

A962V

PRODUCT SPECIFICATIONS

2-STAGE VARIABLE SPEED GAS FURNACE

FORM NO. A962V-100 (06/2014)



VENTING

- Vent materials for Canadian applications must comply with ULC 5636
- Certified for direct vent (2-pipe) and in-direct (1-pipe) applications.

INSTALLATION FEATURES

- Left and right utility connections
- Removable floor base for bottom return air
- All models comply with California's South Coast Air Quality Management district Low NO_x requirements
- Zero step horizontal conversion

WARRANTY

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



CONFIGURATIONS

- Upflow / Horizontal
- Downflow

HEAT EXCHANGER DESIGN

- 409 Stainless steel primary heat exchanger material
- AL29-4C Stainless steel secondary heat exchanger
- Non-welded crimped S-curve primary heat exchanger design for maximum durability

CABINET DESIGN

- Compact 33" height
- Standardized widths for easy coil fit

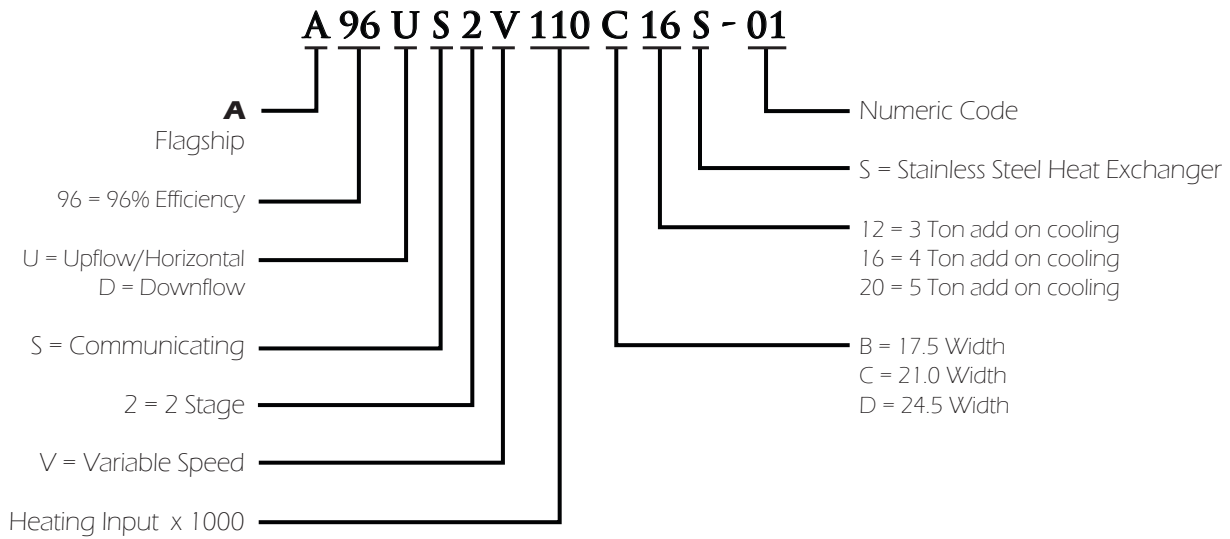
AIR DELIVERY SYSTEM

- ECM™ Variable speed blower motor
- Easily removable slide out blower design

CONTROLS

- Comfort Sync communicating thermostat
- Two stage gas valve
- Self diagnostics saves last 5 fault codes regardless of power interruption

