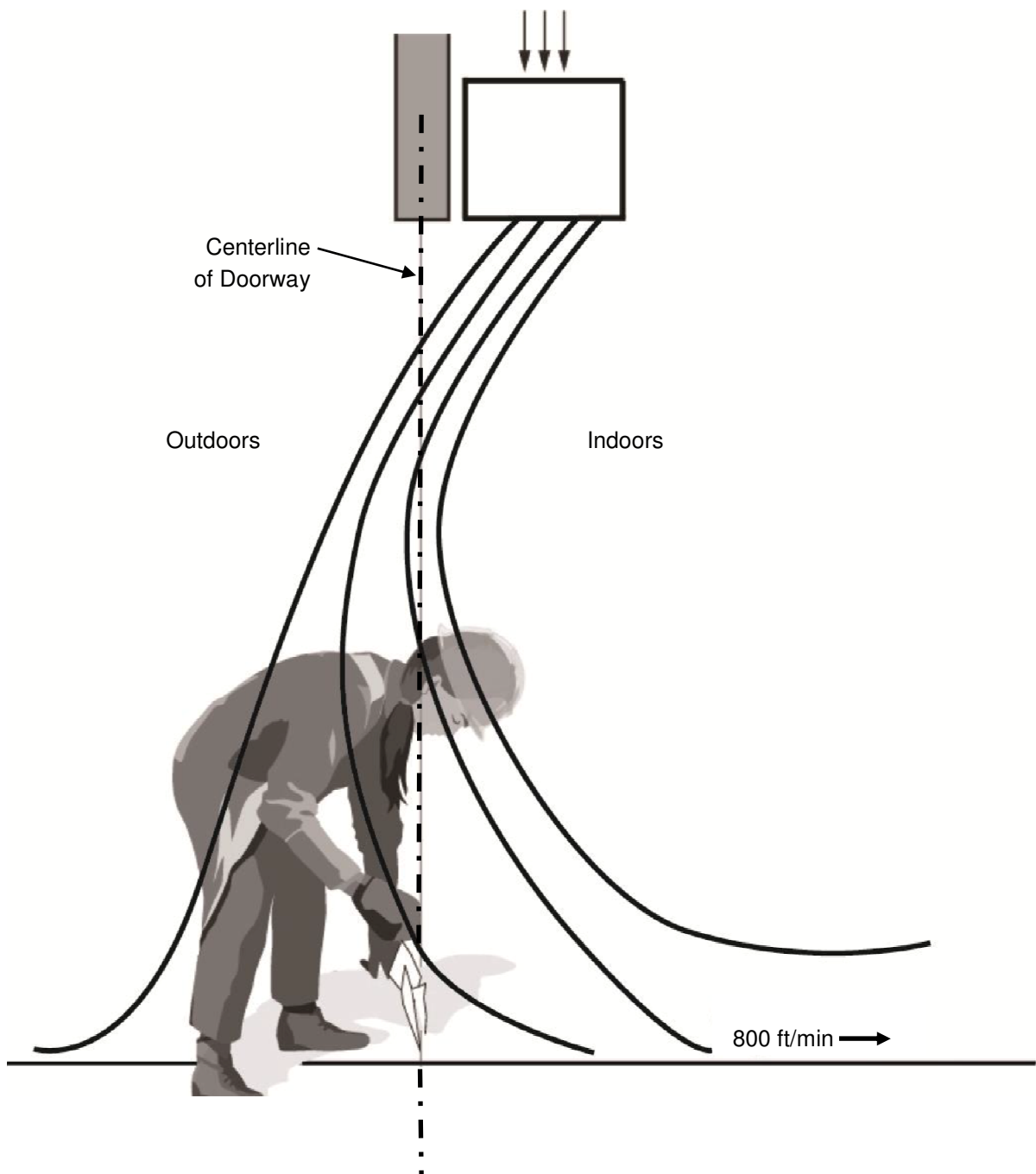
Install Air Curtain



**Final Assembly**



#### 4. Adjust the Air Curtain Air Output Flow



Approximately 10 -15% of the airflow should be directed outdoors to prevent cold draft entering at the floor.

To find the airflow's "split location" hold a handkerchief by the top corners approximately 2 to 3 inches above the floor. Move it gently back and forth across the doorway centerline. The handkerchief will point straight down at the split location.

