



## GENESIS LARGE (GL) SERIES



SIZE 070 - 300 (21.1kW - 87.9kW)  
HORIZONTAL & VERTICAL  
R22 - 60Hz STANDARD & EXTENDED RANGE



## GENESIS LARGE (GL) SERIES



SIZE 070 - 300 (2.1kW - 8.7kW)  
HORIZONTAL & VERTICAL  
EXTENDED STANDARD & RANGE

## THE GENESIS LARGE (GL) SERIES

The GL series offers high efficiency and high capacity in a compact cabinet. As ClimateMaster's largest capacity R-22 refrigerant water-to-air units, the GL series, meets ASHRAE 90.1 efficiencies.

Available in sizes 6 tons (21.1 kW) through 25 tons (87.9 kW) with multiple cabinet configurations, the GL series offers a wide range of units for most any installation. The GL has an extended range refrigerant circuit, capable of ground loop (geothermal) applications as well as water loop (boiler-tower) applications. Standard features are many. Microprocessor controls, galvanized steel cabinet, polyester powder coat paint (vertical units) and TXV refrigerant metering device are just some of the features of the flexible GL series.

ClimateMaster's use of scroll compressors and belt-drive blowers help maximize vibration/sound attenuation. Options such as e-coated air coil, DDC controls, and stainless steel drain pans allow customized design solutions.

The GL Series water-source heat pumps are designed to meet the challenges of today's HVAC demands with a high efficiency, high value solution.

## UNIT FEATURES

- Horizontal sizes 072 (6 tons, 21.1 kW), 096 (8 tons, 28.1 kW), 120 (10 tons, 35.2 kW)
- Vertical sizes 080 (6.7 tons, 23.4 kW), 100 (8.3 tons, 29.3 kW), 120 (10 tons, 35.2 kW), 160 (13.3 tons, 46.9 kW), 200 (16.7 tons, 58.6 kW), 240 (20 tons, 70.3 kW), 300 (25 tons, 87.9 kW)
- Copeland scroll compressors (reciprocating on GLH072)
- Dual refrigeration circuits (except GLV80, 100, 120)
- Meets ASHRAE 90.1 efficiencies
- Galvanized steel construction with polyester powder coat paint (vertical units)
- Insulated divider and separate compressor/air handler compartments
- TXV metering device
- Extended range (20 to 110°F, -6.7 to 43.3°C) operation
- Microprocessor controls standard (optional DXM and/or DDC controls)
- LonWorks, BACnet, Modbus and Johnson N2 compatibility options for DDC controls
- Flush securely-mounted corner post water connections (no backup wrench required)
- Unit Performance Sentinel performance monitoring system
- Eight Safeties Standard
- Wide variety of options including ClimaDry modulating reheat

**Selection Procedure****Reference Calculations**

| Heating                                  | Cooling   |
|--|---|
| $LWT = EWT - \frac{HE}{GPM \times 500}$  | $LWT = EWT + \frac{HR}{GPM \times 500}$   |
| $LAT = EAT + \frac{HC}{CFM \times 1.08}$ | $LC = TC - SC$<br>$LAT (DB) = EAT (DB) - \frac{SC}{CFM \times 1.08}$<br>$S/T = \frac{SC}{TC}$ |

**Legend and Glossary of Abbreviations**

BTUH = BTU( British Thermal Unit) per hour

CFM = airflow, cubic feet/minute

COP = coefficient of performance = BTUH output/BTUH input

DB = dry bulb temperature (°F)

EAT = entering air temperature, Fahrenheit (dry bulb/wet bulb)

EER = energy efficiency ratio = BTUH output/Watt input

EPT = external pipe thread

ESP = external static pressure (inches w.g.)

EWT = entering water temperature

GPM = water flow in U.S. gallons/minute

HE = total heat of extraction, BTUH

HC = air heating capacity, BTUH

HR = total heat of rejection, BTUH

HWC = hot water generator (desuperheater) capacity, Mbtuh

IPT = internal pipe thread

KW = total power unit input, kilowatts

LAT = leaving air temperature, °F

LC = latent cooling capacity, BTUH

LWT = leaving water temperature, °F

MBTUH = 1000 BTU per hour

S/T = sensible to total cooling ratio

SC = sensible cooling capacity, BTUH

TC = total cooling capacity, BTUH

WB = wet bulb temperature (°F)

WPD = waterside pressure drop (psi &amp; ft. of hd.)

**Conversion Table - to convert inch-pound (English) to SI (Metric)**

| Air Flow                    | Water Flow                      | Ext Static Pressure             | Water Pressure Drop             |
|-----------------------------|---------------------------------|---------------------------------|---------------------------------|
| Airflow (L/s) = CFM x 0.472 | Water Flow (L/s) = gpm x 0.0631 | ESP (Pa) = ESP (in of wg) x 249 | PD (kPa) = PD (ft of hd) x 2.99 |

**Selection Procedure**

- Step 1** Determine the actual heating and cooling loads at the desired dry bulb and wet bulb conditions.
- Step 2** Obtain the following design parameters: Entering water temperature, water flow rate in GPM, air flow in CFM, water flow pressure drop and design wet and dry bulb temperatures. Air flow CFM should be between 300 and 450 CFM per ton. Unit water pressure drop should be kept as close as possible to each other to make water balancing easier. Go to the appropriate tables and find the proper indicated water flow and water temperature.
- Step 3** Select a unit based on total and sensible cooling conditions. Select a unit which is closest to, but no larger than, the actual cooling load.
- Step 4** Enter tables at the design water flow and water temperature. Read the total and sensible cooling capacities (Note: interpolation is permissible, extrapolation is not).
- Step 5** Read the heating capacity. If it exceeds the design criteria it is acceptable. It is quite normal for Water-Source Heat Pumps to be selected on cooling capacity only since the heating output is usually greater than the cooling capacity.
- Step 6** Determine the correction factors associated with the variable factors of dry bulb and wet bulb (page 14).
- Corrected Total Cooling = tabulated total cooling x wet bulb correction.  
 Corrected Sensible Cooling = tabulated sensible cooling x wet/dry bulb correction.
- Step 7** Compare the corrected capacities to the load requirements. Normally if the capacities are within 10% of the loads, the equipment is acceptable. It is better to undersize than oversize, as undersizing improves humidity control, reduces sound levels and extends the life of the equipment.
- Step 8** When completed, calculate water temperature rise and assess the selection. If the units selected are not within 10% of the load calculations, then review what effect changing the GPM, water temperature and/or air flow and air temperature would have on the corrected capacities. If the desired capacity cannot be achieved, select the next larger or smaller unit and repeat the procedure. Remember, when in doubt, undersize slightly for best performance.

**Example Equipment Selection For Cooling****Step 1 Load Determination:**

Assume we have determined that the appropriate cooling load at the desired dry bulb 80°F and wet bulb 65°F conditions is as follows:

|                        |                               |
|------------------------|-------------------------------|
| Total Cooling .....    | 63,800 BTUH                   |
| Sensible Cooling ..... | 53,000 BTUH                   |
| Entering Air Temp....  | 80°F Dry Bulb / 65°F Wet Bulb |

**Step 2 Design Conditions:**

Similarly, we have also obtained the following design parameters:

|  |           |
|--|-----------|
| Entering Water Temp .....                  | 90°F      |
| Water Flow (Based upon 12°F rise in temp.) | 14 GPM    |
| Air Flow .....                             | 2,400 CFM |

**Step 3, 4 & 5 HP Selection:**

After making our preliminary selection (GLV080), we enter the tables at design water flow and water temperature and read Total Cooling, Sens. Cooling and Heat of Rej. capacities:

|                         |             |
|-------------------------|-------------|
| Total Cooling .....     | 69,300 BTUH |
| Sensible Cooling .....  | 52,000 BTUH |
| Heat of Rejection ..... | 89,300 BTUH |

**Step 6 & 7 Entering Air and Airflow Corrections:**

Next, we determine our correction factors.

| Table                      | Ent Air | Air Flow | Corrected        |
|----------------------------|---------|----------|------------------|
| Corrected Total Cooling =  | 69,300  | x 0.944  | x 0.988 = 64,634 |
| Corrected Sens Cooling =   | 52,000  | x 1.094  | x 0.956 = 54,385 |
| Corrected Heat of Reject = | 89,300  | x 0.979  | x 0.987 = 86,288 |

**Step 8 Water Temperature Rise Calculation & Assessment:**

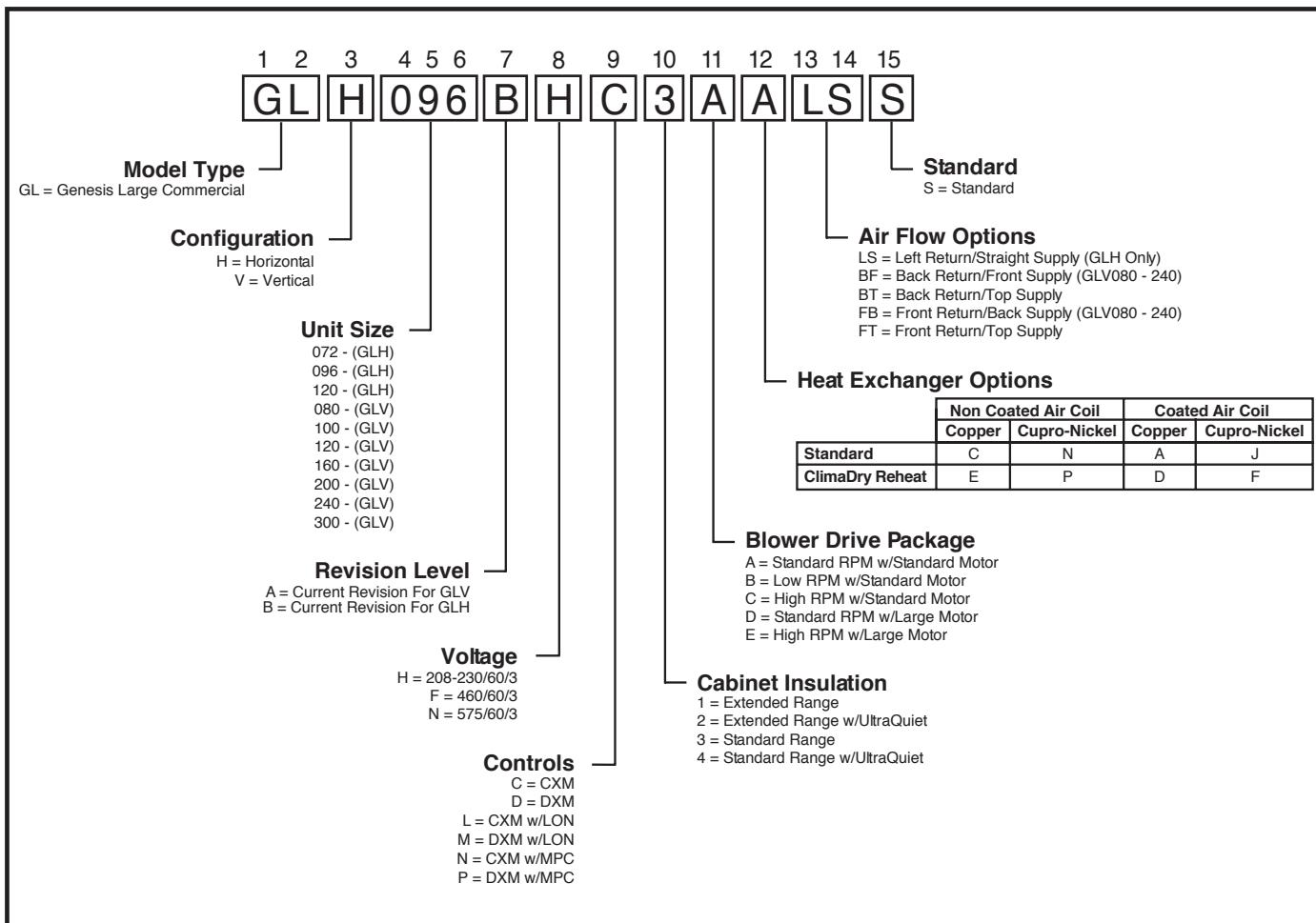
|                         |        |
|-------------------------|--------|
| Actual Temperature Rise | 12.3°F |
|-------------------------|--------|

When we compare the Corrected Total Cooling and Corrected Sensible Cooling figures with our load requirements stated in Step 1, we discover that our selection is within +/- 10% of our sensible load requirement. Furthermore, we see that our Corrected Total Cooling figure is slightly undersized as recommended, when compared to the actual indicated load.

## Genesis Large (GL) Series

Rev.: 05/23/07D

## GL Series Nomenclature



Rev.: 03/02/06D

**Performance Data  
ARI/ASHRAE/ISO 13256-1**

ASHRAE/ARI/ISO 13256-1. English (IP) Units

| Model  | Water Loop Heat Pump |            |               |     | Ground Water Heat Pump |            |               |     | Ground Loop Heat Pump |            |               |     |
|--------|----------------------|------------|---------------|-----|------------------------|------------|---------------|-----|-----------------------|------------|---------------|-----|
|        | Cooling 86°F         |            | Heating 68°F  |     | Cooling 59°F           |            | Heating 50°F  |     | Cooling 77°F          |            | Heating 32°F  |     |
|        | Capacity Btuh        | EER Btuh/W | Capacity Btuh | COP | Capacity Btuh          | EER Btuh/W | Capacity Btuh | COP | Capacity Btuh         | EER Btuh/W | Capacity Btuh | COP |
| GLH072 | 68,000               | 13.2       | 86,000        | 4.6 | 76,000                 | 18.7       | 69,000        | 4.1 | 70,500                | 14.6       | 52,500        | 3.5 |
| GLH096 | 94,600               | 12.8       | 108,700       | 4.4 | 101,900                | 17.4       | 91,000        | 4.0 | 96,700                | 14.2       | 72,600        | 3.4 |
| GLH120 | 120,000              | 12.7       | 137,800       | 4.2 | 127,600                | 17.2       | 114,000       | 3.9 | 122,200               | 14.1       | 90,500        | 3.2 |
| GLV080 | 71,000               | 13.5       | 90,000        | 4.5 | 75,500                 | 17.7       | 72,000        | 3.9 | 72,200                | 14.8       | 56,300        | 3.2 |
| GLV100 | 97,000               | 12.5       | 111,000       | 4.5 | 108,000                | 17.0       | 90,700        | 4.0 | 103,000               | 14.3       | 73,300        | 3.3 |
| GLV120 | 108,000              | 12.2       | 124,000       | 4.2 | 116,500                | 16.2       | 99,500        | 3.8 | 111,000               | 13.4       | 79,000        | 3.3 |
| GLV160 | 142,000              | 13.5       | 180,000       | 4.5 | 151,000                | 17.7       | 144,000       | 3.9 | 144,400               | 14.8       | 112,600       | 3.2 |
| GLV200 | 194,000              | 12.5       | 222,000       | 4.5 | 216,000                | 17.0       | 181,400       | 4.0 | 206,000               | 14.3       | 146,600       | 3.3 |
| GLV240 | 216,000              | 12.2       | 248,000       | 4.2 | 233,000                | 16.2       | 199,000       | 3.8 | 222,000               | 13.4       | 158,000       | 3.3 |
| GLV300 | 273,000              | 11.8       | 318,000       | 4.0 | 286,000                | 15.3       | 260,600       | 3.4 | 278,400               | 12.7       | 209,200       | 3.0 |

Cooling capacities based upon 80.6°F DB, 66.2°F WB entering air temperature

Heating capacities based upon 68°F DB, 59°F WB entering air temperature

All air flow is rated on high speed

All ratings based upon operation at lower voltage of dual voltage rated models

ASHRAE/ARI/ISO 13256-1. Metric (SI) Units

| Model  | Water Loop Heat Pump |         |                |     | Ground Water Heat Pump |         |                |     | Ground Loop Heat Pump |         |                |     |
|--------|----------------------|---------|----------------|-----|------------------------|---------|----------------|-----|-----------------------|---------|----------------|-----|
|        | Cooling 30°C         |         | Heating 20°C   |     | Cooling 15°C           |         | Heating 10°C   |     | Cooling 25°C          |         | Heating 0°C    |     |
|        | Capacity Watts       | EER W/W | Capacity Watts | COP | Capacity Watts         | EER W/W | Capacity Watts | COP | Capacity Watts        | EER W/W | Capacity Watts | COP |
| GLH072 | 19,930               | 3.9     | 25,205         | 4.6 | 22,274                 | 5.5     | 20,223         | 4.1 | 20,662                | 4.3     | 15,387         | 3.5 |
| GLH096 | 27,726               | 3.8     | 31,858         | 4.4 | 29,865                 | 5.1     | 26,671         | 4.0 | 28,341                | 4.2     | 21,278         | 3.4 |
| GLH120 | 35,170               | 3.7     | 40,387         | 4.2 | 37,397                 | 5.0     | 33,411         | 3.9 | 35,815                | 4.1     | 26,524         | 3.2 |
| GLV080 | 20,809               | 4.0     | 26,377         | 4.5 | 22,128                 | 5.2     | 21,102         | 3.9 | 21,161                | 4.3     | 16,501         | 3.2 |
| GLV100 | 28,429               | 3.7     | 32,532         | 4.5 | 31,653                 | 5.0     | 26,583         | 4.0 | 30,188                | 4.2     | 21,483         | 3.3 |
| GLV120 | 31,653               | 3.6     | 36,342         | 4.2 | 34,144                 | 4.7     | 29,162         | 3.8 | 32,532                | 3.9     | 23,154         | 3.3 |
| GLV160 | 41,618               | 4.0     | 52,755         | 4.5 | 44,256                 | 5.2     | 42,204         | 3.9 | 42,321                | 4.3     | 33,001         | 3.2 |
| GLV200 | 56,858               | 3.7     | 65,064         | 4.5 | 63,306                 | 5.0     | 53,165         | 4.0 | 60,375                | 4.2     | 42,966         | 3.3 |
| GLV240 | 63,306               | 3.6     | 72,685         | 4.2 | 68,288                 | 4.7     | 58,324         | 3.8 | 65,064                | 3.9     | 46,307         | 3.3 |
| GLV300 | 80,012               | 3.5     | 93,200         | 4.0 | 83,822                 | 4.5     | 76,377         | 3.4 | 81,594                | 3.7     | 61,313         | 3.0 |

Cooling capacities based upon 27°C DB, 19°C WB entering air temperature

Heating capacities based upon 20°C DB, 15°C WB entering air temperature

All air flow is rated on high speed

All ratings based upon operation at lower voltage of dual voltage rated models

## Performance Data Selection Notes

For operation in the shaded area when water is used in lieu of an anti-freeze solution, the LWT (Leaving Water Temperature) must be calculated. Flow must be maintained to a level such that the LWT is maintained above 42°F [5.6°C] when the JW3 jumper is not clipped (see example below). This is due to the potential of the refrigerant temperature being as low as 32°F [0°C] with 40°F [4.4°C] LWT, which may lead to a nuisance cutout due to the activation of the Low Temperature Protection. JW3 should never be clipped for standard range equipment or systems without antifreeze.

### Example:

At 50°F EWT (Entering Water Temperature) and 1.5 gpm/ton, a 3 ton unit has a HE of 22,500 Btuh. To calculate LWT, rearrange the formula for HE as follows:

$HE = TD \times GPM \times 500$ , where HE = Heat of Extraction (Btuh); TD = temperature difference (EWT - LWT) and GPM = U.S. Gallons per Minute.

$$TD = HE / (GPM \times 500)$$

$$TD = 22,500 / (4.5 \times 500)$$

$$TD = 10^{\circ}\text{F}$$

$$LWT = EWT - TD$$

$$LWT = 50 - 10 = 40^{\circ}\text{F}$$

In this example, a higher flow rate will be required for EWTs at or below 50°F without antifreeze. At 2 gpm/ton, the calculation above results in a TD of 7.5.  $LWT = 50 - 7.5 = 42.5^{\circ}\text{F}$ , which is above 42°F EWT, and is acceptable for this application.

|          |      | Heating - EAT 70°F |      |      |      |      |
|----------|------|--------------------|------|------|------|------|
|          | EER  | HC                 | kW   | HE   | LAT  | COP  |
| Standard |      | 42.7               | 4.00 | 29.1 | 86.5 | 3.13 |
| 95.6     | 21.8 | 47.7               | 4.19 | 33.4 | 88.4 | 3.33 |
| 95.5     | 23.6 | 49.9               | 4.28 | 35.3 | 89.2 | 3.41 |
| 95.4     | 24.4 | 51.1               | 4.33 | 36.3 | 89.7 | 3.46 |
| 94.8     | 19.4 | 55.5               | 4.50 | 40.1 | 91.4 | 3.61 |
| 95.3     | 21.1 | 58.2               | 4.60 | 42.5 | 92.4 | 3.70 |
| 95.6     | 21.9 | 59.6               | 4.66 | 43.7 | 93.0 | 3.75 |
| 95.8     | 17.1 | 63.4               | 4.80 | 47.0 | 94.4 | 3.87 |
| 95.9     | 18.7 | 66.6               | 4.91 | 49.8 | 95.7 | 3.97 |
| 95.5     | 15   | 68.3               | 4.98 | 51.3 | 96.3 | 4.02 |
|          |      | 71.3               | 5.09 | 54.0 | 97.5 | 4.11 |
|          |      | 75.2               | 5.20 | 57.2 | 98.5 | 4.21 |

**Performance Data  
GLH072**

2400 CFM Nominal (Rated) Airflow

Performance capacities shown in thousands of Btuh

| EWT<br>°F | GPM | WPD |      | Cooling - EAT 80/67°F     |      |                   |      |      |      | Heating - EAT 70°F        |      |      |       |      |
|-----------|-----|-----|------|---------------------------|------|-------------------|------|------|------|---------------------------|------|------|-------|------|
|           |     | PSI | FT   | TC                        | SC   | Sens/Tot<br>Ratio | kW   | HR   | EER  | HC                        | kW   | HE   | LAT   | COP  |
| 20        | 18  | 6.0 | 13.7 | Operation Not Recommended |      |                   |      |      |      | 42.7                      | 4.00 | 29.1 | 86.5  | 3.13 |
| 30        | 9   | 1.7 | 4.0  | 82.7                      | 54.8 | 0.66              | 3.79 | 95.6 | 21.8 | 47.7                      | 4.19 | 33.4 | 88.4  | 3.33 |
|           | 14  | 3.1 | 7.3  | 83.4                      | 55.3 | 0.66              | 3.54 | 95.5 | 23.6 | 49.9                      | 4.28 | 35.3 | 89.2  | 3.41 |
|           | 18  | 5.4 | 12.5 | 83.7                      | 55.5 | 0.66              | 3.43 | 95.4 | 24.4 | 51.1                      | 4.33 | 36.3 | 89.7  | 3.46 |
| 40        | 9   | 1.6 | 3.8  | 80.6                      | 54.9 | 0.68              | 4.16 | 94.8 | 19.4 | 55.5                      | 4.50 | 40.1 | 91.4  | 3.61 |
|           | 14  | 3.0 | 6.8  | 82.0                      | 55.5 | 0.68              | 3.89 | 95.3 | 21.1 | 58.2                      | 4.60 | 42.5 | 92.4  | 3.70 |
|           | 18  | 5.1 | 11.7 | 82.5                      | 55.6 | 0.67              | 3.76 | 95.4 | 21.9 | 59.6                      | 4.66 | 43.7 | 93.0  | 3.75 |
| 50        | 9   | 1.3 | 3.0  | 77.8                      | 53.4 | 0.69              | 4.55 | 93.3 | 17.1 | 63.4                      | 4.80 | 47.0 | 94.4  | 3.87 |
|           | 14  | 2.5 | 5.8  | 79.9                      | 54.5 | 0.68              | 4.28 | 94.4 | 18.7 | 66.6                      | 4.91 | 49.8 | 95.7  | 3.97 |
|           | 18  | 4.2 | 9.7  | 80.7                      | 55.0 | 0.68              | 4.14 | 94.9 | 19.5 | 68.3                      | 4.98 | 51.3 | 96.3  | 4.02 |
| 60        | 9   | 1.2 | 2.8  | 74.3                      | 51.4 | 0.69              | 4.96 | 91.2 | 15.0 | 71.3                      | 5.09 | 54.0 | 97.5  | 4.11 |
|           | 14  | 2.4 | 5.5  | 76.7                      | 52.8 | 0.69              | 4.68 | 92.7 | 16.4 | 75.0                      | 5.22 | 57.2 | 98.9  | 4.21 |
|           | 18  | 4.0 | 9.2  | 77.9                      | 53.5 | 0.69              | 4.54 | 93.4 | 17.2 | 77.0                      | 5.29 | 58.9 | 99.7  | 4.26 |
| 70        | 9   | 1.2 | 2.7  | 70.3                      | 49.2 | 0.70              | 5.37 | 88.7 | 13.1 | 79.3                      | 5.37 | 61.0 | 100.6 | 4.33 |
|           | 14  | 2.3 | 5.3  | 73.0                      | 50.7 | 0.69              | 5.10 | 90.4 | 14.3 | 83.4                      | 5.51 | 64.6 | 102.2 | 4.43 |
|           | 18  | 3.8 | 8.8  | 74.3                      | 51.4 | 0.69              | 4.96 | 91.2 | 15.0 | 85.6                      | 5.59 | 66.5 | 103.0 | 4.49 |
| 80        | 9   | 1.1 | 2.6  | 66.2                      | 47.2 | 0.71              | 5.78 | 85.9 | 11.5 | 87.2                      | 5.64 | 67.9 | 103.6 | 4.53 |
|           | 14  | 2.2 | 5.1  | 68.9                      | 48.5 | 0.70              | 5.52 | 87.7 | 12.5 | 91.6                      | 5.79 | 71.9 | 105.4 | 4.64 |
|           | 18  | 3.7 | 8.5  | 70.3                      | 49.2 | 0.70              | 5.38 | 88.6 | 13.1 | 94.0                      | 5.87 | 74.0 | 106.3 | 4.70 |
| 85        | 9   | 1.1 | 2.6  | 64.2                      | 46.3 | 0.72              | 5.98 | 84.6 | 10.7 | 91.1                      | 5.77 | 71.4 | 105.1 | 4.62 |
|           | 14  | 2.2 | 5.0  | 66.8                      | 47.5 | 0.71              | 5.72 | 86.3 | 11.7 | 95.7                      | 5.92 | 75.5 | 106.9 | 4.74 |
|           | 18  | 3.6 | 8.4  | 68.2                      | 48.1 | 0.71              | 5.59 | 87.2 | 12.2 | 98.2                      | 6.00 | 77.7 | 107.9 | 4.80 |
| 90        | 9   | 1.1 | 2.5  | 62.2                      | 45.5 | 0.73              | 6.18 | 83.3 | 10.1 | 94.9                      | 5.89 | 74.8 | 106.6 | 4.72 |
|           | 14  | 2.1 | 4.9  | 64.7                      | 46.5 | 0.72              | 5.93 | 84.9 | 10.9 | 99.7                      | 6.04 | 79.0 | 108.4 | 4.83 |
|           | 18  | 3.6 | 8.2  | 66.0                      | 47.1 | 0.71              | 5.80 | 85.8 | 11.4 | 102.2                     | 6.12 | 81.3 | 109.4 | 4.89 |
| 100       | 9   | 1.1 | 2.5  | 58.5                      | 44.5 | 0.76              | 6.56 | 80.9 | 8.9  | Operation Not Recommended |      |      |       |      |
|           | 14  | 2.1 | 4.8  | 60.7                      | 45.0 | 0.74              | 6.33 | 82.3 | 9.6  |                           |      |      |       |      |
|           | 18  | 3.4 | 7.9  | 61.9                      | 45.4 | 0.73              | 6.21 | 83.1 | 10.0 |                           |      |      |       |      |
| 110       | 9   | 1.0 | 2.4  | 55.4                      | 44.3 | 0.80              | 6.91 | 79.0 | 8.0  |                           |      |      |       |      |
|           | 14  | 2.0 | 4.6  | 57.2                      | 44.3 | 0.77              | 6.70 | 80.1 | 8.5  |                           |      |      |       |      |
|           | 18  | 3.3 | 7.6  | 58.2                      | 44.4 | 0.76              | 6.59 | 80.7 | 8.8  |                           |      |      |       |      |

Interpolation is permissible; extrapolation is not.