Model Number Guide



Physical and Electrical Data

| | Model | 1st Stage | | 2nd Stage | | AFUE (ICS) | Nominal Cooling Capacity | Gas Inlet (in.) | Volts/ Hz/ Phase | Max. Time Delay Breaker or Fuse | Nominal F.L.A. | Trans. (V.A.) | Approx. Shipping Weight (lbs.) |
|-------------------|----------------|--------------|----------------|--------------|----------------|------------|--------------------------|-----------------|------------------|---------------------------------|----------------|---------------|--------------------------------|
| | | Input (Btuh) | Output* (Btuh) | Input (Btuh) | Output* (Btuh) | | | | | | | | |
| Upflow/Horizontal | A96US2V045B12S | 29,000 | 28,000 | 44,000 | 42,000 | 96.0 | 3 | 1/2 | 120-60-1 | 15 | 7.7 | 40 | 130 |
| | A96US2V070B12S | 43,000 | 41,000 | 66,000 | 62,000 | 96.0 | 3 | 1/2 | 120-60-1 | 15 | 7.7 | 40 | 138 |
| | A96US2V090C12S | 57,000 | 55,000 | 88,000 | 84,000 | 96.0 | 3 | 1/2 | 120-60-1 | 15 | 7.7 | 40 | 154 |
| | A96US2V090C16S | 57,000 | 55,000 | 88,000 | 85,000 | 96.0 | 4 | 1/2 | 120-60-1 | 15 | 10.1 | 40 | 165 |
| | A96US2V090C20S | 57,000 | 55,000 | 88,000 | 85,000 | 96.0 | 5 | 1/2 | 120-60-1 | 20 | 12.8 | 40 | 166 |
| | A96US2V110C16S | 72,000 | 70,000 | 110,000 | 105,000 | 96.0 | 4 | 1/2 | 120-60-1 | 15 | 10.1 | 40 | 173 |
| | A96US2V110C20S | 72,000 | 70,000 | 110,000 | 106,000 | 96.0 | 5 | 1/2 | 120-60-1 | 20 | 12.8 | 40 | 174 |
| Downflow | A96US2V135D20S | 88,000 | 84,000 | 135,000 | 126,000 | 96.0 | 5 | 1/2 | 120-60-1 | 20 | 12.8 | 40 | 188 |
| | A96DS2V045B12S | 29,000 | 28,000 | 44,000 | 43,000 | 96.0 | 3 | 1/2 | 120-60-1 | 15 | 7.7 | 40 | 131 |
| | A96DS2V070B16S | 43,000 | 42,000 | 66,000 | 64,000 | 96.0 | 4 | 1/2 | 120-60-1 | 15 | 10.1 | 40 | 138 |
| | A96DS2V090C20S | 57,000 | 56,000 | 88,000 | 85,000 | 96.0 | 5 | 1/2 | 120-60-1 | 20 | 12.8 | 40 | 166 |
| | A96DS2V110C20S | 72,000 | 70,000 | 110,000 | 106,000 | 96.0 | 5 | 1/2 | 120-60-1 | 20 | 12.8 | 40 | 176 |

Note: For vent length and clearances to combustibles, please reference installation instructions.

* Outputs shown are High Fire, 100% rate. Low Fire is 67% of shown output.

Filter Requirement Data

1. The Airflow Descriptor is the two digits following the "B", "C", or "D" in the model number; e.g. "20" is the Airflow Descriptor.
2. Areas shown for permanent filters are based on filters rated at 600 feet per minute face velocity.

| Airflow Descriptor | Disposable Filters | Cleanable Filters |
|--------------------|------------------------|-----------------------|
| | Minimum Area (sq. in.) | Minimum Area (sq.in.) |
| 12 | 576 | 288 |
| 16 | 768 | 384 |
| 20 | 960 | 480 |

