

# R80ESN, R80ESL

## Product Specifications

### 80% AFUE, Single Stage, Multi-Speed ECM Gas Furnace

#### EASIER TO SELL

- 80% AFUE
- Flame roll-out sensors standard
- Category I venting
- Blocked vent switch
- Louvered door
- 24 VAC and 115 VAC humidifier terminal
- Electronic air cleaner terminal
- Select sizes approved for twinning, refer to accessory kit listing
- R80ESL - Low NOx units are designed for California installations and can be installed in air quality management districts with a 40 ng/J NOx emissions limit.
- 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

#### TOUGHER

- Adjustable heating blower OFF delay
- Factory set blower ON delay
- RPJ aluminized steel heat exchanger
- High temperature limit control designed to prevent overheating
- Direct ignition with Silicon Nitride ignitor
- One piece prepainted steel cabinet

#### QUIETER

- In-shot burners

#### EASIER TO INSTALL AND SERVICE

- 33 1/3" (847mm) high, for ease of installation
- Quarter turn knobs for easy door removal and secure attachment
- Factory shipped for natural gas, convertible to propane with accessory kit
- Four position - upflow/downflow/horizontal (left/right) installation
- Three position inducer elbow capability
- Through the casing flue pipe for counterflow applications
- Common venting with other Category I appliances
- Masonry chimney adapter available
- Self diagnostics
- Slide out blower assembly

#### LIMITED WARRANTY\*

- 20 year heat exchanger limited warranty
- 5 year parts limited warranty
  - With timely registration, an additional 5 year parts limited warranty
- \* For residential applications only, See warranty certificate for complete details and restrictions, including warranty cover age of other applications.



Illustrations and photographs are only representative.  
Some product models may vary.

#### WARNING

This furnace is not designed for use in mobile homes, trailers, or recreational vehicles. Such use could result in property damage and/or death.



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).



ISO 9001  
Quality

| Model           | Input (BTUH) | Efficiency AFUE | Cooling Capacity CFM range @ .5 in. w.c. (125 Pa) | Dimensions H x W x D Inches (Millimeters) | Shipping Wt. Lbs(Kg) |
|-----------------|--------------|-----------------|---------------------------------------------------|-------------------------------------------|----------------------|
| R80ESN/L0451412 | 44,000       | 80%             | 415-1080                                          | 33-1/3 x 14-3/16 x 29 (847 x 360 x 737)   | 104 (47)             |
| R80ESN/L0451712 | 44,000       | 80%             | 320-1215                                          | 33-1/3 x 17-1/2 x 29 (847 x 445 x 737)    | 119 (54)             |
| R80ESN/L0701412 | 66,000       | 80%             | 315-1070                                          | 33-1/3 x 14-3/16 x 29 (847 x 360 x 737)   | 114 (52)             |
| R80ESN/L0701712 | 66,000       | 80%             | 385-1005                                          | 33-1/3 x 17-1/2 x 29 (847 x 445 x 737)    | 120 (54)             |
| R80ESN/L0702116 | 66,000       | 80%             | 775-1545                                          | 33-1/3 x 21 x 29 (847 x 533 x 737)        | 142 (64)             |
| R80ESN/L0901714 | 88,000       | 80%             | 750-1210                                          | 33-1/3 x 17-1/2 x 29 (847 x 445 x 737)    | 131 (49)             |
| R80ESN/L0902116 | 88,000       | 80%             | 845-1445                                          | 33-1/3 x 21 x 29 (847 x 533 x 737)        | 137 (62)             |
| R80ESN/L0902120 | 88,000       | 80%             | 915-1980                                          | 33-1/3 x 21 x 29 (847 x 533 x 737)        | 140 (64)             |
| R80ESN/L0902420 | 88,000       | 80%             | 845-1960                                          | 33-1/3 x 24-1/2 x 29 (847 x 622 x 737)    | 146 (66)             |
| R80ESN/L1102120 | 110,000      | 80%             | 990-1715                                          | 33-1/3 x 21 x 29 (847 x 533 x 737)        | 146 (66)             |
| R80ESN/L1102420 | 110,000      | 80%             | 820-2005                                          | 33-1/3 x 24-1/2 x 29 (847 x 622 x 737)    | 161 (73)             |
| R80ESN/L1352420 | 132,000      | 80%             | 1025-1810                                         | 33-1/3 x 24-1/2 x 29 (847 x 622 x 737)    | 167 (76)             |

