ALL phases of this installation must comply with NATIONAL, STATE AND LOCAL CODES

IMPORTANT — This Document is customer property. Please return to service information pack and give this Installer's Guide to the homeowner upon completion of work.

WARNING: HAZARDOUS VOLTAGE - DISCONNECT POWER and DISCHARGE CAPACITORS BEFORE SERVICING
**Installer’s Guide**

**Safety Considerations**

**IMPORTANT:** Read this entire manual before beginning installation procedures.

---

**NOTICE**

Warning and Cautions appear at appropriate locations throughout this guide. Read these carefully.

- **WARNING:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- **CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices and where property-damage-only accidents could occur.

---

<table>
<thead>
<tr>
<th>WARNING: BODILY INJURY CAN RESULT FROM HIGH VOLTAGE ELECTRICAL COMPONENTS, FAST MOVING FANS, AND COMBUSTIBLE GAS. FOR PROTECTION FROM THESE INHERENT HAZARDS DURING INSTALLATION AND SERVICING, THE ELECTRICAL SUPPLY MUST BE DISCONNECTED AND THE MAIN GAS VALVE MUST BE TURNED OFF. IF OPERATING CHECKS MUST BE PERFORMED WITH THE UNIT OPERATING, IT IS THE TECHNICIANS RESPONSIBILITY TO RECOGNIZE THESE HAZARDS AND PROCEED SAFELY.</th>
</tr>
</thead>
</table>

**IMPORTANT:** DO NOT CONNECT GAS PIPING TO THE UNIT UNTIL A LINE PRESSURE TEST HAS BEEN COMPLETED. DAMAGE TO THE GAS VALVE MAY RESULT IN AN UNSAFE CONDITION. THIS UNIT SHOULD NEVER BE EXPOSED TO GAS LINE PRESSURE IN EXCESS OF 13.8 INCHES WATER COLUMN. (1/2 PSIG)

**IMPORTANT:** RECONNECT ALL GROUNDING DEVICES. ALL PARTS OF THIS PRODUCT CAPABLE OF CONDUCTING ELECTRICAL CURRENT ARE GROUNDED. IF GROUNDING WIRES, SCREWS, STRAPS, CLIPS NUTS OR WASHERS USED TO COMPLETE A PATH TO GROUND ARE REMOVED FOR SERVICE, THEY MUST BE RETURNED TO THEIR ORIGINAL POSITION AND PROPERLY FASTENED.

---

**WARNING:** NEVER USE AN OPEN FLAME TO TEST FOR GAS LEAKS: AN EXPLOSION COULD OCCUR, CAUSING INJURY OR DEATH.

---

**WARNING:** DO NOT OPERATE THE UNIT WITHOUT THE EVAPORATOR FAN OR COIL ACCESS PANELS IN PLACE. REINSTALL THE ACCESS PANELS AFTER PERFORMING MAINTENANCE PROCEDURES ON THE FAN. OPERATING THE UNIT WITHOUT THE ACCESS PANELS PROPERLY INSTALLED MAY RESULT IN SEVERE PERSONAL INJURY OR DEATH.

---

**NOTICE:** Wear appropriate gloves, arm sleeve protectors, and eye protection when servicing or maintaining this equipment.

The following warnings complies with the State of California law, Proposition 65.

<table>
<thead>
<tr>
<th>WARNING: HAZARDOUS GASSES!</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure to fuel substances or by products of incomplete fuel consumption is believed by the state of California to cause cancer, birth defects, or other reproductive harm.</td>
</tr>
</tbody>
</table>

**WARNING:** This product contains fiberglass wool insulation! Fiberglass dust and ceramic filters are believe by the state of California to cause cancer through inhalation. Glasswool fibers may also cause respiratory, skin, or eye irritation.

**PRECAUTIONARY MEASURES**

- Avoid breathing fiberglass dust
- Use a NIOSH approved dust/mist respirator
- Avoid contact with the skin or eyes. Wear long-sleeved, loose fitting clothing, gloves, and eye protection.
- Wash clothes separately from other clothing, rinse washer thoroughly.
- Operations, such as sawing, blowing, tear-out, and spraying may generate fiber concentrations requiring additional respiratory protection. Use the appropriate NIOSH approved respirator in these situations.

**FIRST AID MEASURES**

- **Eye Contact:** Flush eyes with water to remove dust. If symptoms persist, seek medical attention.
- **Skin Contact:** Wash affected area gently with soap and warm water after handling.

---

**WARNING:** DO NOT OPERATE THE UNIT WITHOUT THE EVAPORATOR FAN OR COIL ACCESS PANELS IN PLACE. REINSTALL THE ACCESS PANELS AFTER PERFORMING MAINTENANCE PROCEDURES ON THE FAN. OPERATING THE UNIT WITHOUT THE ACCESS PANELS PROPERLY INSTALLED MAY RESULT IN SEVERE PERSONAL INJURY OR DEATH.

---

**NOTICE:** Wear appropriate gloves, arm sleeve protectors, and eye protection when servicing or maintaining this equipment.
Installer's Guide

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Step 3—Review Location and Recommendation Information

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Ground Level Installation

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Covert Horizontal Airflow to Down Airflow

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Lifting and Rigging

Placing the Unit on the Mounting Curb

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Status LEDs

Introduction

Read this manual carefully before attempting to install, operate, or perform maintenance on this unit. Installation and maintenance should be performed by qualified service technicians only. Do NOT use this furnace for temporary heating of buildings under construction.

As shipped from the factory, this unit is for use with natural gas only. It is listed by Underwriters Laboratory. An LPG conversion kit is available. A high altitude installation kit of additional orifice sizes is available. An extreme mounting kit for slabs and curbs is also available.

Model YC heating/cooling units are designed for outdoor mounting with a vertical condenser discharge. They can be located either at ground level or on a roof in accordance with local codes or National Fuel Gas Code (ANSI-Z223.1A) Latest Revision. Since these units are designed exclusively for outdoor operation, additional flue venting systems are not required. Each unit contains an operating charge of Refrigerant as shipped. Extreme mounting kits are available for slab (BAYEXMK002AA) or curb (BAYEXMK003AA) mountings.

The indoor fan motor speed adjustment is provided in the Maintenance section.

