G80CTL (Series B) 80% AFUE, Two-Stage Variable Speed, 4-Way Multipoise, Gas Furnace



Product Data



SYST0101CW Recommended (sold separately)



A200433

⚠ 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 .



Quality

A200115

EASIER TO SELL

- 80% AFUE
- Cabinet air leakage less than 2.0% at 1.0 in. w.c. and cabinet air leakage less than 1.4% at 0.5 in. w.c. when tested in accordance with ASHRAE standard 193
- Supports two-stage cooling units
- IONTM Communicating Control System
- Flame roll-out sensors standard
- Category I venting
- Blocked vent switch
- Dehumidification feature in cooling
- 24 VAC humidifier terminal
- · Electronic air cleaner terminal
- All units can be installed in air quality management districts with a 40 ng/J NOx emissions requirements

TOUGHER

- Variable speed ECM blower motor
- · Adjustable heating blower OFF delay
- · Factory set blower ON delay
- · RPJ aluminized steel heat exchanger
- · High temperature limit control prevents overheating
- · Direct ignition with Silicon Nitride ignitor
- · One piece pre-painted steel cabinet
- On-board NFC antenna makes setup a tap away when using the Service Technician App.
- 3-digit display shows fault codes and furnace status
- RAT and SAT thermistors can provide temperature rise
- Two-stage induced draft blower
- In-shot burners
- · Insulated blower compartment

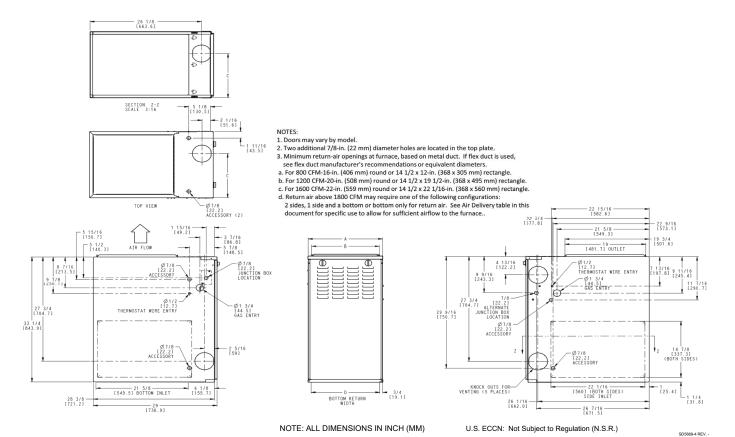
EASIER TO INSTALL AND SERVICE

- 33-1/3" (847mm) high, for ease of installation
- Quarter turn knobs for easy door removal and secure attachment
- · Convertible to propane gas conversion accessory kit
- Four position upflow/downflow/horizontal (left/right) installation
- Three position vent 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*

- 10 year No Hassle ReplacementTM limited warranty
- · Lifetime heat exchanger limited warranty with timely registration
- 5 year parts limited warranty
 - additional 5 year parts limited warranty with timely registration
- * For residential applications only, See warranty certificate for complete details and restrictions, including warranty coverage of other applications.

DIMENSIONAL DATA



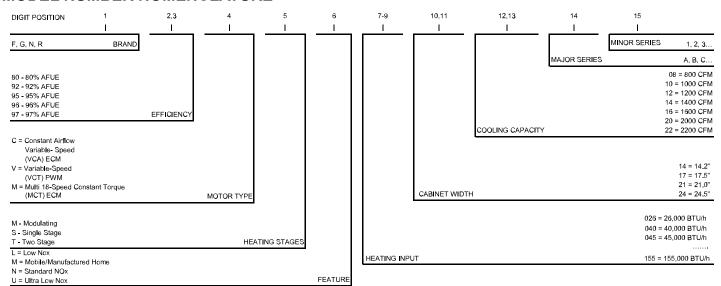
Dimensions

A190084

| | Α | В | С | D | | - | |
|--------------|---------------|---------------|----------------------------------|-----------------------|-------------------------|---------------------|--|
| FURNACE SIZE | CABINET WIDTH | OUTLET WIDTH | TOP AND BOTTOM FLUE COLLAR | BOTTOM INLET WIDTH | VENT CONNECTION SIZE | SHIP WT. LB (KG) | |
| 0451712 | 17-1/2 (445) | 15-7/8 (403) | 11-9/16 (294) | 16 (406) | 4 (102) | 122.5 (55.6) | |
| 0701412 | 14-3/16 (360) | 12-9/16 (319) | 9-5/16 (237) | 12-11/16 (322) | 4 (102) | 119.5 (54.2) | |
| 0701716 | 17-1/2 (445) | 15-7/8 (403) | 11-9/16 (294) | 16 (406) | 4 (102) | 132 (59.9) | |
| 0702120 | 21 (533) | 19-3/8 (492) | 13-5/16 (338) | 19-1/2 (495) | 4 (102) | 137 (62.1) | |
| 0901716 | 17-1/2 (445) | 15-7/8 (403) | 11-9/16 (294) | 16 (406) | 4 (102) | 134.5 (61.0) | |
| 0902120 | 21 (533) | 19-3/8 (492) | 13-5/16 (338) | 19-1/2 (495) | 4 (102) | 147.5 (66.9) | |
| 1102120 | 21 (533) | 19-3/8 (492) | 13-5/16 (338) | 19-1/2 (495) | 4 (102) | 152 (68.9) | |
| 1352422 | 24-1/2 (622) | 22-7/8 (581) | 15-1/16 (383) | 23 (584) | 4 (102) [*] | 174.5 (79.2) | |

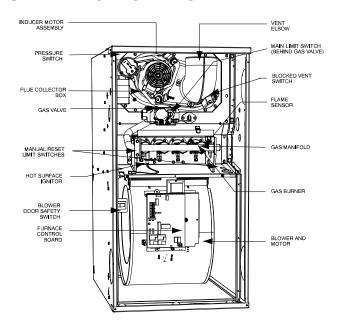
^{*. 135} size furnace require a 5 or 6-in. (127 or 152 mm) vent. Use a vent adapter between furnace and vent stack. See Installation Instructions for complete installation requirements.