## MODEL NUMBER IDENTIFICATION GUIDE

| DIGIT POSITION                                                                                                                                    | 1                | 2,3 | 4 | 5 | 6 | 7-9 | 10,11 | 12,13 | 14 | 15 |
|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----|---|---|---|-----|-------|-------|----|----|
| F, G, N, R                                                                                                                                        | BRAND            |     |   |   |   |     |       |       |    |    |
| 80 - 80% AFUE<br>92 - 92% AFUE<br>95 - 95% AFUE<br>96 - 96% AFUE<br>97 - 97% AFUE                                                                 | EFFICIENCY       |     |   |   |   |     |       |       |    |    |
| C = Comm. Variable-Speed Constant Airflow (VCA) ECM<br>E = Fixed-Speeds Constant Torque (FCT) ECM<br>V = Variable-Speed Constant Torque (VCT) ECM | MOTOR TYPE       |     |   |   |   |     |       |       |    |    |
| M - Modulating<br>S - Single Stage<br>T - Two Stage                                                                                               | HEATING STAGES   |     |   |   |   |     |       |       |    |    |
| L = Low NOx<br>M = Mobile/Manufactured Home<br>N = Standard NOx<br>U = Ultra Low Nox                                                              | FEATURE          |     |   |   |   |     |       |       |    |    |
| 026 = 26,000 BTU/h<br>040 = 40,000 BTU/h<br>060 = 60,000 BTU/h<br>.....                                                                           | HEATING INPUT    |     |   |   |   |     |       |       |    |    |
| 14 = 14.2"<br>17 = 17.5"<br>21 = 21.0"<br>24 = 24.5"                                                                                              | CABINET WIDTH    |     |   |   |   |     |       |       |    |    |
| 08 = 800 CFM<br>10 = 1000 CFM<br>12 = 1200 CFM<br>14 = 1400 CFM<br>16 = 1600 CFM<br>20 = 2000 CFM<br>22 = 2200 CFM                                | COOLING CAPACITY |     |   |   |   |     |       |       |    |    |
| A, B, C, D...                                                                                                                                     | MAJOR SERIES     |     |   |   |   |     |       |       |    |    |
| 1, 2, 3, 4...                                                                                                                                     | MINOR SERIES     |     |   |   |   |     |       |       |    |    |

A190043

## MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS FOR ALL UNITS

This forced air furnace is equipped for use with natural gas at altitudes 0 - 10,000 ft (0 - 3,050m).

An accessory kit, supplied by the manufacturer, shall be used to convert to propane gas use or may be required for some natural gas applications.

This furnace is for indoor installation in a building constructed on site.

The furnace may be installed on combustible flooring in alcove or closet at minimum clearance as indicated by the diagram from combustible material.

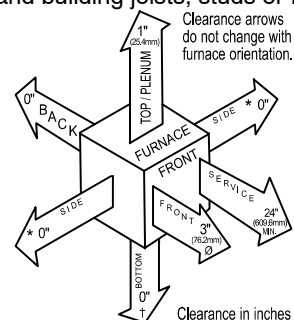
This furnace may be used with a Type B-1 Vent and may be vented in common with other gas fired appliances.

This furnace is approved for UPFLOW, DOWNFLOW, and HORIZONTAL installations.

Downflow Positions:

- † Installation on non-combustible floors only.  
For Installation on combustible flooring only when installed on special base or coil assembly.
- Ø 18 inch front clearance required for alcove.

- \* Indicate supply or return sides when furnace is in the horizontal position. Line contact only permissible between lines formed by intersections of the Top and two Sides of the furnace jacket, and building joists, studs or framing.