This guide is organized as follows:

- Step 1—Inspect Shipment
- Step 2—Determine Unit Clearances
- Step 3—Review Location and Recommendation Information
- Step 4—Unit Installation
- Step 5—Unit Startup
- Sequence of Operation
- Maintenance

Step 1—Inspect Shipment

1. Check for damage after the unit is unloaded. Report promptly to the carrier any damage found to the unit. Do not drop the unit.

   Important: To prevent damage to the sides and top of the unit when hoisting, the use of “spreader bars” is recommended.

2. Check the unit’s nameplate to determine if the unit is correct for the intended application. The power supply must be adequate for both the unit and all accessories.

3. Check to be sure the refrigerant charge has been retained during shipment. Remove the Compressor access panel to access the 1/4” flare pressure taps.

4. The Flue Hood is included with the unit’s literature. It is attached to the unit’s side panel with two mounting screws. The factory installs the screws into the unit. During installation remove the screws and use to install the Flue Hood.

5. If this unit is being installed on a curb, verify that the correct curb is provided with the unit.

   - YC-3018 through YC-3036 use the small cabinet, Model BAYCURB050A.
   - YC-3042 through YC-3060 use the large cabinet, Model BAYCURB051A.

6. If the unit is being hoisted, accessory kit BAYLIFT002AA is recommended. It includes a kit of four (4) lifting lugs and instructions.
Step 2—Determine Unit Clearances

Figures 1 to 8 show the unit critical dimensions. Figures 2 and 4 show the YCC clearances and Figures 6 and 8 show the YCX clearances.

Figure 1. YCC3018A through YCC3036A (1 of 2)
**SUPPLY RETURN**

| BACK SIDE | 304.8 (12) | 609.6 (24) |
| LEFT SIDE | 914.4 (36) | 1066.8 (42) |
| RIGHT SIDE | 1066.8 (42) | - |
| FRONT SIDE | 1066.8 (42) | - |

**CLEARANCE TO COMBUSTIBLE MATERIAL**

| BOTTOM | 0 |
| BACK SIDE | 25.4 (1) |
| LEFT SIDE | 152.4 (6) |
| RIGHT SIDE | 152.4 (6) |
| FRONT SIDE | 304.8 (12) |
| TOP | 914.4 (36) |

**FLUE HOOD** (FIELD INSTALLED)

**RIGHT SIDE**

**BACK SIDE**

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<tr>
<th>MODEL</th>
<th>HEIGHT</th>
<th>APPROX. CORNER WEIGHS - KG/LS</th>
<th>TOTAL WEIGHT - KG/LBS</th>
<th>CENTER OF GRAVITY</th>
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</table>

Figure 2. YCC3018A through YCC3036A (2 of 2)
Figure 3. YCC3042A through YCC3060A (1 of 2)
**Figure 4** YCC3042A through YCC3060A (2 of 2)
Figure 5  YCX3018A through YCX3036A (1 of 2)
RECOMMENDED SERVICE CLEARANCE

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<th>With Z Pos. Damper</th>
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CLEARANCE TO COMBUSTIBLE MATERIAL

| Bottom | D
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<td>157.4 [6]</td>
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<tr>
<td>Front Side</td>
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<tr>
<td>Top</td>
<td>914.4 [36]</td>
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</table>

FLUE HOOD (FIELD INSTALLED)

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<tr>
<th>Model</th>
<th>Height</th>
<th>Approx Corner Weight - KG/LBS</th>
<th>Total Weight KG/LBS</th>
<th>Center of Gravity</th>
</tr>
</thead>
</table>

Figure 6. YC03018A through YC03036A (2 of 2)
RETURN SUPPLY (FIELD INSTALLED)
CENTER OF GRAVITY
FLUE HOOD (FIELD INSTALLED)

CENTER OF GRAVITY

Figure 7. YCX3042A through YCX3060A (1 of 2)
### RECOMMENDED SERVICE CLEARANCE

<table>
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<th>WITH 2 POS. DAMPER</th>
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</thead>
<tbody>
<tr>
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<td>1066.8 (42)</td>
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### CLEARANCE TO COMBUSTIBLE MATERIAL

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<td>304.8 (12)</td>
</tr>
<tr>
<td>TOP</td>
<td>914.4 (36)</td>
</tr>
</tbody>
</table>

**Figure 8. YCX3042A through YCX3060A (2 of 2)**
Step 3—Review Location and Recommendation Information

**Note:** The unit is shipped for horizontal installation.

CAUTION MUST BE TAKEN AT ALL TIMES TO AVOID PERSONAL INJURIES AND/OR DAMAGE TO EQUIPMENT

**NOTE:** During heating operation, avoid supply air below 80 degrees F or return air below 50 degrees F to prevent flue gas condensation.

### Horizontal Airflow Units

1. Location of the unit must allow service clearance around it to ensure adequate serviceability, maximum capacity, and peak operating efficiency.

2. These units are design certified for outdoor installation. They may be installed directly on a slab, wood flooring, or on Class A, B, or C roof covering material. The discharge air from the condenser fans must be unrestricted for a minimum of 3 feet above the unit.

3. The louvers above and below the flue hood in the side panel must have adequate clearance around the air opening into the combustion area. See Figures 2, 4, 6, or 8.

4. Examine all flue product-carrying areas of the furnace, its vent system, and the main burner for safe operation.

**Note:** If practical, install any internal accessories to the unit at the shop.

**IMPORTANT:** Air outlet duct must have 1” clearance to combustible material downstream from the unit.

5. Check the handling facilities to ensure the safety of personnel and the unit.

6. The unit must be mounted level for proper drainage of water through the drain holes in the base pan.

7. The unit should not be exposed to direct roof water runoff.

8. Flexible duct connectors must be of a flame retardant material. All duct work outside of the structure must be insulated and weatherproofed in accordance with local codes.

9. Holes through exterior walls or roof must be sealed in accordance with local codes.

10. All fabricated outdoor ducts should be as short as possible. See Figure 9.

### Clearances

1. The recommended clearances for single-unit installations are illustrated in Figures 1 to 8.

2. Any reduction of the unit clearances indicated in these figures may result in condenser coil starvation or the recirculation of warm condenser air. Actual clearances, which appear to be inadequate should be reviewed with a local engineer.

3. See the unit's nameplate for the absolute minimum clearance between the unit and any combustible surfaces.

### Down Airflow Units

1. Location of the unit must allow service clearance around it to ensure adequate serviceability, maximum capacity, and peak operating efficiency.

