# Enhanced 80% Gas Furnace

**G2D80**

## Features

### HEAT EXCHANGER DESIGN
- Efficient aluminized steel tapered S-curve design
- Crimped no weld construction for longer life

### BURNERS
- Aluminized steel inshot burners for smooth ignition
- Sealed combustion burner enclosure for quiet operation

### CABINET CONSTRUCTION
- Compact 40" height
- Insulated to increase efficiency and reduce sound levels
- Unitized construction for cabinet integrity
- Baked on prepainted steel cabinet finish

### AIR DELIVERY SYSTEM
- ECM variable speed blower motor
- Motor features "soft start" and "soft stop" for quiet operation
- Active and passive dehumidification feature
- Easily removable slide-out blower design
- Dynamically balanced blower wheel and resilient motor mounts for smooth and quiet operation

### CONTROLS
- Two stage gas valve
- Integrated ignition and fan control
- System Sentry™ control features five (5) fault codes with push button memory recall, regardless of power interruption
- Hot surface ignition using steel shrouded, high density mini-ignitor
- Control features 120 volt electronic air cleaner and humidifier terminals
- Control circuit is fuse protected
- Compatible with single or two stage thermostats for heating
  *Note: Two stage cooling thermostat is required when installed with two stage cooling unit.*

G2D80CR-V = Counterflow / Horizontal
G2D80CT-V = Upflow / Horizontal
(shown)


### VENTING
- 2-speed induced draft motor with stainless steel shaft, steel ball bearings, and fan cooled for long life
- Certified for direct and non-direct vent applications
  *Direct vent refers to a combustion air supply intake pipe installed in conjunction with flue gas vent pipe*

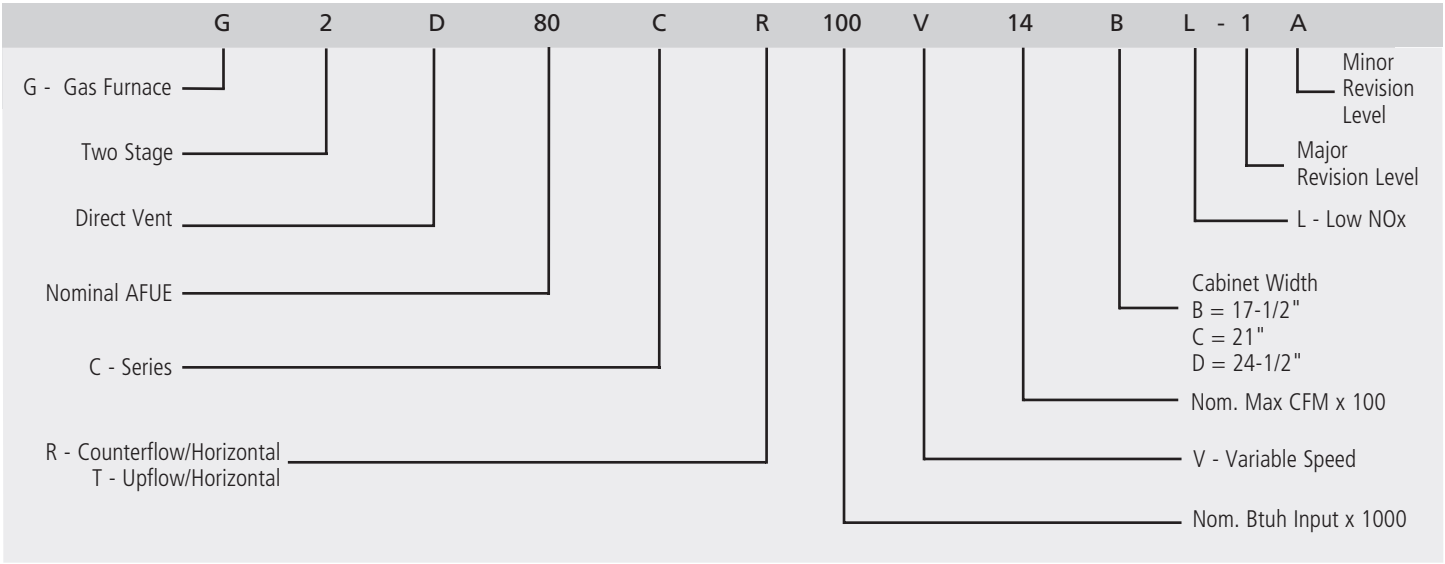
### INSTALLATION FEATURES
- Left or right gas and electric entry
- "L" models comply with California's South Coast Air Quality Management District Low NOx requirements
- Filter rack and permanent cleanable filter provided on upflow/horizontal models
- Downflow/Horizontal models are Low NOx equipped as standard

### WARRANTY
- 10 year limited parts warranty / lifetime heat exchanger warranty available. See limited warranty document for details.

