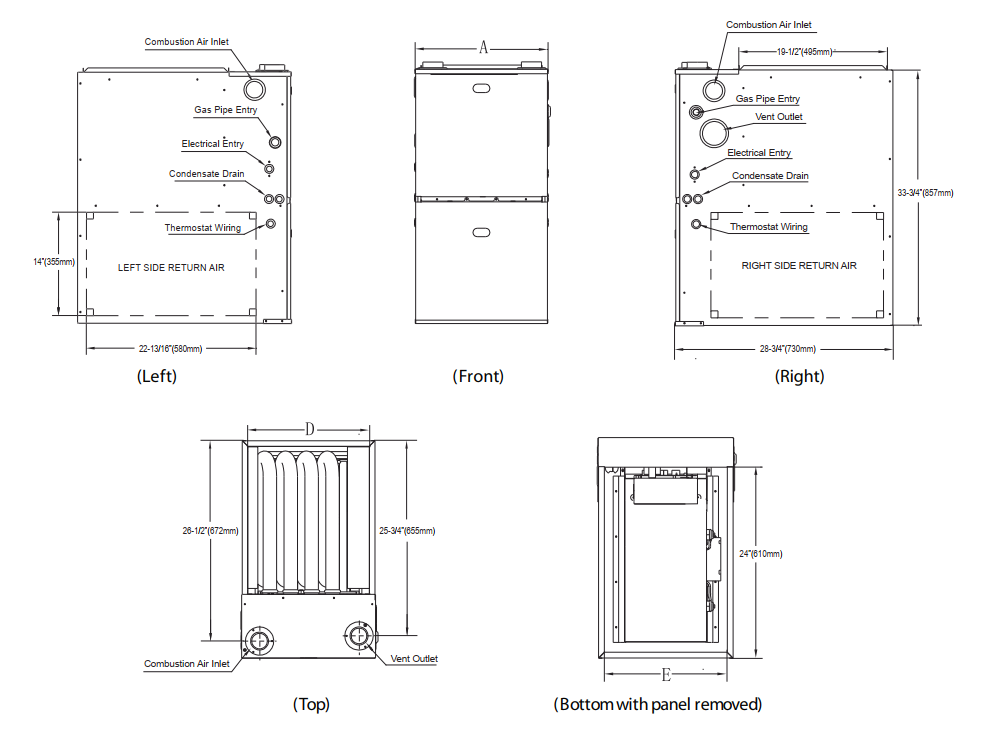
|  |  |
| --- | --- |
| **Submittal** | TAG: |

**MGV96 Series**

**Heating capacity: 20–120 kBTU/h**

****

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| FURNACE SIZE | A  CABINET WIDTH IN. | D  SUPPLY AIR WIDTH IN. | E  RETURN AIR WIDTH IN. | NET/SHIP WT (lbs) |
| 60B3B | 17.5 | 16 | 15-57/32 | 135/147.5 |
| 80B3B | 17.5 | 16 | 15-57/32 | 141/153 |
| 80C4B | 21 | 19.5 | 19-13/32 | 152/165 |
| 100C5A | 21 | 19.5 | 19-13/32 | 162/173 |
| 100D5A | 24.5 | 23 | 22-27/32 | 170/185 |
| 120D5A | 24.5 | 23 | 22-27/32 | 176/190 |

