# N80MSU

## 80% AFUE, Ultra Low NOx, Multi 18-Speed ECM, 4-Way Multipoise Gas Furnace

Arcoaire® Air Conditioning & Heating

# Product Data

A230171

Representative drawing only. 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 .

ISO 9001 Quality

A200115

## EASIER TO SELL

- 80% AFUE
- Multi 18-Speed, Constant Torque (MCT) ECM blower motor
- Ultra-low NOx emissions - meets the nitrogen oxides (NOx) emission limit of 14 nanograms/joule for the South Coast Air Quality Management District, San Joaquin Valley Air Pollution Control District in California, and Bay Area Air Quality Management District.
- Two-stage cooling capability
- Four-position furnace: Upflow, Horizontal Right, Horizontal Left, Downflow (6 different vent options)
- Versatile venting for tight-fit applications
- Category I venting
- 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

- On-board NFC antenna makes setup a tap away when using the mobile technician app
- Stainless steel, tubular heat exchanger
- Pilot free, hot surface ignition
- High temperature limit control designed to prevent overheating
- Blocked vent switch

## QUIETER

- Noise reduction combustion system, insulated blower compartment
- Variable speed inducer motor

## EASIER TO INSTALL AND SERVICE

- Approved for installations up to 5,400 feet
- 33 1/4" (843.9mm) high, for ease of installation
- Quarter turn knobs for easy door removal and secure attachment
- Factory shipped for natural gas, not convertible to propane
- Flexible installation: Upflow, Downflow, Horizontal
- Two position vent elbow capability
- Common venting with other Category I appliances
- Self diagnostics
- Slide out blower assembly

## LIMITED WARRANTY *

- 20-year heat exchanger limited warranty
- 5-year parts limited warranty

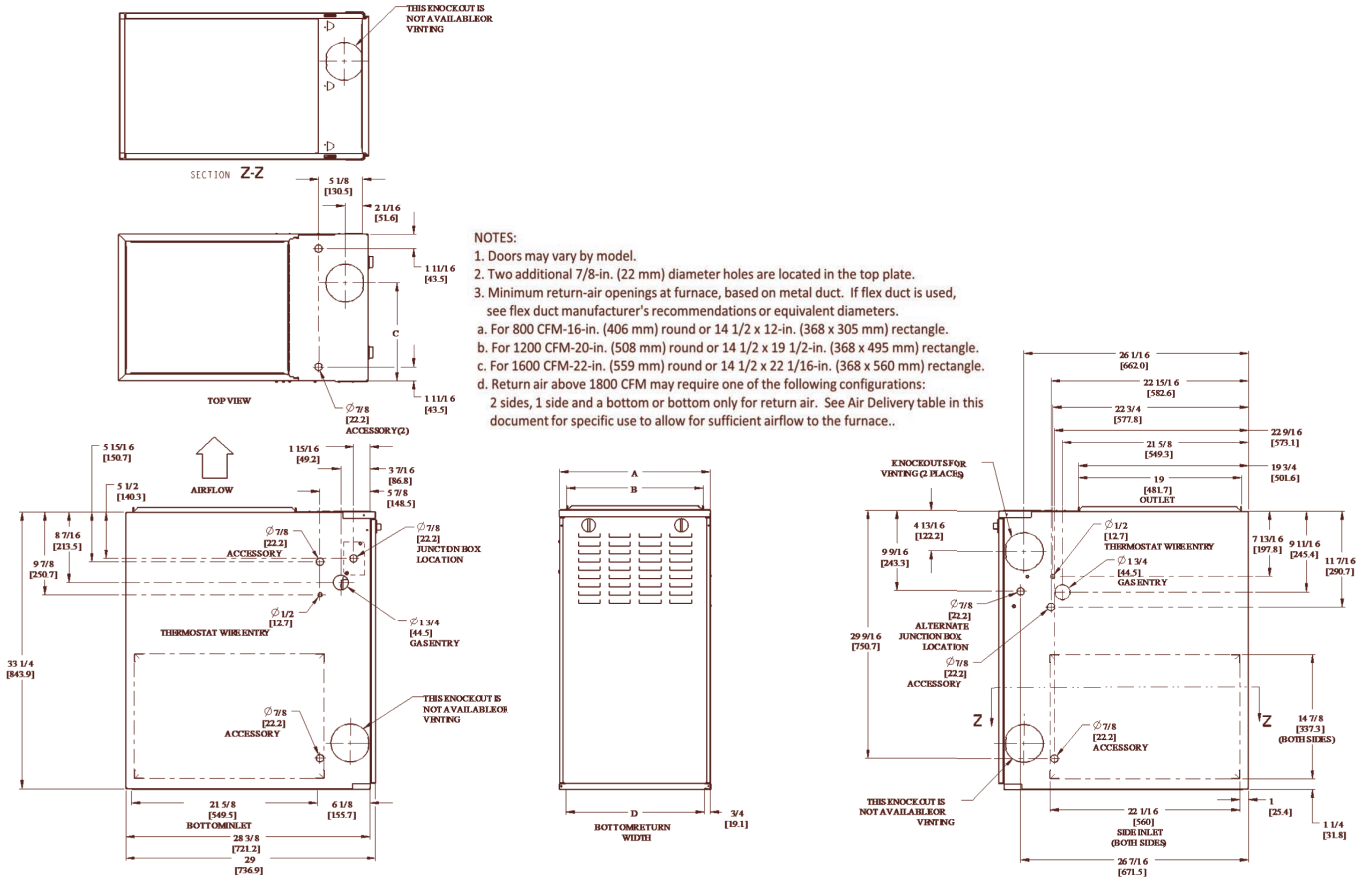
\- Additional 5-year parts limited warranty with timely registration