**Note:** If practical, install any internal accessories to the unit at the shop.

2. Refer to the Installation section for instruction on converting the supply and return airflow covers to down airflow.

3. The field assembled Roof Mounting Curb (BAYCURB050A or BAYCURB051A) or a field fabricated curb should be in place before the unit is hoisted to the roof top.

**The Roof Mounting Curb (frame) must be installed on a flat, level section of the roof (maximum of 1/4” per foot pitch) and provide a level mounting surface for the unit. Also, be sure to provide sufficient height above the roof to prevent water from entering the unit.**

4. Be sure the mounting curb spans structural members (trusses) of the roof, thereby providing sufficient support for the weight of the unit, the curb, the duct(s), and any factory or field installed accessories.

5. Be sure the hole in the structure for the ducts is large enough to accommodate the fabricated ducts and the insulation surrounding them. See Figures 13 and 14 on page 16.

6. These units are design certified for outdoor installation. They may be installed directly on a slab, wood flooring, or on Class A, B, or C roof covering material. The discharge air from the condenser fans must be unrestricted for a minimum of 3 feet above the unit.

7. The louvers above and below the flue hood in the side panel must have adequate clearance around the air opening into the combustion area.

8. Examine all flue product-carrying areas of the furnace, its vent system, and the main burner for safe operation.

**IMPORTANT:** Air outlet duct must have 1” clearance to combustible material downstream from the unit.

9. Exhaust vents or other sources of contaminated air should not be near the unit's air inlet if outside air is to be introduced as make-up air or a ventilation feature is to be used. Contamination from exhaust vents or chimneys may also foul the condenser causing degraded performance.

10. Check the handling facilities to ensure the safety of personnel and the unit(s).

### Clearances

Refer to the Clearances section in the previous Horizontal Airflow Units section.
Step 4—Unit Installation

Note: The factory ships this unit for horizontal installation.

Install Flue Hood
1. Locate the Flue Hood in the literature package.
2. Remove the two Flue Hood mounting screws from the unit. They are located to the right of the Power Entry connection panel.
3. Attach the Flue Hood to the unit with the two screws removed in step 2.

Ground Level Installation
To install the unit at ground level:
1. Place the unit on a pad the size of the unit or larger. The unit must be mounted level for proper drainage of water through the holes in the base pan. To securely attach the unit to the slab, use extreme mounting kit, BAYEXMK002AA.

   The pad must not come in contact with the structure (see Figure 9.) Be sure the outdoor portion of the supply and return air ducts are as short as possible.
2. The louvers above and below the Flue Hood in the side panel must have adequate clearance around the air opening into the combustion area.
3. Location of the unit must allow service clearance around it. Clearance of the unit must be given careful consideration. See Figures 1 to 8.

   Note: Any reduction of the unit clearances indicated in these illustrations may result in condenser coil starvation or the recirculation of warm condenser air. Actual clearances, which appear to be inadequate should be reviewed with a local engineer.

   IMPORTANT: The air outlet duct must have 1” clearance to combustible material downstream from the unit.
4. Attach the supply and return air ducts to the unit as explained in the following Ductwork Installation section.
5. Flexible duct connectors must be of a flame retardant material. Insulate any ductwork outside of the structure with at least 2 inches of insulation and weatherproof. There must be a weatherproof seal where the duct enters the structure.
6. Do not expose the unit to direct roof water runoff.
7. Seal all holes through exterior walls in accordance with local codes.
8. Continue with the following installation sections to complete the installation: Ductwork, Gas Piping, Filter, and Electrical Wiring.

Rooftop Installation – Curb Mounting
Convert Horizontal Airflow to Down Airflow
The factory ships the unit for horizontal airflow. Perform this procedure to convert it to down airflow:
1. Remove the three (3) sheet metal screws securing the supply air cover and the four (4) sheet metal screws securing the return air cover from the base of the unit. Remove the covers from the base. See Figure 10.
2. Place the covers over the horizontal supply and return openings (painted side out). Align the screw holes, and secure using the same screws removed in step 1.

Install Full Perimeter Roof Mounting Curb
1. Verify that the roof mounting curb is correct for the unit. There are two Installer's Guides depending on the cabinet sizes:
   - YC~3018 through YC~3036 use the small cabinet, Model BAYCURB050A.
   - YC~3042 through YC~3060 use the large cabinet, Model BAYCURB051A.
2. Assemble and install the curb following the instructions in the appropriate Installer's Guide.

Lifting and Rigging
1. Before preparing the unit for lifting, check the unit dimension drawings for center of gravity for lifting safety (Figures 1 to 8). Because of placement of internal components, the unit’s weight may be unevenly distributed. Approximate unit weights are also provided in the unit drawings.

   Note: Unit rigging and hoisting requires accessory kit BAYLIFT002AA. It includes a kit of four (4) lifting lugs. See Figure 11 insert B.
   Note: Use the extreme mounting kit, BAYEXMK002AA, to secure the unit to the slab.

Figure 9. Typical Ground Level Applications
2. Insert the four lifting lugs in the openings provided in the drip lip on each end of the unit. See Figure 11 insert B. A tap or jerk to the lug will overcome the interference that arises due to the dimple on the lug.

3. Before hoisting the unit, be sure that the proper method of rigging is used with straps or slings and spreader bars for protection during lifting. Always test-lift the unit to determine the exact unit balance and stability before hoisting it to the installation location.

**Important:** Do not lift the unit without test lifting for balance and rigging. Do not lift the unit in windy conditions or above personnel. Do not lift the unit by attaching clevis, hooks, pins, or bolts to the unit casing, casing hardware, corner lugs, angles, tabs, or flanges. Failure to observe these warnings may result in equipment damage.

4. When the curb and air ducts have been properly installed, the unit is ready to be hoisted to the roof and set in position.

**Important:** “Spreader Bars” are recommended when hoisting the unit.

**Important:** The unit must be lowered into position. The P.V.C. rubber tape on the curb flange permits the unit to be repositioned if required without destroying the P.V.C. rubber seals affixed to the mounting curb.

**Placing the Unit on the Mounting Curb**
1. The unit is designed with a perimeter drip lip that is lower than the unit base pan, see Figure 11, inset A.

2. Position the unit drip lip down over and in contact with the outside corner of the curb, as illustrated in Figure 12, insert A. Continue to lower the unit on top of the curb, with the unit drip lip astraddle, and in contact with, both the end and side rail of the curb. The unit should now rest on top of the curb.