All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.

ARI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.

Table does not reflect fan or pump power corrections for ARI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.

Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.

Operation below 40°F EWT is based upon a 15% antifreeze solution.

Operation below 60°F EWT requires optional insulated water/refrigerant circuit.

See performance correction tables for operating conditions other than those listed above.

See Performance Data Selection Notes for operation in shaded areas.

## Genesis Large (GL) Series

Rev.: 05/23/07D

## Performance Data

### GLH096

3200 CFM Nominal (Rated) Airflow

Performance capacities shown in thousands of Btuh

| EWT<br>°F | GPM | WPD  |      | Cooling - EAT 80/67°F     |      |                   |       |       | Heating - EAT 70°F |                           |      |      |       |      |
|-----------|-----|------|------|---------------------------|------|-------------------|-------|-------|--------------------|---------------------------|------|------|-------|------|
|           |     | PSI  | FT   | TC                        | SC   | Sens/Tot<br>Ratio | kW    | HR    | EER                | HC                        | kW   | HE   | LAT   | COP  |
| 20        | 24  | 10.7 | 24.7 | Operation Not Recommended |      |                   |       |       | 65.7               | 6.41                      | 43.8 | 89.0 | 3.00  |      |
| 30        | 12  | 5.9  | 13.6 |                           |      |                   |       |       | 70.2               | 6.49                      | 48.0 | 90.3 | 3.17  |      |
|           | 18  | 7.9  | 18.2 |                           |      |                   |       |       | 72.4               | 6.55                      | 50.1 | 91.0 | 3.24  |      |
|           | 24  | 10.6 | 24.4 |                           |      |                   |       |       | 73.7               | 6.58                      | 51.2 | 91.3 | 3.28  |      |
| 40        | 12  | 5.8  | 13.4 | 109.0                     | 74.1 | 0.68              | 5.62  | 128.1 | 19.4               | 78.9                      | 6.73 | 55.9 | 92.8  | 3.43 |
|           | 18  | 7.8  | 17.9 | 111.8                     | 75.1 | 0.67              | 5.23  | 129.7 | 21.4               | 82.0                      | 6.82 | 58.7 | 93.7  | 3.52 |
|           | 24  | 10.4 | 24.0 | 113.4                     | 75.7 | 0.67              | 5.02  | 130.6 | 22.6               | 83.7                      | 6.88 | 60.3 | 94.2  | 3.57 |
| 50        | 12  | 5.7  | 13.2 | 105.4                     | 72.8 | 0.69              | 6.14  | 126.4 | 17.2               | 88.8                      | 7.04 | 64.7 | 95.7  | 3.69 |
|           | 18  | 7.7  | 17.7 | 107.9                     | 73.7 | 0.68              | 5.77  | 127.6 | 18.7               | 92.6                      | 7.17 | 68.2 | 96.8  | 3.79 |
|           | 24  | 10.3 | 23.7 | 109.2                     | 74.2 | 0.68              | 5.58  | 128.3 | 19.6               | 94.7                      | 7.24 | 70.0 | 97.4  | 3.83 |
| 60        | 12  | 5.6  | 13.0 | 102.2                     | 71.8 | 0.70              | 6.66  | 124.9 | 15.4               | 99.0                      | 7.39 | 73.8 | 98.6  | 3.93 |
|           | 18  | 7.6  | 17.4 | 104.4                     | 72.5 | 0.69              | 6.29  | 125.9 | 16.6               | 103.3                     | 7.54 | 77.6 | 99.9  | 4.02 |
|           | 24  | 10.1 | 23.3 | 105.6                     | 72.9 | 0.69              | 6.11  | 126.4 | 17.3               | 105.6                     | 7.61 | 79.6 | 100.6 | 4.06 |
| 70        | 12  | 5.6  | 12.8 | 99.1                      | 70.7 | 0.71              | 7.21  | 123.7 | 13.7               | 108.8                     | 7.73 | 82.4 | 101.5 | 4.13 |
|           | 18  | 7.5  | 17.2 | 101.2                     | 71.4 | 0.71              | 6.82  | 124.5 | 14.8               | 113.1                     | 7.87 | 86.2 | 102.7 | 4.21 |
|           | 24  | 10.0 | 23.0 | 102.3                     | 71.8 | 0.70              | 6.64  | 125.0 | 15.4               | 115.2                     | 7.95 | 88.1 | 103.3 | 4.25 |
| 80        | 12  | 5.5  | 12.7 | 95.8                      | 69.6 | 0.73              | 7.82  | 122.5 | 12.2               | 117.3                     | 8.02 | 89.9 | 103.9 | 4.29 |
|           | 18  | 7.3  | 16.9 | 98.1                      | 70.4 | 0.72              | 7.39  | 123.3 | 13.3               | 120.8                     | 8.13 | 93.0 | 105.0 | 4.35 |
|           | 24  | 9.8  | 22.7 | 99.2                      | 70.8 | 0.71              | 7.19  | 123.7 | 13.8               | 122.3                     | 8.18 | 94.4 | 105.4 | 4.38 |
| 85        | 12  | 5.5  | 12.7 | 94.0                      | 68.9 | 0.73              | 8.17  | 121.9 | 11.5               | 120.3                     | 8.11 | 92.6 | 104.8 | 4.35 |
|           | 18  | 7.3  | 16.9 | 96.4                      | 69.8 | 0.72              | 7.72  | 122.7 | 12.5               | 123.0                     | 8.19 | 95.0 | 105.6 | 4.40 |
|           | 24  | 9.8  | 22.7 | 97.5                      | 70.2 | 0.72              | 7.50  | 123.1 | 13.0               | 123.9                     | 8.21 | 95.9 | 105.9 | 4.42 |
| 90        | 12  | 5.4  | 12.5 | 92.2                      | 68.3 | 0.74              | 8.52  | 121.2 | 10.8               | 123.4                     | 8.21 | 95.4 | 105.7 | 4.40 |
|           | 18  | 7.2  | 16.7 | 94.7                      | 69.2 | 0.73              | 8.04  | 122.1 | 11.8               | 125.2                     | 8.24 | 97.0 | 106.2 | 4.45 |
|           | 24  | 9.7  | 22.4 | 95.9                      | 69.6 | 0.73              | 7.81  | 122.5 | 12.3               | 125.6                     | 8.24 | 97.5 | 106.3 | 4.47 |
| 100       | 12  | 5.3  | 12.3 | 88.0                      | 66.5 | 0.76              | 9.34  | 119.8 | 9.4                | Operation Not Recommended |      |      |       |      |
|           | 18  | 7.1  | 16.5 | 90.9                      | 67.7 | 0.75              | 8.78  | 120.8 | 10.3               |                           |      |      |       |      |
|           | 24  | 9.6  | 22.0 | 92.2                      | 68.3 | 0.74              | 8.52  | 121.3 | 10.8               |                           |      |      |       |      |
| 110       | 12  | 5.3  | 12.1 | 82.9                      | 64.2 | 0.77              | 10.31 | 118.1 | 8.0                | Operation Not Recommended |      |      |       |      |
|           | 18  | 7.0  | 16.2 | 86.4                      | 65.8 | 0.76              | 9.65  | 119.3 | 8.9                |                           |      |      |       |      |
|           | 24  | 9.4  | 21.7 | 87.9                      | 66.5 | 0.76              | 9.35  | 119.8 | 9.4                |                           |      |      |       |      |

Interpolation is permissible; extrapolation is not.

All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.

ARI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68.6°F DB in heating.

Table does not reflect fan or pump power corrections for ARI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.

Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.

Operation below 40°F EWT is based upon a 15% antifreeze solution.

Operation below 60°F EWT requires optional insulated water/refrigerant circuit.

See performance correction tables for operating conditions other than those listed above.

See Performance Data Selection Notes for operation in shaded areas.

**Performance Data  
GLH120**

4000 CFM Nominal (Rated) Airflow

Performance capacities shown in thousands of Btuh

| EWT<br>°F | GPM | WPD  |      | Cooling - EAT 80/67°F     |      |                   |       |       | Heating - EAT 70°F |                           |      |       |       |      |
|-----------|-----|------|------|---------------------------|------|-------------------|-------|-------|--------------------|---------------------------|------|-------|-------|------|
|           |     | PSI  | FT   | TC                        | SC   | Sens/Tot<br>Ratio | kW    | HR    | EER                | HC                        | kW   | HE    | LAT   | COP  |
| 20        | 30  | 14.3 | 32.9 |                           |      |                   |       |       |                    | 83.5                      | 8.45 | 54.6  | 89.3  | 2.90 |
| 30        | 15  | 5.1  | 11.7 | Operation Not Recommended |      |                   |       |       |                    | 89.1                      | 8.37 | 60.6  | 90.6  | 3.12 |
|           | 23  | 8.5  | 19.5 |                           |      |                   |       |       |                    | 92.0                      | 8.38 | 63.4  | 91.3  | 3.22 |
|           | 30  | 14.1 | 32.4 |                           |      |                   |       |       |                    | 93.6                      | 8.40 | 64.9  | 91.7  | 3.27 |
| 40        | 15  | 5.0  | 11.5 | 135.1                     | 83.5 | 0.62              | 7.20  | 159.7 | 18.8               | 100.1                     | 8.51 | 71.1  | 93.2  | 3.45 |
|           | 23  | 8.3  | 19.2 | 138.6                     | 84.2 | 0.61              | 7.02  | 162.6 | 19.7               | 104.2                     | 8.61 | 74.8  | 94.1  | 3.55 |
|           | 30  | 13.8 | 31.9 | 140.6                     | 84.5 | 0.60              | 6.99  | 164.4 | 20.1               | 106.5                     | 8.67 | 76.9  | 94.7  | 3.60 |
| 50        | 15  | 4.9  | 11.4 | 130.9                     | 82.2 | 0.63              | 7.69  | 157.2 | 17.0               | 112.9                     | 8.85 | 82.7  | 96.1  | 3.74 |
|           | 23  | 8.2  | 18.9 | 133.8                     | 83.1 | 0.62              | 7.31  | 158.8 | 18.3               | 118.2                     | 9.01 | 87.5  | 97.4  | 3.85 |
|           | 30  | 13.6 | 31.5 | 135.4                     | 83.5 | 0.62              | 7.17  | 159.9 | 18.9               | 121.2                     | 9.10 | 90.2  | 98.1  | 3.90 |
| 60        | 15  | 4.9  | 11.2 | 127.2                     | 80.9 | 0.64              | 8.44  | 156.0 | 15.1               | 126.8                     | 9.27 | 95.2  | 99.4  | 4.01 |
|           | 23  | 8.1  | 18.6 | 129.8                     | 81.8 | 0.63              | 7.90  | 156.7 | 16.4               | 133.2                     | 9.45 | 101.0 | 100.8 | 4.13 |
|           | 30  | 13.4 | 31.0 | 131.1                     | 82.3 | 0.63              | 7.66  | 157.3 | 17.1               | 136.8                     | 9.55 | 104.2 | 101.7 | 4.20 |
| 70        | 15  | 4.8  | 11.0 | 123.7                     | 79.6 | 0.64              | 9.37  | 155.7 | 13.2               | 141.1                     | 9.66 | 108.2 | 102.7 | 4.28 |
|           | 23  | 7.9  | 18.3 | 126.1                     | 80.5 | 0.64              | 8.71  | 155.8 | 14.5               | 148.4                     | 9.81 | 114.9 | 104.3 | 4.43 |
|           | 30  | 13.2 | 30.5 | 127.4                     | 80.9 | 0.64              | 8.40  | 156.0 | 15.2               | 152.3                     | 9.87 | 118.6 | 105.3 | 4.52 |
| 80        | 15  | 4.7  | 10.8 | 120.1                     | 78.3 | 0.65              | 10.41 | 155.6 | 11.5               | 155.2                     | 9.91 | 121.4 | 105.9 | 4.59 |
|           | 23  | 7.8  | 18.0 | 122.6                     | 79.2 | 0.65              | 9.68  | 155.7 | 12.7               | 162.9                     | 9.95 | 129.0 | 107.7 | 4.80 |
|           | 30  | 13.0 | 30.0 | 123.9                     | 79.6 | 0.64              | 9.33  | 155.7 | 13.3               | 167.0                     | 9.94 | 133.1 | 108.7 | 4.92 |
| 85        | 15  | 4.7  | 10.8 | 118.1                     | 77.8 | 0.66              | 10.94 | 155.5 | 10.8               | 161.8                     | 9.92 | 128.0 | 107.5 | 4.78 |
|           | 23  | 7.8  | 17.9 | 120.8                     | 78.6 | 0.65              | 10.21 | 155.6 | 11.8               | 169.5                     | 9.85 | 135.9 | 109.2 | 5.04 |
|           | 30  | 12.9 | 29.8 | 122.1                     | 79.0 | 0.65              | 9.85  | 155.7 | 12.4               | 173.5                     | 9.77 | 140.1 | 110.2 | 5.20 |
| 90        | 15  | 4.6  | 10.7 | 116.1                     | 77.2 | 0.67              | 11.48 | 155.3 | 10.1               | 168.4                     | 9.92 | 134.6 | 109.0 | 4.97 |
|           | 23  | 7.7  | 17.8 | 118.9                     | 78.0 | 0.66              | 10.74 | 155.6 | 11.1               | 176.1                     | 9.76 | 142.8 | 110.8 | 5.29 |
|           | 30  | 12.8 | 29.6 | 120.3                     | 78.4 | 0.65              | 10.37 | 155.6 | 11.6               | 179.9                     | 9.60 | 147.2 | 111.7 | 5.49 |
| 100       | 15  | 4.6  | 10.5 | 111.4                     | 76.2 | 0.68              | 12.52 | 154.1 | 8.9                | Operation Not Recommended |      |       |       |      |
|           | 23  | 7.6  | 17.5 | 114.7                     | 76.9 | 0.67              | 11.81 | 155.0 | 9.7                |                           |      |       |       |      |
|           | 30  | 12.6 | 29.1 | 116.3                     | 77.3 | 0.66              | 11.44 | 155.3 | 10.2               |                           |      |       |       |      |
| 110       | 15  | 4.5  | 10.4 | 105.6                     | 75.0 | 0.71              | 13.44 | 151.5 | 7.9                | Operation Not Recommended |      |       |       |      |
|           | 23  | 7.5  | 17.2 | 109.6                     | 75.8 | 0.69              | 12.83 | 153.4 | 8.5                |                           |      |       |       |      |
|           | 30  | 12.4 | 28.7 | 111.5                     | 76.2 | 0.68              | 12.49 | 154.1 | 8.9                |                           |      |       |       |      |

Interpolation is permissible; extrapolation is not.

All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.

ARI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.

Table does not reflect fan or pump power corrections for ARI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.

Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.

Operation below 40°F EWT is based upon a 15% antifreeze solution.

Operation below 60°F EWT requires optional insulated water/refrigerant circuit.

See performance correction tables for operating conditions other than those listed above.

See Performance Data Selection Notes for operation in shaded areas.

## Genesis Large (GL) Series

Rev.: 05/23/07D

## Performance Data

### GLV080

2600 CFM Nominal (Rated) Airflow

Performance capacities shown in thousands of Btuh

| EWT<br>°F | GPM  | WPD  |      | Cooling - EAT 80/67°F     |      |                   |      |      | Heating - EAT 70°F |                           |      |      |       |      |
|-----------|------|------|------|---------------------------|------|-------------------|------|------|--------------------|---------------------------|------|------|-------|------|
|           |      | PSI  | FT   | TC                        | SC   | Sens/Tot<br>Ratio | kW   | HR   | EER                | HC                        | kW   | HE   | LAT   | COP  |
| 20        | 18.4 | 12.1 | 28.0 | Operation Not Recommended |      |                   |      |      | 48.32              | 4.74                      | 32.2 | 87.2 | 2.99  |      |
| 30        | 9.1  | 6.8  | 15.8 | 78.3                      | 54.6 | 0.70              | 3.97 | 91.9 | 19.7               | 53.13                     | 4.86 | 36.5 | 88.9  | 3.20 |
|           | 13.7 | 8.8  | 20.2 | 78.3                      | 54.5 | 0.70              | 3.79 | 91.3 | 20.7               | 55.33                     | 4.92 | 38.5 | 89.7  | 3.29 |
|           | 18.4 | 11.4 | 26.3 | 78.3                      | 54.4 | 0.70              | 3.75 | 91.1 | 20.9               | 58.28                     | 5.00 | 41.2 | 90.8  | 3.41 |
| 40        | 9.1  | 6.3  | 14.5 | 77.8                      | 55.1 | 0.71              | 4.24 | 92.2 | 18.3               | 61.04                     | 5.08 | 43.7 | 91.7  | 3.52 |
|           | 13.7 | 8.1  | 18.7 | 78.2                      | 54.9 | 0.70              | 4.05 | 92.1 | 19.3               | 63.86                     | 5.15 | 46.3 | 92.7  | 3.63 |
|           | 18.4 | 10.5 | 24.2 | 78.3                      | 54.6 | 0.70              | 3.96 | 91.9 | 19.8               | 65.44                     | 5.20 | 47.7 | 93.3  | 3.69 |
| 50        | 9.1  | 4.9  | 11.3 | 76.6                      | 54.8 | 0.72              | 4.53 | 92.1 | 16.9               | 69.44                     | 5.31 | 51.3 | 94.7  | 3.83 |
|           | 13.7 | 6.9  | 15.8 | 77.5                      | 55.1 | 0.71              | 4.33 | 92.2 | 17.9               | 72.93                     | 5.41 | 54.5 | 96.0  | 3.95 |
|           | 18.4 | 9.0  | 20.9 | 77.8                      | 55.1 | 0.71              | 4.23 | 92.2 | 18.4               | 74.90                     | 5.46 | 56.3 | 96.7  | 4.02 |
| 60        | 9.1  | 4.7  | 10.9 | 74.9                      | 54.1 | 0.72              | 4.86 | 91.5 | 15.4               | 78.24                     | 5.56 | 59.3 | 97.9  | 4.13 |
|           | 13.7 | 6.7  | 15.4 | 76.1                      | 54.6 | 0.72              | 4.64 | 91.9 | 16.4               | 82.47                     | 5.68 | 63.1 | 99.4  | 4.26 |
|           | 18.4 | 8.8  | 20.3 | 76.6                      | 54.8 | 0.72              | 4.53 | 92.1 | 16.9               | 84.85                     | 5.75 | 65.2 | 100.2 | 4.33 |
| 70        | 9.1  | 4.6  | 10.7 | 72.8                      | 53.2 | 0.73              | 5.24 | 90.7 | 13.9               | 87.41                     | 5.82 | 67.5 | 101.1 | 4.40 |
|           | 13.7 | 6.5  | 15.0 | 74.3                      | 53.9 | 0.73              | 4.98 | 91.3 | 14.9               | 92.40                     | 5.97 | 72.0 | 102.9 | 4.54 |
|           | 18.4 | 8.6  | 19.8 | 75.0                      | 54.2 | 0.72              | 4.86 | 91.5 | 15.4               | 95.23                     | 6.05 | 74.6 | 103.9 | 4.61 |
| 80        | 9.1  | 4.5  | 10.5 | 70.3                      | 52.3 | 0.74              | 5.69 | 89.7 | 12.4               | 96.87                     | 6.10 | 76.1 | 104.5 | 4.65 |
|           | 13.7 | 6.4  | 14.7 | 72.0                      | 52.9 | 0.73              | 5.38 | 90.4 | 13.4               | 102.67                    | 6.27 | 81.3 | 106.6 | 4.80 |
|           | 18.4 | 8.4  | 19.4 | 72.8                      | 53.2 | 0.73              | 5.24 | 90.7 | 13.9               | 105.96                    | 6.37 | 84.2 | 107.7 | 4.87 |
| 85        | 9.1  | 4.5  | 10.4 | 68.9                      | 51.8 | 0.75              | 5.94 | 89.2 | 11.6               | 101.70                    | 6.24 | 80.4 | 106.2 | 4.77 |
|           | 13.7 | 6.3  | 14.6 | 70.7                      | 52.4 | 0.74              | 5.61 | 89.9 | 12.6               | 107.91                    | 6.43 | 86.0 | 108.4 | 4.92 |
|           | 18.4 | 8.3  | 19.2 | 71.6                      | 52.7 | 0.74              | 5.46 | 90.2 | 13.1               | 111.43                    | 6.53 | 89.1 | 109.7 | 5.00 |
| 90        | 9.1  | 4.5  | 10.3 | 67.4                      | 51.5 | 0.76              | 6.22 | 88.6 | 10.8               | 106.59                    | 6.39 | 84.8 | 108.0 | 4.89 |
|           | 13.7 | 6.3  | 14.5 | 69.3                      | 52.0 | 0.75              | 5.86 | 89.3 | 11.8               | 113.21                    | 6.59 | 90.7 | 110.3 | 5.04 |
|           | 18.4 | 8.2  | 19.0 | 70.3                      | 52.3 | 0.74              | 5.69 | 89.7 | 12.3               | 116.97                    | 6.70 | 94.1 | 111.7 | 5.11 |
| 100       | 9.1  | 4.4  | 10.1 | 64.3                      | 50.9 | 0.79              | 6.84 | 87.6 | 9.4                | Operation Not Recommended |      |      |       |      |
|           | 13.7 | 6.2  | 14.3 | 66.4                      | 51.2 | 0.77              | 6.42 | 88.3 | 10.3               | Operation Not Recommended |      |      |       |      |
|           | 18.4 | 8.1  | 18.8 | 67.4                      | 51.4 | 0.76              | 6.22 | 88.6 | 10.8               | Operation Not Recommended |      |      |       |      |
| 110       | 9.1  | 4.3  | 10.0 | 60.9                      | 50.6 | 0.83              | 7.57 | 86.8 | 8.1                | Operation Not Recommended |      |      |       |      |
|           | 13.7 | 6.1  | 14.1 | 63.1                      | 50.7 | 0.80              | 7.08 | 87.3 | 8.9                | Operation Not Recommended |      |      |       |      |
|           | 18.4 | 8.0  | 18.5 | 64.2                      | 50.9 | 0.79              | 6.85 | 87.6 | 9.4                | Operation Not Recommended |      |      |       |      |

Interpolation is permissible; extrapolation is not.

All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.

ARI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68.6°F DB in heating.

Table does not reflect fan or pump power corrections for ARI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.

Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.

Operation below 40°F EWT is based upon a 15% antifreeze solution.

Operation below 60°F EWT requires optional insulated water/refrigerant circuit.

See performance correction tables for operating conditions other than those listed above.

See Performance Data Selection Notes for operation in shaded areas.