**Vent Clearance to combustibles:**  
For Single Wall vents 6 inches (6 po).  
For Type B-1 vent type 1 inch (1 po).

## PHYSICAL DATA

| UNIT SIZE                                     |                                    | 0451412                    | 0451712               | 0701412               | 0701712               | 0702116                | 0901714               |
|-----------------------------------------------|------------------------------------|----------------------------|-----------------------|-----------------------|-----------------------|------------------------|-----------------------|
| RATINGS AND PERFORMANCE                       |                                    |                            |                       |                       |                       |                        |                       |
| Input Btuh*                                   | All Standard<br>All Low NOx Upflow | 44,000                     | 44,000                | 66,000                | 66,000                | 66,000                 | 88,000                |
| Nonweatherized ICS                            | All Low NOx<br>Downflow/Horizontal | 42,000                     | 42,000                | 63,000                | 63,000                | 63,000                 | 84,000                |
| Output Capacity (Btuh)†                       | All Standard<br>All Low NOx Upflow | 36,000                     | 35,000                | 54,000                | 54,000                | 53,000                 | 71,000                |
| Nonweatherized ICS                            | All Low NOx<br>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                   | 1090                  | 985                   | 1305                   | 1203                  |
|                                               | Cooling                            | 1080                       | 1215                  | 1070                  | 1005                  | 1545                   | 1210                  |
| ELECTRICAL                                    |                                    |                            |                       |                       |                       |                        |                       |
| Unit Volts–Hertz–Phase                        |                                    | 115–60–1                   |                       |                       |                       |                        |                       |
| Operating Voltage Range Min–Max               |                                    | 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                   | 1/3                   | 3/4                    | 1/2                   |
| Motor Full Load Amps                          |                                    | 4.4                        | 6.4                   | 4.4                   | 4.4                   | 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

| PHYSICAL DATA                                 |                                    |                           |                        |                        |                        |                        |                        |
|-----------------------------------------------|------------------------------------|---------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| UNIT SIZE                                     |                                    | 0902116                   | 0902120                | 0902420                | 1102120                | 1102420                | 1352420                |
| RATINGS AND PERFORMANCE                       |                                    |                           |                        |                        |                        |                        |                        |
| Input Btuh*                                   | All Standard<br>All Low NOx Upflow | 88,000                    | 88,000                 | 88,000                 | 110,000                | 110,000                | 132,000                |
|                                               | All Low NOx<br>Downflow/Horizontal | 84,000                    | 84,000                 | 84,000                 | 105,000                | 105,000                | 126,000                |
| Output Capacity (Btuh)†                       | All Standard<br>All Low NOx Upflow | 72,000                    | 71,000                 | 72,000                 | 90,000                 | 90,000                 | 107,000                |
|                                               | All Low NOx<br>Downflow/Horizontal | 68,000                    | 68,000                 | 69,000                 | 85,000                 | 86,000                 | 102,000                |
| Nonweatherized ICS                            |                                    |                           |                        |                        |                        |                        |                        |
| AFUE†                                         |                                    | 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)       |
| Certified External Static<br>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              |
|                                               | Heating                            | 1418                      | 1650                   | 1565                   | 1890                   | 1930                   | 1760                   |
| Airflow CFM‡                                  | Cooling                            | 1445                      | 1980                   | 1960                   | 2040                   | 2005                   | 1810                   |
|                                               |                                    |                           |                        |                        |                        |                        |                        |
| ELECTRICAL                                    |                                    |                           |                        |                        |                        |                        |                        |
| Unit Volts–Hertz–Phase                        |                                    | 115–60–1                  |                        |                        |                        |                        |                        |
| Operating Voltage Range                       |                                    | Min–Max<br>104–127        |                        |                        |                        |                        |                        |
| Maximum Unit Amps                             |                                    | 8.3                       | 13                     | 10.3                   | 13.4                   | 10.7                   | 10.7                   |
| Unit Ampacity                                 |                                    | 11                        | 16.90                  | 13.50                  | 17.40                  | 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)               |
| Minimum Wire Size                             |                                    | 14                        | 12                     | 14                     | 12                     | 14                     | 14                     |
| Maximum Fuse or Ckt Bkr Size (Amps)**         |                                    | 15                        | 20                     | 15                     | 20                     | 15                     | 15                     |
| Transformer (24v)                             |                                    | 40va                      |                        |                        |                        |                        |                        |
| External Control                              |                                    | Heating                   | 12va                   |                        |                        |                        |                        |
| Power Available                               |                                    | Cooling                   | 35va                   |                        |                        |                        |                        |
| Air Conditioning Blower Relay                 |                                    | Standard                  |                        |                        |                        |                        |                        |
| CONTROLS                                      |                                    |                           |                        |                        |                        |                        |                        |
| Heating Blower Control                        |                                    | SolidState Time Operation |                        |                        |                        |                        |                        |
| Burners (Monoport)                            |                                    | 4                         | 4                      | 4                      | 5                      | 5                      | 6                      |
| 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                         |                                    | 1/2                       | 1                      | 3/4                    | 1                      | 3/4                    | 3/4                    |
| Motor Full Load Amps                          |                                    | 6.80                      | 11.50                  | 8.80                   | 11.50                  | 8.80                   | 8.80                   |
| RPM (Nominal)Speeds                           |                                    | 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) |