AIREASE™

Built for life. Yours.

## Model Number Guide




## Physical and Electrical Data

| Model | 1st Stage | | 2nd Stage | | AFUE (ICS) | Nom. Cooling Capacity | Gas Inlet (in.) | Flue Size (in.) | Volts/ Hz/ Phase | Min. Time Delay Breaker or Fuse | Nominal F.L.A. | Trans. (V.A.) | Approx. Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Input | Output | Input | Output | | | | | | | | | |
| G2D80CR075V14BL* | 52,500 | 42,000 | 75,000 | 60,000 | 80.0% | 2.0 - 3.5 | 1/2 | 4 | 120/60/1 | 15 | 5.3 | 40 | 140 |
| G2D80CR100V14BL* | 70,000 | 56,000 | 100,000 | 80,000 | 80.0% | 2.0 - 3.5 | 1/2 | 5 | 120/60/1 | 15 | 5.3 | 40 | 155 |
| G2D80CR125V20CL* | 87,500 | 70,000 | 125,000 | 100,000 | 80.0% | 3.0 - 5.0 | 1/2 | 5 | 120/60/1 | 15 | 5.8 | 40 | 190 |
| G2D80CT050V12B(L) | 35,000 | 28,000 | 50,000 | 40,000 | 80.0% | 1.5 - 3.0 | 1/2 | 4 | 120/60/1 | 15 | 2.8 | 40 | 125 |
| G2D80CT075V14B(L) | 52,500 | 42,000 | 75,000 | 60,000 | 80.0% | 2.0 - 3.5 | 1/2 | 4 | 120/60/1 | 15 | 5.3 | 40 | 140 |
| G2D80CT100V14B(L) | 70,000 | 56,000 | 100,000 | 80,000 | 80.0% | 2.0 - 3.5 | 1/2 | 5 | 120/60/1 | 15 | 5.3 | 40 | 155 |
| G2D80CT100V20C(L) | 70,000 | 56,000 | 100,000 | 80,000 | 80.0% | 3.0 - 5.0 | 1/2 | 5 | 120/60/1 | 15 | 5.8 | 40 | 180 |
| G2D80CT125V20C(L) | 87,500 | 70,000 | 125,000 | 100,000 | 80.0% | 3.0 - 5.0 | 1/2 | 5 | 120/60/1 | 15 | 5.8 | 40 | 190 |
| G2D80CT150V20D(L) | 105,000 | 84,000 | 150,000 | 120,000 | 80.0% | 3.0 - 5.0 | 1/2 | 5 | 120/60/1 | 15 | 5.8 | 40 | 200 |

* Low NOx is standard

## Filter Requirement Data

| Maximum Airflow (CFM)[1] | Disposable Filters | | | Permanent (Cleanable) Filters[2] | | |
|---|---|---|---|---|---|---|
| | Minimum Area (sq. in)[3] | Size (in.)[3] | Quantity | Minimum Area (sq. in.)[3] | Size (in.)[3] | Quantity |
| 1200 | 576 | 16 x 20 | 2 | 288 | 16 x 20 | 1 |
| 1400 | 672 | 20 x 20 | 2 | 336 | 20 x 20 | 1 |
| 1600 | 768 | 20 x 20 | 2 | 384 | 20 x 20 | 1 |
| 2000 | 960 | 20 x 25 | 2 | 480 | 20 x 25 | 1 |

1. The Maximum Airflow is the two digits following the "V" in the model number x 100; e.g. "14 x 100 = 1400" is the maximum airflow for G2D80CR100V14B.
2. Areas and dimensions shown for permanent (cleanable) filters are based on filters rated at 600 feet per minute face velocity.
3. Typical filter sizes are shown, however, any combination of filters whose area equals or exceeds the minimum area shown is satisfactory.

