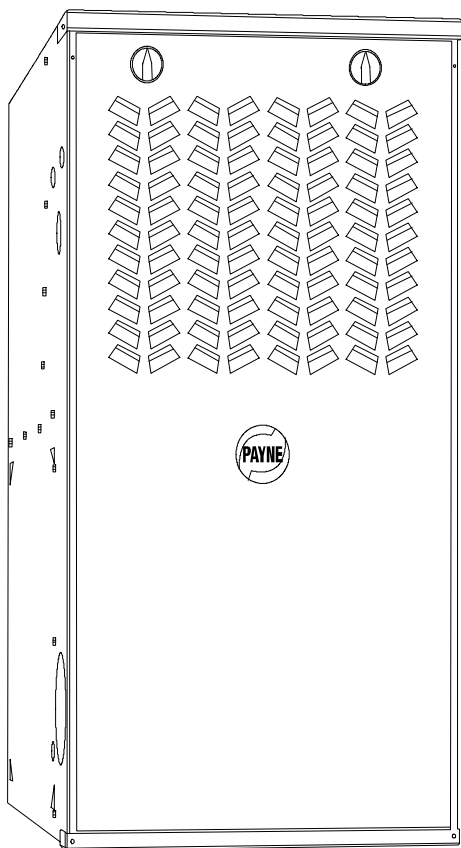




**PG80ESA/PG80ESL  
4-WAY MULTIPOISE  
NON-CONDENSING 33-1/3 IN. GAS FURNACE  
INPUT CAPACITIES: 45,000 THRU 155,000 BTUH**

## Product Data



A180283

### THE PG80ESA/PG80ESL GAS FURNACE

The PG80ESA/PG80ESL applications are easy with 4-way multipoise design, through-the-furnace downflow venting, 13 different venting options, and designed for easy service access. An inner blower door is provided for tighter sealing in sensitive applications. The PG80ESA furnaces are approved for use with natural or propane gas, and the PG80ESL - Low NOx units are designed for California installations and meet 40 ng/J NOx emissions. Can be installed in air quality management districts with a 40 ng/J NOx emissions requirement.

### PERFORMANCE

- LED diagnostics and self test feature
- Hot surface ignition
- Draft safeguard switch to ensure proper furnace venting
- Inner door for tighter sealing

### INSTALLATION FLEXIBILITY

- 4-way Multipoise furnace, 13 vent applications
- Dual fuel compatible (including 13.0 SEER Heat Pumps)
- All models are chimney friendly when used with accessory vent kit

### APPLICATIONS

- Compact design - only 33-1/3 in. (847 mm) tall
- Propane convertible with gas conversion accessory

### CERTIFICATION

- 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



Use of the AHRI Certified TM 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).

## SPECIFICATIONS

| UNIT SIZE                                     |                                   | 36045A                     | 36045B                | 36070A                | 36070B                | 48070C                 | 42090B                |
|-----------------------------------------------|-----------------------------------|----------------------------|-----------------------|-----------------------|-----------------------|------------------------|-----------------------|
| RATINGS AND PERFORMANCE                       |                                   |                            |                       |                       |                       |                        |                       |
| Input Btuh*                                   | All Standard                      | 44,000                     | 44,000                | 66,000                | 66,000                | 66,000                 | 88,000                |
|                                               | All Low NOx Upflow                |                            |                       |                       |                       |                        |                       |
| Nonweatherized ICS                            | All Low Nox Downflow/Horizontal   | 42,000                     | 42,000                | 63,000                | 63,000                | 63,000                 | 84,000                |
| Output Capacity (Btuh)†                       | All Standard                      | 36,000                     | 35,000                | 54,000                | 54,000                | 53,000                 | 71,000                |
|                                               | All Low NOx Upflow                |                            |                       |                       |                       |                        |                       |
| Nonweatherized ICS                            | All Low Nox Downflow/Horizontal   | 34,000                     | 34,000                | 51,000                | 51,000                | 51,000                 | 68,000                |
| AFUE‡                                         |                                   | 80.00                      | 80.00                 | 80.00                 | 80.00                 | 80.00                  | 80.00                 |
| Certified Temperature Rise Range – °F (°C)    |                                   | 30–60<br>(17–33)           | 30–60<br>(17–33)      | 30–60<br>(17–33)      | 35–65<br>(19–36)      | 25–55<br>(14–30)       | 40–70<br>(22–39)      |
| Certified External Static Pressure            | Heat/Cool                         | 0.10/0.50                  | 0.10/0.50             | 0.12/0.50             | 0.12/0.50             | 0.12/0.50              | 0.15/0.50             |
| Airflow CFM‡                                  | Heating                           | 710                        | 760                   | 982                   | 985                   | 1305                   | 1203                  |
|                                               | Cooling                           | 1080                       | 1215                  | 1005                  | 1005                  | 1545                   | 1210                  |
| ELECTRICAL                                    |                                   |                            |                       |                       |                       |                        |                       |
| Unit Volts–Hertz–Phase                        |                                   | 115–60–1                   |                       |                       |                       |                        |                       |
| Operating Voltage Range                       |                                   | Min–Max<br>104–127         |                       |                       |                       |                        |                       |
| Maximum Unit Amps                             |                                   | 5.6                        | 7.6                   | 5.6                   | 5.6                   | 10.0                   | 8.3                   |
| Unit Ampacity                                 |                                   | 7.8                        | 10.3                  | 7.8                   | 7.8                   | 13.3                   | 11.0                  |
| Maximum Wire Length (Measure 1 Way in Ft (M)) |                                   | 47 (14.3)                  | 36 (11)               | 47 (14.3)             | 47 (14.3)             | 27 (8.2)               | 33 (10.1)             |
| Minimum Wire Size                             |                                   | 14                         |                       |                       |                       |                        |                       |
| Maximum Fuse or Ckt Bkr Size (Amps)**         |                                   | 15                         |                       |                       |                       |                        |                       |
| Transformer (24v)                             |                                   | 40va                       |                       |                       |                       |                        |                       |
| External Control                              | Heating                           | 12va                       |                       |                       |                       |                        |                       |
| Power Available                               | Cooling                           | 35va                       |                       |                       |                       |                        |                       |
| Air Conditioning Blower Relay                 |                                   | Standard                   |                       |                       |                       |                        |                       |
| CONTROLS                                      |                                   |                            |                       |                       |                       |                        |                       |
| Heating Blower Control                        |                                   | Solid State Time Operation |                       |                       |                       |                        |                       |
| Burners (Monoport)                            |                                   | 2                          | 2                     | 3                     | 3                     | 3                      | 4                     |
| Gas Connection Size                           |                                   | 1/2in. NPT                 |                       |                       |                       |                        |                       |
| GAS CONTROLS                                  |                                   |                            |                       |                       |                       |                        |                       |
| Gas Valve (Redundant)                         | Mfr.                              | WhiteRodgers               |                       |                       |                       |                        |                       |
|                                               | Min. inlet pressure<br>(In. W.C.) | 4.5 (Natural Gas)          |                       |                       |                       |                        |                       |
|                                               | Max. inlet pressure<br>(In. W.C.) | 13.6 (Natural Gas)         |                       |                       |                       |                        |                       |
| Ignition Device                               |                                   | Hot Surface                |                       |                       |                       |                        |                       |
| Factory installed orifice                     |                                   | Size 43                    |                       |                       |                       |                        |                       |
| BLOWER DATA                                   |                                   |                            |                       |                       |                       |                        |                       |
| Direct Drive Motor HP                         |                                   | 1/3                        | 1/2                   | 1/3                   | 3/4                   | 3/4                    | 1/2                   |
| Motor Full Load Amps                          |                                   | 4.4                        | 6.4                   | 4.4                   | 8.8                   | 8.8                    | 6.8                   |
| RPM (Nominal)Speeds                           |                                   | 1050–5                     | 1050–5                | 1050–5                | 1050–5                | 1050–5                 | 1050–5                |
| Blower Wheel Diameter x Width – In. (mm)      |                                   | 10 x 6<br>(254 x 152)      | 10 x 8<br>(254 x 203) | 11 x 8<br>(279 x 203) | 11 x 8<br>(279 x 203) | 10 x 10<br>(254 x 254) | 11 x 8<br>(279 x 203) |