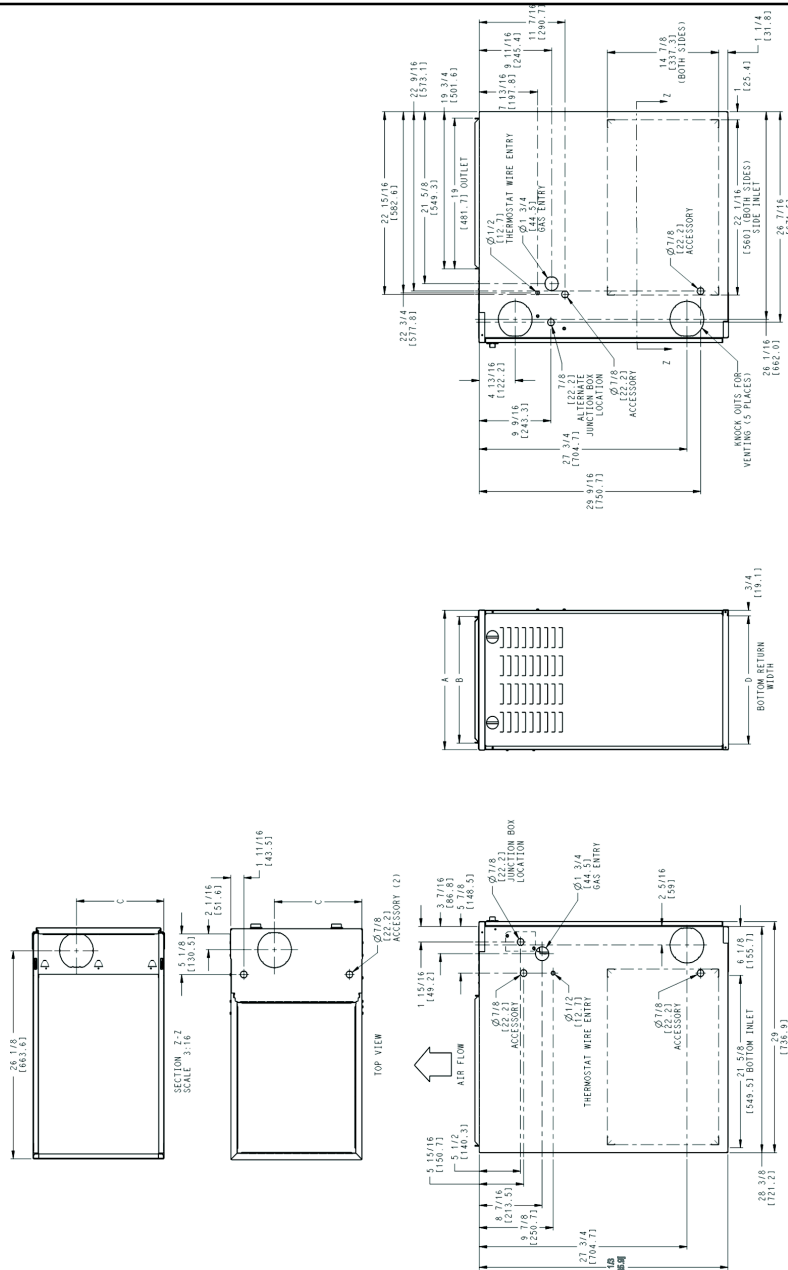
\* Gas input ratings are certified for elevations to 2000 ft. (610 M). In USA, for elevations above 2000 ft. (610 M), reduce ratings 4 percent for each 1000 ft. (305 M) above sea level. Refer to National Fuel Gas Code NFPA 54/ANSI Z223.1 Table F.4 or furnace installation instructions.

