

80% AFUE ULTRA LOW NO_x GAS FURNACE

Multipoise Design

GRAND AIRE®
Heating & Cooling Products



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UPFLOW/DOWNFLOW/HORIZONTAL (NATURAL GAS)

| Model Number | Heat Exchangers | Input (MBTUH) | Efficiency AFUE | Cooling Capacity @ .5 in wc |
|--------------|-----------------|---------------|-----------------|-----------------------------|
| WFEU060B048A | 20 year | 60,000 | 80.0 | 4.0 |
| WFEU080C060A | 20 year | 80,000 | 80.0 | 5.0 |

STANDARD FEATURES

- 80% AFUE
- Ultra-low NO_x emissions – 14 nanograms/joule for use in California Air Quality Management Districts requiring 14 nanograms/joule or less emissions.
- Four-position furnace: Upflow, Horizontal Right, Horizontal Left, Downflow (6 different vent options)
- Versatile venting for tight-fit applications
- ECM blower motor included
- Category I venting
- Self diagnostics
- Pilot free, hot surface ignition
- 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

LIMITED WARRANTY*

- 1 year unit replacement limited warranty
 - 20 year heat exchanger limited warranty
 - 10 year parts limited warranty with timely registration
 - 5 years parts limited warranty if not registered within 90 days of original installation
- * For residential applications only. See warranty certificate for complete details and restrictions, including warranty coverage for other applications.