* Applies to original purchaser/homeowner, some limitations may apply. For residential applications only, See warranty certificate for complete details and restrictions, including warranty coverage of other applications.

# UNIT PERFORMANCE DATA

| Model | Input (BTUh) | Efficiency AFUE | Cooling Capacity CFM range | Dimensions H x W x D In (mm) | Shipping Wt. Lbs (Kg) |
|---|---|---|---|---|---|
| **0401712** | 40,000 | 80% | 300-1415 | 33-1/3 x 17-1/2 x 29 (847 x 445 x 737) | 123 (56) |
| **0601716** | 60,000 | 80% | 340-1845 | 33-1/3 x 17-1/2 x 29 (847 x 445 x 737) | 127 (58) |
| **0802120** | 80,000 | 80% | 330-2365 | 33-1/3 x 21 x 29 (847 x 533 x 737) | 149 (68) |
| **1002120** | 100,000 | 80% | 425-2290 | 33-1/3 x 21 x 29 (847 x 533 x 737) | 153 (69) |

# DIMENSIONAL DATA




NOTES:
1. Doors may vary by model.
2. Two additional 7/8-in. (22 mm) diameter holes are located in the top plate.
3. Minimum return-air openings at furnace, based on metal duct. If flex duct is used, see flex duct manufacturer's recommendations or equivalent diameters.
a. For 800 CFM-16-in. (406 mm) round or 14 1/2 x 12-in. (368 x 305 mm) rectangle.
b. For 1200 CFM-20-in. (508 mm) round or 14 1/2 x 19 1/2-in. (368 x 495 mm) rectangle.
c. For 1600 CFM-22-in. (559 mm) round or 14 1/2 x 22 1/16-in. (368 x 560 mm) rectangle.
d. Return air above 1800 CFM may require one of the following configurations: 2 sides, 1 side and a bottom or bottom only for return air. See Air Delivery table in this document for specific use to allow for sufficient airflow to the furnace..

NOTE: ALL DIMENSIONS IN INCH (MM)