MODEL NUMBER NOMENCLATURE



A221575

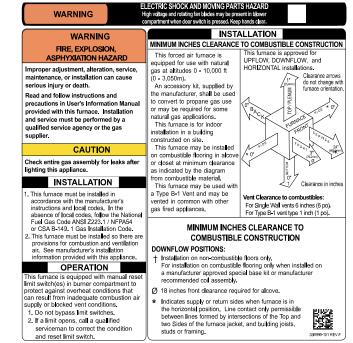
FURNACE COMPONENTS



A190086

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

CLEARANCES



A220231

SPECIFICATIONS

| UNI | T SIZE | | 0451712 | 0701412 | 0701716 | 0702120 | 0901716 | 0902120 | 1102120 | 1352422 | |
|---|-------------------------|---|--|---|---------------------|----------------------|---------------------|----------------------|----------------------|----------------------|--|
| HEATING AND CAPA | | FICIENCY | | | | | | | | | |
| | All Standard, | High | 44,000 | 66,000 | 66,000 | 66,000 | 88,000 | 88,000 | 110,000 | 132,000 | |
| _ | Low NOx- Upflow | Low | 29,000 | 43,500 | 43,500 | 43,500 | 58,000 | 58,000 | 72,500 | 87,000 | |
| Input BTUh* | Low Nox | High | 42,000 | 63,000 | 63,000 | 63,000 | 84,000 | 84,000 | 105,000 | 126,000 | |
| | Downflow/ Horizontal | Low | 29,000 | 43,500 | 43,500 | 43,500 | 58,000 | 58,000 | 72,500 | 87,000 | |
| | All Standard, | High | 35,000 | 54,000 | 53,000 | 53,000 | 71,000 | 71,000 | 89,000 | 107,000 | |
| Output Capacity | • | | 23,000 | 35,000 | 35,000 | 35,000 | 47,000 | 47,000 | 59,000 | 70,000 | |
| (BTUh) [†] | Low Nox | High | 34,000 | 51,000 | 51,000 | 51,000 | 68,000 | 68,000 | 85,000 | 102,000 | |
| | Downflow/ Horizontal | Low | 23,000 | 35,000 | 35,000 | 35,000 | 47,000 | 47,000 | 59,000 | 70,000 | |
| Certified Temperatu | re Rise | High | 30-60 (17-33) | 30-60 (17-33) | 25-55 (14-31) | 25-55 (14-31) | 40-70 (22-39) | 25-55 (14-31) | 40-70 (22-39) | 40-70 (22-39) | |
| Range - °F (°C) | | Low | 20-50 (11-28) | 30-60 (17-33) | 15-45 (8-25) | 15-45 (8-25) | 30-60 (17-33) | 15-45 (8-25) | 25-55 (14-31) | 25-55 (14-31) | |
| AFUE [†] | | | | | | 80 | 1% | | | | |
| AIRFLOW CAPACITY | Y AND BLOWE | R DATA | | | | | | | | | |
| Rated Certified | | Heating | 0.10 | 0.12 | 0.12 | 0.12 | 0.15 | 0.15 | 0.20 | 0.20 | |
| External Static Pressure | | Cooling | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | |
| | High Heat | | 630 | 1030 | 1175 | 1174 | 1175 | 1650 | 1445 | 1815 | |
| Airflow CFM @ Rated ESP (CFM) [‡] | Low Heat | | 520 | 650 | 1040 | 1025 | 965 | 1445 | 1315 | 1700 | |
| | | Cooling | 1565 | 1355 | 1650 | 2070 | 1455 | 2270 | 2245 | 2240 | |
| Direct Drive Motor H | Р | | 3/4 | 1/2 | 3/4 | 1 | 1/2 | 1 | 1 | 1 | |
| Motor Full Load Am | | | 8.8 6.7 8.8 11.5 6.7 11.5 11.5 11.7 Adjustable: 90, 120 (factory-set), 150, 180 seconds | | | | | | | | |
| Heating Blower Con | ` ` ` | • | | | | , | • • | | | | |
| Cooling Blower Con | trol (Time Dela | y Relay) | | Adjustable: 90 (factory-set), 5, 30, 60 seconds | | | | | | | |
| Blower Wheel Diame | eter x Width - | ln. (mm) | 11 x 8 (279x203) | 10 x 6 (254x152) | 11 x 8 (279x203) | 11 x 10 (279x254) | 10 x 8 (254x203) | 11 x 11 (279x279) | 11 x 10 (279x254) | 11 x 11 (279x279) | |
| Air Filtration System | | | | | | | olied Filter | | | | |
| Filter used for Certif | ied Watt Data | | | | | 32553 | 1-40** | | | | |
| ELECTRICAL DATA | | | | | | | | | | | |
| Unit Volts-Hertz-Pha | se | | | | | 115- | 60-1 | | | | |
| Operating Voltage Range | | Min-Max | | | | 104 | -127 | | | | |
| Maximum Unit Amps | 3 | | 10.5 | 8.0 | 10.5 | 13.8 | 8.6 | 14.4 | 14.7 | 13.9 | |
| Unit Ampacity | | | 13.8 | 10.7 | 13.8 | 18.0 | 11.3 | 18.5 | 18.8 | 17.8 | |
| Maximum Wire Leng (Measure 1 way in F | | | 26 (7.9) | 34 (10.4) | 26 (7.9) | 31 (9.4) | 32 (9.8) | 31 (9.4) | 30 (9.1) | 32 (9.8) | |
| Minimum Wire Size | | AWG | 14 | 14 | 14 | 12 | 14 | 12 | 12 | 12 | |
| Max. Fuse/Ckt Bkr Size (Time-Delay Type Recommended) | | Amps | 15 | 15 | 15 | 20 | 15 | 20 | 20 | 20 | |
| Transformer Capaci | ty (24 VAC out | put) | | <u>I</u> | <u>I</u> | 40 | VA | I | I | I | |

