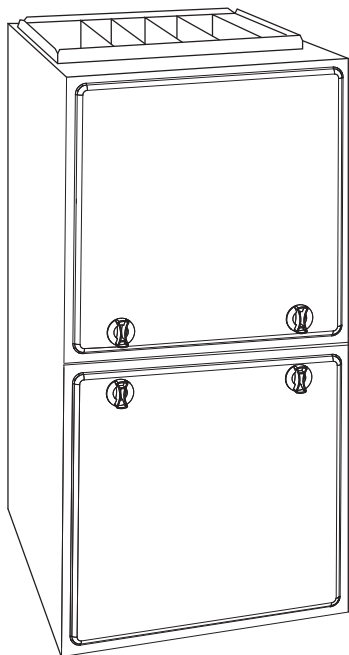


**PG96VTA**  
**VARIABLE SPEED, TWO-STAGE**  
**NON-COMMUNICATING, 35-IN. (889 MM) TALL**  
**CONDENSING GAS FURNACE**

## Product Data



A11300

The PG96VTAA Multipoise Condensing Gas Furnace features a two-stage gas valve and a variable speed, constant torque (VCT) ECM blower motor. With an Annual Fuel Utilization Efficiency (AFUE) of up to 96.0% AFUE, this furnace provides added savings over standard gas furnaces. It features 4-way multipoise installation flexibility, and is available in eight model sizes. All sizes are design certified in Canada. This furnace is not designed for use in recreation vehicles, manufactured (mobile) homes or outdoors.

### PERFORMANCE

- Variable-speed, constant-torque ECM blower motor, two-speed inducer motor, and two-stage gas valve.
- Fully-insulated casing including blower section.
- Aluminized-steel primary heat exchanger.
- Stainless-steel condensing secondary heat exchanger.
- Silicon Nitride Hot Surface Igniter.
- Adjustable blower speed for heating, cooling, continuous fan, and dehumidification.

### INSTALLATION FLEXIBILITY

- 4-way multipoise design for upflow, downflow or horizontal installations, with unique vent elbow and optional through-the-cabinet downflow venting capability.
- Factory-configured ready for upflow applications.
- Installation flexibility: sidewall or vertical vent.
- Ideal height 35" (889 mm) cabinet: short enough for taller coils, but still allows enough room for service.
- Direct-vent/sealed combustion, single-pipe venting or ventilated combustion air.

### APPLICATIONS

- Convertible to propane with gas conversion accessory kit.
- Convenient Air Purifier and Humidifier connections.
- 5 ton sizes (sizes 60080 and 60100) allow 15 Amp breaker with accessory (order separately).
- Twinning capable with accessory kit (sizes 42060, 48080, 60080, 60100, and 66120).

### CERTIFICATIONS

- All sizes meet ENERGY STAR® Version 4.1 criteria for gas furnaces: 95.0%+ AFUE.
- Cabinet air leakage less than 2.0% at 1.0 in. W.C. and cabinet air leakage less than 1.4% at 0.5 in. W.C. when tested in accordance with ASHRAE standard 193.
- All sizes can be installed in air quality management districts with a 40 ng/J NOx emissions requirement



Use of the AHRI Certified™ Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to [www.ahridirectory.org](http://www.ahridirectory.org).



| FURNACE SIZE | CASING DIMENSIONS (IN.) |       |       | RATED HEATING OUTPUT† (BTUH) |        | AFUE                |           | ENERGY STAR® | HEATING AIRFLOW    |                   |                             | COOLING CFM @ 0.5 ESP (in. W.C.) | MOTOR HP |
|--------------|-------------------------|-------|-------|------------------------------|--------|---------------------|-----------|--------------|--------------------|-------------------|-----------------------------|----------------------------------|----------|
|              | H                       | D     | W     | High                         | Low    | UP-FLOW/HORI-ZONTAL | DOWN-FLOW |              | CFM (High Heating) | CFM (Low Heating) | High Heating ESP (in. W.C.) |                                  |          |
| 30040A       | 35                      | 29.50 | 14.20 | 39,000                       | 25,000 | 96.0%               | 95.0%     | YES          | 800                | 560               | 0.10                        | 1030                             | 1/2      |
| 36040B       | 35                      | 29.50 | 17.50 | 39,000                       | 25,000 | 96.0%               | 95.0%     | YES          | 850                | 625               | 0.10                        | 1105                             | 1/2      |
| 36060A       | 35                      | 29.50 | 14.20 | 58,000                       | 38,000 | 95.0%               | 95.0%     | YES          | 1110               | 770               | 0.12                        | 1115                             | 1/2      |
| 42060B       | 35                      | 29.50 | 17.50 | 58,000                       | 38,000 | 96.0%               | 95.0%     | YES          | 1135               | 860               | 0.12                        | 1475                             | 3/4      |
| 48080B       | 35                      | 29.50 | 17.50 | 78,000                       | 50,000 | 96.0%               | 95.0%     | YES          | 1450               | 1130              | 0.15                        | 1655                             | 3/4      |
| 60080C       | 35                      | 29.50 | 21.00 | 78,000                       | 51,000 | 96.0%               | 95.0%     | YES          | 1555               | 1200              | 0.15                        | 2005                             | 1        |
| 60100C       | 35                      | 29.50 | 21.00 | 97,000                       | 63,000 | 96.0%               | 95.0%     | YES          | 1865               | 1435              | 0.20                        | 2005                             | 1        |
| 66120D       | 35                      | 29.50 | 24.00 | 117,000                      | 76,000 | 96.0%               | 95.0%     | YES          | 2120               | 1625              | 0.20                        | 2190                             | 1        |

†Capacity in accordance with DOE test procedures. Ratings are position dependent. See rating plate.

ESP – External Static Pressure

## FEATURES AND BENEFITS

**SmartEvap™ Technology** — When paired with a compatible thermostat, this dehumidification feature overrides the cooling blower off-delay when there is a call for dehumidification. By deactivating the blower off-delay, SmartEvap technology prevents condensate that remains on the coil after a dehumidification cycle from re-humidifying throughout the home. This results in reduced humidity and a more comfortable indoor environment for the homeowner.

Unlike competitive systems, SmartEvap technology only overrides the cooling blower off delay when humidity control is needed. Once humidity is back in control, SmartEvap re-enables the energy-saving cooling blower off-delay.

**Dual Fuel system** — This system can provide more control over your monthly energy bills by automatically selecting the most economical method of heating. With dual fuel, our system automatically switches between the gas furnace and the electric heat pump as outside temperatures change to maintain greater efficiency and comfort than with any traditional single-source heating system. The heat pump also delivers high-efficiency cooling in the summer.

**Robust Igniter** — The unique SiN igniter is not only physically robust is also electrically robust. It is capable of running at line voltage and does not require complex voltage regulators. This unique feature further enhances the gas furnace reliability and continues the tradition of technology leadership and innovation in providing a reliable and durable product.

**ECM Motors** — Our variable-speed, constant torque ECM (Electronically Commutated Motor) optimizes comfort levels in the home year round; features such as passive/active dehumidification, ramping profiles, and quiet operation. It can provide cooling match enhancements to increase the effective SEER of select the air conditioner or heat pump systems. This motor does not report back RPM and static pressure to the furnace control.

**Reliable Heat Exchanger Design** — The aluminized steel, clam shell primary heat exchanger features a crimped, no-weld seam to create an efficient, robust design for this essential component.

The condensing heat exchanger, a stainless steel fin and tube design, is positioned in the furnace to extract additional heat.

Stainless steel coupling box componentry between heat exchangers has exceptional corrosion resistance in both natural gas and propane applications.

**Optional Media Filter Cabinet** — Enhanced indoor air quality in the home is made easier with our media filter cabinet (available as an accessory). When installed as a part of the system, this cabinet allows for easy and convenient addition of a high efficiency air filter.

**4-Way Multipoise Design** — One model for all applications – there is no need to stock special downflow or horizontal models when one unit will do it all.

**Direct or Single-pipe Venting, or Optional Ventilated Combustion Air** — This furnace can be installed as a 2-pipe (Direct Vent) furnace, in an optional ventilated combustion air application, or in single-pipe, non-direct vent applications. This provides added flexibility to meet diverse installation needs.

**Sealed Combustion System** — This furnace brings in combustion air from outside the furnace, which results in especially quiet operation. By sealing the entire combustion vestibule, the entire furnace can be made quieter, not just the burners.

**Insulated Casing** — Foil-faced insulation in heat exchanger section of the casing minimizes heat loss. The acoustical insulation in the blower compartment reduces air and motor noise for quiet operation.

**Monoport Burners** — The burners are specially designed and finely tuned for smooth, quiet combustion and economical operation.

**Bottom Closure** — Factory-installed for side return; easily removable for bottom return. The multi-use bottom closure can also serve for roll-out protection in horizontal applications, and act as the bottom closure for the optional return air base accessory.

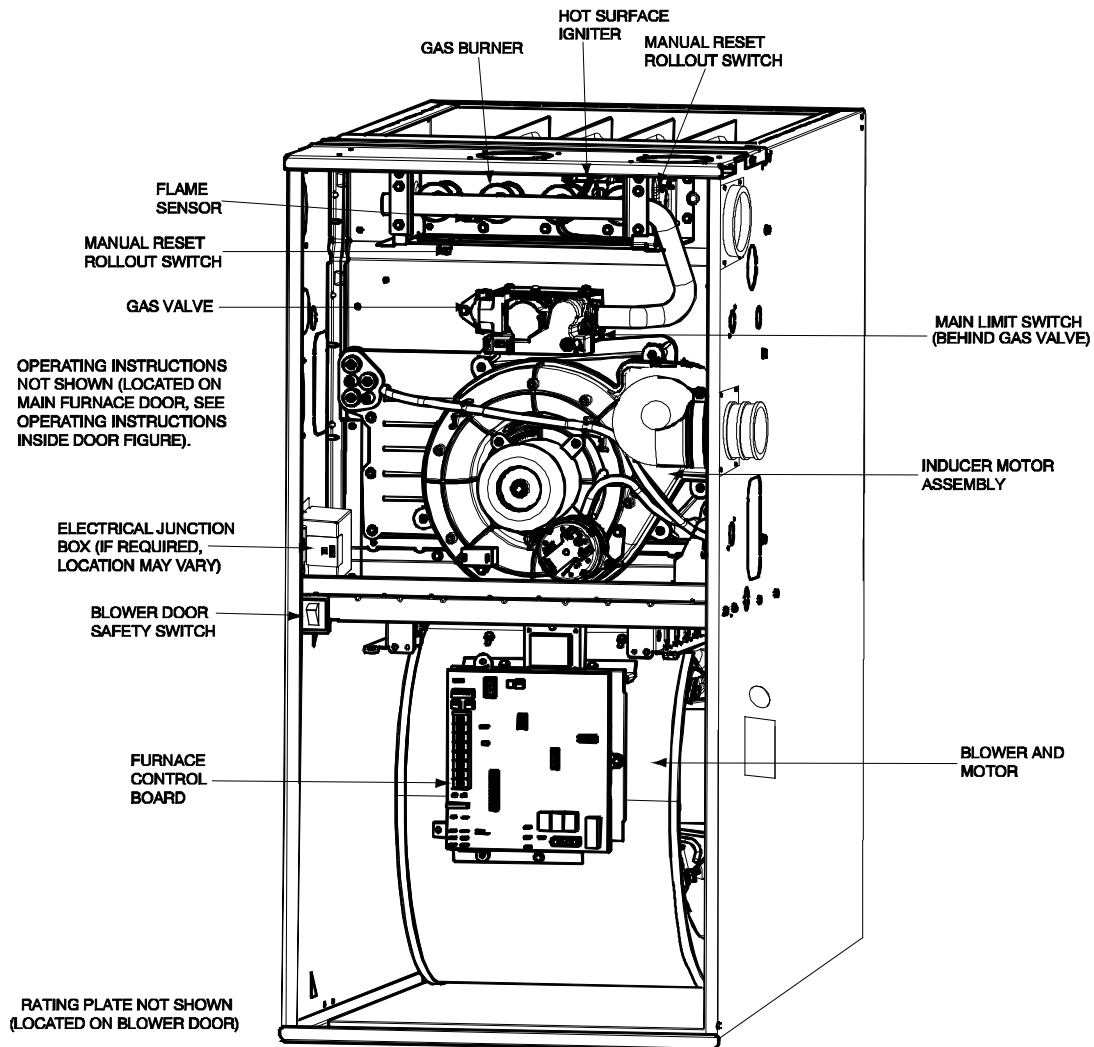
**Certifications** — This furnace is CSA (AGA and CGA) design certified for use with natural and propane gases. The furnace is factory-shipped for use with natural gas. A CSA listed gas conversion kit is required to convert furnace for use with propane gas. The efficiency is AHRI efficiency rating certified.

## MODEL NUMBER NOMENCLATURE

| 1<br>Brand<br>Identifier | 2<br>Product    | 3, 4<br>Base Effy.                                                                                 | 5<br>Motor                                                                                                                                                          | 6<br>Heating Stages                                 | 7<br>NOx Level                                   | 8<br>Major<br>Series | 9 - 10<br>Cooling Capacity                                                                                                          | 11, 12, 13<br>Heating Input                                                                 | 14<br>Width                                      | 15<br>Minor<br>Series |
|--------------------------|-----------------|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------|-----------------------|
| P                        | G               | 92                                                                                                 | E                                                                                                                                                                   | S                                                   | A                                                | A                    | 36                                                                                                                                  | 040                                                                                         | A                                                | A                     |
| P                        | G = Gas Furnace | 80 = 80% AFUE<br>92 = 92% AFUE<br>95 = 95% AFUE<br>98 = 98% AFUE<br>97 = 97% AFUE<br>98 = 98% AFUE | C = Comm. Variable-Speed<br>Constant Airflow<br>(VCA) ECM<br>E = Fixed-Speeds<br>Constant Torque<br>(FCT) ECM<br>V = Variable-Speed<br>Constant Torque<br>(VCT) ECM | M = Modulating<br>S = Single Stage<br>T = Two-Stage | A = Standard<br>L = Low Nox<br>U = Ultra Low Nox | A<br>B<br>C<br>---   | 24 - 800 CFM<br>30 - 1000 CFM<br>36 - 1200 CFM<br>42 - 1400 CFM<br>48 - 1600 CFM<br>54 - 1800 CFM<br>60 - 2000 CFM<br>66 - 2200 CFM | 026 = 26,000 BTU/h<br>040 = 40,000 BTU/h<br>060 = 60,000 BTU/h<br>080 = 80,000 BTU/h<br>--- | A = 14.2"<br>B = 17.5"<br>C = 21.0"<br>D = 24.5" | A<br>B<br>C<br>---    |

A200153

## FURNACE COMPONENTS



A190145

## SPECIFICATIONS

The furnace should be sized to provide 100 percent of the design heating load requirement plus any margin that occurs because of furnace model size capacity increments. None of the furnace model sizes can be used if the heating load is 20,000 BTU or lower. Use Air Conditioning Contractors of America (Manual J and S); American Society of Heating, Refrigerating, and Air-Conditioning Engineers; or other approved engineering

method to calculate heating load estimates and select the furnace. Excessive oversizing of the furnace may cause the furnace and/or vent to fail prematurely, customer discomfort and/or vent freezing. Failure to follow these guidelines is considered faulty installation and/or misapplication of the furnace; and resulting failure, damage, or repairs may impact warranty coverage.