U.S. ECCN: Not Subject to Regulation (N.S.R.)SD5674-4 REV A

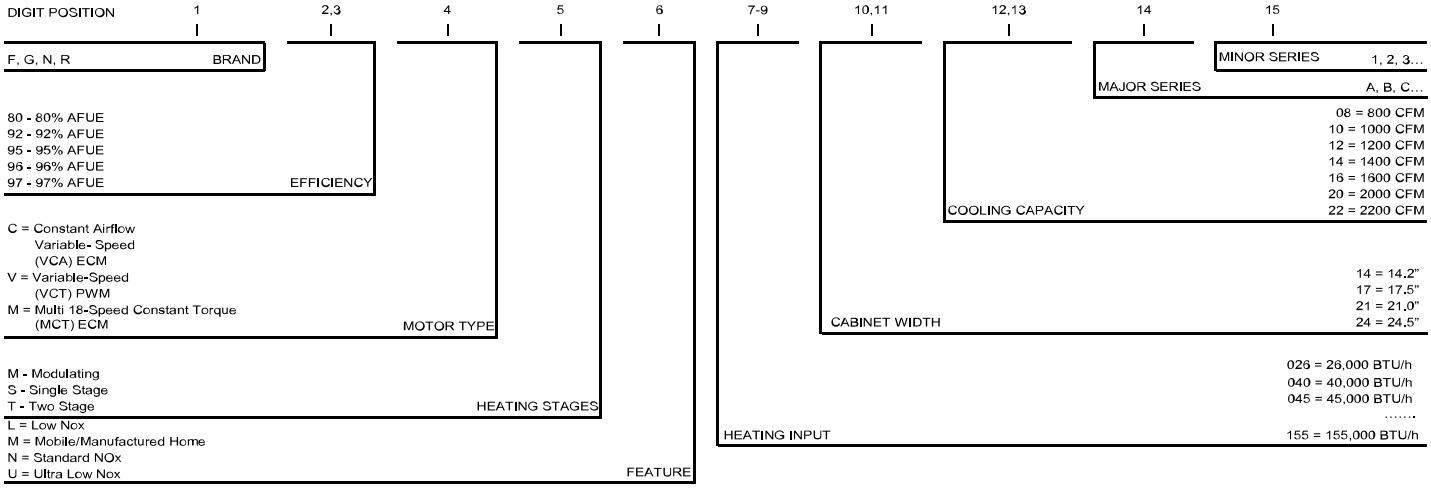
A210783

**Dimensions**

| FURNACE SIZE | A CABINET WIDTH IN. (MM) | B OUTLET WIDTH IN. (MM) | C TOP FLUE COLLAR ONLY IN. (MM) | D BOTTOM INLET WIDTH IN. (MM) | VENT CONNECTION IN. (MM) SIZE | SHIP WT. LB. (KG) |
|---|---|---|---|---|---|---|
| **0401712** | 17-1/2 (445) | 15-7/8 (403) | 11-9/16 (294) | 16 (406) | 4 (102) | 123 (56) |
| **0601716** | 17-1/2 (445) | 15-7/8 (403) | 11-9/16 (294) | 16 (406) | 4 (102) | 127 (58) |
| **0802120** | 21 (533) | 19-3/8 (492) | 13-5/16 (338) | 19-1/2 (495) | 4 (102) | 149 (68) |
| **1002120** | 21 (533) | 19-3/8 (492) | 13-5/16 (338) | 19-1/2 (495) | 4 (102) | 153 (69) |

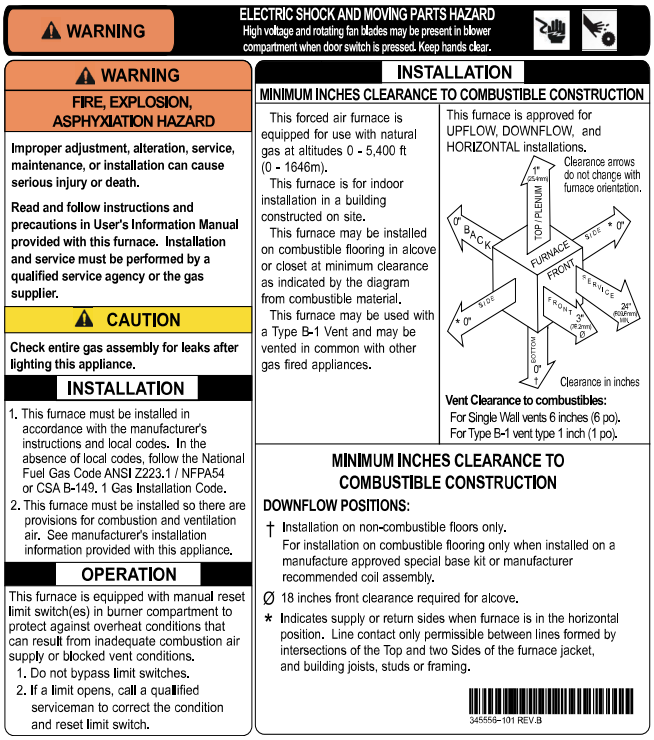
**Manufacturer reserves the right to change, at any time, specifications and designs without notice and without obligations.**

# MODEL NUMBER NOMENCLATURE




A221575

# CLEARANCES




A220905

The furnace should be sized to provide 100 percent of the design heating load requirement plus any margin that occurs because of furnace model size capacity increments. None of the furnace model sizes can be used if the heating load is 20,000 BTU or lower. Use Air Conditioning Contractors of America (Manual J and S); American Society of Heating, Refrigerating, and Air-Conditioning Engineers; or other approved engineering method to calculate heating load estimates and select the furnace. Excessive oversizing of the furnace may cause the furnace and/or vent to fail prematurely, customer discomfort and/or vent freezing.

Failure to follow these guidelines is considered faulty installation and/or misapplication of the furnace; and resulting failure, damage, or repairs may impact warranty coverage.