# Specifications

|  |  |  |  |
| --- | --- | --- | --- |
|  | **MGV96U060B3C** | **MGV96U080B3C** | **MGV96U080C4C** |
| **FUEL TYPE** | Natural/Propane Gas | Natural/Propane Gas | Natural/Propane Gas |
| **GAS HEATING PERFORMANCE** |  |  |  |
| High Fire Input (BTU/h) | 60,000 | 80,000 | 80,000 |
| Natural Gas | 57,000 | 76,000 | 76,000 |
| LP Gas | 57,000 | 76,000 | 76,000 |
| Low Fire Input (BTU/h) | 39,000 | 52,000 | 52,000 |
| Natural Gas | 37,000 | 49,000 | 49,000 |
| LP Gas | 37,000 | 49,000 | 49,000 |
| AFUE | 96 | 96 | 96 |
| Available AC @ 0.5” ESP | 1.5/2/2.5/3 | 2.5/3/3.5/4 | 2.5/3/3.5/4 |
| Temperature Rise Range (° F) | 30-60 | 35-65 | 35-65 |
| Static pressure(in.w.c) |  |  |  |
| Heating | 0.12 | 0.15 | 0.15 |
| Cooling | 0.5 | 0.5 | 0.5 |
| **ELECTRICAL DATA** |  |  |  |
| Voltage/Phase (60Hz) | 115 | 115 | 115 |
| Min. / Max. Voltage (V) | 104/127 | 104/127 | 104/127 |
| Min. Circuit Ampacity (MCA) (A) | 8 | 8 | 7.8 |
| Max. Overcurrent Protection (MOP) (A) | 15 | 15 | 15 |
| **FAN MOTOR** |  |  |  |
| Motor Type | ECM | ECM | ECM |
| Horsepower (HP) | 3/4 | 3/4 | 3/4 |
| Rated RPM | 1050 | 1050 | 1050 |
| Full Load Amps (FLA) (A) | 8 | 8 | 7.8 |
| Capacitor (uF) | / | / | / |
| **CIRCULATOR BLOWER** |  |  |  |
| Material | Metal | Metal | Metal |
| Size (D x H) (in.) | 12-3/8 x 8 | 12-3/8 x 8 | 12-6/8 x 11-1/4 |
| Vent Diameter (in.) | 2/3 | 2/3 | 2/3 |
| No. of Burners | 3 | 4 | 4 |
| Speed Mode Number | 5 | 5 | 5 |

# Specifications

|  |  |  |  |
| --- | --- | --- | --- |
|  | **MGV96U100C5C** | **MGV96U100D5C** | **MGV96U120D5C** |
| **FUEL TYPE** | Natural/Propane Gas | Natural/Propane Gas | Natural/Propane Gas |
| **GAS HEATING PERFORMANCE** |  |  |  |
| High Fire Input (BTU/h) | 100,000 | 100,000 | 120,000 |
| Natural Gas | 95,000 | 95,000 | 115,000 |
| LP Gas | 95,000 | 95,000 | 115,000 |
| Low Fire Input (BTU/h) | 70,000 | 70,000 | 84,000 |
| Natural Gas | 67,000 | 67,000 | 80,500 |
| LP Gas | 67,000 | 67,000 | 80,500 |
| AFUE | 96 | 96 | 96 |
| Available AC @ 0.5” ESP | 3.5/4/4.5/5 | 3.5/4/4.5/5 | 3.5/4/4.5/5 |
| Temperature Rise Range (° F) | 35-65 | 35-65 | 40-70 |
| Static pressure(in.w.c) |  |  |  |
| Heating | 0.2 | 0.2 | 0.2 |
| Cooling | 0.5 | 0.5 | 0.5 |
| **ELECTRICAL DATA** |  |  |  |
| Voltage/Phase (60Hz) | 115 | 115 | 115 |
| Min. / Max. Voltage (V) | 104/127 | 104/127 | 104/127 |
| Min. Circuit Ampacity (MCA) (A) | 11.5 | 10.5 | 10.5 |
| Max. Overcurrent Protection (MOP) (A) | 20 | 20 | 20 |
| **FAN MOTOR** |  |  |  |
| Motor Type | ECM | ECM | ECM |
| Horsepower (HP) | 1 | 1 | 1 |
| Rated RPM | 1050 | 1050 | 1050 |
| Full Load Amps (FLA) (A) | 11.5 | 10.5 | 10.5 |
| Capacitor (uF) | / | / | / |
| **CIRCULATOR BLOWER** |  |  |  |
| Material | Metal | Metal | Metal |
| Size (D x H) (in.) | 12-6/8 x 11-1/4 | 12-6/8 x 11-1/4 | 12-6/8 x 11-1/4 |
| Vent Diameter (in.) | 2/3 | 2/3 | 3 |
| No. of Burners | 5 | 5 | 6 |
| Speed Mode Number | 5 | 5 | 5 |