WFEU

Product Specifications

NOMENCLATURE IDENTIFICATION GUIDE

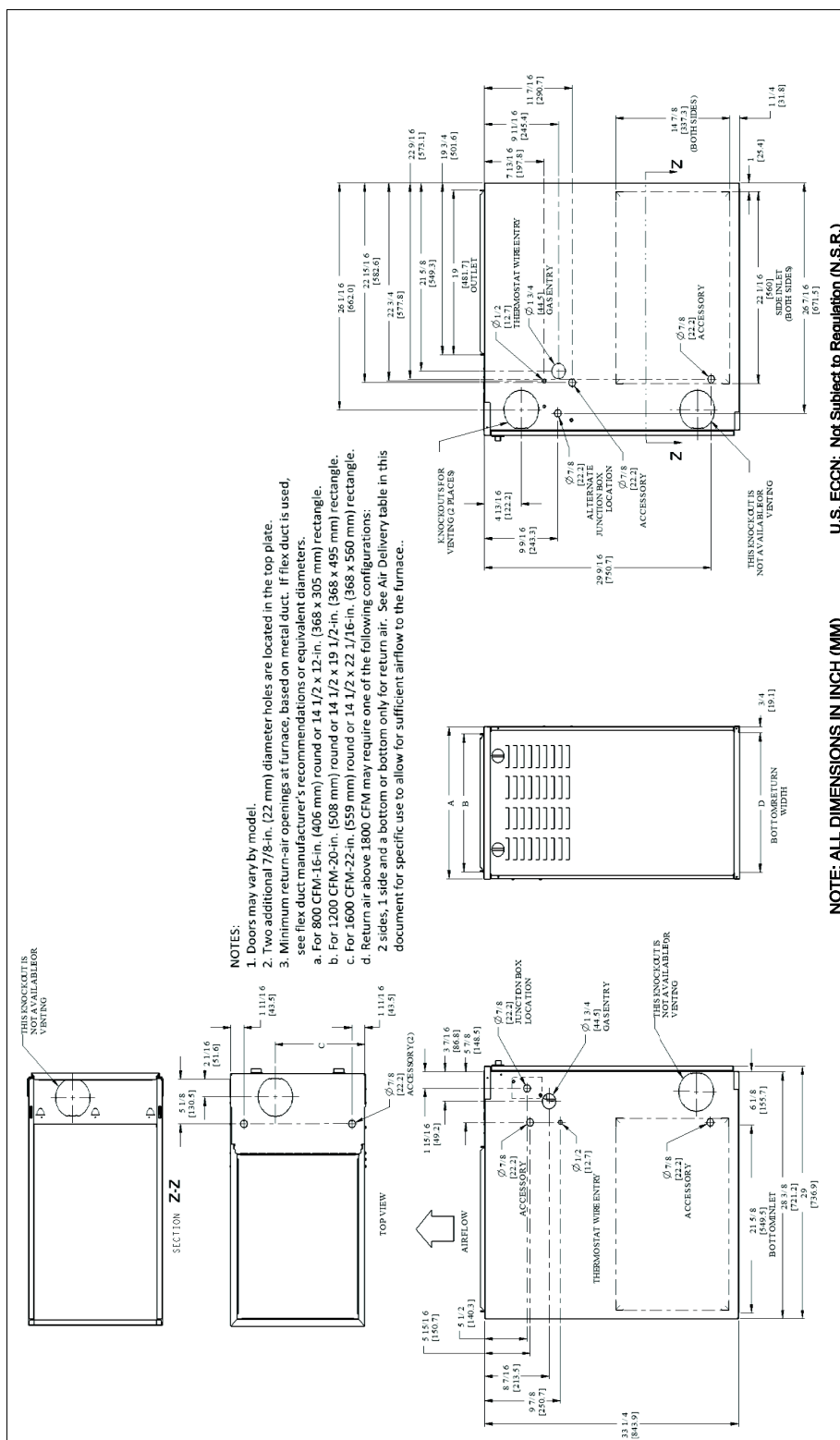
| DIGIT POSITION | 1, 2 | 3 | 4 | 5, 6, 7 | 8 | 9, 10, 11 | 12 | 13 |
|-----------------------------------|-----------|-------------------|----------------|-----------------------------|------------------------------|---------------------|----------|----------|
| | WF | E | U | 045 | A | 024 | A | 1 |
| WF = Gas Furnace | | EFFICIENCY | FEATURE | HEATING INPUT, MBTUH | CABINET WIDTH, Inches | COOLING SIZE | | |
| A= 92% AFUE | | | | | | | | |
| E= Tapped ECM (80% Models Only) | | | | | | | | |
| H = High Efficiency | | | | | | | | |
| M = Mid Efficiency | | | | | | | | |
| S = 95% AFUE | | | | | | | | |
| L = Low NOx | | | | | | | | |
| R = Regular | | | | | | | | |
| U = Ultra Low NOx | | | | | | | | |
| X = Tapped ECM (90%+ Models Only) | | | | | | | | |
| | | | | | | | | |
| 026 = 26,000 | | | | | | | | |
| 040 = 40,000 | | | | | | | | |
| 045 = 45,000 | | | | | | | | |
| --- | | | | | | | | |
| 155 = 155,000 | | | | | | | | |
| A = 14½" | | | | | | | | |
| B = 17½" | | | | | | | | |
| C = 21" | | | | | | | | |
| D = 24½" | | | | | | | | |
| 24 = 26,000 BTU/hr, 2 Ton | | | | | | | | |
| 30 = 30,000 BTU/hr, 2½ Ton | | | | | | | | |
| 36 = 36,000 BTU/hr, 3 Ton | | | | | | | | |
| 48 = 48,000 BTU/hr, 4 Ton | | | | | | | | |
| 60 = 60,000 BTU/hr, 5 Ton | | | | | | | | |
| 66 = 66,000 BTU/hr, 5.5 Ton | | | | | | | | |
| SALES DIGIT | | | | | | | | |
| EXTRA DIGIT | | | | | | | | |

NOTE: Standard input rate for 80% is approximately 22.5K per heat exchanger.
Standard input rate for 90%+ is approximately 30K per heat exchanger.
Units can be developed with slight under rate or over rate to fine tune heating capacity.