3. Take the two (2) hold-down brackets shipped with the curb and secure the unit to the curb as illustrated in Figure 12, insert A.

Use the extreme mounting kit, BAYEXMK003AA, to add additional hold down strength to the mounting.

**NOTE:** The ductwork is installed as part of the curb installation. Do not attach ductwork to the unit and lower the unit with ductwork onto the curb.

**Rooftop Installation – Frame Mounting**
For roof top applications using a field fabricated frame and ducts, use the following procedure:

1. Locate and secure the frame to the roof by bolting or welding. Add flashing as required. Flashing must conform to local building codes.

2. Prepare the hole in the roof in advance of installing the unit.

3. Secure the horizontal or down airflow ducts to the roof. Refer to the previous Convert from Horizontal Airflow to Down Airflow section if conversion is needed.

4. All fabricated outdoor ducts should be as short as possible.

5. Place the unit on the frame. Refer to Figures 13 or 14.

6. The unit must be mounted level for proper drainage of water through the holes in the base pan.

7. Secure the unit to the frame.

8. Insulate any ductwork outside of the structure with at least two (2) inches of insulation and then weatherproof. There must be a weatherproof seal where the duct enters the structure.

9. The unit should not be exposed to direct roof water runoff.

10. Flexible duct connectors must be of a flame retardant material. All duct work outside of the structure must be insulated and weatherproofed in accordance with local codes.

11. Access and service clearances for the unit must be given careful consideration when locating the duct entrance openings. Figures 1 to 8 provides unit dimensions.

12. Continue with the following installation sections to complete the installation: Ductwork, Gas Piping, Filter, and Electrical Wiring.
Figure 11. Lifting and Rigging

Note: Use the extreme mounting kit, BAYEXMK003AA, to additional holding strength to the unit to curb mounting.

Figure 12. Placing Unit on Curb
Figure 13. Typical Rooftop Horizontal Airflow Application with Frame

Figure 14. Typical Rooftop Down Airflow Application with Frame
Ductwork Installation

Attaching Downflow Ductwork to Roof Curb
Supply and return air flanges are provided on the roof curb for easy duct installation. All ductwork must be run and attached to the curb before the unit is set into place.

Attaching Downflow Ductwork to Roof Frame
Follow these guidelines for ductwork construction:
Connections to the unit should be made with three inch canvas connectors to minimize noise and vibration transmission.
Elbows with turning vanes or splitters are recommended to minimize air noise and resistance.
The first elbow in the ductwork leaving the unit should be no closer than two (2) feet from the unit, to minimize noise and resistance.
To prevent leaking, do not attach the ductwork to the bottom of the unit base; refer to the bottom example in Figure 15.

Attaching Horizontal Ductwork to Unit
All conditioned air ductwork should be insulated to minimize heating and cooling duct losses. Use a minimum of two (2) inches of insulation with a vapor barrier. The outside ductwork must be weatherproofed between the unit and the building. See Figure 16.

When attaching ductwork to a horizontal unit, provide a flexible watertight connection to prevent noise transmission from the unit to the ducts. The flexible connection must be indoors and made out of heavy canvas.

Note: Do not draw the canvas taut between the solid ducts.

Condensate Drain Piping
A 3/4-inch female NPT condensate drain connection is provided on the evaporator access panel end of the unit. Provide a trap and fill it with water before starting the unit to avoid air from being drawn through. Follow local codes and standard piping practices when running the drain line. Pitch the line downward away from the unit. Avoid long horizontal runs. See Figure 17.

Note: Do not use reducing fittings in the drain lines.

The condensate drain must be:
- Made of 3/4" pipe size.
- Pitched 1/4" per foot to provide free drainage to convenient drain system.
- Trapped.
- Must not be connected to a closed drain system unless the trap is properly vented.

Figure 15. Down Airflow Ductwork

Figure 16. Horizontal Airflow Ductwork

Figure 17. Typical Condensate Drain Piping
Gas Piping Installation

IMPORTANT: Before making the gas pipe connection, seriously consider providing the required clearance necessary to remove the access panels on the unit (for example, heat exchange side access panel).

Note: In the absence of local codes, the installation must conform with American National Standard--Z223.1--National Fuel Gas Code, Latest Revision.

The available gas supply must agree with the required gas supply marked on the unit nameplate. The Minimum permissible gas supply pressure for the purpose of input adjustment must be at least 5.0” W. C. (inches Water Column) for natural gas and 11” W.C. for propane.

Pipe Delivery Schedule (Natural Gas Only)

Note: The following procedure and tables below apply to Natural Gas only.

1. Obtain from the gas company the heating value and specific gravity of the gas delivered.
2. Determine the exact length of pipe needed.
3. Read the BTUH input nameplate on the furnace.
4. Use the multiplier opposite the specific gravity of the gas given in Table 1 and insert in the following CHF formula:

   \[ \text{CFH} = \frac{\text{Furnace Input in BTUH}}{\text{Gas Heat Content in BTU/Cu. Ft. X Multiplier}} \]

   Table 1

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<td>.962</td>
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   CFH = \text{Furnace Input in BTUH} / \text{Gas Heat Content in BTU/Cu. Ft. X Multiplier}

   This will give the factor for columns 2 through 7 in Table 2.
5. Using Table 2, select the pipe length nearest to yours.
6. Follow this line down to the exact CFH found in Step 4 above or the next highest value.
7. Read across to the left of this column for the required pipe size diameter.

Table 2. Natural Gas Only

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<td>92</td>
<td>73</td>
<td>63</td>
<td>56</td>
<td>50</td>
<td>46</td>
</tr>
<tr>
<td>3/4</td>
<td>278</td>
<td>190</td>
<td>152</td>
<td>130</td>
<td>115</td>
<td>105</td>
<td>96</td>
</tr>
<tr>
<td>1</td>
<td>520</td>
<td>350</td>
<td>285</td>
<td>245</td>
<td>215</td>
<td>195</td>
<td>180</td>
</tr>
<tr>
<td>1-1/4</td>
<td>1050</td>
<td>730</td>
<td>590</td>
<td>520</td>
<td>440</td>
<td>400</td>
<td>370</td>
</tr>
</tbody>
</table>

This table is based on pressure drop of 0.3 inch W.C. and 0.6 sp.gr. gas.

Note: If this is a propane application, consult your propane supplier for pipe sizes and deliveries.

