



atmosphere is everything

Document No: PH8-IOM
Date: 6/10/24

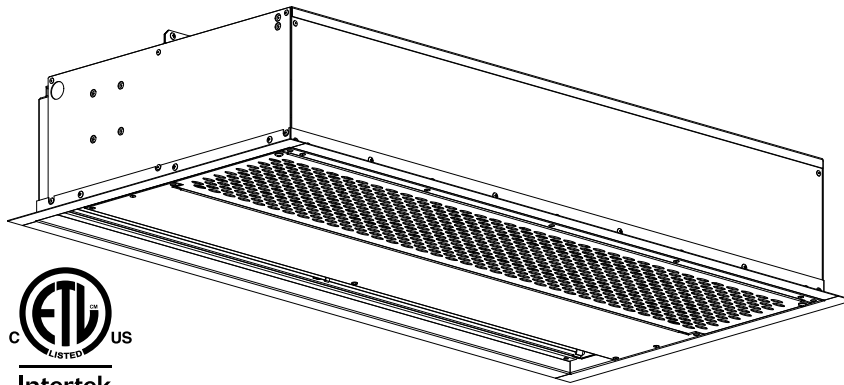
PHANTOM 8 (PH8) COMMERCIAL SERIES

Installation, Operation and Maintenance Manual

Please read and save these instructions. Read carefully before attempting to assemble, install, operate, or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with these instructions could result in personal injury and/or property damage. Retain these instructions for future reference.

OVERVIEW

Mars Air Curtains are designed to cover door openings, providing both temperature control/environmental separation and flying insect control when the building's doors are opened. Typical installation heights



are up to 7' for flying insect control and up to 8' for environmental separation for PH8 models. The units are typically installed horizontally above the door opening and can either be mounted to the wall or suspended from the ceiling. All models are ETL Listed to Canada and US standards; unheated models are approved for inside and outside installation, while heated units must be installed on the inside (protected) side of the opening. The motors used in all PH8 models are 1/6HP.

GENERAL SAFETY INFORMATION

Use this product only in the manner intended by the manufacturer. If you have any questions, contact the manufacturer. Only qualified personnel should install this product. Installing personnel should have

a clear understanding of these instructions and should be aware of general safety precautions. Improper installation can result in electric shock, injury due to contact with moving parts, and other potential hazards.



WARNING

When servicing the product, motor may be hot enough to cause pain or injury. Allow motor to cool before servicing.

All Phantom Models come standard with a stamped air intake screen(s) and can be configured with aluminum mesh filter(s) as an option.



WARNING

To reduce the risk of fire, electric shock, or injury to persons, observe the following.

- Always disconnect, lock and tag power source before installing or servicing product.
- Installation work or electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
- The combustion airflow needed for safe operation of fuel burning equipment in the area may be affected by the product's operation. Follow the heating equipment manufacturer's guideline and safety standards, such as those published by the National Fire Protection Agency (NFPA), the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) and local code authorities.
- When cutting or drilling into a wall or ceiling, be careful not to damage electrical wiring and other hidden utilities.



WARNING

Precaution should be taken in explosive atmospheres.

RECEIVING AND INSPECTION

Upon receiving the product, check to ensure all items (including accessories, e.g. switches) are accounted for by referencing the Bill of Lading to ensure all items were received. Inspect each carton for shipping damage before accepting delivery. Notify the freight carrier if any damage is noticed. The carrier will make notification on the delivery receipt acknowledging any damage to the product. All damage should be noted on all copies of the Bill of Lading which is countersigned by the delivering carrier. A Carrier Inspection Report should be filled out by the carrier upon arrival and a report given to the Traffic Department. If damaged upon arrival, file a claim immediately with the carrier. Any physical damage to the unit after acceptance is not the responsibility of Mars Air Systems.

UNPACKING

Verify that all parts, components and accessories, and the correct quantities of each have been received. If any items are missing, report shortages to Mars Air Systems directly to arrange for obtaining the missing items. Again, verify quantities received against those on the Bill of Lading only, as multiple shipments may be involved.