**Performance Data  
GLV100**

3500 CFM Nominal (Rated) Airflow

Performance capacities shown in thousands of Btuh

| EWT<br>°F | GPM | WPD  |      | Cooling - EAT 80/67°F     |      |                   |       |       |      | Heating - EAT 70°F        |      |       |       |      |
|-----------|-----|------|------|---------------------------|------|-------------------|-------|-------|------|---------------------------|------|-------|-------|------|
|           |     | PSI  | FT   | TC                        | SC   | Sens/Tot<br>Ratio | kW    | HR    | EER  | HC                        | kW   | HE    | LAT   | COP  |
| 20        | 24  | 14.2 | 32.8 | Operation Not Recommended |      |                   |       |       |      | 69.0                      | 6.50 | 46.8  | 88.2  | 3.11 |
| 30        | 12  | 6.8  | 15.6 | 112.4                     | 78.6 | 0.70              | 5.89  | 132.5 | 19.1 | 73.0                      | 6.64 | 50.4  | 89.3  | 3.22 |
|           | 18  | 9.3  | 21.5 | 112.6                     | 78.0 | 0.69              | 5.58  | 131.6 | 20.2 | 75.3                      | 6.71 | 52.4  | 89.9  | 3.29 |
| 40        | 24  | 12.8 | 29.5 | 112.7                     | 77.8 | 0.69              | 5.42  | 131.2 | 20.8 | 76.5                      | 6.74 | 53.5  | 90.2  | 3.33 |
|           | 12  | 6.2  | 14.3 | 111.4                     | 79.3 | 0.71              | 6.29  | 132.9 | 17.7 | 81.4                      | 6.88 | 57.9  | 91.5  | 3.47 |
|           | 18  | 8.5  | 19.7 | 112.3                     | 78.9 | 0.70              | 6.00  | 132.8 | 18.7 | 84.5                      | 6.96 | 60.8  | 92.4  | 3.56 |
| 50        | 24  | 11.7 | 27.0 | 112.4                     | 78.5 | 0.70              | 5.85  | 132.3 | 19.2 | 86.3                      | 7.01 | 62.4  | 92.8  | 3.61 |
|           | 12  | 5.9  | 13.5 | 109.0                     | 79.3 | 0.73              | 6.71  | 131.9 | 16.3 | 91.1                      | 7.14 | 66.8  | 94.1  | 3.74 |
|           | 18  | 8.0  | 18.6 | 110.9                     | 79.4 | 0.72              | 6.40  | 132.8 | 17.3 | 95.2                      | 7.24 | 70.4  | 95.2  | 3.85 |
| 60        | 24  | 10.9 | 25.1 | 111.6                     | 79.3 | 0.71              | 6.25  | 132.9 | 17.9 | 97.4                      | 7.30 | 72.5  | 95.8  | 3.91 |
|           | 12  | 5.6  | 13.0 | 105.6                     | 78.7 | 0.75              | 7.16  | 130.0 | 14.8 | 101.6                     | 7.41 | 76.3  | 96.9  | 4.02 |
|           | 18  | 7.7  | 17.8 | 108.2                     | 79.2 | 0.73              | 6.82  | 131.5 | 15.9 | 106.4                     | 7.53 | 80.7  | 98.1  | 4.14 |
| 70        | 24  | 10.4 | 24.0 | 109.3                     | 79.4 | 0.73              | 6.66  | 132.1 | 16.4 | 109.0                     | 7.59 | 83.1  | 98.8  | 4.21 |
|           | 12  | 5.5  | 12.6 | 101.6                     | 77.7 | 0.76              | 7.68  | 127.8 | 13.2 | 112.3                     | 7.68 | 86.1  | 99.7  | 4.29 |
|           | 18  | 7.5  | 17.3 | 104.5                     | 78.5 | 0.75              | 7.29  | 129.4 | 14.3 | 117.6                     | 7.81 | 91.0  | 101.1 | 4.41 |
| 80        | 24  | 10.1 | 23.4 | 105.9                     | 78.8 | 0.74              | 7.12  | 130.2 | 14.9 | 120.4                     | 7.88 | 93.6  | 101.9 | 4.48 |
|           | 12  | 5.4  | 12.4 | 97.2                      | 76.4 | 0.79              | 8.29  | 125.5 | 11.7 | 122.7                     | 7.94 | 95.6  | 102.5 | 4.53 |
|           | 18  | 7.3  | 17.0 | 100.3                     | 77.3 | 0.77              | 7.84  | 127.1 | 12.8 | 128.1                     | 8.08 | 100.6 | 103.9 | 4.64 |
| 85        | 24  | 9.9  | 22.9 | 101.9                     | 77.8 | 0.76              | 7.64  | 127.9 | 13.3 | 130.9                     | 8.16 | 103.1 | 104.6 | 4.70 |
|           | 12  | 5.3  | 12.3 | 95.0                      | 75.6 | 0.80              | 8.64  | 124.5 | 11.0 | 127.6                     | 8.07 | 100.0 | 103.8 | 4.63 |
|           | 18  | 7.3  | 16.8 | 98.1                      | 76.6 | 0.78              | 8.16  | 125.9 | 12.0 | 132.9                     | 8.21 | 104.9 | 105.2 | 4.74 |
| 90        | 24  | 9.8  | 22.7 | 99.7                      | 77.1 | 0.77              | 7.93  | 126.7 | 12.6 | 135.5                     | 8.29 | 107.3 | 105.9 | 4.79 |
|           | 12  | 5.3  | 12.2 | 92.9                      | 74.9 | 0.81              | 9.03  | 123.7 | 10.3 | 132.2                     | 8.19 | 104.2 | 105.0 | 4.73 |
|           | 18  | 7.2  | 16.7 | 95.9                      | 75.9 | 0.79              | 8.50  | 124.9 | 11.3 | 137.2                     | 8.34 | 108.8 | 106.3 | 4.82 |
| 100       | 24  | 9.8  | 22.5 | 97.4                      | 76.4 | 0.78              | 8.26  | 125.6 | 11.8 | 139.6                     | 8.41 | 110.9 | 106.9 | 4.86 |
|           | 12  | 5.2  | 11.9 | 88.9                      | 73.6 | 0.83              | 9.93  | 122.8 | 9.0  | Operation Not Recommended |      |       |       |      |
|           | 18  | 7.1  | 16.3 | 91.6                      | 74.5 | 0.81              | 9.29  | 123.3 | 9.9  | Operation Not Recommended |      |       |       |      |
| 110       | 24  | 9.6  | 22.1 | 93.0                      | 75.0 | 0.81              | 9.00  | 123.7 | 10.3 | Operation Not Recommended |      |       |       |      |
|           | 12  | 5.0  | 11.6 | 85.8                      | 72.7 | 0.85              | 11.05 | 123.5 | 7.8  | Operation Not Recommended |      |       |       |      |
|           | 18  | 6.9  | 15.8 | 87.8                      | 73.3 | 0.83              | 10.26 | 122.8 | 8.6  | Operation Not Recommended |      |       |       |      |
| 24        |     |      |      |                           |      |                   |       |       |      |                           |      |       |       |      |

Interpolation is permissible; extrapolation is not.

All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.

ARI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.

Table does not reflect fan or pump power corrections for ARI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.

Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.

Operation below 40°F EWT is based upon a 15% antifreeze solution.

Operation below 60°F EWT requires optional insulated water/refrigerant circuit.

See performance correction tables for operating conditions other than those listed above.

See Performance Data Selection Notes for operation in shaded areas.

## Genesis Large (GL) Series

Rev.: 05/23/07D

## Performance Data

### GLV120

4000 CFM Nominal (Rated) Airflow

Performance capacities shown in thousands of Btu/h

| EWT<br>°F | GPM | WPD  |      | Cooling - EAT 80/67°F     |      |                   |       |       | Heating - EAT 70°F |                           |      |       |       |      |
|-----------|-----|------|------|---------------------------|------|-------------------|-------|-------|--------------------|---------------------------|------|-------|-------|------|
|           |     | PSI  | FT   | TC                        | SC   | Sens/Tot<br>Ratio | kW    | HR    | EER                | HC                        | kW   | HE    | LAT   | COP  |
| 20        | 30  | 20.2 | 46.7 | Operation Not Recommended |      |                   |       |       | 77.1               | 7.55                      | 51.3 | 87.8  | 2.99  |      |
| 30        | 15  | 8.8  | 20.3 | 113.2                     | 77.8 | 0.69              | 6.49  | 135.3 | 17.5               | 83.4                      | 7.76 | 57.0  | 89.3  | 3.15 |
|           | 23  | 12.8 | 29.6 | 113.3                     | 75.9 | 0.67              | 6.15  | 134.3 | 18.4               | 86.2                      | 7.85 | 59.4  | 90.0  | 3.22 |
|           | 30  | 17.8 | 41.0 | 113.4                     | 74.9 | 0.66              | 6.01  | 133.9 | 18.9               | 87.5                      | 7.89 | 60.6  | 90.3  | 3.25 |
| 40        | 15  | 7.9  | 18.2 | 113.1                     | 80.2 | 0.71              | 7.01  | 137.0 | 16.1               | 93.7                      | 8.08 | 66.1  | 91.7  | 3.40 |
|           | 23  | 11.5 | 26.5 | 113.2                     | 78.8 | 0.70              | 6.68  | 136.0 | 16.9               | 97.0                      | 8.18 | 69.1  | 92.5  | 3.47 |
|           | 30  | 15.9 | 36.7 | 113.3                     | 78.1 | 0.69              | 6.54  | 135.6 | 17.3               | 98.6                      | 8.23 | 70.5  | 92.8  | 3.51 |
| 50        | 15  | 6.8  | 15.6 | 112.9                     | 81.7 | 0.72              | 7.52  | 138.5 | 15.0               | 104.3                     | 8.40 | 75.6  | 94.1  | 3.64 |
|           | 23  | 10.3 | 23.7 | 113.1                     | 80.8 | 0.71              | 7.19  | 137.6 | 15.7               | 108.2                     | 8.52 | 79.2  | 95.1  | 3.72 |
|           | 30  | 14.1 | 32.5 | 113.2                     | 80.4 | 0.71              | 7.05  | 137.3 | 16.1               | 110.1                     | 8.57 | 80.9  | 95.5  | 3.76 |
| 60        | 15  | 6.5  | 15.1 | 111.9                     | 82.3 | 0.74              | 8.06  | 139.4 | 13.9               | 115.1                     | 8.72 | 85.4  | 96.6  | 3.87 |
|           | 23  | 10.0 | 23.0 | 112.6                     | 82.0 | 0.73              | 7.71  | 138.9 | 14.6               | 119.6                     | 8.85 | 89.4  | 97.7  | 3.96 |
|           | 30  | 13.6 | 31.5 | 112.8                     | 81.7 | 0.72              | 7.56  | 138.6 | 14.9               | 121.7                     | 8.91 | 91.4  | 98.2  | 4.00 |
| 70        | 15  | 6.4  | 14.7 | 110.0                     | 82.3 | 0.75              | 8.63  | 139.4 | 12.7               | 126.0                     | 9.03 | 95.2  | 99.2  | 4.09 |
|           | 23  | 9.7  | 22.3 | 111.3                     | 82.4 | 0.74              | 8.26  | 139.5 | 13.5               | 130.9                     | 9.17 | 99.6  | 100.3 | 4.18 |
|           | 30  | 13.3 | 30.6 | 111.8                     | 82.3 | 0.74              | 8.10  | 139.4 | 13.8               | 133.2                     | 9.24 | 101.7 | 100.8 | 4.23 |
| 80        | 15  | 6.2  | 14.3 | 106.9                     | 81.5 | 0.76              | 9.25  | 138.4 | 11.6               | 136.6                     | 9.33 | 104.8 | 101.6 | 4.29 |
|           | 23  | 9.5  | 21.8 | 109.0                     | 82.1 | 0.75              | 8.84  | 139.2 | 12.3               | 141.9                     | 9.49 | 109.5 | 102.9 | 4.38 |
|           | 30  | 12.9 | 29.9 | 109.8                     | 82.2 | 0.75              | 8.67  | 139.4 | 12.7               | 144.3                     | 9.56 | 111.7 | 103.4 | 4.42 |
| 85        | 15  | 6.2  | 14.2 | 104.8                     | 80.9 | 0.77              | 9.58  | 137.5 | 10.9               | 141.8                     | 9.49 | 109.5 | 102.8 | 4.38 |
|           | 23  | 9.4  | 21.6 | 107.4                     | 81.7 | 0.76              | 9.16  | 138.6 | 11.7               | 147.2                     | 9.64 | 114.3 | 104.1 | 4.47 |
|           | 30  | 12.8 | 29.6 | 108.3                     | 81.9 | 0.76              | 8.98  | 139.0 | 12.1               | 149.6                     | 9.72 | 116.5 | 104.6 | 4.51 |
| 90        | 15  | 6.1  | 14.1 | 102.3                     | 80.1 | 0.78              | 9.93  | 136.2 | 10.3               | 146.9                     | 9.64 | 114.0 | 104.0 | 4.47 |
|           | 23  | 9.3  | 21.4 | 105.4                     | 81.1 | 0.77              | 9.49  | 137.8 | 11.1               | 152.3                     | 9.80 | 118.9 | 105.3 | 4.55 |
|           | 30  | 12.7 | 29.3 | 106.6                     | 81.4 | 0.76              | 9.30  | 138.3 | 11.5               | 154.7                     | 9.87 | 121.0 | 105.8 | 4.59 |
| 100       | 15  | 6.0  | 13.8 | 96.1                      | 77.8 | 0.81              | 10.68 | 132.6 | 9.0                | Operation Not Recommended |      |       |       |      |
|           | 23  | 9.1  | 21.0 | 100.2                     | 79.3 | 0.79              | 10.20 | 135.0 | 9.8                |                           |      |       |       |      |
|           | 30  | 12.5 | 28.8 | 101.8                     | 79.9 | 0.78              | 10.00 | 135.9 | 10.2               |                           |      |       |       |      |
| 110       | 15  | 5.9  | 13.6 | 88.2                      | 74.6 | 0.85              | 11.52 | 127.5 | 7.7                | Operation Not Recommended |      |       |       |      |
|           | 23  | 9.0  | 20.7 | 93.2                      | 76.7 | 0.82              | 11.00 | 130.8 | 8.5                |                           |      |       |       |      |
|           | 30  | 12.3 | 28.4 | 95.3                      | 77.5 | 0.81              | 10.78 | 132.1 | 8.8                |                           |      |       |       |      |

Interpolation is permissible; extrapolation is not.

All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.

ARI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68.6°F DB in heating.

Table does not reflect fan or pump power corrections for ARI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.

Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.

Operation below 40°F EWT is based upon a 15% antifreeze solution.

Operation below 60°F EWT requires optional insulated water/refrigerant circuit.

See performance correction tables for operating conditions other than those listed above.

See Performance Data Selection Notes for operation in shaded areas.

**Performance Data  
GLV160**

5200 CFM Nominal (Rated) Airflow

Performance capacities shown in thousands of Btuh

| EWT<br>°F | GPM | WPD  |      | Cooling - EAT 80/67°F     |       |                   |       |       |      | Heating - EAT 70°F        |       |       |       |      |
|-----------|-----|------|------|---------------------------|-------|-------------------|-------|-------|------|---------------------------|-------|-------|-------|------|
|           |     | PSI  | FT   | TC                        | SC    | Sens/Tot<br>Ratio | kW    | HR    | EER  | HC                        | kW    | HE    | LAT   | COP  |
| 20        | 37  | 13.3 | 30.8 | Operation Not Recommended |       |                   |       |       |      | 96.6                      | 9.47  | 64.3  | 87.2  | 2.99 |
| 30        | 18  | 7.5  | 17.3 | 156.7                     | 109.3 | 0.70              | 7.94  | 183.8 | 19.7 | 106.3                     | 9.73  | 73.1  | 88.9  | 3.20 |
|           | 27  | 9.6  | 22.2 | 156.6                     | 109.0 | 0.70              | 7.58  | 182.5 | 20.7 | 110.7                     | 9.84  | 77.1  | 89.7  | 3.29 |
| 40        | 37  | 12.5 | 28.9 | 156.6                     | 108.8 | 0.70              | 7.51  | 182.2 | 20.9 | 116.6                     | 10.00 | 82.4  | 90.8  | 3.41 |
|           | 18  | 6.9  | 16.0 | 155.6                     | 110.2 | 0.71              | 8.48  | 184.5 | 18.3 | 122.1                     | 10.15 | 87.4  | 91.7  | 3.52 |
|           | 27  | 8.9  | 20.5 | 156.5                     | 109.8 | 0.70              | 8.11  | 184.1 | 19.3 | 127.7                     | 10.31 | 92.5  | 92.7  | 3.63 |
| 50        | 37  | 11.5 | 26.7 | 156.7                     | 109.3 | 0.70              | 7.93  | 183.7 | 19.8 | 130.9                     | 10.39 | 95.4  | 93.3  | 3.69 |
|           | 18  | 5.4  | 12.4 | 153.2                     | 109.7 | 0.72              | 9.07  | 184.2 | 16.9 | 138.9                     | 10.62 | 102.6 | 94.7  | 3.83 |
|           | 27  | 7.5  | 17.4 | 154.9                     | 110.1 | 0.71              | 8.66  | 184.5 | 17.9 | 145.9                     | 10.81 | 109.0 | 96.0  | 3.95 |
| 60        | 37  | 9.9  | 22.9 | 155.6                     | 110.2 | 0.71              | 8.47  | 184.5 | 18.4 | 149.8                     | 10.92 | 112.5 | 96.7  | 4.02 |
|           | 18  | 5.2  | 12.0 | 149.9                     | 108.3 | 0.72              | 9.73  | 183.1 | 15.4 | 156.5                     | 11.12 | 118.6 | 97.9  | 4.13 |
|           | 27  | 7.3  | 16.9 | 152.3                     | 109.3 | 0.72              | 9.27  | 183.9 | 16.4 | 164.9                     | 11.36 | 126.2 | 99.4  | 4.26 |
| 70        | 37  | 9.7  | 22.3 | 153.3                     | 109.7 | 0.72              | 9.05  | 184.2 | 16.9 | 169.7                     | 11.49 | 130.5 | 100.2 | 4.33 |
|           | 18  | 5.1  | 11.7 | 145.6                     | 106.5 | 0.73              | 10.49 | 181.4 | 13.9 | 174.8                     | 11.64 | 135.1 | 101.1 | 4.40 |
|           | 27  | 7.2  | 16.5 | 148.6                     | 107.7 | 0.73              | 9.96  | 182.6 | 14.9 | 184.8                     | 11.93 | 144.1 | 102.9 | 4.54 |
| 80        | 37  | 9.4  | 21.8 | 149.9                     | 108.3 | 0.72              | 9.72  | 183.1 | 15.4 | 190.5                     | 12.10 | 149.2 | 103.9 | 4.61 |
|           | 18  | 5.0  | 11.5 | 140.5                     | 104.6 | 0.74              | 11.38 | 179.4 | 12.4 | 193.7                     | 12.20 | 152.1 | 104.5 | 4.65 |
|           | 27  | 7.0  | 16.2 | 144.0                     | 105.8 | 0.73              | 10.77 | 180.7 | 13.4 | 205.3                     | 12.54 | 162.6 | 106.6 | 4.80 |
| 85        | 37  | 9.2  | 21.3 | 145.6                     | 106.5 | 0.73              | 10.48 | 181.4 | 13.9 | 211.9                     | 12.74 | 168.4 | 107.7 | 4.87 |
|           | 18  | 4.9  | 11.4 | 137.8                     | 103.7 | 0.75              | 11.88 | 178.3 | 11.6 | 203.4                     | 12.48 | 160.8 | 106.2 | 4.77 |
|           | 27  | 7.0  | 16.1 | 141.4                     | 104.9 | 0.74              | 11.22 | 179.7 | 12.6 | 215.8                     | 12.86 | 172.0 | 108.4 | 4.92 |
| 90        | 37  | 9.1  | 21.1 | 143.2                     | 105.5 | 0.74              | 10.91 | 180.4 | 13.1 | 222.9                     | 13.07 | 178.3 | 109.7 | 5.00 |
|           | 18  | 4.9  | 11.3 | 134.8                     | 102.9 | 0.76              | 12.43 | 177.3 | 10.8 | 213.2                     | 12.78 | 169.6 | 108.0 | 4.89 |
|           | 27  | 6.9  | 15.9 | 138.7                     | 104.0 | 0.75              | 11.72 | 178.7 | 11.8 | 226.4                     | 13.18 | 181.5 | 110.3 | 5.04 |
| 100       | 37  | 9.1  | 20.9 | 140.5                     | 104.5 | 0.74              | 11.38 | 179.4 | 12.3 | 233.9                     | 13.40 | 188.2 | 111.7 | 5.11 |
|           | 18  | 4.8  | 11.1 | 128.6                     | 101.7 | 0.79              | 13.67 | 175.2 | 9.4  | Operation Not Recommended |       |       |       |      |
|           | 27  | 6.8  | 15.7 | 132.7                     | 102.4 | 0.77              | 12.84 | 176.5 | 10.3 | Operation Not Recommended |       |       |       |      |
| 110       | 37  | 8.9  | 20.6 | 134.7                     | 102.9 | 0.76              | 12.45 | 177.2 | 10.8 | Operation Not Recommended |       |       |       |      |
|           | 18  | 4.8  | 11.0 | 121.9                     | 101.2 | 0.83              | 15.13 | 173.5 | 8.1  | Operation Not Recommended |       |       |       |      |
|           | 27  | 6.7  | 15.5 | 126.2                     | 101.5 | 0.80              | 14.16 | 174.6 | 8.9  | Operation Not Recommended |       |       |       |      |
| 37        |     |      |      |                           |       |                   |       |       |      |                           |       |       |       |      |

Interpolation is permissible; extrapolation is not.

All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.

ARI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.

Table does not reflect fan or pump power corrections for ARI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.

Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.

Operation below 40°F EWT is based upon a 15% antifreeze solution.

Operation below 60°F EWT requires optional insulated water/refrigerant circuit.

See performance correction tables for operating conditions other than those listed above.

See Performance Data Selection Notes for operation in shaded areas.

## Genesis Large (GL) Series

Rev.: 05/23/07D

## Performance Data

### GLV200

7000 CFM Nominal (Rated) Airflow

Performance capacities shown in thousands of Btu/h

| EWT<br>°F | GPM | WPD  |      | Cooling - EAT 80/67°F     |       |                   |       |       | Heating - EAT 70°F |                           |       |       |       |      |
|-----------|-----|------|------|---------------------------|-------|-------------------|-------|-------|--------------------|---------------------------|-------|-------|-------|------|
|           |     | PSI  | FT   | TC                        | SC    | Sens/Tot<br>Ratio | kW    | HR    | EER                | HC                        | kW    | HE    | LAT   | COP  |
| 20        | 48  | 15.6 | 36.1 | Operation Not Recommended |       |                   |       |       | 137.9              | 13.01                     | 93.5  | 88.2  | 3.11  |      |
| 30        | 24  | 7.4  | 17.2 | 224.8                     | 157.2 | 0.70              | 11.78 | 265.0 | 19.1               | 146.1                     | 13.28 | 100.8 | 89.3  | 3.22 |
|           | 36  | 10.3 | 23.7 | 225.2                     | 156.0 | 0.69              | 11.16 | 263.3 | 20.2               | 150.6                     | 13.41 | 104.8 | 89.9  | 3.29 |
|           | 48  | 14.0 | 32.4 | 225.4                     | 155.6 | 0.69              | 10.85 | 262.4 | 20.8               | 153.1                     | 13.49 | 107.1 | 90.2  | 3.33 |
| 40        | 24  | 6.8  | 15.7 | 222.9                     | 158.7 | 0.71              | 12.59 | 265.8 | 17.7               | 162.8                     | 13.76 | 115.8 | 91.5  | 3.47 |
|           | 36  | 9.4  | 21.7 | 224.6                     | 157.7 | 0.70              | 11.99 | 265.5 | 18.7               | 169.1                     | 13.93 | 121.6 | 92.4  | 3.56 |
|           | 48  | 12.8 | 29.7 | 224.8                     | 156.9 | 0.70              | 11.69 | 264.7 | 19.2               | 172.6                     | 14.02 | 124.8 | 92.8  | 3.61 |
| 50        | 24  | 6.4  | 14.9 | 218.1                     | 158.7 | 0.73              | 13.41 | 263.8 | 16.3               | 182.2                     | 14.28 | 133.5 | 94.1  | 3.74 |
|           | 36  | 8.8  | 20.4 | 221.9                     | 158.8 | 0.72              | 12.80 | 265.5 | 17.3               | 190.3                     | 14.48 | 140.9 | 95.2  | 3.85 |
|           | 48  | 11.9 | 27.6 | 223.2                     | 158.6 | 0.71              | 12.50 | 265.9 | 17.9               | 194.8                     | 14.60 | 145.0 | 95.8  | 3.91 |
| 60        | 24  | 6.2  | 14.3 | 211.2                     | 157.5 | 0.75              | 14.31 | 260.1 | 14.8               | 203.2                     | 14.81 | 152.7 | 96.9  | 4.02 |
|           | 36  | 8.5  | 19.6 | 216.4                     | 158.4 | 0.73              | 13.65 | 263.0 | 15.9               | 212.8                     | 15.05 | 161.4 | 98.1  | 4.14 |
|           | 48  | 11.4 | 26.4 | 218.7                     | 158.7 | 0.73              | 13.33 | 264.1 | 16.4               | 218.0                     | 15.19 | 166.2 | 98.8  | 4.21 |
| 70        | 24  | 6.0  | 13.9 | 203.1                     | 155.4 | 0.76              | 15.35 | 255.5 | 13.2               | 224.6                     | 15.35 | 172.2 | 99.7  | 4.29 |
|           | 36  | 8.2  | 19.0 | 209.1                     | 157.0 | 0.75              | 14.59 | 258.9 | 14.3               | 235.2                     | 15.62 | 181.9 | 101.1 | 4.41 |
|           | 48  | 11.1 | 25.7 | 211.9                     | 157.6 | 0.74              | 14.23 | 260.5 | 14.9               | 240.9                     | 15.77 | 187.1 | 101.9 | 4.48 |
| 80        | 24  | 5.9  | 13.6 | 194.4                     | 152.7 | 0.79              | 16.58 | 251.0 | 11.7               | 245.4                     | 15.88 | 191.2 | 102.5 | 4.53 |
|           | 36  | 8.1  | 18.7 | 200.6                     | 154.6 | 0.77              | 15.69 | 254.1 | 12.8               | 256.3                     | 16.17 | 201.1 | 103.9 | 4.64 |
|           | 48  | 10.9 | 25.2 | 203.7                     | 155.5 | 0.76              | 15.28 | 255.8 | 13.3               | 261.8                     | 16.32 | 206.2 | 104.6 | 4.70 |
| 85        | 24  | 5.8  | 13.5 | 190.1                     | 151.3 | 0.80              | 17.28 | 249.0 | 11.0               | 255.2                     | 16.14 | 200.1 | 103.8 | 4.63 |
|           | 36  | 8.0  | 18.5 | 196.2                     | 153.3 | 0.78              | 16.31 | 251.9 | 12.0               | 265.8                     | 16.43 | 209.8 | 105.2 | 4.74 |
|           | 48  | 10.8 | 25.0 | 199.3                     | 154.2 | 0.77              | 15.87 | 253.5 | 12.6               | 271.1                     | 16.57 | 214.5 | 105.9 | 4.79 |
| 90        | 24  | 5.8  | 13.4 | 185.8                     | 149.8 | 0.81              | 18.06 | 247.4 | 10.3               | 264.4                     | 16.40 | 208.4 | 105.0 | 4.72 |
|           | 36  | 7.9  | 18.3 | 191.8                     | 151.8 | 0.79              | 17.00 | 249.8 | 11.3               | 274.4                     | 16.70 | 217.4 | 106.3 | 4.81 |
|           | 48  | 10.7 | 24.8 | 194.8                     | 152.8 | 0.78              | 16.51 | 251.2 | 11.8               | 279.2                     | 16.80 | 221.9 | 106.9 | 4.87 |
| 100       | 24  | 5.7  | 13.1 | 177.9                     | 147.2 | 0.83              | 19.87 | 245.7 | 9.0                | Operation Not Recommended |       |       |       |      |
|           | 36  | 7.8  | 18.0 | 183.2                     | 149.0 | 0.81              | 18.59 | 246.6 | 9.9                |                           |       |       |       |      |
|           | 48  | 10.5 | 24.3 | 186.1                     | 149.9 | 0.81              | 18.01 | 247.5 | 10.3               |                           |       |       |       |      |
| 110       | 24  | 5.5  | 12.7 | 171.5                     | 145.5 | 0.85              | 22.10 | 246.9 | 7.8                | Operation Not Recommended |       |       |       |      |
|           | 36  | 7.5  | 17.4 | 175.7                     | 146.5 | 0.83              | 20.52 | 245.7 | 8.6                |                           |       |       |       |      |
|           | 48  | 10.2 | 23.6 | 178.1                     | 147.3 | 0.83              | 19.82 | 245.7 | 9.0                |                           |       |       |       |      |

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Table does not reflect fan or pump power corrections for ARI/ISO conditions.