| Heating Capacity and Efficiency                                          |           |                                     | 30040A                                          | 36040B               | 36060A               | 42060B               | 48080B               | 60080C               | 60100C               | 66120D               |
|--------------------------------------------------------------------------|-----------|-------------------------------------|-------------------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Input                                                                    | High Heat | (BTUH)                              | 40,000                                          | 40,000               | 60,000               | 60,000               | 80,000               | 80,000               | 100,000              | 120,000              |
|                                                                          | Low Heat  | (BTUH)                              | 26,000                                          | 26,000               | 39,000               | 39,000               | 52,000               | 52,000               | 65,000               | 78,000               |
| Output                                                                   | High Heat | (BTUH)                              | 39,000                                          | 39,000               | 58,000               | 58,000               | 78,000               | 78,000               | 97,000               | 117,000              |
|                                                                          | Low Heat  | (BTUH)                              | 25,000                                          | 25,000               | 38,000               | 38,000               | 50,000               | 51,000               | 63,000               | 76,000               |
| Certified Temperature Rise Range °F (°C)                                 |           | High Heat                           | 40 – 70<br>(22 – 39)                            | 40 – 70<br>(22 – 39) | 40 – 70<br>(22 – 39) | 40 – 70<br>(22 – 39) | 40 – 70<br>(22 – 39) | 40 – 70<br>(22 – 39) | 40 – 70<br>(22 – 39) | 40 – 70<br>(22 – 39) |
|                                                                          |           | Low Heat                            | 30 – 60<br>(17 – 33)                            | 30 – 60<br>(17 – 33) | 30 – 60<br>(17 – 33) | 30 – 60<br>(17 – 33) | 30 – 60<br>(17 – 33) | 30 – 60<br>(17 – 33) | 30 – 60<br>(17 – 33) | 30 – 60<br>(17 – 33) |
| Airflow Capacity and Blower Data                                         |           |                                     |                                                 |                      |                      |                      |                      |                      |                      |                      |
| Rated External Static Pressure (in. w.c.)                                |           | Heating                             | 0.10                                            | 0.10                 | 0.12                 | 0.12                 | 0.15                 | 0.15                 | 0.20                 | 0.20                 |
|                                                                          |           | Cooling                             | 0.50                                            | 0.50                 | 0.50                 | 0.50                 | 0.50                 | 0.50                 | 0.50                 | 0.50                 |
| Airflow Delivery @ Rated ESP (CFM)                                       |           | High Heat                           | 800                                             | 850                  | 1110                 | 1135                 | 1450                 | 1555                 | 1865                 | 2120                 |
|                                                                          |           | Low Heat                            | 560                                             | 625                  | 770                  | 860                  | 1130                 | 1200                 | 1435                 | 1625                 |
|                                                                          |           | Cooling                             | 1030                                            | 1105                 | 1115                 | 1475                 | 1655                 | 2005                 | 2005                 | 2190                 |
| Cooling Capacity (tons) @ 400, 350 CFM/ton                               |           | 400 CFM/ton                         | 2                                               | 2.5                  | 2.5                  | 3.5                  | 4                    | 5                    | 5                    | 5                    |
|                                                                          |           | 350 CFM/ton                         | 2.5                                             | 3                    | 3                    | 4                    | 4.5                  | 5.5                  | 5.5                  | 6                    |
| Direct–Drive Motor Type                                                  |           |                                     | Electronically Commutated Motor (ECM)           |                      |                      |                      |                      |                      |                      |                      |
| Direct–Drive Motor HP                                                    |           |                                     | 1/2                                             | 1/2                  | 1/2                  | 3/4                  | 3/4                  | 1                    | 1                    | 1                    |
| Motor Full Load Amps Default / Low Amp Kit†                              |           |                                     | 6.3                                             | 6.5                  | 6.3                  | 10.1                 | 9.2                  | 13.9/10.4            | 13.9/10.4            | 11.7                 |
| RPM Range                                                                |           |                                     | 600 – 2000                                      | 400 – 1200           | 600 – 2000           | 400 – 1200           | 400 – 1200           | 400 – 1200           | 400 – 1200           | 400 – 1200           |
| Speed Selections                                                         |           |                                     | Variable (PWM)                                  |                      |                      |                      |                      |                      |                      |                      |
| Blower Wheel Dia x Width                                                 |           | in.                                 | 11 x 7                                          | 11 x 8               | 11 x 7               | 11 x 8               | 11 x 8               | 11 x 10              | 11 x 10              | 11 x 11              |
| Air Filtration System                                                    |           |                                     | Field Supplied Filter                           |                      |                      |                      |                      |                      |                      |                      |
| Filter Used for Certified Watt Data                                      |           |                                     | 325531 – 40*                                    |                      |                      |                      |                      |                      |                      |                      |
| Electrical Data                                                          |           |                                     |                                                 |                      |                      |                      |                      |                      |                      |                      |
| Input Voltage                                                            |           | Volts–Hertz–Phase                   |                                                 | 115–60–1             |                      |                      |                      |                      |                      |                      |
| Operating Voltage Range                                                  |           | Min–Max                             |                                                 | 104–127              |                      |                      |                      |                      |                      |                      |
| Maximum Input Amps Default / Low Amp Kit†                                |           | Amps                                | 7.0                                             | 7.2                  | 7.1                  | 10.9                 | 10.0                 | 14.7/11.3            | 14.7/11.3            | 12.6                 |
| Unit Ampacity Default / Low Amp Kit†                                     |           | Amps                                | 9.7                                             | 9.8                  | 9.7                  | 14.6                 | 13.4                 | 19.3/14.9            | 19.4/15.0            | 16.7                 |
| Minimum Wire Size Default / Low Amp Kit†                                 |           | AWG                                 | 14                                              | 14                   | 14                   | 14                   | 14                   | 12/14                | 12/14                | 12                   |
| Maximum Wire Length @ Minimum Wire Size Default / Low Amp Kit†           |           | Feet                                | 38                                              | 37                   | 38                   | 25                   | 27                   | 29/24                | 29/24                | 34                   |
|                                                                          |           | (M)                                 | (11.7)                                          | (11.5)               | (11.7)               | (7.7)                | (8.4)                | (9.0/7.5)            | (9.0/7.5)            | (10.5)               |
| Maximum Fuse/Ckt Bkr (Time–Delay Type Recommended)Default / Low Amp Kit† |           | Amps                                | 15                                              | 15                   | 15                   | 15                   | 15                   | 20/15                | 20/15                | 20                   |
| Transformer Capacity (24vac output)                                      |           |                                     | VA                                              |                      |                      |                      |                      |                      |                      |                      |
| External Control Power Available                                         |           | Heating                             | 24.3 VA                                         |                      |                      |                      |                      |                      |                      |                      |
|                                                                          |           | Cooling                             | 34.6 VA                                         |                      |                      |                      |                      |                      |                      |                      |
| Controls                                                                 |           |                                     |                                                 |                      |                      |                      |                      |                      |                      |                      |
| Gas Connection Size                                                      |           |                                     | 1/2" – NPT                                      |                      |                      |                      |                      |                      |                      |                      |
| Burners (Monoport)                                                       |           |                                     | 2                                               | 2                    | 3                    | 3                    | 4                    | 4                    | 5                    | 6                    |
| Gas Valve (Redundant)                                                    |           | Manufacturer                        | White Rodgers                                   |                      |                      |                      |                      |                      |                      |                      |
|                                                                          |           | Minimum Inlet Gas pressure (in. wc) | 4.50                                            |                      |                      |                      |                      |                      |                      |                      |
|                                                                          |           | Maximum Inlet Gas pressure (in. wc) | 13.60                                           |                      |                      |                      |                      |                      |                      |                      |
| Manufactured (Mobile) Home Kit                                           |           |                                     | not approved for MH use                         |                      |                      |                      |                      |                      |                      |                      |
| Ignition Device                                                          |           |                                     | Silicon Nitride                                 |                      |                      |                      |                      |                      |                      |                      |
| Heating Blower Control (Heating Off–Delay)                               |           |                                     | Adjustable: 90, 120, 150, 180 seconds           |                      |                      |                      |                      |                      |                      |                      |
| Cooling Blower Control (Time Delay Relay)                                |           |                                     | 90 seconds                                      |                      |                      |                      |                      |                      |                      |                      |
| Communication System                                                     |           |                                     | None                                            |                      |                      |                      |                      |                      |                      |                      |
| Thermostat Connections                                                   |           |                                     | R, W/W1, W2 Y/Y2, Y1, G, Com 24V, DHUM          |                      |                      |                      |                      |                      |                      |                      |
| Accessory Connections                                                    |           |                                     | EAC (115vac); HUM (24vac); 1–stg. AC (via Y/Y2) |                      |                      |                      |                      |                      |                      |                      |

\* See Accessory List for part numbers available.

† Low Amp Kit (KGAPC0101ECM) allows select furnaces to be installed with a 15 Amp Breaker and 14 AWG wire within the listed wire length.

## ACCESSORIES

| DESCRIPTION                                                 | PART NUMBER  | 30040A                | 36040B | 36060A | 42060B |
|-------------------------------------------------------------|--------------|-----------------------|--------|--------|--------|
| Vent Kit - Through the Cabinet                              | KGADC0101BVC | X                     | X      | X      | X      |
| Vent Terminal - Concentric - 2" (51 mm)                     | KGAVT0701CVT | See Venting Tables    |        |        |        |
| Vent Terminal - Concentric - 3" (76 mm)                     | KGAVT0801CVT |                       |        |        |        |
| Vent Terminal Bracket - 2" (51 mm)                          | KGAVT0101BRA |                       |        |        |        |
| Vent Terminal Bracket - 3" (76 mm)                          | KGAVT0201BRA |                       |        |        |        |
| Vent Kit – Rubber Coupling                                  | KGAAC0101RVC |                       |        |        |        |
| Freeze Protect Kit - Condensate Drain Line Tape             | KGAHT0101CFP | X                     | X      | X      | X      |
| Freeze Protect Kit - Condensate Trap with Heat Pad          | KGAHT0201CFP | X                     | X      | X      | X      |
| CPVC to PVC Drain Adapters - 1/2" CPVC to 3/4" PVC          | KGAAD0110PVC | X                     | X      | X      | X      |
| Horizontal Trap Grommet - Direct Vent                       | KGACK0101HCK | All 2–Pipe Horizontal |        |        |        |
| Condensate Neutralizer Kit                                  | P908–0001    | X                     | X      | X      | X      |
| External Trap Kit                                           | KGAET0201ETK | X                     | X      | X      | X      |
| Downflow Furnace Base Kit for Combustible Floors            | KGASB0201ALL | X                     | X      | X      | X      |
| Coil Adapter Kits – No Offset                               | KGADA0101ALL | X                     | X      | X      | X      |
| Coil Adapter Kits – Single Offset                           | KGADA0201ALL | X                     | X      | X      | X      |
| Coil Adapter Kits – Double Offset                           | KGADA0301ALL | X                     | X      | X      | X      |
| Return Air Base (Upflow Applications) 14.0–in. wide         | KGARP0301B14 | X                     |        | X      |        |
| Return Air Base (Upflow Applications) 17.5–in. wide         | KGARP0301B17 |                       | X      |        | X      |
| IAQ Device Duct Adapters 20.0–in. IAQ to 16 in. Side Return | KGAAD0101MEC | 20"x25" IAQ Devices   |        |        |        |
| IAQ Device Duct Adapters 24.0–in. IAQ to 16 in. Side Return | KGAAD0201MEC | 24"x25" IAQ Devices   |        |        |        |
| Gas Conversion Kit - Nat to LP                              | AGAGC9NPS01A | X                     | X      | X      | X      |
| Gas Conversion Kit - LP to Nat                              | AGAGC9PNS01A | X                     | X      | X      | X      |
| Gas Valve Tower Port Adapter Kit                            | 92–1003      | X                     | X      | X      | X      |
| Twinning Kit                                                | AGATWNPME01A |                       |        |        | X      |
| External Bottom Return Filter Rack*                         | FHG1425–2    | X                     |        | X      |        |
|                                                             | FHG1625–2    |                       | X      |        | X      |
| Unframed Filter 3/4–in. (19 mm)*                            | 325531–402   | X                     | X      | X      | X      |

\* = Purchased through Replacement Components

X = Used with the model furnace

| DESCRIPTION                                                 | PART NUMBER  | 48080B                | 60080C | 60100C | 60120D |
|-------------------------------------------------------------|--------------|-----------------------|--------|--------|--------|
| Vent Kit - Through the Cabinet                              | KGADC0101BVC | X                     | X      | X      | X      |
| Vent Terminal - Concentric - 2" (51 mm)                     | KGAVT0701CVT | See Venting Tables    |        |        |        |
| Vent Terminal - Concentric - 3" (76 mm)                     | KGAVT0801CVT |                       |        |        |        |
| Vent Terminal Bracket - 2" (51 mm)                          | KGAVT0101BRA |                       |        |        |        |
| Vent Terminal Bracket - 3" (76 mm)                          | KGAVT0201BRA |                       |        |        |        |
| Vent Kit – Rubber Coupling                                  | KGAAC0101RVC |                       |        |        |        |
| Freeze Protect Kit - Condensate Drain Line Tape             | KGAHT0101CFP | X                     | X      | X      | X      |
| Freeze Protect Kit - Condensate Trap with Heat Pad          | KGAHT0201CFP | X                     | X      | X      | X      |
| CPVC to PVC Drain Adapters - 1/2" CPVC to 3/4" PVC          | KGAAD0110PVC | X                     | X      | X      | X      |
| Horizontal Trap Grommet - Direct Vent                       | KGACK0101HCK | All 2–Pipe Horizontal |        |        |        |
| Condensate Neutralizer Kit                                  | P908–0001    | X                     | X      | X      | X      |
| External Trap Kit                                           | KGAET0201ETK | X                     | X      | X      | X      |
| Downflow Furnace Base Kit for Combustible Floors            | KGASB0201ALL | X                     | X      | X      | X      |
| Coil Adapter Kits – No Offset                               | KGADA0101ALL | X                     | X      | X      | X      |
| Coil Adapter Kits – Single Offset                           | KGADA0201ALL | X                     | X      | X      | X      |
| Coil Adapter Kits – Double Offset                           | KGADA0301ALL | X                     | X      | X      | X      |
| Return Air Base (Upflow Applications) 17.5–in. wide         | KGARP0301B17 | X                     |        |        |        |
| Return Air Base (Upflow Applications) 21.0–in. wide         | KGARP0301B21 |                       | X      | X      |        |
| Return Air Base (Upflow Applications) 24.5–in. wide         | KGARP0301B24 |                       |        |        | X      |
| IAQ Device Duct Adapters 20.0–in. IAQ to 16 in. Side Return | KGAAD0101MEC | 20"x25" IAQ Devices   |        |        |        |
| IAQ Device Duct Adapters 24.0–in. IAQ to 16 in. Side Return | KGAAD0201MEC | 24"x25" IAQ Devices   |        |        |        |
| Gas Conversion Kit - Nat to LP                              | AGAGC9NPS01A | X                     | X      | X      | X      |
| Gas Conversion Kit - LP to Nat                              | AGAGC9PNS01A | X                     | X      | X      | X      |
| Gas Valve Tower Port Adapter Kit                            | 92–1003      | X                     | X      | X      | X      |
| Twinning Kit                                                | AGATWNPME01A | X                     | X      | X      | X      |
| External Bottom Return Filter Rack*                         | FHG1625–2    | X                     |        |        |        |
|                                                             | FHG2025–2    |                       | X      | X      |        |
|                                                             | FHG2424–2    |                       |        |        | X      |
| Unframed Filter 3/4–in. (19 mm)*                            | 325531–402   | X                     |        |        |        |
|                                                             | 325531–403   |                       | X      | X      |        |
|                                                             | 325531–404   |                       |        |        | X      |
| Lower Amp Kit                                               | KGAPC0101ECM |                       | X      | X      |        |

\* = Purchased through Replacement Components

X = Used with the model furnace

## ACCESSORIES (CONTINUED)

| DESCRIPTION                     |           | See Installation Instructions for model, altitude, and heat value usages. |
|---------------------------------|-----------|---------------------------------------------------------------------------|
| Gas Orifice Kit - #42 (Nat Gas) | LH32DB207 |                                                                           |
| Gas Orifice Kit - #43 (Nat Gas) | LH32DB202 |                                                                           |
| Gas Orifice Kit - #44 (Nat Gas) | LH32DB200 |                                                                           |
| Gas Orifice Kit - #45 (Nat Gas) | LH32DB205 |                                                                           |
| Gas Orifice Kit - #46 (Nat Gas) | LH32DB208 |                                                                           |
| Gas Orifice Kit - #47 (Nat Gas) | LH32DB078 |                                                                           |
| Gas Orifice Kit - #48 (Nat Gas) | LH32DB076 |                                                                           |
| Gas Orifice Kit - #54 (LP)      | LH32DB203 |                                                                           |
| Gas Orifice Kit - #55 (LP)      | LH32DB201 |                                                                           |
| Gas Orifice Kit - #56 (LP)      | LH32DB206 |                                                                           |
| Gas Orifice Kit - 1.25mm (LP)   | LH32DB209 |                                                                           |
| Gas Orifice Kit - 1.30mm (LP)   | LH32DB210 |                                                                           |

| DESCRIPTION                                           | ACCESSORY       | 14" | 17" | 21" | 24" |
|-------------------------------------------------------|-----------------|-----|-----|-----|-----|
| Cartridge Media Filter - 16" (407 mm) (MERV 11)       | FILXXCAR0116    | X   | X   |     |     |
| Cartridge Media Filter - 16" (407 mm) (MERV 8)        | FILXXCAR0016    | X   | X   |     |     |
| Cartridge Media Filter - 20" (508 mm) (MERV 8)        | FILXXCAR0020    |     |     | X   |     |
| Cartridge Media Filter - 20" (508 mm) (MERV11)        | FILXXCAR0120    |     |     | X   |     |
| Cartridge Media Filter - 24" (610 mm) (MERV 8)        | FILXXCAR0024    |     |     |     | X   |
| Cartridge Media Filter - 24" (610 mm) (MERV11)        | FILXXCAR0124    |     |     |     | X   |
| EZ Flex Cabinet Side or Bottom – 16"                  | EZXCAB – – 0016 | X   | X   |     |     |
| EZ Flex Cabinet Side or Bottom – 20"                  | EZXCAB – – 0020 |     |     | X   | X   |
| EZ Flex Replacement Filters 16" MERV 10               | EXPXXFIL0016    | X   | X   |     |     |
| EZ Flex Replacement Filters 16" MERV 13               | EXPXXFIL0316    | X   | X   |     |     |
| EZ Flex Replacement Filters 20" MERV 10               | EXPXXFIL0020    |     |     | X   |     |
| EZ Flex Replacement Filters 20" MERV 13               | EXPXXFIL0320    |     |     | X   |     |
| EZ Flex Replacement Filters 24" MERV 10               | EXPXXFIL0024    |     |     |     | X   |
| EZ Flex Replacement Filters 24" MERV 13               | EXPXXFIL0324    |     |     |     | X   |
| EZ-Flex Filter with End Caps - 16" (407 mm) (MERV 10) | EXPXXUNV0016    | X   | X   |     |     |
| EZ-Flex Filter with End Caps - 16" (407 mm) (MERV 13) | EXPXXUNV0316    | X   | X   |     |     |
| EZ-Flex Filter with End Caps - 20" (508 mm) (MERV 10) | EXPXXUNV0020    |     |     | X   |     |
| EZ-Flex Filter with End Caps - 20" (508 mm) (MERV 13) | EXPXXUNV0320    |     |     | X   |     |
| EZ-Flex Filter with End Caps - 24" (610 mm) (MERV 10) | EXPXXUNV0024    |     |     |     | X   |
| EZ-Flex Filter with End Caps - 24" (610 mm) (MERV 13) | EXPXXUNV0324    |     |     |     | X   |
| Media Filter Cabinet – 20"                            | FILCABXL0020    |     |     | X   |     |
| Media Filter Cabinet – 24"                            | FILCABXL0024    |     |     |     | X   |
| Media Filter Cabinet – 16"                            | FILCABXL0016    | X   | X   |     |     |