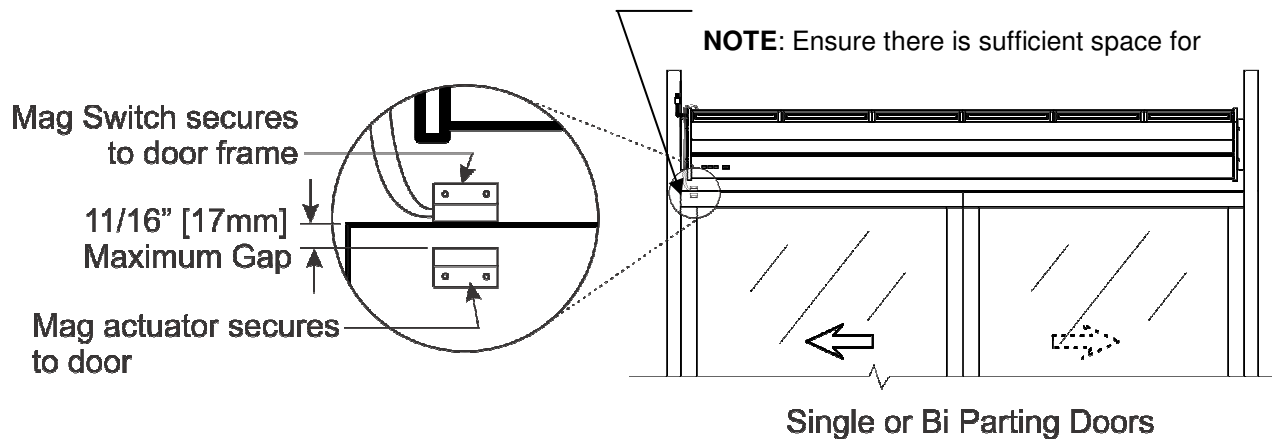
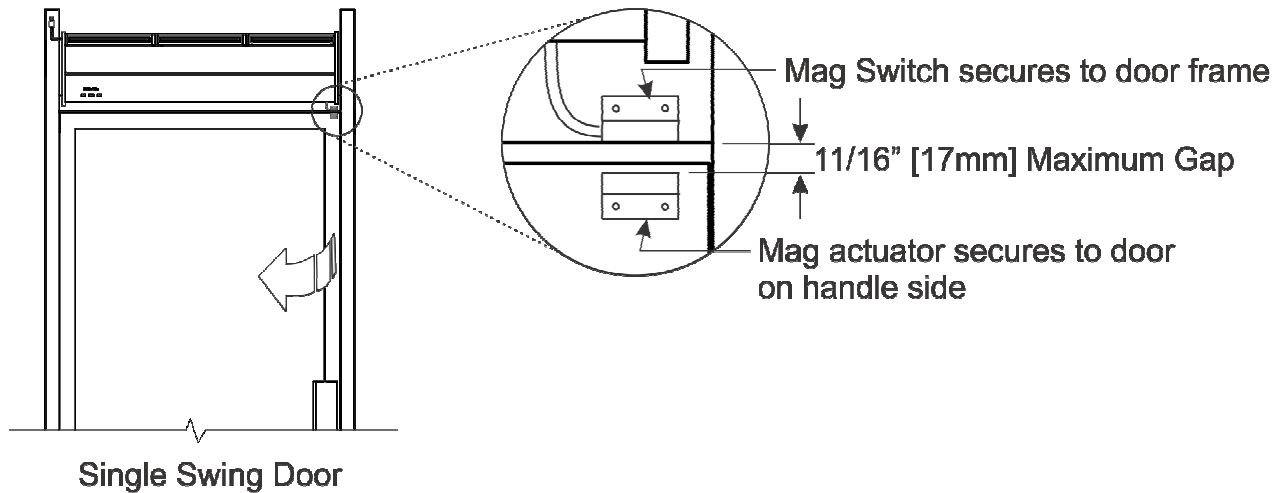
The split location should be at the centerline of the doorway or a little outside.

Adjust the discharge nozzle louvers on the bottom of the unit to accomplish this split location.

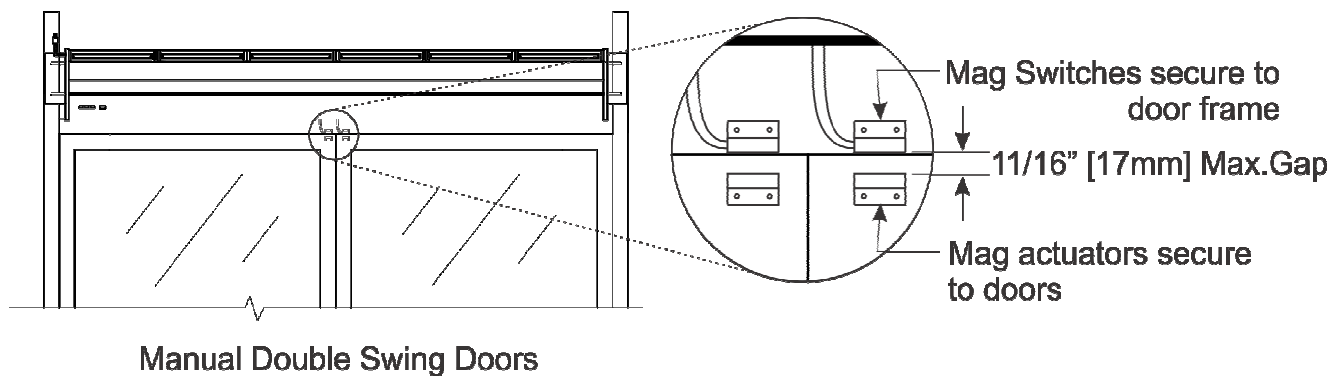
## 5. Installation of Magnetic Proximity Switch

A magnetic proximity switch serves to turn on/off the air curtain.