† 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



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### DIMENSIONS

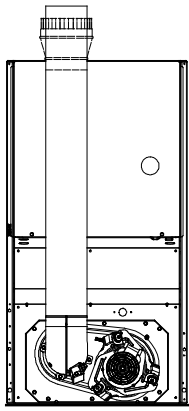
| FURNACE SIZE | A<br>CABINET WIDTH | B<br>OUTLET WIDTH | C<br>TOP AND<br>BOTTOM FLUE<br>COLLAR | D<br>BOTTOM<br>INLET WIDTH | VENT<br>CONNECTION<br>SIZE | SHIP WT. LB. (KG) |
|--------------|--------------------|-------------------|---------------------------------------|----------------------------|----------------------------|-------------------|
| 0451412      | 14-3/16 (360)      | 12-9/16 (319)     | 9-5/16 (237)                          | 12-11/16 (322)             | 4 (102)                    | 104 (47)          |
| 0451712      | 17-1/2 (445)       | 15-7/8 (403)      | 11-9/16 (294)                         | 16 (406)                   | 4 (102)                    | 119 (54)          |
| 0701412      | 14-3/16 (360)      | 12-9/16 (319)     | 9-5/16 (237)                          | 12-11/16 (322)             | 4 (102)                    | 114 (52)          |
| 0701712      | 17-1/2 (445)       | 15-7/8 (403)      | 11-9/16 (294)                         | 16 (406)                   | 4 (102)                    | 120 (54)          |
| 0702116      | 21 (533)           | 19-3/8 (492)      | 13-5/16 (338)                         | 19-1/2 (495)               | 4 (102)                    | 142 (64)          |
| 0901714      | 17-1/2 (445)       | 15-7/8 (403)      | 11-9/16 (294)                         | 16 (406)                   | 4 (102)                    | 131 (49)          |
| 0902116      | 21 (533)           | 19-3/8 (492)      | 13-5/16 (338)                         | 19-1/2 (495)               | 4 (102)                    | 137 (62)          |
| 0902120      | 21 (533)           | 19-3/8 (492)      | 13-5/16 (338)                         | 19-1/2 (495)               | 4 (102)                    | 140 (64)          |
| 0902420      | 24-1/2 (622)       | 22-7/8 (581)      | 15-1/16 (383)                         | 23 (584)                   | 4 (102)                    | 146 (66)          |
| 1102120      | 21 (533)           | 19-3/8 (492)      | 13-5/16 (338)                         | 19-1/2 (495)               | 4 (102)                    | 146 (66)          |
| 1102420      | 24-1/2 (622)       | 22-7/8 (581)      | 15-1/16 (383)                         | 23 (584)                   | 4 (102)                    | 161 (73)          |
| 1352420      | 24-1/2 (622)       | 22-7/8 (581)      | 15-1/16 (383)                         | 23 (584)                   | 4 (102)*                   | 167 (76)          |