# SPECIFICATIONS

| UNIT SIZE | | 0401712 | 0601716 | 0802120 | 1002120 |
|---|---|---|---|---|---|
| **HEATING AND CAPACITY AND EFFICIENCY** | | | | | |
| **Input BTUh*** | | 40,000 | 60,000 | 80,000 | 100,000 |
| **Output Capacity (BTUh)†** | | 32,000 | 48,000 | 64,000 | 80,000 |
| **Certified Temperature Rise Range - °F (°C)** | | 25-55 (14-31) | 25-55 (14-31) | 25-55 (14-31) | 25-55 (14-31) |
| **AFUE†** | | 80% | | | |
| **AIRFLOW CAPACITY AND BLOWER DATA** | | | | | |
| **Rated Certified External Static Pressure** | Heating | 0.10 | 0.12 | 0.15 | 0.20 |
| | Cooling | 0.50 | 0.50 | 0.50 | 0.50 |
| **Airflow CFM @ Rated ESP (CFM)‡** | Heating | 740 | 985 | 1475 | 1765 |
| | Cooling | 300-1415 | 340-1845 | 330-2365 | 425-2290 |
| **Direct Drive Motor Type** | | Electronically Commutated Motor (ECM) | | | |
| **Direct Drive Motor HP** | | 1/2 | 3/4 | 1 | 1 |
| **Motor Full Load Amps** | | 6.7 | 8.8 | 11.5 | 11.5 |
| **Heating Blower Control (Htg OFF-Delay)** | | Adjustable: 90, 120 (factory-set), 150, 180 seconds | | | |
| **Cooling Blower Control (Clg OFF-Delay)** | | Adjustable: 90 (factory-set), 5, 30 seconds | | | |
| **Blower Wheel Diameter x Width - In. (mm)** | | 11x8 (279x203) | 11x8 (279x203) | 11x10 (279x254) | 11x11 (279x279) |
| **Air Filtration System** | | Field Supplied Filter | | | |
| **Filter used for Certified Watt Data** | | 325531-40** | | | |
| **ELECTRICAL DATA** | | | | | |
| **Unit Volts-Hertz-Phase** | | 115-60-1 | | | |
| **Operating Voltage Range** | Min-Max | 104-127 | | | |
| **Maximum Unit Amps** | | 8.6 | 11.0 | 14.2 | 14.2 |
| **Unit Ampacity** | | 11.2 | 14.2 | 18.2 | 18.2 |
| **Maximum Wire Length (Measure 1 way in Ft/M)** | | 33/10.1 | 26/7.9 | 31/9.6 | 31/9.6 |
| **Minimum Wire Size** | AWG | 14 | 14 | 12 | 12 |
| **Max. Fuse/Ckt Bkr Size (Time-Delay Type Recommended)** | Amps | 15 | 15 | 20 | 20 |
| **Transformer Capacity (24 VAC output)** | | 40VA | | | |
| **External Control Power Available** | Heating | 12VA | | | |
| | Cooling | 35VA | | | |
| **GAS CONTROLS** | | | | | |
| **Gas Connection Size** | | 1/2 in. NPT | | | |
| **Gas Valve (Redundant)** | Mfr | WhiteRodgers™ | | | |
| **Min. inlet pressure** | (in.w.c.) | 4.5 (Natural Gas) | | | |
| **Max. inlet pressure** | (in.w.c.) | 13.6 (Natural Gas) | | | |
| **Ignition Device** | | Silicon Nitride | | | |
| **Factory installed orifice** | | 3.35mm | 18 | 10 | 6 |
| **CONNECTIONS** | | | | | |
| **Communication System** | | None | | | |
| **Thermostat Connections** | | Y1, G, C, W, Y/Y2, R | | | |
| **Accessory Connections** | | EAC-1 (115 VAC); HUM (24 VAC); 1-STG AC or 2-STG (via Y/Y2, Y1) | | | |

*. Gas input ratings are certified for elevations to 2000 ft. (610 M). In USA, For elevations above 2000 ft (610 M), reduce ratings 2percent 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.