SPECIFICATIONS (Continued)

| UNI | Γ SIZE | 0451712 | 0701412 | 0701716 | 0702120 | 0901716 | 0902120 | 1102120 | 1352422 | | | |
|-----------------------|-----------|---------------|---------|--------------|--------------|--------------|---------------|---------|---------|--|--|--|
| External Control | Heating | 24VA | | | | | | | | | | |
| Power Available | Cooling | 35VA | | | | | | | | | | |
| GAS CONTROLS | | | | | | | | | | | | |
| Burners | | 2 | 3 | 3 | 3 | 4 | 4 | 5 | 6 | | | |
| Gas Connection Size |) | | | | 1/2-in | . NPT | | | | | | |
| Gas Valve (Redundant) | Mfr | WhiteRodgers™ | | | | | | | | | | |
| Min. inlet pressure | (in.w.c.) | | | | 4.5 (Natu | ural Gas) | | | | | | |
| Max. inlet pressure | (in.w.c.) | | | | 13.6 (Nat | ural Gas) | | | | | | |
| Ignition Device | | | | | Silicon | Nitride | | | | | | |
| Factory installed ori | fice | | | | Size | e 43 | | | | | | |
| CONNECTIONS | | | | | | | | | | | | |
| Communication Sys | tem | | | ION™ Co | mmunicating | Control SYS | T0101CW | | | | | |
| Thermostat Connect | ions | | | R, W/W1, | W2, Y/Y2, Y | 1, G, Com 24 | V, DHUM | | | | | |
| Accessory Connecti | ons | | E | AC-1 (115 VA | AC); HUM (24 | VAC); 1-ST | G AC (via Y/Y | 2) | | | | |

^{*.} 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.

 $[\]dot{\uparrow}.$ 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.