\* 135 Btu/h size furnace 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.

| 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    |
| 0451412                           | 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  | —    |
| 0451712                           | 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  | —    | —    |
| 0701412                           | 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  |
| 0701712                           | 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  | —    | —    |
| 0702116                           | 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  |
| 0901714                           | 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  |
| 0902116                           | 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  |
| 0902120                           | 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  |
| 0902420                           | 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  |
| 1102120                           | 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  |
| 1102420                           | 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  |
| 1352420                           | 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  |

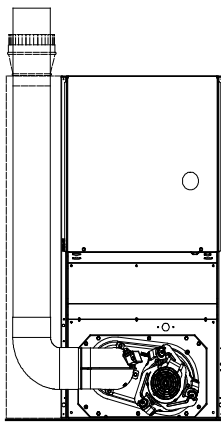
1. A filter is required for each return-air inlet. Airflow performance included 3/4-in. (19 mm) washable filter media such as contained in factory-authorized accessory filter rack. To determine airflow performance without this filter, assume an additional 0.1 In. W.C. available external static pressure.
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 sheet for the current Jumper Wire accessory part number), see Function column for applicable limitations.

**DOWNFLOW VENT CONFIGURATIONS**



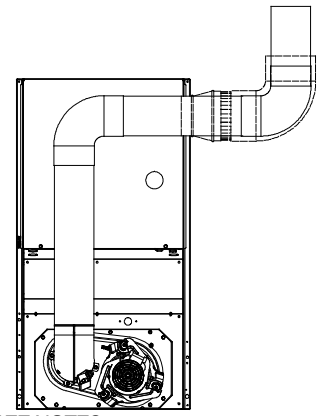
SEE NOTES: 1,2,4,5,7,8,9

A02061



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

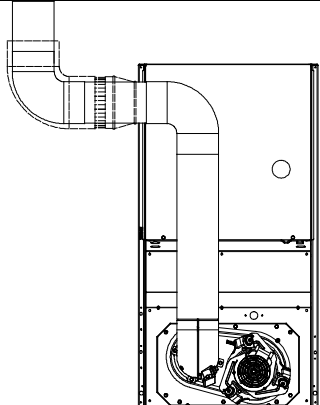
A02062



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

A02063

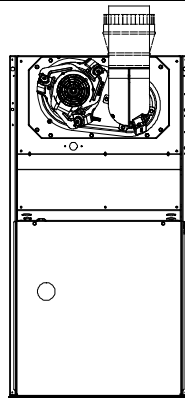