**. See Accessory List for part numbers available.

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# AIR DELIVERY - CFM

**Air Delivery - CFM (with filter)**

| Unit Size | Airflow Setting | Default Setting | 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 |
| 0401712 | 1 | Const. Fan | 610 | 525 | 440 | 365 | 300 | 230 | 165 | - | - | - |
| | 2 | | 650 | 570 | 490 | 410 | 350 | 285 | 220 | 155 | - | - |
| | 3 | | 705 | 630 | 555 | 480 | 415 | 355 | 295 | 235 | 170 | - |
| | 4 | Heating | 740 | 665 | 590 | 520 | 455 | 395 | 340 | 285 | 225 | 160 |
| | 5 | | 815 | 735 | 670 | 600 | 540 | 475 | 420 | 370 | 315 | 260 |
| | 6 | | 855 | 785 | 720 | 655 | 595 | 535 | 480 | 430 | 380 | 325 |
| | 7 | | 915 | 850 | 785 | 725 | 665 | 605 | 550 | 495 | 450 | 405 |
| | 8 | | 970 | 905 | 850 | 785 | 730 | 675 | 620 | 565 | 515 | 470 |
| | 9 | | 1020 | 960 | 905 | 850 | 790 | 740 | 685 | 635 | 585 | 535 |
| | 10 | | 1080 | 1025 | 970 | 920 | 865 | 810 | 760 | 710 | 665 | 615 |
| | 11 | | 1140 | 1085 | 1035 | 980 | 930 | 880 | 830 | 785 | 735 | 690 |
| | 12 | | 1200 | 1150 | 1095 | 1045 | 1000 | 950 | 905 | 855 | 810 | 765 |
| | 13 | | 1265 | 1215 | 1160 | 1115 | 1070 | 1025 | 980 | 935 | 890 | 845 |
| | 14 | | 1325 | 1280 | 1230 | 1180 | 1135 | 1095 | 1050 | 1005 | 960 | 920 |
| | 15 | | 1385 | 1335 | 1285 | 1245 | 1200 | 1160 | 1120 | 1075 | 1035 | 990 |
| | 16 | Cooling | 1450 | 1405 | 1360 | 1315 | 1275 | 1235 | 1190 | 1155 | 1110 | 1070 |
| | 17 | | 1520 | 1480 | 1435 | 1395 | 1355 | 1310 | 1275 | 1235 | 1195 | 1155 |
| | 18 | | 1580 | 1540 | 1500 | 1455 | 1415 | 1375 | 1340 | 1300 | 1260 | 1225 |
| 0601716 | 1 | Const. Fan | 665 | 585 | 490 | 410 | 340 | 275 | 195 | 145 | - | - |
| | 2 | | 755 | 680 | 600 | 520 | 445 | 385 | 325 | 255 | 190 | 140 |
| | 3 | | 835 | 765 | 695 | 615 | 545 | 480 | 425 | 365 | 310 | 245 |
| | 4 | | 905 | 840 | 775 | 710 | 635 | 570 | 515 | 460 | 405 | 355 |
| | 5 | Heating | 1000 | 935 | 875 | 815 | 750 | 690 | 620 | 570 | 520 | 470 |
| | 6 | | 1050 | 995 | 935 | 880 | 820 | 755 | 700 | 645 | 595 | 550 |
| | 7 | | 1130 | 1075 | 1020 | 970 | 915 | 855 | 800 | 745 | 690 | 645 |
| | 8 | | 1200 | 1150 | 1100 | 1050 | 1000 | 945 | 890 | 840 | 785 | 735 |
| | 9 | | 1285 | 1240 | 1190 | 1145 | 1095 | 1050 | 1000 | 945 | 895 | 850 |
| | 10 | | 1365 | 1320 | 1275 | 1230 | 1185 | 1140 | 1100 | 1050 | 995 | 955 |
| | 11 | | 1395 | 1355 | 1310 | 1265 | 1220 | 1175 | 1135 | 1090 | 1035 | 995 |
| | 12 | | 1455 | 1415 | 1370 | 1330 | 1285 | 1245 | 1200 | 1160 | 1115 | 1070 |
| | 13 | | 1545 | 1500 | 1465 | 1420 | 1380 | 1340 | 1305 | 1265 | 1225 | 1180 |
| | 14 | | 1615 | 1580 | 1540 | 1500 | 1465 | 1425 | 1390 | 1350 | 1315 | 1275 |
| | 15 | | 1695 | 1660 | 1625 | 1585 | 1550 | 1515 | 1480 | 1445 | 1405 | 1375 |
| | 16 | Cooling | 1775 | 1740 | 1705 | 1670 | 1635 | 1600 | 1570 | 1535 | 1500 | 1470 |
| | 17 | | 1860 | 1825 | 1795 | 1760 | 1730 | 1695 | 1665 | 1635 | 1605 | 1575 |
| | 18 | | 1970 | 1940 | 1910 | 1880 | 1845 | 1815 | 1780 | 1740 | 1695 | 1650 |
| 0802120 | 1 | Const. Fan | 745 | 630 | 520 | 420 | 330 | 240 | 155 | - | - | - |
| | 2 | | 825 | 725 | 620 | 520 | 435 | 355 | 270 | 195 | - | - |
| | 3 | | 925 | 835 | 740 | 650 | 560 | 485 | 415 | 340 | 260 | 195 |
| | 4 | | 995 | 910 | 825 | 735 | 650 | 570 | 500 | 430 | 360 | 285 |
| | 5 | | 1095 | 1015 | 935 | 855 | 770 | 695 | 620 | 555 | 495 | 430 |
| | 6 | | 1210 | 1135 | 1065 | 990 | 915 | 840 | 770 | 705 | 635 | 580 |
| | 7 | | 1290 | 1220 | 1150 | 1080 | 1010 | 940 | 875 | 810 | 740 | 685 |
| | 8 | | 1390 | 1330 | 1265 | 1195 | 1130 | 1065 | 1000 | 940 | 875 | 815 |
| | 9 | Heating | 1505 | 1450 | 1390 | 1325 | 1270 | 1205 | 1145 | 1085 | 1025 | 970 |
| | 10 | | 1595 | 1540 | 1480 | 1425 | 1370 | 1310 | 1250 | 1195 | 1140 | 1085 |
| | 11 | | 1700 | 1645 | 1595 | 1540 | 1485 | 1435 | 1380 | 1325 | 1270 | 1220 |
| | 12 | | 1795 | 1750 | 1700 | 1650 | 1595 | 1545 | 1495 | 1445 | 1395 | 1340 |
| | 13 | | 1910 | 1865 | 1815 | 1770 | 1720 | 1675 | 1625 | 1580 | 1530 | 1485 |
| | 14 | | 2020 | 1975 | 1930 | 1885 | 1840 | 1795 | 1750 | 1705 | 1660 | 1615 |
| | 15 | | 2125 | 2080 | 2040 | 2000 | 1955 | 1915 | 1870 | 1830 | 1785 | 1745 |
| | 16 | Cooling | 2240 | 2200 | 2160 | 2120 | 2080 | 2040 | 2000 | 1965 | 1925 | 1885 |
| | 17 | | 2335 | 2295 | 2260 | 2220 | 2185 | 2150 | 2110 | 2075 | 2040 | 2005 |
| | 18 | | 2510 | 2475 | 2440 | 2400 | 2365 | 2325 | 2285 | 2230 | 2185 | 2130 |