# AIR DELIVERY - CFM

| (SW1–5 and SW2–2 set to OFF, except as indicated. See notes 1 and 2.) |                                |       |       |                                |      |            |            |      |            |      |     |     |     |
|-----------------------------------------------------------------------|--------------------------------|-------|-------|--------------------------------|------|------------|------------|------|------------|------|-----|-----|-----|
| Unit Size:<br>30040A                                                  | Clg/CF Switch settings         |       |       | External Static Pressure (ESP) |      |            |            |      |            |      |     |     |     |
| Clg Switches:                                                         | SW2–8                          | SW2–7 | SW2–6 | 0.1                            | 0.2  | 0.3        | 0.4        | 0.5  | 0.6        | 0.7  | 0.8 | 0.9 | 1.0 |
| Clg Default:                                                          | OFF                            | OFF   | OFF   | 1125                           | 1105 | 1080       | 1055       | 1030 | 1005       | 975  | 955 | 930 | 905 |
| Cooling (SW2–8,7,6)                                                   | OFF                            | OFF   | ON    | 605                            | 565  | 525        | 485        | 445  | See Note 4 |      |     |     |     |
|                                                                       | OFF                            | ON    | OFF   | 760                            | 730  | 695        | 655        | 625  | 590        | 555  | 525 | 490 | 455 |
|                                                                       | OFF                            | ON    | ON    | 950                            | 925  | 900        | 870        | 840  | 810        | 785  | 760 | 730 | 705 |
|                                                                       | ON                             | OFF   | OFF   | 1125                           | 1105 | 1080       | 1055       | 1030 | 1005       | 975  | 955 | 930 | 905 |
|                                                                       | ON                             | OFF   | ON    | 1130                           | 1105 | 1080       | 1055       | 1030 | 1005       | 980  | 955 | 930 | 905 |
|                                                                       | ON                             | ON    | OFF   | 1130                           | 1105 | 1080       | 1055       | 1030 | 1005       | 980  | 955 | 930 | 905 |
|                                                                       | ON                             | ON    | ON    | 1130                           | 1105 | 1080       | 1055       | 1030 | 1005       | 980  | 955 | 930 | 905 |
| Maximum Clg Airflow <sup>2</sup>                                      |                                |       | 1130  | 1105                           | 1080 | 1055       | 1030       | 1005 | 980        | 955  | 930 | 905 |     |
| CF Switches                                                           | SW2–5                          | SW2–4 | SW2–3 |                                |      |            |            |      |            |      |     |     |     |
| Low–Clg Default:                                                      | OFF                            | OFF   | OFF   | 605                            | 565  | 525        | 485        | 445  | See Note 4 |      |     |     |     |
| Low–Cooling<br>(SW2–5,4,3)                                            | OFF                            | OFF   | ON    | 605                            | 565  | 525        | 485        | 445  | See Note 4 |      |     |     |     |
|                                                                       | OFF                            | ON    | OFF   | 760                            | 730  | 695        | 655        | 625  | 590        | 555  | 525 | 490 | 455 |
|                                                                       | OFF                            | ON    | ON    | 950                            | 925  | 900        | 870        | 840  | 810        | 785  | 760 | 730 | 705 |
|                                                                       | ON                             | OFF   | OFF   | 1125                           | 1105 | 1080       | 1055       | 1030 | 1005       | 975  | 955 | 930 | 905 |
|                                                                       | ON                             | OFF   | ON    | 1130                           | 1105 | 1080       | 1055       | 1030 | 1005       | 980  | 955 | 930 | 905 |
|                                                                       | ON                             | ON    | OFF   | 1130                           | 1105 | 1080       | 1055       | 1030 | 1005       | 980  | 955 | 930 | 905 |
|                                                                       | ON                             | ON    | ON    | 1130                           | 1105 | 1080       | 1055       | 1030 | 1005       | 980  | 955 | 930 | 905 |
| Cont. Fan Default:                                                    | OFF                            | OFF   | OFF   | 385                            | 335  | See Note 4 |            |      |            |      |     |     |     |
| Continuous Fan<br>(SW2–5,4,3)                                         | OFF                            | OFF   | ON    | 245                            | 180  | See Note 4 |            |      |            |      |     |     |     |
|                                                                       | OFF                            | ON    | OFF   | 310                            | 245  | See Note 4 |            |      |            |      |     |     |     |
|                                                                       | OFF                            | ON    | ON    | 385                            | 335  | See Note 4 |            |      |            |      |     |     |     |
|                                                                       | ON                             | OFF   | OFF   | 385                            | 335  | See Note 4 |            |      |            |      |     |     |     |
|                                                                       | ON                             | OFF   | ON    | 385                            | 335  | See Note 4 |            |      |            |      |     |     |     |
|                                                                       | ON                             | ON    | OFF   | 385                            | 335  | See Note 4 |            |      |            |      |     |     |     |
|                                                                       | ON                             | ON    | ON    | 385                            | 335  | See Note 4 |            |      |            |      |     |     |     |
| Heating (SW1)                                                         | High Heat Airflow <sup>3</sup> |       |       | 800                            | 770  | 730        | 700        | 665  | 635        | 605  | 570 | 540 | 510 |
|                                                                       | Low Heat Airflow <sup>3</sup>  |       |       | 560                            | 520  | 470        | 425        | 390  | See Note 4 |      |     |     |     |
| Unit Size:<br>36040B                                                  | Clg/CF Switch settings         |       |       | External Static Pressure (ESP) |      |            |            |      |            |      |     |     |     |
| Clg Switches:                                                         | SW2–8                          | SW2–7 | SW2–6 | 0.1                            | 0.2  | 0.3        | 0.4        | 0.5  | 0.6        | 0.7  | 0.8 | 0.9 | 1.0 |
| Clg Default:                                                          | OFF                            | OFF   | OFF   | 1240                           | 1210 | 1180       | 1145       | 1105 | 1060       | 1005 | 950 | 895 | 835 |
| Cooling (SW2–8,7,6)                                                   | OFF                            | OFF   | ON    | 585                            | 540  | 490        | 445        | 400  | 360        | 315  | 265 | 210 | 155 |
|                                                                       | OFF                            | ON    | OFF   | 780                            | 740  | 695        | 655        | 620  | 580        | 545  | 510 | 480 | 445 |
|                                                                       | OFF                            | ON    | ON    | 975                            | 945  | 910        | 870        | 835  | 805        | 775  | 740 | 710 | 680 |
|                                                                       | ON                             | OFF   | OFF   | 1170                           | 1140 | 1115       | 1085       | 1050 | 1020       | 985  | 945 | 890 | 835 |
|                                                                       | ON                             | OFF   | ON    | 1240                           | 1210 | 1180       | 1145       | 1105 | 1060       | 1005 | 950 | 895 | 835 |
|                                                                       | ON                             | ON    | OFF   | 1240                           | 1210 | 1180       | 1145       | 1105 | 1060       | 1005 | 950 | 895 | 835 |
|                                                                       | ON                             | ON    | ON    | 1240                           | 1210 | 1180       | 1145       | 1105 | 1060       | 1005 | 950 | 895 | 835 |
| Maximum Clg Airflow <sup>2</sup>                                      |                                |       | 1240  | 1210                           | 1180 | 1145       | 1105       | 1060 | 1005       | 950  | 895 | 835 |     |
| CF Switches                                                           | SW2–5                          | SW2–4 | SW2–3 |                                |      |            |            |      |            |      |     |     |     |
| Low–Clg Default:                                                      | OFF                            | OFF   | OFF   | 585                            | 540  | 490        | 445        | 400  | See Note 4 |      |     |     |     |
| Low–Cooling<br>(SW2–5,4,3)                                            | OFF                            | OFF   | ON    | 585                            | 540  | 490        | 445        | 400  | See Note 4 |      |     |     |     |
|                                                                       | OFF                            | ON    | OFF   | 780                            | 740  | 695        | 655        | 620  | 580        | 545  | 510 | 480 | 445 |
|                                                                       | OFF                            | ON    | ON    | 975                            | 945  | 910        | 870        | 835  | 805        | 775  | 740 | 710 | 680 |
|                                                                       | ON                             | OFF   | OFF   | 1170                           | 1140 | 1115       | 1085       | 1050 | 1020       | 985  | 945 | 890 | 835 |
|                                                                       | ON                             | OFF   | ON    | 1240                           | 1210 | 1180       | 1145       | 1105 | 1060       | 1005 | 950 | 895 | 835 |
|                                                                       | ON                             | ON    | OFF   | 1240                           | 1210 | 1180       | 1145       | 1105 | 1060       | 1005 | 950 | 895 | 835 |
|                                                                       | ON                             | ON    | ON    | 1240                           | 1210 | 1180       | 1145       | 1105 | 1060       | 1005 | 950 | 895 | 835 |
| Cont. Fan Default:                                                    | OFF                            | OFF   | OFF   | 585                            | 540  | 490        | 445        | 400  | See Note 4 |      |     |     |     |
| Continuous Fan<br>(SW2–5,4,3)                                         | OFF                            | OFF   | ON    | 305                            | 235  | See Note 4 |            |      |            |      |     |     |     |
|                                                                       | OFF                            | ON    | OFF   | 470                            | 410  | 350        | See Note 4 |      |            |      |     |     |     |
|                                                                       | OFF                            | ON    | ON    | 585                            | 540  | 490        | 445        | 400  | See Note 4 |      |     |     |     |
|                                                                       | ON                             | OFF   | OFF   | 585                            | 540  | 490        | 445        | 400  | See Note 4 |      |     |     |     |
|                                                                       | ON                             | OFF   | ON    | 585                            | 540  | 490        | 445        | 400  | See Note 4 |      |     |     |     |
|                                                                       | ON                             | ON    | OFF   | 585                            | 540  | 490        | 445        | 400  | See Note 4 |      |     |     |     |
|                                                                       | ON                             | ON    | ON    | 585                            | 540  | 490        | 445        | 400  | See Note 4 |      |     |     |     |
| Heating (SW1)                                                         | High Heat Airflow <sup>3</sup> |       |       | 850                            | 810  | 770        | 730        | 700  | 660        | 630  | 595 | 560 | 530 |
|                                                                       | Low Heat Airflow <sup>3</sup>  |       |       | 625                            | 580  | 535        | 490        | 445  | 405        | 365  | 320 | 270 | 220 |

# AIR DELIVERY - CFM (CONTINUED)

(SW1–5 and SW2–2 set to OFF, except as indicated. See notes 1 and 2.)

| Unit Size:<br>36060A          | Clg/CF Switch settings           |       |       | External Static Pressure (ESP) |      |            |      |      |            |      |      |      |     |
|-------------------------------|----------------------------------|-------|-------|--------------------------------|------|------------|------|------|------------|------|------|------|-----|
| Clg Switches:                 | SW2–8                            | SW2–7 | SW2–6 | 0.1                            | 0.2  | 0.3        | 0.4  | 0.5  | 0.6        | 0.7  | 0.8  | 0.9  | 1.0 |
| Clg Default:                  | OFF                              | OFF   | OFF   | 1180                           | 1150 | 1130       | 1100 | 1075 | 1045       | 1020 | 995  | 965  | 935 |
| Cooling (SW2–8,7,6)           | OFF                              | OFF   | ON    | 625                            | 585  | 540        | 495  | 445  | See Note 4 |      |      |      |     |
|                               | OFF                              | ON    | OFF   | 820                            | 785  | 745        | 710  | 670  | 635        | 595  | 560  | 525  | 490 |
|                               | OFF                              | ON    | ON    | 1000                           | 970  | 935        | 905  | 875  | 845        | 815  | 785  | 755  | 725 |
|                               | ON                               | OFF   | OFF   | 1180                           | 1150 | 1130       | 1100 | 1075 | 1045       | 1020 | 995  | 965  | 935 |
|                               | ON                               | OFF   | ON    | 1220                           | 1195 | 1170       | 1140 | 1115 | 1090       | 1065 | 1035 | 1010 | 985 |
|                               | ON                               | ON    | OFF   | 1220                           | 1195 | 1170       | 1140 | 1115 | 1090       | 1065 | 1035 | 1010 | 985 |
|                               | ON                               | ON    | ON    | 1220                           | 1195 | 1170       | 1140 | 1115 | 1090       | 1065 | 1035 | 1010 | 985 |
|                               | Maximum Clg Airflow <sup>2</sup> |       |       | 1220                           | 1195 | 1170       | 1140 | 1115 | 1090       | 1065 | 1035 | 1010 | 985 |
| CF Switches                   | SW2–5                            | SW2–4 | SW2–3 |                                |      |            |      |      |            |      |      |      |     |
| Low–Clg Default:              | OFF                              | OFF   | OFF   | 625                            | 585  | 540        | 495  | 445  | See Note 4 |      |      |      |     |
| Low–Cooling<br>(SW2–5,4,3)    | OFF                              | OFF   | ON    | 625                            | 585  | 540        | 495  | 445  | See Note 4 |      |      |      |     |
|                               | OFF                              | ON    | OFF   | 820                            | 785  | 745        | 710  | 670  | 635        | 595  | 560  | 525  | 490 |
|                               | OFF                              | ON    | ON    | 1000                           | 970  | 935        | 905  | 875  | 845        | 815  | 785  | 755  | 725 |
|                               | ON                               | OFF   | OFF   | 1180                           | 1150 | 1130       | 1100 | 1075 | 1045       | 1020 | 995  | 965  | 935 |
|                               | ON                               | OFF   | ON    | 1220                           | 1195 | 1170       | 1140 | 1115 | 1090       | 1065 | 1035 | 1010 | 985 |
|                               | ON                               | ON    | OFF   | 1220                           | 1195 | 1170       | 1140 | 1115 | 1090       | 1065 | 1035 | 1010 | 985 |
|                               | ON                               | ON    | ON    | 1220                           | 1195 | 1170       | 1140 | 1115 | 1090       | 1065 | 1035 | 1010 | 985 |
| Cont. Fan Default:            | OFF                              | OFF   | OFF   | 375                            | 315  | See Note 4 |      |      |            |      |      |      |     |
| Continuous Fan<br>(SW2–5,4,3) | OFF                              | OFF   | ON    | 200                            | 125  | See Note 4 |      |      |            |      |      |      |     |
|                               | OFF                              | ON    | OFF   | 285                            | 215  | See Note 4 |      |      |            |      |      |      |     |
|                               | OFF                              | ON    | ON    | 375                            | 315  | See Note 4 |      |      |            |      |      |      |     |
|                               | ON                               | OFF   | OFF   | 375                            | 315  | See Note 4 |      |      |            |      |      |      |     |
|                               | ON                               | OFF   | ON    | 375                            | 315  | See Note 4 |      |      |            |      |      |      |     |
|                               | ON                               | ON    | OFF   | 375                            | 315  | See Note 4 |      |      |            |      |      |      |     |
|                               | ON                               | ON    | ON    | 375                            | 315  | See Note 4 |      |      |            |      |      |      |     |
| Heating (SW1)                 | High Heat Airflow <sup>3</sup>   |       |       | 1115                           | 1090 | 1060       | 1035 | 1010 | 980        | 955  | 930  | 905  | 875 |
|                               | Low Heat Airflow <sup>3</sup>    |       |       | 780                            | 740  | 695        | 655  | 615  | 575        | 530  | 490  | 450  | 405 |