Blower Performance Data

| Model | Motor Size (hp) | Blower Size | Heating Temp. Rise (°F) | Heating CFM @ .10" - .80" w.c. | | | | Cooling Stage | Cooling CFM @ .10" - .80" w.c. | | | | Speed Adj. |
|------------------|-----------------|-------------|-------------------------|--------------------------------|-------------|-------------|-------------------|---------------|--------------------------------|-------------|-------------|-------------|------------|
| | | | | Cooling "D" | Cooling "C" | Cooling "B" | Cooling "A" | | Cooling "D" | Cooling "C" | Cooling "B" | Cooling "A" | |
| | | | | A96US2V045B1ZS | 1/2 | 10x9 | "35-65 High Fire" | | 745 | 875 | 990 | 1005 | |
| 685 | 765 | 895 | 910 | | | | | 815 | 980 | 1120 | 1255 | Norm | |
| 610 | 695 | 785 | 810 | | | | | 720 | 885 | 1020 | 1135 | - | |
| "20-50 Low Fire" | 685 | 765 | 895 | | | | 910 | 1st Stage | 595 | 760 | 865 | 980 | + |
| | 620 | 705 | 800 | | | | 820 | | 540 | 660 | 785 | 890 | Norm |
| | 545 | 625 | 715 | | | | 725 | | 485 | 600 | 695 | 790 | - |
| A96US2V070B1ZS | 1/2 | 10x9 | "50-80 High Fire" | 965 | 1130 | 1255 | 1400 | 2nd Stage | 860 | 1060 | 1215 | 1365 | + |
| | | | | 880 | 990 | 1140 | 1295 | | 810 | 960 | 1130 | 1265 | Norm |
| | | | | 810 | 890 | 1030 | 1170 | | 705 | 840 | 1005 | 1140 | - |
| | | | "25-55 Low Fire" | 940 | 1070 | 1195 | 1345 | 1st Stage | 600 | 740 | 840 | 970 | + |
| | | | | 830 | 965 | 1100 | 1235 | | 555 | 665 | 770 | 855 | Norm |
| | | | | 755 | 840 | 975 | 1130 | | 500 | 600 | 680 | 790 | - |
| A96US2V090C1ZS | 1/2 | 10x9 | "60-90 High Fire" | 1060 | 1135 | 1240 | 1430 | 2nd Stage | 875 | 1040 | 1210 | 1360 | + |
| | | | | 960 | 1040 | 1120 | 1310 | | 800 | 945 | 1100 | 1245 | Norm |
| | | | | 830 | 935 | 980 | 1175 | | 720 | 840 | 970 | 1115 | - |
| | | | "35-65 Low Fire" | 960 | 1040 | 1120 | 1310 | 1st Stage | 625 | 710 | 830 | 950 | + |
| | | | | 875 | 945 | 995 | 1195 | | 565 | 670 | 760 | 860 | Norm |
| | | | | 790 | 840 | 920 | 1080 | | 520 | 610 | 685 | 785 | - |
| A96US2V090C16S | 3/4 | 11x11 | "45-75 High Fire" | 1230 | 1310 | 1360 | 1605 | 2nd Stage | 1165 | 1375 | 1580 | 1770 | + |
| | | | | 1115 | 1195 | 1255 | 1455 | | 1075 | 1265 | 1440 | 1645 | Norm |
| | | | | 1005 | 1070 | 1130 | 1335 | | 935 | 1145 | 1320 | 1465 | - |