**Manufacturer reserves the right to change, at any time, specifications and designs without notice and without obligations.**

**Air Delivery - CFM (with filter) (Continued)**

| Unit Size | Airflow Setting | Default Setting | 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 |
| 1002120 | 1 | Const. Fan | 865 | 745 | 640 | 525 | 425 | 315 | 170 | - | - | - |
| | 2 | | 935 | 825 | 725 | 620 | 515 | 420 | 315 | 175 | - | - |
| | 3 | | 1035 | 935 | 830 | 745 | 640 | 550 | 460 | 365 | 235 | 140 |
| | 4 | | 1095 | 1000 | 900 | 815 | 725 | 630 | 545 | 455 | 360 | 240 |
| | 5 | | 1205 | 1125 | 1035 | 945 | 870 | 780 | 695 | 620 | 540 | 455 |
| | 6 | | 1290 | 1210 | 1125 | 1040 | 965 | 890 | 805 | 725 | 645 | 570 |
| | 7 | | 1385 | 1310 | 1235 | 1155 | 1080 | 1010 | 940 | 860 | 785 | 710 |
| | 8 | | 1495 | 1430 | 1360 | 1285 | 1215 | 1145 | 1080 | 1015 | 945 | 870 |
| | 9 | | 1585 | 1520 | 1455 | 1385 | 1315 | 1250 | 1185 | 1125 | 1065 | 995 |
| | 10 | | 1685 | 1625 | 1565 | 1505 | 1435 | 1370 | 1305 | 1250 | 1190 | 1135 |
| | 11 | | 1785 | 1725 | 1665 | 1605 | 1550 | 1485 | 1425 | 1365 | 1310 | 1255 |
| | 12 | Heating | 1820 | 1765 | 1710 | 1655 | 1590 | 1530 | 1470 | 1410 | 1355 | 1305 |
| | 13 | | 1880 | 1830 | 1775 | 1720 | 1665 | 1610 | 1550 | 1490 | 1435 | 1385 |
| | 14 | | 1985 | 1930 | 1880 | 1830 | 1780 | 1730 | 1675 | 1620 | 1565 | 1515 |
| | 15 | | 2090 | 2040 | 1990 | 1940 | 1895 | 1845 | 1795 | 1745 | 1690 | 1645 |
| | 16 | | 2185 | 2140 | 2095 | 2045 | 2000 | 1960 | 1915 | 1865 | 1820 | 1770 |
| | 17 | Cooling | 2285 | 2240 | 2195 | 2150 | 2110 | 2065 | 2025 | 1980 | 1940 | 1895 |
| | 18 | | 2465 | 2420 | 2375 | 2335 | 2290 | 2235 | 2180 | 2125 | 2060 | 2000 |

**NOTE:**

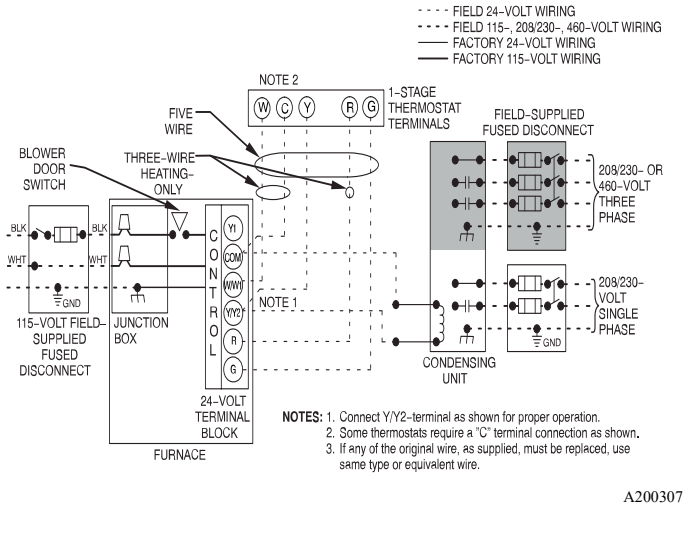
1. A filter is required for each return-air inlet. Airflow performance included 3/4-in. (19 mm) washable filter media such as contained in a factory - authorized accessory filter rack. See accessory list. To determine airflow performance without this filter, assume an additional 0.1 in. w.c. available external static pressure.
2. **Adjust the blower airflow settings as necessary for the proper air temperature rise for each installation.**
3. Airflows over 1800 CFM require bottom return, two-side return, or bottom and side return. A minimum filter size of 20" x 25" (508 x 635 mm) is required.
4. For upflow applications, air entering from one side into both the side of the furnace and a return air base counts as a side and bottom return
5. .The -- entry indicates unstable operating conditions.