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Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.

Operation below 40°F EWT is based upon a 15% antifreeze solution.

Operation below 60°F EWT requires optional insulated water/refrigerant circuit.

See performance correction tables for operating conditions other than those listed above.

See Performance Data Selection Notes for operation in shaded areas.

**Performance Data  
GLV240**

8000 CFM Nominal (Rated) Airflow

Performance capacities shown in thousands of Btuh

| EWT<br>°F | GPM | WPD  |      | Cooling - EAT 80/67°F     |       |                   |       |       |      | Heating - EAT 70°F        |       |       |       |      |
|-----------|-----|------|------|---------------------------|-------|-------------------|-------|-------|------|---------------------------|-------|-------|-------|------|
|           |     | PSI  | FT   | TC                        | SC    | Sens/Tot<br>Ratio | kW    | HR    | EER  | HC                        | kW    | HE    | LAT   | COP  |
| 20        | 60  | 22.2 | 51.3 | Operation Not Recommended |       |                   |       |       |      | 154.2                     | 15.09 | 102.7 | 87.8  | 2.99 |
| 30        | 30  | 9.7  | 22.3 | 226.4                     | 155.7 | 0.69              | 12.97 | 270.7 | 17.5 | 166.9                     | 15.52 | 113.9 | 89.3  | 3.15 |
|           | 46  | 14.1 | 32.6 | 226.6                     | 151.8 | 0.67              | 12.31 | 268.6 | 18.4 | 172.4                     | 15.70 | 118.8 | 90.0  | 3.22 |
|           | 60  | 19.5 | 45.1 | 226.9                     | 149.9 | 0.66              | 12.02 | 267.9 | 18.9 | 175.0                     | 15.78 | 121.2 | 90.3  | 3.25 |
| 40        | 30  | 8.6  | 20.0 | 226.2                     | 160.4 | 0.71              | 14.01 | 274.0 | 16.1 | 187.3                     | 16.16 | 132.1 | 91.7  | 3.40 |
|           | 46  | 12.6 | 29.1 | 226.4                     | 157.6 | 0.70              | 13.36 | 272.0 | 16.9 | 194.0                     | 16.37 | 138.2 | 92.5  | 3.47 |
|           | 60  | 17.5 | 40.3 | 226.6                     | 156.2 | 0.69              | 13.07 | 271.2 | 17.3 | 197.2                     | 16.46 | 141.0 | 92.8  | 3.51 |
| 50        | 30  | 7.4  | 17.2 | 225.7                     | 163.3 | 0.72              | 15.05 | 277.1 | 15.0 | 208.6                     | 16.80 | 151.2 | 94.1  | 3.64 |
|           | 46  | 11.3 | 26.1 | 226.2                     | 161.6 | 0.71              | 14.38 | 275.3 | 15.7 | 216.5                     | 17.03 | 158.4 | 95.1  | 3.72 |
|           | 60  | 15.5 | 35.8 | 226.4                     | 160.7 | 0.71              | 14.10 | 274.6 | 16.1 | 220.2                     | 17.14 | 161.7 | 95.5  | 3.76 |
| 60        | 30  | 7.2  | 16.6 | 223.8                     | 164.6 | 0.74              | 16.12 | 278.8 | 13.9 | 230.2                     | 17.43 | 170.8 | 96.6  | 3.87 |
|           | 46  | 10.9 | 25.3 | 225.2                     | 164.0 | 0.73              | 15.42 | 277.8 | 14.6 | 239.3                     | 17.69 | 178.9 | 97.7  | 3.96 |
|           | 60  | 15.0 | 34.6 | 225.6                     | 163.5 | 0.72              | 15.13 | 277.3 | 14.9 | 243.5                     | 17.81 | 182.7 | 98.2  | 4.00 |
| 70        | 30  | 7.0  | 16.2 | 219.9                     | 164.5 | 0.75              | 17.26 | 278.8 | 12.7 | 251.9                     | 18.06 | 190.3 | 99.2  | 4.09 |
|           | 46  | 10.6 | 24.6 | 222.6                     | 164.7 | 0.74              | 16.51 | 279.0 | 13.5 | 261.9                     | 18.34 | 199.3 | 100.3 | 4.18 |
|           | 60  | 14.6 | 33.7 | 223.6                     | 164.7 | 0.74              | 16.20 | 278.8 | 13.8 | 266.5                     | 18.47 | 203.4 | 100.8 | 4.23 |
| 80        | 30  | 6.8  | 15.8 | 213.7                     | 163.0 | 0.76              | 18.49 | 276.8 | 11.6 | 273.3                     | 18.67 | 209.6 | 101.6 | 4.29 |
|           | 46  | 10.4 | 24.0 | 218.0                     | 164.1 | 0.75              | 17.68 | 278.4 | 12.3 | 283.8                     | 18.98 | 219.1 | 102.9 | 4.38 |
|           | 60  | 14.2 | 32.9 | 219.6                     | 164.4 | 0.75              | 17.34 | 278.7 | 12.7 | 288.7                     | 19.12 | 223.4 | 103.4 | 4.42 |
| 85        | 30  | 6.8  | 15.6 | 209.6                     | 161.7 | 0.77              | 19.16 | 274.9 | 10.9 | 283.7                     | 18.97 | 218.9 | 102.8 | 4.38 |
|           | 46  | 10.3 | 23.8 | 214.8                     | 163.3 | 0.76              | 18.31 | 277.2 | 11.7 | 294.4                     | 19.29 | 228.6 | 104.1 | 4.47 |
|           | 60  | 14.1 | 32.5 | 216.7                     | 163.8 | 0.76              | 17.95 | 278.0 | 12.1 | 299.3                     | 19.44 | 233.0 | 104.6 | 4.51 |
| 90        | 30  | 6.7  | 15.5 | 204.6                     | 160.1 | 0.78              | 19.86 | 272.4 | 10.3 | 293.8                     | 19.20 | 228.3 | 104.0 | 4.48 |
|           | 46  | 10.2 | 23.5 | 210.8                     | 162.1 | 0.77              | 18.97 | 275.5 | 11.1 | 304.6                     | 19.60 | 237.7 | 105.3 | 4.55 |
|           | 60  | 13.9 | 32.2 | 213.1                     | 162.8 | 0.76              | 18.60 | 276.6 | 11.5 | 309.4                     | 19.80 | 241.8 | 105.8 | 4.58 |
| 100       | 30  | 6.6  | 15.2 | 192.3                     | 155.6 | 0.81              | 21.36 | 265.2 | 9.0  | Operation Not Recommended |       |       |       |      |
|           | 46  | 10.0 | 23.1 | 200.4                     | 158.7 | 0.79              | 20.40 | 270.0 | 9.8  |                           |       |       |       |      |
|           | 60  | 13.7 | 31.7 | 203.6                     | 159.8 | 0.78              | 19.99 | 271.8 | 10.2 |                           |       |       |       |      |
| 110       | 30  | 6.5  | 15.0 | 176.4                     | 149.1 | 0.85              | 23.03 | 255.0 | 7.7  |                           |       |       |       |      |
|           | 46  | 9.9  | 22.8 | 186.5                     | 153.3 | 0.82              | 22.00 | 261.5 | 8.5  |                           |       |       |       |      |
|           | 60  | 13.5 | 31.2 | 190.6                     | 155.0 | 0.81              | 21.55 | 264.1 | 8.8  |                           |       |       |       |      |

Interpolation is permissible; extrapolation is not.

All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.

ARI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.

Table does not reflect fan or pump power corrections for ARI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.

Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.

Operation below 40°F EWT is based upon a 15% antifreeze solution.

Operation below 60°F EWT requires optional insulated water/refrigerant circuit.

See performance correction tables for operating conditions other than those listed above.

See Performance Data Selection Notes for operation in shaded areas.

## Genesis Large (GL) Series

Rev.: 05/23/07D

## Performance Data

### GLV300

9000 CFM Nominal (Rated) Airflow

Performance capacities shown in thousands of Btu/h

| EWT<br>°F | GPM | WPD  |      | Cooling - EAT 80/67°F     |       |                   |       |       | Heating - EAT 70°F |                           |       |       |       |      |
|-----------|-----|------|------|---------------------------|-------|-------------------|-------|-------|--------------------|---------------------------|-------|-------|-------|------|
|           |     | PSI  | FT   | TC                        | SC    | Sens/Tot<br>Ratio | KW    | HR    | EER                | HC                        | KW    | HE    | LAT   | COP  |
| 20        | 75  | 18.9 | 43.7 | Operation Not Recommended |       |                   |       |       | 183.3              | 19.79                     | 115.7 | 88.9  | 2.71  |      |
| 30        | 38  | 8.6  | 20.0 | 282.9                     | 200.2 | 0.71              | 16.61 | 339.5 | 17.0               | 200.8                     | 20.36 | 131.4 | 90.7  | 2.89 |
|           | 56  | 12.6 | 29.1 | 283.0                     | 198.2 | 0.70              | 15.88 | 337.2 | 17.8               | 207.3                     | 20.57 | 137.1 | 91.3  | 2.95 |
|           | 75  | 17.5 | 40.3 | 283.2                     | 197.1 | 0.70              | 15.50 | 336.1 | 18.3               | 210.9                     | 20.69 | 140.3 | 91.7  | 2.99 |
| 40        | 38  | 7.1  | 16.5 | 282.3                     | 203.4 | 0.72              | 17.88 | 343.3 | 15.8               | 228.6                     | 21.28 | 156.0 | 93.5  | 3.15 |
|           | 56  | 10.1 | 23.4 | 282.7                     | 201.6 | 0.71              | 17.12 | 341.1 | 16.5               | 236.9                     | 21.56 | 163.4 | 94.4  | 3.22 |
|           | 75  | 14.1 | 32.7 | 283.0                     | 200.6 | 0.71              | 16.74 | 340.1 | 16.9               | 241.6                     | 21.72 | 167.5 | 94.9  | 3.26 |
| 50        | 38  | 6.9  | 16.0 | 280.9                     | 205.9 | 0.73              | 19.21 | 346.5 | 14.6               | 258.1                     | 22.28 | 182.1 | 96.6  | 3.39 |
|           | 56  | 9.8  | 22.7 | 281.9                     | 204.5 | 0.73              | 18.40 | 344.7 | 15.3               | 268.1                     | 22.62 | 190.9 | 97.6  | 3.47 |
|           | 75  | 13.7 | 31.7 | 282.2                     | 203.7 | 0.72              | 18.00 | 343.7 | 15.7               | 273.7                     | 22.81 | 195.9 | 98.2  | 3.52 |
| 60        | 38  | 6.7  | 15.5 | 278.0                     | 207.2 | 0.75              | 20.65 | 348.5 | 13.5               | 288.1                     | 23.30 | 208.6 | 99.6  | 3.62 |
|           | 56  | 9.5  | 22.0 | 280.0                     | 206.6 | 0.74              | 19.76 | 347.4 | 14.2               | 299.4                     | 23.69 | 218.6 | 100.8 | 3.70 |
|           | 75  | 13.3 | 30.7 | 280.7                     | 206.0 | 0.73              | 19.33 | 346.7 | 14.5               | 305.7                     | 23.90 | 224.1 | 101.4 | 3.75 |
| 70        | 38  | 6.5  | 15.1 | 273.0                     | 207.0 | 0.76              | 22.24 | 348.9 | 12.3               | 317.4                     | 24.30 | 234.5 | 102.7 | 3.83 |
|           | 56  | 9.3  | 21.4 | 276.3                     | 207.3 | 0.75              | 21.25 | 348.8 | 13.0               | 329.4                     | 24.70 | 245.1 | 103.9 | 3.91 |
|           | 75  | 12.9 | 29.9 | 277.7                     | 207.3 | 0.75              | 20.77 | 348.5 | 13.4               | 335.9                     | 24.91 | 250.9 | 104.6 | 3.95 |
| 80        | 38  | 6.4  | 14.7 | 265.6                     | 204.7 | 0.77              | 24.02 | 347.5 | 11.1               | 344.7                     | 25.20 | 258.7 | 105.5 | 4.01 |
|           | 56  | 9.1  | 20.9 | 270.5                     | 206.3 | 0.76              | 22.91 | 348.6 | 11.8               | 356.5                     | 25.58 | 269.2 | 106.7 | 4.08 |
|           | 75  | 12.6 | 29.1 | 272.6                     | 206.9 | 0.76              | 22.37 | 348.9 | 12.2               | 362.6                     | 25.77 | 274.7 | 107.3 | 4.12 |
| 85        | 38  | 6.3  | 14.6 | 260.8                     | 202.7 | 0.78              | 24.99 | 346.0 | 10.4               | 357.2                     | 25.60 | 269.9 | 106.8 | 4.09 |
|           | 56  | 9.0  | 20.7 | 266.5                     | 205.1 | 0.77              | 23.82 | 347.8 | 11.2               | 368.5                     | 25.95 | 279.9 | 107.9 | 4.16 |
|           | 75  | 12.5 | 28.8 | 269.1                     | 205.9 | 0.77              | 23.24 | 348.4 | 11.6               | 374.1                     | 26.12 | 285.0 | 108.5 | 4.20 |
| 90        | 38  | 6.2  | 14.4 | 255.2                     | 200.0 | 0.78              | 26.02 | 344.0 | 9.8                | 368.7                     | 25.96 | 280.1 | 107.9 | 4.16 |
|           | 56  | 8.9  | 20.5 | 261.9                     | 203.2 | 0.78              | 24.78 | 346.4 | 10.6               | 379.1                     | 26.26 | 289.5 | 109.0 | 4.23 |
|           | 75  | 12.4 | 28.6 | 264.9                     | 204.4 | 0.77              | 24.17 | 347.4 | 11.0               | 384.1                     | 26.40 | 294.0 | 109.5 | 4.26 |
| 100       | 38  | 6.2  | 14.2 | 241.4                     | 192.5 | 0.80              | 28.28 | 337.9 | 8.5                | Operation Not Recommended |       |       |       |      |
|           | 56  | 8.7  | 20.2 | 250.0                     | 197.3 | 0.79              | 26.90 | 341.8 | 9.3                |                           |       |       |       |      |
|           | 75  | 12.2 | 28.2 | 254.1                     | 199.5 | 0.79              | 26.21 | 343.5 | 9.7                |                           |       |       |       |      |
| 110       | 38  | 6.1  | 14.1 | 223.9                     | 181.7 | 0.81              | 30.82 | 329.1 | 7.3                | Operation Not Recommended |       |       |       |      |
|           | 56  | 8.7  | 20.0 | 234.6                     | 188.4 | 0.80              | 29.30 | 334.6 | 8.0                |                           |       |       |       |      |
|           | 75  | 12.1 | 27.9 | 239.7                     | 191.5 | 0.80              | 28.54 | 337.1 | 8.4                |                           |       |       |       |      |

Interpolation is permissible; extrapolation is not.

All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.

ARI/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68.6°F DB in heating.

Table does not reflect fan or pump power corrections for ARI/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.

Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.

Operation below 40°F EWT is based upon a 15% antifreeze solution.

Operation below 60°F EWT requires optional insulated water/refrigerant circuit.

See performance correction tables for operating conditions other than those listed above.

See Performance Data Selection Notes for operation in shaded areas.

**GLH Performance Data  
Correction Tables****Air Flow Correction Table**

| Airflow | Cooling    |                |                   |       | Heating           |                  |       |                    |
|---------|------------|----------------|-------------------|-------|-------------------|------------------|-------|--------------------|
|         | % of Rated | Total Capacity | Sensible Capacity | Power | Heat of Rejection | Heating Capacity | Power | Heat of Extraction |
| 81%     | 0.971      | 0.940          | 0.971             | 0.964 | 0.978             | 1.026            | 0.975 |                    |
| 88%     | 0.983      | 0.963          | 0.981             | 0.978 | 0.985             | 1.017            | 0.987 |                    |
| 94%     | 0.992      | 0.982          | 0.990             | 0.989 | 0.992             | 1.009            | 0.994 |                    |
| 100%    | 1.000      | 1.000          | 1.000             | 1.000 | 1.000             | 1.000            | 1.000 |                    |
| 106%    | 1.005      | 1.013          | 1.010             | 1.009 | 1.008             | 0.991            | 1.005 |                    |
| 113%    | 1.010      | 1.027          | 1.019             | 1.019 | 1.017             | 0.983            | 1.010 |                    |
| 119%    | 1.012      | 1.033          | 1.029             | 1.026 | 1.022             | 0.974            | 1.011 |                    |

**Entering Air Correction Table**

| Heating           |                  |       |                    |
|-------------------|------------------|-------|--------------------|
| Entering Air DB°F | Heating Capacity | Power | Heat of Extraction |
| 45                | 1.032            | 0.817 | 1.106              |
| 50                | 1.025            | 0.849 | 1.086              |
| 55                | 1.018            | 0.884 | 1.065              |
| 60                | 1.012            | 0.920 | 1.044              |
| 65                | 1.005            | 0.959 | 1.022              |
| 68                | 1.002            | 0.984 | 1.009              |
| 70                | 1.000            | 1.000 | 1.000              |
| 75                | 0.996            | 1.046 | 0.978              |
| 80                | 0.991            | 1.094 | 0.956              |

| Entering Air WB°F | Total Capacity | Sensible Cooling Capacity Multiplier - Entering DB °F |       |       |       |       |       |       | Power | Heat of Rejection |
|-------------------|----------------|---|-------|-------|-------|-------|-------|-------|-------|-------------------|
|                   |                | 70  | 75    | 80    | 80.6  | 85    | 90    | 95    |       |                   |
| 60                | 0.955          | 0.887   | 1.102 | 1.452 | *     | *     | *     | *     | 0.990 | 0.960             |
| 65                | 0.982          | 0.665   | 0.876 | 1.091 | 1.116 | *     | *     | *     | 0.996 | 0.984             |
| 66.2              | 0.993          | 0.612   | 0.822 | 1.037 | 1.062 | 1.245 | *     | *     | 0.998 | 0.993             |
| 67                | 1.000          | 0.577   | 0.786 | 1.000 | 1.025 | 1.210 | *     | *     | 1.000 | 1.000             |
| 70                | 1.027          | 0.445   | 0.652 | 0.864 | 0.889 | 1.079 | 1.297 | *     | 1.005 | 1.023             |
| 75                | 1.097          |   | 0.430 | 0.637 | 0.662 | 0.848 | 1.067 | 1.285 | 1.021 | 1.084             |

\* = Sensible capacity equals total capacity  
ARI/ISO/ASHRAE 13256-1 uses entering air conditions of Cooling - 80.6°F DB/66.2°F WB, 1 and Heating - 68°F DB/59°F WB entering air temperature

## GLV Performance Data Correction Tables

### Air Flow Correction Table

| Airflow | Cooling    |                |                   |       | Heating           |                  |       |                    |
|---------|------------|----------------|-------------------|-------|-------------------|------------------|-------|--------------------|
|         | % of Rated | Total Capacity | Sensible Capacity | Power | Heat of Rejection | Heating Capacity | Power | Heat of Extraction |
| 75%     | 0.962      | 0.867          | 0.950             | 0.959 | 0.985             | 1.030            | 0.972 |                    |
| 81%     | 0.973      | 0.898          | 0.962             | 0.970 | 0.989             | 1.017            | 0.980 |                    |
| 88%     | 0.983      | 0.940          | 0.977             | 0.982 | 0.993             | 1.008            | 0.988 |                    |
| 94%     | 0.993      | 0.971          | 0.989             | 0.992 | 0.997             | 1.003            | 0.994 |                    |
| 100%    | 1.000      | 1.000          | 1.000             | 1.000 | 1.000             | 1.000            | 1.000 |                    |
| 106%    | 1.006      | 1.029          | 1.011             | 1.007 | 1.003             | 0.999            | 1.005 |                    |
| 113%    | 1.012      | 1.061          | 1.024             | 1.015 | 1.007             | 0.999            | 1.009 |                    |

### Entering Air Correction Table

| Heating           |                  |       |                    | Cooling           |                |   |       |       |       |       |       |       |                   |       |
|-------------------|------------------|-------|--------------------|-------------------|----------------|---|-------|-------|-------|-------|-------|-------|-------------------|-------|
| Entering Air DB°F | Heating Capacity | Power | Heat of Extraction | Entering Air WB°F | Total Capacity | Sensible Cooling Capacity Multiplier - Entering DB °F |       |       |       |       |       | Power | Heat of Rejection |       |
|                   |                  |       |                    |                   |                | 70  | 75    | 80    | 80.6  | 85    | 90    | 95    |                   |       |
| 60                | 1.010            | 0.988 | 1.018              | 60                | 0.899          | 0.877   | 1.102 | 1.253 | 1.261 | *     | *     | *     | 0.972             | 0.910 |
| 65                | 1.006            | 0.998 | 1.010              | 65                | 0.944          | 0.648   | 0.867 | 1.094 | 1.120 | 1.304 | *     | *     | 0.984             | 0.979 |
| 68                | 1.003            | 0.997 | 1.008              | 66.2              | 0.956          | 0.594   | 0.811 | 1.040 | 1.066 | 1.259 | *     | *     | 0.987             | 0.988 |
| 70                | 1.000            | 1.000 | 1.000              | 67                | 1.000          | 0.554   | 0.774 | 1.000 | 1.029 | 1.226 | 1.397 | 1.470 | 1.000             | 1.000 |
| 75                | 0.996            | 1.005 | 0.990              | 70                | 1.032          |   | 0.664 | 0.854 | 0.884 | 1.086 | 1.310 | 1.470 | 1.009             | 1.028 |
| 80                | 0.985            | 1.010 | 0.987              | 75                | 1.091          |   | 0.539 | 0.651 | 0.840 | 1.072 | 1.299 | 1.025 | 1.025             | 1.080 |

\* = Sensible capacity equals total capacity  
ARI/ISO/ASHRAE 13256-1 uses entering air conditions of Cooling - 80.6°F DB/66.2°F WB, 1 and Heating - 68°F DB/59°F WB entering air temperature