AIR DELIVERY—CFM (With Filter)*

| AIR DELIVERY—C | | | | | 04517 | 12 | | | | | | | |
|--|---|---|---------------------------------------|--------------------------------|--------------------------------------|----------------------------------|--------------------|------------------------------|----------------------|--------------|------|------|-------|
| Available Cooling Airflow Settings (CFM) | 488 | 525 | 555 | 600 | 650 | 700 | 740 | *800 | 875 | 925 | 975 | 1000 | †1050 |
| Available Constant Fan | 1138 | 1200 | 1225 | 1300 | 1400 | 1480 | 1600 | 000 | 075 | 005 | 075 | 4000 | 4050 |
| Airflow Settings (CFM) | [‡] 488 1138 | 525 1200 | 555 1225 | 600 | 650 | 700 | 740 | 800 | 875 | 925 | 975 | 1000 | 1050 |
| Airnow Settings (Cr W) | | low | | n. w.c.) | | | | | | | | | |
| Airflow reduces by 2% - | 14 | | , | .7 | | | | | | | | | |
| 3% per 0.1 of ESP above | 1480 | | 0.5 | | | | | | | | | | |
| the noted static for these | 16 | | | .3 | | | | | | | | | |
| airflow settings | 1000 | | | | | | | | | | | | |
| Max Cooling ESP | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1 | | | |
| **Max Cooling CFM | 1695 | 1670 | 1640 | 1605 | 1565 | 1530 | 1490 | 1445 | 1400 | 1360 | | | |
| | | | | | 07044 | 40 | | | | | | | |
| Available Cooling Airflow | 400 | 450 | 488 | 525 | 07014 555 | 600 | 650 | 700 | 740 | *800 | 875 | 925 | 975 |
| Available Cooling Airflow Settings (CFM) | | | | | | | | 700 | 740 | 800 | 0/5 | 925 | 9/5 |
| | 1000 | †1050 | 1138 | 1200 | 1225 | 1300 | 1400 | | | 0.5.5 | 0== | 0.00 | |
| Available Constant Fan | [‡] 400 | 450 | 488 | 525 | 555 | 600 | 650 | 700 | 740 | 800 | 875 | 925 | 975 |
| Airflow Settings (CFM) | 1000 | 1050 | 1138 | 2 111 5 1 | | | | | | | | | |
| Airflow reduces by 2% - | | low 00 | | n. w.c.) .8 | | | | | | | | | |
| 3% per 0.1 of ESP above | 12 | | _ | .o .8 | | | | | | | | | |
| the noted static for these | | 00 | | .6 | | | | | | | | | |
| airflow settings | 1400 | | | .4 | | | | | | | | | |
| Max Cooling ESP | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1 | | | |
| **Max Cooling CFM | 1430 | 1430 | 1420 | 1390 | 1355 | 1315 | 1275 | 1235 | 1195 | 1155 | | | |
| <u> </u> | I | | | | I | | I | | | I | | | |
| | | | | | 07017 | 16 | | | | | | | |
| Available Cooling Airflow | 488 | 525 | 555 | 600 | 650 | 700 | 740 | 800 | 875 | 925 | 975 | 1000 | *1050 |
| Settings (CFM) | 1138 | 1200 | 1225 | 1300 | †1400 | 1480 | 1600 | | | | | | |
| Available Constant Fan | [‡] 488 | 525 | 555 | 600 | 650 | 700 | 740 | 800 | 875 | 925 | 975 | 1000 | 1050 |
| Airflow Settings (CFM) | 1138 | 1200 | 1225 | | | | - | | | | | | |
| Ainflow and wood by 20/ | Airflow | Setting | ESP (ii | n. w.c.) | | | | | | | | | |
| Airflow reduces by 2% - 3% per 0.1 of ESP above | 14 | 80 | 0 | .9 | | | | | | | | | |
| the noted static for these | 16 | 00 | 0 | .7 | | | | | | | | | |
| airflow settings | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Max Cooling ESP | | | 0.3 | | | | | | 0.9 | 1 | | | |
| | 0.1 | 0.2 | | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | | 4475 | | | |
| *Max Cooling CFM | 1655 | 1655 | 1655 | 1655 | 1650 | 1645 | 1615 | 1570 | 1520 | 1475 | | | |
| | | | | | | 1645 | | | | 1475 | | | |
| | | | | | 1650 | 1645 | | | | 1475 1138 | 1200 | 1225 | *1300 |
| **Max Cooling CFM | 1655 | 1655 | 1655 | 1655 | 1650 07021 | 1645 20 | 1615 | 1570 | 1520 | | 1200 | 1225 | *1300 |
| Max Cooling CFM Available Cooling Airflow | 650 1400 | 700 1480 | 740 1600 | 800 1625 | 1650 07021 875 †1750 | 1645 20 925 1850 | 975 1911 | 1570 1000 2000 | 1520 | 1138 | | | |
| Max Cooling CFM Available Cooling Airflow Settings (CFM) | 1655 650 | 1655 700 | 1655 740 | 1655 800 | 1650 07021 875 | 1645 20 925 | 1615 975 | 1570 | 1520 | | 1200 | 1225 | *1300 |
| Available Cooling Airflow Settings (CFM) Available Constant Fan Airflow Settings (CFM) | 650 1400 ‡650 | 700 1480 700 1480 | 740 1600 740 1600 | 800 1625 | 1650 07021 875 †1750 | 1645 20 925 1850 | 975 1911 | 1570 1000 2000 | 1520 | 1138 | | | |
| Available Cooling Airflow Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - | 1655 650 1400 ‡650 1400 Airf | 700 1480 700 1480 10w 50 | 740 1600 740 1600 ESP (ii | 800 1625 800 n. w.c.) | 1650 07021 875 †1750 | 1645 20 925 1850 | 975 1911 | 1570 1000 2000 | 1520 | 1138 | | | |
| Available Cooling Airflow Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above | 1655 650 1400 ‡650 1400 Airf 18 | 700 1480 700 1480 low 50 | 740 1600 740 1600 ESP (ii | 800 1625 800 n. w.c.) | 1650 07021 875 †1750 | 1645 20 925 1850 | 975 1911 | 1570 1000 2000 | 1520 | 1138 | | | |
| Available Cooling Airflow Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - | 1655 650 1400 ‡650 1400 Airf | 700 1480 700 1480 low 50 | 740 1600 740 1600 ESP (ii | 800 1625 800 n. w.c.) | 1650 07021 875 †1750 | 1645 20 925 1850 | 975 1911 | 1570 1000 2000 | 1520 | 1138 | | | |
| Available Cooling Airflow Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these airflow settings | 1655 650 1400 *650 1400 Airf 18 19 | 700 1480 700 1480 1480 50 111 | 740 1600 740 1600 ESP (ii | 800 1625 800 n. w.c.) | 1650 07021 875 †1750 875 | 925 1850 925 | 975 1911 975 | 1570 1000 2000 1000 | 1520 1050 1050 | 1138 | | | |
| Available Cooling Airflow Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these | 1655 650 1400 ‡650 1400 Airf 18 | 700 1480 700 1480 low 50 | 740 1600 740 1600 ESP (ii | 800 1625 800 n. w.c.) | 1650 07021 875 †1750 | 1645 20 925 1850 | 975 1911 | 1570 1000 2000 | 1520 | 1138 | | | |

AIR DELIVERY—CFM (With Filter)* (Continued)