| | | | "30-60 Low Fire" | 1165 | 1250 | 1315 | 1520 | 1st Stage | 840 | 1005 | 1155 | 1315 | + |
| | | | | 1075 | 1140 | 1195 | 1405 | | 780 | 915 | 1045 | 1190 | Norm |
| | | | | 935 | 1030 | 1065 | 1285 | | 690 | 835 | 955 | 1070 | - |
| A96US2V090C20S | 1 | 11x11 | "40-70 High Fire" | 1450 | 1565 | 1725 | 1865 | 2nd Stage | 1385 | 1595 | 1820 | 2020 | + |
| | | | | 1310 | 1450 | 1585 | 1690 | | 1225 | 1465 | 1645 | 1885 | Norm |
| | | | | 1155 | 1305 | 1450 | 1545 | | 1065 | 1320 | 1504 | 1675 | - |
| | | | "30-60 Low Fire" | 1120 | 1265 | 1420 | 1520 | 1st Stage | 935 | 1055 | 1275 | 1465 | + |
| | | | | 965 | 1120 | 1285 | 1395 | | 835 | 980 | 1120 | 1335 | Norm |
| | | | | 865 | 950 | 1120 | 1235 | | 740 | 870 | 1010 | 1150 | - |
| A96US2V110C16S | 3/4 | 11x11 | "60-90 High Fire" | 1210 | 1275 | 1385 | 1620 | 2nd Stage | 1100 | 1325 | 1530 | 1760 | + |
| | | | | 1100 | 1160 | 1255 | 1455 | | 1025 | 1205 | 1405 | 1565 | Norm |
| | | | | 1015 | 1055 | 1135 | 1335 | | 920 | 1080 | 1260 | 1440 | - |
| | | | "35-65 Low Fire" | 1210 | 1275 | 1385 | 1620 | 1st Stage | 810 | 980 | 1085 | 1235 | + |
| | | | | 1100 | 1160 | 1255 | 1455 | | 760 | 875 | 1010 | 1135 | Norm |
| | | | | 1015 | 1055 | 1135 | 1335 | | 695 | 805 | 905 | 1040 | - |
| A96US2V110C20S | 1 | 11x11 | "45-75 High Fire" | 1560 | 1760 | 1905 | 2080 | 2nd Stage | 1310 | 1560 | 1745 | 1955 | + |
| | | | | 1415 | 1610 | 1740 | 1930 | | 1220 | 1405 | 1570 | 1795 | Norm |
| | | | | 1285 | 1485 | 1560 | 1745 | | 1075 | 1270 | 1430 | 1635 | - |
| | | | "35-65 Low Fire" | 1155 | 1325 | 1420 | 1565 | 1st Stage | 935 | 1065 | 1245 | 1405 | + |
| | | | | 1055 | 1200 | 1310 | 1480 | | 865 | 970 | 1145 | 1280 | Norm |
| | | | | 935 | 1075 | 1170 | 1315 | | 790 | 890 | 1025 | 1165 | - |
| A96US2V135D20S | 1 | 11x11 | "55-85 High Fire" | 1650 | 1845 | 2000 | 2195 | 2nd Stage | 1395 | 1640 | 1840 | 2055 | + |
| | | | | 1495 | 1660 | 1880 | 1985 | | 1290 | 1480 | 1660 | 1905 | Norm |
| | | | | 1360 | 1500 | 1670 | 1850 | | 1170 | 1330 | 1500 | 1705 | - |
| | | | "40-70 Low Fire" | 1300 | 1435 | 1630 | 1715 | 1st Stage | 1015 | 1160 | 1330 | 1480 | + |
| | | | | 1190 | 1325 | 1465 | 1620 | | 940 | 1085 | 1200 | 1345 | Norm |
| | | | | 1095 | 1190 | 1340 | 1430 | | 870 | 965 | 1110 | 1225 | - |