\* Gas input ratings are certified for elevations to 2000 ft. (610 M). In USA, For elevations above 2000 ft (610 M), reduce ratings 4 percent for each 1000 ft (305 M) above sea level. Refer to National Fuel Gas Code NFPA 54/ANSI Z223.1 Table F.4 or furnace installation instructions.

† Capacity in accordance with U.S. Government DOE test procedures.

‡ Airflow shown is for bottom only return-air supply for the as-shipped speed tap. For air delivery above 1800 CFM, see Air Delivery table for other options. A filter is required for each return-air supply. An airflow reduction of up to 7 percent may occur when using the factory-specified 4-5/16-in. (110 mm) wide, high efficiency media filter.

\*\* Time–delay type is recommended.

ICS Isolated Combustion System

## SPECIFICATIONS (continued)

| UNIT SIZE                                     |                                    | 48090C                    | 60090C                 | 60090D                 | 60110C                 | 60110D                 | 60135D                 | 60155D                 |
|-----------------------------------------------|------------------------------------|---------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| RATINGS AND PERFORMANCE                       |                                    |                           |                        |                        |                        |                        |                        |                        |
| Input Btuh*                                   | All Standard<br>All Low NOx Upflow | 88,000                    | 88,000                 | 88,000                 | 110,000                | 110,000                | 132,000                | 154,000                |
| Nonweatherized ICS                            | All Low Nox<br>Downflow/Horizontal | 84,000                    | 84,000                 | 84,000                 | 105,000                | 105,000                | 126,000                | 147,000                |
| Output Capacity (Btuh)†                       | All Standard<br>All Low NOx Upflow | 72,000                    | 71,000                 | 72,000                 | 90,000                 | 90,000                 | 107,000                | 125,000                |
| Nonweatherized ICS                            | All Low Nox<br>Downflow/Horizontal | 68,000                    | 68,000                 | 69,000                 | 85,000                 | 86,000                 | 102,000                | 119,000                |
| AFUE†                                         |                                    | 80.00                     | 80.00                  | 80.00                  | 80.00                  | 80.00                  | 80.00                  | 80.00                  |
| Certified Temperature Rise Range °F (°C)      |                                    | 35–65<br>(19–36)          | 25–55<br>(14–30)       | 30–60<br>(17–33)       | 30–60<br>(17–33)       | 30–60<br>(17–33)       | 40–70<br>(22–39)       | 45–75<br>(25–41)       |
| Certified External Static Pressure            | Heat/Cool                          | 0.15/0.50                 | 0.15/0.50              | 0.15/0.50              | 0.20/0.50              | 0.20/0.80              | 0.20/0.50              | 0.20/0.50              |
| Airflow CFM‡                                  | Heating                            | 1418                      | 1650                   | 1565                   | 1890                   | 1930                   | 1760                   | 1995                   |
|                                               | Cooling                            | 1445                      | 1980                   | 1960                   | 2040                   | 2005                   | 1810                   | 1965                   |
| ELECTRICAL                                    |                                    |                           |                        |                        |                        |                        |                        |                        |
| Unit Volts – Hertz – Phase                    |                                    | 115 – 60 – 1              |                        |                        |                        |                        |                        |                        |
| Operating Voltage Range                       |                                    | 104 – 127                 |                        |                        |                        |                        |                        |                        |
| Maximum Unit Amps                             |                                    | 8.3                       | 13                     | 10.3                   | 13.4                   | 10.7                   | 10.7                   | 10.7                   |
| Unit Ampacity                                 |                                    | 11                        | 16.90                  | 13.50                  | 17.40                  | 14                     | 14                     | 14                     |
| Maximum Wire Length (Measure 1 Way in Ft (M)) |                                    | 33 (10.1)                 | 34 (10.4)              | 27 (8.2)               | 33 (10.1)              | 26 (7.9)               | 26 (7.9)               | 26 (7.9)               |
| Minimum Wire Size                             |                                    | 14                        | 12                     | 14                     | 12                     | 14                     | 14                     | 14                     |
| Maximum Fuse or Ckt Bkr Size (Amps)**         |                                    | 15                        | 20                     | 20                     | 15                     | 20                     | 20                     | 20                     |
| Transformer (24v)                             |                                    | 40va                      |                        |                        |                        |                        |                        |                        |
| External Control                              |                                    | Heating<br>12va           |                        |                        |                        |                        |                        |                        |
| Power Available                               |                                    | Cooling<br>35va           |                        |                        |                        |                        |                        |                        |
| Air Conditioning Blower Relay                 |                                    | Standard                  |                        |                        |                        |                        |                        |                        |
| CONTROLS                                      |                                    |                           |                        |                        |                        |                        |                        |                        |
| Heating Blower Control                        |                                    | SolidState Time Operation |                        |                        |                        |                        |                        |                        |
| Burners (Monoport)                            |                                    | 4                         | 4                      | 4                      | 5                      | 5                      | 6                      | 7                      |
| Gas Connection Size                           |                                    | 1/2in. NPT                |                        |                        |                        |                        |                        |                        |
| GAS CONTROLS                                  |                                    |                           |                        |                        |                        |                        |                        |                        |
| Gas Valve (Redun-<br>dant)                    | Mfr.                               | WhiteRodgers              |                        |                        |                        |                        |                        |                        |
|                                               | Min. inlet pressure<br>(In. W.C.)  | 4.5 (Natural Gas)         |                        |                        |                        |                        |                        |                        |
|                                               | Max. inlet pressure<br>(In. W.C.)  | 13.6 (Natural Gas)        |                        |                        |                        |                        |                        |                        |
| Ignition Device                               |                                    | Hot Surface               |                        |                        |                        |                        |                        |                        |
| Factory installed orifice                     |                                    | Size 43                   |                        |                        |                        |                        |                        |                        |
| BLOWER DATA                                   |                                    |                           |                        |                        |                        |                        |                        |                        |
| Direct Drive Motor HP                         |                                    | 1/2                       | 1                      | 3/4                    | 1                      | 3/4                    | 3/4                    | 3/4                    |
| Motor Full Load Amps                          |                                    | 6.80                      | 11.50                  | 8.80                   | 11.50                  | 8.80                   | 8.80                   | 8.80                   |
| RPM (Nominal)Speeds                           |                                    | 1050 – 5                  | 1050 – 5               | 1050 – 5               | 1050 – 5               | 1050 – 5               | 1050 – 5               | 1050 – 5               |
| Blower Wheel Diameter x Width – In. (mm)      |                                    | 10 x 10<br>(254 x 254)    | 11 x 11<br>(279 x 279) | 11 x 11<br>(279 x 279) | 11 x 11<br>(279 x 279) | 11 x 11<br>(279 x 279) | 11 x 11<br>(279 x 279) | 11 x 11<br>(279 x 279) |

\* Gas input ratings are certified for elevations to 2000 ft. (610 M). In USA, for elevations above 2000 ft. (610 M), reduce ratings 4 percent for each 1000 ft. (305 M) above sea level. Refer to National Fuel Gas Code NFPA 54/ANSI Z223.1 Table F.4 or furnace installation instructions.