| | | | | | 09017 | 16 | | | | | | | |
|---|--|---|---|---|--|---|---|--|--------------------------------------|--|--------------------------------------|----------------------|----------------------|
| Available Cooling Airflow | 400 | 450 | 488 | 525 | 555 | 600 | 650 | 700 | 740 | 800 | 875 | 925 | 975 |
| Settings (CFM) | 1000 | *1050 | 1138 | 1200 | 1225 | 1300 | †1400 | 1480 | 1600 | | | | |
| Available Constant Fan | [‡] 400 | 450 | 488 | 525 | 555 | 600 | 650 | 700 | 740 | 800 | 875 | 925 | 975 |
| Airflow Settings (CFM) | 1000 | 1050 | 1138 | | | | | | | | | | |
| 4:5 1 20/ | Airf | low | ESP (i | n. w.c.) | | | | | | | | | |
| Airflow reduces by 2% - | 13 | 00 | Ô | .9 | | | | | | | | | |
| 3% per 0.1 of ESP above the noted static for these | 14 | 00 | 0 | .7 | | | | | | | | | |
| airflow settings | 14 | | 0 | .5 | | | | | | | | | |
| | 16 | 00 | 0 | .1 | | | | | | | | | |
| Max Cooling ESP | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1 | | | |
| **Max Cooling CFM | 1595 | 1560 | 1525 | 1490 | 1455 | 1420 | 1385 | 1340 | 1280 | 1220 | | | |
| | | | | | | | | | | | | | |
| | | | | | 09021 | 20 | | | | | | | |
| Available Cooling Airflow | 650 | 700 | 740 | 800 | 875 | 925 | 975 | 1000 | 1050 | 1138 | 1200 | 1225 | *130 |
| Settings (CFM) | 1400 | 1480 | 1600 | 1625 | †1750 | 1850 | 1911 | 2000 | 2100 | 2179 | 2200 | | |
| Available Constant Fan | [‡] 650 | 700 | 740 | 800 | 875 | 925 | 975 | 1000 | 1050 | 1138 | 1200 | 1225 | 130 |
| Airflow Settings (CFM) | 1400 | 1480 | 1600 | | • | | | | | | | | |
| | Airflow | | | n. w.c.) | | | | | | | | | |
| Airflow reduces by 2% - | 20 | | , | .8 | | | | | | | | | |
| 3% per 0.1 of ESP above | 21 | 00 | 0 | .7 | | | | | | | | | |
| the noted static for these | 21 | 79 | 0 | .6 | | | | | | | | | |
| airflow settings | 2200 | | 0 | .5 | | | | | | | | | |
| Max Cooling ESP | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1 | | | |
| **Max Cooling CFM | 2290 | 2290 | 2290 | 2285 | 2270 | 2230 | 2185 | 2130 | 2070 | 2015 | | | |
| | | | | | 44004 | 20 | | | | | | | |
| Available Cooling Airflow | 650 | 700 | 740 | 800 | 11021 875 | 20 925 | 975 | 1000 | 1050 | 1138 | 1200 | 1225 | *130 |
| Available Cooling Airflow Settings (CFM) | 650 1400 | 700 1480 | 740 1600 | 800 1625 | | | 975 1911 | 1000 | 1050 2100 | 1138 2179 | 1200 2200 | 1225 | *130 |
| | 1400 | | | | 875 †1750 | 925 1850 | | | 2100 | 2179 | 2200 | | |
| Settings (CFM) | | 1480 700 | 1600 | 1625 | 875 | 925 | 1911 | 2000 | | | | 1225 | |
| Settings (CFM) Available Constant Fan Airflow Settings (CFM) | 1400 ‡650 | 1480 700 1480 | 1600 740 1600 | 1625 | 875 †1750 | 925 1850 | 1911 | 2000 | 2100 | 2179 | 2200 | | |
| Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - | 1400 [‡] 650 1400 | 1480 700 1480 Setting | 1600 740 1600 ESP (i | 1625 800 | 875 †1750 | 925 1850 | 1911 | 2000 | 2100 | 2179 | 2200 | | |
| Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above | 1400 [‡] 650 1400 Airflow | 1480 700 1480 Setting | 1600 740 1600 ESP (i | 1625 800 n. w.c.) | 875 †1750 | 925 1850 | 1911 | 2000 | 2100 | 2179 | 2200 | | |
| Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these | 1400 [‡] 650 1400 Airflow 20 21 21 | 1480 700 1480 Setting 00 00 79 | 1600 740 1600 ESP (i | 1625 800 n. w.c.) .9 .7 | 875 †1750 | 925 1850 | 1911 | 2000 | 2100 | 2179 | 2200 | | |
| Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these airflow settings | 1400 [‡] 650 1400 Airflow 20 21 | 1480 700 1480 Setting 00 00 79 | 1600 740 1600 ESP (i | 1625 800 n. w.c.) .9 .7 .6 | 875 †1750 875 | 925 1850 925 | 1911 | 2000 | 2100 | 2179 | 2200 | | |
| Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these airflow settings Max Cooling ESP | 1400 [‡] 650 1400 Airflow 20 21 21 | 1480 700 1480 Setting 00 00 79 | 1600 740 1600 ESP (i | 1625 800 n. w.c.) .9 .7 | 875 †1750 | 925 1850 | 1911 | 2000 | 2100 | 2179 | 2200 | | |
| Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these airflow settings | 1400 ‡650 1400 Airflow 20 21 21 22 | 1480 700 1480 Setting 00 00 79 | 1600 740 1600 ESP (i | 1625 800 n. w.c.) .9 .7 .6 | 875 †1750 875 | 925 1850 925 | 1911 975 | 2000 | 2100 | 2179 | 2200 | | |
| Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these airflow settings Max Cooling ESP | 1400 ‡650 1400 Airflow 20 21 21 22 0.1 | 1480 700 1480 Setting 00 00 79 00 0.2 | 1600 740 1600 ESP (i 0 0 0 0 | 1625 800 n. w.c.) .9 .7 .6 .5 | 875 †1750 875 0.5 | 925 1850 925 0.6 2200 | 1911 975 0.7 | 2000 | 2100 | 2179 1138 | 2200 | | |
| Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these airflow settings Max Cooling ESP **Max Cooling CFM | 1400 ‡650 1400 Airflow 20 21 21 22 0.1 | 1480 700 1480 Setting 00 00 79 00 0.2 | 1600 740 1600 ESP (i 0 0 0 0 | 1625 800 n. w.c.) .9 .7 .6 .5 | 875 †1750 875 0.5 2245 | 925 1850 925 0.6 2200 | 1911 975 0.7 | 2000 | 2100 | 2179 1138 | 2200 | | 1300 |
| Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these airflow settings Max Cooling ESP **Max Cooling CFM | 1400 ‡650 1400 Airflow 20 21 21 22 0.1 2270 | 1480 700 1480 Setting 00 00 79 00 0.2 2270 | 1600 740 1600 ESP (i 0 0 0 0 0.3 2270 | 1625 800 n. w.c.) .9 .7 .6 .5 0.4 2270 | 875 †1750 875 0.5 2245 13524 740 | 925 1850 925 0.6 2200 | 1911 975 0.7 2150 | 2000 1000 0.8 2100 | 2100 1050 0.9 2050 | 2179 1138 1 1 1995 | 2200 1200 | 1225 | 1300 |
| Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these airflow settings Max Cooling ESP **Max Cooling CFM Available Cooling Airflow Settings (CFM) | 1400 ‡650 1400 Airflow 20 21 21 22 0.1 2270 550 1225 | 1480 700 1480 Setting 00 00 79 00 0.2 2270 600 1300 | 1600 740 1600 ESP (i 0 0 0 0 0.3 2270 650 *1400 | 1625 800 n. w.c.) .9 .7 .6 .5 0.4 2270 | 875 †1750 875 0.5 2245 13524 740 1600 | 925 1850 925 0.6 2200 222 800 1625 | 1911 975 0.7 2150 875 1750 | 2000 1000 0.8 2100 925 1850 | 2100 1050 0.9 2050 †1911 | 2179 1138 1 1 1995 1000 2000 | 2200 1200 1000 1050 2100 | 1225 1138 2179 | 1300 |
| Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these airflow settings Max Cooling ESP **Max Cooling CFM Available Cooling Airflow Settings (CFM) Available Constant Fan | 1400 ‡650 1400 Airflow 20 21 21 22 0.1 2270 550 1225 ‡550 | 1480 700 1480 Setting 00 00 79 00 0.2 2270 600 1300 600 | 1600 740 1600 ESP (i 0 0 0 0 0.3 2270 *1400 650 | 1625 800 n. w.c.) .9 .7 .6 .5 0.4 2270 | 875 †1750 875 0.5 2245 13524 740 | 925 1850 925 0.6 2200 | 1911 975 0.7 2150 | 2000 1000 0.8 2100 | 2100 1050 0.9 2050 | 2179 1138 1 1 1995 | 2200 1200 | 1225 | 1300 |
| Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these airflow settings Max Cooling ESP **Max Cooling CFM Available Cooling Airflow Settings (CFM) Available Constant Fan Airflow Settings (CFM) | 1400 ‡650 1400 Airflow 20 21 21 22 0.1 2270 550 1225 ‡550 1225 | 1480 700 1480 Setting 00 00 79 00 0.2 2270 600 1300 | 1600 740 1600 ESP (i 0 0 0 0 0.3 2270 *1400 650 1400 | 1625 800 n. w.c.) .9 .7 .6 .5 0.4 2270 700 1480 700 | 875 †1750 875 0.5 2245 13524 740 1600 | 925 1850 925 0.6 2200 222 800 1625 | 1911 975 0.7 2150 875 1750 | 2000 1000 0.8 2100 925 1850 | 2100 1050 0.9 2050 †1911 | 2179 1138 1 1 1995 1000 2000 | 2200 1200 1000 1050 2100 | 1225 1138 2179 | 130 |
| Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these airflow settings Max Cooling ESP **Max Cooling CFM Available Cooling Airflow Settings (CFM) Available Constant Fan Airflow Settings (CFM) | 1400 ‡650 1400 Airflow 20 21 21 22 0.1 2270 550 1225 ‡550 1225 Airflow | 1480 700 1480 Setting 00 00 79 00 0.2 2270 600 1300 600 1300 Setting | 1600 740 1600 ESP (i 0 0 0 0 0.3 2270 *1400 650 1400 ESP (i | 1625 800 n. w.c.) .9 .7 .6 .5 0.4 2270 700 1480 700 n. w.c.) | 875 †1750 875 0.5 2245 13524 740 1600 | 925 1850 925 0.6 2200 222 800 1625 | 1911 975 0.7 2150 875 1750 | 2000 1000 0.8 2100 925 1850 | 2100 1050 0.9 2050 †1911 | 2179 1138 1 1 1995 1000 2000 | 2200 1200 1000 1050 2100 | 1225 1138 2179 | 130 |
| Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these airflow settings Max Cooling ESP **Max Cooling CFM Available Cooling Airflow Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above | 1400 ‡650 1400 Airflow 20 21 21 22 0.1 2270 550 1225 ‡550 1225 Airflow 19 | 1480 700 1480 Setting 00 00 79 00 0.2 2270 600 1300 600 1300 Setting 11 | 1600 740 1600 ESP (i 0 0 0 0 0.3 2270 *1400 650 1400 ESP (i 0 | 1625 800 n. w.c.) .9 .7 .6 .5 0.4 2270 700 1480 700 n. w.c.) | 875 †1750 875 0.5 2245 13524 740 1600 | 925 1850 925 0.6 2200 222 800 1625 | 1911 975 0.7 2150 875 1750 | 2000 1000 0.8 2100 925 1850 | 2100 1050 0.9 2050 †1911 | 2179 1138 1 1 1995 1000 2000 | 2200 1200 1000 1050 2100 | 1225 1138 2179 | 130 |
| Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these airflow settings Max Cooling ESP **Max Cooling CFM Available Cooling Airflow Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these | 1400 ‡650 1400 Airflow 20 21 21 22 0.1 2270 550 1225 Åirflow 19 20 | 1480 700 1480 Setting 00 00 79 00 0.2 2270 600 1300 600 1300 Setting 11 | 1600 740 1600 ESP (i 0 0 0 0 0.3 2270 *1400 650 1400 ESP (i 0 0 | 1625 800 n. w.c.) .9 .7 .6 .5 0.4 2270 700 1480 700 n. w.c.) | 875 †1750 875 0.5 2245 13524 740 1600 | 925 1850 925 0.6 2200 222 800 1625 | 1911 975 0.7 2150 875 1750 | 2000 1000 0.8 2100 925 1850 | 2100 1050 0.9 2050 †1911 | 2179 1138 1 1 1995 1000 2000 | 2200 1200 1000 1050 2100 | 1225 1138 2179 | 1300 |
| Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these airflow settings Max Cooling ESP **Max Cooling CFM Available Cooling Airflow Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above | 1400 ‡650 1400 Airflow 20 21 21 22 0.1 2270 550 1225 Åirflow 19 20 21 | 1480 700 1480 Setting 00 00 79 00 0.2 2270 600 1300 600 1300 Setting 11 00 00 | 1600 740 1600 ESP (i 0 0 0 0 0.3 2270 *1400 ESP (i 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 1625 800 n. w.c.) .9 .7 .6 .5 0.4 2270 1480 700 n. w.c.) .9 .7 | 875 †1750 875 0.5 2245 13524 740 1600 | 925 1850 925 0.6 2200 222 800 1625 | 1911 975 0.7 2150 875 1750 | 2000 1000 0.8 2100 925 1850 | 2100 1050 0.9 2050 †1911 | 2179 1138 1 1 1995 1000 2000 | 2200 1200 1000 1050 2100 | 1225 1138 2179 | 1300 |
| Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these airflow settings Max Cooling ESP **Max Cooling CFM Available Cooling Airflow Settings (CFM) Available Constant Fan Airflow Settings (CFM) Airflow reduces by 2% - 3% per 0.1 of ESP above the noted static for these | 1400 ‡650 1400 Airflow 20 21 21 22 0.1 2270 550 1225 Åirflow 19 20 | 1480 700 1480 Setting 00 00 79 00 0.2 2270 600 1300 600 1300 Setting 11 00 00 | 1600 740 1600 ESP (i 0 0 0 0 0.3 2270 *1400 ESP (i 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 1625 800 n. w.c.) .9 .7 .6 .5 0.4 2270 700 1480 700 n. w.c.) | 875 †1750 875 0.5 2245 13524 740 1600 | 925 1850 925 0.6 2200 222 800 1625 | 1911 975 0.7 2150 875 1750 | 2000 1000 0.8 2100 925 1850 | 2100 1050 0.9 2050 †1911 | 2179 1138 1 1 1995 1000 2000 | 2200 1200 1000 1050 2100 | 1225 1138 2179 | 1300 1300 1200 |