Gas Pressure Set-Up Precautions

WARNING: NEVER USE AN OPEN FLAME TO TEST FOR GAS LEAKS: AN EXPLOSION COULD OCCUR, CAUSING INJURY OR DEATH.

IMPORTANT: The furnace and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures exceeding 1/2 psig (3.48 kPa).

The furnace must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system at test pressures less than or equal to 1/2 psig (3.48 kPa).

Gas Supply Line Pressure (All Fuels)

Before connecting the unit to the gas supply line, be sure to determine the gas pressure in the line.

If the gas supply pressure is excessive (above 13.8 inches water column or 1/2 psig), install a pressure regulator either at the supply source or in the branch circuit serving the unit. Once the regulator is installed, set it to provide a maximum pressure of 13.8” W.C. to the gas valve for natural gas with a minimum supply pressure of 5.0” W.C. A maximum supply pressure of 13.8” W.C. to the gas valve for propane with a minimum pressure of 11.0” W.C.

Note: Maximum pressure to the gas valve for natural gas is 13.8” W.C. Minimum pressure is 5.0” W.C. Maximum pressure to the gas valve for propane is 13.8” W.C. Minimum pressure to the gas valve is 11.0” W.C.

If the supply line pressure is below the minimum supply pressure indicated on the unit nameplate, contact the gas supply company.

Follow these steps to complete the installation of the unit gas piping. See Figure 18.

1. Install a tapped, Style A (1/8-inch NPT tap) shut-off gas cock at the end of the gas supply line near the unit. Be sure the tapped gas cock is downstream of the pressure regulator, if used.

Figure 18
Note: The shut-off gas cock must be installed outside of the unit and should meet the specifications of all applicable national and local codes.

2. Install a ground union joint downstream of the shut-off cock. This joint must also be installed outside of the unit.

3. Install a drip leg at least six (6) inches in depth next to the union as shown in Figure 18. This drip leg is required to collect any sediment that may be deposited in the line.

4. Before connecting the piping circuit to the unit, bleed the air from the supply line. Then cap or plug the line and test the pressure at the tapped shut-off cock. The pressure reading should not exceed 13.8 inches water column.

5. Using an appropriate backup wrench on the gas valve inlet boss, connect the gas piping to the unit. Check the completed piping for leaks using a soap and water solution or the equivalent.

6. After installation of the gas pipe in the unit, the pipe chase opening should be closed with the filler/barrier plug provided.

Verify Manifold Pressure
Check the manifold pressure at the unit gas valve. Do not exceed the recommended pressure shown on the unit nameplate. See Figure 19 for connections. Refer to Manifold Pressure Check and Adjust in the following Step 5-Unit Startup section if adjustment is needed.

Input Check and Adjustment
1. Make sure all gas appliances are off except the furnace.

2. Clock the gas meter with the furnace operating (determine the dial rating of the meter) for one revolution.

3. Match the “Sec” column in the Gas Flow (in cfh) Table 3 with the time clocked.

4. Read the “Flow” column opposite the number of seconds clocked.

5. Table 3 lists values for a 2 cubic foot dial. For 1, 1/2, or 5 Cu. Ft. dials use the following conversions:
   
   1 Cu. Ft. Dial Gas Flow CFH = Chart Flow Reading / 2
   1/2 Cu Ft. Dial Gas Flow CFH = Chart Flow Reading / 4
   5 Cu. Ft. Dial Gas Flow CFH = 10X Chart Flow Reading / 4

6. Multiply the final figure by the heating value of the gas obtained from the utility company and compare to the nameplate rating. This must not exceed the nameplate rating.

7. Changes can be made by adjusting the manifold pressure.

   a. Attach a manifold pressure gauge to the Outlet Pressure Tap.
   b. Remove the cover screw on top of the gas valve to access the manifold pressure adjustment screw. See Figure 19.
   c. Turn the adjustment screw in to increase the gas flow rate, and out to decrease the gas flow rate using a 3/32” hex wrench or flat-head screwdriver.

Note: For manifold pressures and orifice sizes for gas with other BTU ratings, contact the local gas utility. Manifold pressure should be 3.5 inches water column (+0.1). Input for natural gas must not exceed the value shown on the rating plate.

Figure 19. Burner and Valve
Installer’s Guide

Air Filter Installation

The YC heating/cooling unit requires an air filter. The basic unit does not have a filter in it. However, a filter frame accessory is offered that will allow the installation of a filter within the unit. Otherwise a filter rack must be installed by the installer in the return duct work.

Affix the filter label supplied with the unit adjacent to the filter area. Refer to Table 6 to determine filter size.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>NOMINAL CFM</th>
<th>FILTER* SIZE (Sq Ft)</th>
<th>FILTER RESISTANCE (*W.C.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>YC-3018A</td>
<td>600</td>
<td>2.00</td>
<td>0.08</td>
</tr>
<tr>
<td>YC-3024A</td>
<td>800</td>
<td>2.67</td>
<td>0.08</td>
</tr>
<tr>
<td>YC-3030A</td>
<td>1000</td>
<td>3.33</td>
<td>0.08</td>
</tr>
<tr>
<td>YC-3036A</td>
<td>1200</td>
<td>4.00</td>
<td>0.08</td>
</tr>
<tr>
<td>YC-3042A</td>
<td>1400</td>
<td>4.67</td>
<td>0.08</td>
</tr>
<tr>
<td>YC-3048A</td>
<td>1600</td>
<td>5.33</td>
<td>0.08</td>
</tr>
<tr>
<td>YC-3060A</td>
<td>2000</td>
<td>6.67</td>
<td>0.08</td>
</tr>
</tbody>
</table>

*Filters must be installed in the return air system. The above square footages are based on 300 F.P.M. face velocity. If permanent filters are used, size per mgf. Recommendation with clear resistance of 0.05" WC.

High Altitude Installation

Input ratings (BTUH) of these furnaces are based on sea level operation and should not be changed at elevations up to 2000 ft. If the unit installation is from 2000 to 8000 feet elevation, then change the burner orifices to the size listed in Table 4. Refer to Table 5 for orifice part numbers.

Electrical Connections

Electrical wiring and grounding must be installed in accordance with local codes or, in the absence of local codes, with the National Electrical Code ANSI/NFPA 70, Latest Revision.

Notes: For branch circuit wiring (main power supply to unit disconnect), determine wire size for the length of run using the circuit ampacity found on the unit nameplate and the N.E.C. For more than 3 conductors in a raceway or cable, see the N.E.C. for derating the ampacity of each conductor.