† Capacity in accordance with U.S. Government DOE test procedures.

‡ Airflow shown is for bottom only return-air supply for the as-shipped speed tap. For air delivery above 1800 CFM, see Air Delivery table for other options. A filter is required for each return-air supply. An airflow reduction of up to 7 percent may occur when using the factory-specified 4-5/16-in. (110 mm) wide, high efficiency media filter.

\*\* Time–delay type is recommended.

ICS Isolated Combustion System

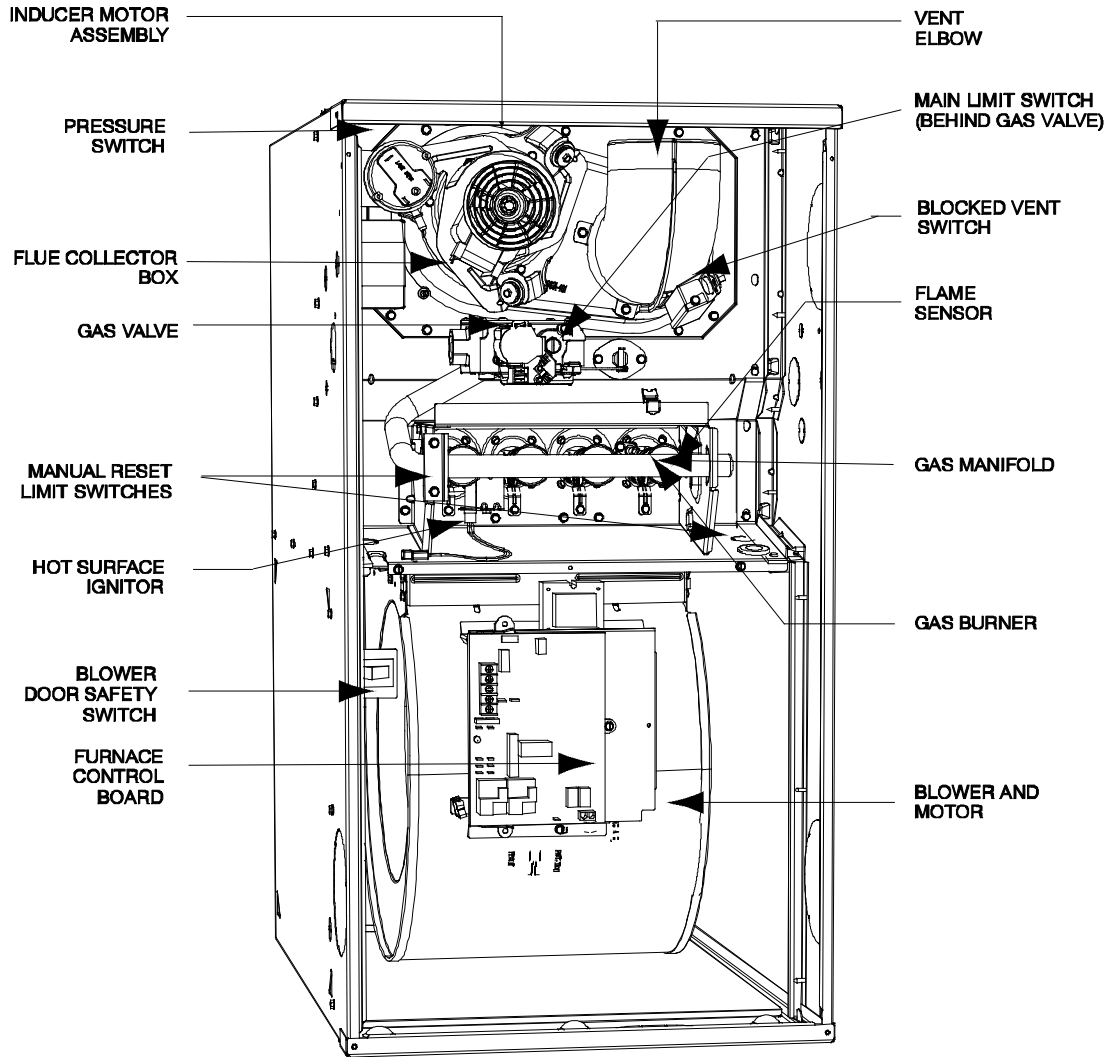
MODEL NUMBER NOMENCLATURE

| 1                     | 2               | 3, 4                                                                                               | 5                                                                                                                                                         | 6                                                   | 7                                                | 8                 | 9 - 10                                                                                                                              | 11, 12, 13                                                                                | 14                                               | 15                |
|-----------------------|-----------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------|
| Brand Identifier<br>P | Product<br>G    | Base Effy.<br>92                                                                                   | Motor<br>E                                                                                                                                                | Heating Stages<br>S                                 | NOx Level<br>A                                   | Major Series<br>A | Cooling Capacity<br>36                                                                                                              | Heating Input<br>040                                                                      | Width<br>A                                       | Minor Series<br>A |
|                       |                 |                                                                                                    |                                                                                                                                                           |                                                     |                                                  |                   |                                                                                                                                     |                                                                                           |                                                  |                   |
| P = Payne             |                 | 80 = 80% AFUE<br>92 = 92% AFUE<br>95 = 95% AFUE<br>96 = 96% AFUE<br>97 = 97% AFUE<br>98 = 98% AFUE | C = Comm. Variable-Speed<br>Constant Airflow (VCA) ECM<br>E= Fixed-Speeds<br>Constant Torque (FCT) ECM<br>V = Variable-Speed<br>Constant Torque (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>—  |
|                       | G = Gas Furnace |                                                                                                    |                                                                                                                                                           |                                                     |                                                  |                   |                                                                                                                                     |                                                                                           |                                                  |                   |

A190067

**For California Residents:**  
For installation in SCAQMD only: This furnace does not meet the SCAQMD Rule 1111 14 ng/J NOx emission limit, and thus is subject to a mitigation fee of up to \$450. This furnace is not eligible for the Clean Air Furnace Rebate Program: [www.CleanAirFurnaceRebate.com](http://www.CleanAirFurnaceRebate.com)

FURNACE COMPONENTS



A190086

**NOTE:** The furnaces are factory shipped for use with natural gas. These furnaces can be field-converted for propane gas with a factory-authorized and listed accessory conversion kit.