ACCESSORIES PART NUMBER IDENTIFICATION GUIDE

| DIGIT POSITION | 1 | 2 | 3 | 4 | 5, 6, 7 | 8, 9 | 10, 11 |
|--|-----------------|----------------------|------------------|---------------------|------------|-----------|-----------|
| | N | A | H | A | 001 | 01 | DH |
| N = Non-Branded | BRANDING | PRODUCT GROUP | KIT USAGE | MAJOR SERIES | | | |
| A = Accessory | | | | | | | |
| H = Heating | | | | | | | |
| A = Original | | | | | | | |
| B = 2nd Generation | | | | | | | |
| Product Identifier Number | | | | | | | |
| Package Quantity | | | | | | | |
| Type of Kit (Example: DH = Draft Hood – Chimney Adapter) | | | | | | | |

UNIT DIMENSIONS



A180207

| | A CABINET WIDTH IN (MM) | B OUTLET WIDTH IN (MM) | C TOP OUTLET IN (MM) | D BOTTOM INLET WIDTH IN (MM) | VENT CONNECTION SIZE IN. (MM) | SHIP WT LB (KG) |
|---------|----------------------------------|---------------------------------|-------------------------------|--|-------------------------------------|--------------------|
| 060B048 | 17-1/2 (445) | 15-7/8 (403) | 11-9/16 (294) | 16 (406) | 4 (102) | 126 (57) |
| 080C060 | 21 (533) | 19-3/8 (492) | 13-5/16 (338) | 19-1/2 (495) | 4 (102) | 140 (64) |

See installation instructions for complete installation requirements.

SPECIFICATIONS

| UNIT SIZE | | 060B048 | 080C060 |
|---|--------------------------------|----------------------------|---------------------|
| RATINGS AND PERFORMANCE | | | |
| Input Btuh* | | 60,000 | 80,000 |
| Output Capacity (Btuh)† | | 48,000 | 64,000 |
| AFUE‡ | | 80.0 | 80.0 |
| Certified Temperature Rise Range – °F (°C) | | 30 (16) – 60 (33) | 25 (14)– 55 (30) |
| External Static Pressure | Heating | .15 | .12 |
| | Cooling | .5 | .5 |
| Airflow CFM‡ | Heating | 1020 | 1330 |
| | Cooling | 1545 | 1990 |
| ELECTRICAL | | | |
| Unit Volts–Hertz–Phase | | 115-60-1 | |
| Operating Voltage Range | Min-Max | 104-127 | |
| Maximum Unit Amps | | 10.6 | 13.3 |
| Unit Ampacity | | 13.9 | 17.3 |
| Maximum Wire Length – Measure one way in Ft (M) | | 26 (8) | 33 (10) |
| Minimum Wire Size | | 14 | 12 |
| Maximum Fuse or Ckt Bkr Size (Amps)** | | 15 | 20 |
| Transformer (24v) | | 40 VA | |
| External Control | Heating | 12 VA | |
| Power Available | Cooling | 35 VA | |
| Air Conditioning Blower Relay | | Standard | |
| CONTROLS | | | |
| Limit Control | | SPST | |
| Heating Blower Control | | Solid–State Time Operation | |
| Gas Connection Size | | 1/2-in. NPT | |
| GAS CONTROLS | | | |
| Gas Valve (Redundant) | Mfr. | White Rodgers | |
| | Min. inlet pressure (In. W.C.) | 3.5 Natural Gas | |
| | Max. inlet pressure (In. W.C.) | 13.6 Natural Gas | |
| Ignition Device | | Hot Surface Igniter | |
| Factory-installed orifice | | #18 | #10 |
| BLOWER DATA | | | |
| Direct-Drive Motor HP (DTCT) | | 3/4 | 1 |
| Motor Full Load Amps | | 8.8 | 11.5 |
| RPM (Nominal)-Speeds | | 1050 | 1050 |
| Blower Wheel Diameter x Width – In. (mm) | | 11 (279) x 8 (203) | 11 (279) x 11 (279) |

* Gas input ratings are certified for elevations to 2000 ft. (609.6 m). 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% may occur when using the factory specified 4–5/16 inch (109.5 mm) wide, high efficiency media filter.