**Table 1 – Airflow Settings**

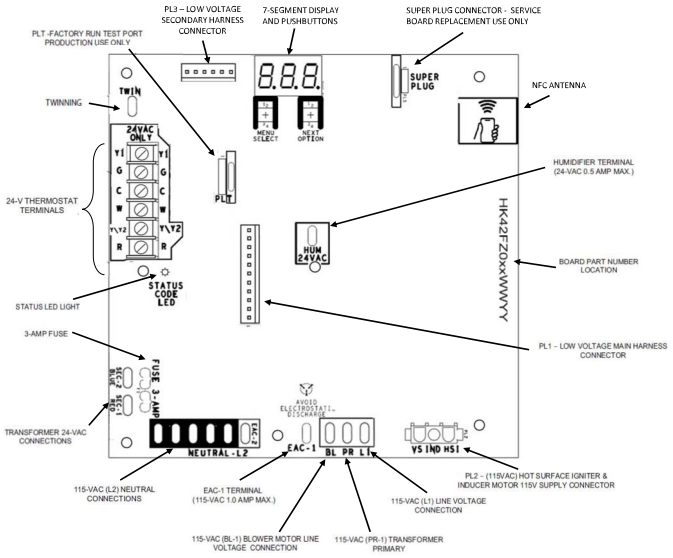
| | Default Airflow Settings* | | Designated Airflow Settings | |
|---|---|---|---|---|
| Unit Size | Heating | Cooling | Heating | Constant Fan |
| **0401712** | 4 | 16 | (2-12) | (1-7) |
| **0601716** | 5 | 16 | (3-11) | (1-8) |
| **0802120** | 9 | 16 | (5-14) | (1-8) |
| **1002120** | 12 | 17 | (7-15) | (1-7) |

*. Setting #1 is the default setting for Constant Fan.

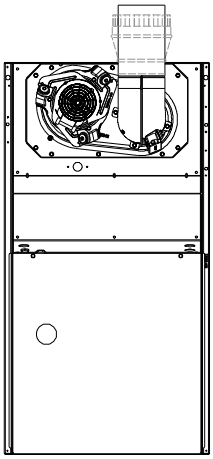
## TYPICAL WIRING SCHEMATIC




## FURNACE CONTROL BOARD



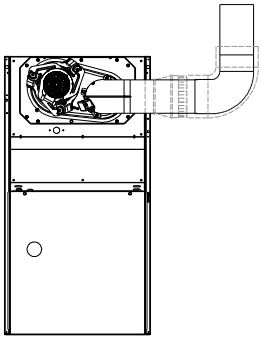
# VENTING CONFIGURATIONS



SEE NOTES: 1,2,4,7,8,9 on the page following

A03208

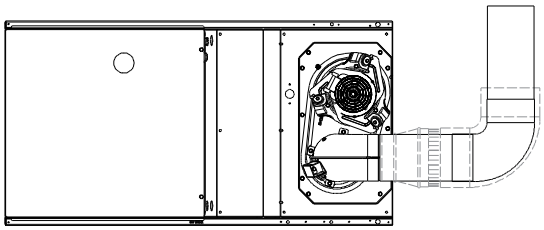
Upflow Application-Vent Elbow Up



SEE NOTES: 1,2,3,4,7,8,9 on the pages following these figures

A03209

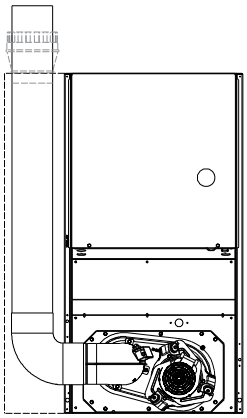
Upflow Application-Vent Elbow Right



SEE NOTES: 1,2,4,7,8,9 on the page following these figures

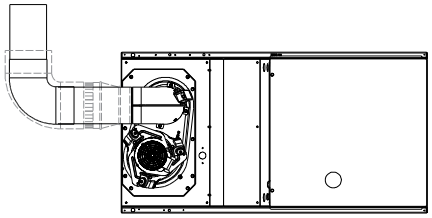
A03218

Horizontal Right Application-Vent Elbow Right



A03207

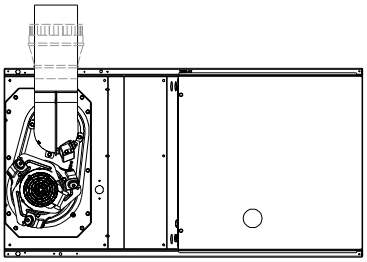
Downflow Application-Vent Elbow Left then Up