**Additional Correction & Conversion Tables**

| Antifreeze Type  | Antifreeze % | Cooling   |          |       | Heating  |       | WPD<br>Corr. Fct.<br>EWT 30°F |  |
|------------------|--------------|-----------|----------|-------|----------|-------|-------------------------------|--|
|                  |              | EWT 90°F  |          | Power | EWT 30°F |       |                               |  |
|                  |              | Total Cap | Sens Cap |       | Htg Cap  | Power |                               |  |
| Water            | 0            | 1.000     | 1.000    | 1.000 | 1.000    | 1.000 | 1.000                         |  |
| Propylene Glycol | 5            | 0.995     | 0.995    | 1.003 | 0.989    | 0.997 | 1.070                         |  |
|                  | 15           | 0.986     | 0.986    | 1.009 | 0.968    | 0.990 | 1.210                         |  |
|                  | 25           | 0.978     | 0.978    | 1.014 | 0.947    | 0.983 | 1.360                         |  |
| Methanol         | 5            | 0.997     | 0.997    | 1.002 | 0.989    | 0.997 | 1.070                         |  |
|                  | 15           | 0.990     | 0.990    | 1.007 | 0.968    | 0.990 | 1.160                         |  |
|                  | 25           | 0.982     | 0.982    | 1.012 | 0.949    | 0.984 | 1.220                         |  |
| Ethanol          | 5            | 0.998     | 0.998    | 1.002 | 0.981    | 0.994 | 1.140                         |  |
|                  | 15           | 0.994     | 0.994    | 1.005 | 0.944    | 0.983 | 1.300                         |  |
|                  | 25           | 0.986     | 0.986    | 1.009 | 0.917    | 0.974 | 1.360                         |  |
| Ethylene Glycol  | 5            | 0.998     | 0.998    | 1.002 | 0.993    | 0.998 | 1.040                         |  |
|                  | 15           | 0.994     | 0.994    | 1.004 | 0.980    | 0.994 | 1.120                         |  |
|                  | 25           | 0.988     | 0.988    | 1.008 | 0.966    | 0.990 | 1.200                         |  |

**GL Series Dry Coil to Wet Coil Conversion Table**

| Air Coil Face Velocity (FPM) | Required BH Multiplier | Required RP Multiplier |
|------------------------------|------------------------|------------------------|
| 250                          | 1.00                   | 1.00                   |
| 300                          | 1.02                   | 1.06                   |
| 350                          | 1.05                   | 1.12                   |
| 400                          | 1.08                   | 1.18                   |
| 450                          | 1.11                   | 1.26                   |
| 500                          | 1.14                   | 1.34                   |

Example:

GLV080 dry coil performance is 0.92 BHP, 867 RPM @ 2600 CFM  
 (or 2600 CFM / 9ft<sup>2</sup> coil = 290 FPM);  
 Wet coil performance would be  $0.92 \times 1.02 = 0.94$  BHP required and  
 $867 \text{ RPM} \times 1.06 = 919$  RPM required

Notes:

Sheave turns and RPM relationship is unchanged, use original table to find correct turns based upon new RPM

## Genesis Large (GL) Series

Rev.: 05/23/07D

## Blower Performance Data

### GLH072

Airflow in CFM with dry coil and clean air filter.

| Airflow (SCFM) |            | Airflow (cfm) at External Static Pressure (in. wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------|------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                |            | 0.00   | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 | 0.70 | 0.80 | 0.90 | 1.00 | 1.10 | 1.20 | 1.30 | 1.40 | 1.50 |
| 1800           | BHP        |  | 0.23 | 0.26 | 0.31 | 0.35 | 0.39 | 0.44 | 0.48 | 0.53 | 0.58 | 0.63 | 0.68 | 0.73 | 0.79 | 0.84 | 0.90 |
|                | SHEAVE/MTR |  | B    | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | C    | C    | C    | C    |
|                | RPM        |  | 482  | 536  | 587  | 636  | 683  | 729  | 773  | 816  | 858  | 899  | 938  | 977  | 1015 | 1052 | 1088 |
|                | TURNS OPEN |  | 5.0  | 4.0  | 3.0  | 2.0  | 1.0  | 5.0  | 4.0  | 3.0  | 2.5  | 1.5  | 1.0  | 0.0  | 3.5  | 3.0  | 2.5  |
| 2000           | BHP        | 0.27   | 0.31 | 0.35 | 0.40 | 0.44 | 0.49 | 0.54 | 0.59 | 0.64 | 0.69 | 0.75 | 0.80 | 0.86 | 0.91 | 0.97 | 1.03 |
| 2000           | SHEAVE/MTR | B  | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    | C    |
| 2000           | RPM        | 484  | 534  | 582  | 629  | 674  | 717  | 760  | 801  | 841  | 881  | 919  | 956  | 993  | 1029 | 1064 | 1098 |
| 2000           | TURNS OPEN | 5.0  | 4.0  | 3.0  | 2.0  | 1.5  | 5.0  | 4.0  | 3.5  | 2.5  | 2.0  | 1.0  | 0.5  | 4.0  | 3.5  | 3.0  | 2.5  |
| 2200           | BHP        | 0.36   | 0.41 | 0.46 | 0.51 | 0.56 | 0.61 | 0.66 | 0.72 | 0.77 | 0.83 | 0.88 | 0.94 | 1.00 | 1.06 | 1.12 | 1.18 |
| 2200           | SHEAVE/MTR | B  | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    | C    |
| 2200           | RPM        | 544  | 589  | 633  | 676  | 717  | 758  | 797  | 836  | 873  | 910  | 946  | 982  | 1016 | 1050 | 1084 | 1116 |
| 2200           | TURNS OPEN | 4.0  | 3.0  | 2.0  | 1.5  | 5.0  | 4.0  | 3.5  | 3.0  | 2.0  | 1.5  | 0.5  | 0.0  | 3.5  | 3.0  | 2.5  | 2.0  |
| 2400           | BHP        | 0.49   | 0.54 | 0.59 | 0.64 | 0.70 | 0.75 | 0.81 | 0.87 | 0.93 | 0.99 | 1.05 | 1.11 | 1.17 | 1.24 | 1.30 | 1.37 |
| 2400           | SHEAVE/MTR | B  | B    | A    | A    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    | C    | C    |
| 2400           | RPM        | 605  | 647  | 687  | 726  | 765  | 802  | 839  | 875  | 910  | 945  | 979  | 1012 | 1045 | 1077 | 1109 | 1140 |
| 2400           | TURNS OPEN | 2.5  | 2.0  | 1.0  | 5.0  | 4.0  | 3.5  | 2.5  | 2.0  | 1.5  | 0.5  | 0.0  | 3.5  | 3.0  | 3.0  | 2.5  | 2.0  |
| 2600           | BHP        | 0.64   | 0.69 | 0.75 | 0.81 | 0.86 | 0.92 | 0.99 | 1.05 | 1.11 | 1.17 | 1.24 | 1.30 | 1.37 | 1.44 | 1.51 | 1.57 |
| 2600           | SHEAVE/MTR | B  | A    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    | E    | E    | E    | E    |
| 2600           | RPM        | 667  | 705  | 742  | 779  | 814  | 849  | 884  | 917  | 950  | 983  | 1015 | 1046 | 1078 | 1108 | 1138 | 1168 |
| 2600           | TURNS OPEN | 1.5  | 1.0  | 4.5  | 4.0  | 3.0  | 2.5  | 2.0  | 1.0  | 0.5  | 0.0  | 3.5  | 3.0  | 2.5  | 2.5  | 2.0  | 1.5  |
| 2800           | BHP        | 0.81   | 0.87 | 0.93 | 1.00 | 1.06 | 1.12 | 1.19 | 1.25 | 1.32 | 1.39 | 1.46 | 1.52 | 1.60 | 1.67 | 1.74 | 1.81 |
| 2800           | SHEAVE/MTR | A  | A    | A    | A    | A    | A    | A    | E    | E    | E    | E    | E    | E    | E    | E    | E    |
| 2800           | RPM        | 729  | 764  | 799  | 833  | 866  | 899  | 931  | 962  | 993  | 1024 | 1054 | 1084 | 1114 | 1143 | 1171 | 1199 |
| 2800           | TURNS OPEN | 5.0  | 4.0  | 3.5  | 3.0  | 2.0  | 1.5  | 1.0  | 0.5  | 0.0  | 3.5  | 3.0  | 2.5  | 2.0  | 2.0  | 1.5  | 1.0  |
| 3000           | BHP        | 1.02   | 1.09 | 1.15 | 1.22 | 1.29 | 1.35 | 1.42 | 1.49 | 1.56 | 1.64 | 1.71 | 1.78 | 1.85 | 1.93 |      |      |
| 3000           | SHEAVE/MTR | A  | A    | A    | A    | A    | E    | E    | E    | E    | E    | E    | E    | E    | E    | E    |      |
| 3000           | RPM        | 793  | 825  | 858  | 889  | 920  | 951  | 981  | 1011 | 1040 | 1069 | 1098 | 1126 | 1154 | 1182 |      |      |
| 3000           | TURNS OPEN | 3.5  | 3.0  | 2.5  | 1.5  | 1.0  | 0.5  | 0.0  | 3.5  | 3.5  | 3.0  | 2.5  | 2.0  | 1.5  | 1.0  |      |      |

A = Standard Static/Standard Motor, B = Low Static/Standard Motor, C = High Static/Standard Motor, D = Standard Static/Large Motor, E = High Static/Large Motor

Unit factory shipped with standard static sheave and drive at 2.5 turns open (2400 CFM @ 0.5in. ESP wet coil). Other speed require field selection.

ISO/ARI rating point with standard static sheave and drive 3.5 turns open (2400 CFM @ 0.5in. ESP wet coil). Other speeds require field selection.

For applications requiring higher static pressures, contact your local representative.

Performance data does not include drive losses and is based on sea level conditions.

Do not operate in black regions.

All airflow in rated at lowest Voltage if unit is dual Voltage rated, i.e. 208V for 208-230V units.

For wet coil performance first calculate the face velocity of the air coil (Face Velocity [FPM] = Airflow [CFM] / Face Area [sqft]).

Then use preceding dry coil to wet coil conversion table.

**Blower Performance Data  
GLH096**

Airflow in CFM with dry coil and clean air filter.

| Airflow (SCFM) |            | Airflow (cfm) at External Static Pressure (in. wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------|------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                |            | 0.00   | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 | 0.70 | 0.80 | 0.90 | 1.00 | 1.10 | 1.20 | 1.30 | 1.40 | 1.50 |
| 2600           | BHP        |  | 0.84 | 0.91 | 0.97 | 1.04 | 1.10 | 1.17 | 1.24 | 1.31 | 1.37 | 1.44 | 1.51 | 1.58 | 1.65 | 1.72 |      |
| 2600           | SHEAVE/MTR |  | B    | B    | B    | B    | B    | A    | A    | A    | A    | A    | C    | C    | C    | C    |      |
| 2600           | RPM        |  | 1048 | 1095 | 1140 | 1184 | 1226 | 1267 | 1308 | 1346 | 1384 | 1421 | 1457 | 1493 | 1527 | 1560 |      |
| 2600           | TURNS OPEN |  | 4.0  | 3.0  | 2.0  | 1.0  | 0.0  | 4.0  | 3.5  | 2.5  | 2.0  | 1.5  | 1.0  | 4.5  | 4.0  | 3.5  |      |
| 2800           | BHP        | 0.87   | 0.94 | 1.01 | 1.08 | 1.15 | 1.22 | 1.29 | 1.36 | 1.43 | 1.51 | 1.58 | 1.65 | 1.73 | 1.80 | 1.87 | 1.95 |
| 2800           | SHEAVE/MTR | B  | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | C    | C    | C    | C    |      |
| 2800           | RPM        | 1012   | 1058 | 1104 | 1148 | 1191 | 1232 | 1273 | 1313 | 1351 | 1389 | 1426 | 1461 | 1497 | 1531 | 1564 | 1597 |
| 2800           | TURNS OPEN | 4.5  | 3.5  | 2.5  | 2.0  | 1.0  | 4.5  | 4.0  | 3.5  | 2.5  | 2.0  | 1.5  | 1.0  | 4.5  | 4.0  | 3.5  | 3.0  |
| 3000           | BHP        | 1.05   | 1.12 | 1.20 | 1.27 | 1.35 | 1.42 | 1.50 | 1.57 | 1.65 | 1.73 | 1.80 | 1.88 | 1.96 | 2.04 | 2.12 | 2.20 |
| 3000           | SHEAVE/MTR | B  | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | C    | E    | E    | E    |      |
| 3000           | RPM        | 1070   | 1114 | 1157 | 1199 | 1239 | 1280 | 1319 | 1356 | 1394 | 1430 | 1465 | 1501 | 1534 | 1568 | 1601 | 1632 |
| 3000           | TURNS OPEN | 3.5  | 2.5  | 1.5  | 0.5  | 4.5  | 4.0  | 3.0  | 2.5  | 2.0  | 1.5  | 0.5  | 0.0  | 4.0  | 3.5  | 3.0  | 2.5  |
| 3200           | BHP        | 1.25   | 1.32 | 1.40 | 1.48 | 1.56 | 1.64 | 1.72 | 1.80 | 1.88 | 2.00 | 2.04 | 2.13 | 2.21 | 2.29 | 2.38 | 2.46 |
| 3200           | SHEAVE/MTR | B  | B    | B    | A    | A    | A    | A    | A    | D    | D    | E    | E    | E    | E    | E    |      |
| 3200           | RPM        | 1126   | 1167 | 1208 | 1248 | 1287 | 1325 | 1362 | 1400 | 1435 | 1470 | 1505 | 1538 | 1571 | 1604 | 1636 | 1667 |
| 3200           | TURNS OPEN | 2.5  | 1.5  | 0.5  | 4.5  | 3.5  | 3.0  | 2.5  | 2.0  | 1.0  | 0.5  | 0.0  | 4.0  | 3.5  | 3.0  | 2.5  | 2.0  |
| 3400           | BHP        | 1.46   | 1.54 | 1.62 | 1.71 | 1.79 | 1.88 | 1.96 | 2.05 | 2.13 | 2.22 | 2.31 | 2.39 | 2.48 | 2.57 | 2.65 | 2.74 |
| 3400           | SHEAVE/MTR | B  | B    | A    | A    | A    | A    | D    | D    | D    | E    | E    | E    | E    | E    | E    |      |
| 3400           | RPM        | 1179   | 1219 | 1257 | 1296 | 1333 | 1369 | 1406 | 1441 | 1475 | 1510 | 1543 | 1576 | 1608 | 1639 | 1671 | 1702 |
| 3400           | TURNS OPEN | 1.0  | 0.5  | 4.5  | 3.5  | 3.0  | 2.5  | 1.5  | 1.0  | 0.5  | 0.0  | 4.0  | 3.5  | 3.0  | 2.5  | 2.0  | 1.5  |
| 3600           | BHP        | 1.69   | 1.78 | 1.87 | 1.95 | 2.04 | 2.13 | 2.22 | 2.31 | 2.40 | 2.49 | 2.58 | 2.67 | 2.76 | 2.85 | 2.94 |      |
| 3600           | SHEAVE/MTR | A  | A    | A    | A    | D    | D    | D    | D    | E    | E    | E    | E    | E    | E    | E    |      |
| 3600           | RPM        | 1230   | 1268 | 1305 | 1341 | 1377 | 1413 | 1447 | 1481 | 1515 | 1548 | 1580 | 1612 | 1643 | 1674 | 1705 |      |
| 3600           | TURNS OPEN | 4.5  | 4.0  | 3.5  | 3.0  | 2.0  | 1.5  | 1.0  | 0.5  | 0.0  | 4.0  | 3.5  | 3.0  | 2.5  | 2.0  | 1.5  |      |
| 3800           | BHP        | 1.94   | 2.03 | 2.13 | 2.22 | 2.31 | 2.41 | 2.50 | 2.59 | 2.69 | 2.78 | 2.88 | 2.97 |      |      |      |      |
| 3800           | SHEAVE/MTR | A  | D    | D    | D    | D    | D    | E    | E    | E    | E    | E    |      |      |      |      |      |
| 3800           | RPM        | 1280   | 1316 | 1351 | 1387 | 1421 | 1455 | 1488 | 1521 | 1553 | 1586 | 1617 | 1648 |      |      |      |      |
| 3800           | TURNS OPEN | 4.0  | 3.0  | 2.5  | 2.0  | 1.5  | 1.0  | 0.5  | 4.0  | 3.5  | 3.0  | 3.0  | 2.5  |      |      |      |      |

A = Standard Static/Standard Motor, B = Low Static/Standard Motor, C = High Static/Standard Motor, D = Standard Static/Large Motor, E = High Static/Large Motor Unit factory shipped with standard static sheave and drive at 2.5 turns open (3200 CFM @ 0.6in. ESP wet coil). Other speed require field selection.

ISO/ARI rating point with standard static sheave and drive 3.5 turns open (3200 CFM @ 0.4in. ESP wet coil). Other speeds require field selection.

For applications requiring higher static pressures, contact your local representative.

Performance data does not include drive losses and is based on sea level conditions.

Do not operate in black regions.

All airflow is rated at lowest Voltage if unit is dual Voltage rated, i.e. 208V for 208-230V units.

For wet coil performance first calculate the face velocity of the air coil (Face Velocity [FPM] = Airflow [CFM] / Face Area [sqft]).

Then use preceding dry coil to wet coil conversion table.

## Genesis Large (GL) Series

Rev.: 05/23/07D

## Blower Performance Data

### GLH120

Airflow in CFM with dry coil and clean air filter.

| Airflow (SCFM) |            | Airflow (cfm) at External Static Pressure (in. wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------|------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                |            | 0.00   | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 | 0.70 | 0.80 | 0.90 | 1.00 | 1.10 | 1.20 | 1.30 | 1.40 | 1.50 |
| 3400           | BHP        | 1.10   | 1.15 | 1.20 | 1.25 | 1.30 | 1.35 | 1.40 | 1.45 | 1.50 | 1.54 | 1.59 | 1.63 | 1.68 | 1.73 | 1.77 | 1.82 |
| 3400           | SHEAVE/MTR | B  | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    |      |
| 3400           | RPM        | 1014   | 1043 | 1072 | 1102 | 1129 | 1156 | 1183 | 1209 | 1234 | 1260 | 1285 | 1309 | 1333 | 1356 | 1380 | 1403 |
| 3400           | TURNS OPEN | 3.0  | 2.5  | 2.0  | 1.0  | 0.5  | 4.5  | 4.0  | 3.5  | 3.0  | 2.5  | 2.0  | 1.5  | 1.0  | 4.5  | 4.0  | 4.0  |
| 3600           | BHP        | 1.26   | 1.31 | 1.37 | 1.42 | 1.48 | 1.53 | 1.58 | 1.63 | 1.68 | 1.74 | 1.79 | 1.84 | 1.89 | 1.94 | 1.99 | 2.04 |
| 3600           | SHEAVE/MTR | B  | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    | E    |      |
| 3600           | RPM        | 1052   | 1081 | 1109 | 1136 | 1163 | 1190 | 1216 | 1241 | 1266 | 1291 | 1315 | 1338 | 1362 | 1385 | 1408 | 1430 |
| 3600           | TURNS OPEN | 2.5  | 1.5  | 1.0  | 0.5  | 4.0  | 3.5  | 3.0  | 2.5  | 2.5  | 2.0  | 1.5  | 1.0  | 4.5  | 4.0  | 3.5  | 3.5  |
| 3800           | BHP        | 1.44   | 1.50 | 1.56 | 1.61 | 1.67 | 1.73 | 1.78 | 1.84 | 1.89 | 1.95 | 2.00 | 2.06 | 2.11 | 2.16 | 2.21 | 2.26 |
| 3800           | SHEAVE/MTR | B  | B    | B    | A    | A    | A    | A    | A    | A    | A    | D    | D    | E    | E    | E    |      |
| 3800           | RPM        | 1090   | 1118 | 1145 | 1172 | 1199 | 1223 | 1248 | 1273 | 1298 | 1321 | 1345 | 1368 | 1391 | 1413 | 1435 | 1457 |
| 3800           | TURNS OPEN | 1.5  | 1.0  | 0.0  | 4.0  | 3.5  | 3.0  | 2.5  | 2.0  | 1.5  | 1.0  | 1.0  | 0.5  | 0.0  | 3.5  | 3.5  | 3.0  |
| 4000           | BHP        | 1.63   | 1.70 | 1.76 | 1.82 | 1.88 | 1.94 | 2.00 | 2.06 | 2.11 | 2.17 | 2.22 | 2.28 | 2.34 | 2.39 | 2.45 | 2.50 |
| 4000           | SHEAVE/MTR | B  | A    | A    | A    | A    | A    | A    | D    | D    | D    | D    | E    | E    | E    | E    |      |
| 4000           | RPM        | 1127   | 1154 | 1181 | 1207 | 1232 | 1257 | 1281 | 1306 | 1329 | 1352 | 1375 | 1398 | 1420 | 1441 | 1463 | 1485 |
| 4000           | TURNS OPEN | 0.5  | 4.5  | 4.0  | 3.5  | 3.0  | 2.5  | 2.0  | 1.5  | 1.0  | 0.5  | 0.0  | 0.0  | 3.5  | 3.0  | 3.0  | 2.5  |
| 4200           | BHP        | 1.84   | 1.91 | 1.98 | 2.04 | 2.10 | 2.16 | 2.22 | 2.28 | 2.34 | 2.40 | 2.47 | 2.53 | 2.59 | 2.65 | 2.71 | 2.77 |
| 4200           | SHEAVE/MTR | A  | A    | A    | D    | D    | D    | D    | D    | D    | E    | E    | E    | E    | E    | E    |      |
| 4200           | RPM        | 1164   | 1191 | 1217 | 1241 | 1266 | 1291 | 1314 | 1337 | 1360 | 1383 | 1406 | 1427 | 1449 | 1470 | 1492 | 1513 |
| 4200           | TURNS OPEN | 4.0  | 3.5  | 3.0  | 2.5  | 2.5  | 2.0  | 1.5  | 1.0  | 0.5  | 0.0  | 3.5  | 3.5  | 3.0  | 2.5  | 2.5  | 2.0  |
| 4400           | BHP        | 2.07   | 2.13 | 2.20 | 2.27 | 2.33 | 2.40 | 2.46 | 2.53 | 2.60 | 2.66 | 2.73 | 2.79 | 2.86 | 2.93 | 2.99 |      |
| 4400           | SHEAVE/MTR | D  | D    | D    | D    | D    | D    | D    | D    | E    | E    | E    | E    | E    | E    | E    |      |
| 4400           | RPM        | 1202   | 1227 | 1251 | 1276 | 1300 | 1323 | 1346 | 1369 | 1392 | 1414 | 1435 | 1457 | 1478 | 1500 | 1520 |      |
| 4400           | TURNS OPEN | 3.5  | 3.0  | 2.5  | 2.0  | 1.5  | 1.0  | 1.0  | 0.5  | 0.0  | 3.5  | 3.5  | 3.0  | 2.5  | 2.5  | 2.0  |      |
| 4600           | BHP        | 2.30   | 2.37 | 2.44 | 2.51 | 2.59 | 2.66 | 2.73 | 2.80 | 2.87 | 2.95 |      |      |      |      |      |      |
| 4600           | SHEAVE/MTR | D  | D    | D    | D    | D    | D    | D    | E    | E    | E    |      |      |      |      |      |      |
| 4600           | RPM        | 1237   | 1262 | 1287 | 1310 | 1333 | 1356 | 1379 | 1402 | 1423 | 1444 |      |      |      |      |      |      |
| 4600           | TURNS OPEN | 3.0  | 2.5  | 2.0  | 1.5  | 1.0  | 0.5  | 0.0  | 4.0  | 3.5  | 3.0  |      |      |      |      |      |      |

A = Standard Static/Standard Motor, B = Low Static/Standard Motor, C = High Static/Standard Motor, D = Standard Static/Large Motor, E = High Static/Large Motor Unit factory shipped with standard static sheave and drive at 2.5 turns open (4000 CFM @ 0.5in. ESP wet coil). Other speed require field selection.

ISO/ARI rating point with standard static sheave and drive 3.5 turns open (4000 CFM @ 0.4in. ESP wet coil). Other speeds require field selection.

For applications requiring higher static pressures, contact your local representative.

Performance data does not include drive losses and is based on sea level conditions.

Do not operate in black regions.

All airflow in rated at lowest Voltage if unit is dual Voltage rated, i.e. 208V for 208-230V units.

For wet coil performance first calculate the face velocity of the air coil (Face Velocity [FPM] = Airflow [CFM] / Face Area [sqft]).

Then use preceding dry coil to wet coil conversion table.