## Blower Performance Data

| Direction | Model | Motor Size (hp) | Blower Size | Temp Rise (°F) | Blower Speed Tap Heating CFM | | | Cooling Adjust-ment | Cooling CFM @ .50 in W.C. ext. static pressure | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Low Fire | High Fire | | Setting "A" | Setting "B" | Setting "C" | Setting "D" |
| Counterflow / Horizontal | G2D80CR075V14BL* | 1/2 | 10 x 8 | 50 - 60 | | --- | --- | Norm. | 1465 | 1265 | 1045 | 825 |
| | | | | | | --- | --- | (+) | 1520 | 1460 | 1215 | 970 |
| | | | | | | --- | --- | (-) | 1255 | 1050 | 890 | 655 |
| | | | | | B Tap Setting** | 715 | 1075 | --- | --- | --- | --- | --- |
| | G2D80CR100V14BL* | 1/2 | 10 x 8 | 60 - 70 | | --- | --- | Norm. | 1555 | 1375 | 1140 | 915 |
| | | | | | | --- | --- | (+) | 1585 | 1525 | 1305 | 1050 |
| | | | | | | --- | --- | (-) | 1340 | 1145 | 980 | 760 |
| | | | | | B Tap Setting** | 835 | 1135 | --- | --- | --- | --- | --- |
| | G2D80CR125V20CL* | 3/4 | 12 x 10 | 55 - 65 | | --- | --- | Norm. | 1940 | 1930 | 1740 | 1565 |
| | | | | | | --- | --- | (+) | 1930 | 1950 | 1970 | 1730 |
| | | | | | | --- | --- | (-) | 1800 | 1680 | 1520 | 1345 |
| | | | | | D Tap Setting** | 1025 | 1585 | --- | --- | --- | --- | --- |
| Upflow / Horizontal | G2D80CT50V12B(L) | 1/3 | 10 x 8 | 40 - 50 | | --- | --- | Norm. | 1130 | 990 | 810 | 605 |
| | | | | | | --- | --- | (+) | 1125 | 1125 | 920 | 690 |
| | | | | | | --- | --- | (-) | 1005 | 855 | 670 | 515 |
| | | | | | A Tap Setting** | 575 | 750 | --- | --- | --- | --- | --- |
| | G2D80CT075V14B(L) | 1/2 | 10 x 8 | 50 - 60 | | --- | --- | Norm. | 1420 | 1210 | 1010 | 815 |
| | | | | | | --- | --- | (+) | 1515 | 1385 | 1170 | 945 |
| | | | | | | --- | --- | (-) | 1195 | 1010 | 865 | 660 |
| | | | | | A Tap Setting** | 750 | 1000 | --- | --- | --- | --- | --- |
| | G2D80CT100V14B(L) | 1/2 | 10 x 8 | 60-70 | | --- | --- | Norm. | 1395 | 1190 | 1005 | 795 |
| | | | | | | --- | --- | (+) | 1490 | 1370 | 1155 | 935 |
| | | | | | | --- | --- | (-) | 1195 | 1015 | 855 | 650 |
| | | | | | C Tap Setting** | 900 | 1195 | --- | --- | --- | --- | --- |
| | G2D80CT100V20C(L) | 3/4 | 12 x10 | 55-65 | | --- | --- | Norm. | 2020 | 1865 | 1670 | 1480 |
| | | | | | | --- | --- | (+) | 2030 | 2020 | 1910 | 1660 |
| | | | | | | --- | --- | (-) | 1765 | 1615 | 1410 | 1255 |
| | | | | | A Tap Setting** | 680 | 1155 | --- | --- | --- | --- | --- |
| | G2D80CT125V20C(L) | 3/4 | 12 x 10 | 55-65 | | --- | --- | Norm. | 1945 | 1785 | 1605 | 1405 |
| | | | | | | --- | --- | (+) | 1945 | 1945 | 1820 | 1600 |
| | | | | | | --- | --- | (-) | 1675 | 1530 | 1355 | 1210 |
| | | | | | B Tap Setting** | 950 | 1605 | --- | --- | --- | --- | --- |
| | G2D80CT150V20D(L) | 3/4 | 12 x 10 | 65-75 | | --- | --- | Norm. | 1955 | 1800 | 1615 | 1430 |
| | | | | | | --- | --- | (+) | 1960 | 1965 | 1815 | 1620 |
| | | | | | | --- | --- | (-) | 1700 | 1550 | 1375 | 1210 |
| | | | | | C,D Tap Setting** | 850 | 1435 | --- | --- | --- | --- | --- |

* Low NOx is standard
** Required tap to maintain recommended rise.