# Consumption system specifications

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Model** | | | | **060B3A** | **080B3A** | **080C4A** | **100C5A** | **100D5A** | **120D5A** |
| Max. Inlet Gas Press | Natural Gas | in.w.c | | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 |
| Propane Gas (LP) | in.w.c | | 13 | 13 | 13 | 13 | 13 | 13 |
| Min. Inlet Gas Press | Natural Gas | in.w.c | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Propane Gas (LP) | in.w.c | | 11 | 11 | 11 | 11 | 11 | 11 |
| Natural Gas Manifold Pressure (High fire) | | in.w.c | | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| Natural Gas Manifold Pressure (Low fire) | | in.w.c | | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| Propane Gas Manifold Pressure (High fire) | | in.w.c | | 10 | 10 | 10 | 10 | 10 | 10 |
| Propane Gas Manifold Pressure (Low fire) | | in.w.c | | 4 | 4 | 4 | 4 | 4 | 4 |
| Natural Gas Factory Orifice (0-2000 feet) | | # | | 45 | 45 | 45 | 45 | 45 | 45 |
| Propane Gas (LP) Factory Orifice (0-2000  feet) | | # | | 55 | 55 | 55 | 55 | 55 | 55 |
| Gas Connection Size | | in. NPT | | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| Igniton Device | |  | | Hot surface | | | | | |
| Number of Burners | | # | | 3 | 4 | 4 | 5 | 5 | 6 |
| Primary Heat exchanger Diameter | | Inch | | 1-6/8 | 1-6/8 | 1-6/8 | 1-6/8 | 1-6/8 | 1-6/8 |
| Primary Heat exchanger | | # tubes | | 3 | 4 | 4 | 5 | 5 | 6 |
| Secondary Heat Exchanger Diameter | | Inch | | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 | 3/8 |
| Secondary Heat Exchanger | | # tubes | | 33 | 33 | 39 | 39 | 48 | 48 |
| Flue Vent Diameter | | Inch | | 2“/3” | 2“/3” | 2“/3” | 2“/3” | 2“/3” | 3” |
| **Safety Switch Settings** | | | | | | | | | |
| Pressure Switch Factory Setting | | High | in.w.c | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| Pressure Switch Factory Setting | | Low | in.w.c | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| Rollout switch - resettable | | Off/On | °F | 300 | 300 | 300 | 300 | 300 | 300 |
| Inlet High Temperature Limit switch - fixed | | Off/On | °F | 150/120 | 150/120 | 130/100 | 150/120 | 150/120 | 150/120 |