## Blower Performance Data

### GLV080 - Standard Unit - No Reheat

Airflow in CFM with dry coil and clean air filter.

| Airflow (SCFM) |            | Airflow (cfm) at External Static Pressure (in. wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------|------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                |            | 0.00   | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 | 0.70 | 0.80 | 0.90 | 1.00 | 1.10 | 1.20 | 1.30 | 1.40 | 1.50 |
| 2000           | BHP        | 0.36   | 0.40 | 0.43 | 0.47 | 0.51 | 0.55 | 0.59 | 0.63 | 0.68 | 0.72 | 0.76 | 0.81 | 0.85 | 0.90 | 0.95 | 0.99 |
| 2000           | SHEAVE/MTR | B  | B    | B    | B    | A    | A    | A    | A    | A    | A    | C    | C    | C    | C    | C    |      |
| 2000           | RPM        | 601  | 641  | 681  | 720  | 757  | 795  | 831  | 867  | 903  | 937  | 971  | 1005 | 1037 | 1069 | 1101 | 1131 |
| 2000           | TURNS OPEN | 2.5  | 2    | 1    | 0    | 4.5  | 4    | 3    | 2.5  | 1.5  | 1    | 0.5  | 3    | 2.5  | 2    | 1.5  | 1    |
| 2200           | BHP        | 0.45   | 0.48 | 0.53 | 0.57 | 0.61 | 0.65 | 0.70 | 0.74 | 0.79 | 0.83 | 0.88 | 0.93 | 0.97 | 1.02 | 1.08 | 1.13 |
| 2200           | SHEAVE/MTR | B  | B    | B    | B    | A    | A    | A    | A    | A    | A    | C    | C    | C    | C    | C    |      |
| 2200           | RPM        | 634  | 672  | 709  | 742  | 780  | 815  | 849  | 883  | 916  | 948  | 981  | 1013 | 1044 | 1074 | 1105 | 1134 |
| 2200           | TURNS OPEN | 2  | 1    | 0.5  | 0    | 4    | 3.5  | 3    | 2    | 1.5  | 1    | 0    | 3    | 2.5  | 2    | 1.5  | 1    |
| 2400           | BHP        | 0.56   | 0.60 | 0.64 | 0.69 | 0.73 | 0.77 | 0.82 | 0.87 | 0.92 | 0.96 | 1.01 | 1.07 | 1.12 | 1.17 | 1.23 | 1.28 |
| 2400           | SHEAVE/MTR | B  | B    | B    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    | C    | C    |      |
| 2400           | RPM        | 672  | 707  | 741  | 774  | 807  | 840  | 872  | 904  | 935  | 966  | 997  | 1026 | 1056 | 1085 | 1114 | 1142 |
| 2400           | TURNS OPEN | 1  | 0.5  | 0    | 4.5  | 3.5  | 3    | 2.5  | 1.5  | 1    | 0.5  | 0    | 3    | 2.5  | 2    | 1.5  | 1    |
| 2600           | BHP        | 0.68   | 0.73 | 0.77 | 0.82 | 0.87 | 0.92 | 0.96 | 1.01 | 1.07 | 1.12 | 1.17 | 1.23 | 1.28 | 1.33 | 1.39 | 1.44 |
| 2600           | SHEAVE/MTR | B  | B    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    | C    | C    | C    |      |
| 2600           | RPM        | 711  | 742  | 775  | 806  | 837  | 867  | 898  | 927  | 957  | 986  | 1015 | 1043 | 1071 | 1100 | 1127 | 1154 |
| 2600           | TURNS OPEN | 0.5  | 0    | 4    | 3.5  | 3    | 2.5  | 2    | 1    | 0.5  | 0    | 3    | 2.5  | 2    | 1.5  | 1    | 0.5  |
| 2800           | BHP        | 0.82   | 0.87 | 0.92 | 0.97 | 1.02 | 1.07 | 1.13 | 1.18 | 1.23 | 1.29 | 1.34 | 1.40 | 1.45 | 1.50 | 1.56 | 1.62 |
| 2800           | SHEAVE/MTR | A  | A    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    | E    | E    | E    |      |
| 2800           | RPM        | 750  | 778  | 809  | 838  | 867  | 896  | 924  | 952  | 980  | 1007 | 1034 | 1062 | 1089 | 1115 | 1141 | 1167 |
| 2800           | TURNS OPEN | 4.5  | 4    | 3.5  | 3    | 2.5  | 2    | 1.5  | 0.5  | 0    | 3    | 2.5  | 2    | 2    | 1.5  | 1    | 0.5  |
| 3000           | BHP        | 0.98   | 1.03 | 1.08 | 1.14 | 1.19 | 1.25 | 1.30 | 1.35 | 1.41 | 1.46 | 1.52 | 1.58 | 1.64 | 1.70 | 1.76 | 1.82 |
| 3000           | SHEAVE/MTR | A  | A    | A    | A    | A    | A    | A    | C    | C    | E    | E    | E    | E    | E    | E    |      |
| 3000           | RPM        | 783  | 812  | 839  | 867  | 895  | 922  | 949  | 975  | 1002 | 1028 | 1054 | 1079 | 1105 | 1130 | 1155 | 1180 |
| 3000           | TURNS OPEN | 4  | 3.5  | 3    | 2.5  | 2    | 1.5  | 1    | 0.5  | 3    | 3    | 2.5  | 2    | 1.5  | 1    | 0.5  | 0.5  |
| 3200           | BHP        | 1.14   | 1.20 | 1.25 | 1.31 | 1.36 | 1.42 | 1.50 | 1.53 | 1.59 | 1.65 | 1.72 | 1.78 | 1.84 | 1.90 | 1.96 |      |
| 3200           | SHEAVE/MTR | A  | A    | A    | A    | A    | E    | E    | E    | E    | E    | E    | E    | E    | E    | E    |      |
| 3200           | RPM        | 813  | 840  | 867  | 894  | 920  | 945  | 971  | 996  | 1021 | 1046 | 1071 | 1095 | 1120 | 1144 | 1168 |      |
| 3200           | TURNS OPEN | 3.5  | 3    | 2.5  | 2    | 1.5  | 1    | 3.5  | 3.5  | 3    | 2.5  | 2    | 1.5  | 1.0  | 1.0  | 0.5  |      |

A = Standard Static/Standard Motor, B = Low Static/Standard Motor, C = High Static/Standard Motor, D = Standard Static/Large Motor, E = High Static/Large Motor Unit factory shipped with standard static sheave and drive at 2.5 turns open (2600 CFM @ 0.4in. ESP wet coil). Other speed require field selection.

ISO/ARI rating point with standard static sheave and drive 2 turns open (2600 CFM @ 0.48in. ESP wet coil). Other speeds require field selection.

For applications requiring higher static pressures, contact your local representative.

Performance data does not include drive losses and is based on sea level conditions.

Do not operate in black regions.

All airflow is rated at lowest Voltage if unit is dual Voltage rated, i.e. 208V for 208-230V units.

For wet coil performance first calculate the face velocity of the air coil (Face Velocity [FPM] = Airflow [CFM] / Face Area [sqft]).

Then use preceding dry coil to wet coil conversion table.

## Blower Performance Data

### Standard Unit - No Reheat - GLV100

Airflow in CFM with dry coil and clean air filter.

| Airflow (SCFM) |            | Airflow (cfm) at External Static Pressure (in. wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------|------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                |            | 0.00   | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 | 0.70 | 0.80 | 0.90 | 1.00 | 1.10 | 1.20 | 1.30 | 1.40 | 1.50 |      |      |      |
| 2700           | BHP        |  |      |      |      | 0.55 | 0.62 | 0.69 | 0.75 | 0.83 | 0.90 | 0.97 | 1.05 | 1.13 | 1.21 | 1.28 | 1.36 |      |      |      |
|                | SHEAVE/MTR |  |      |      |      | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | A    |      |      |      |
|                | RPM        |  |      |      |      | 600  | 635  | 670  | 704  | 736  | 768  | 800  | 829  | 857  | 886  | 914  | 940  |      |      |      |
|                | TURNS OPEN |  |      |      |      | 3.5  | 3    | 2    | 1    | 4.5  | 3.5  | 3    | 2.5  | 2    | 1.5  | 0.5  | 0    |      |      |      |
| 2900           | BHP        |  |      |      |      | 0.56 | 0.63 | 0.69 | 0.76 | 0.83 | 0.91 | 0.98 | 1.06 | 1.14 | 1.23 | 1.31 | 1.39 | 1.47 |      |      |
|                | SHEAVE/MTR |  |      |      |      | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | A    |      |      |      |
|                | RPM        |  |      |      |      | 576  | 613  | 647  | 681  | 713  | 744  | 776  | 806  | 835  | 863  | 892  | 918  | 944  |      |      |
|                | TURNS OPEN |  |      |      |      | 4.5  | 3.5  | 2.5  | 1.5  | 0.5  | 4    | 3.5  | 3    | 2.5  | 1.5  | 1    | 0.5  | 0    |      |      |
| 3100           | BHP        |  |      |      |      | 0.64 | 0.70 | 0.77 | 0.84 | 0.92 | 0.99 | 1.08 | 1.16 | 1.24 | 1.32 | 1.41 | 1.50 | 1.58 |      |      |
|                | SHEAVE/MTR |  |      |      |      | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | E    | E    |      |      |      |
|                | RPM        |  |      |      |      | 592  | 626  | 659  | 692  | 723  | 753  | 783  | 813  | 841  | 869  | 897  | 923  | 948  |      |      |
|                | TURNS OPEN |  |      |      |      | 4    | 3    | 2    | 1.5  | 4.5  | 4    | 3.5  | 3    | 2    | 1.5  | 1    | 2.5  | 2    |      |      |
| 3300           | BHP        |  |      |      |      | 0.66 | 0.72 | 0.78 | 0.86 | 0.93 | 1.00 | 1.09 | 1.17 | 1.26 | 1.34 | 1.43 | 1.51 | 1.60 | 1.69 |      |
|                | SHEAVE/MTR |  |      |      |      | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | E    | E    | E    |      |      |
|                | RPM        |  |      |      |      | 571  | 606  | 639  | 671  | 703  | 733  | 762  | 792  | 820  | 847  | 875  | 902  | 927  | 952  |      |
|                | TURNS OPEN |  |      |      |      | 4.5  | 3.5  | 2.5  | 2    | 1    | 4.5  | 4    | 3    | 2.5  | 2    | 1.5  | 3    | 2.5  | 2    |      |
| 3500           | BHP        |  |      |      |      | 0.74 | 0.81 | 0.88 | 0.95 | 1.02 | 1.11 | 1.19 | 1.28 | 1.36 | 1.44 | 1.53 | 1.62 | 1.72 | 1.81 |      |
|                | SHEAVE/MTR |  |      |      |      | B    | B    | B    | B    | B    | A    | A    | A    | A    | A    | E    | E    | E    |      |      |
|                | RPM        |  |      |      |      | 587  | 620  | 652  | 684  | 714  | 743  | 772  | 801  | 827  | 854  | 881  | 907  | 932  | 957  |      |
|                | TURNS OPEN |  |      |      |      | 4    | 3    | 2.5  | 1.5  | 0.5  | 4.5  | 3.5  | 3    | 2.5  | 2    | 3.5  | 3    | 2.5  | 2    |      |
| 3700           | BHP        |  |      |      |      | 0.77 | 0.84 | 0.91 | 0.98 | 1.05 | 1.14 | 1.22 | 1.30 | 1.38 | 1.47 | 1.56 | 1.65 | 1.75 | 1.84 | 1.93 |
|                | SHEAVE/MTR |  |      |      |      | B    | B    | B    | B    | B    | A    | A    | A    | A    | A    | E    | E    | E    |      |      |
|                | RPM        |  |      |      |      | 569  | 604  | 635  | 666  | 697  | 726  | 754  | 782  | 810  | 836  | 862  | 889  | 914  | 938  | 963  |
|                | TURNS OPEN |  |      |      |      | 4.5  | 3.5  | 3    | 2    | 1    | 4.5  | 4    | 3.5  | 3    | 2.5  | 4    | 3.5  | 3    | 2.5  | 2    |
| 3900           | BHP        |  |      |      |      | 0.88 | 0.94 | 1.01 | 1.09 | 1.17 | 1.25 | 1.33 | 1.42 | 1.50 | 1.59 | 1.68 | 1.78 | 1.87 | 1.97 |      |
|                | SHEAVE/MTR |  |      |      |      | B    | B    | B    | B    | B    | A    | A    | A    | E    | E    | E    | E    | E    |      |      |
|                | RPM        |  |      |      |      | 587  | 619  | 650  | 681  | 710  | 738  | 766  | 794  | 820  | 846  | 871  | 897  | 921  | 945  |      |
|                | TURNS OPEN |  |      |      |      | 4    | 3    | 2.5  | 1.5  | 1    | 4.5  | 4    | 3    | 4.5  | 4    | 3.5  | 3    | 2.5  | 2    |      |
| 4100           | BHP        | 0.93   | 0.99 | 1.07 | 1.14 | 1.22 | 1.30 | 1.38 | 1.45 | 1.54 | 1.63 | 1.73 | 1.82 | 1.91 |      |      |      |      |      |      |
| 4100           | SHEAVE/MTR | B  | B    | B    | B    | B    | A    | A    | A    | E    | E    | E    | E    | E    |      |      |      |      |      |      |
| 4100           | RPM        | 574  | 606  | 636  | 667  | 697  | 724  | 752  | 779  | 809  | 831  | 856  | 882  | 906  |      |      |      |      |      |      |
| 4100           | TURNS OPEN | 4.5  | 3.5  | 3    | 2    | 1    | 4.5  | 4    | 3.5  | 5    | 4.5  | 4    | 3.5  | 3    |      |      |      |      |      |      |

A = Standard Static/Standard Motor, B = Low Static/Standard Motor, C = High Static/Standard Motor, D = Standard Static/Large Motor, E = High Static/Large Motor  
 Unit factory shipped with standard static sheave and drive at 2.5 turns open (3500 CFM @ 0.7in. ESP wet coil). Other speed require field selection.

ISO/ARI rating point with standard static sheave and drive 3.5 turns open (3500 CFM @ 0.45in. ESP wet coil). Other speeds require field selection.

For applications requiring higher static pressures, contact your local representative.

Performance data does not include drive losses and is based on sea level conditions.

Do not operate in black regions.

All airflow is rated at lowest Voltage if unit is dual Voltage rated, i.e. 208V for 208-230V units.

For wet coil performance first calculate the face velocity of the air coil (Face Velocity [FPM] = Airflow [CFM] / Face Area [sqft]).

Then use preceding dry coil to wet coil conversion table.

## Blower Performance Data GLV120 - Standard Unit - No Reheat

Airflow in CFM with dry coil and clean air filter.

| Airflow (SCFM) |            | Airflow (cfm) at External Static Pressure (in. wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------|------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                |            | 0.00   | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 | 0.70 | 0.80 | 0.90 | 1.00 | 1.10 | 1.20 | 1.30 | 1.40 | 1.50 |      |      |
| 2800           | BHP        |  |      |      | 0.52 | 0.59 | 0.66 | 0.72 | 0.79 | 0.87 | 0.94 | 1.02 | 1.10 | 1.18 | 1.26 | 1.34 | 1.42 |      |      |
| 2800           | SHEAVE/MTR |  |      |      | A    | A    | A    | A    | A    | C    | C    | C    | C    | C    | C    | C    | C    |      |      |
| 2800           | RPM        |  |      |      | 569  | 606  | 641  | 675  | 709  | 740  | 772  | 803  | 832  | 860  | 889  | 916  | 942  |      |      |
| 2800           | TURNS OPEN |  |      |      | 4.5  | 3.5  | 2.5  | 2    | 1    | 4.5  | 3.5  | 3    | 2.5  | 2    | 1    | 0.5  | 0    |      |      |
| 3000           | BHP        |  |      |      | 0.60 | 0.66 | 0.73 | 0.80 | 0.88 | 0.95 | 1.03 | 1.11 | 1.19 | 1.27 | 1.36 | 1.44 | 1.52 |      |      |
| 3000           | SHEAVE/MTR |  |      |      | A    | A    | A    | A    | A    | C    | C    | C    | C    | C    | C    | C    | C    |      |      |
| 3000           | RPM        |  |      |      | 584  | 619  | 653  | 686  | 718  | 749  | 779  | 809  | 838  | 866  | 894  | 920  | 946  |      |      |
| 3000           | TURNS OPEN |  |      |      | 4    | 3    | 2.5  | 1.5  | 0.5  | 4    | 3.5  | 3    | 2.5  | 1.5  | 1    | 0.5  | 0    |      |      |
| 3200           | BHP        |  |      |      | 0.61 | 0.68 | 0.74 | 0.81 | 0.89 | 0.96 | 1.04 | 1.12 | 1.21 | 1.29 | 1.37 | 1.46 | 1.55 | 1.64 |      |
| 3200           | SHEAVE/MTR |  |      |      | A    | A    | A    | A    | A    | C    | C    | C    | C    | C    | C    | C    | C    |      |      |
| 3200           | RPM        |  |      |      | 563  | 599  | 632  | 665  | 697  | 728  | 758  | 788  | 816  | 844  | 871  | 899  | 925  | 950  |      |
| 3200           | TURNS OPEN |  |      |      | 4.5  | 4    | 3    | 2    | 1    | 4.5  | 4    | 3.5  | 2.5  | 2    | 1.5  | 1    | 0.5  | 0    |      |
| 3400           | BHP        |  |      |      | 0.70 | 0.76 | 0.83 | 0.90 | 0.98 | 1.06 | 1.14 | 1.22 | 1.31 | 1.39 | 1.48 | 1.57 | 1.66 | 1.75 |      |
| 3400           | SHEAVE/MTR |  |      |      | A    | A    | A    | A    | A    | C    | C    | C    | C    | C    | C    | C    | C    |      |      |
| 3400           | RPM        |  |      |      | 579  | 613  | 645  | 677  | 708  | 738  | 767  | 796  | 824  | 851  | 878  | 904  | 930  | 955  |      |
| 3400           | TURNS OPEN |  |      |      | 4.5  | 3.5  | 2.5  | 1.5  | 1    | 4.5  | 3.5  | 3    | 2.5  | 2    | 1.5  | 1    | 0.5  | 0    |      |
| 3600           | BHP        |  |      |      | 0.79 | 0.86 | 0.93 | 1.00 | 1.08 | 1.16 | 1.25 | 1.33 | 1.41 | 1.50 | 1.59 | 1.68 | 1.78 | 1.87 |      |
| 3600           | SHEAVE/MTR |  |      |      | A    | A    | A    | A    | C    | C    | C    | C    | C    | C    | C    | C    | C    |      |      |
| 3600           | RPM        |  |      |      | 595  | 627  | 659  | 690  | 720  | 748  | 777  | 805  | 832  | 858  | 885  | 910  | 935  | 958  |      |
| 3600           | TURNS OPEN |  |      |      | 4    | 3    | 2    | 1.5  | 4.5  | 4    | 3.5  | 3    | 2.5  | 2    | 1.5  | 1    | 0    | 0    |      |
| 3800           | BHP        |  |      |      | 0.82 | 0.89 | 0.96 | 1.03 | 1.11 | 1.19 | 1.28 | 1.36 | 1.44 | 1.52 | 1.62 | 1.71 | 1.81 | 1.90 | 2.00 |
| 3800           | SHEAVE/MTR |  |      |      | A    | A    | A    | A    | A    | C    | C    | C    | C    | C    | C    | C    | E    |      |      |
| 3800           | RPM        |  |      |      | 578  | 611  | 642  | 673  | 704  | 732  | 760  | 788  | 815  | 841  | 867  | 893  | 917  | 942  | 966  |
| 3800           | TURNS OPEN |  |      |      | 4.5  | 3.5  | 2.5  | 2    | 1    | 4.5  | 4    | 3.5  | 2.5  | 2    | 1.5  | 1    | 0.5  | 0    |      |
| 4000           | BHP        | 0.87   | 0.93 | 1.00 | 1.08 | 1.16 | 1.24 | 1.31 | 1.39 | 1.47 | 1.56 | 1.66 | 1.75 | 1.84 | 1.94 | 2.04 | 2.14 |      |      |
| 4000           | SHEAVE/MTR | A  | A    | A    | A    | A    | A    | C    | C    | C    | C    | C    | C    | C    | C    | E    | E    |      |      |
| 4000           | RPM        | 563  | 597  | 628  | 658  | 689  | 717  | 745  | 772  | 800  | 825  | 851  | 876  | 902  | 925  | 949  | 973  |      |      |
| 4000           | TURNS OPEN | 4.5  | 4    | 3    | 2    | 1.5  | 0.5  | 4    | 3.5  | 3    | 2.5  | 2    | 1.5  | 1    | 0.5  | 2    | 1.5  |      |      |
| 4200           | BHP        | 0.98   | 1.06 | 1.13 | 1.21 | 1.29 | 1.36 | 1.44 | 1.52 | 1.61 | 1.70 | 1.80 | 1.89 | 1.98 | 2.08 | 2.19 | 2.30 |      |      |
| 4200           | SHEAVE/MTR | A  | A    | A    | A    | A    | C    | C    | C    | C    | C    | C    | C    | C    | E    | E    | E    |      |      |
| 4200           | RPM        | 584  | 615  | 645  | 675  | 705  | 732  | 759  | 786  | 812  | 837  | 862  | 887  | 911  | 935  | 958  | 981  |      |      |
| 4200           | TURNS OPEN | 4  | 3.5  | 2.5  | 2    | 1    | 4.5  | 4    | 3.5  | 3    | 2.5  | 2    | 1    | 0.5  | 2.5  | 2    | 1.5  |      |      |
| 4400           | BHP        | 1.13   | 1.20 | 1.27 | 1.35 | 1.42 | 1.49 | 1.58 | 1.67 | 1.76 | 1.85 | 1.94 | 2.04 | 2.15 | 2.25 | 2.36 | 2.46 |      |      |
| 4400           | SHEAVE/MTR | A  | A    | A    | A    | C    | C    | C    | C    | C    | C    | C    | E    | E    | E    | E    | E    |      |      |
| 4400           | RPM        | 605  | 634  | 664  | 694  | 721  | 748  | 774  | 801  | 826  | 850  | 875  | 899  | 922  | 945  | 968  | 991  |      |      |
| 4400           | TURNS OPEN | 3.5  | 3    | 2    | 1    | 4.5  | 4    | 3.5  | 3    | 2.5  | 2    | 1.5  | 3    | 2.5  | 2    | 2    | 1.5  |      |      |
| 4600           | BHP        | 1.28   | 1.35 | 1.42 | 1.49 | 1.57 | 1.66 | 1.75 | 1.84 | 1.92 | 2.01 | 2.12 | 2.22 | 2.33 | 2.43 | 2.54 | 2.64 |      |      |
| 4600           | SHEAVE/MTR | A  | A    | A    | A    | C    | C    | C    | C    | E    | E    | E    | E    | E    | E    | E    | E    |      |      |
| 4600           | RPM        | 626  | 655  | 684  | 712  | 739  | 765  | 791  | 816  | 841  | 865  | 889  | 912  | 935  | 957  | 980  | 1002 |      |      |
| 4600           | TURNS OPEN | 3  | 2.5  | 1.5  | 1    | 4.5  | 4    | 3    | 2.5  | 2    | 3.5  | 3.5  | 3    | 2.5  | 2    | 1.5  | 1    |      |      |

A = Standard Static/Standard Motor, B = Low Static/Standard Motor, C = High Static/Standard Motor, D = Standard Static/Large Motor, E = High Static/Large Motor

Unit factory shipped with standard static sheave and drive at 2.5 turns open (4000 CFM @ 0.5in. ESP wet coil). Other speed require field selection.

ISO/ARI rating point with standard static sheave and drive 3.5 turns open (4000 CFM @ 0.6in. ESP wet coil). Other speeds require field selection.

For applications requiring higher static pressures, contact your local representative.

Performance data does not include drive losses and is based on sea level conditions.

Do not operate in black regions.

All airflow in rated at lowest Voltage if unit is dual Voltage rated, i.e. 208V for 208-230V units.

For wet coil performance first calculate the face velocity of the air coil (Face Velocity [FPM] = Airflow [CFM] / Face Area [sqft]).

Then use preceding dry coil to wet coil conversion table.

## Genesis Large (GL) Series

Rev.: 05/23/07D

## Blower Performance Data

### Standard Unit - No Reheat - GLV160

Airflow in CFM with dry coil and clean air filter.

| Airflow (SCFM) |            | Airflow (cfm) at External Static Pressure (in. wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------|------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                |            | 0.00   | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 | 0.70 | 0.80 | 0.90 | 1.00 | 1.10 | 1.20 | 1.30 | 1.40 | 1.50 |
| 4000           | BHP        | 0.72   | 0.79 | 0.87 | 0.94 | 1.01 | 1.10 | 1.18 | 1.27 | 1.35 | 1.44 | 1.52 | 1.62 | 1.71 | 1.80 | 1.89 | 1.99 |
| 4000           | SHEAVE/MTR | B  | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    | C    | C    |
| 4000           | RPM        | 601  | 641  | 681  | 720  | 757  | 795  | 831  | 867  | 903  | 937  | 971  | 1005 | 1037 | 1069 | 1101 | 1131 |
| 4000           | TURNS OPEN | 2.5  | 2    | 1    | 0    | 4.5  | 4    | 3    | 2.5  | 1.5  | 1    | 0.5  | 3    | 2.5  | 2    | 1.5  | 1    |
| 4400           | BHP        | 0.89   | 0.97 | 1.05 | 1.14 | 1.22 | 1.31 | 1.39 | 1.48 | 1.57 | 1.66 | 1.76 | 1.85 | 1.95 | 2.05 | 2.15 | 2.26 |
| 4400           | SHEAVE/MTR | B  | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    | C    | C    |
| 4400           | RPM        | 634  | 672  | 709  | 742  | 780  | 815  | 849  | 883  | 916  | 948  | 981  | 1013 | 1044 | 1074 | 1105 | 1134 |
| 4400           | TURNS OPEN | 2  | 1    | 0.5  | 0    | 4    | 3.5  | 3    | 2    | 1.5  | 1    | 0    | 3    | 2.5  | 2    | 1.5  | 1    |
| 4800           | BHP        | 1.11   | 1.20 | 1.28 | 1.37 | 1.46 | 1.55 | 1.64 | 1.74 | 1.83 | 1.93 | 2.03 | 2.13 | 2.24 | 2.34 | 2.45 | 2.56 |
| 4800           | SHEAVE/MTR | B  | B    | B    | A    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    | C    | C    |
| 4800           | RPM        | 672  | 707  | 741  | 774  | 807  | 840  | 872  | 904  | 935  | 966  | 997  | 1026 | 1056 | 1085 | 1114 | 1142 |
| 4800           | TURNS OPEN | 1  | 0.5  | 0    | 4.5  | 3.5  | 3    | 2.5  | 1.5  | 1    | 0.5  | 0    | 3    | 2.5  | 2    | 1.5  | 1    |
| 5200           | BHP        | 1.36   | 1.45 | 1.54 | 1.64 | 1.74 | 1.83 | 1.93 | 2.03 | 2.13 | 2.24 | 2.35 | 2.45 | 2.56 | 2.67 | 2.77 | 2.88 |
| 5200           | SHEAVE/MTR | B  | B    | A    | A    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    | C    | C    |
| 5200           | RPM        | 711  | 742  | 775  | 806  | 837  | 867  | 898  | 927  | 957  | 986  | 1015 | 1043 | 1071 | 1100 | 1127 | 1154 |
| 5200           | TURNS OPEN | 0.5  | 0    | 4    | 3.5  | 3    | 2.5  | 2    | 1    | 0.5  | 0    | 3    | 2.5  | 2    | 1.5  | 1    | 0.5  |
| 5600           | BHP        | 1.64   | 1.74 | 1.84 | 1.94 | 2.04 | 2.15 | 2.25 | 2.36 | 2.47 | 2.58 | 2.68 | 2.79 | 2.90 |      |      |      |
| 5600           | SHEAVE/MTR | A  | A    | A    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    | C    | C    |      |
| 5600           | RPM        | 750  | 778  | 809  | 838  | 867  | 896  | 924  | 952  | 980  | 1007 | 1034 | 1062 | 1089 |      |      |      |
| 5600           | TURNS OPEN | 4.5  | 4    | 3.5  | 3    | 2.5  | 2    | 1.5  | 0.5  | 0    | 3    | 2.5  | 2    | 2    |      |      |      |
| 6000           | BHP        | 1.95   | 2.06 | 2.16 | 2.27 | 2.38 | 2.49 | 2.60 | 2.71 | 2.82 | 2.93 |      |      |      |      |      |      |
| 6000           | SHEAVE/MTR | A  | A    | A    | A    | A    | A    | A    | A    | C    | C    |      |      |      |      |      |      |
| 6000           | RPM        | 783  | 812  | 839  | 867  | 895  | 922  | 949  | 975  | 1002 | 1028 |      |      |      |      |      |      |
| 6000           | TURNS OPEN | 4  | 3.5  | 3    | 2.5  | 2    | 1.5  | 1    | 0.5  | 3    | 3    |      |      |      |      |      |      |
| 6400           | BHP        | 2.29   | 2.40 | 2.51 | 2.62 | 2.73 | 2.84 | 2.95 |      |      |      |      |      |      |      |      |      |
| 6400           | SHEAVE/MTR | A  | A    | A    | A    | A    | A    | A    |      |      |      |      |      |      |      |      |      |
| 6400           | RPM        | 813  | 840  | 867  | 894  | 920  | 945  | 971  |      |      |      |      |      |      |      |      |      |
| 6400           | TURNS OPEN | 3.5  | 3    | 2.5  | 2    | 1.5  | 1    | 0.5  |      |      |      |      |      |      |      |      |      |

A = Standard Static/Standard Motor, B = Low Static/Standard Motor, C = High Static/Standard Motor, D = Standard Static/Large Motor, E = High Static/Large Motor

Unit factory shipped with standard static sheave and drive at 2.5 turns open (5200 CFM @ 0.4in. ESP wet coil). Other speed require field selection.