** Time delay type is recommended.

ICS Isolated Combustion System

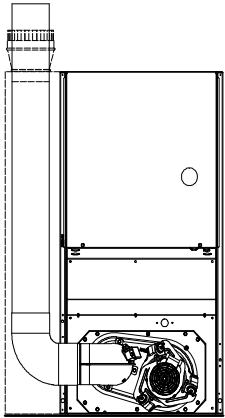
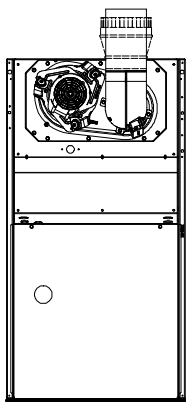
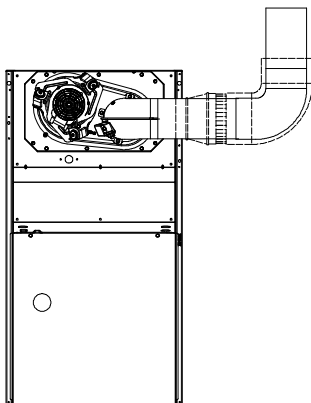
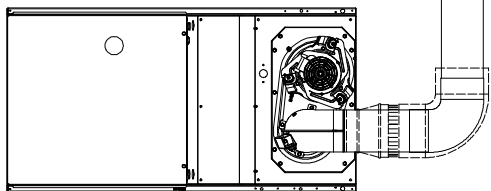
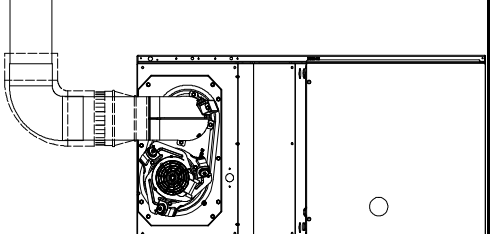
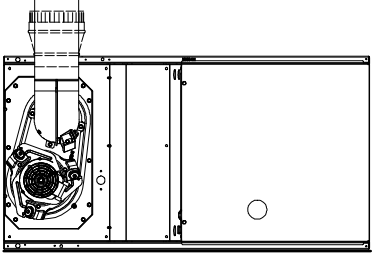
AIR DELIVERY—CFM (WITH FILTER)*

| Furnace | Wire Lead Color ² | Function | Test Airflow Delivery @ Various External Static Pressures | | | | | | | | | |
|---------|------------------------------|----------------------------------|---|------|------|------|------|------|------|------|------|------|
| | | | External Static Pressure (IN. W.C.) | | | | | | | | | |
| | | | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 |
| 060B048 | Gray | Cooling. Do not use for heating. | 1720 | 1680 | 1635 | 1585 | 1545 | 1505 | 1455 | 1405 | 1355 | 1305 |
| | Yellow | Alt Cooling or alt Heating | 1470 | 1425 | 1385 | 1335 | 1290 | 1245 | 1200 | 1160 | 1110 | 1060 |
| | Orange | Alt Cooling or alt Heating | 1305 | 1255 | 1215 | 1160 | 1115 | 1070 | 1025 | 975 | 925 | 870 |
| | Blue | Heating or alt cooling | 1040 | 940 | 890 | 835 | 790 | 740 | 675 | 620 | 565 | 525 |
| | Red | Alt Cooling or alt Heating | 1135 | 1090 | 1035 | 985 | 940 | 895 | 845 | 790 | 730 | 675 |
| 080C060 | Gray | Cooling. Do not use for heating. | 2185 | 2135 | 2085 | 2035 | 1990 | 1935 | 1880 | 1825 | 1770 | 1715 |
| | Yellow | Alt Cooling or alt Heating | 1885 | 1830 | 1780 | 1730 | 1675 | 1625 | 1575 | 1520 | 1470 | 1420 |
| | Orange | Alt Cooling or alt Heating | 1565 | 1500 | 1440 | 1385 | 1330 | 1275 | 1220 | 1170 | 1115 | 1055 |
| | Blue | Heating or alt cooling | 1365 | 1295 | 1230 | 1165 | 1100 | 1045 | 985 | 925 | 845 | 780 |
| | Red | Alt Heating or alt cooling | 1205 | 1045 | 965 | 895 | 815 | 745 | 650 | 595 | 540 | 480 |