# Airflow Data

# Air Delivery - CFM without filter

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| FURANCE  SIZE | RETURN-AIR  INLET | SPEED |  | EXTERNAL STATIC PRESSURE(IN.W.C) | | | | | | | | | |
| 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 |
| 60B | Bottom or Sides | H | CFM | 1339 | 1327 | 1338 | 1309 | 1321 | 1320 | 1342 | 1334 | 1316 | 1335 |
| Temp Rise-1st stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Temp Rise-2nd stage℉ | 37.3 | 37.7 | 37.5 | 38.3 | 38.1 | 38.1 | 37.6 | 37.9 | 38.5 | 38.0 |
| Mid-H | CFM | 1124 | 1118 | 1102 | 1106 | 1096 | 1099 | 1102 | 1109 | 1089 | 1105 |
| Temp Rise-1st stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Temp Rise-2nd stage℉ | 44.2 | 44.5 | 45.2 | 45.1 | 45.6 | 45.5 | 45.5 | 45.3 | 46.2 | 45.6 |
| Mid | CFM | 880 | 870 | 853 | 858 | 865 | 858 | 854 | 866 | 871 | 839 |
| Temp Rise-1st stage℉ | 36.7 | 37.2 | 37.9 | 37.8 | 37.6 | 38.0 | 38.2 | 37.8 | 37.6 | 39.1 |
| Temp Rise-2nd stage℉ | 56.3 | 57.0 | 58.1 | 57.9 | 57.5 | 58.0 | 58.4 | 57.7 | 57.4 | 59.7 |
| Mid-L | CFM | 779 | 768 | 762 | 756 | 740 | 753 | 757 | 747 | 785 | 766 |
| Temp Rise-1st stage℉ | 41.4 | 42.0 | 42.4 | 42.8 | 43.8 | 43.1 | 43.0 | 43.6 | 41.6 | 42.7 |
| Temp Rise-2nd stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Low | CFM | 553 | 586 | 543 | 569 | 552 | 562 | 584 | 572 | 575 | 567 |
| Temp Rise-1st stage℉ | 58.1 | 54.9 | 59.3 | 56.7 | 58.5 | 57.6 | 55.5 | 56.8 | 56.5 | 57.4 |
| Temp Rise-2nd stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 80B | Bottom or Sides | H | CFM | 1230 | 1233 | 1222 | 1226 | 1214 | 1236 | 1255 | 1244 | 1249 | 1251 |
| Temp Rise-1st stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Temp Rise-2nd stage℉ | 53.9 | 53.8 | 54.4 | 54.3 | 54.8 | 53.9 | 53.2 | 53.7 | 53.6 | 53.6 |
| Mid-H | CFM | 1052 | 1052 | 1041 | 1044 | 1037 | 1034 | 1048 | 1046 | 1024 | 1076 |
| Temp Rise-1st stage℉ | 41.0 | 41.0 | 41.5 | 41.5 | 41.8 | 42.1 | 41.5 | 41.7 | 42.7 | 40.7 |
| Temp Rise-2nd stage℉ | 62.8 | 62.8 | 63.6 | 63.5 | 64.0 | 64.3 | 63.4 | 63.7 | 65.1 | 62.1 |
| Mid | CFM | 849 | 861 | 854 | 853 | 855 | 844 | 855 | 848 | 834 | 859 |
| Temp Rise-1st stage℉ | 50.6 | 50.0 | 50.4 | 50.5 | 50.5 | 51.2 | 50.6 | 51.2 | 52.1 | 50.7 |
| Temp Rise-2nd stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mid-L | CFM | 754 | 771 | 765 | 764 | 728 | 761 | 782 | 739 | 758 | 758 |
| Temp Rise-1st stage℉ | 56.9 | 55.7 | 56.2 | 56.3 | 59.2 | 56.8 | 55.3 | 58.5 | 57.2 | 57.3 |
| Temp Rise-2nd stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Low | CFM | 569 | 554 | 571 | 572 | 568 | 572 | 598 | 594 | 572 | 548 |