| Unit Size:<br>42060B          | Clg/CF Switch settings           |       |       | External Static Pressure (ESP) |      |      |      |      |            |      |      |      |      |
|-------------------------------|----------------------------------|-------|-------|--------------------------------|------|------|------|------|------------|------|------|------|------|
| Clg Switches:                 | SW2–8                            | SW2–7 | SW2–6 | 0.1                            | 0.2  | 0.3  | 0.4  | 0.5  | 0.6        | 0.7  | 0.8  | 0.9  | 1.0  |
| Clg Default:                  | OFF                              | OFF   | OFF   | 1330                           | 1295 | 1260 | 1220 | 1190 | 1150       | 1110 | 1075 | 1045 | 1005 |
| Cooling (SW2–8,7,6)           | OFF                              | OFF   | ON    | 725                            | 600  | 435  | 280  | 210  | See Note 4 |      |      |      |      |
|                               | OFF                              | ON    | OFF   | 780                            | 725  | 660  | 615  | 540  | See Note 4 |      |      |      |      |
|                               | OFF                              | ON    | ON    | 975                            | 925  | 875  | 835  | 785  | 750        | 690  | 655  | 610  | 570  |
|                               | ON                               | OFF   | OFF   | 1160                           | 1120 | 1090 | 1045 | 1010 | 970        | 920  | 885  | 840  | 800  |
|                               | ON                               | OFF   | ON    | 1330                           | 1295 | 1260 | 1220 | 1190 | 1150       | 1110 | 1075 | 1045 | 1005 |
|                               | ON                               | ON    | OFF   | 1705                           | 1650 | 1595 | 1545 | 1475 | 1415       | 1340 | 1275 | 1200 | 1105 |
|                               | ON                               | ON    | ON    | 1705                           | 1650 | 1595 | 1545 | 1475 | 1415       | 1340 | 1275 | 1200 | 1105 |
|                               | Maximum Clg Airflow <sup>2</sup> |       |       | 1705                           | 1650 | 1595 | 1545 | 1475 | 1415       | 1340 | 1275 | 1200 | 1105 |
| CF Switches                   | SW2–5                            | SW2–4 | SW2–3 |                                |      |      |      |      |            |      |      |      |      |
| Low–Clg Default:              | OFF                              | OFF   | OFF   | 725                            | 600  | 435  | 280  | 210  | See Note 4 |      |      |      |      |
| Low–Cooling<br>(SW2–5,4,3)    | OFF                              | OFF   | ON    | 725                            | 600  | 435  | 280  | 210  | See Note 4 |      |      |      |      |
|                               | OFF                              | ON    | OFF   | 780                            | 725  | 660  | 615  | 540  | See Note 4 |      |      |      |      |
|                               | OFF                              | ON    | ON    | 975                            | 925  | 875  | 835  | 785  | 750        | 690  | 655  | 610  | 570  |
|                               | ON                               | OFF   | OFF   | 1160                           | 1120 | 1090 | 1045 | 1010 | 970        | 920  | 885  | 840  | 800  |
|                               | ON                               | OFF   | ON    | 1330                           | 1295 | 1260 | 1220 | 1190 | 1150       | 1110 | 1075 | 1045 | 1005 |
|                               | ON                               | ON    | OFF   | 1705                           | 1650 | 1595 | 1545 | 1475 | 1415       | 1340 | 1275 | 1200 | 1105 |
|                               | ON                               | ON    | ON    | 1705                           | 1650 | 1595 | 1545 | 1475 | 1415       | 1340 | 1275 | 1200 | 1105 |
| Cont. Fan Default:            | OFF                              | OFF   | OFF   | 725                            | 600  | 435  | 280  | 210  | See Note 4 |      |      |      |      |
| Continuous Fan<br>(SW2–5,4,3) | OFF                              | OFF   | ON    | 725                            | 600  | 435  | 280  | 210  | See Note 4 |      |      |      |      |
|                               | OFF                              | ON    | OFF   | 780                            | 725  | 660  | 615  | 540  | See Note 4 |      |      |      |      |
|                               | OFF                              | ON    | ON    | 975                            | 925  | 875  | 835  | 785  | 750        | 690  | 655  | 610  | 570  |
|                               | ON                               | OFF   | OFF   | 975                            | 925  | 875  | 835  | 785  | 750        | 690  | 655  | 610  | 570  |
|                               | ON                               | OFF   | ON    | 975                            | 925  | 875  | 835  | 785  | 750        | 690  | 655  | 610  | 570  |
|                               | ON                               | ON    | OFF   | 975                            | 925  | 875  | 835  | 785  | 750        | 690  | 655  | 610  | 570  |
|                               | ON                               | ON    | ON    | 975                            | 925  | 875  | 835  | 785  | 750        | 690  | 655  | 610  | 570  |
| Heating (SW1)                 | High Heat Airflow <sup>3</sup>   |       |       | 1145                           | 1105 | 1075 | 1030 | 995  | 955        | 905  | 870  | 825  | 785  |
|                               | Low Heat Airflow <sup>3</sup>    |       |       | 870                            | 820  | 760  | 720  | 655  | 620        | 560  | 525  | 470  | 435  |

# AIR DELIVERY - CFM (CONTINUED)

(SW1–5 and SW2–2 set to OFF, except as indicated. See notes 1 and 2.)

| (SW1 – 5 and SW2 – 2 set to OFF, except as indicated. See notes 1 and 2.) |                                |       |       |                                |      |      |            |      |      |            |      |            |      |
|---------------------------------------------------------------------------|--------------------------------|-------|-------|--------------------------------|------|------|------------|------|------|------------|------|------------|------|
| Unit Size:<br>48080B                                                      | Clg/CF Switch settings         |       |       | External Static Pressure (ESP) |      |      |            |      |      |            |      |            |      |
| Clg Switches:                                                             | SW2–8                          | SW2–7 | SW2–6 | 0.1                            | 0.2  | 0.3  | 0.4        | 0.5  | 0.6  | 0.7        | 0.8  | 0.9        | 1.0  |
| Clg Default:                                                              | OFF                            | OFF   | OFF   | 1595                           | 1560 | 1530 | 1500       | 1470 | 1440 | 1405       | 1370 | 1340       | 1290 |
| Cooling (SW2–8,7,6)                                                       | OFF                            | OFF   | ON    | 625                            | 555  | 495  | 425        | 360  | 300  | See Note 4 |      |            |      |
|                                                                           | OFF                            | ON    | OFF   | 810                            | 755  | 700  | 645        | 595  | 540  | 480        | 425  | 380        | 330  |
|                                                                           | OFF                            | ON    | ON    | 1040                           | 995  | 950  | 900        | 860  | 815  | 770        | 725  | 680        | 630  |
|                                                                           | ON                             | OFF   | OFF   | 1215                           | 1175 | 1135 | 1095       | 1055 | 1015 | 975        | 935  | 900        | 860  |
|                                                                           | ON                             | OFF   | ON    | 1390                           | 1355 | 1320 | 1285       | 1245 | 1210 | 1175       | 1140 | 1105       | 1070 |
|                                                                           | ON                             | ON    | OFF   | 1595                           | 1560 | 1530 | 1500       | 1470 | 1440 | 1405       | 1370 | 1340       | 1290 |
|                                                                           | ON                             | ON    | ON    | 1790                           | 1760 | 1735 | 1700       | 1655 | 1610 | 1570       | 1485 | 1395       | 1295 |
| Maximum Clg Airflow <sup>2</sup>                                          |                                |       | 1790  | 1760                           | 1735 | 1700 | 1655       | 1610 | 1570 | 1485       | 1395 | 1295       |      |
| CF Switches                                                               | SW2–5                          | SW2–4 | SW2–3 |                                |      |      |            |      |      |            |      |            |      |
| Low–Clg Default:                                                          | OFF                            | OFF   | OFF   | 625                            | 555  | 495  | 425        | 360  | 300  | See Note 4 |      |            |      |
| Low–Cooling<br>(SW2–5,4,3)                                                | OFF                            | OFF   | ON    | 625                            | 555  | 495  | 425        | 360  | 300  | See Note 4 |      |            |      |
|                                                                           | OFF                            | ON    | OFF   | 810                            | 755  | 700  | 645        | 595  | 540  | 480        | 425  | 380        | 330  |
|                                                                           | OFF                            | ON    | ON    | 1040                           | 995  | 950  | 900        | 860  | 815  | 770        | 725  | 680        | 630  |
|                                                                           | ON                             | OFF   | OFF   | 1215                           | 1175 | 1135 | 1095       | 1055 | 1015 | 975        | 935  | 900        | 860  |
|                                                                           | ON                             | OFF   | ON    | 1390                           | 1355 | 1320 | 1285       | 1245 | 1210 | 1175       | 1140 | 1105       | 1070 |
|                                                                           | ON                             | ON    | OFF   | 1595                           | 1560 | 1530 | 1500       | 1470 | 1440 | 1405       | 1370 | 1340       | 1290 |
| ON                                                                        | ON                             | ON    | 1790  | 1760                           | 1735 | 1700 | 1655       | 1610 | 1570 | 1485       | 1395 | 1295       |      |
| Cont. Fan Default:                                                        | OFF                            | OFF   | OFF   | 625                            | 555  | 495  | 425        | 360  | 300  | See Note 4 |      |            |      |
| Continuous Fan<br>(SW2–5,4,3)                                             | OFF                            | OFF   | ON    | 465                            | 390  | 300  | See Note 4 |      |      |            |      |            |      |
|                                                                           | OFF                            | ON    | OFF   | 625                            | 555  | 495  | 425        | 360  | 300  | See Note 4 |      |            |      |
|                                                                           | OFF                            | ON    | ON    | 690                            | 630  | 570  | 510        | 445  | 385  | See Note 4 |      |            |      |
|                                                                           | ON                             | OFF   | OFF   | 690                            | 630  | 570  | 510        | 445  | 385  | See Note 4 |      |            |      |
|                                                                           | ON                             | OFF   | ON    | 690                            | 630  | 570  | 510        | 445  | 385  | See Note 4 |      |            |      |
|                                                                           | ON                             | ON    | OFF   | 690                            | 630  | 570  | 510        | 445  | 385  | See Note 4 |      |            |      |
|                                                                           | ON                             | ON    | ON    | 690                            | 630  | 570  | 510        | 445  | 385  | See Note 4 |      |            |      |
| Heating (SW1)                                                             | High Heat Airflow <sup>3</sup> |       |       | 1470                           | 1435 | 1400 | 1365       | 1330 | 1295 | 1260       | 1225 | 1190       | 1155 |
|                                                                           | Low Heat Airflow <sup>3</sup>  |       |       | 1150                           | 1110 | 1070 | 1030       | 990  | 950  | 910        | 870  | 830        | 790  |
| Unit Size:<br>60080C                                                      | Clg/CF Switch settings         |       |       | External Static Pressure (ESP) |      |      |            |      |      |            |      |            |      |
| Clg Switches:                                                             | SW2–8                          | SW2–7 | SW2–6 | 0.1                            | 0.2  | 0.3  | 0.4        | 0.5  | 0.6  | 0.7        | 0.8  | 0.9        | 1.0  |
| Clg Default:                                                              | OFF                            | OFF   | OFF   | 1905                           | 1870 | 1825 | 1785       | 1750 | 1700 | 1665       | 1625 | 1560       | 1460 |
| Cooling (SW2–8,7,6)                                                       | OFF                            | OFF   | ON    | 950                            | 770  | 620  | 515        | 440  | 365  | See Note 4 |      |            |      |
|                                                                           | OFF                            | ON    | OFF   | 1015                           | 935  | 880  | 825        | 765  | 690  | 625        | 580  | See Note 4 |      |
|                                                                           | OFF                            | ON    | ON    | 1155                           | 1105 | 1040 | 990        | 920  | 875  | 815        | 755  | 710        | 645  |
|                                                                           | ON                             | OFF   | OFF   | 1335                           | 1290 | 1245 | 1190       | 1145 | 1085 | 1040       | 990  | 930        | 890  |
|                                                                           | ON                             | OFF   | ON    | 1520                           | 1485 | 1435 | 1390       | 1340 | 1300 | 1255       | 1200 | 1160       | 1115 |
|                                                                           | ON                             | ON    | OFF   | 1905                           | 1870 | 1825 | 1785       | 1750 | 1700 | 1665       | 1625 | 1560       | 1460 |
|                                                                           | ON                             | ON    | ON    | 2290                           | 2230 | 2160 | 2085       | 2005 | 1915 | 1820       | 1730 | 1640       | 1525 |
| Maximum Clg Airflow <sup>2</sup>                                          |                                |       | 2290  | 2230                           | 2160 | 2085 | 2005       | 1915 | 1820 | 1730       | 1640 | 1525       |      |
| CF Switches                                                               | SW2–5                          | SW2–4 | SW2–3 |                                |      |      |            |      |      |            |      |            |      |
| Low–Clg Default:                                                          | OFF                            | OFF   | OFF   | 950                            | 770  | 620  | 515        | 440  | 365  | See Note 4 |      |            |      |
| Low–Cooling<br>(SW2–5,4,3)                                                | OFF                            | OFF   | ON    | 645                            | 540  | 435  | See Note 4 |      |      |            |      |            |      |
|                                                                           | OFF                            | ON    | OFF   | 950                            | 770  | 620  | 515        | 440  | 365  | See Note 4 |      |            |      |
|                                                                           | OFF                            | ON    | ON    | 1015                           | 935  | 880  | 825        | 765  | 690  | 625        | 580  | See Note 4 |      |
|                                                                           | ON                             | OFF   | OFF   | 1155                           | 1105 | 1040 | 990        | 920  | 875  | 815        | 755  | 710        | 645  |
|                                                                           | ON                             | OFF   | ON    | 1335                           | 1290 | 1245 | 1190       | 1145 | 1085 | 1040       | 990  | 930        | 890  |
|                                                                           | ON                             | ON    | OFF   | 1520                           | 1485 | 1435 | 1390       | 1340 | 1300 | 1255       | 1200 | 1160       | 1115 |
| ON                                                                        | ON                             | ON    | 1905  | 1870                           | 1825 | 1785 | 1750       | 1700 | 1665 | 1625       | 1560 | 1460       |      |
| Cont. Fan Default:                                                        | OFF                            | OFF   | OFF   | 950                            | 770  | 620  | 515        | 440  | 365  | See Note 4 |      |            |      |
| Continuous Fan<br>(SW2–5,4,3)                                             | OFF                            | OFF   | ON    | 645                            | 540  | 435  | See Note 4 |      |      |            |      |            |      |
|                                                                           | OFF                            | ON    | OFF   | 950                            | 770  | 620  | 515        | 440  | 365  | See Note 4 |      |            |      |
|                                                                           | OFF                            | ON    | ON    | 1015                           | 935  | 880  | 825        | 765  | 690  | 625        | 580  | See Note 4 |      |
|                                                                           | ON                             | OFF   | OFF   | 1155                           | 1105 | 1040 | 990        | 920  | 875  | 815        | 755  | 710        | 645  |
|                                                                           | ON                             | OFF   | ON    | 1335                           | 1290 | 1245 | 1190       | 1145 | 1085 | 1040       | 990  | 930        | 890  |
|                                                                           | ON                             | ON    | OFF   | 1520                           | 1485 | 1435 | 1390       | 1340 | 1300 | 1255       | 1200 | 1160       | 1115 |
|                                                                           | ON                             | ON    | ON    | 1520                           | 1485 | 1435 | 1390       | 1340 | 1300 | 1255       | 1200 | 1160       | 1115 |
| Heating (SW1)                                                             | High Heat Airflow <sup>3</sup> |       |       | 1575                           | 1535 | 1485 | 1445       | 1400 | 1350 | 1310       | 1260 | 1215       | 1170 |
|                                                                           | Low Heat Airflow <sup>3</sup>  |       |       | 1230                           | 1170 | 1125 | 1065       | 1015 | 955  | 900        | 855  | 795        | 755  |