## ACCESSORIES

| DESCRIPTION                           | PART NO.     | 36045A | 36045B | 36070A | 36070B | 48070C | 42090B |
|---------------------------------------|--------------|--------|--------|--------|--------|--------|--------|
| External Bottom Return Filter Rack    | KGBFR0401B14 | X      |        | X      |        |        |        |
|                                       | KGBFR0501B17 |        | X      |        | X      |        | X      |
|                                       | KGBFR0601B21 |        |        |        |        | X      |        |
| Unframed Filter 3/4-in. (19 mm)       | KGAWF1306UFR | X      | X      | X      | X      |        | X      |
|                                       | KGAWF1406UFR |        |        |        |        | X      |        |
| Flue Extension                        | KGAFE0112UPH | X      | X      | X      | X      | X      | X      |
| Combustible Floor Base                | KGASB0201ALL | X      | X      | X      | X      | X      | X      |
| Downflow Vent Guard                   | KGBVG0101DFG | X      | X      | X      | X      | X      | X      |
| Vent Extension Kit                    | KGAVE0101DNH | X      | X      | X      | X      | X      | X      |
| Chimney Adapter Kit                   | KGACA02014FC | X      | X      | X      | X      | X      | X      |
|                                       | KGACA02015FC |        |        |        |        |        |        |
| Natural-to-Propane Conversion Kit*    | AGAGC8NPS01A | X      | X      | X      | X      | X      | X      |
| Propane-to-Natural Conversion Kit     | AGAGC8PNS01A | X      | X      | X      | X      | X      | X      |
| Blower Speed Tap Jumper Kit (10 pack) | AGABLRJMP10A | X      | X      | X      | X      | X      | X      |

\* Factory-authorized and field installed. Fuel conversion kits are CSA (formerly AGA/CGA) recognized.  
X = Accessory

| DESCRIPTION                           | PART NO.     | 48090C | 60090C | 60090D | 60110C | 60110D | 60135D | 60155D |
|---------------------------------------|--------------|--------|--------|--------|--------|--------|--------|--------|
| External Bottom Return Filter Rack    | KGBFR0601B21 | X      | X      |        | X      |        |        |        |
|                                       | KGBFR0701B24 |        |        | X      |        | X      | X      | X      |
|                                       | KGAWF1406UFR | X      | X      |        | X      |        |        |        |
|                                       | KGAWF1506UFR |        |        | X      |        | X      | X      | X      |
| Unframed Filter 3/4-in. (19 mm)       | KGAWF1406UFR | X      | X      |        | X      |        |        |        |
|                                       | KGAWF1506UFR |        |        | X      |        | X      | X      | X      |
| Flue Extension                        | KGAFE0112UPH | X      | X      | X      | X      | X      | X      | X      |
| Combustible Floor Base                | KGASB0201ALL | X      | X      | X      | X      | X      | X      | X      |
| Downflow Vent Guard                   | KGBVG0101DFG | X      | X      | X      | X      | X      | X      | X      |
| Vent Extension Kit                    | KGAVE0101DNH | X      | X      | X      | X      | X      | X      | X      |
| Chimney Adapter Kit                   | KGACA02014FC | X      | X      | X      | X      | X      |        |        |
|                                       | KGACA02015FC |        |        |        |        |        | X      | X      |
| Natural-to-Propane Conversion Kit*    | AGAGC8NPS01A | X      | X      | X      | X      | X      | X      | X      |
| Propane-to-Natural Conversion Kit     | AGAGC8PNS01A | X      | X      | X      | X      | X      | X      | X      |
| Blower Speed Tap Jumper Kit (10 pack) | AGABLRJMP10A | X      | X      | X      | X      | X      | X      | X      |

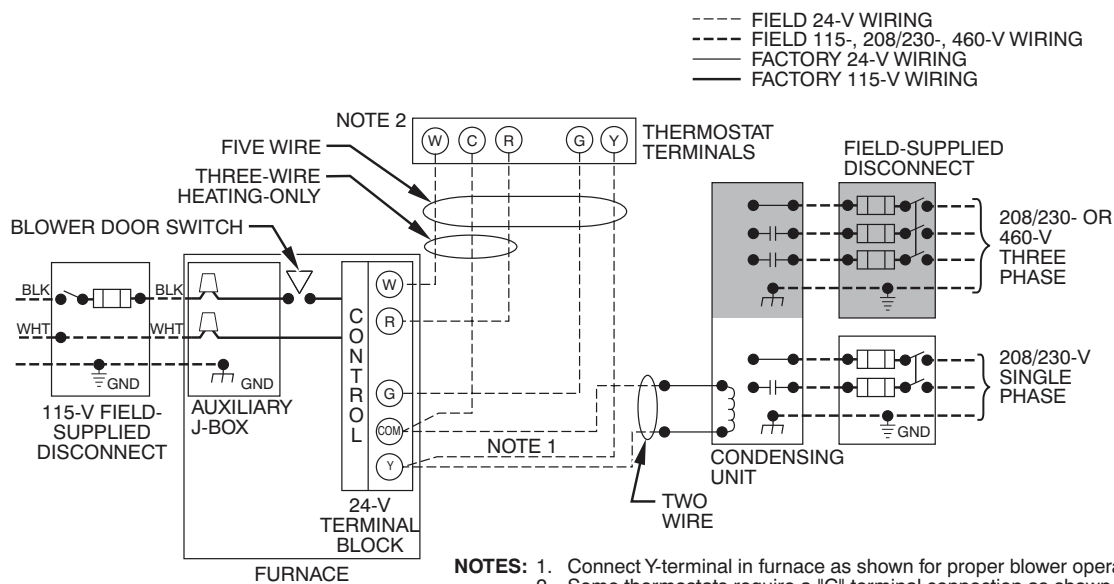
\* Factory-authorized and field installed. Fuel conversion kits are CSA (formerly AGA/CGA) recognized.  
X = Accessory

| ORIFICES    |           |                                                                           |
|-------------|-----------|---------------------------------------------------------------------------|
| Gas Orifice | LH32DB207 | See Installation Instructions for model, altitude, and heat value usages. |
|             | LH32DB202 |                                                                           |
|             | LH32DB200 |                                                                           |
|             | LH32DB205 |                                                                           |
|             | LH32DB208 |                                                                           |
|             | LH32DB078 |                                                                           |
|             | LH32DB076 |                                                                           |
|             | LH32DB203 |                                                                           |
|             | LH32DB201 |                                                                           |
|             | LH32DB206 |                                                                           |
|             | LH32DB209 |                                                                           |
|             | LH32DB210 |                                                                           |

## ACCESSORIES (continued)

| 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   |     |     |

## TYPICAL WIRING SCHEMATIC



- NOTES:** 1. Connect Y-terminal in furnace as shown for proper blower operation.  
 2. Some thermostats require a "C" terminal connection as shown.  
 3. If any of the original wire, as supplied, must be replaced, use same type or equivalent wire.

Representative drawing only, some models may vary.