ISO/ARI rating point with standard static sheave and drive 3.5 turns open (5200 CFM @ 0.48in. ESP wet coil). Other speeds require field selection.

For applications requiring higher static pressures, contact your local representative.

Performance data does not include drive losses and is based on sea level conditions.

Do not operate in black regions.

All airflow in rated at lowest Voltage if unit is dual Voltage rated, i.e. 208V for 208-230V units.

For wet coil performance first calculate the face velocity of the air coil (Face Velocity [FPM] = Airflow [CFM] / Face Area [sqft]).

Then use preceding dry coil to wet coil conversion table.

## Blower Performance Data

### GLV200 - Standard Unit - No Reheat

Airflow in CFM with dry coil and clean air filter.

| Airflow (SCFM) |            | Airflow (cfm) at External Static Pressure (in. wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------|------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                |            | 0.00   | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 | 0.70 | 0.80 | 0.90 | 1.00 | 1.10 | 1.20 | 1.30 | 1.40 | 1.50 |      |      |      |
| 5400           | BHP        |  |      |      |      | 0.55 | 0.62 | 0.69 | 0.75 | 0.83 | 0.90 | 0.97 | 1.05 | 1.13 | 1.21 | 1.28 | 1.36 |      |      |      |
| 5400           | SHEAVE/MTR |  |      |      |      | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | A    |      |      |      |
| 5400           | RPM        |  |      |      |      | 600  | 635  | 670  | 704  | 736  | 768  | 800  | 829  | 857  | 886  | 914  | 940  |      |      |      |
| 5400           | TURNS OPEN |  |      |      |      | 3.5  | 3    | 2    | 1    | 4.5  | 3.5  | 3    | 2.5  | 2    | 1.5  | 0.5  | 0    |      |      |      |
| 5800           | BHP        |  |      |      |      | 0.56 | 0.63 | 0.69 | 0.76 | 0.83 | 0.91 | 0.98 | 1.06 | 1.14 | 1.23 | 1.31 | 1.39 | 1.47 |      |      |
| 5800           | SHEAVE/MTR |  |      |      |      | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | A    |      |      |      |
| 5800           | RPM        |  |      |      |      | 576  | 613  | 647  | 681  | 713  | 744  | 776  | 806  | 835  | 863  | 892  | 918  | 944  |      |      |
| 5800           | TURNS OPEN |  |      |      |      | 4.5  | 3.5  | 2.5  | 1.5  | 0.5  | 4    | 3.5  | 3    | 2.5  | 1.5  | 1    | 0.5  | 0    |      |      |
| 6200           | BHP        |  |      |      |      | 0.64 | 0.70 | 0.77 | 0.84 | 0.92 | 0.99 | 1.08 | 1.16 | 1.24 | 1.32 | 1.41 | 1.50 | 1.58 |      |      |
| 6200           | SHEAVE/MTR |  |      |      |      | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | E    | E    |      |      |      |
| 6200           | RPM        |  |      |      |      | 592  | 626  | 659  | 692  | 723  | 753  | 783  | 813  | 841  | 869  | 897  | 923  | 948  |      |      |
| 6200           | TURNS OPEN |  |      |      |      | 4    | 3    | 2    | 1.5  | 4.5  | 4    | 3.5  | 3    | 2    | 1.5  | 1    | 2.5  | 2    |      |      |
| 6600           | BHP        |  |      |      |      | 0.66 | 0.72 | 0.78 | 0.86 | 0.93 | 1.00 | 1.09 | 1.17 | 1.26 | 1.34 | 1.43 | 1.51 | 1.60 | 1.69 |      |
| 6600           | SHEAVE/MTR |  |      |      |      | B    | B    | B    | B    | A    | A    | A    | A    | A    | E    | E    | E    |      |      |      |
| 6600           | RPM        |  |      |      |      | 571  | 606  | 639  | 671  | 703  | 733  | 762  | 792  | 820  | 847  | 875  | 902  | 927  | 952  |      |
| 6600           | TURNS OPEN |  |      |      |      | 4.5  | 3.5  | 2.5  | 2    | 1    | 4.5  | 4    | 3    | 2.5  | 2    | 1.5  | 3    | 2.5  | 2    |      |
| 7000           | BHP        |  |      |      |      | 0.74 | 0.81 | 0.88 | 0.95 | 1.02 | 1.11 | 1.19 | 1.28 | 1.36 | 1.44 | 1.53 | 1.62 | 1.72 | 1.81 |      |
| 7000           | SHEAVE/MTR |  |      |      |      | B    | B    | B    | B    | A    | A    | A    | A    | A    | E    | E    | E    |      |      |      |
| 7000           | RPM        |  |      |      |      | 587  | 620  | 652  | 684  | 714  | 743  | 772  | 801  | 827  | 854  | 881  | 907  | 932  | 957  |      |
| 7000           | TURNS OPEN |  |      |      |      | 4    | 3    | 2.5  | 1.5  | 0.5  | 4.5  | 3.5  | 3    | 2.5  | 2    | 3.5  | 3    | 2.5  | 2    |      |
| 7400           | BHP        |  |      |      |      | 0.77 | 0.84 | 0.91 | 0.98 | 1.05 | 1.14 | 1.22 | 1.30 | 1.38 | 1.47 | 1.56 | 1.65 | 1.75 | 1.84 | 1.93 |
| 7400           | SHEAVE/MTR |  |      |      |      | B    | B    | B    | B    | A    | A    | A    | A    | A    | E    | E    | E    |      |      |      |
| 7400           | RPM        |  |      |      |      | 569  | 604  | 635  | 666  | 697  | 726  | 754  | 782  | 810  | 836  | 862  | 889  | 914  | 938  | 963  |
| 7400           | TURNS OPEN |  |      |      |      | 4.5  | 3.5  | 3    | 2    | 1    | 4.5  | 4    | 3.5  | 3    | 2.5  | 4    | 3.5  | 3    | 2.5  | 2    |
| 7800           | BHP        |  |      |      |      | 0.88 | 0.94 | 1.01 | 1.09 | 1.17 | 1.25 | 1.33 | 1.42 | 1.50 | 1.59 | 1.68 | 1.78 | 1.87 | 1.97 |      |
| 7800           | SHEAVE/MTR |  |      |      |      | B    | B    | B    | B    | A    | A    | A    | E    | E    | E    | E    | E    |      |      |      |
| 7800           | RPM        |  |      |      |      | 587  | 619  | 650  | 681  | 710  | 738  | 766  | 794  | 820  | 846  | 871  | 897  | 921  | 945  |      |
| 7800           | TURNS OPEN |  |      |      |      | 4    | 3    | 2.5  | 1.5  | 1    | 4.5  | 4    | 3    | 4.5  | 4    | 3.5  | 3    | 2.5  | 2    |      |
| 8200           | BHP        | 0.93   | 0.99 | 1.07 | 1.14 | 1.22 | 1.30 | 1.38 | 1.45 | 1.54 | 1.63 | 1.73 | 1.82 | 1.91 |      |      |      |      |      |      |
| 8200           | SHEAVE/MTR | B  | B    | B    | B    | A    | A    | A    | E    | E    | E    | E    | E    | E    |      |      |      |      |      |      |
| 8200           | RPM        | 574  | 606  | 636  | 667  | 697  | 724  | 752  | 779  | 809  | 831  | 856  | 882  | 906  |      |      |      |      |      |      |
| 8200           | TURNS OPEN | 4.5  | 3.5  | 3    | 2    | 1    | 4.5  | 4    | 3.5  | 5    | 4.5  | 4    | 3.5  | 3    |      |      |      |      |      |      |

A = Standard Static/Standard Motor, B = Low Static/Standard Motor, C = High Static/Standard Motor, D = Standard Static/Large Motor, E = High Static/Large Motor  
 Unit factory shipped with standard static sheave and drive at 2.5 turns open (7000 CFM @ 0.7in. ESP wet coil). Other speed require field selection.

ISO/ARI rating point with standard static sheave and drive 3.5 turns open (7000 CFM @ 0.45in. ESP wet coil). Other speeds require field selection.

For applications requiring higher static pressures, contact your local representative.

Performance data does not include drive losses and is based on sea level conditions.

Do not operate in black regions.

All airflow in rated at lowest Voltage if unit is dual Voltage rated, i.e. 208V for 208-230V units.

For wet coil performance first calculate the face velocity of the air coil (Face Velocity [FPM] = Airflow [CFM] / Face Area [sqft]).

Then use preceding dry coil to wet coil conversion table.

## Genesis Large (GL) Series

Rev.: 05/23/07D

## Blower Performance Data

### Standard Unit - No Reheat - GLV240

Airflow in CFM with dry coil and clean air filter.

| Airflow (SCFM) |            | Airflow (cfm) at External Static Pressure (in. wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------|------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                |            | 0.00   | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 | 0.70 | 0.80 | 0.90 | 1.00 | 1.10 | 1.20 | 1.30 | 1.40 | 1.50 |      |      |
| 5600           | BHP        |  |      |      | 0.52 | 0.59 | 0.66 | 0.72 | 0.79 | 0.87 | 0.94 | 1.02 | 1.10 | 1.18 | 1.26 | 1.34 | 1.42 |      |      |
| 5600           | SHEAVE/MTR |  |      |      | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | A    | A    |      |      |
| 5600           | RPM        |  |      |      | 569  | 606  | 641  | 675  | 709  | 740  | 772  | 803  | 832  | 860  | 889  | 916  | 942  |      |      |
| 5600           | TURN OPEN  |  |      |      | 4.5  | 3.5  | 2.5  | 2    | 1    | 4.5  | 3.5  | 3    | 2.5  | 2    | 1    | 0.5  | 0    |      |      |
| 6000           | BHP        |  |      |      | 0.60 | 0.66 | 0.73 | 0.80 | 0.88 | 0.95 | 1.03 | 1.11 | 1.19 | 1.27 | 1.36 | 1.44 | 1.52 |      |      |
| 6000           | SHEAVE/MTR |  |      |      | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | A    | A    |      |      |
| 6000           | RPM        |  |      |      | 584  | 619  | 653  | 686  | 718  | 749  | 779  | 809  | 838  | 866  | 894  | 920  | 946  |      |      |
| 6000           | TURN OPEN  |  |      |      | 4    | 3    | 2.5  | 1.5  | 0.5  | 4    | 3.5  | 3    | 2.5  | 1.5  | 1    | 0.5  | 0    |      |      |
| 6400           | BHP        |  |      |      | 0.61 | 0.68 | 0.74 | 0.81 | 0.89 | 0.96 | 1.04 | 1.12 | 1.21 | 1.29 | 1.37 | 1.46 | 1.55 | 1.64 |      |
| 6400           | SHEAVE/MTR |  |      |      | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | A    | A    |      |      |
| 6400           | RPM        |  |      |      | 563  | 599  | 632  | 665  | 697  | 728  | 758  | 788  | 816  | 844  | 871  | 899  | 925  | 950  |      |
| 6400           | TURN OPEN  |  |      |      | 4.5  | 4    | 3    | 2    | 1    | 4.5  | 4    | 3.5  | 2.5  | 2    | 1.5  | 1    | 0.5  | 0    |      |
| 6800           | BHP        |  |      |      | 0.70 | 0.76 | 0.83 | 0.90 | 0.98 | 1.06 | 1.14 | 1.22 | 1.31 | 1.39 | 1.48 | 1.57 | 1.66 | 1.75 |      |
| 6800           | SHEAVE/MTR |  |      |      | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | A    | A    |      |      |
| 6800           | RPM        |  |      |      | 579  | 613  | 645  | 677  | 708  | 738  | 767  | 796  | 824  | 851  | 878  | 904  | 930  | 955  |      |
| 6800           | TURN OPEN  |  |      |      | 4.5  | 3.5  | 2.5  | 1.5  | 1    | 4.5  | 3.5  | 3    | 2.5  | 2    | 1.5  | 1    | 0.5  | 0    |      |
| 7200           | BHP        |  |      |      | 0.79 | 0.86 | 0.93 | 1.00 | 1.08 | 1.16 | 1.25 | 1.33 | 1.41 | 1.50 | 1.59 | 1.68 | 1.78 | 1.87 |      |
| 7200           | SHEAVE/MTR |  |      |      | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | A    | A    |      |      |
| 7200           | RPM        |  |      |      | 595  | 627  | 659  | 690  | 720  | 748  | 777  | 805  | 832  | 858  | 885  | 910  | 935  | 958  |      |
| 7200           | TURN OPEN  |  |      |      | 4    | 3    | 2    | 1.5  | 4.5  | 4    | 3.5  | 3    | 2.5  | 2    | 1.5  | 1    | 0    | 0    |      |
| 7600           | BHP        |  |      |      | 0.82 | 0.89 | 0.96 | 1.03 | 1.11 | 1.19 | 1.28 | 1.36 | 1.44 | 1.52 | 1.62 | 1.71 | 1.81 | 1.90 | 2.00 |
| 7600           | SHEAVE/MTR |  |      |      | B    | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | E    |      |      |
| 7600           | RPM        |  |      |      | 578  | 611  | 642  | 673  | 704  | 732  | 760  | 788  | 815  | 841  | 867  | 893  | 917  | 942  | 966  |
| 7600           | TURN OPEN  |  |      |      | 4.5  | 3.5  | 2.5  | 2    | 1    | 4.5  | 4    | 3.5  | 2.5  | 2    | 1.5  | 1    | 0.5  | 2    |      |
| 8000           | BHP        | 0.87   | 0.93 | 1.00 | 1.08 | 1.16 | 1.24 | 1.31 | 1.39 | 1.47 | 1.56 | 1.66 | 1.75 | 1.84 | 1.94 | 2.04 | 2.14 |      |      |
| 8000           | SHEAVE/MTR | B  | B    | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | A    | E    | E    |      |      |
| 8000           | RPM        | 563  | 597  | 628  | 658  | 689  | 717  | 745  | 772  | 800  | 825  | 851  | 876  | 902  | 925  | 949  | 973  |      |      |
| 8000           | TURN OPEN  | 4.5  | 4    | 3    | 2    | 1.5  | 0.5  | 4    | 3.5  | 3    | 2.5  | 2    | 1.5  | 1    | 0.5  | 2    | 1.5  |      |      |
| 8400           | BHP        | 0.98   | 1.06 | 1.13 | 1.21 | 1.29 | 1.36 | 1.44 | 1.52 | 1.61 | 1.70 | 1.80 | 1.89 | 1.98 | 2.08 | 2.19 | 2.30 |      |      |
| 8400           | SHEAVE/MTR | B  | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | A    | E    | E    | E    |      |      |
| 8400           | RPM        | 584  | 615  | 645  | 675  | 705  | 732  | 759  | 786  | 812  | 837  | 862  | 887  | 911  | 935  | 958  | 981  |      |      |
| 8400           | TURN OPEN  | 4  | 3.5  | 2.5  | 2    | 1    | 4.5  | 4    | 3.5  | 3    | 2.5  | 2    | 1    | 0.5  | 2.5  | 2    | 1.5  |      |      |
| 8800           | BHP        | 1.13   | 1.20 | 1.27 | 1.35 | 1.42 | 1.49 | 1.58 | 1.67 | 1.76 | 1.85 | 1.94 | 2.04 | 2.15 | 2.25 | 2.36 | 2.46 |      |      |
| 8800           | SHEAVE/MTR | B  | B    | B    | B    | A    | A    | A    | A    | A    | A    | E    | E    | E    | E    | E    | E    |      |      |
| 8800           | RPM        | 605  | 634  | 664  | 694  | 721  | 748  | 774  | 801  | 826  | 850  | 875  | 899  | 922  | 945  | 968  | 991  |      |      |
| 8800           | TURN OPEN  | 3.5  | 3    | 2    | 1    | 4.5  | 4    | 3.5  | 3    | 2.5  | 2    | 1.5  | 3    | 2.5  | 2    | 2    | 1.5  |      |      |
| 9200           | BHP        | 1.28   | 1.35 | 1.42 | 1.49 | 1.57 | 1.66 | 1.75 | 1.84 | 1.92 | 2.01 | 2.12 | 2.22 | 2.33 | 2.43 | 2.54 | 2.64 |      |      |
| 9200           | SHEAVE/MTR | B  | B    | B    | B    | A    | A    | A    | A    | E    | E    | E    | E    | E    | E    | E    | E    |      |      |
| 9200           | RPM        | 626  | 655  | 684  | 712  | 739  | 765  | 791  | 816  | 841  | 865  | 889  | 912  | 935  | 957  | 980  | 1002 |      |      |
| 9200           | TURN OPEN  | 3  | 2.5  | 1.5  | 1    | 4.5  | 4    | 3    | 2.5  | 2    | 3.5  | 3.5  | 3    | 2.5  | 2    | 1.5  | 1    |      |      |

A = Standard Static/Standard Motor, B = Low Static/Standard Motor, C = High Static/Standard Motor, D = Standard Static/Large Motor, E = High Static/Large Motor  
 Unit factory shipped with standard static sheave and drive at 2.5 turns open (8000 CFM @ 0.5in. ESP wet coil). Other speed require field selection.

ISO/ARI rating point with standard static sheave and drive 2 turns open (8000 CFM @ 0.6in. ESP wet coil). Other speeds require field selection.

For applications requiring higher static pressures, contact your local representative.

Performance data does not include drive losses and is based on sea level conditions.

Do not operate in black regions.

All airflow in rated at lowest Voltage if unit is dual Voltage rated, i.e. 208V for 208-230V units.

For wet coil performance first calculate the face velocity of the air coil (Face Velocity [FPM] = Airflow [CFM] / Face Area [sqft]).

Then use preceding dry coil to wet coil conversion table.

## Blower Performance Data

### GLV300 - Standard Unit - No Reheat

Airflow in CFM with dry coil and clean air filter.

| Airflow (SCFM) |            | Airflow (cfm) at External Static Pressure (in. wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------|------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                |            | 0.00   | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 | 0.70 | 0.80 | 0.90 | 1.00 | 1.10 | 1.20 | 1.30 | 1.40 | 1.50 |
| 7400           | BHP        | 0.85   | 0.92 | 0.99 | 1.07 | 1.15 | 1.24 | 1.32 | 1.40 | 1.48 | 1.58 | 1.67 | 1.77 | 1.86 | 1.95 | 2.05 | 2.16 |
| 7400           | SHEAVE/MTR | B  | B    | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    |      |
| 7400           | RPM        | 610  | 641  | 673  | 703  | 732  | 760  | 788  | 815  | 842  | 868  | 894  | 919  | 943  | 968  | 992  | 1016 |
| 7400           | TURNS OPEN | 3.5  | 2.5  | 2    | 1    | 0    | 4.5  | 4    | 3.5  | 2.5  | 2    | 1.5  | 1    | 0.5  | 2.5  | 2    | 1.5  |
| 7800           | BHP        | 0.98   | 1.06 | 1.14 | 1.22 | 1.30 | 1.38 | 1.46 | 1.55 | 1.65 | 1.74 | 1.83 | 1.93 | 2.03 | 2.13 | 2.23 | 2.34 |
| 7800           | SHEAVE/MTR | B  | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    |      |
| 7800           | RPM        | 638  | 668  | 699  | 727  | 758  | 783  | 810  | 835  | 861  | 887  | 912  | 936  | 960  | 984  | 1007 | 1030 |
| 7800           | TURNS OPEN | 2.5  | 2    | 1    | 0.5  | 4.5  | 4    | 3.5  | 3    | 2.5  | 1.5  | 1    | 0.5  | 0    | 2.5  | 2    | 1.5  |
| 8200           | BHP        | 1.14   | 1.22 | 1.29 | 1.37 | 1.45 | 1.53 | 1.63 | 1.72 | 1.81 | 1.91 | 2.00 | 2.10 | 2.21 | 2.32 | 2.42 | 2.53 |
| 8200           | SHEAVE/MTR | B  | B    | B    | B    | A    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    |      |
| 8200           | RPM        | 665  | 695  | 723  | 750  | 777  | 804  | 830  | 855  | 880  | 905  | 928  | 952  | 975  | 999  | 1021 | 1043 |
| 8200           | TURNS OPEN | 2  | 1    | 0.5  | 0    | 4.5  | 3.5  | 3    | 2.5  | 2    | 1    | 0.5  | 0    | 2.5  | 2    | 1.5  | 1    |
| 8600           | BHP        | 1.30   | 1.37 | 1.45 | 1.53 | 1.62 | 1.71 | 1.80 | 1.89 | 1.98 | 2.08 | 2.19 | 2.30 | 2.40 | 2.51 | 2.62 | 2.72 |
| 8600           | SHEAVE/MTR | B  | B    | B    | A    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    | C    |      |
| 8600           | RPM        | 691  | 719  | 746  | 773  | 800  | 825  | 849  | 874  | 899  | 922  | 945  | 968  | 991  | 1014 | 1035 | 1057 |
| 8600           | TURNS OPEN | 1.5  | 0.5  | 0    | 4.5  | 3.5  | 3    | 2.5  | 2    | 1.5  | 1    | 0.5  | 2.5  | 2    | 1.5  | 1    | 0.5  |
| 9000           | BHP        | 1.45   | 1.53 | 1.62 | 1.71 | 1.80 | 1.88 | 1.97 | 2.07 | 2.18 | 2.28 | 2.39 | 2.50 | 2.60 | 2.71 | 2.81 | 2.92 |
| 9000           | SHEAVE/MTR | B  | B    | A    | A    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    | C    |      |
| 9000           | RPM        | 716  | 742  | 769  | 796  | 820  | 845  | 869  | 893  | 917  | 939  | 962  | 985  | 1007 | 1028 | 1050 | 1071 |
| 9000           | TURNS OPEN | 0.5  | 0    | 4.5  | 4    | 3.5  | 2.5  | 2    | 1.5  | 1    | 0.5  | 0    | 2.5  | 2    | 1.5  | 1    | 0.5  |
| 9400           | BHP        | 1.63   | 1.72 | 1.80 | 1.89 | 1.98 | 2.07 | 2.18 | 2.28 | 2.39 | 2.49 | 2.59 | 2.70 | 2.80 | 2.90 |      |      |
| 9400           | SHEAVE/MTR | B  | A    | A    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    | C    |      |      |
| 9400           | RPM        | 739  | 766  | 792  | 817  | 841  | 865  | 889  | 912  | 934  | 956  | 979  | 1001 | 1022 | 1043 |      |      |
| 9400           | TURNS OPEN | 0  | 4.5  | 4    | 3.5  | 3    | 2    | 1.5  | 1    | 0.5  | 0    | 2.5  | 2    | 1.5  | 1    |      |      |
| 9800           | BHP        | 1.82   | 1.91 | 1.99 | 2.09 | 2.19 | 2.29 | 2.39 | 2.49 | 2.60 | 2.70 | 2.80 | 2.90 | 3.00 |      |      |      |
| 9800           | SHEAVE/MTR | A  | A    | A    | A    | A    | A    | A    | A    | A    | C    | C    | C    | C    |      |      |      |
| 9800           | RPM        | 763  | 789  | 813  | 837  | 861  | 884  | 908  | 930  | 952  | 974  | 996  | 1017 | 1037 |      |      |      |
| 9800           | TURNS OPEN | 4.5  | 4    | 3.5  | 3    | 2.5  | 1.5  | 1    | 0.5  | 0    | 2.5  | 2    | 1.5  | 1    |      |      |      |
| 10200          | BHP        | 2.01   | 2.11 | 2.21 | 2.31 | 2.41 | 2.51 | 2.61 | 2.71 | 2.81 | 2.91 |      |      |      |      |      |      |
| 10200          | SHEAVE/MTR | A  | A    | A    | A    | A    | A    | A    | A    | C    | C    |      |      |      |      |      |      |
| 10200          | RPM        | 786  | 810  | 834  | 857  | 881  | 904  | 926  | 947  | 969  | 991  |      |      |      |      |      |      |
| 10200          | TURNS OPEN | 4  | 3.5  | 3    | 2.5  | 2    | 1.5  | 0.5  | 0    | 2.5  | 2    |      |      |      |      |      |      |
| 10600          | BHP        | 2.25   | 2.35 | 2.44 | 2.54 | 2.63 | 2.73 | 2.83 | 2.92 |      |      |      |      |      |      |      |      |
| 10600          | SHEAVE/MTR | A  | A    | A    | A    | A    | A    | A    | A    |      |      |      |      |      |      |      |      |
| 10600          | RPM        | 808  | 831  | 855  | 878  | 901  | 922  | 944  | 965  |      |      |      |      |      |      |      |      |
| 10600          | TURNS OPEN | 3.5  | 3    | 2.5  | 2    | 1.5  | 1    | 0.5  |      |      |      |      |      |      |      |      |      |

A = Standard Static/Standard Motor, B = Low Static/Standard Motor, C = High Static/Standard Motor, D = Standard Static/Large Motor, E = High Static/Large Motor  
Unit factory shipped with standard static sheave and drive at 2.5 turns open (9000 CFM @ 0.4in. ESP wet coil). Other speed require field selection.  
ISO/ARI rating point with standard static sheave and drive 2.5 turns open (9000 CFM @ 0.42in. ESP wet coil). Other speeds require field selection.