# AIR DELIVERY - CFM (CONTINUED)

| (SW1 – 5 and SW2 – 2 set to OFF, except as indicated. See notes 1 and 2.) |                                |         |         |                                |      |            |            |      |      |            |      |            |      |
|---------------------------------------------------------------------------|--------------------------------|---------|---------|--------------------------------|------|------------|------------|------|------|------------|------|------------|------|
| Unit Size:<br>60100C                                                      | Clg/CF Switch settings         |         |         | External Static Pressure (ESP) |      |            |            |      |      |            |      |            |      |
| Clg Switches:                                                             | SW2 – 8                        | SW2 – 7 | SW2 – 6 | 0.1                            | 0.2  | 0.3        | 0.4        | 0.5  | 0.6  | 0.7        | 0.8  | 0.9        | 1.0  |
| Clg Default:                                                              | OFF                            | OFF     | OFF     | 1890                           | 1845 | 1800       | 1755       | 1700 | 1655 | 1610       | 1560 | 1510       | 1460 |
| Cooling (SW2 – 8,7,6)                                                     | OFF                            | OFF     | ON      | 1015                           | 825  | 630        | 485        | 405  | 325  | See Note 4 |      |            |      |
|                                                                           | OFF                            | ON      | OFF     | 1080                           | 895  | 815        | 740        | 690  | 615  | 555        | 475  | See Note 4 |      |
|                                                                           | OFF                            | ON      | ON      | 1155                           | 1080 | 1020       | 940        | 890  | 825  | 785        | 710  | 660        | 590  |
|                                                                           | ON                             | OFF     | OFF     | 1310                           | 1260 | 1195       | 1140       | 1075 | 1025 | 970        | 925  | 875        | 810  |
|                                                                           | ON                             | OFF     | ON      | 1520                           | 1475 | 1425       | 1365       | 1315 | 1255 | 1210       | 1155 | 1110       | 1055 |
|                                                                           | ON                             | ON      | OFF     | 1890                           | 1845 | 1800       | 1755       | 1700 | 1655 | 1610       | 1560 | 1510       | 1460 |
|                                                                           | ON                             | ON      | ON      | 2290                           | 2230 | 2160       | 2085       | 2005 | 1915 | 1820       | 1730 | 1640       | 1525 |
| Maximum Clg Airflow <sup>2</sup>                                          |                                |         | 2290    | 2230                           | 2160 | 2085       | 2005       | 1915 | 1820 | 1730       | 1640 | 1525       |      |
| CF Switches                                                               | SW2 – 5                        | SW2 – 4 | SW2 – 3 |                                |      |            |            |      |      |            |      |            |      |
| Low – Clg Default:                                                        | OFF                            | OFF     | OFF     | 1015                           | 825  | 630        | 485        | 405  | 325  | See Note 4 |      |            |      |
| Low – Cooling<br>(SW2 – 5,4,3)                                            | OFF                            | OFF     | ON      | 745                            | 640  | 535        | See Note 4 |      |      |            |      |            |      |
|                                                                           | OFF                            | ON      | OFF     | 1015                           | 825  | 630        | 485        | 405  | 325  | See Note 4 |      |            |      |
|                                                                           | OFF                            | ON      | ON      | 1080                           | 895  | 815        | 740        | 690  | 615  | 555        | 475  | See Note 4 |      |
|                                                                           | ON                             | OFF     | OFF     | 1155                           | 1080 | 1020       | 940        | 890  | 825  | 785        | 710  | 660        | 590  |
|                                                                           | ON                             | OFF     | ON      | 1310                           | 1260 | 1195       | 1140       | 1075 | 1025 | 970        | 925  | 875        | 810  |
|                                                                           | ON                             | ON      | OFF     | 1520                           | 1475 | 1425       | 1365       | 1315 | 1255 | 1210       | 1155 | 1110       | 1055 |
|                                                                           | ON                             | ON      | ON      | 1890                           | 1845 | 1800       | 1755       | 1700 | 1655 | 1610       | 1560 | 1510       | 1460 |
| Cont. Fan Default:                                                        | OFF                            | OFF     | OFF     | 1015                           | 825  | 630        | 485        | 405  | 325  | See Note 4 |      |            |      |
| Continuous Fan<br>(SW2 – 5,4,3)                                           | OFF                            | OFF     | ON      | 745                            | 640  | 535        | See Note 4 |      |      |            |      |            |      |
|                                                                           | OFF                            | ON      | OFF     | 1015                           | 825  | 630        | 485        | 405  | 325  | See Note 4 |      |            |      |
|                                                                           | OFF                            | ON      | ON      | 1080                           | 895  | 815        | 740        | 690  | 615  | 555        | 475  | See Note 4 |      |
|                                                                           | ON                             | OFF     | OFF     | 1155                           | 1080 | 1020       | 940        | 890  | 825  | 785        | 710  | 660        | 590  |
|                                                                           | ON                             | OFF     | ON      | 1155                           | 1080 | 1020       | 940        | 890  | 825  | 785        | 710  | 660        | 590  |
|                                                                           | ON                             | ON      | OFF     | 1155                           | 1080 | 1020       | 940        | 890  | 825  | 785        | 710  | 660        | 590  |
|                                                                           | ON                             | ON      | ON      | 1155                           | 1080 | 1020       | 940        | 890  | 825  | 785        | 710  | 660        | 590  |
| Heating (SW1)                                                             | High Heat Airflow <sup>3</sup> |         |         | 1905                           | 1865 | 1825       | 1775       | 1730 | 1685 | 1640       | 1590 | 1545       | 1490 |
|                                                                           | Low Heat Airflow <sup>3</sup>  |         |         | 1480                           | 1435 | 1375       | 1330       | 1265 | 1215 | 1160       | 1115 | 1060       | 1005 |
| Unit Size:<br>66120D                                                      | Clg/CF Switch settings         |         |         | External Static Pressure (ESP) |      |            |            |      |      |            |      |            |      |
| Clg Switches:                                                             | SW2 – 8                        | SW2 – 7 | SW2 – 6 | 0.1                            | 0.2  | 0.3        | 0.4        | 0.5  | 0.6  | 0.7        | 0.8  | 0.9        | 1.0  |
| Clg Default:                                                              | OFF                            | OFF     | OFF     | 2060                           | 2015 | 1975       | 1930       | 1885 | 1840 | 1790       | 1750 | 1705       | 1630 |
| Cooling (SW2 – 8,7,6)                                                     | OFF                            | OFF     | ON      | 865                            | 775  | 690        | 595        | 505  | 425  | See Note 4 |      |            |      |
|                                                                           | OFF                            | ON      | OFF     | 1080                           | 1005 | 935        | 860        | 785  | 705  | 625        | 555  | 490        | 425  |
|                                                                           | OFF                            | ON      | ON      | 1285                           | 1220 | 1150       | 1085       | 1020 | 960  | 895        | 820  | 750        | 690  |
|                                                                           | ON                             | OFF     | OFF     | 1465                           | 1410 | 1350       | 1285       | 1230 | 1175 | 1115       | 1060 | 1000       | 935  |
|                                                                           | ON                             | OFF     | ON      | 1685                           | 1635 | 1585       | 1530       | 1475 | 1420 | 1375       | 1325 | 1270       | 1225 |
|                                                                           | ON                             | ON      | OFF     | 2060                           | 2015 | 1975       | 1930       | 1885 | 1840 | 1790       | 1750 | 1705       | 1630 |
|                                                                           | ON                             | ON      | ON      | 2265                           | 2225 | 2180       | 2145       | 2100 | 2060 | 2010       | 1895 | 1770       | 1645 |
| Maximum Clg Airflow <sup>2</sup>                                          |                                |         | 2320    | 2310                           | 2270 | 2230       | 2190       | 2135 | 2020 | 1895       | 1770 | 1645       |      |
| CF Switches                                                               | SW2 – 5                        | SW2 – 4 | SW2 – 3 |                                |      |            |            |      |      |            |      |            |      |
| Low – Clg Default:                                                        | OFF                            | OFF     | OFF     | 865                            | 775  | 690        | 595        | 505  | 425  | See Note 4 |      |            |      |
| Low – Cooling<br>(SW2 – 5,4,3)                                            | OFF                            | OFF     | ON      | 585                            | 470  | See Note 4 |            |      |      |            |      |            |      |
|                                                                           | OFF                            | ON      | OFF     | 865                            | 775  | 690        | 595        | 505  | 425  | See Note 4 |      |            |      |
|                                                                           | OFF                            | ON      | ON      | 1080                           | 1005 | 935        | 860        | 785  | 705  | 625        | 555  | 490        | 425  |
|                                                                           | ON                             | OFF     | OFF     | 1285                           | 1220 | 1150       | 1085       | 1020 | 960  | 895        | 820  | 750        | 690  |
|                                                                           | ON                             | OFF     | ON      | 1465                           | 1410 | 1350       | 1285       | 1230 | 1175 | 1115       | 1060 | 1000       | 935  |
|                                                                           | ON                             | ON      | OFF     | 1685                           | 1635 | 1585       | 1530       | 1475 | 1420 | 1375       | 1325 | 1270       | 1225 |
|                                                                           | ON                             | ON      | ON      | 2060                           | 2015 | 1975       | 1930       | 1885 | 1840 | 1790       | 1750 | 1705       | 1630 |
| Cont. Fan Default:                                                        | OFF                            | OFF     | OFF     | 865                            | 775  | 690        | 595        | 505  | 425  | See Note 4 |      |            |      |
| Continuous Fan<br>(SW2 – 5,4,3)                                           | OFF                            | OFF     | ON      | 585                            | 470  | See Note 4 |            |      |      |            |      |            |      |
|                                                                           | OFF                            | ON      | OFF     | 730                            | 630  | See Note 4 |            |      |      |            |      |            |      |
|                                                                           | OFF                            | ON      | ON      | 865                            | 775  | 690        | 595        | 505  | 425  | See Note 4 |      |            |      |
|                                                                           | ON                             | OFF     | OFF     | 865                            | 775  | 690        | 595        | 505  | 425  | See Note 4 |      |            |      |
|                                                                           | ON                             | OFF     | ON      | 865                            | 775  | 690        | 595        | 505  | 425  | See Note 4 |      |            |      |
|                                                                           | ON                             | ON      | OFF     | 865                            | 775  | 690        | 595        | 505  | 425  | See Note 4 |      |            |      |
|                                                                           | ON                             | ON      | ON      | 865                            | 775  | 690        | 595        | 505  | 425  | See Note 4 |      |            |      |
| Heating (SW1)                                                             | High Heat Airflow <sup>3</sup> |         |         | 2165                           | 2120 | 2075       | 2030       | 1985 | 1940 | 1895       | 1850 | 1770       | 1645 |
|                                                                           | Low Heat Airflow <sup>3</sup>  |         |         | 1675                           | 1625 | 1575       | 1525       | 1475 | 1425 | 1375       | 1325 | 1275       | 1225 |

NOTE: See notes at end of table.

## Cooling<sup>4</sup> and Heating Air Delivery - CFM (Bottom Return<sup>5</sup> with Filter) - NOTES

- Nominal 350 CFM/ton cooling airflow is delivered with SW1-5 and SW2-2 set to OFF.  
Set both SW1-5 and SW2-2 to ON for +7% airflow (nominal 370 CFM/ton)  
Set SW1-5 to ON and SW2-2 to OFF for +15% airflow (nominal 400 CFM/ton)  
Set SW1-5 to OFF and SW2-2 to ON for -7% airflow (nominal 325 CFM/ton)  
The above adjustments in airflow are subject to motor horsepower range/capacity  
This applies to Cooling and Low-Cooling airflow, but does not affect continuous fan airflow.
- Maximum cooling airflow is achieved when switches SW2-6, SW2-7, SW2-8 and SW1-5 are set to ON, and SW2-2 is set to OFF.
- All heating CFM's are when comfort/efficiency adjustment switch SW1-4 is set to OFF.
- Ductwork must be sized for high-heating CFM within the operational range of ESP. Operation within the blank areas of the chart is not recommended because high-heat operation will be above 1.0 ESP.
- All airflows on 21" (533 mm) casing size furnaces are 5% less on side-return only installations.
- Side returns for 24.5" (622 mm) casing sizes require two sides, or a side and bottom to allow sufficient airflow at the return of the furnace.
- Airflows over 1800 CFM require bottom return, two-side return, or bottom and side return or excessive watt draw may result. A minimum filter size of 20x25" (508 x 635 mm) is required.

## MAXIMUM ALLOWABLE EXPOSED VENT LENGTH

**Table 1 – Maximum Allowable Exposed Vent Lengths in Unconditioned Space Insulation Table - Ft.**

| Winter Design Temp<br>°F | Unit Size        | 40,000* BTUH |     |     |                    |                    |     |                    |     |                    |              | 60,000 BTUH |     |                    |                    |                    |     |    |                    |                    |     |    |    |
|--------------------------|------------------|--------------|-----|-----|--------------------|--------------------|-----|--------------------|-----|--------------------|--------------|-------------|-----|--------------------|--------------------|--------------------|-----|----|--------------------|--------------------|-----|----|----|
|                          | Pipe Dia.<br>in. | Uninsulated  |     |     | 3/8-in. Insulation |                    |     | 1/2-in. Insulation |     |                    |              | Uninsulated |     |                    |                    | 3/8-in. Insulation |     |    |                    | 1/2-in. Insulation |     |    |    |
|                          |                  | 1 ½          | 2   | 2 ½ | 1 ½                | 2                  | 2 ½ | 1 ½                | 2   | 2 ½                | 1 ½          | 2           | 2 ½ | 3                  | 1 ½                | 2                  | 2 ½ | 3  | 1 ½                | 2                  | 2 ½ | 3  |    |
|                          |                  | 20           | 20  | 20  | 20                 | 20                 | 50  | 45                 | 20  | 60                 | 50           | 20          | 30  | 30                 | 25                 | 20                 | 75  | 65 | 60                 | 20                 | 85  | 75 | 65 |
|                          |                  | 0            | 10  | 5   | 5                  | 20                 | 25  | 20                 | 20  | 30                 | 25           | 15          | 15  | 10                 | 10                 | 20                 | 40  | 30 | 25                 | 20                 | 45  | 40 | 30 |
| -20                      | 5                |              |     | 20  | 15                 | 10                 | 20  | 20                 | 15  | 10                 | 5            |             |     | 20                 | 25                 | 20                 | 15  | 20 | 30                 | 25                 | 20  |    |    |
| -40                      |                  |              |     | 15  | 10                 | 5                  | 15  | 15                 | 10  | 5                  |              |             |     | 20                 | 15                 | 15                 | 10  | 20 | 20                 | 15                 | 10  |    |    |
| Winter Design Temp<br>°F | Unit Size        | 80,000 BTUH  |     |     |                    |                    |     |                    |     |                    |              |             |     |                    |                    |                    |     |    |                    |                    |     |    |    |
|                          | Pipe Dia.<br>in. | Uninsulated  |     |     |                    |                    |     | 3/8-in. Insulation |     |                    |              |             |     | 1/2-in. Insulation |                    |                    |     |    |                    |                    |     |    |    |
|                          |                  | 1 ½          | 2   | 2 ½ | 3                  | 4                  | 1 ½ | 2                  | 2 ½ | 3                  | 4            | 1 ½         | 2   | 2 ½                | 3                  | 4                  |     |    |                    |                    |     |    |    |
|                          |                  | 20           | 15  | 40  | 40                 | 35                 | 30  | 15                 | 50  | 90                 | 75           | 65          | 15  | 50                 | 70                 | 70                 | 70  |    |                    |                    |     |    |    |
|                          |                  | 0            | 15  | 20  | 15                 | 10                 | 5   | 15                 | 50  | 45                 | 35           | 30          | 15  | 50                 | 50                 | 40                 | 35  |    |                    |                    |     |    |    |
|                          |                  | -20          | 15  | 10  | 5                  |                    |     | 15                 | 35  | 30                 | 20           | 15          | 15  | 40                 | 30                 | 25                 | 15  |    |                    |                    |     |    |    |
| -40                      | 10               | 5            |     |     |                    | 15                 | 25  | 20                 | 15  | 5                  | 15           | 30          | 25  | 20                 | 10                 |                    |     |    |                    |                    |     |    |    |
| Winter Design Temp<br>°F | Unit Size        | 100,000 BTUH |     |     |                    |                    |     |                    |     |                    |              |             |     | 140,000 BTUH       |                    |                    |     |    |                    |                    |     |    |    |
|                          | Pipe Dia.<br>in. | Uninsulated  |     |     |                    | 3/8-in. Insulation |     |                    |     | 1/2-in. Insulation |              |             |     | Uninsulated        |                    |                    |     |    |                    |                    |     |    |    |
|                          |                  | 2            | 2 ½ | 3   | 4                  | 2                  | 2 ½ | 3                  | 4   | 2                  | 2 ½          | 3           | 4   | 2                  | 2 ½                | 3                  | 4   |    |                    |                    |     |    |    |
|                          |                  | 20           | 20  | 50  | 40                 | 35                 | 20  | 80                 | 95  | 80                 | 20           | 80          | 105 | 90                 | 5                  | 55                 | 50  | 5  |                    |                    |     |    |    |
|                          |                  | 0            | 20  | 20  | 15                 | 10                 | 20  | 55                 | 45  | 35                 | 20           | 65          | 50  | 5                  | 25                 | 15                 | 5   |    |                    |                    |     |    |    |
|                          |                  | -20          | 15  | 10  | 5                  |                    | 20  | 35                 | 30  | 20                 | 20           | 45          | 30  | 5                  | 10                 | 5                  | 5   |    |                    |                    |     |    |    |
| -40                      | 10               | 5            |     |     | 20                 | 25                 | 20  | 10                 | 30  | 20                 | 5            | 5           |     | 5                  | 30                 | 20                 |     |    |                    |                    |     |    |    |
| Winter Design Temp<br>°F | Unit Size        | 120,000 BTUH |     |     |                    |                    |     |                    |     |                    | 140,000 BTUH |             |     |                    |                    |                    |     |    |                    |                    |     |    |    |
|                          | Pipe Dia.<br>in. | Uninsulated  |     |     | 3/8-in. Insulation |                    |     | 1/2-in. Insulation |     |                    | Uninsulated  |             |     |                    | 3/8-in. Insulation |                    |     |    | 1/2-in. Insulation |                    |     |    |    |
|                          |                  | 2 ½          | 3   | 4   | 2 ½                | 3                  | 4   | 2 ½                | 3   | 4                  | 2 ½          | 3           | 4   | 2 ½                | 3                  | 4                  | 2 ½ | 3  | 4                  |                    |     |    |    |
|                          |                  | 20           | 10  | 50  | 40                 | 10                 | 75  | 95                 | 10  | 75                 | 105          | 5           | 55  | 50                 | 5                  | 65                 | 105 | 5  | 65                 | 125                |     |    |    |
|                          |                  | 0            | 10  | 20  | 15                 | 10                 | 55  | 45                 | 10  | 65                 | 50           | 5           | 25  | 15                 | 5                  | 65                 | 50  | 5  | 65                 | 60                 |     |    |    |
|                          |                  | -20          | 10  | 10  |                    | 10                 | 35  | 25                 | 10  | 45                 | 30           | 5           | 10  | 5                  | 5                  | 45                 | 30  | 5  | 50                 | 40                 |     |    |    |
| -40                      | 10               | 5            |     | 10  | 25                 | 15                 | 10  | 30                 | 20  | 5                  | 5            |             | 5   | 30                 | 20                 | 5                  | 35  | 25 |                    |                    |     |    |    |