A190079

# AIR DELIVERY - CFM (With Filter)

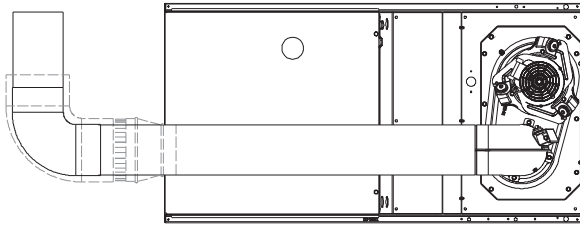
| Furnace | Wire Lead Color | Function                             | Test Airflow Delivery @ Various External Static Pressures |      |      |      |      |      |      |      |      |      |
|---------|-----------------|--------------------------------------|-----------------------------------------------------------|------|------|------|------|------|------|------|------|------|
|         |                 |                                      | 0.1                                                       | 0.2  | 0.3  | 0.4  | 0.5  | 0.6  | 0.7  | 0.8  | 0.9  | 1    |
| 36045A  | Gray            | Cooling. Do not use for heating.     | 1230                                                      | 1190 | 1155 | 1120 | 1080 | 1045 | 1010 | 975  | 935  | 895  |
|         | Yellow          | Alt Cooling or alt Heating           | 980                                                       | 945  | 920  | 890  | 855  | 815  | 770  | 735  | 690  | 645  |
|         | Orange          | Alt Cooling or alt Heating           | 770                                                       | 720  | 685  | 640  | 600  | 560  | 520  | 475  | 430  | 385  |
|         | Blue            | Heating or alt Cooling               | 710                                                       | 660  | 620  | 580  | 540  | 490  | 455  | 415  | 375  | 335  |
|         | Red             | Alt Cooling. Do not use for heating. | 600                                                       | 540  | 500  | 455  | 415  | 385  | 345  | 305  | 235  | —    |
| 36045B  | Gray            | Cooling. Do not use for heating.     | 1370                                                      | 1335 | 1295 | 1255 | 1215 | 1175 | 1135 | 1095 | 1055 | 1020 |
|         | Yellow          | Alt Cooling or alt Heating           | 1130                                                      | 1085 | 1040 | 995  | 955  | 910  | 865  | 825  | 780  | 730  |
|         | Orange          | Alt Cooling or alt Heating           | 930                                                       | 885  | 835  | 795  | 745  | 700  | 655  | 600  | 545  | 495  |
|         | Blue            | Heating or alt Cooling               | 760                                                       | 720  | 670  | 625  | 580  | 515  | 460  | 410  | 355  | 300  |
|         | Red             | Alt Cooling. Do not use for heating. | 610                                                       | 500  | 445  | 375  | 320  | 260  | 200  | 135  | —    | —    |
| 36070A  | Gray            | Cooling. Do not use for heating.     | 1205                                                      | 1170 | 1143 | 1105 | 1070 | 1035 | 1000 | 960  | 925  | 885  |
|         | Blue            | Heating or alt Cooling               | 1095                                                      | 1060 | 1030 | 995  | 960  | 925  | 885  | 840  | 800  | 735  |
|         | Yellow          | Alt Cooling or alt Heating           | 920                                                       | 880  | 845  | 805  | 765  | 730  | 685  | 620  | 560  | 510  |
|         | Orange          | Alt Cooling. Do not use for heating. | 715                                                       | 650  | 610  | 575  | 520  | 465  | 410  | 380  | 305  | 245  |
|         | Red             | Alt Cooling. Do not use for heating. | 635                                                       | 490  | 445  | 375  | 315  | 270  | 205  | 230  | 190  | 140  |
| 36070B  | Gray            | Cooling. Do not use for heating.     | 1185                                                      | 1140 | 1095 | 1055 | 1005 | 960  | 915  | 865  | 820  | 780  |
|         | Yellow          | Alt Cooling or alt Heating           | 1000                                                      | 940  | 895  | 850  | 800  | 750  | 695  | 650  | 600  | 555  |
|         | Blue            | Heating or alt Cooling               | 990                                                       | 935  | 895  | 845  | 790  | 740  | 690  | 640  | 590  | 535  |
|         | Orange          | Alt Cooling or alt Heating           | 855                                                       | 775  | 720  | 660  | 605  | 560  | 495  | 435  | 385  | 335  |
|         | Red             | Alt Cooling. Do not use for heating. | 860                                                       | 685  | 515  | 445  | 385  | 340  | 275  | 205  | —    | —    |
| 48070C  | Gray            | Cooling. Do not use for heating.     | 1735                                                      | 1685 | 1640 | 1595 | 1545 | 1495 | 1450 | 1405 | 1360 | 1310 |
|         | Yellow          | Alt Cooling or alt Heating           | 1480                                                      | 1435 | 1395 | 1340 | 1290 | 1240 | 1190 | 1135 | 1085 | 1030 |
|         | Blue            | Heating or alt Cooling               | 1315                                                      | 1275 | 1225 | 1180 | 1135 | 1085 | 1030 | 975  | 915  | 860  |
|         | Orange          | Alt Cooling or alt Heating           | 1135                                                      | 1080 | 1030 | 985  | 935  | 885  | 835  | 770  | 705  | 645  |
|         | Red             | Alt Cooling. Do not use for heating. | 980                                                       | 930  | 875  | 820  | 775  | 715  | 665  | 595  | 530  | 455  |
| 42090B  | Gray            | Cooling. Do not use for heating.     | 1355                                                      | 1320 | 1285 | 1245 | 1210 | 1165 | 1125 | 1080 | 1025 | 815  |
|         | Yellow          | Alt Cooling or alt Heating           | 1295                                                      | 1255 | 1220 | 1185 | 1140 | 1100 | 1055 | 1005 | 955  | 815  |
|         | Blue            | Heating or alt Cooling               | 1220                                                      | 1185 | 1150 | 1105 | 1065 | 1025 | 975  | 915  | 840  | 740  |
|         | Orange          | Alt Cooling or alt Heating           | 1030                                                      | 985  | 940  | 900  | 845  | 790  | 715  | 655  | 590  | 535  |
|         | Red             | Alt Cooling. Do not use for heating. | 945                                                       | 905  | 855  | 800  | 750  | 670  | 600  | 540  | 490  | 435  |
| 48090C  | Gray            | Cooling. Do not use for heating.     | 1625                                                      | 1580 | 1535 | 1490 | 1445 | 1395 | 1340 | 1260 | 1135 | 995  |
|         | Yellow          | Alt Cooling or alt Heating           | 1425                                                      | 1380 | 1335 | 1290 | 1235 | 1185 | 1125 | 1075 | 1020 | 640  |
|         | Blue            | Heating or alt Cooling               | 1440                                                      | 1395 | 1350 | 1305 | 1255 | 1200 | 1145 | 1090 | 1040 | 950  |
|         | Orange          | Alt Cooling or alt Heating           | 1260                                                      | 1210 | 1160 | 1105 | 1050 | 990  | 935  | 880  | 820  | 755  |
|         | Red             | Alt Cooling. Do not use for heating. | 1095                                                      | 1040 | 980  | 905  | 845  | 780  | 720  | 650  | 585  | 520  |
| 60090C  | Gray            | Cooling. Do not use for heating.     | 2180                                                      | 2130 | 2080 | 2030 | 1980 | 1925 | 1870 | 1805 | 1745 | 1680 |
|         | Yellow          | Alt Cooling or alt Heating           | 1900                                                      | 1845 | 1795 | 1740 | 1685 | 1635 | 1570 | 1500 | 1435 | 1375 |
|         | Blue            | Heating or alt Cooling               | 1685                                                      | 1620 | 1565 | 1505 | 1455 | 1385 | 1320 | 1260 | 1200 | 1140 |
|         | Orange          | Alt Cooling or alt Heating           | 1390                                                      | 1315 | 1240 | 1175 | 1095 | 1030 | 970  | 900  | 825  | 760  |
|         | Red             | Alt Cooling. Do not use for heating. | 1240                                                      | 1155 | 1075 | 990  | 915  | 835  | 765  | 690  | 615  | 555  |
| 60090D  | Gray            | Cooling. Do not use for heating.     | 2190                                                      | 2135 | 2075 | 2015 | 1960 | 1900 | 1835 | 1775 | 1705 | 1630 |
|         | Yellow          | Alt Cooling or alt Heating           | 1870                                                      | 1810 | 1745 | 1685 | 1625 | 1565 | 1495 | 1420 | 1345 | 1280 |
|         | Blue            | Heating or alt Cooling               | 1580                                                      | 1510 | 1445 | 1385 | 1320 | 1240 | 1175 | 1115 | 1050 | 970  |
|         | Orange          | Alt Cooling or alt Heating           | 1305                                                      | 1220 | 1160 | 1075 | 1000 | 930  | 865  | 770  | 690  | 610  |
|         | Red             | Alt Cooling. Do not use for heating. | 1210                                                      | 1075 | 1000 | 915  | 845  | 765  | 675  | 595  | 515  | 425  |
| 60110C  | Gray            | Cooling. Do not use for heating.     | 2255                                                      | 2205 | 2150 | 2100 | 2040 | 1985 | 1920 | 1835 | 1735 | 1615 |
|         | Blue            | Heating or alt Cooling               | 1945                                                      | 1890 | 1830 | 1770 | 1715 | 1655 | 1600 | 1545 | 1480 | 1430 |
|         | Yellow          | Alt Cooling or alt Heating           | 1600                                                      | 1525 | 1465 | 1400 | 1335 | 1275 | 1210 | 1150 | 1080 | 1015 |
|         | Orange          | Alt Cooling. Do not use for heating. | 1420                                                      | 1340 | 1280 | 1200 | 1140 | 1065 | 1005 | 925  | 865  | 790  |
|         | Red             | Alt Cooling. Do not use for heating. | 1280                                                      | 1205 | 1140 | 1055 | 990  | 910  | 840  | 760  | 695  | 630  |
| 60110D  | Gray            | Cooling. Do not use for heating.     | 2250                                                      | 2190 | 2130 | 2070 | 2005 | 1950 | 1885 | 1820 | 1755 | 1685 |
|         | Blue            | Heating or alt Cooling               | 1995                                                      | 1930 | 1865 | 1800 | 1740 | 1670 | 1605 | 1535 | 1465 | 1400 |
|         | Yellow          | Alt Cooling. Do not use for heating. | 1540                                                      | 1460 | 1385 | 1305 | 1235 | 1165 | 1095 | 1035 | 955  | 890  |
|         | Orange          | Alt Cooling or alt Heating           | 1345                                                      | 1195 | 1135 | 1055 | 980  | 920  | 845  | 770  | 695  | 620  |
|         | Red             | Alt Cooling. Do not use for heating. | 1335                                                      | 1075 | 965  | 890  | 820  | 735  | 660  | 580  | 505  | 440  |
| 60135D  | Gray            | Cooling. Do not use for heating.     | 2065                                                      | 2005 | 1940 | 1875 | 1810 | 1740 | 1670 | 1600 | 1530 | 1470 |
|         | Blue            | Heating or alt Cooling               | 1825                                                      | 1760 | 1695 | 1630 | 1560 | 1490 | 1420 | 1350 | 1275 | 1205 |
|         | Yellow          | Alt Cooling or alt Heating           | 1760                                                      | 1690 | 1625 | 1555 | 1485 | 1415 | 1345 | 1275 | 1200 | 1130 |
|         | Orange          | Alt Cooling. Do not use for heating. | 1620                                                      | 1550 | 1480 | 1405 | 1335 | 1260 | 1195 | 1130 | 1065 | 995  |
|         | Red             | Alt Cooling. Do not use for heating. | 1325                                                      | 1260 | 1185 | 1100 | 1025 | 955  | 885  | 805  | 735  | 670  |
| 60155D  | Gray            | Cooling. Do not use for heating.     | 2205                                                      | 2150 | 2090 | 2030 | 1965 | 1905 | 1840 | 1780 | 1710 | 1645 |
|         | Blue            | Heating or alt Cooling               | 2055                                                      | 1995 | 1935 | 1875 | 1810 | 1750 | 1690 | 1615 | 1540 | 1460 |
|         | Yellow          | Alt Cooling or alt Heating           | 1860                                                      | 1795 | 1730 | 1670 | 1605 | 1540 | 1470 | 1395 | 1320 | 1250 |
|         | Orange          | Alt Cooling. Do not use for heating. | 1495                                                      | 1430 | 1355 | 1285 | 1210 | 1130 | 1065 | 995  | 930  | 850  |
|         | Red             | Alt Cooling. Do not use for heating. | 1295                                                      | 1085 | 1000 | 910  | 835  | 765  | 670  | 600  | 530  | 465  |