Upflow / Horizontal

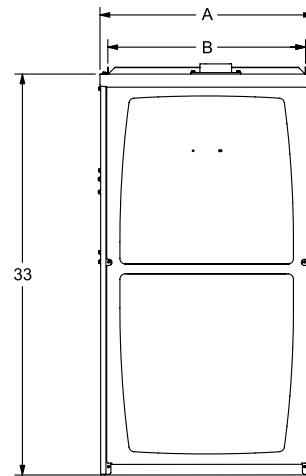
Blower Performance Data

| | Model | Motor Size (hp) | Blower Size | Heating Temp. Rise (°F) | Heating CFM @ .10" - .80" w.c. | | | | Cooling Stage | Cooling CFM @ .10" - .80" w.c. | | | | Speed Adj. |
|----------------|----------------|-----------------|-------------------|-------------------------|--------------------------------|-------------|-------------|-------------|---------------|--------------------------------|-------------|-------------|-------------|------------|
| | | | | | Cooling "D" | Cooling "C" | Cooling "B" | Cooling "A" | | Cooling "D" | Cooling "C" | Cooling "B" | Cooling "A" | |
| | | | | | | | | | | | | | | |
| Downflow | A96DS2V045B12S | 1/2 | 10x9 | "35-65 High Fire" | 735 | 830 | 1015 | 1210 | 2nd Stage | 895 | 1050 | 1210 | 1360 | + |
| | | | | | 680 | 750 | 930 | 1070 | | 805 | 965 | 1105 | 1250 | Norm |
| | | | | | 625 | 695 | 835 | 1000 | | 735 | 865 | 1000 | 1130 | - |
| | | | | "20-50 Low Fire" | 705 | 780 | 975 | 1110 | 1st Stage | 640 | 755 | 850 | 975 | + |
| | | | | | 655 | 730 | 890 | 1055 | | 580 | 695 | 780 | 880 | Norm |
| | | | | | 595 | 670 | 790 | 960 | | 545 | 645 | 720 | 795 | - |
| | A96DS2V070B16S | 3/4 | 11x10 | "35-65 High Fire" | 1110 | 1305 | 1430 | 1700 | 2nd Stage | 1110 | 1340 | 1575 | 1800 | + |
| | | | | | 995 | 1175 | 1315 | 1520 | | 995 | 1230 | 1420 | 1650 | Norm |
| | | | | | 880 | 1055 | 1170 | 1365 | | 880 | 1085 | 1290 | 1460 | - |
| | | | | "25-55 Low Fire" | 860 | 1020 | 1140 | 1340 | 1st Stage | 740 | 915 | 1055 | 1255 | + |
| | | | | | 795 | 910 | 1030 | 1230 | | 660 | 820 | 940 | 1120 | Norm |
| | | | | | 680 | 825 | 910 | 1085 | | 575 | 735 | 850 | 995 | - |
| A96DS2V090C20S | 1 | 11x11 | "40-70 High Fire" | 1395 | 1555 | 1695 | 1825 | 2nd Stage | 1335 | 1600 | 1750 | 1980 | + | |
| | | | | 1275 | 1395 | 1585 | 1670 | | 1225 | 1450 | 1630 | 1830 | Norm | |
| | | | | 1145 | 1265 | 1405 | 1525 | | 1120 | 1270 | 1450 | 1660 | - | |
| | | | "30-60 Low Fire" | 1130 | 1230 | 1365 | 1475 | 1st Stage | 955 | 1115 | 1265 | 1450 | + | |
| | | | | 1040 | 1130 | 1250 | 1340 | | 855 | 1005 | 1150 | 1285 | Norm | |
| | | | | 910 | 1025 | 1130 | 1210 | | 750 | 890 | 1060 | 1170 | - | |
| A96DS2V110C20S | 1 | 11x11 | "45-75 High Fire" | 1595 | 1795 | 1955 | 2140 | 2nd Stage | 1335 | 1585 | 1790 | 2010 | + | |
| | | | | 1450 | 1615 | 1795 | 1975 | | 1220 | 1440 | 1630 | 1865 | Norm | |
| | | | | 1290 | 1460 | 1610 | 1795 | | 1100 | 1275 | 1475 | 1680 | - | |
| | | | "35-65 Low Fire" | 1165 | 1305 | 1465 | 1625 | 1st Stage | 920 | 1095 | 1265 | 1440 | + | |
| | | | | 1055 | 1185 | 1315 | 1475 | | 830 | 965 | 1130 | 1290 | Norm | |
| | | | | 930 | 1070 | 1180 | 1320 | | 735 | 860 | 1035 | 1155 | - | |