## Accessories

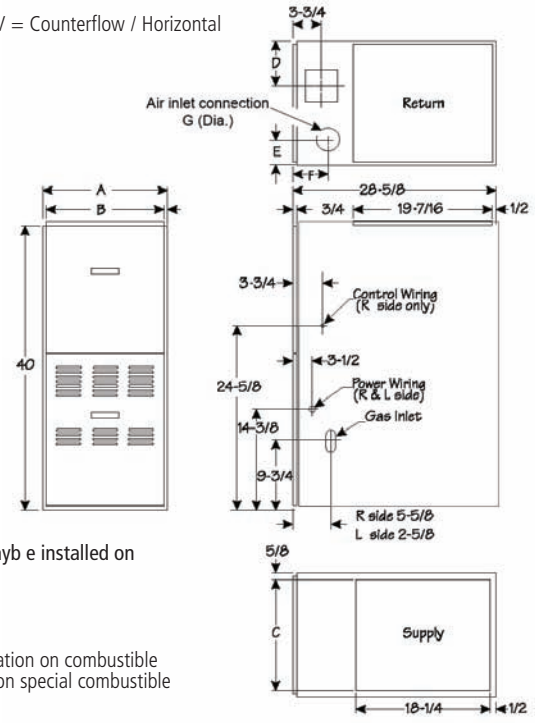
| Description | Used With | Kit Number | Catalog Number |
|---|---|---|---|
| Propane conversion kit | All 2 Stage 80 models | ALPKT582 | 1.831023 |
| Upflow side return filter kit (16 x 25 filter) | All Upflow capable models | AFILT524 | 1.841018 |
| Counterflow filter kit | All Counterflow furnaces | AFILT525 | 1.841019 |
| Bottom return filter kit | 80 Upflow capable models | AFILT529 | 1.841020 |
| Side Return Filter Kit for single return for 5 Tons Airflow (2 16x20 filters) | All Upflow capable models | AFILTHA7 | 1.841005 |
| Combustible floor base for 17.5" wide units | All Counterflows for B width cabinets | ABASE512 | 1.841015 |
| Combustible floor base for 21" wide units | All Counterflows for C width cabinets | ABASE568 | 1.841035 |

## Dimensions (in.)

| Model | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| G2D80CR075V14BL* | 17-1/2 | 16-1/2 | 16-1/4 | 6-1/2 | 5 | 3 | 2 |
| G2D80CR100V14BL* | 17-1/2 | 16-1/2 | 16-1/4 | 6-1/2 | 4-3/8 | 3-3/8 | 3 |
| G2D80CR125V20CL* | 21 | 20 | 19-3/4 | 8-1/4 | 4-5/8 | 3-3/8 | 3 |
| G2D80CT050V12B(L) | 17-1/2 | 16-1/2 | 14 | 6-1/2 | 5 | 3 | --- |
| G2D80CT075V14B(L) | 17-1/2 | 16-1/2 | 14 | 6-1/2 | 5 | 3 | --- |
| G2D80CT100V14B(L) | 17-1/2 | 16-1/2 | 14 | 6-1/2 | 4-1/2 | 3-1/8 | --- |
| G2D80CT100V20C(L) | 21 | 20 | 17-1/2 | 8-1/4 | 6-1/4 | 3-5/16 | --- |
| G2D80CT125V20C(L) | 21 | 20 | 17-1/2 | 8-1/4 | 4-5/8 | 3-1/4 | --- |
| G2D80CT150V20D(L) | 24-1/2 | 23-1/2 | 21 | 10 | 4-7/8 | 3-5/16 | --- |

* Low NOx is standard

G2D80CR-V = Counterflow / Horizontal




For upflow installations: Mayb e installed on comobustible flooring.




