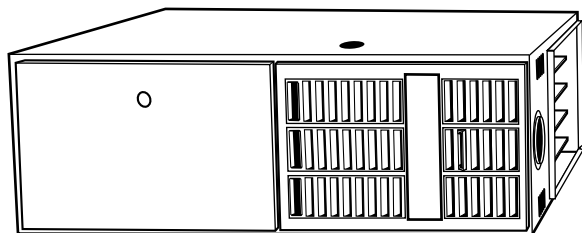
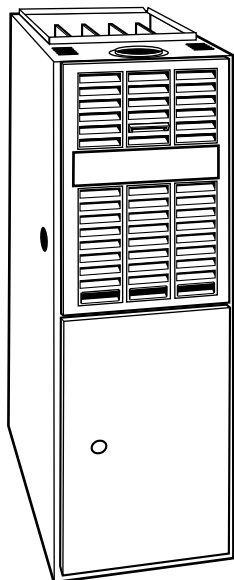




# PLUS 80 TWO-SPEED UPFLOW/HORIZONTAL INDUCED COMBUSTION FURNACE

## 330JAV

Sizes 060 thru 120  
Series A



With a unique approach to induced-combustion design, a 40-in. tall cabinet, a 4-pass heat exchanger, an inshot burner system and its safety features, this furnace is without peer. The Plus 80 Two-Speed Upflow/Horizontal Furnace achieves an 80% Annual Fuel Utilization Efficiency (AFUE) rating. The benefits of 2-speed operation in reducing sound and improving comfort put it in a class well ahead of the competition. The Plus 80 Two-Speed has the kind of overall performance needed in today's homes. All models are GAMA efficiency rating certified and certified for use in California Air Quality Management Districts.

### FEATURES

**EFFICIENCY** — The Plus 80 Two-Speed Induced-Combustion Gas Furnace provides the efficiency customers want with 80.0% AFUE.

**HOT SURFACE IGNITION** — No pilot to waste gas with this field-proven ignition system.

**ALUMINIZED HEAT EXCHANGER** — The patented 4-pass heat exchanger is made of aluminized steel and backed by a 20-year Limited Warranty.

**INTELLIGENT CONTROL** — The Plus 80 Two-Speed has an intelligent control that monitors the operation of the furnace. This control also has a component-test feature that enables the servicing technician to verify operation of the control; the high and low inducer; the hot surface ignitor; and high-, medium-, and low-speed blower operation. The control features a 3-amp fuse that protects the transformer and control. We guarantee the reliability of the control with a 3-year Limited Warranty.

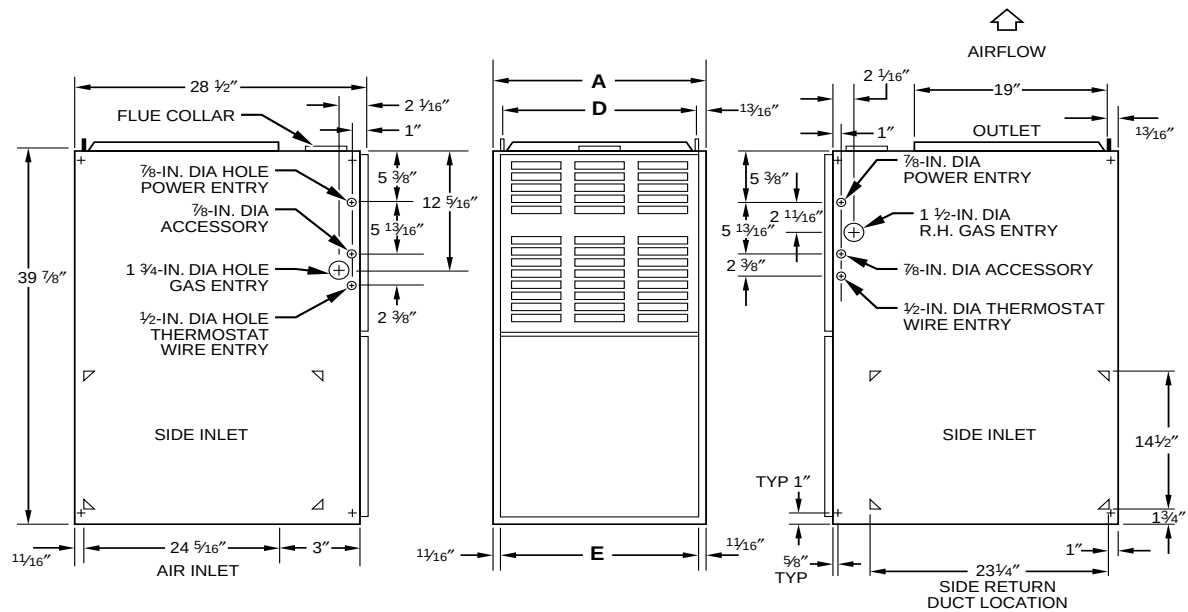
**40-IN. HEIGHT** — The Plus 80 Two-Speed cabinet height is only 40 in. This simplifies installation in alcoves, attics, basements (ideal for short basement), closets, and utility rooms, especially with a taller high-efficiency cooling coil.