**DOWNFLOW CONTINUED**



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

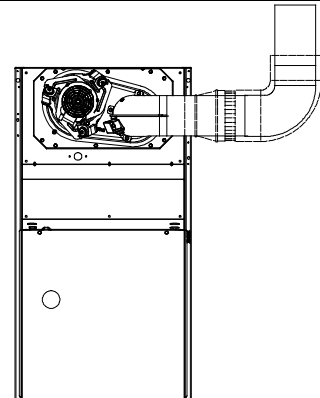
A02060

**UPFLOW VENT CONFIGURATIONS**



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

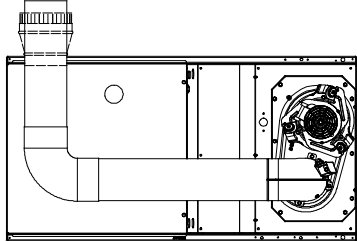
A02058



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

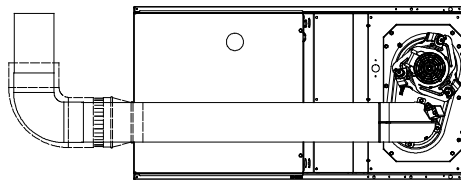
A02059

**HORIZONTAL RIGHT VENT CONFIGURATIONS**



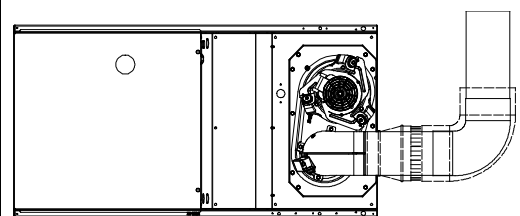
SEE NOTES: 1,2,4,5,7,8,9

A02070



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

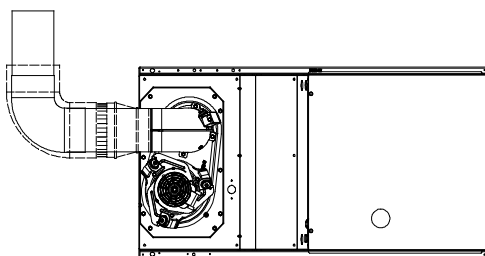
A02068



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

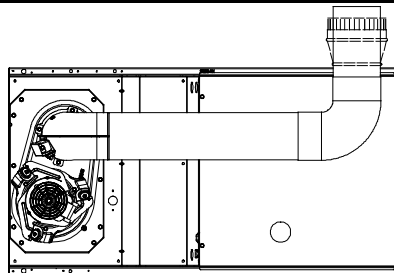
A02069

**HORIZONTAL LEFT VENT CONFIGURATIONS**



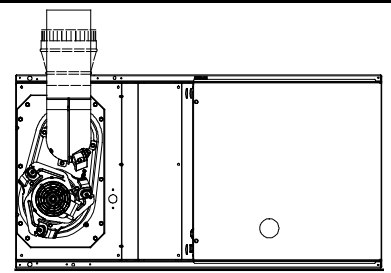
SEE NOTES: 1,2,4,7,8,9

A02064



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

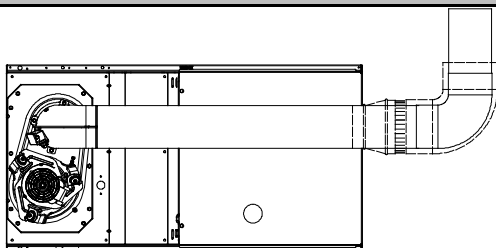
A02065



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

A02066

**HORIZONTAL LEFT VENT CONFIGURATIONS**



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

A02067

**Venting Notes**

1. For common vent, vent connector sizing and vent material, use the NFCC.
2. Immediately increase to 5 inch (127 mm) or 6 inch (152 mm) vent connector outside furnace casing when 5 inch (127 mm) vent connector is required, refer to Note 1 above.
3. Side outlet vent for upflow and downflow installations must use Type B vent immediately after exiting the furnace, except when the Downflow Vent Guard Kit, is used in the downflow position
4. Type-B vent where required, refer to the Note 1 above.
5. A 4 inch (102 mm) single-wall (26 ga. minimum) vent must be used inside furnace casing and when the Downflow Vent Guard Kit is used external to the furnace.
6. Accessory Downflow Vent Guard Kit is required in downflow installations with lower vent configuration.
7. Chimney Adapter Kit may be required for exterior masonry chimney applications. Refer to Chimney Adapter Kit for sizing and complete application details.
8. Secure vent connector to furnace elbow with (2) corrosion-resistant sheet metal screws, spaced 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.