**Maximum Allowable Exposed Vent Length in Unconditioned Space - Meters**

| Winter Design Temp °C | Unit Size    | 40,000* BTUH |     |      |                    |                    |                    |                    |      |                    | 60,000 BTUH  |                    |      |              |                    |      |      |      |                    |      |      |      |      |
|-----------------------|--------------|--------------|-----|------|--------------------|--------------------|--------------------|--------------------|------|--------------------|--------------|--------------------|------|--------------|--------------------|------|------|------|--------------------|------|------|------|------|
|                       | Pipe Dia. mm | Uninsulated  |     |      | 3/8-in. Insulation |                    |                    | 1/2-in. Insulation |      |                    | Uninsulated  |                    |      |              | 3/8-in. Insulation |      |      |      | 1/2-in. Insulation |      |      |      |      |
|                       |              | 38           | 51  | 64   | 38                 | 51                 | 64                 | 38                 | 51   | 64                 | 38           | 51                 | 64   | 76           | 38                 | 51   | 64   | 76   | 38                 | 51   | 64   | 76   |      |
|                       |              | -7           | 6.1 | 6.1  | 6.1                | 6.1                | 15.2               | 13.7               | 6.1  | 18.3               | 15.2         | 6.1                | 9.1  | 9.1          | 7.6                | 6.1  | 22.9 | 19.8 | 18.3               | 6.1  | 25.9 | 22.9 | 19.8 |
|                       |              | -18          | 3.0 | 1.5  | 1.5                | 6.1                | 7.6                | 6.1                | 6.1  | 9.1                | 7.6          | 4.6                | 4.6  | 3.0          | 3.0                | 6.1  | 12.2 | 9.1  | 7.6                | 6.1  | 13.7 | 12.2 | 9.1  |
|                       |              | -29          | 1.5 |      |                    | 6.1                | 4.6                | 3.0                | 6.1  | 6.1                | 4.6          | 3.0                | 1.5  |              |                    | 6.1  | 7.6  | 6.1  | 4.6                | 6.1  | 9.1  | 7.6  | 6.1  |
| -40                   |              |              |     | 4.6  | 3.0                | 1.5                | 4.6                | 4.6                | 3.0  |                    | 1.5          |                    |      | 6.1          | 4.6                | 4.6  | 3.0  | 6.1  | 6.1                | 4.6  | 3.0  |      |      |
| Winter Design Temp °C | Unit Size    | 80,000 BTUH  |     |      |                    |                    |                    |                    |      |                    |              |                    |      |              |                    |      |      |      |                    |      |      |      |      |
|                       | Pipe Dia. mm | Uninsulated  |     |      |                    |                    | 3/8-in. Insulation |                    |      |                    |              | 1/2-in. Insulation |      |              |                    |      |      |      |                    |      |      |      |      |
|                       |              | 38           | 51  | 64   | 76                 | 102                | 38                 | 51                 | 64   | 76                 | 102          | 38                 | 51   | 64           | 76                 | 102  |      |      |                    |      |      |      |      |
|                       |              | -7           | 4.6 | 12.2 | 12.2               | 10.7               | 9.1                | 4.6                | 15.2 | 27.4               | 22.9         | 19.8               | 4.6  | 15.2         | 21.3               | 21.3 | 21.3 |      |                    |      |      |      |      |
|                       |              | -18          | 4.6 | 6.1  | 4.6                | 3.0                | 1.5                | 4.6                | 15.2 | 13.7               | 10.7         | 9.1                | 4.6  | 15.2         | 15.2               | 12.2 | 10.7 |      |                    |      |      |      |      |
|                       |              | -29          | 4.6 | 3.0  | 1.5                |                    |                    | 4.6                | 10.7 | 9.1                | 6.1          | 4.6                | 4.6  | 12.2         | 9.1                | 7.6  | 4.6  |      |                    |      |      |      |      |
| -40                   | 3.0          | 1.5          |     |      |                    | 4.6                | 7.6                | 6.1                | 4.6  | 1.5                | 4.6          | 9.1                | 7.6  | 6.1          | 3.0                |      |      |      |                    |      |      |      |      |
| Winter Design Temp °C | Unit Size    | 100,000 BTUH |     |      |                    |                    |                    |                    |      |                    |              |                    |      | 140,000 BTUH |                    |      |      |      |                    |      |      |      |      |
|                       | Pipe Dia. mm | Uninsulated  |     |      |                    | 3/8-in. Insulation |                    |                    |      | 1/2-in. Insulation |              |                    |      | Uninsulated  |                    |      |      |      |                    |      |      |      |      |
|                       |              | 51           | 64  | 76   | 102                | 51                 | 64                 | 76                 | 102  | 51                 | 64           | 76                 | 102  | 51           | 64                 | 76   | 102  |      |                    |      |      |      |      |
|                       |              | -7           | 6.1 |      | 15.2               | 12.2               | 10.7               | 6.1                | 24.4 | 28.9               | 24.4         | 6.1                | 24.4 | 32.0         | 27.4               |      |      |      |                    |      |      |      |      |
|                       |              | -18          | 6.1 |      | 6.1                | 4.6                | 3.0                | 6.1                | 16.8 | 13.7               | 10.7         | 6.1                | 19.8 | 16.7         | 13.7               |      |      |      |                    |      |      |      |      |
|                       |              | -29          | 4.6 |      | 3.0                | 1.5                |                    | 6.1                | 10.7 | 9.1                | 6.1          | 6.1                | 13.7 | 10.7         | 7.6                |      |      |      |                    |      |      |      |      |
| -40                   | 3.0          |              | 1.5 |      |                    | 6.1                | 7.6                |                    | 6.1  | 3.0                | 6.1          | 7.6                | 4.6  |              |                    |      |      |      |                    |      |      |      |      |
| Winter Design Temp °C | Unit Size    | 120,000 BTUH |     |      |                    |                    |                    |                    |      |                    | 140,000 BTUH |                    |      |              |                    |      |      |      |                    |      |      |      |      |
|                       | Pipe Dia. mm | Uninsulated  |     |      | 3/8-in. Insulation |                    |                    | 1/2-in. Insulation |      |                    | Uninsulated  |                    |      |              | 3/8-in. Insulation |      |      |      | 1/2-in. Insulation |      |      |      |      |
|                       |              | 64           | 76  | 102  | 64                 | 76                 | 102                | 64                 | 76   | 102                | 64           | 76                 | 102  | 64           | 76                 | 102  | 64   | 76   | 102                |      |      |      |      |
|                       |              | -7           | 3.0 | 15.2 | 12.2               | 3.0                | 22.9               | 28.9               | 3.0  | 22.9               | 32.0         | 1.5                | 16.7 | 15.2         | 1.5                | 19.8 | 32.0 | 1.5  | 19.8               | 38.1 |      |      |      |
|                       |              | -18          | 3.0 | 6.1  | 4.6                | 3.0                | 16.8               | 13.7               | 3.0  | 19.8               | 15.2         | 1.5                | 7.6  | 4.6          | 1.5                | 19.8 | 15.2 | 1.5  | 19.8               | 18.3 |      |      |      |
|                       |              | -29          | 3.0 | 3.0  |                    | 3.0                | 10.7               | 7.6                | 3.0  | 13.7               | 9.1          | 1.5                | 3.0  | 1.5          | 1.5                | 13.7 | 9.1  | 1.5  | 15.2               | 12.2 |      |      |      |
| -40                   | 3.0          | 1.5          |     | 3.0  | 7.6                | 4.6                | 3.0                | 9.1                | 6.1  | 1.5                | 1.5          |                    | 1.5  | 9.1          | 6.1                | 1.5  | 35   | 7.6  |                    |      |      |      |      |

\* Pipe length (ft) specified for maximum pipe lengths located in unconditioned spaces. Pipes located in unconditioned space cannot exceed total allowable pipe length calculated from Table 2.

† Insulation thickness based on R value of 3.5 per in.

## MAXIMUM EQUIVALENT VENT LENGTH - FT. (M)

**NOTE:** Maximum Equivalent Vent Length (MEVL) includes standard and concentric vent termination and does NOT include elbows. Use Table 3 - Deductions from Maximum Equivalent Vent Length to determine allowable vent length for each application.

**Table 2 – Maximum Equivalent Vent Length - Ft.**

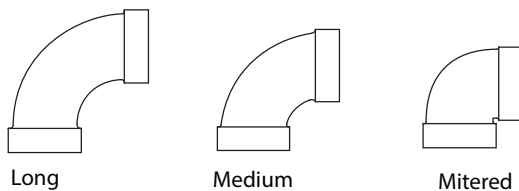
| Unit Size                               |                | 40,000 <sup>1</sup> |      |      | 60,000 <sup>2</sup> |      |      |      | 80,000 |      |      |      |      | 100,000 <sup>3</sup> |      |      |      | 120,000 |      |      |
|-----------------------------------------|----------------|---------------------|------|------|---------------------|------|------|------|--------|------|------|------|------|----------------------|------|------|------|---------|------|------|
| Altitude<br>(feet)                      | Pipe Dia. (in) | 1 ½                 | 2    | 2 ½  | 1 ½                 | 2    | 2 ½  | 3    | 1 ½    | 2    | 2 ½  | 3    | 4    | 2                    | 2 ½  | 3    | 4    | 2 ½     | 3    | 4    |
|                                         | 0–2000         | 40                  | 155  | 185  | 20                  | 100  | 175  | 200  | 15     | 55   | 130  | 175  | 200  | 20                   | 80   | 175  | 200  | 10      | 75   | 185  |
|                                         | 2001–3000      | 35                  | 150  | 175  |                     | 95   | 165  | 185  | 10     | 49   | 125  | 165  | 185  | 15                   | 75   | 165  | 185  |         | 70   | 175  |
|                                         | 3001–4000      | 30                  | 135  | 160  | 16                  | 90   | 155  | 175  |        | 44   | 115  | 155  | 175  | 10                   | 70   | 155  | 175  | 5       | 65   | 165  |
|                                         | 4001–4500      | 25                  | 130  | 155  | 15                  | 85   | 150  | 170  |        |      | 110  | 150  | 165  |                      | 170  | N/A  | 60   | 160     |      |      |
|                                         | 4501–5000      |                     | 125  | 145  |                     | 80   | 145  | 165  | 145    | 160  | 150  | 165  | 160  |                      |      |      |      |         |      |      |
|                                         | 5001–6000      | 20                  | 120  | 130  | 75                  | 140  | 155  | 41   | 100    | 135  | 150  | 65   | 140  |                      | 155  |      | 155  |         |      |      |
|                                         | 6001–7000      | 15                  | 110  | 120  | 13                  | 70   | 130  | 145  | 38     | 125  | 140  | 60   | 135  | 145                  | 140  |      |      |         |      |      |
|                                         | 7001–8000      | 10                  | 100  | 110  | 10                  | 65   | 120  | 135  | 36     | 90   | 120  | 125  | 55   | 125                  | 135  |      | 130  |         |      |      |
|                                         | 8001–9000      |                     | 90   | 95   | 5                   | 60   | 115  | 125  | 33     | 80   | 110  | 115  | 50   | 115                  | 125  |      | 120  |         |      |      |
| 9001–10000                              | 5              | 80                  | 85   | N/A  | 55                  | 105  | 115  | 30   | 75     | 100  | 105  | N/A  | 45   | 100                  | 115  | 115  |      |         |      |      |
| Maximum Equivalent Vent Length – Meters |                |                     |      |      |                     |      |      |      |        |      |      |      |      |                      |      |      |      |         |      |      |
| Unit Size                               |                | 40,000 <sup>1</sup> |      |      | 60,000 <sup>2</sup> |      |      |      | 80,000 |      |      |      |      | 100,000 <sup>3</sup> |      |      |      | 120,000 |      |      |
| Altitude<br>(meters)                    | Pipe Dia. (mm) | 38                  | 51   | 64   | 38                  | 51   | 64   | 76   | 38     | 51   | 64   | 76   | 102  | 51                   | 64   | 76   | 102  | 64      | 76   | 102  |
|                                         | 0–610          | 12.1                | 47.2 | 56.3 | 6.0                 | 30.4 | 53.3 | 60.9 | 4.5    | 16.7 | 39.6 | 53.3 | 60.9 | 6.0                  | 24.3 | 53.3 | 60.9 | 3.0     | 22.8 | 56.3 |
|                                         | 611–914        | 10.6                | 45.7 | 53.3 |                     | 28.9 | 50.2 | 56.3 | 14.9   | 38.1 | 50.2 | 56.3 | 4.5  | 22.8                 | 50.2 | 56.3 | 21.3 |         | 53.3 |      |
|                                         | 915–1219       | 9.1                 | 41.1 | 48.7 | 4.8                 | 27.4 | 47.2 | 53.3 |        | 35.0 | 47.2 | 53.3 | 3.0  | 21.3                 | 47.2 | 51.8 | 1.5  | 19.8    | 50.2 |      |
|                                         | 1220–1370      | 7.6                 | 39.6 | 47.2 | 25.9                | 45.7 | 51.8 | 13.4 |        | 33.5 | 45.7 | 50.2 |      | 19.8                 | 45.7 | 50.2 | NA   | 18.2    | 48.7 |      |
|                                         | 1371–1524      |                     | 38.1 | 44.1 | 4.5                 | 24.3 | 44.1 |      | 50.2   | 44.1 | 48.7 | 42.6 |      | 47.2                 | 47.2 |      |      |         |      |      |
|                                         | 1525–1829      | 6.0                 | 36.5 | 39.6 | 22.8                | 42.6 | 47.2 | 12.4 | 30.4   | 41.1 | 45.7 | 18.2 |      | 41.1                 | 44.1 | 14.0 | 39.6 |         |      |      |
|                                         | 1830–2134      | 4.5                 | 33.5 | 36.5 | 3.9                 | 21.3 | 39.6 | 44.1 | NA     | 11.5 | 27.4 | 38.1 | 42.6 | NA                   | 15.2 | 42.6 | NA   | 15.2    | 42.6 |      |
|                                         | 2135–2438      | 3.0                 | 30.4 | 33.5 | 3.0                 | 19.8 | 36.5 | 41.1 |        | 10.9 | 36.5 | 38.1 | 16.7 |                      | 38.1 | 41.1 |      | 14.0    | 39.6 |      |
|                                         | 2439–2743      |                     | 27.4 | 28.9 | 1.5                 | 18.2 | 35.0 | 38.1 |        | 10.0 | 24.3 | 33.5 | 35.0 |                      | 15.2 | 35.0 |      | 38.1    | 13.1 | 36.5 |
| 2744–3048                               | 1.5            | 24.3                | 25.9 | NA   | 16.7                | 32.0 | 35.0 | 9.1  |        | 22.8 | 30.4 | 32.0 | 13.7 |                      | 30.4 | 35.0 |      | 11.8    | 35.0 |      |