**PREPAINTED CABINET** — The Plus 80 Two-Speed uses pre-painted sheet metal for the cabinet. This is the same high-quality finish found on refrigerators and other appliances today. We ensure its durability by using a galvanized steel substrate to provide superior rust protection.

**PATENTED DRAFT SAFEGUARD** — Our induced-combustion furnace has a patented draft safeguard switch. The safeguard switch will stop furnace operation if the vent system becomes blocked or is not operating properly. An exclusive with the Plus 80 Two-Speed furnace.

**EASY INSTALLATION** — The Plus 80 Two-Speed has many features that make installation easier: left or right gas and electrical connections, heating and cooling blower speed selector, matching coil sizes, accessory low-voltage connections, and many more.

**QUIET OPERATION** — A soft mount inducer assembly and 2-stage slow-opening gas valve reduce sound level. The 2-speed operation capability minimizes furnace and air noise for total home comfort.



- NOTES:**
- Two additional 7/8-in. dia holes are located in the top plate.
  - Minimum return-air opening at furnace:
    - For 800 CFM—16-in. round or 14½ x 12-in. rectangle.
    - For 1200 CFM—20-in. round or 14½ x 19½-in. rectangle.
    - For 1600 CFM—22-in. round or 14½ x 23¼-in. rectangle.
    - For airflow requirements above 1800 CFM, use both side inlets, a combination of 1 side inlet and the bottom, or the bottom only.

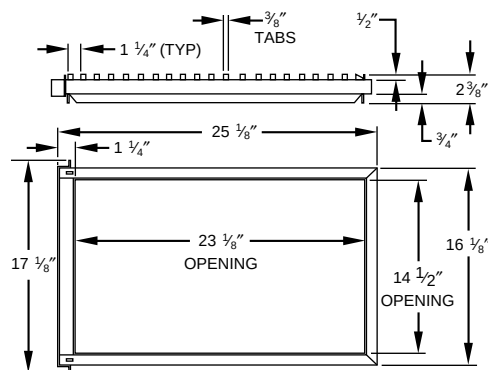
A88367

### DIMENSIONS (In.)

| UNIT SIZE | A       | D       | E        | VENT CONNECTION* | SHIPPING WEIGHT (LB) |
|-----------|---------|---------|----------|------------------|----------------------|
| 036060    | 14-3/16 | 12-9/16 | 12-11/16 | 4                | 134                  |
| 048080    | 21      | 19-3/8  | 19-1/2   | 4                | 154                  |
| 048100    | 21      | 19-3/8  | 19-1/2   | 4                | 166                  |
| 060100    | 24-1/2  | 22-7/8  | 23       | 4                | 184                  |
| 060120    | 24-1/2  | 22-7/8  | 23       | 5                | 194                  |

\* Refer to the furnace Installation Instructions for proper venting procedures.