| Temp Rise-1st stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Temp Rise-2nd stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 80C | Bottom or Sides | H | CFM | 1303 | 1301 | 1281 | 1291 | 1289 | 1291 | 1290 | 1295 | 1298 | 1253 |
| Temp Rise-1st stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Temp Rise-2nd stage℉ | 50.8 | 50.9 | 51.8 | 51.5 | 51.6 | 51.6 | 51.7 | 51.6 | 51.6 | 53.5 |
| Mid-H | CFM | 1120 | 1127 | 1134 | 1130 | 1135 | 1138 | 1132 | 1143 | 1107 | 1112 |
| Temp Rise-1st stage℉ | 38.5 | 38.3 | 38.1 | 38.3 | 38.2 | 38.2 | 38.5 | 38.2 | 39.5 | 39.4 |
| Temp Rise-2nd stage℉ | 59.0 | 58.7 | 58.4 | 58.7 | 58.5 | 58.4 | 58.8 | 58.3 | 60.3 | 60.1 |
| Mid | CFM | 908 | 894 | 896 | 902 | 896 | 894 | 864 | 891 | 935 | 880 |
| Temp Rise-1st stage℉ | 47.3 | 48.1 | 48.0 | 47.8 | 48.2 | 48.4 | 50.1 | 48.7 | 46.5 | 49.5 |
| Temp Rise-2nd stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mid-L | CFM | 818 | 819 | 825 | 800 | 813 | 803 | 831 | 838 | 791 | 802 |
| Temp Rise-1st stage℉ | 52.4 | 52.4 | 52.1 | 53.8 | 53.1 | 53.8 | 52.1 | 51.8 | 54.9 | 54.2 |
| Temp Rise-2nd stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Low | CFM | 577 | 628 | 605 | 624 | 615 | 601 | 628 | 573 | 590 | 588 |
| Temp Rise-1st stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Temp Rise-2nd stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 100C | Bottom or Sides | H | CFM | 1752 | 1764 | 1768 | 1781 | 1774 | 1786 | 1762 | 1802 | 1792 | 1786 |
| Temp Rise-1st stage℉ |  |  |  |  |  |  |  |  |  |  |
| Temp Rise-2nd stage℉ | 47.5 | 47.3 | 47.3 | 47.0 | 47.3 | 47.0 | 47.7 | 46.8 | 47.2 | 47.4 |
| Mid-H | CFM | 1512 | 1506 | 1536 | 1523 | 1514 | 1509 | 1529 | 1551 | 1565 | 1532 |
| Temp Rise-1st stage℉ | 38.6 | 38.8 | 38.1 | 38.5 | 38.8 | 39.0 | 38.6 | 38.1 | 37.9 | 38.8 |
| Temp Rise-2nd stage℉ | 54.8 | 55.1 | 54.1 | 54.6 | 55.1 | 55.3 | 54.7 | 54.0 | 53.6 | 54.8 |
| Mid | CFM | 1354 | 1354 | 1362 | 1370 | 1357 | 1381 | 1389 | 1394 | 1416 | 1383 |
| Temp Rise-1st stage℉ | 42.9 | 43.0 | 42.8 | 42.6 | 43.1 | 42.4 | 42.3 | 42.2 | 41.7 | 42.7 |
| Temp Rise-2nd stage℉ | 61.1 | 61.1 | 60.8 | 60.6 | 61.2 | 60.3 | 60.0 | 59.9 | 59.0 | 60.5 |
| Mid-L | CFM | 1165 | 1165 | 1176 | 1164 | 1185 | 1190 | 1186 | 1205 | 1174 | 1199 |
| Temp Rise-1st stage℉ | 49.7 | 49.7 | 49.3 | 49.9 | 49.2 | 49.0 | 49.2 | 48.6 | 49.9 | 49.0 |
| Temp Rise-2nd stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Low | CFM | 994 | 1025 | 1018 | 1024 | 1032 | 1026 | 1035 | 988 | 1005 | 1041 |
| Temp Rise-1st stage℉ | 58.1 | 56.4 | 56.9 | 56.6 | 56.3 | 56.7 | 56.3 | 59.0 | 58.1 | 56.2 |
| Temp Rise-2nd stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| FURANCE  SIZE | RETURN-AIR  INLET | SPEED |  | EXTERNAL STATIC PRESSURE(IN.W.C) | | | | | | | | | |