Maximum Equivalent Vent Length – Meters

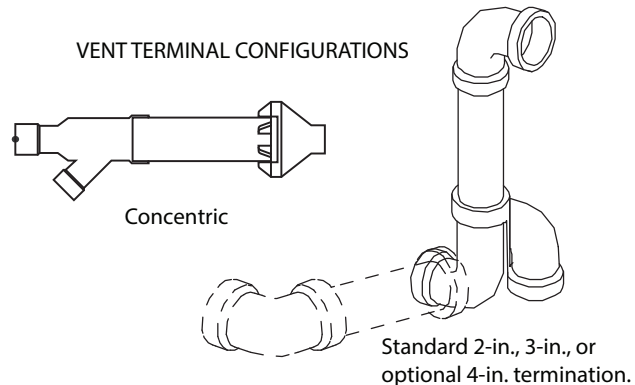
| Unit Size            |                   | 40,000 <sup>1</sup> |      |      | 60,000 <sup>2</sup> |      |      |      | 80,000 |      |      |      |      | 100,000 <sup>3</sup> |      |      |      | 120,000 |      |      |
|----------------------|-------------------|---------------------|------|------|---------------------|------|------|------|--------|------|------|------|------|----------------------|------|------|------|---------|------|------|
| Altitude<br>(meters) | Pipe Dia.<br>(mm) | 38                  | 51   | 64   | 38                  | 51   | 64   | 76   | 38     | 51   | 64   | 76   | 102  | 51                   | 64   | 76   | 102  | 64      | 76   | 102  |
|                      | 0–610             | 12.1                | 47.2 | 56.3 | 6.0                 | 30.4 | 53.3 | 60.9 | 4.5    | 16.7 | 39.6 | 53.3 | 60.9 | 6.0                  | 24.3 | 53.3 | 60.9 | 3.0     | 22.8 | 56.3 |
|                      | 611–914           | 10.6                | 45.7 | 53.3 |                     | 28.9 | 50.2 | 56.3 | 3.0    | 14.9 | 38.1 | 50.2 | 56.3 | 4.5                  | 22.8 | 50.2 | 56.3 |         | 21.3 | 53.3 |
|                      | 915–1219          | 9.1                 | 41.1 | 48.7 | 4.8                 | 27.4 | 47.2 | 53.3 |        |      | 35.0 | 47.2 | 53.3 |                      |      | 3.0  | 21.3 | 47.2    | 53.3 | 1.5  |
|                      | 1220–1370         | 7.6                 | 39.6 | 47.2 | 4.5                 | 25.9 | 45.7 | 51.8 |        | 13.4 | 33.5 | 45.7 | 50.2 | 51.8                 | NA   |      |      | 18.2    | 48.7 |      |
|                      | 1371–1524         |                     | 38.1 | 44.1 |                     | 24.3 | 44.1 | 50.2 | 44.1   |      |      | 48.7 | 45.7 | 50.2                 |      |      |      |         |      |      |
|                      | 1525–1829         | 6.0                 | 36.5 | 39.6 | 3.9                 | 22.8 | 42.6 | 47.2 | 12.4   | 30.4 | 41.1 | 45.7 | 19.8 | 42.6                 |      |      | 47.2 | 47.2    |      |      |
|                      | 1830–2134         | 4.5                 | 33.5 | 36.5 |                     | 3.9  | 21.3 | 39.6 | 44.1   | 11.5 | 27.4 | 38.1 |      | 42.6                 |      | 18.2 | 41.1 | 44.1    | 15.2 | 42.6 |
|                      | 2135–2438         | 3.0                 | 30.4 | 33.5 | 3.0                 | 19.8 | 36.5 | 41.1 | 10.9   | 36.5 |      | 38.1 | NA   | 16.7                 |      | 38.1 | 41.1 | 14.0    | 39.6 |      |
|                      | 2439–2743         |                     | 27.4 | 28.9 | 1.5                 | 18.2 | 35.0 | 38.1 | 10.0   | 24.3 | 33.5 | 35.0 |      | 15.2                 |      | 35.0 | 38.1 | 13.1    | 36.5 |      |
| 2744–3048            | 1.5               | 24.3                | 25.9 | NA   | 16.7                | 32.0 | 35.0 | 9.1  | 22.8   | 30.4 | 32.0 | 13.7 |      | 30.4                 | 35.0 | 11.8 | 35.0 |         |      |      |

1. Inducer Outlet Restrictor disk (P/N 337683–401; 1.25–in. (32 mm) Dia.) shipped in the loose parts bag or available through Replacement Components required under 10–ft. (3 M) TEVL in all orientations. Required for installations from 0 – 2000 (0 to 610 M) above sea level. Failure to use an outlet restrictor may result in flame disturbances or flame sense lock-out.
2. Inducer Outlet Restrictor disk (P/N 337683–401; 1.25–in. (32 mm) Dia.) available through Replacement Components required for less than 5–ft. (1.5 M) TEVL in downflow and horizontal orientations only. Required for installations from 0 – 2000 (0 to 610 M) above sea level.
3. Inducer Outlet Restrictor disk (P/N 337683–402; 1.50–in. (38 mm) Dia.) available through Replacement Components required for less than 5–ft. (1.5 M) TEVL in downflow and horizontal orientations only. Required for installations from 0 – 2000 (0 to 610 M) above sea level.

ELBOW CONFIGURATIONS



VENT TERMINAL CONFIGURATIONS



**Table 3 – Deductions from Maximum Equivalent Vent Length - Ft. (M)**

| Pipe Diameter (in):         | 1-1/2 |       | 2   |       | 2-1/2 |       | 3   |       | 4   |       |
|-----------------------------|-------|-------|-----|-------|-------|-------|-----|-------|-----|-------|
| Mitered 90° Elbow           | 8     | (2.4) | 8   | (2.4) | 8     | (2.4) | 8   | (2.4) | 8   | (2.4) |
| Medium Radius 90° Elbow     | 5     | (1.5) | 5   | (1.5) | 5     | (1.5) | 5   | (1.5) | 5   | (1.5) |
| Long Radius 90° Elbow       | 3     | (0.9) | 3   | (0.9) | 3     | (0.9) | 3   | (0.9) | 3   | (0.9) |
| Mitered 45° Elbow           | 4     | (1.2) | 4   | (1.2) | 4     | (1.2) | 4   | (1.2) | 4   | (1.2) |
| Medium Radius 45° Elbow     | 2.5   | (0.8) | 2.5 | (0.8) | 2.5   | (0.8) | 2.5 | (0.8) | 2.5 | (0.8) |
| Long Radius 45° Elbow       | 1.5   | (0.5) | 1.5 | (0.5) | 1.5   | (0.5) | 1.5 | (0.5) | 1.5 | (0.5) |
| Tee                         | 16    | (4.9) | 16  | (4.9) | 16    | (4.9) | 16  | (4.9) | 16  | (4.9) |
| Concentric Vent Termination | NA    |       | 0   | (0.0) | NA    |       | 0   | (0.0) | NA  |       |
| Standard Vent Termination   | 0     | (0.0) | 0   | (0.0) | 0     | (0.0) | 0   | (0.0) | 0   | (0.0) |

**NOTES:**

1. Use only the smallest diameter pipe possible for venting. Over-sizing may cause flame disturbance or excessive vent terminal icing or freeze-up.
2. NA – Not allowed. Pressure switch will not close, or flame disturbance may result.
3. Vent sizing for Canadian installations over 4500 ft (1370 M) above sea level are subject to acceptance by local authorities having jurisdiction.
4. Size both the combustion air and vent pipe independently, then use the larger size for both pipes.
5. Assume the two 45° elbows equal one 90° elbow. Wide radius elbows are desirable and may be required in some cases.
6. Elbow and pipe sections within the furnace casing and at the vent termination should not be included in vent length or elbow count.
7. The minimum pipe length is 5 ft. (2 M) linear feet (meters) for all applications.
8. Use 3–in. (76 mm) diameter vent termination kit for installations requiring 4–in. (102 mm) diameter pipe.

## Venting System Length Calculations

The Total Equivalent Vent Length (TEVL) for **EACH** combustion air or vent pipe equals the length of the venting system, plus the equivalent length of elbows used in the venting system from Table 3.

Standard vent terminations or factory accessory concentric vent terminations count for zero deduction.

See vent system manufacturer's data for equivalent lengths of flexible vent pipe or other termination systems. **DO NOT ASSUME** that one foot of flexible vent pipe equals one foot of straight PVC/ABS DWV vent pipe.

Compare the Total Equivalent Vent Length to the Maximum Equivalent Vent Lengths in Table 2.

### Example 1

A direct-vent 60,000 BTUH furnace installed at 2100 ft. (640M). Venting system includes **FOR EACH PIPE:**

70 feet (22 M) of vent pipe, 65 feet (20 M) of combustion air inlet pipe, (3) 90° long-radius elbows, (2) 45° long-radius elbows, and a factory accessory concentric vent kit.

Can this application use 2" (50 mm ND) PVC/ABS DWV vent piping?

|                                                                                                                     |   |   |                    |   |                  |                                                                 |
|---------------------------------------------------------------------------------------------------------------------|---|---|--------------------|---|------------------|-----------------------------------------------------------------|
| Measure the required linear length of air inlet and vent pipe; insert the longest of the two here                   |   |   |                    |   | 70 ft.<br>(22 M) | Use length of the longer of the vent or air inlet piping system |
| Add equiv length of (3) 90° long-radius elbows (use the highest number of elbows for either the vent or inlet pipe) | 3 | x | 3 ft.<br>(0.9 M)   | = | 9 ft.<br>(2.7 M) | From Table 3.                                                   |
| Add equiv length of (2) 45° long-radius elbows (use the highest number of elbows for either the vent or inlet pipe) | 2 | x | 1.5 ft.<br>(0.5 M) | = | 3 ft.<br>(0.9 M) | From Table 3.                                                   |
| Add equiv length of factory concentric vent term                                                                    |   |   |                    |   | 0 ft.            | From Table 3.                                                   |
| Add correction for flexible vent pipe, if any                                                                       |   |   |                    |   | 0 ft.            | From Vent Manufacturer's instructions; zero for PVC/ABS DWV     |
| Total Equivalent Vent Length (TEVL)                                                                                 |   |   |                    |   | 82 ft.<br>(25 M) | Add all of the above lines                                      |
| Maximum Equivalent Vent Length (MEVL)                                                                               |   |   |                    |   | 95 ft.<br>(29 M) | For 2" pipe from Table 2                                        |
| Is TEVL less than MEVL?                                                                                             |   |   |                    |   | YES              | Therefore, 2" pipe MAY be used                                  |

### Example 2

A direct-vent 60,000 BTUH furnace installed at 2100 ft. (640M). Venting system includes **FOR EACH PIPE:**

100 feet (30 M) of vent pipe, 95 feet (29 M) of combustion air inlet pipe, (3) 90° long-radius elbows, and a polypropylene concentric vent kit. Also includes 20 feet (6.1 M) of flexible polypropylene vent pipe, included within the 100 feet (30 M) of vent pipe.

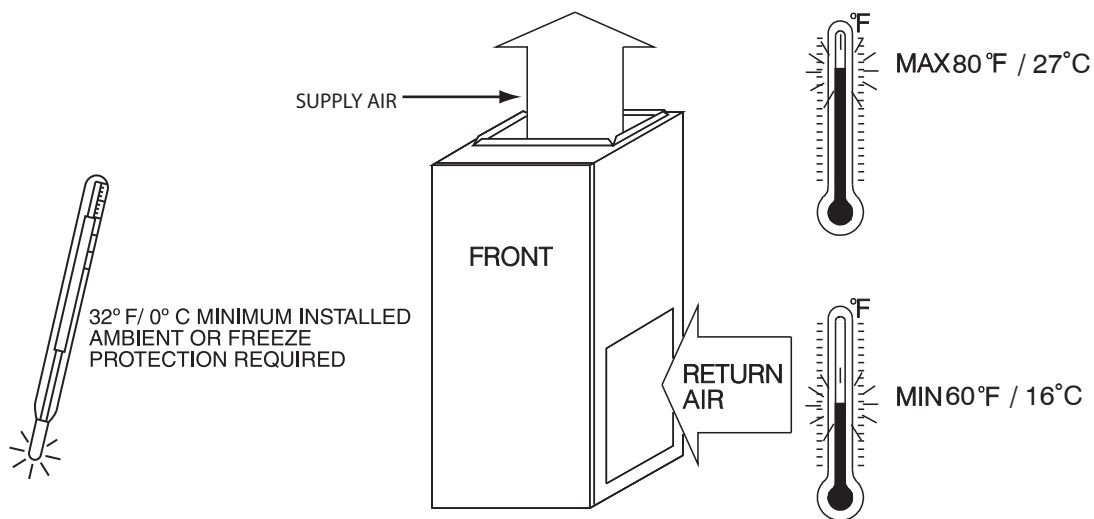
VERIFY FROM POLYPROPYLENE VENT MANUFACTURER'S INSTRUCTIONS for the multiplier correction for flexible vent pipe.

Can this application use 60mm o.d. (2") polypropylene vent piping? If not, what size piping can be used?

|                                                                                                                                                                                            |    |   |                   |   |                    |                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|---|-------------------|---|--------------------|------------------------------------------------------------------------------------------------------------|
| Measure the required linear length of <b>RIGID</b> air inlet and vent pipe; insert the longest of the two here: 100 ft. Of rigid pipe – 20 ft. Of flexible pipe                            |    |   |                   | = | 80 ft.<br>(24 M)   | Use length of the longer of the vent or air inlet piping system                                            |
| Add equiv length of (3) 90° long-radius elbows (use the highest number of elbows for either the vent or inlet pipe)                                                                        | 3  | x | 5 ft.<br>(1.5 M)  | = | 15 ft.<br>(4.6 M)  | Example from polypropylene vent manufacturer's instructions, Verify from vent manufacturer's instructions. |
| Add equiv length of 45° long-radius elbows (use the highest number of elbows for either the vent or inlet pipe)                                                                            | 0  | x |                   | = | 0 ft.<br>(0 M)     |                                                                                                            |
| Add equiv length of factory concentric vent term                                                                                                                                           | 9  | x | 3.3 ft<br>(0.9 M) | = | 30 ft.<br>(9 M)    |                                                                                                            |
| Add correction for flexible vent pipe, if any                                                                                                                                              | 2* | x | 20 ft.<br>(6.1 M) | = | 40 ft.<br>(12.2 M) |                                                                                                            |
| <b>* VERIFY FROM VENT MANUFACTURER'S INSTRUCTIONS;</b> For example only, assume 1 meter of flexible 60mm (2") or 80mm (3") polypropylene pipe equals 2.0 meters (6.5 ft.) of PVC/ABS pipe. |    |   |                   |   |                    |                                                                                                            |
| Total Equivalent Vent Length (TEVL)                                                                                                                                                        |    |   |                   |   | 165 ft.<br>(50 M)  | Add all of the above lines                                                                                 |
|                                                                                                                                                                                            |    |   |                   |   |                    |                                                                                                            |
| Maximum Equivalent Vent Length (MEVL)                                                                                                                                                      |    |   |                   |   | 95 ft.<br>(29 M)   | For 2" pipe from Table 2                                                                                   |
| <b>Is TEVL less than MEVL?</b>                                                                                                                                                             |    |   |                   |   | <b>NO</b>          | <b>Therefore, 60mm (2") pipe may NOT be used; try 80mm (3")</b>                                            |
|                                                                                                                                                                                            |    |   |                   |   |                    |                                                                                                            |
| Maximum Equivalent Vent Length (MEVL)                                                                                                                                                      |    |   |                   |   | 185 ft.<br>(57 M)  | For 3" pipe from Table 2                                                                                   |
| <b>Is TEVL less than MEVL?</b>                                                                                                                                                             |    |   |                   |   | <b>YES</b>         | <b>Therefore, 80mm (3") pipe MAY be used</b>                                                               |

## RETURN AIR TEMPERATURE

This furnace is designed for continuous return-air minimum temperature of 60°F (15°C) db or intermittent operation down to 55°F (13°C) db such as when used with a night setback thermometer. Return-air temperature must not exceed 80°F (27°C) db. Failure to follow these return air limits may affect reliability of heat exchangers, motors and controls.



A10490

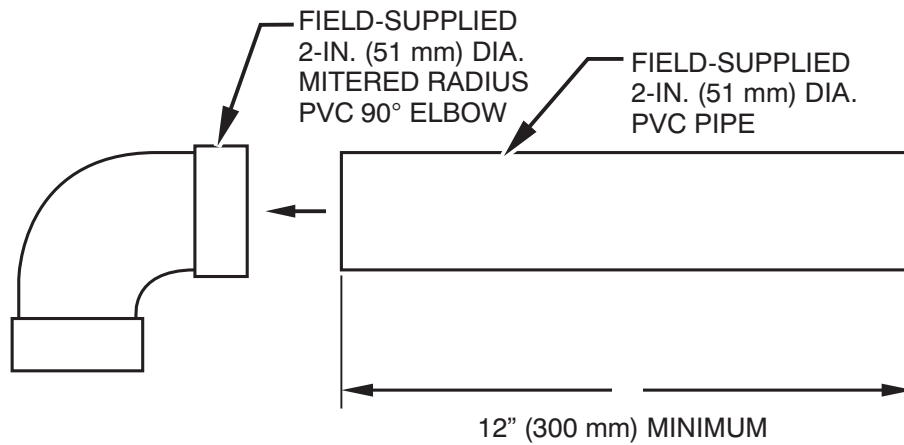
### MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS

| POSITION                                                    | CLEARANCE        |
|-------------------------------------------------------------|------------------|
| Rear                                                        | 0 (0 mm)         |
| Front (Combustion air openings in furnace and in structure) | 1 in. (25 mm)    |
| Required for service**                                      | 24 in. (610 mm)* |
| All Sides of Supply Plenum**                                | 1 in. (25 mm)    |
| Sides                                                       | 0 (0 mm)         |
| Vent                                                        | 0 (0 mm)         |
| Top of Furnace                                              | 1 in. (25 mm)    |

\* Recommended

\*\*Consult your local building codes

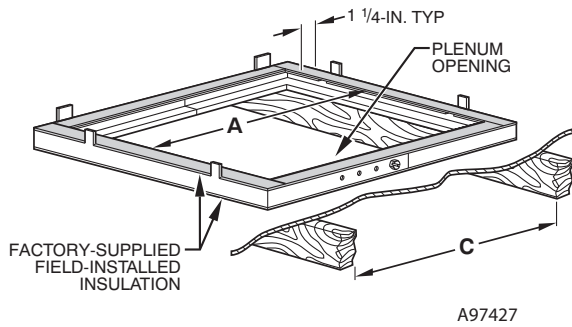
### COMBUSTION-AIR PIPE FOR NON-DIRECT (1-PIPE) VENT APPLICATION



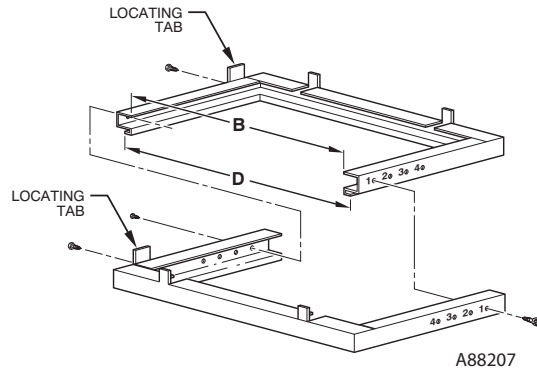
**NOTE:** See Installation Instructions for specific venting configurations.