### DIMENSIONAL DRAWINGS OF OPTIONAL SIDE FILTER RACK



A80199

## SPECIFICATIONS

| UNIT SIZE                                       |                             | 036060                                   | 048080          | 048100         | 060100          | 060120          |
|-------------------------------------------------|-----------------------------|------------------------------------------|-----------------|----------------|-----------------|-----------------|
| RATINGS AND PERFORMANCE                         |                             |                                          |                 |                |                 |                 |
| Gas Input (Btuh)*                               | High Stage                  | 60,000                                   | 80,000          | 100,000        | 100,000         | 117,000         |
|                                                 | Low Stage                   | 39,000                                   | 52,000          | 65,000         | 65,000          | 78,000          |
| Output Capacity (Btuh)†<br>Nonweatherized ICS   | High Stage                  | 48,000                                   | 64,000          | 80,000         | 81,000          | 94,000          |
|                                                 | Low Stage                   | 31,000                                   | 42,000          | 52,000         | 52,000          | 63,000          |
| AFUE%‡                                          | Nonweatherized ICS          | 80.0                                     | 80.0            | 80.0           | 80.0            | 80.0            |
| Certified Temperature Rise<br>Range (°F)        | High Stage                  | 25—55                                    | 30—60           | 40—70          | 25—55           | 40—70           |
|                                                 | Low Stage                   | 15—45                                    | 15—45           | 20—50          | 15—45           | 25—55           |
| Certified External Static Pressure              | Heat/Cool                   | 0.12/0.50                                | 0.15/0.50       | 0.20/0.50      | 0.20/0.50       | 0.20/0.50       |
| Airflow CFM‡                                    | Heating High/Low            | 1140/990                                 | 1445/1260       | 1410/1265      | 1720/1515       | 1730/1525       |
|                                                 | Cooling                     | 1195                                     | 1740            | 1575           | 2210            | 1980            |
| ELECTRICAL                                      |                             |                                          |                 |                |                 |                 |
| Unit Volts— Hertz— Phase                        |                             | 115—60—1                                 |                 |                |                 |                 |
| Operating Voltage Range                         |                             | 104—127                                  |                 |                |                 |                 |
| Maximum Unit Amps                               |                             | 11.4                                     | 13.5            | 13.2           | 19.0            | 18.2            |
| Maximum Wire Length (Measured 1 Way) Ft         |                             | 32                                       | 27              | 28             | 30              | 31              |
| Minimum Wire Size                               |                             | 14                                       |                 | 14             | 12              | 12              |
| Maximum Fuse Size                               |                             | 15                                       |                 | 15             | 20              | 20              |
| Transformer (24v)                               |                             | 40va                                     |                 |                |                 |                 |
| External Control                                | Heating                     | 19va                                     |                 |                |                 |                 |
| Power Available                                 | Cooling                     | 35va                                     |                 |                |                 |                 |
| Air Conditioning Blower Relay                   |                             | Standard                                 |                 |                |                 |                 |
| CONTROLS                                        |                             |                                          |                 |                |                 |                 |
| Limit Control                                   |                             | SPST (Auto-Reset)                        |                 |                |                 |                 |
| Heating Blower Control                          |                             | Solid-State Time Operation               |                 |                |                 |                 |
| Inducer                                         |                             | 2-Speed                                  |                 |                |                 |                 |
| Burners (Monoport)                              |                             | 3                                        | 4               | 5              | 6               |                 |
| Gas Connection Size                             |                             | 1/2-in. NPT                              |                 |                |                 |                 |
| GAS CONTROLS                                    |                             |                                          |                 |                |                 |                 |
| 2-Stage Redundant Gas Valve                     |                             | White-Rodgers                            |                 |                |                 |                 |
|                                                 | Min Inlet Pressure (In. wc) | 4.5 (Natural Gas)                        |                 |                |                 |                 |
|                                                 | Max Inlet Pressure (In. wc) | 13.6 (Natural Gas)                       |                 |                |                 |                 |
| Ignition Device                                 |                             | Hot Surface                              |                 |                |                 |                 |
| BLOWER DATA                                     |                             |                                          |                 |                |                 |                 |
| Direct-Drive Motor HP (PSC)                     |                             | 1/3                                      | 1/2             | 1/2            | 3/4             | 3/4             |
| Motor Full Load Amps                            |                             | 5.8                                      | 7.9             | 7.9            | 11.1            | 11.1            |
| RPM (Nominal)—Speeds                            |                             | 1075—4                                   | 1075—4          | 1075—4         | 1075—4          | 1075—4          |
| Blower Wheel Diameter x Width (In.)             |                             | 10 x 6                                   | 10 x 8          | 10 x 8         | 11 x 10         | 11 x 10         |
| Filter Size (In.)—Permanent Washable (Supplied) |                             | (1) 16 x 25 x 1                          | (1) 20 x 25 x 1 | (1) 20x 25 x 1 | (2) 16 x 25 x 1 | (2) 16 x 25 x 1 |
| FACTORY-AUTHORIZED DEALER-INSTALLED ACCESSORIES |                             |                                          |                 |                |                 |                 |
| Twinning Kit                                    |                             | N/A                                      | KGATW0301HSI    |                |                 |                 |
| High-Altitude Pressure Switch Kit**             |                             | KGAHA5501PSW                             |                 |                |                 |                 |
| Gas Conversion Kit—Natural-to-Propane           |                             | KGANP24012SP                             |                 |                |                 |                 |
| Gas Conversion Kit—Propane-to-Natural           |                             | KGAPN20012SP                             |                 |                |                 |                 |
| Side Filter Rack (Accepts 1 Filter)             |                             | KGAFR0201ALL (Filter Size 16 x 25 x 1)   |                 |                |                 |                 |
| Return Filter Cabinet (With Washable Filters)   |                             | KGARP0201ALL (Filter Size 2—20 x 25 x 1) |                 |                |                 |                 |