Electrical Wiring

Note: This unit is factory wired for 230V. See wiring diagram for 208V conversion.
Electrical Power
It is important that proper electrical power be available for the unit.
Voltage variation should remain within the limits stamped on the
unit nameplate.

Disconnect Switch
Provide an approved weatherproof disconnect within close prox-
imity and within sight of the unit.

Over Current Protection
The branch circuit feeding the unit must be protected as shown on
the unit’s rating plate.

Power Wiring
The power supply lines must be run in weather-tight conduit to the
disconnect and into the side of the unit control box. Provide strain
relief for all conduit with suitable connectors.
Provide flexible conduit supports whenever vibration transmission
may cause a noise problem within the building structure.

1. Remove the Control/Heat access panel. Pass the power
wires through the Power Entry hole in the end of the unit.
See Figure 20.

2. Connect the high voltage wires to the appropriate contactor
terminals. Single phase units use a two (2) pole contactor
and three phase units use three (3) pole contactor. Connect
the ground to the ground lug on the chassis. See Figure 21.
Be sure all connections are tight.

GROUNDING: THE UNIT MUST BE ELECTRICALLY
GROUNDED IN ACCORDANCE WITH LOCAL CODES OR
THE NATIONAL ELECTRIC CODE.

Note: Unit must be grounded for ignitor to operate properly. Gas
pipe to unit is not an adequate ground. Ground the unit internally
as provided. See wiring diagram for location in Figure 22.

Thermostat Heat Anticipator
Set the heat anticipator of the thermostat to equal the amperage
draw of the gas valve

IMPORTANT: Upon completion of wiring, check all electrical
connections, including factory wiring within the unit.
Make sure all connections are tight. Replace and secure all
electrical box covers and access panels before leaving the unit or
turning on the power to the unit.

Step 5—Unit Startup
Pre-Start Quick Checklist

☐ Is the unit properly located and level with the proper clearance?
See Figures 1 to 8. See Step 2-Review Location and Clearances
on page 4.

☐ Is the duct work correctly sized, run, taped, insulated, and
weatherproofed with proper unit arrangement? See Ductwork
Installation section on page 17.

☐ Is the condensate line properly sized, run, trapped, and pitched?
See Condensate Drain Piping section on page 17.

☐ Is the gas piping correctly sized, run, trapped, and purged of
air? See Gas Piping Installation section on page 18.

☐ Is the filter of the correct size and quantity? Is it clean and in place?
See Air Filter Installation section on page 20.

☐ Is the wiring properly sized and run according to the unit wiring
diagram? See Electrical Wiring section on page 20 and 21.

☐ Are all the wiring connections, including those in the unit, tight?
See Electrical Wiring section on page 20 and 21.

☐ Has the unit been properly grounded and fused with the
recommended fuse size? See Electrical Wiring section
on page 20 and 21.

☐ Is the thermostat well located, level, correctly wired, and set
for the proper heat anticipation? See Electrical Wiring section
on page 20 and 21.

☐ Have the air conditioning systems been checked at the service
ports for charge and leak tested if necessary?

☐ Does the condenser fan and indoor blower turn free without
rubbing, and are they tight on the shafts?

☐ Has the indoor blower speed been determined and the proper
speed been set? To adjust the fan, see the Indoor Fan Motor
Speed Tap Setting section on page 25.

☐ Has all work been done in accordance with applicable local
and national codes?

☐ Are all covers and access panels in place to prevent air loss and
safety hazards?

Table 6. Thermostat Wire Size and Maximum Length

<table>
<thead>
<tr>
<th>Wire Size</th>
<th>Maximum Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>75</td>
</tr>
<tr>
<td>16</td>
<td>125</td>
</tr>
<tr>
<td>14</td>
<td>200</td>
</tr>
</tbody>
</table>

Refer to Table 6 for recommended wire sizes and lengths for
installing the unit thermostat. The total resistance of these low
voltage wires must not exceed one (1) ohm. Any resistance in
excess of 1 ohm may cause the control to malfunction because of
the excessive voltage drop.
NOTES:
1. FUSED DISCONNECT SIZE, POWER WIRING AND GROUNDING OF EQUIPMENT MUST COMPLY WITH CODES.
2. BE SURE POWER SUPPLY AGREES WITH EQUIPMENT AND HEATER NAMEPLATE.
3. LOW VOLTAGE WIRING TO BE 18 AWG MINIMUM CONDUCTOR.
4. SEE UNIT DIAGRAM FOR ELECTRICAL CONNECTION DETAILS.
5. THE THERMOSTAT ON THE GAS/ELECTRIC UNIT MUST PROVIDE A "C" SIGNAL IN THE COOLING MODE ONLY. DURING THE HEATING MODE THE FAN WILL BE ENERGIZED BY THE SYSTEM.
6. FOR SINGLE STAGE THERMOSTATS JUMPER W1 AND W2 TOGETHER. SECOND STAGE HEAT WILL BEGIN 10 MINUTES AFTER FIRST STAGE.

Figure 22. YC Field Wiring Diagram
Starting the Unit in Cooling Mode

CAUTION: Before starting the system on the cooling cycle, turn the thermostat switch to OFF and close the unit disconnect switch. This is a precaution against foaming at startup which could damage the compressor bearings.

**Note:** See the section on “Sequence of Operation” for a description of the cooling operating sequence.

To start the unit in the cooling mode, set the thermostat system switch to COOL and move the thermostat COOL indicator to a setting below room temperature. The condenser fan motor, compressor and evaporator fan motor will operate automatically.

**Note:** Do not use the pressures from the unit’s SERVICE FACTS to determine the unit refrigerant charge. The correct charge is shown on the unit nameplate. To charge the system accurately, weigh in the charge according to the unit nameplate.

Voltage Check

With the compressor operating, check the line voltage at the unit (contactor is located behind the Control/Heat access panel). The voltage should be within the range shown on the unit nameplate. If low voltage is encountered, check the size and length of the supply line from the main disconnect to the unit. The line may be undersized for the length of the run.

Cooling Shut Down

At the thermostat, place the system selector to the OFF position or reset the thermostat to a setting above room temperature.

**IMPORTANT:** De-energize the main power disconnect ONLY when servicing the unit. Power may be required to keep the heat pump compressor warm and to boil off refrigerant in the compressor.