SEE NOTES: 1,2,4,7,8,9 on the page following these figures

A03213

Horizontal Left Application-Vent Elbow Left



SEE NOTES: 1,2,4,5,7,8,9 on the page following these figures

A03215

Horizontal Left Application-Vent Elbow Up

## Venting notes

1. For common vent, vent connector sizing and vent material: United States, latest edition of the National Fuel Gas Code (NFGC), NFPA54/ANSI Z223.1.
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 accessory 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. Secure vent connector to furnace elbow with (2) corrosion-resistant sheet metal screws, space approximately 180° apart.
8. Secure all other single wall vent connector joints with (3) corrosion-resistant screws spaced approximately 120° apart.
9. Secure Type B vent connectors per vent connector manufacturer's recommendations.

# ACCESSORIES

| PART NUMBER | DESCRIPTION | 0401712 | 0601716 | 0802120 | 1002120 |
|---|---|---|---|---|---|
| ACG1625NCF* | External Filter Rack, 16" x 25" | X | X | – | – |
| ACG2025NCJ* | External Filter Rack, 20" x 25" | – | – | X | X |
| 325531-402* | Washable filter, 3/4" x 16" x 25" | X | X | – | – |
| 325531-403* | Washable filter, 3/4" x 21" x 25" | – | – | X | X |
| NAHB00101CA | Coil Adapter Kits - No Offset | X | X | X | X |
| NAHB00201CA | Coil Adapter Kits - Single Offset | X | X | X | X |
| NAHB00301CA | Coil Adapter Kits - Double Offset | X | X | X | X |
| NAHA01701RA | Return Air Base (Upflow Applications) 17-1/2" wide | X | X | – | – |
| NAHA02101RA | Return Air Base (Upflow Applications) 21" wide | – | – | X | X |
| NAHA01101SB | Combustible Floor Base (Not required when evaporator coil case is used for downflow) | X | X | X | X |
| NAHB00301VC | Downflow Vent Guard (Not required when vent is routed through cabinet) | X | X | X | X |
| AGAFLTULN01A17 | Combustion Air Filter Kit – 17" | X | X | – | – |
| AGAFLTULN01A21 | Combustion Air Filter Kit – 21" | – | – | X | X |

*. Purchased through FAST Parts.

# GUIDE SPECIFICATIONS

## General

### System Description

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

### Quality Assurance

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

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

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

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

### Delivery, Storage, and Handling

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

### Warranty (for inclusion by specifying engineer)

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

## Equipment

### Blower Wheel and ECM Blower Motor

Galvanized blower wheel shall be centrifugal type, statically and dynamically balanced. Blower motor of ECM type shall be permanently lubricated with sealed ball bearings, of _____HP, and have multiple speeds from 600-1200 RPM operating only when 24-VAC motor inputs are provided. Blower motor shall be direct drive and soft mounted to the blower housing to reduce vibration transmission.

### Filters

Furnace shall have reusable-type filters.

Filter shall be _____ in. (mm) x_____ in. (mm).

An accessory highly efficient Media Filter is available as an option. _____ Media Filter.

### Casing

Casing shall be of 0.030 in. thickness minimum, pre-painted steel.

### Draft Inducer Motor

Draft inducer motor shall be single-speed PSC design.

### Primary Heat Exchangers

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

### Secondary Heat Exchangers

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

## Controls

Controls shall include a micro-processor-based integrated electronic control board with at least 16 service troubleshooting codes displayed via diagnostic flashing LED light on the control, a self-test feature that checks all major functions of the furnace, and a replaceable automotive-type circuit protection fuse. Multiple operational settings available, including blower speeds for heating and cooling.

### Operating Characteristics

Heating capacity shall be _____ Btuh input; _____ Btuh output capacity.

Fuel Gas Efficiency shall be _____AFUE.

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

Dimensions shall be: depth_____in. (mm); width _____in. (mm); height_____in. (mm) (casing only).

Height shall be_____in. (mm) with A/C coil and _____in. (mm) overall with plenum.

### Electrical Requirements

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

### Special Features

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

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**Manufacturer reserves the right to change, at any time, specifications and designs without notice and without obligations.**