1. A filter is required for each return—air inlet. Airflow performance included 3/4-in. (19 mm) washable filter media such as contained in factory—authorized accessory filter rack. To determine airflow performance without this filter, assume an additional 0.1 In. W.C. available external static pressure.

2. **Adjust the blower speed tabs as necessary for the proper air temperature rise for each installation.**

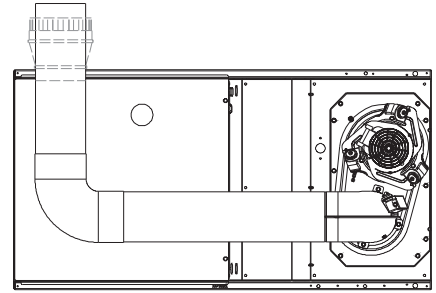
3. — — Indicates unstable operating conditions.

4. If the same motor speed tap is needed for heating and cooling, a Jumper Wire accessory kit is available (see Product Data sheet for the current Jumper Wire accessory part number), see Function column for applicable limitations.



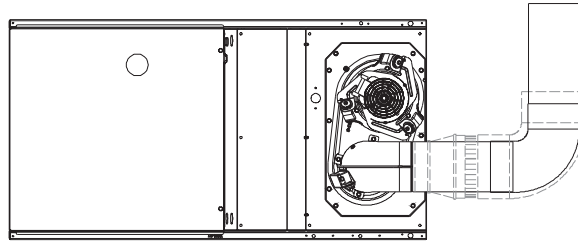
SEE NOTES 1,2,4,5,7,8,9  
HORIZONTAL RIGHT

A02068



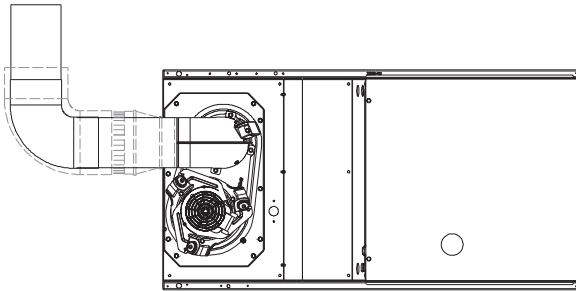
SEE NOTES 1,2,4,5,7,8,9  
HORIZONTAL RIGHT

A02070



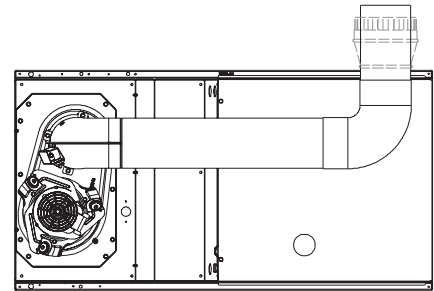
SEE NOTES 1,2,4,7,8,9  
HORIZONTAL RIGHT