Starting the Unit in Gas Heating Mode

**Note:** See the section on “Sequence of Operation” for a description of the Heating operating sequence.

These units are equipped with a solid-state ignition control that lights the burners each time the thermostat calls for heat. The burners are extinguished during the OFF cycle. To start the gas heating section of the unit:

1. Check that all grills and registers are open and all unit access panels are closed before start-up.
2. Purge the gas supply line of air by opening the union ahead (upstream) of the unit. When the odor of gas is detected, retighten the union and wait five (5) minutes before proceeding.
3. Be sure the thermostat is at its lowest setting and the power to the unit is off.
   a. Turn the main shut-off valve on the gas supply line to ON.
   b. Turn or switch the manual valve on the combination gas valve to the ON position.

4. Be sure the burner compartment access panel is in place.
   a. Turn on the electrical power to the unit.
   b. Turn the thermostat to the highest setting in the heating cycle.
5. As the thermostat calls for heat, the system cycles as follows:
   a. The combustion blower is energized.
   b. The pressure switch is closed.
   c. The gas valve opens and the ignitator lights the burner.
   d. Cycle the thermostat on and off a few times to check out the control system and burner operation characteristics.

**Note:** For manifold pressures and orifice sizes for gas with other BTU ratings, contact the local gas utility. Manifold pressure should be 3.5 inches w.c. (+0.1). Input must not exceed the value shown on the rating plate.

8. Set the thermostat at the desired temperature setting and the unit will function automatically.

Final Installation Checklist

- Does the unit run and operate as described in the section on “Sequence of Operation” in response to the room thermostat?
- Are the condenser fan and indoor blower operating correctly with proper rotation and without undue noise?
- Is the compressor operating correctly and has the system been checked with a charging chart?
- Has the voltage and running current been checked to determine if it is within limits?
- Has the thermostat been checked for calibration and the air discharge grilles adjusted to balance the system?
- Has the ductwork been checked for air leaks and condensation?
- Has the furnace manifold pressure been checked and adjusted if necessary?
- Has the heating air temperature rise been checked?
- Has the unit been checked for tubing and sheet metal rattles? Are there any other unusual noises to be checked?
- Are all covers and panels in place and properly fastened?
- Has the owner been instructed on the proper operation and maintenance of the unit? Be sure to leave this manual with the owner.
Sequence of Operation

Operation of the unit heating or cooling cycles is controlled by the setting of the system switch on the room thermostat. Once the system switch is placed either in the “HEAT” or “COOL” position, unit operation is automatic. A fan switch on the thermostat also provides for continuous operation of the indoor fan when desired. The fan switch “ON” position provides continuous operation while the “AUTO” position provides operation during the heating or cooling cycles.

Heating Cycle

Thermostat call for heat

(R) and (W) thermostat contacts close signaling the control module (IGN) to run its self-check routine. After the control has verified that the pressure switch (PS) contacts are open, the limit switch (TCO) contacts are closed, and the flame rollout (RO) switch is closed, the induced draft blower (CFM) will be energized. After the induced draft blower (CFM) has come up to speed, the control will verify that the pressure switch (PS) contacts are closed and run the induced draft blower for a 20 second prepurge. The gas valve (GV) is energized to permit gas flow and the spark ignitor (IP) is energized. The flame detector (FD) confirms that ignition has been achieved within the 7 second trial period.

As the flame detector confirms that ignition has been achieved the delay to the indoor-fan-on period begins timing and after approximately 45 seconds, the indoor blower motor (IDM) will be energized and will continue to run during the heating cycle.

Thermostat satisfied:

(R) and (W) contacts open signaling the control module to close the gas valve and de-energize the induced draft blower after approximately 5 seconds postpurge. The indoor blower motor will continue to operate at the current speed for 60 or 90 seconds (field selectable) after the flames are extinguished.

Safety Sequences

This product is equipped with safety devices to protect against abnormal conditions.

The temperature limit switch (TCO) is located on the blower barrier, and can be accessed through the blower compartment. This automatic reset device protects against excessive leaving air temperature. If this device opens, the gas valve is immediately closed and will not permit operation until the limit switch closes.

The rollout switch (RO) is located in the gas compartment near the inlet of the burners. This is a manual reset device designed to protect against any form of flame rollout. If this device is opened the gas valve is immediately de-energized and the control (IGN) will lockout the system. The rollout switch (RO) must be reset before operation is allowed to continue.

The pressure switch (PS) is located in the upper right side of the gas compartment. This automatic device assures adequate combustion air pressure. If pressure against the induced draft blower outlet becomes excessive, the pressure switch will react and shut off the gas valve, until acceptable combustion pressure is again available.

If the control (IGN) does not sense flame within the first trial for ignition period, the gas valve will be de-energized. The control (IGN) will initiate a 60 seconds interpurge. Following the interpurge, the control will perform a second ignition attempt. If the second try is not successful, the control will start another 60 second interpurge. After the interpurge, a third attempt will be tried. If the third try is not successful, the control will lock out.

If loss of flame occurs during a heating cycle, the control (IGN) will close the gas valve and cycle through the ignition trial as stated above.

If control lock out occurs, the control (IGN) will retry a complete ignition sequence in 1 hour.

The control (IGN) can be reset by removing power to the unit or by turning the thermostat from “ON” to “OFF” for approximately three seconds, then back “ON.”

Cooling Cycle

With the room thermostat system switch in the “COOLING” position and the fan switch in the “AUTO” position, the compressor contactor (CC) and the indoor fan motor (IDM) are energized.

The energized compressor contactor (CC) completes the circuit to the compressor (CPR) and a secondary circuit to the outdoor fan motor (ODM). If the compressor safety controls are closed, the compressor (CPR) will operate with the outdoor fan motor (ODM). The indoor fan motor (IDM) will operate. The thermostat will continue to cycle the compressor and fans to maintain the desired temperature.

With the thermostat fan switch in the “ON” position, the indoor fan motor (IDM) will continue to run regardless of compressor and condenser fan operation.

Maintenance

Owner Maintenance

Some of the periodic maintenance functions of the YC unit can be performed by the owner; this includes replacing the disposable or cleaning the permanent air filters, cleaning the unit cabinet, cleaning the condenser coil, and conducting a general unit inspection on a regular basis.

Filters

When the system is in constant operation, inspect the filters at least once each month.

If you have disposable-type filters, replace them with new filters of the same type and size. Do not attempt to clean disposable filters.