INSTALLATION

Typical Mounting – Wall or Ceiling Mounted Horizontally Above the Door Opening

1. Gently remove all packaging materials, hardware, and all other accessories from interior of unit prior to operating. Severe unit damage will occur if these items are not removed prior to operation.
2. The intake screen can be opened by removing the two screws on the bottom of the unit. The screen can be removed from the unit by pulling the spring-loaded piano hinges.

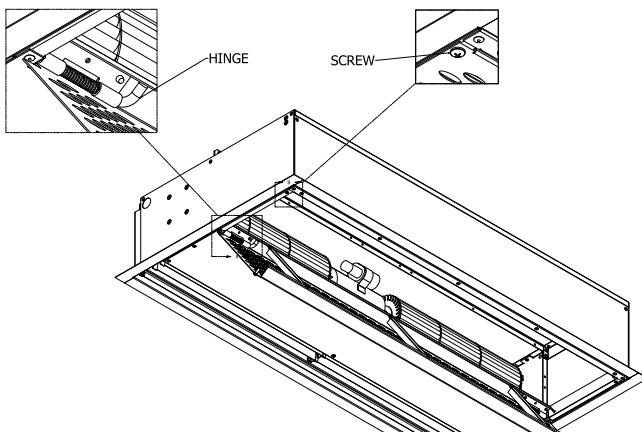


FIG. 1

3. Mount the product such that the discharge is 1" above the opening and all obstacles (FIG. 3). Use four (4) 1/4"-

20 threaded rods (by others) for overhead installation (FIG. 2).

Note: If the product is installed higher than the recommended 1" above the opening, then it must be moved 3/8" away from the wall for every 1" that it is moved up. Any void between the wall and the product must be sealed (by others) to optimize performance.

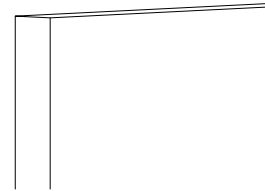
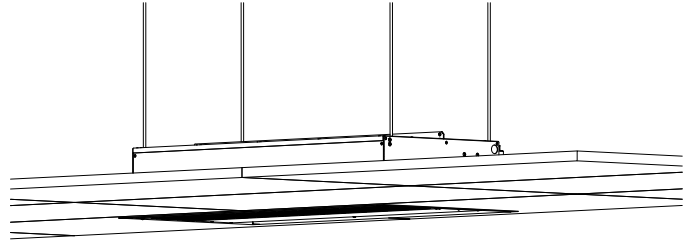


FIG. 2

4. Alternatively, the unit can be installed to the wall with the included removable mounting plate. Remove the mounting plate by removing the two (2) screws and center the plate over the opening; the air curtain shall be equal to or greater than the width of the opening.
5. Install the mounting plate(s) above the opening. Multiple pre-punched 1/4" mounting holes are provided for your convenience to secure the product to the wall. All hardware is field provided by others.
6. Align the tabs on the rear of the unit with the slots provided on the wall mounting plate (FIG. 3). The bottom flange on the unit must also drop in the bottom channel of the wall mounting plate. Reinstall the two screws to secure the unit in place.

Note: If the holes provided on the bottom of the unit and the bottom of the wall mounting plate do not align, remove the unit and re-install. The holes on the bottom channel of the wall mounted plate must be on the bottom.

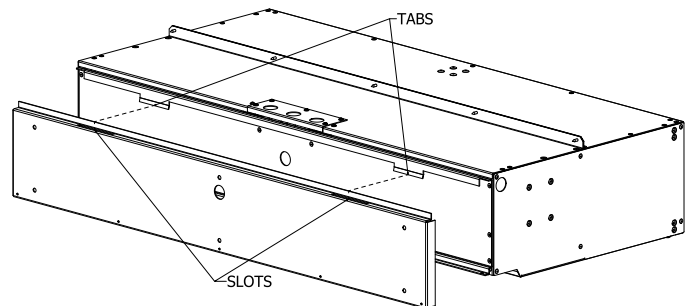


FIG. 3

7. Optional Adjustable Mounting Brackets, Side Extension Plates, and Extended Wall Mounted Brackets are available for installations over a Vertical Lift or Drum Roll-up type door (reference **Accessory Installation Supplement**).
8. If applicable, for tandem installation or products mounted side by side, allow no more than 6" between the two products. For overhead installation using threaded rods, the products may require a beam (by others) to span the full distance of the mounting length (reference **Accessory Installation Supplement**).
9. All wires must be connected internally in the unit. Some knockouts are provided, however it may be necessary to create your own knockout, as required.
10. The unit must be wired per NEC and local codes.

Electrical Field Wiring

The air curtain is provided with an internal junction box, accessible from the top face of the unit, for all internal connections (FIG. 4). For units mounted in tandem, an additional access point is provided to pass power to the secondary unit. The unit and any optional accessories must be wired with the proper voltage to the junction box per the wiring diagram (FIG. 5).

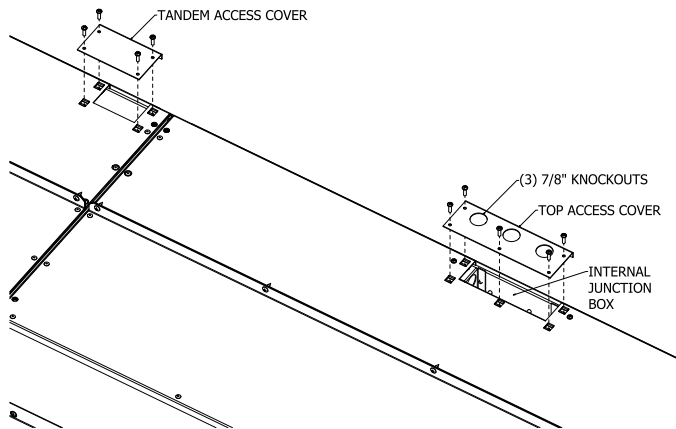


FIG. 4

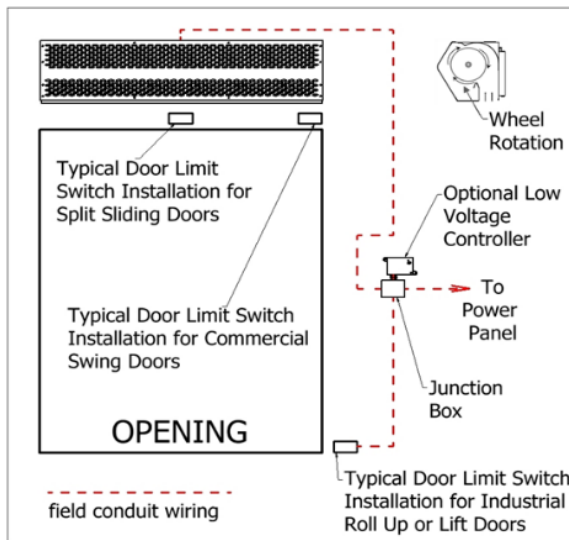


FIG. 5 (Unheated products only)

NOTE

For accessory installation, reference **Accessory Installation Supplement**.

For heated products, reference **Heated Products Supplement**.

START-UP

This product has been assembled and tested at the factory prior to shipping. The following procedures should be performed to ensure its performance. Before continuing with the start-up, it is important to recognize the safety controls furnished with the unit.



WARNING

Prevent hazard of electrical shock. More than one disconnect switch may be required to de-energize this product.



WARNING

The following items must all be completed by a qualified installer and checked off when completed

- A. Re-check that the product has been installed properly and is level and secure.
- B. Check all terminal screws are tight and field wiring is connected in accordance with National Electrical Code (NEC) and wired per the enclosed wiring diagram. For electric heated models, ensure that the coils are secured and not touching each other or any metal surface.
- C. Verify proper voltage prior to powering the product. (see product label for reference).
- D. Check that all field wired components, if supplied, are wired correctly.
- E. Check that the inlet air supply and the discharge air supply are free of obstructions.
- F. Check that all air filter(s) and/or air intake grille(s) are in place and installed properly, as originally shipped.
- G. Verify voltage to the product once more and turn power on.
- H. Regardless of whether the product is mounted on the inside or outside of the door opening, set the air directional vanes in the discharge nozzle slightly outward to approximately 10-15° towards the in the direction of the wind load (FIG. 6).

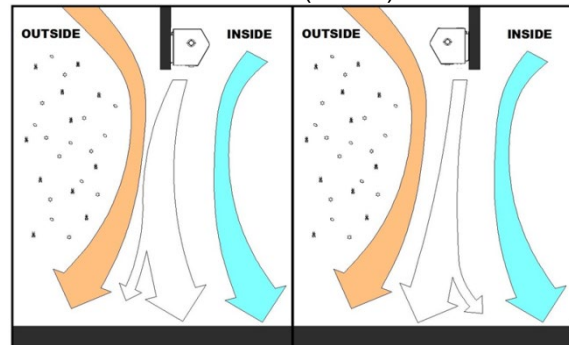


FIG. 6

- I. For products with control panels, turn the HOA (Hand-On-Auto) selector switch to “On” position and open the door to energize the product. For products without a control panel or an On/Off switch, open the door to energize the product.
- J. If heated products are installed, reference **Heated Products Supplement**.
- K. For units with three phase power, verify direction of rotation of blower wheels (note direction arrows on the blower wheel housing). Correct if needed by changing polarity of three phase power.
- L. **VERY IMPORTANT:** Using a clamp meter, measure the amperage to each motor and ensure that they do not exceed the amperage listed on the product label.
- M. For temperature control and environmental separation applications, the air stream should reach the floor with sufficient strength to create an air seal around the door opening without creating turbulent mixing of the inside and outside air. For flying insect control applications, the air stream should reach the floor with maximum strength. If, after proper installation and adjustment, the product appears to be producing too little or too much air for the application, contact the manufacturer.

2. Use a damp cloth and either a warm mild soapy water solution or bio-degradable degreaser, to wipe down the exterior components of the housing.
3. To access the interior of the product, remove the air intake grille(s) and/or air intake filter(s). This is accomplished by removing the screws on the face of the air intake grille(s)/filter(s).
4. Thoroughly clean the air intake grille(s)/filter(s).
5. Thoroughly wipe down the motor, blower wheels and blower wheel housings. Do not spray the motor with a water hose.
6. The motor(s) require no additional lubrication. They are permanently lubricated and feature double sealed ball bearings.
7. To re-install the product, perform the above procedures in reverse.
8. Reconnect the power source to the product.
9. If you have any questions regarding the maintenance of the product, contact the manufacturer.

SPECIAL APPLICATIONS

Outdoor Installation

For units being installed outdoors, special consideration may be required for enclosure, motor, wheel, and other components to minimize damage caused by exposure to the outdoor elements. Contact factory for special construction and costing.

Freezer and Cooler Installation

Air curtain must be mounted on the warm side for optimal performance. Freezer applications in high humidity areas may require a de-humidifier, or an additional defrost cycle, to minimize condensation and icing. We recommend the air curtain unit not to replace physical doors, but to work in conjunction with the door opening sequence cycle. Contact factory for details.

CAUTION

The appliance is not to be used by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction. Children are not to play with the appliance.

DISCLAIMER

Mars reserves the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, improvements, additions, or replacements for previously purchased equipment.

MAINTENANCE



WARNING

To reduce the risk of fire, electrical shock, or injury to persons, observe the following:

- A. Maintenance is to be performed only by qualified personnel who are familiar with local codes and regulations and are experienced with this type of product.
- B. Before servicing or cleaning the product, switch power off at service panel and lock out to prevent power from being switched “ON” accidentally.

Routine maintenance is required to keep this product operating at its peak performance and efficiency. Over time, the housing, air intake grille, air intake filter, blower wheels and motor(s) will accumulate a buildup of dust, debris and other residue. It is imperative to keep these components clean. Failure to do so will not only lower operational efficiency and performance, but also reduce the useful life of the product. The time between cleanings depends on the application, location, and daily hours of use. On average, under normal usage conditions, the product should require a thorough cleaning once every six (6) months.

To clean the product, perform the following:

1. Verify the product has been disconnected from the power source.