A02069



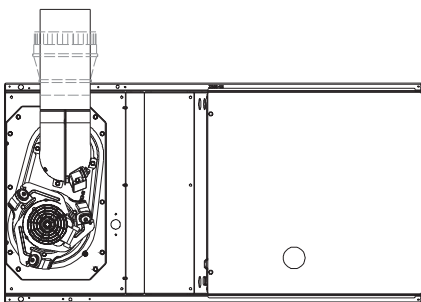
SEE NOTES 1,2,4,7,8,9  
HORIZONTAL LEFT

A02064



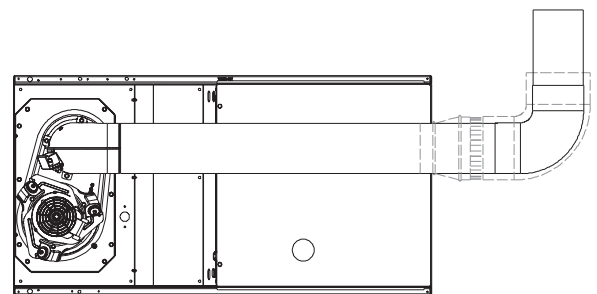
SEE NOTES 1,2,4,5,7,8,9  
HORIZONTAL LEFT

A02065



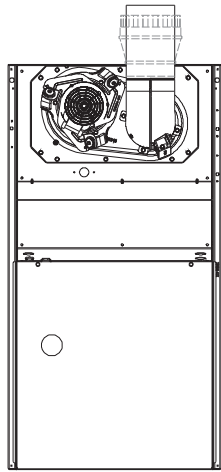
SEE NOTES 1,2,4,5,7,8,9  
HORIZONTAL LEFT

A02066



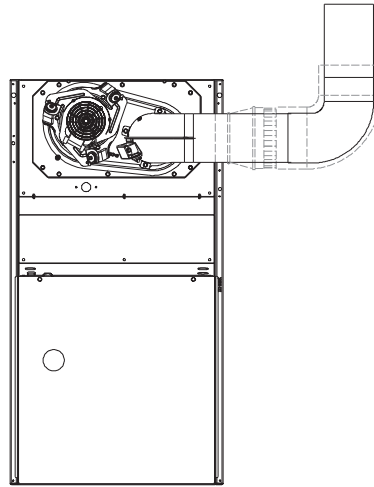
SEE NOTES 1,2,4,5,7,8,9  
HORIZONTAL LEFT

A02067



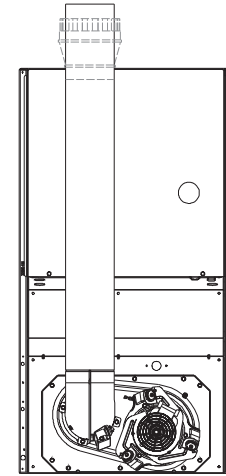
SEE NOTES: 1,2,4,7,8,9  
**UPFLOW**

A02058



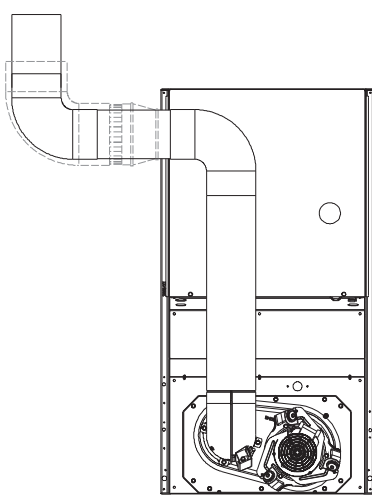
SEE NOTES: 1,2,3,4,7,8,9  
**UPFLOW**

A02059



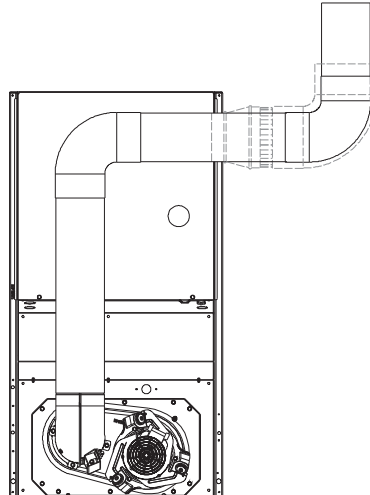
SEE NOTES: 1,2,4,5,7,8,9  
**DOWNFLOW**

A02061



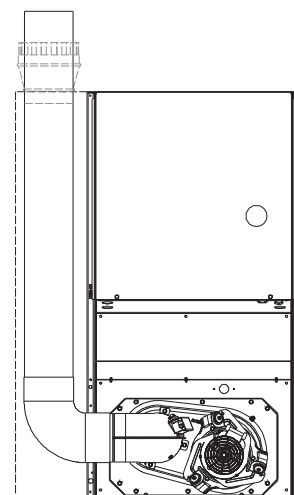
SEE NOTES: 1,2,3,4,5,7,8,9  
**DOWNFLOW**

A02060



SEE NOTES: 1,2,3,4,5,7,8,9  
**DOWNFLOW**

A02063



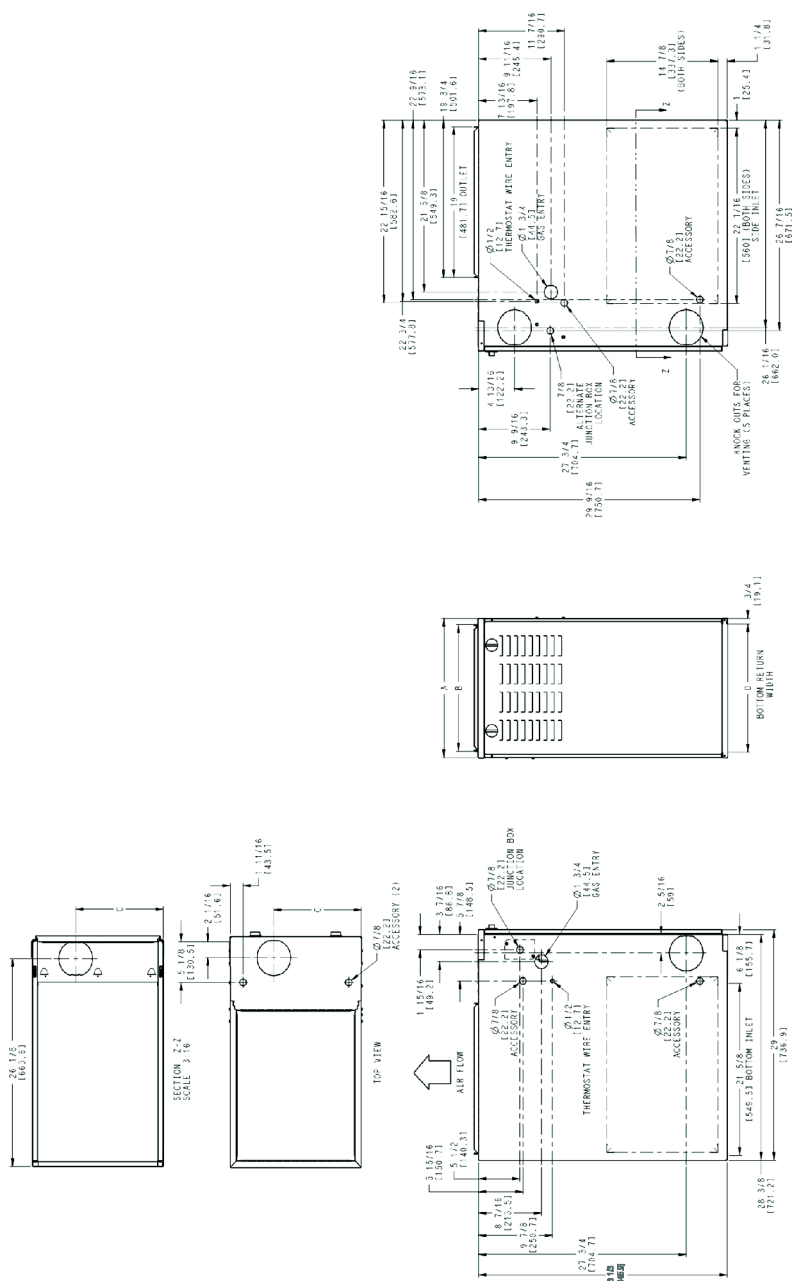
SEE NOTES: 1,2,4,5,6,7,8,9  
**DOWNFLOW**