NOTES:

1. A filter is required for each return-air inlet. Airflow performance includes a 3/4 in. (19 mm) washable filter media such as contained in factory-authorized accessory filter rack. See accessory list. To determine airflow performance without this filter, assume an additional 0.1 in. W.C. available external static pressure.
2. **ADJUST THE BLOWER SPEED TAPS AS NECESSARY FOR THE PROPER AIR TEMPERATURE RISE FOR EACH INSTALLATION.**
3. Highlighted areas indicate airflow range is beyond the range allowed for heating. THESE AIRFLOW RANGES MAY ONLY BE USED FOR COOLING.

-- Indicates unstable operating conditions.

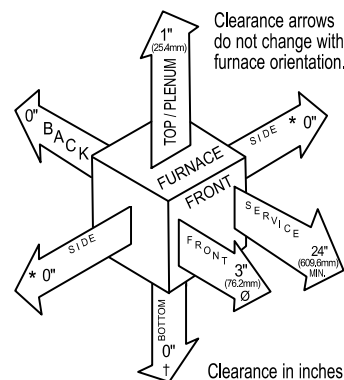
| DOWNFLOW VENT CONFIGURATIONS | | UPFLOW VENT CONFIGURATIONS | |
|--|--|---|--|
|  <p>SEE NOTES: 1,2,4,5,6,7,8,9</p> <p>A02062</p> | |  <p>SEE NOTES: 1,2,4,7,8,9</p> <p>A02058</p> | |
|  <p>SEE NOTES: 1,2,3,4,7,8,9</p> <p>A02059</p> | |  <p>SEE NOTES: 1,2,4,7,8,9</p> <p>A02069</p> | |
|  <p>SEE NOTES: 1,2,4,7,8,9</p> <p>A02068</p> | |  <p>SEE NOTES: 1,2,4,5,7,8,9</p> <p>A02066</p> | |

Venting Notes

1. For common vent, vent connector sizing and vent material: United States—use the NFGC.
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 Downflow Vent Guard Kit, is used in the downflow position.
4. Type-B vent where required, refer to Note 1 above.
5. 4 inch single-wall (26 ga. min.) 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, required in downflow installations with lower vent configuration.
7. Secure vent connector to furnace elbow with (2) corrosion-resistant sheet metal screws, spaced approximately 180° apart.
8. 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.

MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS FOR ALL UNITS

This forced air furnace is equipped for use with natural gas at altitudes 0 – 2,000 ft (0 – 610m).
 Refer to furnace installation manual for suitability and operation above 2,000 ft. (610m).
 If furnace is convertible, see rating plate for manufacturer supplied accessory kits that shall be used to convert to propane gas use.
 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.



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

ACCESSORIES

| PART NUMBER | DESCRIPTION | 060B048 | 080C060 |
|-------------|--|---------|---------|
| NAHB00601FF | External Bottom Filter Rack, 17 inch (16 x 25 inch washable filter included) | 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 | |
| NAHA00706FB | Washable filter, 1 inch 24 x 25 (6 pack) | | X |
| NAHA01101SB | Combustible Floor Base (Not required when evaporator coil case is used for downflow) | X | X |
| NAHB00301VC | Downflow Vent Guard (Not required when vent is routed through cabinet) | X | X |

X Accessory available