**Counterflow models:** Installation on combustible flooring only when installed on special combustible floor base.

## Clearances (in.) Counterflow

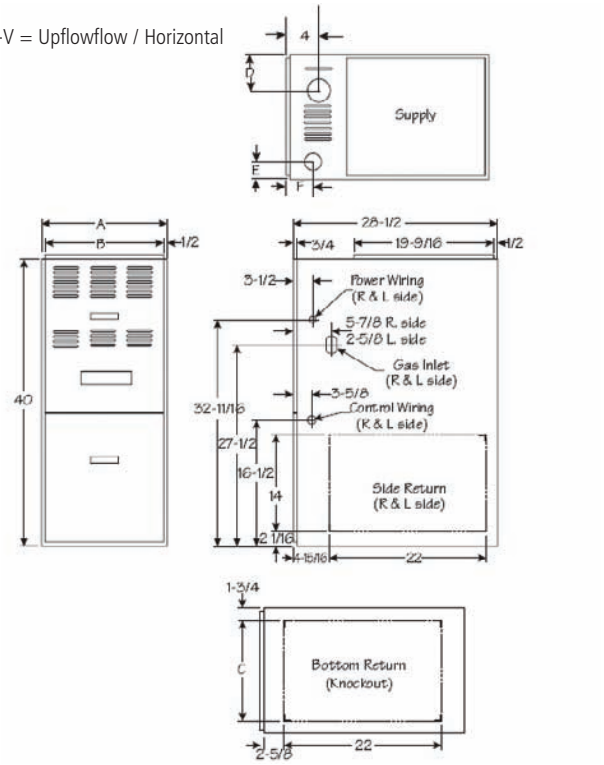
| Model | Top | Right Side | Left Side | Front | Back | Vent |
|---|---|---|---|---|---|---|
| G2D80CR075V14BL* | 1 | 0 | 2[1] | 4[3] | 0 | 6[2] |
| G2D80CR100V14BL* | | | | | | |
| G2D80CR125V20CL* | 1 | 0 | 0 | 4[3] | 0 | 6[2] |
| **Upflow** | | | | | | |
| G2D80CT050V12B(L) | 1 | 0 | 2[1] | 4[3] | 0 | 6[2] |
| G2D80CT075V14B(L) | | | | | | |
| G2D80CT100V14B(L) | | | | | | |
| G2D80CT100V20C(L) | 1 | 0 | 0 | 4[3] | 0 | 6[2] |
| G2D80CT125V20C(L) | 1 | 0 | 0 | 4[3] | 0 | 6[2] |
| G2D80CT150V20D(L) | | | | | | |

* Low NOx is standard

[1]0" IF B1 Vent is used
[2]1" IF B1 Vent is used
[3]2" IF B1 Vent is used

Minimum clearances to combustibles. 18" minimum clearance required to front of furnace to remove blower assembly.

G2D80CT-V = Upflowflow / Horizontal




## Clearances (in.) Horizontal

| Model | Right Side | Left Side | Front | Back | Vent | Airflow | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Left to Right | | Right to Left | |
| | | | | | | Top | Bottom | Top | Bottom |
| G2D80CR075V14BL* | 1 | 1 | 18 | 0 | 6[2] | 1 | 2[1] | 2[1] | 0 |
| G2D80CR100V14BL* | | | | | | | | | |
| G2D80CR125V20CL* | 1 | 1 | 18 | 0 | 6[2] | 1 | 0 | 1 | 0 |
| G2D80CT050V12B(L) | 1 | 1 | 18 | 0 | 6[2] | 1 | 3[1] | 3[1] | 0 |
| G2D80CT075V14B(L) | | | | | | | | | |
| G2D80CT100V14B(L) | | | | | | | | | |
| G2D80CT100V20C(L) | 1 | 1 | 18 | 0 | 6[2] | 1 | 2[1] | 2[1] | 0 |
| G2D80CT125V20C(L) | | | | | | | | | |
| G2D80CT150V20D(L) | 1 | 1 | 18 | 0 | 6[2] | 1 | 0 | 1[1] | 0 |

* Low NOx is standard

[1]0" IF B1 Vent is used
[2]1" IF B1 Vent is used
[3]2" IF B1 Vent is used

Minimum clearances to combustibles. 18" minimum clearance required to front of furnace to remove blower assembly.

AIREASE™

Built for life. Yours.

All specifications and illustrations subject to change without notice and without incurring obligations.

www.airease.com
1-800-448-5872

Form No. JG2D80CR/CT-V-100 (05/09)



Printed in the U.S.A.