- Mount the magnetic switch (with wires) to the door frame, and the magnetic actuator to the door.
- The wires from the magnetic switch connect to the terminal block located at the top back of the unit near the electrical cord.
- The gap between the switch and actuator must not exceed 11/16" [17mm] and can be less than that distance.
- Attach the switch and actuator to the frame and door using the adhesive backing.
  - For more secure attachment use screws provided to secure the switch & actuator
  - Test operation of the switch/air curtain before using screws - adjust gap if required

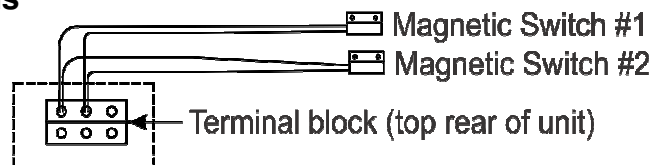


**NOTE:** Double swing doors require the purchase of one additional switch/actuator kit.  
Connect switches in parallel (together) at the terminal block - either switch will activate unit.

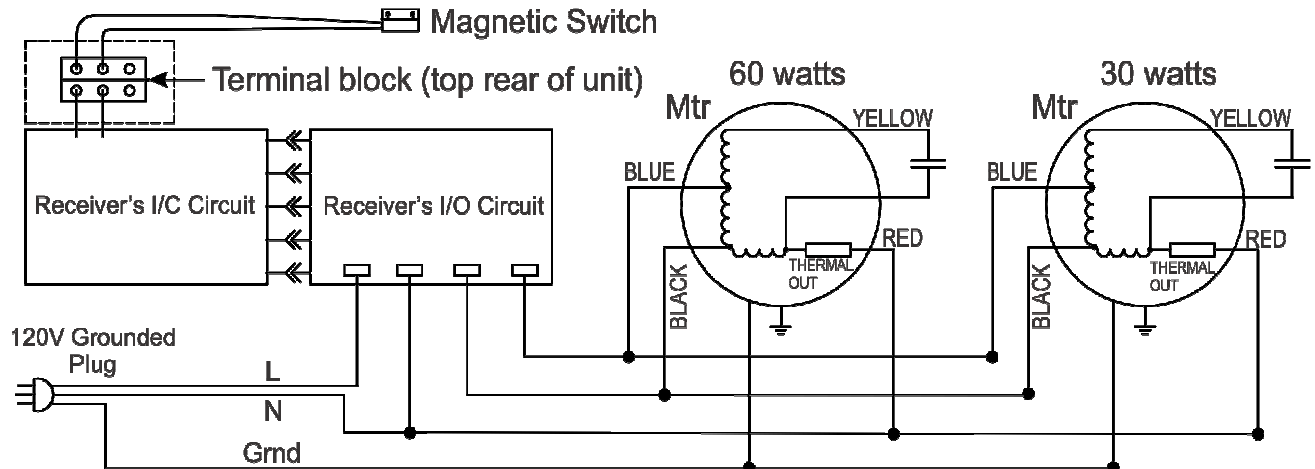


## 6. Wiring Diagrams 1000 Series Air Curtains

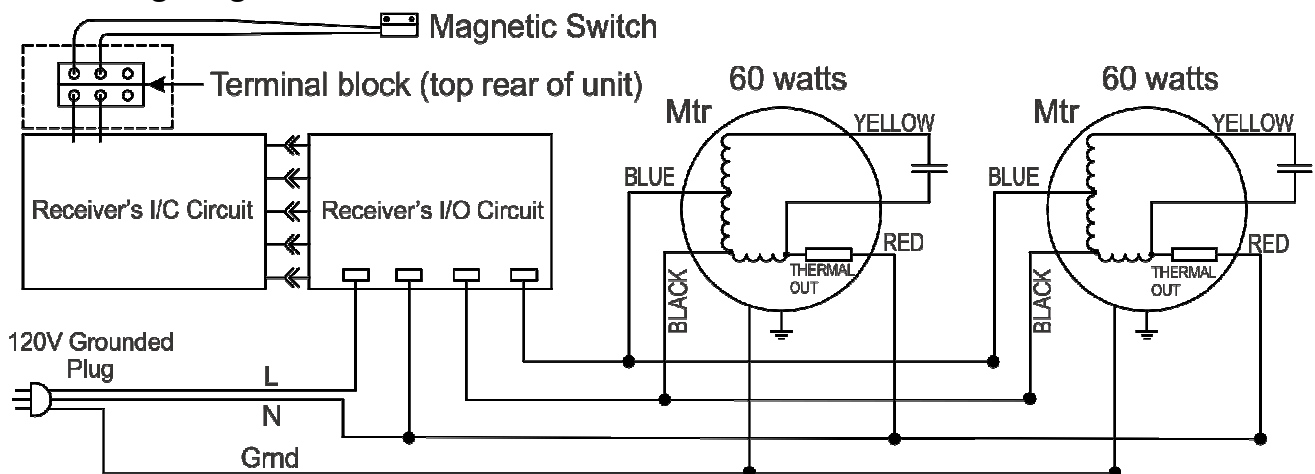
**NOTE:** If two magnetic switches are required, connect in parallel at terminal block. (See 'Double Swing Doors' previous page.)



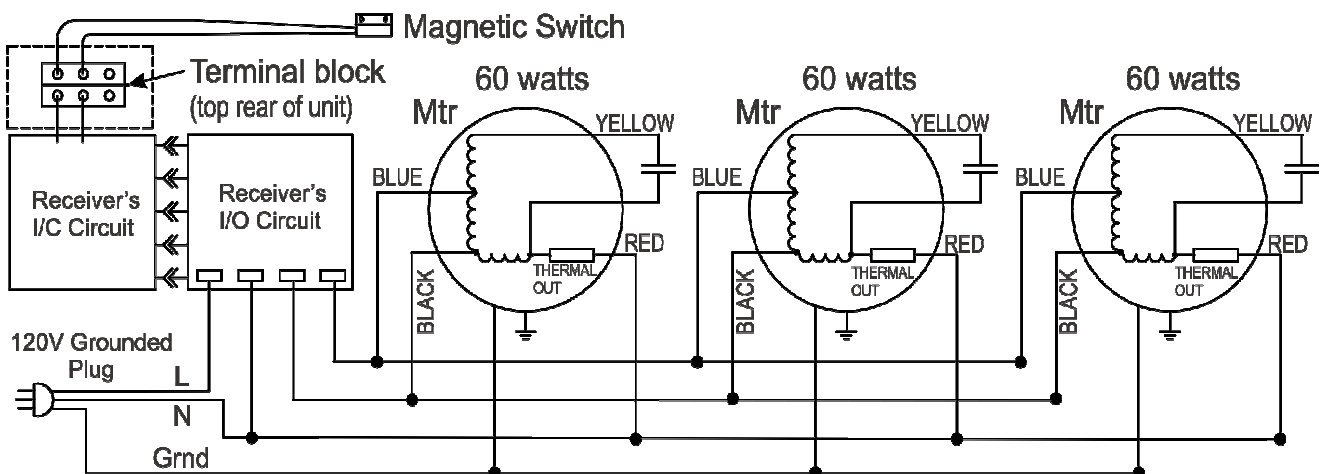
### 6.A Wiring Diagram Model 1003



### 6.B Wiring Diagram Model 1004



### 6.B Wiring Diagram Model 1006





## THIS MANUAL & WARRANTY CERTIFICATE TO BE RETAINED BY CUSTOMER

### GENERAL WARRANTY STATEMENT

Schwank/Infrasave warrants all SchwankAir and Infrasave Air products to be free from defects in material and workmanship under normal use and service. This warranty covers the product only as to materials and workmanship and does not cover fitness for purpose or merchantability. In the event that a product is found to be defective in materials or workmanship, the extent of liability and warranty coverage will be replacement of a defective part only.

### PERIOD OF COVERAGE

**ONE YEAR WARRANTY:** The above warranty applies for one (1) year from the date of original installation to all parts and components in the SchwankAir/Infrasave Air product identified below.

### GENERAL CONDITIONS

This warranty **DOES NOT COVER** the cost of labor for any adjustments or service calls, nor does it include the cost of labor for replacing defective parts or components.

This warranty **DOES NOT APPLY** to any SchwankAir/Infrasave Air product or any component thereof, if it has been subject to misuse, abuse, neglect, accident, or alteration.

This warranty is in lieu of all other warranties expressed or implied, and in no event shall Schwank/Infrasave be liable for any indirect or consequential damages.

Service or other labor charges not included in this warranty may be covered by a service agreement through the seller/installer at the time of purchase. Such agreement is a contract between the purchaser and the seller/installer and shall be separate and apart from this factory equipment warranty.

Model #:

Serial #:

Installation Date: