



Installation, Operation, and Spare Parts Manual for Gas Fired Air Curtain

APPLIES TO:

Models AB 175 and AB 225





A WARNING:

FIRE OR EXPLOSION HAZARD

Failure to follow safety warnings exactly could result in serious injury, death, or property damage.

Be sure to read and understand the installation, operation, and service instructions in this manual.

Improper installation, adjustment, alteration, service, or maintenance can cause serious injury, death, or property damage.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- WHAT TO DO IF YOU SMELL GAS
- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Leave the building immediately.
- Immediately call your gas supplier from a phone remote from the building. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

TABLE OF CONTENTS

| 1.0 General | 2 3 3 4 4 5 5 | 8.0 Pre-Startup Check, Adjustment, Startup, and Shutdown | 14 14 15 16 16 16 17 17 |
|----------------|---------------------------------------|--|---|
| 4.1 Dimensions | 4 5 6 6 6 7 8 10 | 8.8 Shutdown 9.0 Trouble Shooting 10.0 Spare Parts | 16 17 19 20 |

1.0 General

1.1 Cautions and Warnings

There are warning labels on the unit, on the front page and throughout this manual. For your safety, comply with all warning during installation, operation and service of this system. Definitions of the hazard intensity levels of the cautions, warnings and dangers are shown below.

Definitions of Hazard Intensity Levels used in this Manual

HAZARD INTENSITY LEVELS

- 1. DANGER: Failure to comply will result in severe personal injury or death and/or property damage.
- 2. WARNING: Failure to comply could result in severe personal injury or death and/or property damage.
- 3. CAUTION: Failure to comply could result in minor personal injury and/or property damage.

WARNING

Gas-fired appliances are not designed for use in hazardous atmospheres containing flammable vapors or combustible dust, in atmospheres containing chlorinated or halogenated hydrocarbons, or in applications with airborne silicone substances.

WARNING

Should overheating occur, or the gas supply fail to shut off, shut off the manual gas valve to the appliance before shutting off the electrical supply.

WARNING

Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and replace any gas control that has been under water.

1.2 General Information

This manual includes installation, operation and spare parts information. Before beginning any procedure, carefully review the information, paying particular attention to the warnings. If you do not have knowledge of local requirements, check with the local agencies who might have requirements concerning the installation. Become familiar with the requirements of your particular installation and make preparations for necessary supplies, equipment and manpower.

These air curtains are **ONLY** for indoor applications designed to operate at an ambient temperature range between 5°F (-15°C) to 86°F (30°C).

Never place or rest anything, especially ladders against the air curtain.

The installation instructions in this manual apply to Gas Fired Air Curtain Models AB 175 and AB 225.

1.3 Warranty

Refer to limited warranty information on the warranty form in the "Literature Bag" shipped with this unit.

If an extended warranty form applies, keep the extended warranty information for future reference and verification of warranty.

Warranty is void if:

- a) The wiring is not in accordance with the diagram furnished with this unit.
- b) The unit is installed without proper clearances to combustible materials
- c) Unauthorized replacement parts are used.

1.4 Installation Codes

The units contained in this manual are design-certified to ANSI and CSA standards by ETL. These models are approved for installation in the United States and in Canada.

The units are approved for use with either natural gas or propane. The type of gas for which the air curtain is equipped and the correct firing rate as shown on the rating plate attached to the unit.

Electrical characteristics are shown on the unit rating plate.

These units must be installed in accordance with local building codes. In absence of local codes in the United States, the unit must be installed in accordance with the National Fuel Gas Code NAPA/ANSI Z223.1a (latest edition) or CAN/CSA-B149.1 and B149.2. (See Paragraph 1). These codes are available from CSA Information Services 1-800-463-6727. Local authorities having jurisdiction should be consulted before installation is made to verify local codes and procedure requirements.

California Warning Label

If this system is being installed in the state of California, the installer MUST attach the California warning label on the outside of the heat section access panel.

The California Warning label (PN 196977) is shipped in the "Literature Bag".

Select a dry, clean location on the heat section access panel and adhere the label.

Massachusetts Requirements

If this system is being installed in the Commonwealth of Massachusetts, it must be installed by a licensed plumber or licensed gas fitter.

2.0 Receiving, Uncrating and Preparing for Installation

This unit was inspected and test operated at the factory prior to crating and was in operating condition. If the unit was damaged in shipment, document the damage with the transporting agency and contact your distributor. If you are an authorized distributor, follow the FOB freight policy procedures.

Check the rating plate for the correct gas specifications and the electrical characteristics of the unit to ensure that both utilities are compatible to with the gas and electric services specific to the installation site.

Read this manual and become familiar with the installation requirements of your particular unit. If you do not have knowledge of local requirements, check with the gas company or other local agencies that may have requirements concerning this installation.

3.0 Air Curtain Location

Check the supporting structure to be used to verify that it has sufficient load-carrying capacity to support the weight of the air curtain assembly.

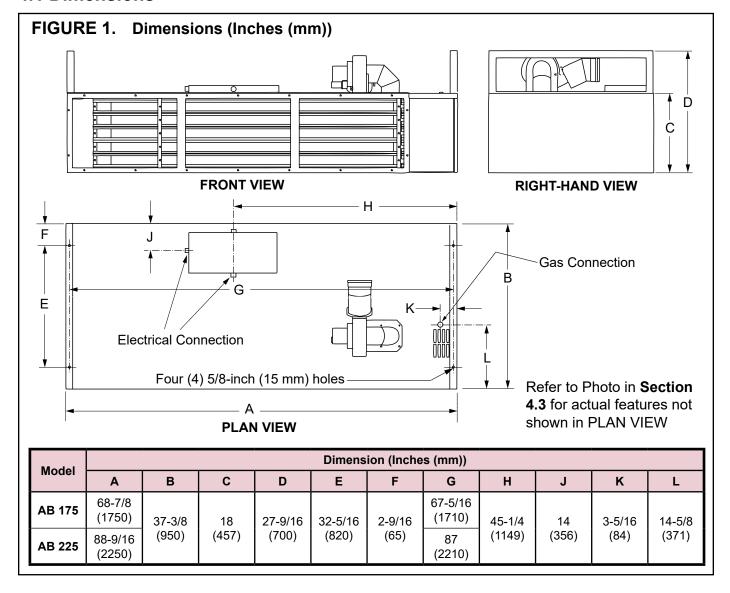
The air curtain assembly must be level and comply with the clearances as shown in **FIGURE 2**.

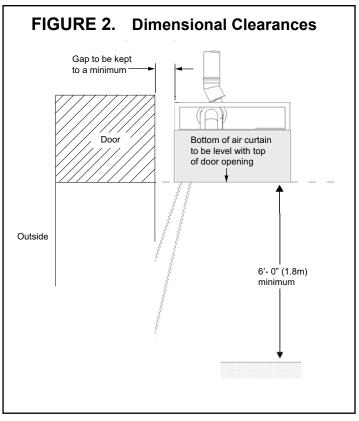
CAUTION: Do not locate the air curtain where it may be exposed to water spray, rain or dripping water.

| Approximate Net Weight | | | | | | | | |
|------------------------|----------------------|-----|--|--|--|--|--|--|
| Weight | Weight AB 175 AB 225 | | | | | | | |
| lb | 408 | 507 | | | | | | |
| kg | kg 185 230 | | | | | | | |

4.0 Dimensions, Clearances, and Features

4.1 Dimensions



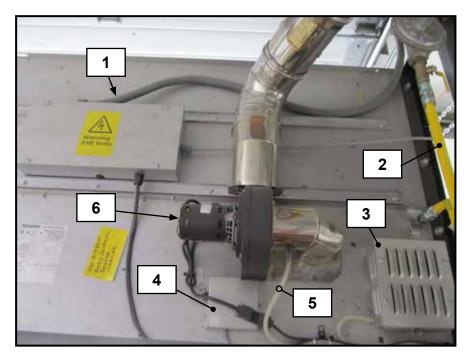


4.2 Combustible Clearances

For safety and convenience, provide clearances as shown in the following table. Clearance to combustibles is defined as the minimum distance from the heater to a surface or object that is necessary to ensure that a surface temperature of 90°F above the surrounding ambient temperature is not exceeded. Minimum clearances are also listed on the heater rating plate.

| | Minimum Clearances to Combustibles—ALL Models | | | | | | | | | |
|--------|--|-----|----|-----|-----|-----|--|--|--|--|
| UOM | UOM Service Side Opposite Service Side Front Top Bottom Flue | | | | | | | | | |
| inches | 18 | 6 | 3 | 18 | 36 | 6 | | | | |
| mm | 457 | 152 | 76 | 457 | 914 | 152 | | | | |

4.3 Features



| No | Feature |
|----|----------------------|
| 1 | Main power cable |
| 2 | Gas supply line |
| 3 | Combustion air inlet |
| 4 | Limit control sensor |
| 5 | Vacuum line |
| 6 | Venter motor |

5.0 Position and Mounting

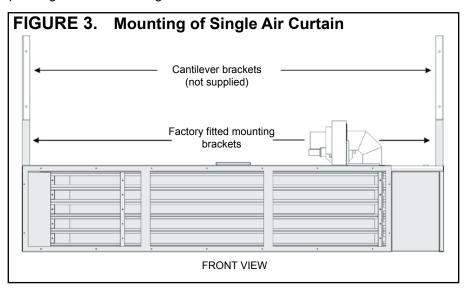
Determine the position of the air curtain with regard to clearances, venting, gas supply connection, gas pressure, electrical supply connection and working height consideration.

Air curtain units are supplied with mounting brackets pre-fitted as either a single or multiple units which can be bolted together for various door widths.

Refer to **FIGURE 2** for minimum working height considerations.

5.1 Single Air Curtain

Each single air curtain should be supported by cantilever brackets (not supplied) then fixed to the building structure by bolting directly using suitable support brackets or by suspending from above using suitable steel work as shown in **FIGURE 3** below.

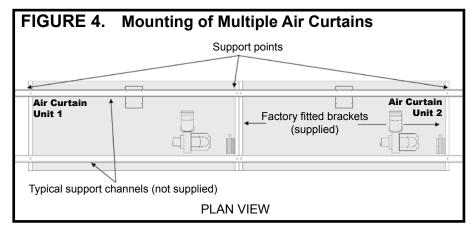


5.2 Multiple Air Curtains

Multiple air curtains should be bolted together using three sets of 3/8-16 bolts, nuts, and washers fitted through the existing holes in the factory provided mounting brackets and then through the holes in the support channels (not supplied).

WARNING

Hardware must be positioned along the full length in the top of the factory-provided mounting brackets to ensure proper load conditions. The unit can now be directly attached to the building trusses by using suitable support brackets or by suspending the unit from overhead steel work as shown in **FIGURE 4**.



WARNING

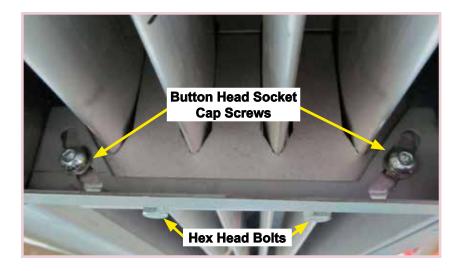
Mounting of Multiple Air Curtains may require larger support channels to ensure proper support of heavier loads.

If required, the support channels may be slightly extended past the ends of the air curtains units to aid in fastening.

5.3 Adjusting of Air Outlet Louvers

To adjust the air outlet louvers:

Loosen two hex head bolts at each end of the unit (total of four) as shown below.



- Loosen the two button head socket cap screws that lock the louvers in position.
 (Note: two pair on Model AB 225 & one pair on Model AB 175) as shown.
- Now move the louvers to desired position and retighten all bolts/screws.

6.0 Mechanical

Technical **Specifications**

| Model | AB | 225 | AB 175 | | |
|------------------------------|---------------------|---------|---------|-----------|--|
| Gas type | Natural | Propane | Natural | Propane | |
| Gas connection | | 1/2" | NPT | | |
| Max supply pressure (i.w.c.) | | 14 | 1.0 | | |
| Min supply pressure (i.w.c.) | 5.0/12.0 | | | | |
| Gross heat input (BTU) | 225,000 175,000 | | | | |
| Gross heat output (BTU) | 180,000 140,000 | | | | |
| Number of orifices | | ţ | 5 | | |
| Orifice size (mm) | 3.3 | 1.85 | 2.9 | #51 drill | |
| Manifold pressure (i.w.c.) | 3.5 | 10.0 | 3.5 | 10.0 | |
| Flue nominal diameter | 6" | | | | |
| Temperature rise (°C) | -5.0/-2.8 -3.3/-1.1 | | | | |
| Temperature rise (°F) | 23 | /27 | 26 | /30 | |

Venter Fan

| Voltage | 120V/60 Hz |
|-----------|--------------|
| RPM | 3400 |
| Current | 1.7 A |
| Capacitor | 10 μF (370V) |

Air Distribution Fans

| Туре | Direct Drive Centrifugal (1/3 hp) | | | | |
|--------------------------|-----------------------------------|-------|--|--|--|
| Speeds | 2 | | | | |
| Number of fans | 4 3 | | | | |
| Maximum air volume (CFM) | 6170 4320 | | | | |
| Voltage | 230V/60 Hz | | | | |
| Power rating (per fan) | 550 \ | watts | | | |

6.1 Gas Piping and Pressures

WARNING

This unit is equipped for a maximum gas supply pressure of 1/2 psi, 3.5 kPA or 14 inches water column. Supply pressure higher than 1/2 psi requires installation of an additional lockup-type service regulator external to the unit.

Sizing a Gas Supply Line

| Specific Gravity for Natural Gas: 0.6 (1000 BTU/Cubic Foot) | | | | | | | | | | | | |
|---|---|---------|---------|---------|---------|------------|-----------|---------|---------|---------|---------|---------|
| | Specific Gravity for Propane Gas: 1.6 (2550 BTU/Cubic Foot) | | | | | | | | | | | |
| Length | | | | | Dia | meter of F | Pipe (Inc | hes) | | | | |
| of Pipe | | /2 | | /4 | | 1 | | 1/4 | | 1/2 | | 2 |
| (Feet) | Natural | Propane | Natural | Propane | Natural | Propane | Natural | Propane | Natural | Propane | Natural | Propane |
| 20 | 92 | 56 | 190 | 116 | 350 | 214 | 730 | 445 | 1100 | 671 | 2100 | 1281 |
| 30 | 73 | 45 | 152 | 93 | 285 | 174 | 590 | 360 | 890 | 543 | 1650 | 1007 |
| 40 | 63 | 38 | 130 | 79 | 245 | 149 | 500 | 305 | 760 | 464 | 1450 | 885 |
| 50 | 56 | 34 | 115 | 70 | 215 | 131 | 440 | 268 | 670 | 409 | 1270 | 775 |
| 60 | 50 | 31 | 105 | 64 | 195 | 119 | 400 | 244 | 610 | 372 | 1105 | 674 |
| 70 | 46 | 28 | 96 | 59 | 180 | 110 | 370 | 226 | 560 | 342 | 1050 | 641 |
| 80 | 43 | 26 | 90 | 55 | 170 | 104 | 350 | 214 | 530 | 323 | 990 | 604 |
| 90 | 40 | 24 | 84 | 51 | 160 | 98 | 320 | 195 | 490 | 299 | 930 | 567 |
| 100 | 38 | 23 | 79 | 48 | 150 | 92 | 305 | 186 | 460 | 281 | 870 | 531 |
| 125 | 34 | 21 | 72 | 44 | 130 | 79 | 275 | 168 | 410 | 250 | 780 | 476 |
| 150 | 31 | 19 | 64 | 39 | 120 | 73 | 250 | 153 | 380 | 232 | 710 | 433 |
| 175 | 28 | 17 | 59 | 36 | 110 | 67 | 225 | 137 | 350 | 214 | 650 | 397 |
| 200 | 26 | 16 | 55 | 34 | 100 | 61 | 210 | 128 | 320 | 195 | 610 | 372 |

Gas Piping Requirements and Connection

All piping must be in accordance with requirements outlined in the National Fuel Gas Code ANSI Z223.1a (latest edition) or CAN/CSA-B149.1 and B149.2 (See Paragraph 1). Gas supply piping installation should conform with good practice and with the local codes.

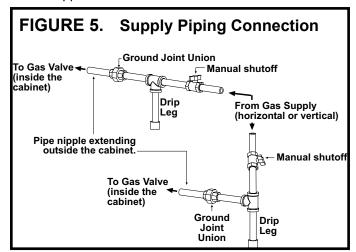
Pipe joint compounds (pipe dope) shall be resistant to the action of liquefied petroleum gas or any other chemical constituents of the gas being supplied.

Install a ground joint union and manual shutoff valve upstream of the unit control system as shown in **FIGURE 5**.

The 1/8" plugged tapping in the shutoff valve provides connection for a supply line pressure test gauge.

The National Fuel Gas Code requires the installation of a trap with a minimum 3" (76 mm) drip leg. Local codes may require a minimum drip leg longer than 3", typically 6" (152 mm).

Bleed gas lines of trapped air.



WARNING

All components of a gas system must be leak tested prior to placing equipment in service. NEVER TEST WITH AN OPEN FLAME. Failure to comply could result in personal injury, property damage or death.

Pressure Settings

System pressure cannot be set until the unit is in operation.

For Natural Gas: The unit is set at the factory to a inlet supply pressure of 7.0 inches water column. Inlet supply pressure to the valve for natural gas must be a minimum of 5 inches water column or as noted on the rating plate and a maximum of 14 inches water column.

For Propane: The unit can be converted to propane by using a field installed natural gas to propane kit, Option DL2. Use PN 1005716 for Model AB 175 or PN 1005717 for Model AB 225.

Once converted set the pressure to 12.0 inches of water column. Inlet supply pressure to the valve for propane must be a minimum of 12 inches water column and a maximum of 14 inches water column.

MOTE: Before attempting to measure or adjust gas pressure the inlet supply pressure **MUST** be within the specified range both when the air curtain is in operation and on standby. Incorrect inlet pressure could cause excessive unit pressure immediately or at some future time. If the natural gas supply pressure is too high, install a lockup-type service regulator in the supply line before it reaches the unit. If the natural gas supply pressure is too low, contact your gas supplier.

The gas pressure is set at the factory and should be in compliance to the data noted on the rating plate and should not require adjustment.

6.0 Mechanical (cont'd)

6.2 Venting

WARNING

The vent must be installed in accordance with national and local regulations. Failure to provide proper venting could result in death, serious injury and/or property damage. This unit must be installed with a vent to the outside of the building. Safe operation of any power-vented, gas-fired equipment requires a properly operating vent system, correct provision for combustion air and regular maintenance and inspection.

Venting must be in accordance with the National Fuel Gas Code Z223.1 or CSA B149.1 and b149.2, Installation Code for Gas Burning Appliances and Equipment and all local codes. Local requirements supersede national requirements. Combustion air for this heater only provided from surrounding ambient air. Flue products must always be vented to the outdoors.

Installation should be done by a qualified agency in accordance with these instructions. The qualified agency installing the vent or vent/combustion air system is responsible for the installation.

WARNING

Do not intermix different vent system parts from different manufacturers in the same venting system.

The venting systems illustrated in this manual are the only ones approved for these Air Curtain units.

Vent parts from any agency-listed vent system manufacturer may be used.

WARNING

Units installed in multiples require individual vent pipe runs and vent caps. Manifolding of vent runs is not permitted due to possible recirculation of combustion products into the building and back pressure effects on the combustion air switch.

All pipe is field supplied. Requirements for vent pipe(s) as follows:

- Vent pipe approved for Category III appliance OR single wall, 26-gauge or heavier galvanized (or material of equivalent durability and corrosion resistance) vent pipe is required between the air curtain combustion exhaust and the vent terminal section.
- Double-wall (Type B) vent pipe is required for the vent terminal section. The length of pipe that extends through roof or wall.

A fixed flue must be installed on all air curtains. The fan is fitted with a 5-1/8" (130 mm) diameter female outlet.

The flue pipe needs to be supported every 6' (1.8M) and terminated externally with a 6" diameter (152 mm) CC1 vent cap (PN 111850).

The flue pipe may be installed vertically or horizontally, refer to **FIGURES 6, 7A, & 7B**. Ventilation should meet a minimum of 0.5 air changes per hour using appropriately sized fans interlocked with the unit.

In applications where air changes are less than 0.5 per hour, additional mechanical or natural ventilation is required.

WARNING

All vent terminals must be positioned or located away from fresh air intakes, doors and windows to preclude combustion products from entering occupied space. Failure to comply could result in severe personal injury or death/or property damage.

Vent Pipe

FIGURE 6. Typical Vertical Flue Arrangement

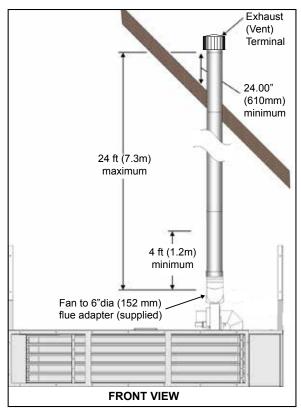
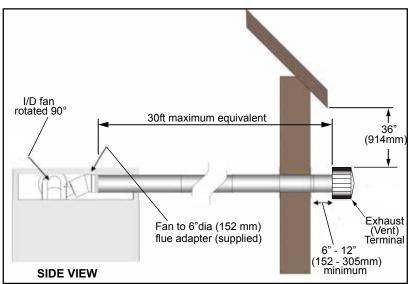


FIGURE 7A. Typical Horizontal Flue Arrangement REAR EXIT



NOTE: Before fitting a horizontal flue, it will be necessary to rotate the I/D fan 90° on its mounting bracket to enable the flue to be routed to the rear of the air curtain as shown in **FIGURE 7A**.

Clearances to Horizontal Vent

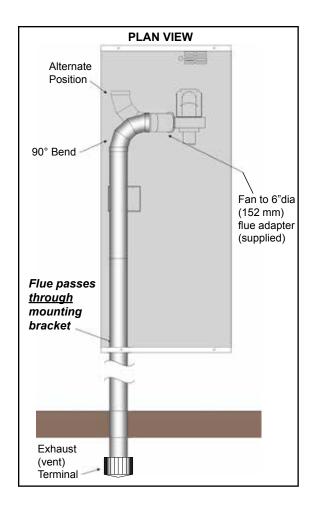
| Structure | Minimum Clearances for Vent Terminal Location (All Directions Unless Specified) |
|---|---|
| Forced air inlet within 10 ft (3.1M)* | 3 ft (0.9M) above |
| Combustion air inlet of another appliance | 6 ft (1.8M) |
| Door window or growity air inlot (ony | 4 ft (1.2M) horizontally |
| Door, window, or gravity air inlet (any building opening) | 4 ft (1.2M) below |
| Dulluling opening) | 1 ft (305 mm) above |
| Electric meter, gas meter and relief equipment** | U.S.: 4 ft (1.2M) horizontally; Canada: 6 ft (1.8M) |
| Gas regulator** | U.S.: 3 ft (0.9M); Canada: 6 ft (1.8M) horizontally |
| Adjoining building or parapet | 6 ft (1.8M) |
| Adjacent public walkways | 7 ft (2.1M) above |
| Grade (ground level) | 3 ft (0.9M) above*** |
| *D | Para |

^{*}Does not apply to the inlet of a direct vent appliance.

^{**}Do not terminate the vent directly above a gas meter or service regulator.

^{***}Consider local snow depth conditions. The vent must be at least 6" (152 mm) higher than anticipated snow depth.

FIGURE 7B. Typical Horizontal Flue Arrangement LEFT or RIGHT HAND EXIT



Pipe Diameter

Pipe diameter and length requirements shown below are for the indoor sections of pipe between the unit and the vent terminal section. This information applies to both horizontal and vertical vents. Add all straight length sections and elbow(s) to obtain a total length. Maximum total length not to exceed 30 feet (9.1M).

A minimum of 12" (30 mm) of straight pipe is required at the vertical outlet before installing an elbow in the vent system. An elbow should never be attached directly to the venter. An elbow attached to the straight pipe can be in any position at or above the horizontal.

| | Pipe Di | ameter | Maximum | | Equiv | alent Strai | ght Lengt | h for |
|--------|---------|--------|---------|-----|---------|-------------|-----------|----------|
| Model | Vent | Pipe | Length | | 90-Degr | ee Elbow | 45-Degr | ee Elbow |
| | inch | mm | feet M | | feet | M | feet | M |
| AB 175 | 6 | 152.4 | 30 | 9.1 | 8 | 2.4 | 4 | 1.2 |
| AB 225 | 6 | 152.4 | 30 | 9.1 | 8 | 2.4 | 4 | 1.2 |

Condensation

Any length of single-wall pipe exposed to cold air or run through an unheated area or an area with an ambient temperature of 45°F (7.2°C) or less, must be insulated along its entire length with a minimum of 1/2" (13 mm) foil-faced fiberglass, 1-1/2# density insulation. Where extreme conditions are anticipated, install a means of condensate disposal.

Joints and Sealing

Provide pipe as specified Vent Pipe Section and seal joints as follows:

- If using Category III vent pipe run, follow the pipe manufacturer's instructions for joining and sealing Category III vent pipe sections.
- If using single-wall, 26-gauge or heavier galvanized vent pipe run, secure slip-fit
 connections using sheet metal screws or rivets. Seal all joints with high temperature
 aluminum tape or silicone sealant.

7.0 Electrical and Wiring

7.1 Wiring

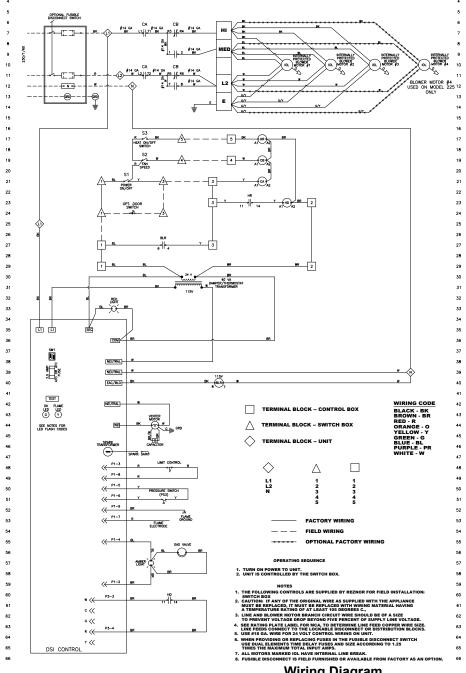
All wiring and connections, including electrical grounding, MUST be made in accordance with local, state and national codes and regulations and with the National Electrical Code (ANSI/NFPA 70) or in Canada the Canadian Electric Code Part 1 CSA C.22.1. In addition, the installer should be aware of and comply with any local ordinances or gas company requirements.

Check the rating plate on the unit for the supply voltage and current requirements. A separate line voltage supply with a fused disconnect switch should be run directly from the main electrical panel to the heater. All external wiring must be within approved conduit and have a minimum temperature rating of 60°C. Conduit from the disconnect switch must be run so as not to interfere with the service panels of the unit.

CAUTION

If any of the original wire as suppled with the unit must be replaced, it must be replaced with wiring material having a temperature rating of at least 105°C, except for sensor lead wires which must be 150°C (refer to Hazard Levels, page 2).

7.2 Typical Unit Wiring Diagram



Wiring Diagram PN D304456WDR6

7.3 Burner Controls

The burner controls are mounted in the burner control compartment which is an integral part of the air curtain cabinet and is accessible by opening a hinged lid on the on the right hand side of the air curtain unit, reference **FIGURES 8 & 9** shown below.



FIGURE 8. Remove two lid retaining screws (indicated in circles shown) located on the right hand side on the top of the air curtain cabinet.



FIGURE 9. The lid assembly will now swing down for access.

Once open, the following items are now accessible; gas safety valve, ignition controller, air pressure switch, flame probe, ignition electrode, red & amber neon lamps and associated wiring. (Reference wiring diagram for locations).

- 8.0 Pre-Startup Check, Adjustment, Startup, and Shutdown
- 8.1 Pre-Startup Check
- Check clearances from combustibles per **Section 4.2**.
- Verify unit clearances per Section 4.0.
- Verify support structure holding unit can support the load.
- Verify unit is positioned away from exposure to water spray, rain and dripping water.
- Check venting supports and clearances per Section 6.2.
- Check piping for leaks and proper gas line pressure. Bleed gas lines of trapped air.
- Check electrical wiring, be sure correct wire gauges have been used. A service disconnect switch should be in place. Verify fuses that used are correct for load use.

8.2 Gas Connection Check

The entire gas service installation, including the meter must be inspected, tested and purged in accordance with the current National Fuel Gas and local codes.

8.3 Gas Piping Check

All gas piping was factory checked prior to shipping, however during transit and installation, connections may have loosened. Check all joints for leakage and correct if necessary.

WARNING

All components of a gas system must be leak tested prior to placing equipment in service. NEVER TEST WITH AN OPEN FLAME. Failure to comply could result in personal injury, property damage or death.

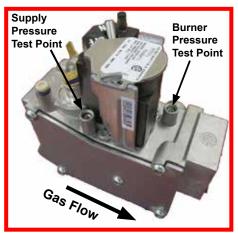
8.4 Gas Pressure Adjustment Procedure

To check the pressure use the following steps:

- 1. Using the data contained in the **Technical Specifications** table shown on page 8 and as noted on the rating plate to determine the correct gas pressure for the air curtain.
- 2. On the remote console, activate the "Power" & "Heat" switches to the "ON" position (reference picture shown below).



3. Remove the screw from the burner pressure test point of the gas control valve as shown below.



- Connect a calibrated manometer to the burner pressure test point.
 Turn the control panel "cool/heat" selector switch to the "heat" position and wait for the burner to light.
- 5. Observe the manometer reading located at the burner pressure test point.
- 6. If an adjustment is necessary, using the photo shown below and the following instructions:
 - Turn the regulator adjusting screw clockwise to increase gas pressure or counter clockwise to decrease gas pressure.



7. Set the control panel "heat/cool" switch to the "cool" position to turn the burner OFF. Replace the test point screw if removed, relight the burner and test for leaks

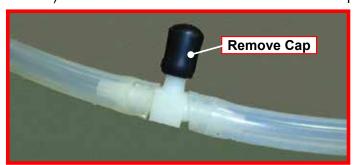
WARNING

All components of a gas system must be leak tested prior to placing equipment in service. NEVER TEST WITH AN OPEN FLAME. Failure to comply could result in personal injury, property damage or death.

8.5 Vacuum Setting Check

After the venting has been installed in accordance to Section 6.2. Verify that the vacuum setting is correct using the following procedure:

- On the remote console (see photo on page 15), activate the "Power" switch to "ON".
- Turn the remote console "Heat" switch to "ON". The air curtain exhaust fan should now start. If it did not start, follow the "Trouble Shooting the Air Distribution Fans" flow chart in Section 9.0 to start fan(s).
- Locate plastic vacuum line on top of the air curtain. Refer to Item No. 5 in picture shown in **Section 4.3**.
- Remove the cap from the one port on the tee-fitting (reference picture shown below) and connect a calibrated manometer at this port.



| Vacuum Setting Range (i.w.c.) | | | | | | | | |
|-------------------------------|---------------------|-----------|--|--|--|--|--|--|
| Model | Model AB 225 AB 175 | | | | | | | |
| Cold | 0.60-0.65 | 0.30-0.35 | | | | | | |
| Hot | 0.50-0.55 | 0.20-0.25 | | | | | | |

NOTE: If the air curtain will not start on the initial start up, the ignition controller may require resetting. This occurs when ever the unit has been on a prolonged standby period.

8.6 Lighting Sequence

This unit is fitted with an automatic spark ignition. When proper airflow for combustion is proven by the air proving switch and a pre-purge period has elapsed, the integral igniter and gas control valve operates. The ignition spark ignites the burner and the flame is detected by the flame sensor. If a burner flame is not detected, the ignition controller will require manual resetting.

NOTE: If the air curtain will not reset, use the flow chart in **Section 9.0, Trouble Shooting the Burner Controls,** to reset the unit.

8.7 Startup

To start up the air curtain:

- On the remote console (see photo on page 15), activate the "Power" switch to "ON".
- Turn the remote console "Heat" switch to "ON". The air curtain exhaust fan should now start.

8.8 Shutdown

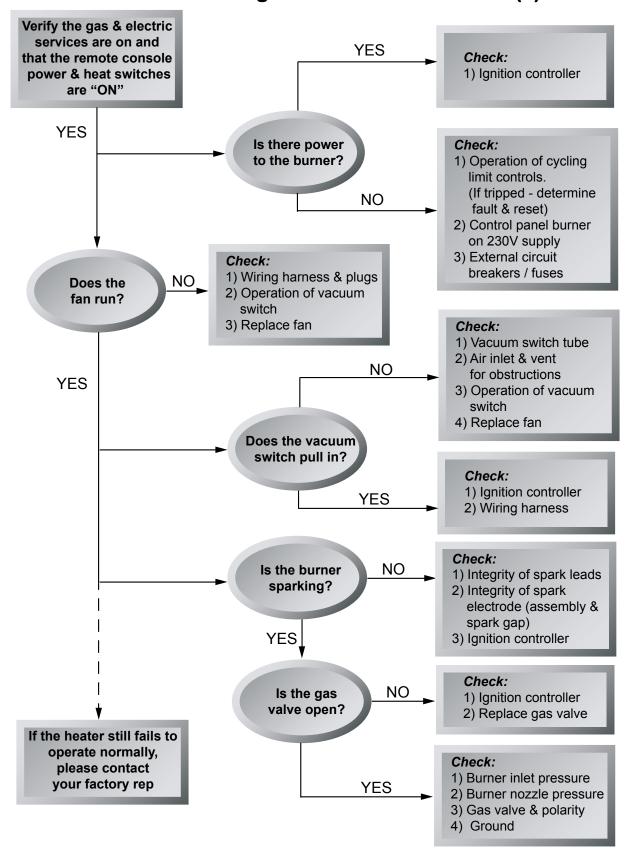
To shut down the air curtain:

- On the remote console (see photo on page 15), turn the "Power" switch to "OFF".
- Turn the remote console "Heat" switch to "OFF".

NOTE: If the air curtain is to be shut down longer than a week, it is highly recommended that the gas and electrical services are turned off to the unit.

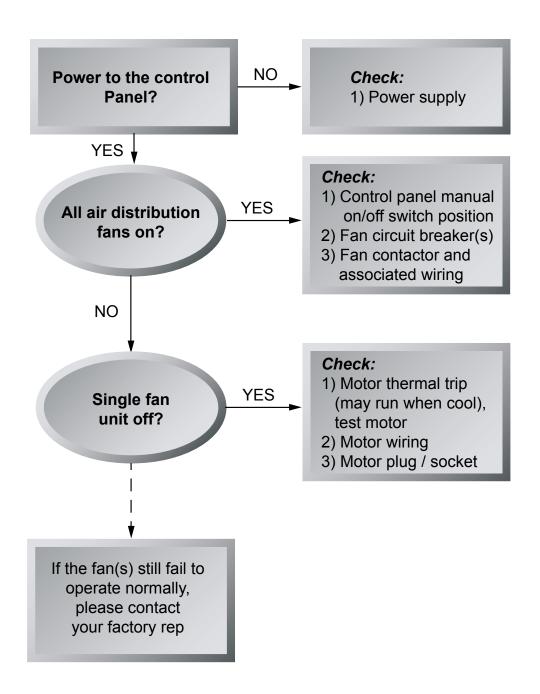
9.0 Trouble Shooting

Trouble Shooting the Air Distribution Fan(s)



9.0 Trouble Shooting (cont'd)

Trouble Shooting the Air Distribution Fan(s)



10.0 Spare Parts

NOTE: Use of components that are not factory approved could void the warranty of the unit.

Ignition Controller PN 195265



3-Speed Air Distribution Fan PN 1001113



Combustion Fan (Venter) PN 1001112



Gas Valve Natural Gas PN 270378



Manual Reset Limit Control with Capillary PN 210855



Ignition Electrode with HT lead PN 195874



Flame Probe PN 195292



Pressure Switch AB175 PN 205442 AB225 PN 204328



Red Neon PN 270474



Amber Neon PN 270473



Manifold PN 1001152



Orifice (Natural Gas) AB175 PN 1001156 AB225 PN 1001155



Burner PN 1001153



Transformer PN 194808



Wire Harness with 5-Pin Terminal PN 195656



Wire Harness with 9-Pin Terminal PN 201419



Propane Conversion Kits

Conversion Kit to convert Air Curtain Model AB 175 from natural gas to L.P. (PN 1005716) Conversion Kit to convert Air Curtain Model AB 225 from natural gas to L.P. (PN 1005717)

NOTE: Refer to Propane Conversion Instructions, Form CP-C A-GC, Document No D303078 for installation instructions for the kits listed above.

11.0 Service

To ensure continued safe and efficient operation the air curtain should only be serviced by a qualified technician.

It is recommended that this unit be inspected/serviced once a year.

If this unit is located in a exceptionally dusty area, service should be performed on a more frequent basis. Consult with your factory rep to determine service requirements.

| NOTES: | |
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INDEX

| A | M | |
|---|---------------------------------------|--|
| Adjusting of Air Outlet Louvers 7 | Manifold 19 | |
| Air Curtain Location 4 | Massachusetts Requirements 3 | |
| Amber Neon 19 | Multiple Air Curtains 6 | |
| В | N | |
| Burner 19 | Net Weight 4 | |
| Burner Controls 14 | 0 | |
| С | Orifice 19 | |
| California Warning Label 3 | | |
| Clearances 5 | P | |
| Clearances to Horizontal Vent 11 | Pipe Diameter 12 | |
| Combustible Clearances 5 | Position and Mounting 6 | |
| Compressor Mounting Kit 19 | Pressure Settings 9 | |
| Condensation 12 | Pressure Switch 19 | |
| Contact 23 | Pre Startup Check 14 | |
| D | Propane Conversion Kits 19 | |
| Dimensions 4 | R | |
| Distribution Fan 19 | Receiving, Uncrating 3 | |
| _ | Red Neon 19 | |
| E Spectrical and Wiring 12 | Reset Limit Control with Capillary 19 | |
| Electrical and Wiring 13 | S | |
| F | Service 20 | |
| Fan (Venter) 19 | Shutdown 16 | |
| Features 5 | Single Air Curtain 6 | |
| Flame Probe 19 | Sizing a Gas Supply Line 8 | |
| G | Spare Parts 19 | |
| Gas Connection Check 14 | Startup 16 | |
| Gas Piping and Pressures 8 | Т | |
| Gas Piping Check 14 | Technical Specifications 8 | |
| Gas Piping Requirements and Connection 9 | Thermistor 19 | |
| Gas Pressure Adjustment Procedure 15 | Transformer 19 | |
| Gas Valve 19 | Trouble Shooting 17 | |
| General Information 3 | U | |
| Н | Unit Wiring Diagram 13 | |
| Hazard Intensity Levels used in this Manual 2 | V | |
| I | Vacuum Setting Check 16 | |
| Ignition Controller 19 | Vacuum Setting Range 16 | |
| Ignition Electrode with HT lead 19 | Venting 10 | |
| Installation Codes 23 | Vent Pipe 10 | |
| INSTALLATION RECORD 23 | W | |
| J | Warranty 3 | |
| Joints and Sealing 12 | Wire Harness with 5 pin Terminal 19 | |
| L | Wire Harness with 9 pin Terminal 19 | |
| Lighting Sequence 16 | Wiring 13 | |
| | | |

INSTALLATION RECORD—to be completed by the installer:

| <u>Installer</u> : | | | |
|--|----------------------------|-------------------|---------------------------------------|
| Name | | | |
| Company | | | |
| Address | | | |
| | | | |
| DI. | | | |
| Phone | | | |
| Distributor (company | from which the unit was pu | rchased): | |
| Company | | | |
| Contact | | | |
| Address | | | |
| | | | |
| Phone | | | |
| Model | Serial No | Date of Installat | ion |
| SPECIFIC INSTALLATION NOTES: (i.e., Location, Amps, Gas Pressure, Temperature, Voltage, Adjustments, Warranty, etc.) | | | |
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BUILDING OWNER OR MAINTENANCE PERSONNEL:

For service or repair:

- Contact the installer listed above.
- If you need additional assistance, contact the Distributor listed above.