^{*.} Low Cooling Default

^{†.} High Cooling Default

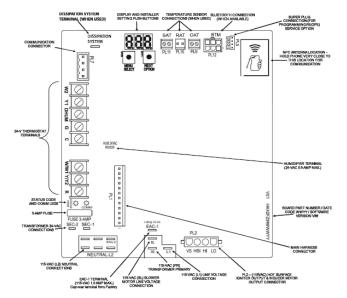
†. Constant Fan Default Not Recommended

**. Max Cooling values are test CFM all other airflows are standard CFM

TYPICAL WIRING SCHEMATIC

---- FIELD 24-VOLT WIRING ---- FIELD 115-, 208/230-, 460-VOLT WIRING ---- FACTORY 24-VOLT WIRING ---- FACTORY 115-VOLT WIRING NOTE 2 R G THERMOSTAT TERMINALS (W) (D) (Y) FIELD-SUPPLIED FUSED DISCONNECT FIVE WIRE THREE-WIRE 208/230- OR 460-VOLT ONLY PHASE (W2) (001) (W) W) 208/230 VOLT SINGLE PHASE NOTE 1 ≑GND (1/12) 115-VOLT FIELD-SUPPLIED FUSED JUNCTION BOX R CONTROL CONDENSING DISCONNECT BOX 24-VOLT TERMINAL NOTES: 1. Connect Y/Y2-terminal as shown for proper operation. 2. Some thermostats require a "C" terminal connection as shown. 3. If any of the original wire, as supplied, must be replaced, use BLOCK FURNACE same type or equivalent wire. A95236

FURNACE CONTROL BOARD



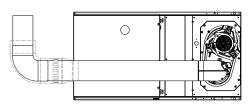
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A02065

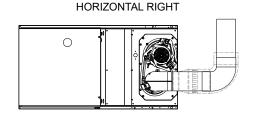
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A02058