Permanent-type filters can be cleaned by washing them with a mild detergent and water. Make sure that the filters are thoroughly dry before reinstalling them in the unit (or duct system).

Note: It may be necessary to replace permanent filters annually if washing fails to clean the filter or if the filter shows signs of deterioration. Be sure to use the same type and size as was originally installed.

Condenser Coil

Unfiltered air circulates through the unit’s condenser coil and can cause the coil’s surface to become clogged with dust and dirt. To clean the coil, flush with low pressure water from the inside out, such as using a garden hose with the nozzle removed.

Be sure to keep all vegetation away from the condenser coil area.

WARNING: TO PREVENT AN EXPLOSION OR POSSIBLE INJURY, DEATH AND EQUIPMENT DAMAGE, DO NOT STORE COMBUSTIBLE MATERIALS, GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS NEAR THE UNIT.
Service Maintenance

Service maintenance should be performed by qualified service personnel.

Cooling Season

To keep the unit operating safely and efficiently, the manufacturer recommends that a qualified servicer check the entire system at least once each year or sooner if needed. The serviceman should examine these areas of the YC unit:

- filters (for cleaning or replacement)
- motors and drive system components
- economizer gaskets (for possible replacement)
- safety controls (for mechanical cleaning)
- electrical components and wiring (for possible replacement and connection tightness)
- condensate drain (for proper sealing and cleaning)
- unit duct connections (to see that they are physically sound and sealed to the unit casing)
- unit mounting support (for structural integrity)
- the unit (for obvious unit deterioration)

Heating Season

Complete the following unit inspections and service routines described at the beginning of each heating season.

- Visually inspect the unit to ensure that the airflow required for combustion and condenser coil is not obstructed from the unit.
- Inspect the control panel wiring to verify that all electrical connections are tight and that the wire insulation is intact.
- Check the operation of the gas ignition system as follows:
  1. Turn off the gas supply with the unit operating to verify that the gas valve closes and that a reignition cycle is initiated by the unit.
  2. Visually inspect the inside of the burners and the burner ports for deposit buildup and corrosion. Wipe and brush the inside of the burner and the burner ports and then clean with a dry cloth. If the deposit buildup or corrosion is excessive, replace the burners.

Indoor Fan Motor (IDM) Speed Tap Setting

The 208/230 and 460 Volt units are factory set to high speed with one exception. The YC*3030 is factory set to low speed.

208/230 Volt Motor Tap Settings (Figure 23)

High speed setting: On the IGN board:
1. Connect the “RD” wire to the “PARK” terminal.
2. Connect the (IDM) PR wire to the “BLOWER LOAD” terminal.

Low speed setting: On the IGN board:
1. Connect the “RD” wire to the “BLOWER LOAD” terminal.
2. Connect the (IDM) PR wire to the “PARK” terminal.

460 Volt Motor Tap Settings (Figure 24)

High speed setting (460V):
1. At the “FTBA”, connect the “PR” wire from the IGN board to the “HI” (B) terminal.
2. Connect the “PR” wire from the “HI” (B) terminal on the “FTBA” to the “P” terminal on the IDM.
3. Connect the Orange wire on the IDM to the “H” terminal on the IDM.

Low speed setting (460V):
1. At the “FTBA”, connect the “PR” wire from the IGN board to the “LOW” (D) terminal.
2. Connect the “PR” wire from the “HI” (B) terminal on the “FTBA” to the “P” terminal on the IDM.
3. Connect the Orange wire on the IDM to the “H” terminal on the IDM.
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Manifold Pressure Check and Adjust

1. Connect a manometer to the pressure tap at the outlet side of the unit’s gas valve (remove the Control/Heat access panel). Read the manifold pressure with the burners firing. See Figure 19 on page 19 for gas valve connections.

2. If the manifold pressure reading does not match the value indicated on the unit's nameplate, the unit’s pressure regulator must be adjusted as follows:
   a. Remove the cover screw on the gas regulator located on the front side of the unit’s gas valve.
   b. Turn the adjusting screw clockwise to increase manifold pressure or counterclockwise to decrease manifold pressure.

3. Check the temperature rise during furnace operation to insure that it falls within the range specified on the unit's nameplate.

4. If the temperature rise noted is outside of the specified limits, adjust the indoor air flow to cause the temperature rise of the heat exchanger to fall within the required range.

Flue Hood and Combustion Blower Cleaning

Before each heating season, the Flue Hood and combustion blower should be inspected for signs of any blockage or sooting. Any cleaning required should be performed only by a qualified servicer using the following procedure:

1. Turn the room thermostat to the "OFF" position. Turn off power to the unit. Turn the main power disconnect OFF. Turn the manual gas valve OFF.

2. Remove the Flue Hood from the side panel.

3. Remove the combustion blower from the vestibule panel. Disconnect blower wiring and pressure switch hose.

4. Wipe blower and Flue Hood clean with a dry cloth.

   **CAUTION:** Never use combustible cleaning fluids on any part of the furnace.

5. Replace the combustion blower gasket with a new one.


7. Verify all wiring is correct per the unit's wiring diagram.

8. Follow start-up procedure to place unit back in service. Verify proper operation.

Table 7. IGN LED Diagnostic Indicators *

<table>
<thead>
<tr>
<th>IGN Diagnostic Indicators Flash Codes</th>
<th>Liteport LED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Status LED</strong></td>
<td><strong>2 Flashes</strong></td>
</tr>
<tr>
<td>Continuous Off</td>
<td>1 Hour Lockout, No Flame</td>
</tr>
<tr>
<td>Flashing Slow</td>
<td>3 Flashes</td>
</tr>
<tr>
<td>Normal, No Call for Heat</td>
<td>Pressure Switch/Inducer Issue</td>
</tr>
<tr>
<td>Flashing Fast</td>
<td>4 Flashes</td>
</tr>
<tr>
<td>Call for Heat</td>
<td>Open Temperature Limit Switch or Rollout Limit</td>
</tr>
<tr>
<td>Continuous On</td>
<td>5 Flashes</td>
</tr>
<tr>
<td>Internal Error-Replace Control Board</td>
<td>Flame without Gas Valve</td>
</tr>
<tr>
<td><strong>7 Flashes</strong></td>
<td>Gas Valve Circuit Error</td>
</tr>
<tr>
<td><strong>8 Flashes</strong></td>
<td>Low Flame Sense</td>
</tr>
</tbody>
</table>

* LEDs are located on the IGN board, which is inside the Control/Heat compartment