A12376

## DOWNFLOW SUBBASE



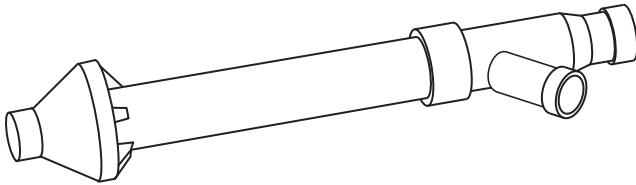
Assembled



Disassembled

| DIMENSIONS (IN. / MM) |                                                         |                 |          |               |              |                               |
|-----------------------|---------------------------------------------------------|-----------------|----------|---------------|--------------|-------------------------------|
| FURNACE CASING WIDTH  | FURNACE IN DOWNFLOW APPLICATION                         | PLENUM OPENING* |          | FLOOR OPENING |              | HOLE NO. FOR WIDTH ADJUSTMENT |
|                       |                                                         | A               | B        | C             | D            |                               |
| 14–3/16 (360)         | Furnace with or without Cased Coil Assembly or Coil Box | 11–3/16 (322)   | 19 (483) | 13–7/16 (341) | 20–5/8 (600) | 4                             |
| 17–1/2 (445)          | Furnace with or without Cased Coil Assembly or Coil Box | 15–1/8 (384)    | 19 (483) | 16–3/4 (426)  | 20–5/8 (600) | 3                             |
| 21 (533)              | Furnace with or without Cased Coil Assembly or Coil Box | 18–5/8 (396)    | 19 (483) | 20–1/4 (514)  | 20–5/8 (600) | 2                             |
| 24–1/2 (622)          | Furnace with or without Cased Coil Assembly or Coil Box | 22–1/8 (562)    | 19 (483) | 23–3/4 (603)  | 20–5/8 (600) | 1                             |

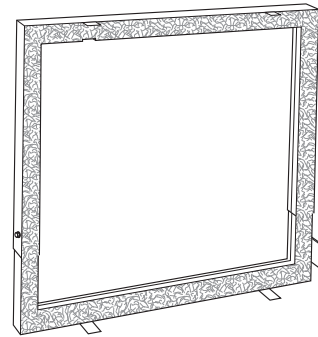
\*The plenum should be constructed 1/4–in. (6 mm) smaller in width and depth than the plenum dimensions shown above.



Concentric Vent Kit

A93086

A concentric vent kit allows vent and combustion-air pipes to terminate through a single exit in a roof or side wall. One pipe runs inside the other allowing venting through the inner pipe and combustion air to be drawn in through the outer pipe.

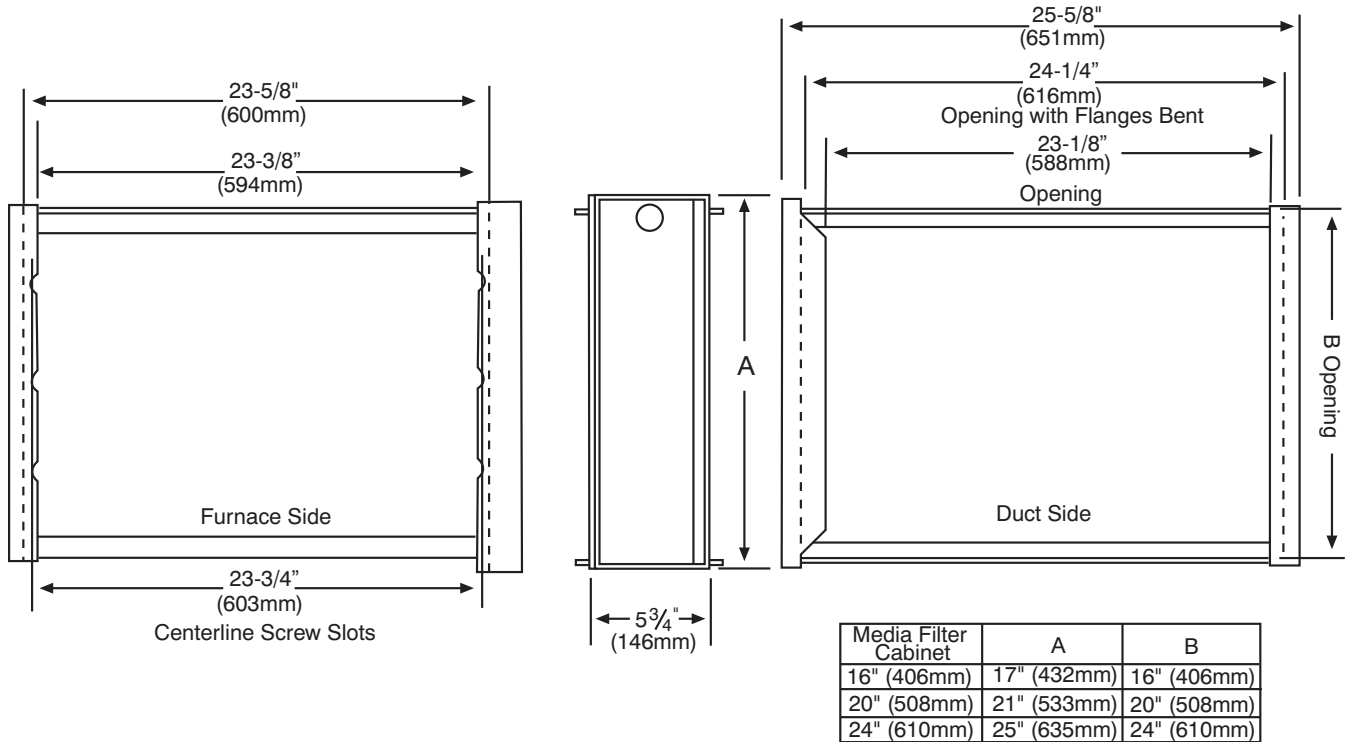


Downflow Subbase

A88202

One base fits all furnace sizes. The base is designed to be installed between the furnace and a combustible floor when no coil box is used or when a coil box other than a cased coil is used. It is CSA design certified for use with a branded furnaces when installed in downflow applications.

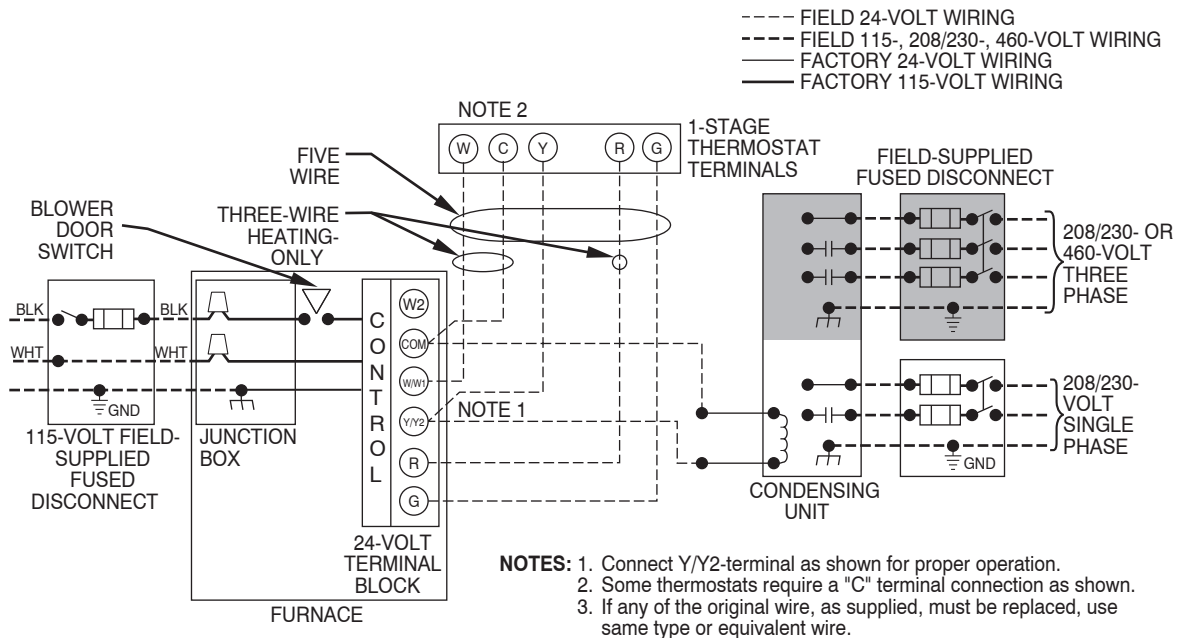
## MEDIA FILTER CABINET (OPTIONAL ACCESSORY)



NOTE: Media cabinet is matched to the bottom opening on furnace. May also be used for side return.

A12428

## TYPICAL WIRING SCHEMATIC

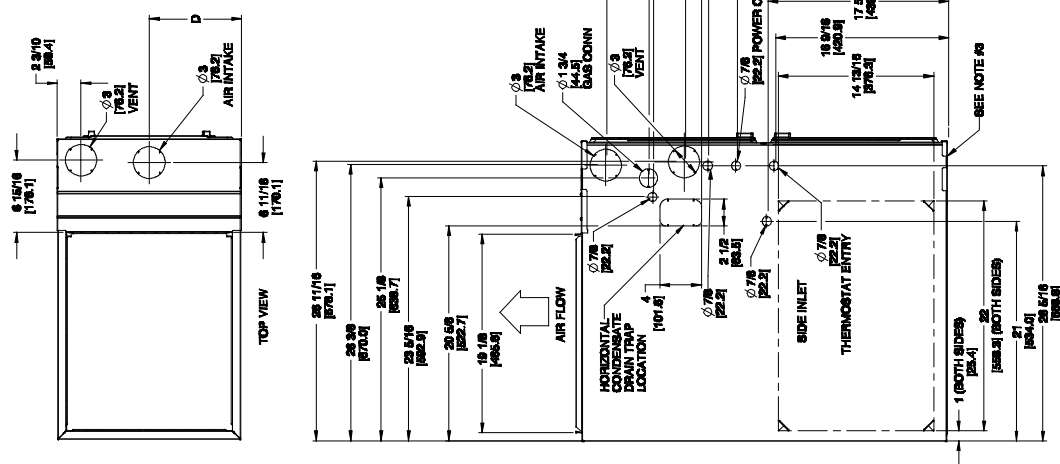


A11401

# DIMENSIONAL DRAWING

## NOTES:

1. Doors may vary by model.
2. Minimum return-air openings at furnace, based on metal duct. If flex duct is used, see flex duct manufacturer's recommendations for equivalent diameters.
  - a. For 800 CFM-16-in. (406 mm) round or 14 1/2 x 12-in. (368 x 305 mm) rectangle.
  - b. For 1200 CFM-20-in. (508 mm) round or 14 1/2 x 19 1/2-in. (368 x 495 mm) rectangle.
  - c. For 1600 CFM-22-in. (559 mm) round or 14 1/2 x 22 1/16-in. (368 x 560 mm) rectangle.
- d. Return air above 1800 CFM at 0.5 in. w.c. ESP on 24.5" casing, requires one of the following configurations: 2 sides, 1 side and a bottom or bottom only. See Air Delivery table in this document for specific use to allow for sufficient airflow to the furnace.
3. Vent and Combustion air pipes through blower compartment must use accessory "Vent Kit - Through the Cabinet". See accessory list for current part number.



A180203

| FURNACE SIZE | A             | B            | C                     | D            | SHIP WT.<br>LB (KG) |
|--------------|---------------|--------------|-----------------------|--------------|---------------------|
|              | CABINET WIDTH | OUTLET WIDTH | BOTTOM INLET<br>WIDTH | AIR INTAKE   |                     |
| 30040A       | 14-3/16 (361) | 12-1/2 (319) | 12-9/16 (322)         | 7-1/8 (181)  | 123 (55.8)          |
| 36040B       | 17-1/2 (445)  | 15-7/8 (403) | 16 (406)              | 8-3/4 (222)  | 133 (60.3)          |
| 36060A       | 14-3/16 (361) | 12-1/2 (319) | 12-9/16 (322)         | 7-1/8 (181)  | 132 (59.9)          |
| 42060B       | 17-1/2 (445)  | 15-7/8 (403) | 16 (406)              | 8-3/4 (222)  | 139 (63.0)          |
| 48080B       | 17-1/2 (445)  | 15-7/8 (403) | 16 (406)              | 8-3/4 (222)  | 147 (66.7)          |
| 60080C       | 21 (533)      | 19-3/8 (492) | 19-1/2 (495)          | 10-1/2 (267) | 156 (70.7)          |
| 60100C       | 21 (533)      | 19-3/8 (492) | 19-1/2 (495)          | 10-1/2 (267) | 170 (77.1)          |
| 66120D       | 24-1/2 (622)  | 22-7/8 (581) | 23 (584)              | 12-1/4 (311) | 190 (86.2)          |

# GUIDE SPECIFICATIONS

## General

### System Description

Furnish a \_\_\_\_\_ 4-way multipoise gas-fired condensing furnace for use with natural gas or propane (factory-authorized conversion kit required for propane).

### Quality Assurance

Unit will be designed, tested and constructed to the current ANSI Z 21.47/CSA 2.3 design standard for gas-fired central furnaces.

Unit will be third party certified by CSA to the current ANSI Z 21.47/CSA 2.3 design standard for gas-fired central furnaces. Unit will carry the CSA Blue Star® and Blue Flame® labels. Unit efficiency testing will be performed per the current DOE test procedure as listed in the Federal Register.

Unit will be certified for capacity and efficiency and listed in the latest AHRI Consumer's Directory of Certified Efficiency Ratings.

Unit will carry the current Federal Trade Commission Energy Guide efficiency label.

### Delivery, Storage, and Handling

Unit will be shipped as single package only and is stored and handled per unit manufacturer's recommendations.

### Primary Heat Exchangers

Primary heat exchangers shall be 3-Pass corrosion-resistant aluminized steel of fold-and-crimp sectional design and applied operating under negative pressure.

### Secondary Heat Exchangers

Secondary heat exchangers shall be of a stainless steel flow-through of fin-and-tube design and applied operating under negative pressure.

### Controls

Controls shall include a micro-processor-based integrated electronic control board with at least 16 service troubleshooting codes displayed via diagnostic flashing LED light on the control, a self-test feature that checks all major functions of the furnace, and a replaceable automotive-type circuit protection fuse. Multiple operational settings available, including separate blower speeds for low heat, high heat, low cooling, high cooling and continuous fan. Continuous fan speed may be adjusted from the thermostat. Cooling airflow will be selectable between 325 to 400 CFM per ton of air conditioning. Features will also include temporary reduced airflow in the cooling mode for improved dehumidification when a T6-PRH is selected as the thermostat.

### Operating Characteristics

Heating capacity shall be \_\_\_\_\_ Btuh input; \_\_\_\_\_ Btuh output capacity.

Fuel Gas Efficiency shall be \_\_\_\_\_ AFUE.

Air delivery shall be \_\_\_\_\_ cfm minimum at 0.50 in. W.C. external static pressure.

Dimensions shall be: depth \_\_\_\_\_ in. (mm); width \_\_\_\_\_ in. (mm); height \_\_\_\_\_ in. (mm) (casing only).

Height shall be \_\_\_\_\_ in. (mm) with A/C coil and \_\_\_\_\_ in. (mm) overall with plenum.

### Electrical Requirements

Electrical supply shall be 115 volts, 60 Hz, single-phase (nominal). Minimum wire size shall be \_\_\_\_\_ AWG; maximum fuse size of HACR-type designated circuit breaker shall be \_\_\_\_\_ amps.

### Special Features

Refer to section of the product data identifying accessories and descriptions for specific features and available enhancements.

### Warranty (for inclusion by specifying engineer)

U.S. and Canada only. Warranty certificate available upon request.

### Equipment

#### Blower Wheel and ECM Blower Motor

Galvanized blower wheel shall be centrifugal type, statically and dynamically balanced. Blower motor of ECM type shall be permanently lubricated with sealed ball bearings, of \_\_\_\_\_ hp, and have infinitely variable speed from 600-1200 RPM operating only when motor inputs are provided. Blower motor shall be direct drive and soft mounted to the blower housing to reduce vibration transmission.

#### Filters

Furnace shall have reusable-type filters. Filter shall be \_\_\_\_\_ in. (mm) X \_\_\_\_\_ in. (mm). An accessory highly efficient Media Filter is available as an option. \_\_\_\_\_ Media Filter.

#### Casing

Casing shall be of .030 in. thickness minimum, pre-painted steel.

#### Draft Inducer Motor

Draft inducer motor shall be two-speed PSC design.