A02062

### Venting Notes

1. For common vent, vent connector sizing and vent material: United States, latest edition of the National Fuel Gas Code (NFGC), ANSI Z223.1/NFPA 54.
2. Immediately increase to 5-in. (127 mm) vent connector outside furnace casing when 5-in. (127 mm) vent connector required, refer to Note 1.
3. Side outlet vent for upflow and downflow installations must use Type B vent immediately after exiting the furnace, except when Downflow Vent Guard is used in downflow position.
4. Type B vent where required, refer to Note 1.
5. 4-in. (102 mm) single wall vent must be used inside furnace casing and the Downflow Vent Guard Kit.
6. Accessory Downflow Vent Guard Kit required in downflow installations with bottom vent configuration.
7. Chimney Adapter Kit required for exterior masonry chimney applications. Refer to Chimney Adapter Kits for sizing and complete application details.
8. Secure vent connector to furnace elbow with (2) corrosion-resistant sheet metal screws, space approximately 180° apart.
9. Secure all other single wall vent connector joints with (3) corrosion-resistant screws spaced approximately 120° apart. Secure Type B vent connectors per vent connector manufacturer's recommendations.

## DIMENSIONS



A190084

| FURNACE SIZE | A<br>CABINET WIDTH | B<br>OUTLET WIDTH | C<br>TOP AND<br>BOTTOM FLUE<br>COLLAR | D<br>BOTTOM<br>INLET WIDTH | VENT<br>CONNECTION<br>SIZE | SHIP WT. LB.<br>(KG) |
|--------------|--------------------|-------------------|---------------------------------------|----------------------------|----------------------------|----------------------|
| 36045A       | 14–3/16 (360)      | 12–9/16 (319)     | 9–5/16 (237)                          | 12–11/16 (322)             | 4 (102)                    | 104 (47)             |
| 36045B       | 17–1/2 (445)       | 15–7/8 (403)      | 11–9/16 (294)                         | 16 (406)                   | 4 (102)                    | 119 (54)             |
| 36070A       | 14–3/16 (360)      | 12–9/16 (319)     | 9–5/16 (237)                          | 12–11/16 (322)             | 4 (102)                    | 114 (52)             |
| 36070B       | 17–1/2 (445)       | 15–7/8 (403)      | 11–9/16 (294)                         | 16 (406)                   | 4 (102)                    | 120 (54)             |
| 48070C       | 21 (533)           | 19–3/8 (492)      | 13–5/16 (338)                         | 19–1/2 (495)               | 4 (102)                    | 142 (64)             |
| 42090B       | 17–1/2 (445)       | 15–7/8 (403)      | 11–9/16 (294)                         | 16 (406)                   | 4 (102)                    | 131 (49)             |
| 48090C       | 21 (533)           | 19–3/8 (492)      | 13–5/16 (338)                         | 19–1/2 (495)               | 4 (102)                    | 137 (62)             |
| 60090C       | 21 (533)           | 19–3/8 (492)      | 13–5/16 (338)                         | 19–1/2 (495)               | 4 (102)                    | 140 (64)             |
| 60090D       | 24–1/2 (622)       | 22–7/8 (581)      | 15–1/16 (383)                         | 23 (584)                   | 4 (102)                    | 146 (66)             |
| 60110C       | 21 (533)           | 19–3/8 (492)      | 13–5/16 (338)                         | 19–1/2 (495)               | 4 (102)                    | 146 (66)             |
| 60110D       | 24–1/2 (622)       | 22–7/8 (581)      | 15–1/16 (383)                         | 23 (584)                   | 4 (102)                    | 161 (73)             |
| 60135D       | 24–1/2 (622)       | 22–7/8 (581)      | 15–1/16 (383)                         | 23 (584)                   | 4 (102)                    | 167 (76)             |
| 60155D       | 24–1/2 (622)       | 22–7/8 (581)      | 15–1/16 (383)                         | 23 (584)                   | 4 (102)                    | 168 (76)             |

\*135 and 155 size furnaces require a 5 or 6-in. (127 or 152 mm) vent. Use a vent adapter between furnace and vent stack. See Installation Instructions for complete installation requirements.

## GUIDE SPECIFICATIONS

### Gas Furnace

#### PG80ESA/PG80ESL

#### General

#### SYSTEM DESCRIPTION

Furnish a \_\_\_\_\_ fixed capacity gas-fired furnace for use with natural gas or propane (factory authorized conversion kit required for propane); furnish cold air return plenum.

#### 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 3rd 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® label.

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 shall carry the current Federal Trade Commission Energy Guide efficiency label.

#### DELIVERY, STORAGE AND HANDLING

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

#### WARRANTY (for inclusion by specifying engineer)

Warranty certificate available upon request.

#### Products

#### EQUIPMENT

Components shall include: slow-opening gas valve to reduce ignition noise, regulate gas flow, with electric switch gas shut-off; flame proving sensor, hot surface igniter, pressure switch assembly, flame rollout switch, blower and inducer assembly, 40va transformer; low-voltage (heating) (heating/cooling) thermostat.

#### Blower Wheel and Blower Motor

Galvanized blower wheel shall be centrifugal type, statically and dynamically balanced. Blower motor of fixed-speeds, constant torque ECM type shall be permanently lubricated with sealed bearings, of \_\_\_\_\_hp, and shall be multiple-speed direct drive. Blower motor shall be soft mounted to the blower scroll to reduce vibration transmission.

#### Filters

Furnace may have reusable-type filters. Filter shall be \_\_\_\_\_ in. (mm) (x) \_\_\_\_\_ in. (mm). An accessory high efficiency Media Filter is available as an option. \_\_\_\_\_ Media Filter.

#### Casing

Casing shall be of .030 in. (.76) thickness minimum, pre-painted steel.

#### Inducer Motor

Inducer motor shall be soft mounted to reduce vibration transmission.

#### Draft Safeguard Switch

Draft Safeguard Switch (blocked vent safeguard) shall be factory installed to reduce the possibility of vent gas infiltration due to a blocked or restricted vent pipe.

#### Heat Exchangers

Heat exchangers shall be a 4-Pass 20 gage aluminized steel of fold-and-crimp sectional design when applied operating under negative pressure.

#### Controls

Control shall include a micro-processor based integrated electronic control board with at least 11 service troubleshooting codes displayed via enhanced flashing LED diagnostic light on the control, a self-test feature that checks all major functions of the furnace within one minute, and a non-volatile memory replaceable automotive-type circuit protection fuse. Multiple operational settings available including, separate blower speeds for heating, cooling and continuous fan. Continuous fan speed may be adjusted from the thermostat. Cooling airflow will be selectable between 350 or 400 CFM per ton of air conditioning.

#### OPERATING CHARACTERISTICS

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

Fuel Gas Efficiency shall be 80% 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 or circuit breaker shall be \_\_\_\_\_Amps.

#### SPECIAL FEATURES

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