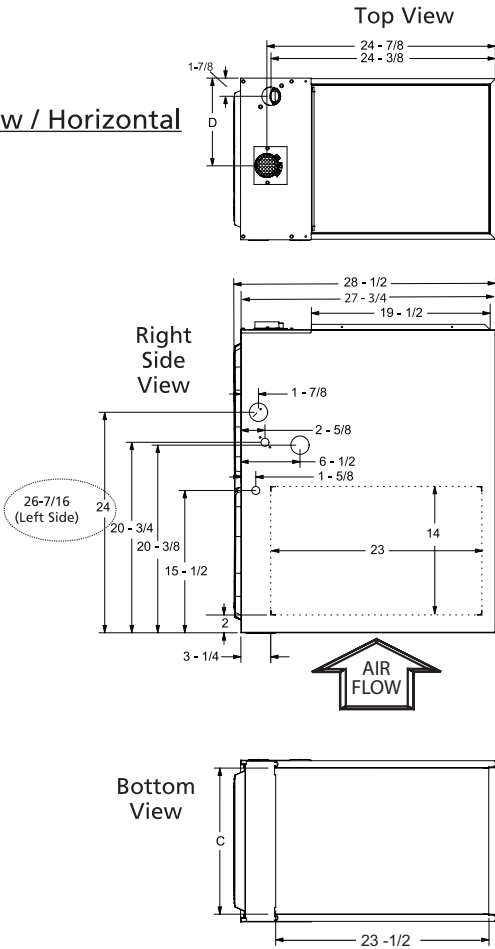
Dimensions

| | Model | A | B | C | D |
|-------------------|----------------|--------|--------|--------|--------|
| Upflow/Horizontal | A96US2V045B12S | 17-1/2 | 16-3/8 | 16 | 7-5/8 |
| | A96US2V070B12S | 17-1/2 | 16-3/8 | 16 | 7-5/8 |
| | A96US2V090C12S | 21 | 19-7/8 | 19-1/2 | 9-3/8 |
| | A96US2V090C16S | 21 | 19-7/8 | 19-1/2 | 9-3/8 |
| | A96US2V090C20S | 21 | 19-7/8 | 19-1/2 | 9-3/8 |
| | A96US2V110C16S | 21 | 19-7/8 | 19-1/2 | 9-3/8 |
| | A96US2V110C20S | 21 | 19-7/8 | 19-1/2 | 9-3/8 |
| | A96US2V135D20S | 24-1/2 | 23-3/8 | 23 | 11-1/8 |
| Downflow | A96DS2V045B12S | 17-1/2 | 16-3/8 | 16 | 15-1/2 |
| | A96DS2V070B16S | 17-1/2 | 16-3/8 | 16 | 15-1/2 |
| | A96DS2V090C20S | 21 | 19-7/8 | 19-1/2 | 19 |
| | A96DS2V110C20S | 21 | 19-7/8 | 19-1/2 | 19 |

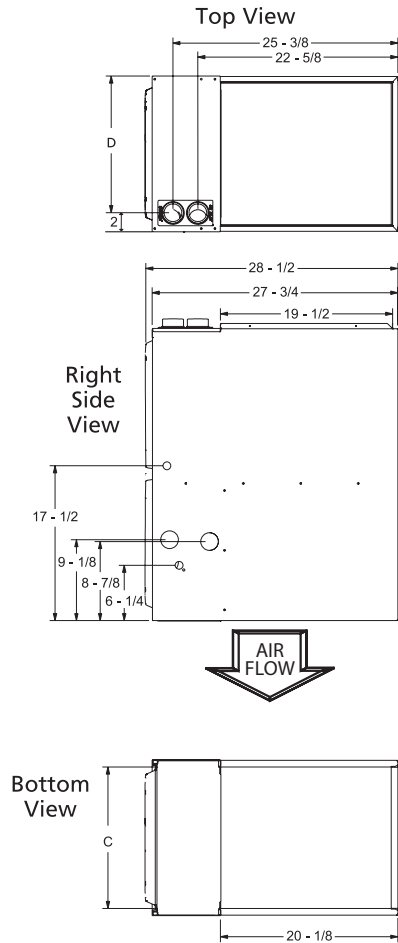
Front View



Upflow / Horizontal



Downflow



Accessory List

| Accessory | Allied Catalog # |
|--|------------------|
| Return Air Base | |
| Return Air Base 17.5 Inch | 68W62 |
| Return Air Base 21.0 Inch | 68W63 |
| Return Air Base 24.5 Inch | 68W64 |
| Comfort Sync Wi-Fi Thermostat | |
| Comfort Sync Wi-Fi Thermostat | 1.841197 |
| Natural to LP Kits | |
| 2-Stage – 90 | 78W94 |
| Downflow Specific Air Filters | |
| 17.5" | 51W07 |
| 21.0" | 51W08 |
| Downflow Combustible Flooring Base | |
| 17.5" B Width | 11M60 |
| 21.0" C Width | 11M61 |
| Night Service Kits | |
| Two-stage | 89W53 |
| Horizontal Suspension Kit | |
| 80% & 90% Kit | 51W10 |
| Flush Mount Termination (90% Furnaces only) | |
| 2" & 3.0" Vent – US Version | 51W11 |
| 2" & 3.0" Vent – ULC S636 Compliant (Canada) | 51W12 |
| Concentric Vent Kit (90% Furnaces only) | |
| 1-1/2" Vent Version (United States) | 71M80 |
| 1-1/2" and 2" Vent Version (Canada) | 44W92 |
| 2" Vent Version (United States) | 69M29 |
| 3" Vent Version (United States) | 60L46 |
| 3" Vent Version (Canada) | 44W93 |
| External Filter Rack Kits | |
| 1 pack (16 x 25) | 1.841018 |
| 10 pack (16 x 25) | 1.841039 |

Note: For vent length and clearances to combustibles, please reference installation instructions.



1-800-448-5872

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