\* Gas input ratings are certified for elevations to 2000 ft. For elevations above 2000 ft, reduce ratings 4% for each 1000 ft above sea level. Refer to National Fuel Gas Code Table F4. In Canada, derate the unit 10% for elevations 2000 ft to 4500 ft above sea level.

† Tentative capacity in accordance with U.S. Government DOE test procedures.

‡ Air delivery above 1800 CFM requires that both sides, or a combination of 1 side and bottom, or bottom only of the furnace be used for return air. A filter is required for each return-air supply.

\*\* 5500 ft and higher above sea level.

ICS—Isolated Combustion System

N/A—Not Applicable

**MEETS DOE RESIDENTIAL  
CONSERVATION SERVICES  
PROGRAM STANDARDS.**

**Before purchasing this appliance, read important  
energy cost and efficiency information available  
from your retailer.**



## AIR DELIVERY— CFM (With Filter)\*

| UNIT SIZE | BLOWER MOTOR HP | SPEED    | EXTERNAL STATIC PRESSURE (IN. WC) |      |      |      |      |      |      |      |
|-----------|-----------------|----------|-----------------------------------|------|------|------|------|------|------|------|
|           |                 |          | 0.1                               | 0.2  | 0.3  | 0.4  | 0.5  | 0.6  | 0.7  | 0.8  |
| 036060    | 1/3 PSC         | High     | 1430                              | 1380 | 1325 | 1265 | 1195 | 1125 | 1045 | 945  |
|           |                 | Med-High | 1310                              | 1275 | 1235 | 1190 | 1135 | 1065 | 990  | 900  |
|           |                 | Med-Low  | 1140                              | 1130 | 1100 | 1065 | 1000 | 965  | 910  | 815  |
|           |                 | Low      | 990                               | 965  | 960  | 935  | 905  | 855  | 800  | 710  |
| 048080    | 1/2 PSC         | High     | 2010                              | 1950 | 1875 | 1810 | 1740 | 1660 | 1550 | 1455 |
|           |                 | Med-High | 1675                              | 1660 | 1625 | 1600 | 1545 | 1490 | 1395 | 1295 |
|           |                 | Med-Low  | 1445                              | 1430 | 1415 | 1400 | 1370 | 1325 | 1265 | 1170 |
|           |                 | Low      | 1260                              | 1260 | 1260 | 1250 | 1210 | 1180 | 1115 | 1030 |
| 048100    | 1/2 PSC         | High     | 1880                              | 1815 | 1745 | 1690 | 1575 | 1500 | 1400 | 1265 |
|           |                 | Med-High | 1660                              | 1615 | 1570 | 1505 | 1435 | 1355 | 1260 | 1170 |
|           |                 | Med-Low  | 1455                              | 1410 | 1375 | 1350 | 1290 | 1235 | 1145 | 985  |
|           |                 | Low      | 1265                              | 1265 | 1240 | 1210 | 1180 | 1110 | 995  | 855  |
| 060100    | 3/4 PSC         | High     | 2475                              | 2405 | 2330 | 2265 | 2210 | 2130 | 2040 | 1945 |
|           |                 | Med-High | 2055                              | 2025 | 2000 | 1965 | 1930 | 1865 | 1795 | 1720 |
|           |                 | Med-Low  | 1725                              | 1720 | 1705 | 1685 | 1665 | 1630 | 1585 | 1525 |
|           |                 | Low      | 1500                              | 1515 | 1510 | 1500 | 1480 | 1460 | 1415 | 1370 |
| 060120    | 3/4 PSC         | High     | —                                 | 2210 | 2130 | 2055 | 1980 | 1895 | 1795 | 1680 |
|           |                 | Med-High | 2015                              | 1975 | 1925 | 1880 | 1805 | 1735 | 1655 | 1555 |
|           |                 | Med-Low  | 1730                              | 1710 | 1670 | 1635 | 1590 | 1535 | 1470 | 1385 |
|           |                 | Low      | 1525                              | 1520 | 1495 | 1450 | 1410 | 1375 | 1315 | 1245 |