| 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 |
| 100D | Bottom or Sides | H | CFM | 1926 | 1926 | 1931 | 1943 | 1936 | 1941 | 1960 | 1974 | 2015 | 2043 |
| Temp Rise-1st stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Temp Rise-2nd stage℉ | 43.2 | 43.3 | 43.2 | 43.1 | 43.3 | 43.3 | 42.9 | 42.7 | 42.0 | 41.6 |
| Mid-H | CFM | 1746 | 1752 | 1749 | 1748 | 1749 | 1763 | 1771 | 1776 | 1794 | 1791 |
| Temp Rise-1st stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Temp Rise-2nd stage℉ | 47.5 | 47.4 | 47.6 | 47.7 | 47.7 | 47.4 | 47.3 | 47.2 | 46.9 | 47.0 |
| Mid | CFM | 1488 | 1525 | 1525 | 1515 | 1528 | 1546 | 1501 | 1525 | 1546 | 1544 |
| Temp Rise-1st stage℉ | 39.0 | 38.2 | 38.2 | 38.6 | 38.3 | 37.9 | 39.1 | 38.6 | 38.2 | 38.3 |
| Temp Rise-2nd stage℉ | 55.6 | 54.3 | 54.4 | 54.8 | 54.4 | 53.9 | 55.5 | 54.7 | 54.1 | 54.2 |
| Mid-L | CFM | 1348 | 1374 | 1341 | 1383 | 1381 | 1385 | 1408 | 1404 | 1400 | 1401 |
| Temp Rise-1st stage℉ | 43.0 | 42.3 | 43.3 | 42.1 | 42.2 | 42.2 | 41.6 | 41.8 | 42.0 | 42.0 |
| Temp Rise-2nd stage℉ | 61.2 | 60.2 | 61.7 | 59.9 | 60.1 | 60.0 | 59.1 | 59.3 | 59.6 | 59.6 |
| Low | CFM | 1163 | 1186 | 1164 | 1167 | 1174 | 1178 | 1182 | 1129 | 1163 | 1172 |
| Temp Rise-1st stage℉ | 49.7 | 48.8 | 49.8 | 49.7 | 49.5 | 49.4 | 49.3 | 51.7 | 50.3 | 50.0 |
| Temp Rise-2nd stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 120D | Bottom or Sides | H | CFM | 1926 | 1933 | 1915 | 1923 | 1916 | 1929 | 1971 | 1941 | 2036 | 1998 |
| Temp Rise-1st stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Temp Rise-2nd stage℉ | 51.8 | 51.7 | 52.2 | 52.1 | 52.4 | 52.1 | 51.1 | 52.0 | 49.8 | 50.7 |
| Mid-H | CFM | 1721 | 1747 | 1716 | 1749 | 1760 | 1768 | 1778 | 1783 | 1747 | 1788 |
| Temp Rise-1st stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Temp Rise-2nd stage℉ | 57.8 | 57.0 | 58.1 | 57.1 | 56.8 | 56.6 | 56.4 | 56.3 | 57.5 | 56.4 |
| Mid | CFM | 1489 | 1497 | 1503 | 1504 | 1507 | 1488 | 1496 | 1518 | 1519 | 1568 |
| Temp Rise-1st stage℉ | 46.7 | 46.6 | 46.4 | 46.5 | 46.5 | 47.1 | 47.0 | 46.4 | 46.4 | 45.1 |
| Temp Rise-2nd stage℉ | 66.5 | 66.3 | 66.1 | 66.1 | 66.1 | 67.0 | 66.7 | 65.8 | 65.9 | 64.0 |
| Mid-L | CFM | 1384 | 1360 | 1365 | 1384 | 1382 | 1383 | 1379 | 1401 | 1421 | 1414 |
| Temp Rise-1st stage℉ | 50.2 | 51.1 | 51.0 | 50.4 | 50.6 | 50.6 | 50.8 | 50.1 | 49.5 | 49.9 |
| Temp Rise-2nd stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Low | CFM | 1165 | 1175 | 1162 | 1158 | 1158 | 1184 | 1186 | 1204 | 1201 | 1185 |
| Temp Rise-1st stage℉ | 59.5 | 59.0 | 59.8 | 60.0 | 60.1 | 58.9 | 58.9 | 58.1 | 58.4 | 59.2 |
| Temp Rise-2nd stage℉ | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