**ACCESSORIES**

| PART         | DESCRIPTION                                                                          | 0451412 | 0451712 | 0701412 | 0701712 | 0702116 | 0901714 | 0902116 |
|--------------|--------------------------------------------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|
| NAHB00501FF  | External Bottom Filter Rack, 14 inch (14 x 25 inch washable filter included)         | X       | X       | X       | X       |         |         |         |
| NAHB00601FF  | External Bottom Filter Rack, 17 inch (17 x 25 inch washable filter included)         |         |         |         |         | X       | X       |         |
| NAHB00701FF  | External Bottom Filter Rack, 21 inch (20 x 25 inch washable filter included)         |         |         |         |         |         |         | X       |
| NAHA00506FB† | Washable filter, 1 inch 16 x 25 (6 pack)                                             | X       | X       | X       | X       | X       | X       |         |
| NAHA00706FB  | Washable filter, 1 inch 24 x 25 (6 pack)                                             |         |         |         |         |         |         | X       |
| NAHA01401RA  | Return Air Kit, 14-3/16" Wide                                                        | X       |         | X       |         |         |         |         |
| NAHA01701RA  | Return Air Kit, 17" Wide                                                             |         | X       |         | X       |         | X       |         |
| NAHA02101RA  | Return Air Kit, 21" Wide                                                             |         |         |         |         | X       |         | X       |
| NAHA01101SB  | Combustible Floor Base (Not required when evaporator coil case is used for downflow) | X       | X       | X       | X       | X       | X       | X       |
| NAHB00301VC  | Downflow Vent Guard (Not required when vent is routed through cabinet)               | X       | X       | X       | X       | X       | X       | X       |
| NAHA00401DH  | Chimney Adapter Kit 4-in. vent                                                       | X       | X       | X       | X       | X       | X       | X       |
| AGATWNDTE01A | Twinning Kit FCT-ECM Motor                                                           |         |         |         |         | X       |         | X       |
| AGAGC8NPS01A | Natural-to-Propane Conversion Kit *                                                  | X       | X       | X       | X       | X       | X       | X       |
| AGAGC8PNS01A | Propane-to-Natural Conversion Kit *                                                  | X       | X       | X       | X       | X       | X       | X       |
| AGABLRJMP10A | Blower Speed Tap Jumper Kit (10 pack)                                                | X       | X       | X       | X       | X       | X       | X       |

**ACCESSORIES**

| PART         | DESCRIPTION                                                                          | 0902120 | 0902420 | 1102120 | 1102420 | 1352420 |
|--------------|--------------------------------------------------------------------------------------|---------|---------|---------|---------|---------|
| NAHB00601FF  | External Bottom Filter Rack, 17 inch (17 x 25 inch washable filter included)         |         | X       |         |         |         |
| NAHB00701FF  | External Bottom Filter Rack, 21 inch (20 x 25 inch washable filter included)         | X       |         | X       | X       |         |
| NAHB00801FF  | External Bottom Filter Rack, 24 inch (24 x 25 inch washable filter included)         |         |         |         |         | X       |
| NAHA00506FB† | Washable filter, 1 inch 16 x 25 (6 pack)                                             |         | X       |         |         |         |
| NAHA00706FB  | Washable filter, 1 inch 24 x 25 (6 pack)                                             | X       |         | X       | X       | X       |
| NAHA02101RA  | Return Air Kit, 21" Wide                                                             | X       |         | X       |         |         |
| NAHA02401RA  | Return Air Kit, 24" Wide                                                             |         | X       |         | X       | X       |
| NAHA01101SB  | Combustible Floor Base (Not required when evaporator coil case is used for downflow) | X       | X       | X       | X       | X       |
| NAHB00301VC  | Downflow Vent Guard (Not required when vent is routed through cabinet)               | X       | X       | X       | X       | X       |
| NAHA00401DH  | Chimney Adapter Kit 4-in. vent                                                       | X       | X       | X       | X       |         |
| NAHA00301DH  | Chimney Adapter Kit 5-in. vent                                                       |         |         |         |         | X       |
| AGATWNDTE01A | Twinning Kit FCT-ECM Motor                                                           | X       | X       | X       | X       | X       |
| AGAGC8NPS01A | Natural-to-Propane Conversion Kit *                                                  | X       | X       | X       | X       | X       |
| AGAGC8PNS01A | Propane-to-Natural Conversion Kit *                                                  | X       | X       | X       | X       | X       |
| AGABLRJMP10A | Blower Speed Tap Jumper Kit (10 pack)                                                | X       | X       | X       | X       | X       |

- X Accessory available  
 † Suitable for 17 inch external bottom filter rack  
 \* Factory authorized and field installed. Gas conversion kits are CSA recognized.