\* Air delivery above 1800 CFM requires that both sides, or a combination of 1 side and bottom, or bottom only of the furnace to be used for return air.

A filter is required for each return-air supply opening.

— Indicates unstable operating conditions.

## CLEARANCES FROM COMBUSTIBLE MATERIALS (In.)

| UNIT SIZE                                  |                           | 060 | 080-120 |
|--------------------------------------------|---------------------------|-----|---------|
| <b>UPFLOW</b>                              |                           |     |         |
| <b>Furnace Sides</b>                       | Single-Wall Vent          | 1   | 0       |
|                                            | Type B-1 Double-Wall Vent | 0   | 0       |
| <b>Furnace Back</b>                        |                           | 0   | 0       |
| <b>Plenum Top</b>                          |                           | 1   | 1       |
| <b>Furnace Front</b><br><b>(See Notes)</b> | Single-Wall Vent          | 6   | 6       |
|                                            | Type B-1 Double-Wall Vent | 3   | 3       |
| <b>Vent</b>                                | Single-Wall Vent          | 6   | 6       |
|                                            | Type B-1 Double-Wall Vent | 1   | 1       |

\* Clearance shown is for the outlet end. The inlet end must maintain 6 in. clearance from flue to combustible materials when using single-wall vent.

† 18 in. front clearance required for alcove.

‡ Indicates supply or return sides when furnace is in the horizontal position.

### NOTES:

1. Provide 30-in. front clearance for servicing. An open door in front of the furnace can meet this requirement.
2. A minimum clearance of 3 in. must be provided in front of the furnace for combustion air and proper operation.

| HORIZONTAL POSITION (IN ALCOVE, ATTIC, AND CRAWLSPACE) |                           |   |   |
|--------------------------------------------------------|---------------------------|---|---|
| <b>Sides*‡</b>                                         |                           | 1 | 1 |
| <b>Back</b>                                            |                           | 0 | 0 |
| <b>Top</b>                                             | Single-Wall Vent          | 1 | 1 |
|                                                        | Type B-1 Double-Wall Vent | 1 | 1 |
| <b>Furnace Front†</b><br><b>(See Notes)</b>            | Single-Wall Vent          | 6 | 6 |
|                                                        | Type B-1 Double-Wall Vent | 3 | 3 |
| <b>Vent</b>                                            | Single-Wall Vent          | 6 | 6 |
|                                                        | Type B-1 Double-Wall Vent | 1 | 1 |
| HORIZONTAL POSITION (IN CLOSET)                        |                           |   |   |
| <b>Sides*‡</b>                                         |                           | 1 | 1 |
| <b>Back</b>                                            |                           | 3 | 3 |
| <b>Top</b>                                             | Single-Wall Vent          | 2 | 2 |
|                                                        | Type B-1 Double-Wall Vent | 2 | 2 |
| <b>Furnace Front</b><br><b>(See Notes)</b>             | Single-Wall Vent          | 6 | 6 |
|                                                        | Type B-1 Double-Wall Vent | 3 | 3 |
| <b>Vent</b>                                            | Single-Wall Vent          | 6 | 6 |
|                                                        | Type B-1 Double-Wall Vent | 1 | 1 |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

UNIT MUST BE INSTALLED IN ACCORDANCE WITH INSTALLATION INSTRUCTIONS

Cancels: PDS 330J.60.1P