A filter is required for each return -air Inlet. Airflow performance Included 3/4-ln. (19 mm) washable filter media such as contained In factory-authorized accessory filter rack. To determine airflow performance with this filter, assume an additional 0.1 in.w.c available external static pressure.

# Filter Size Information - In.

|  |  |  |  |
| --- | --- | --- | --- |
| FURNACE CASING WIDTH  (IN.) | FILTER SIZE | | FILTER TYPE |
| SIDE RETURN (IN.) | BOTTOM RETURN (IN.) |
| 14-1/2 | 16X25 | 14X25 | High Velocity (600 FPM) |
| 17-1/2 | 16X25 | 16X25 |
| 21 | 16X25 | 20X25 |
| 24.5 | 16X25 | 24X25 |

NOTES:

1. Air velocity through throwaway type filters may not exceed 300 feet per minute (91.4 m/min). All velocities over this require the use of high velocity filters.
2. Do not exceed 1800 CFM using a single side return and a 16x25 filter. For CFM greater than 1800, you may use two side returns or one side and the bottom or one side return with a transition to allow use of a 20x25 filter.

# Minimum Area in Square Inch Required for Each Opening

|  |  |
| --- | --- |
| BTUH Input Rating | Minimum Free Area in Square  Inch Required for Each Opening |
| 60,000 | 60 in2 |
| 80,000 | 80 in2 |
| 100,000 | 100 in2 |
| 120,000 | 120 in2 |

# Minimum Free Area Required for Each Opening

|  |  |  |  |
| --- | --- | --- | --- |
| BTUH Input Rating | Minimum Free Area Required for Each Opening | | |
| Horizontal Duct (2,000 BTUH) | Vertical Duct or  Opening to Outside (4,000 BTUH) | Round Duct (4,000 BTUH) |
| 60,000 | 30 in2 | 15 in2 | 5″ |
| 80,000 | 40 in2 | 20 in2 | 5″ |
| 100,000 | 50 in2 | 25 in2 | 6″ |
| 120,000 | 60 in2 | 30 in2 | 7″ |
| EXAMPLE: Determining Free Area.  Appliance 1 Appliance 2 Total Input  100,000 + 30,000 = (130,000 ÷ 4,000) = 32.5 Sq. In. Vertical  Appliance 1 Appliance 2 Total Input  100,000 + 30,000 = (130,000 ÷ 2,000) = 65 Sq. In. Horizontal | | | |

# Piston

# High Altitude Derate Orifice Size Chart (Natural and LP Gas\*) US installation

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Input Rate KBTU/H | Number of Burner | Elevation (Ft) | | | | | | | | | |
| 0-2000 | | 2000-4000 | | 4000-6000 | | 6000-8000 | | 8000-10000 | |
| Nat | LP | Nat | LP | Nat | LP | Nat | LP | Nat | LP |
| 60 | 3 | 45 | 55 | 47 | 56 | 48 | 57 | 49 | 58 | 50 | 59 |
| 80 | 4 | 45 | 55 | 47 | 56 | 48 | 57 | 49 | 58 | 50 | 59 |
| 100 | 5 | 45 | 55 | 47 | 56 | 48 | 57 | 49 | 58 | 50 | 59 |
| 120 | 6 | 45 | 55 | 47 | 56 | 48 | 57 | 49 | 58 | 50 | 59 |

\*LP orifice based on 10 in.w.c manifold pressure

The input to the furnace must be checked AFTER reorificing.

# High Altitude Derate Orifice Size Chart (Natural and LP Gas\*) Canada installation

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Input Rate KBTU/H | Number of Burner | Elevation (Ft) | | | | | | | | | |
| 0-2000 | | 2000-4000 | | 4000-6000 | | 6000-8000 | | 8000-10000 | |
| Nat | LP | Nat | LP | Nat | LP | Nat | LP | Nat | LP |
| 60 | 3 | 45 | 55 | 47 | 56 | 48 | 57 | 49 | 58 | 50 | 59 |
| 80 | 4 | 45 | 55 | 47 | 56 | 48 | 57 | 49 | 58 | 50 | 59 |
| 100 | 5 | 45 | 55 | 47 | 56 | 48 | 57 | 49 | 58 | 50 | 59 |
| 120 | 6 | 45 | 55 | 47 | 56 | 48 | 57 | 49 | 58 | 50 | 59 |

\*LP orifice based on 10 in.w.c manifold pressure

The input to the furnace must be checked AFTER reorificing.

For Canada application, based on regulation that requires 10% derating between 2000-4500ft. orifice change is NOT required up to 4500ft.

**Features**

* Durable aluminized steel tubular heat exchanger. Stainless-steel secondary heat exchanger.
* Two-stage gas valve.
* Hot surface igniter.
* Quiet multi-speed ECM circulator blower motor.
* Control board with self-diagnostics and Low-voltage terminal block.
* R454b refrigerant leakage sensor adaptable
* UL60335-2-40 certified.
* Natural gas and propane (LP) convertible.
* Designed for multi-position installation: Up flow, horizontal. Industry-standard cabinet sizes for easy replacement, installation and add-on cooling.
* Convenient left or right connection for gas and electric service.
* Removable bottom for side or bottom return applications.



**Midea Building Technologies Division**

**Midea Group**

**Add.:** Midea Headquarters Building, 6 Midea Avenue, Shunde, Foshan, Guangdong, China

**Postal code:** 528311

mbt.midea.com / global.midea.com / tsp.midea.com

Note: Product specifications change from time to time as product improvements and developments are released and may vary from those in this document.