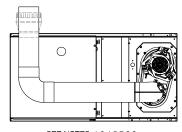
VENTING CONFIGURATIONS



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

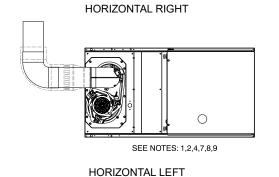


SEE NOTES: 1,2,4,7,8,9



HORIZONTAL RIGHT

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



A02068

A02069

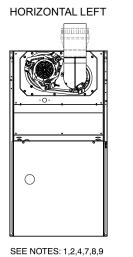
A02070

A02064



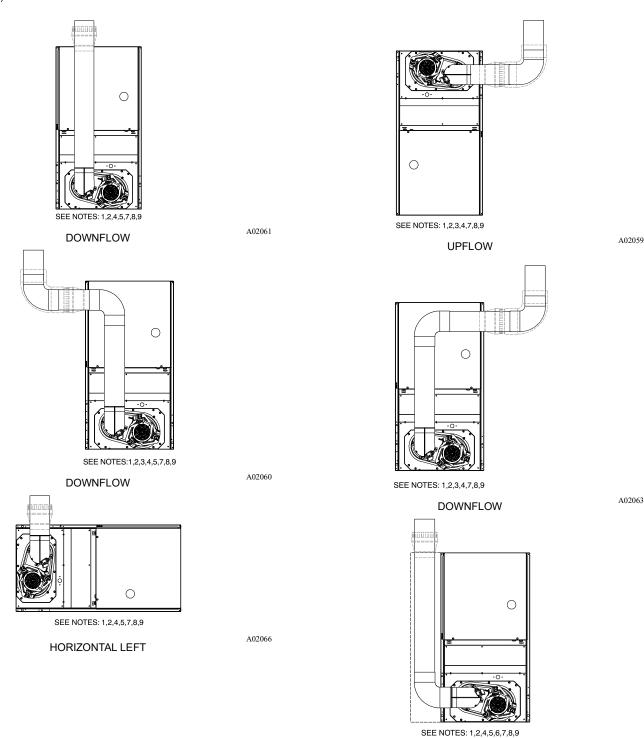


SEE NOTES: 1,2,4,5,7,8,9



LL 1401LO. 1,2,4,7,0,3

UPFLOW



VENTING NOTES

 For common vent, vent connector sizing and vent material: United States, latest edition of the National Fuel Gas Code (NFGC), ANSI Z223.1/NFPA 54.

A02062

DOWNFLOW

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

ACCESSORIES

| PART NUMBER | DESCRIPTION | 0451712 | 0701412 | 0701716 | 0702120 |
|-------------------------|--|---------|---------|---------|---------|
| ACG1425NCB [*] | External Filter Rack, 14-1/2 x 25" | - | Х | - | - |
| ACG1625NCF [*] | External Filter Rack, 16 x 25" | Х | - | - | - |
| ACG2025NCJ* | External Filter Rack, 20 x 25" | - | - | Х | Х |
| 325531-402 [*] | Washable filter, 3/4" x 16" x 25" | Х | Х | Х | - |
| 325531-403 [*] | Washable filter, 3/4" x 21" x 25" | - | - | - | Х |
| NAHB00101CA | Coil Adapter Kits - No Offset | Х | Х | Х | Х |
| NAHB00201CA | Coil Adapter Kits - Single Offset | Х | Х | Х | X |
| NAHB00301CA | Coil Adapter Kits - Double Offset | Х | Х | Х | Х |
| NAHA00401DH | Chimney Adapter Kit, up to or equal to 110K BTUh | X | Х | X | Х |
| NAHA01101SB | Combustible Floor Base (Not required when evaporator coil case is used for downflow) | Х | Х | Х | Х |
| NAHB00301VC | Downflow Vent Guard (Not required when vent is routed through cabinet) | Х | Х | Х | Х |
| AGAGC8NPS01B* | Natural-to-Propane Conversion Kit [†] | Х | Х | Х | Х |
| AGAGC8PNS01B* | Propane-to-Natural Conversion Kit [†] | Х | Х | Х | Х |
| NAHA00201HL | High Altitude Kit | Х | Х | Х | Х |
| SYST0101CW | ION™ Communicating Control | Х | Х | X | Х |

- *. Purchased through FAST Parts.
- †. Factory authorized and field installed. Gas conversion kits are CSA recognized. X Accessory

| PART NUMBER | DESCRIPTION | 0901716 | 0902120 | 1102120 | 1352422 |
|-------------------------|--|---------|---------|---------|---------|
| ACG1625NCF* | External Filter Rack, 16 x 25" | X | - | - | - |
| ACG2025NCJ* | External Filter Rack, 20 x 25" | - | Х | Х | - |
| ACG2424NCL* | External Filter Rack, 24-1/2" x 24"* | - | - | - | X |
| 325531-402 [*] | Washable filter, 3/4" x 16" x 25" | Х | - | - | - |
| 325531-403 [*] | Washable filter, 3/4" x 21" x 25" | - | X | Х | - |
| 325531-404 [*] | Washable filter, 3/4" x 24" x 25"* | - | - | - | X |
| NAHB00101CA | Coil Adapter Kits - No Offset | Х | X | X | X |
| NAHB00201CA | Coil Adapter Kits - Single Offset | Х | X | Х | X |
| NAHB00301CA | Coil Adapter Kits - Double Offset | Х | X | Х | Х |
| NAHA00401DH | Chimney Adapter Kit, up to or equal to 110K BTUh | Х | Х | Х | - |
| NAHA00301DH | Chimney Adapter Kit, greater than or equal to 135K BTUh | - | - | - | X |
| NAHA01101SB | Combustible Floor Base (Not required when evaporator coil case is used for downflow) | Х | Х | Х | Х |
| NAHB00301VC | Downflow Vent Guard (Not required when vent is routed through cabinet) | Х | Х | X | х |
| AGAGC8NPS01B* | Natural-to-Propane Conversion Kit [†] | Х | Х | Х | Х |
| AGAGC8PNS01B* | Propane-to-Natural Conversion Kit [†] | X | X | X | X |
| NAHA00201HL | High Altitude Kit | Х | Х | Х | X |
| SYST0101CW | ION™ Communicating Control | Х | X | Х | Х |

- Purchased through FAST Parts.
- †. Factory au X Accessory Factory authorized and field installed. Gas conversion kits are CSA recognized.

ORIFICES

| Part Number | Gas Type | Orifice Size | Part Number | Gas Type | Orifice Size | Part Number | Gas Type | Orifice Size |
|-------------|----------|--------------|-------------|----------|--------------|-------------|----------|--------------|
| 1185612 | Natural | 42 | 1183809 | Natural | 46 | 1184256 | Propane | 54 |
| 1176928 | Natural | 43 | 1185613 | Natural | 47 | 1185615 | Propane | 55 |
| 1185574 | Natural | 44 | 1185614 | Natural | 48 | 1185616 | Propane | 56 |
| 1177213 | Natural | 45 | | | | 1185617 | Propane | 1.25 mm |
| | | | | | | 1185618 | Propane | 1.30 mm |

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