For applications requiring higher static pressures, contact your local representative.

Performance data does not include drive losses and is based on sea level conditions.

Do not operate in black regions.

All airflow in rated at lowest Voltage if unit is dual Voltage rated, i.e. 208V for 208-230V units.

For wet coil performance first calculate the face velocity of the air coil (Face Velocity [FPM] = Airflow [CFM] / Face Area [sqft]).  
Then use preceding dry coil to wet coil conversion table.

**Blower Performance Data  
GLV Units with ClimaDry****GLV Unit Blower Performance with ClimaDry Modulating Reheat Option**

| Coil Face Velocity FPM | GLV with ClimaDry - ESP Loss |                                       |                     |
|------------------------|------------------------------|---------------------------------------|---------------------|
|                        | GLV080 & 160 In. of Water    | GLV100 - 120 & 200 - 240 In. of Water | GLV300 In. of Water |
| 200                    | 0.04                         | -                                     | -                   |
| 250                    | 0.06                         | 0.02                                  | -                   |
| 300                    | 0.08                         | 0.05                                  | 0.14                |
| 350                    | 0.12                         | 0.10                                  | 0.17                |
| 400                    | 0.15                         | 0.15                                  | 0.23                |
| 450                    | 0.18                         | 0.23                                  | 0.28                |
| 500                    | 0.22                         | 0.30                                  | 0.34                |
| 550                    | -                            | 0.38                                  | 0.41                |
| 600                    | -                            | 0.46                                  | 0.49                |
| 650                    | -                            | -                                     | 0.60                |

For GLV units with ClimaDry reheat option, calculate the coil face velocity of the entering air.

From the table above, find ESP loss for the unit and velocity. This loss includes wet coil loss.

**Example:**

Reheat coil loss can be determined from the above table. Coil velocity (FPM) = Airflow (CFM) / Face Area (sq. ft.)

- 1) GLV080 reheat coil has a face area of 9.0 sq. ft. (see physical data table).
- 2) At 2,400 cfm, coil velocity (FPM) =  $2,400 / 9.0 = 267$  FPM
- 3) From above table, it will be necessary to subtract 0.07 from the blower performance ESP.
- 4) At 904 RPM (1.5 turns), the GLV080 (without reheat - see blower table) can deliver 2,400 cfm at 0.70 in. wg.; with the reheat coil, it now delivers 2,400 cfm at 0.63 in. wg.
- 5) To regain the needed ESP, it will be necessary to change the sheave to approximately 1.25 turns open to compensate for the pressure drop of the reheat coil.

**GLH Physical Data & Corner Weights****GLH Physical Data**

| Model  | 072                     | 096                     | 120                     |
|--|-------------------------|-------------------------|-------------------------|
| Compressor (2 Each)                                    | Recip                   | Scroll                  |                         |
| Factory Charge R22 (oz) [kg]                           | 56 [1.59]               | 50 [1.42]               | 80 [2.27]               |
| <b>Fan Motor &amp; Blower</b>                          |                         |                         |                         |
| Standard Fan Motor (hp) [W]                            | 1.5 [1.1]               | 2 [1.5]                 | 2 [1.5]                 |
| Large Fan Motor (hp) [W]                               | 2 [1.5]                 | 3 [2.2]                 | 3 [2.2]                 |
| Blower Wheel Size (dia x w) - (in) [mm]                | 12 x 11 [305 x 279]     | 2 - 10 x 10 [254 x 254] | 2 - 11 x 10 [279 x 254] |
| <b>Water Connection Size</b>                           |                         |                         |                         |
| IPT (in)   | 1-1/4                   | 1-1/4                   | 1-1/4                   |
| <b>Coax Volume</b>                                     |                         |                         |                         |
| Volume (US Gallons) [liters]                           | 2.9 [10.98]             | 3.3 [12.49]             | 5.367 [20.32]           |
| <b>Condensate Connection Size</b>                      |                         |                         |                         |
| IPT (in)   | 3/4                     | 3/4                     | 3/4                     |
| <b>Horizontal Units</b>                                |                         |                         |                         |
| Air Coil Dimensions (h x w) - (in) [mm]                | 2 - 20 x 24 [508 x 610] | 2 - 20 x 30 [508 x 762] | 2 - 20 x 30 [508 x 762] |
| Standard Filter - 1" [25.4mm] Throwaway, qty (in) [mm] | 2 - 20 x 26 [508 x 660] | 4 - 16 x 20 [406 x 508] | 4 - 16 x 20 [406 x 508] |
| Weight - Operating, (lbs) [kg]                         | 540 [245]               | 580 [263]               | 660 [299]               |
| Weight - Packaged, (lbs) [kg]                          | 560 [254]               | 600 [272]               | 680 [308]               |

All units have grommet & spring compressor mountings, and 1/2" & 1-3/8" electrical knockouts.

**Corner Weights for GLH Series Units**

| Model  | Total | Left-Front* | Right-Front* | Left-Back* | Right-Back* |
|--------|-------|-------------|--------------|------------|-------------|
| GLH072 | Lbs   | 540         | 155          | 151        | 126         |
|        | kg    | 244.94      | 70.31        | 68.49      | 57.15       |
| GLH096 | Lbs   | 580         | 167          | 162        | 135         |
|        | kg    | 263.08      | 75.75        | 73.48      | 61.23       |
| GLH120 | Lbs   | 443         | 191          | 179        | 157         |
|        | kg    | 299.82      | 86.64        | 81.19      | 71.21       |

\*Front is control box end.

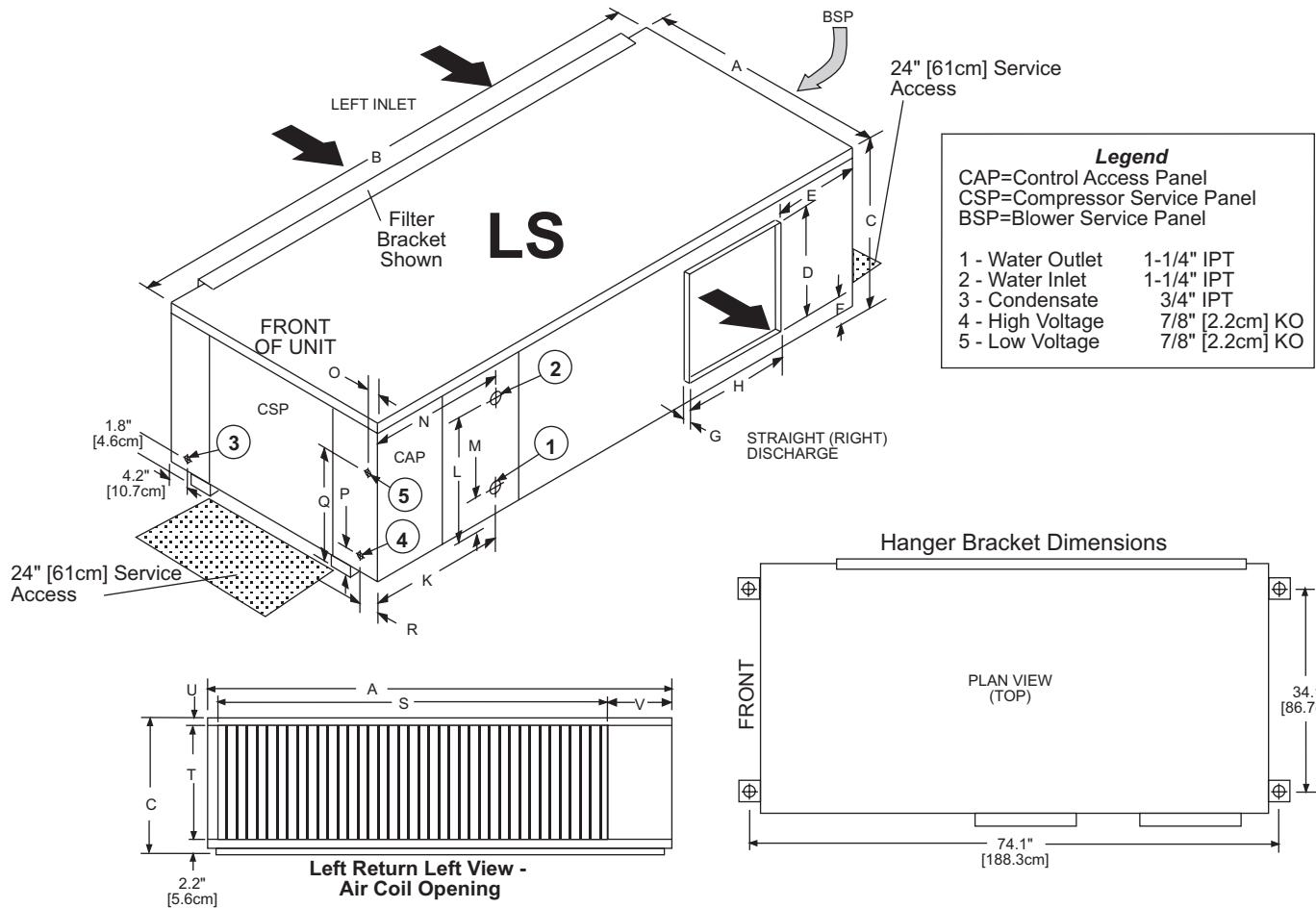
**GLV Physical Data**

| <b>Model</b>  | <b>080</b>                 | <b>100</b>                 | <b>120</b>                 | <b>160</b>                 | <b>200</b>                 | <b>240</b>                 | <b>300</b>                   |
|---|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------------------------------|
| Compressor (Qty)  | Scroll (1)                 |                            |                            | Scroll (2)                 |                            |                            |                              |
| Factory Charge R22 (oz) [kg]  | 110 [3.12]                 | 120 [3.41]                 | 128 [3.64]                 | 110 [3.12]                 | 120 [3.41]                 | 128 [3.64]                 | 192 [5.46]                   |
| <b>Fan Motor &amp; Blower</b>   |                            |                            |                            |                            |                            |                            |                              |
| Standard Fan Motor (hp) [W]   | 1 - 1.5 [1.1]              | 1 - 1.5 [1.1]              | 1 - 2 [1.5]                | 1 - 3 [2.2]                | 2 - 1.5 [1.1]              | 2 - 2 [1.5]                | 2 - 3 [2.2]                  |
| Large Fan Motor (hp) [W]  | 1 - 2 [1.5]                | 1 - 2 [1.5]                | 1 - 3 [2.2]                | N/A                        | 2 - 2 [1.5]                | 2 - 3 [2.2]                | N/A                          |
| Blower Wheel Size (dia x w) - (in) [mm]                                       | 1 - 12 x 9<br>[305 x 229]  | 1 - 15 x 15<br>[381 x 381] | 1 - 15 x 15<br>[381 x 381] | 2 - 12 x 9<br>[305 x 229]  | 2 - 15 x 15<br>[381 x 381] | 2 - 15 x 15<br>[381 x 381] | 2 - 15 x 15<br>[381 x 381]   |
| <b>Water Connection Size</b>  |                            |                            |                            |                            |                            |                            |                              |
| IPT (in)  | 1-1/2                      | 1-1/2                      | 1-1/2                      | 1-1/2                      | 1-1/2                      | 1-1/2                      | 1-1/2                        |
| <b>Coax Volume</b>  |                            |                            |                            |                            |                            |                            |                              |
| Volume (US Gallons) [liters]  | 2.84 [10.75]               | 4.1 [15.52]                | 5.49 [20.78]               | 5.76 [21.80]               | 8.15 [30.85]               | 11.3 [42.78]               | 13.7 [51.86]                 |
| <b>Condensate Connection Size</b>   |                            |                            |                            |                            |                            |                            |                              |
| IPT (in)  | 1                          | 1                          | 1                          | 1                          | 1                          | 1                          | 1                            |
| <b>Vertical Units</b>   |                            |                            |                            |                            |                            |                            |                              |
| Air Coil Dimensions (h x w) - (in) [mm]                                       | 36 x 36<br>[914 x 914]     | 36 x 36<br>[914 x 914]     | 36 x 36<br>[914 x 914]     | 2 - 36 x 36<br>[914 x 914] | 2 - 36 x 36<br>[914 x 914] | 2 - 36 x 36<br>[914 x 914] | 2 - 37.5 x 36<br>[953 x 914] |
| Optional Reheat Coil (h x w) - (in) [mm]                                      | 36 x 36<br>[914 x 914]     | 36 x 36<br>[914 x 914]     | 36 x 36<br>[914 x 914]     | 2 - 36 x 36<br>[914 x 914] | 2 - 36 x 36<br>[914 x 914] | 2 - 36 x 36<br>[914 x 914] | 2 - 36 x 36<br>[914 x 914]   |
| Standard Filter - 1" [25.4mm]<br>Throwaway, qty (in) [mm]                     | 2 - 20 x 25<br>[508 x 635] | 2 - 20 x 25<br>[508 x 635] | 2 - 20 x 25<br>[508 x 635] | 4 - 20 x 25<br>[508 x 635]   |
| Standard Filter (Units with ClimaDry)<br>1" [25.4mm] Throwaway, qty (in) [mm] | 4 - 20 x 20<br>[508 x 508] | 4 - 20 x 20<br>[508 x 508] | 4 - 20 x 20<br>[508 x 508] | 8 - 20 x 20<br>[508 x 508]   |
| Weight - Operating, (lbs) [kg]  | 600 [272]                  | 685 [311]                  | 735 [333]                  | 1120 [508]                 | 1265 [574]                 | 1350 [612]                 | 1465 [664]                   |
| Weight - Packaged, (lbs) [kg]   | 610 [277]                  | 695 [315]                  | 745 [338]                  | 1145 [519]                 | 1275 [578]                 | 1375 [624]                 | 1475 [669]                   |
| Weight - Operating, (lbs) [kg] - ClimaDry                                     | 715 [325]                  | 840 [381]                  | 870 [395]                  | 1275 [578]                 | 1497 [679]                 | 1525 [679]                 | 1555 [705]                   |
| Weight - Packaged, (lbs) [kg] - ClimaDry                                      | 725 [329]                  | 850 [386]                  | 880 [400]                  | 1295 [587]                 | 1517 [688]                 | 1545 [701]                 | 1575 [714]                   |

All units have grommet & spring compressor mountings, and 1/2" & 1-3/4" electrical knockouts.

## GLH072 Dimensional Data

## LEFT RETURN STRAIGHT DISCHARGE



## NOTE:

All Dimensions in inches [cm].

Flanged filter bracket shipped with unit. Leave one end of duct collar open for filter removal.

All side panels are removable.

Available in left return, straight discharge only.

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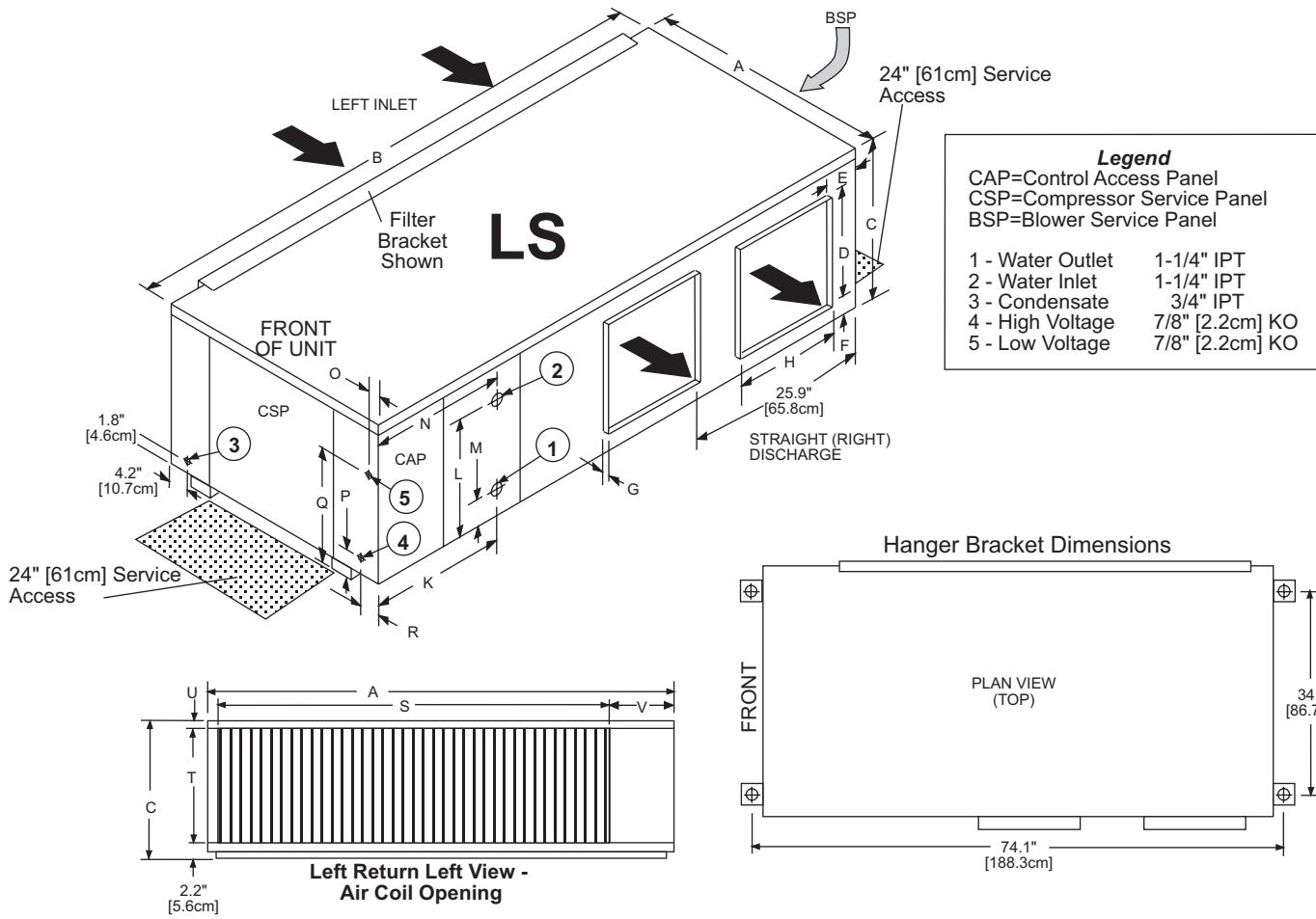
| Model |            | Overall Cabinet |               |              | Discharge Connections Duct Flange ( $\pm 0.10\text{in}, \pm 2.5\text{mm}$ ) |              |             |            |                   | Water Connections |              |             |              | Electrical Knockouts |             |              |            | Return Air Connections Using Return Air Opening |                    |            |              |
|-------|------------|-----------------|---------------|--------------|---|--------------|-------------|------------|-------------------|-------------------|--------------|-------------|--------------|----------------------|-------------|--------------|------------|---|--------------------|------------|--------------|
|       |            | A<br>Width      | B<br>Depth    | C<br>Height  | D<br>Supply Height  | E            | F           | G          | H<br>Supply Depth | K                 | L            | M           | N            | O                    | P           | Q            | R          | S   | T<br>Return Height | U          | V            |
| 072   | in.<br>cm. | 36.3<br>92.2    | 72.3<br>183.6 | 21.6<br>54.9 | 16.0<br>40.6  | 14.5<br>36.8 | 4.0<br>10.2 | 1.0<br>2.5 | 16.0<br>40.6      | 21.0<br>53.3      | 17.8<br>45.2 | 3.9<br>10.0 | 22.5<br>57.2 | 2.0<br>5.1           | 5.6<br>14.2 | 18.3<br>46.5 | 2.0<br>5.1 | 51.0<br>129.5                                   | 18.4<br>46.7       | 1.0<br>2.5 | 19.6<br>49.8 |

Condensate is 3/4" IPT copper

Horizontal unit shipped with filter bracket only. This bracket should be removed for return duct connection

## GLH096-120 Dimensional Data

## LEFT RETURN STRAIGHT DISCHARGE



## NOTE:

All Dimensions in inches [cm].

Flanged filter bracket shipped with unit. Leave one end of duct collar open for filter removal.

All side panels are removable.

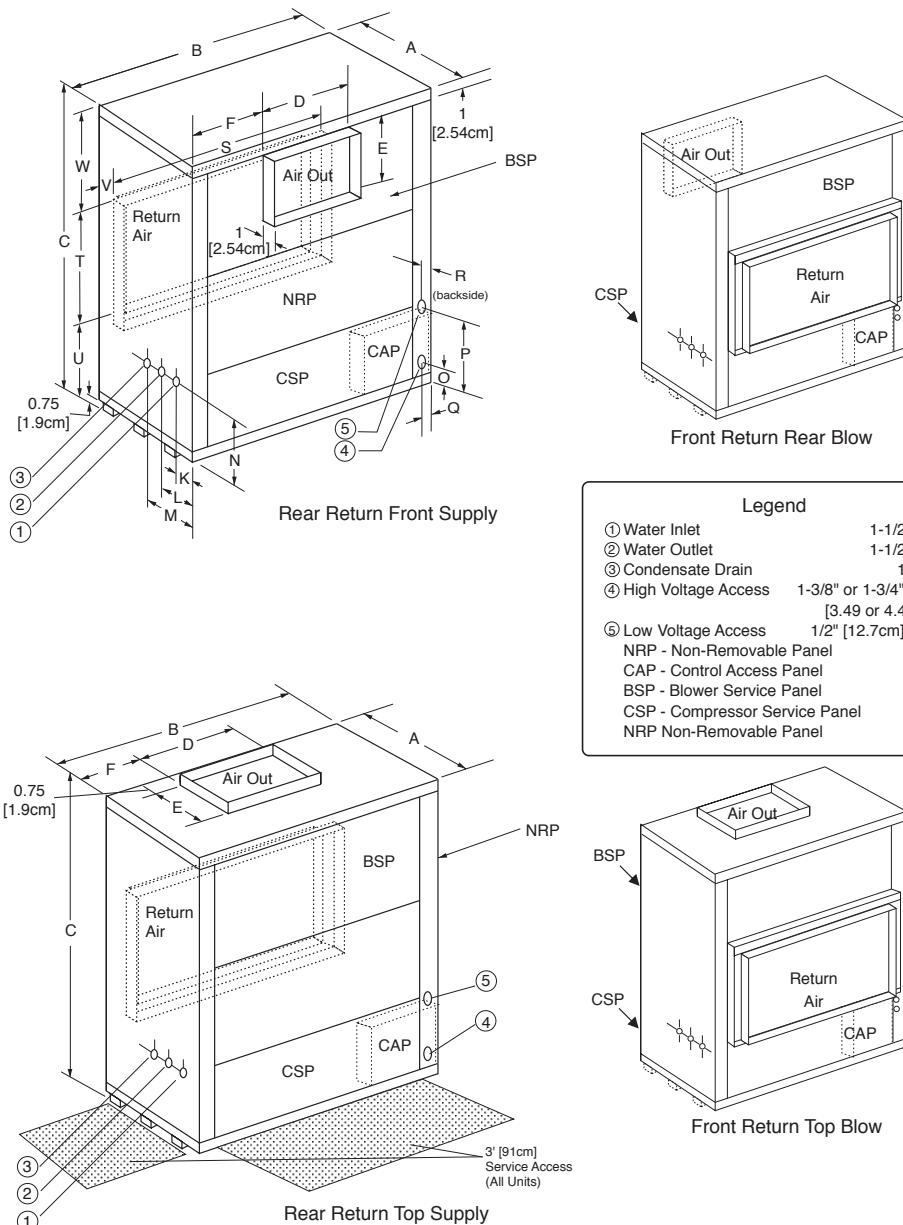
Available in left return, straight discharge only.

Rev.: 10/08/04D

| Model |            | Overall Cabinet |               |              | Discharge Connections<br>Duct Flange ( $\pm 0.10\text{in}$ , $\pm 2.5\text{mm}$ ) |            |             |            | Water Connections    |              |              |            | Electrical Knockouts |            |             |              | Return Air Connections<br>Using Return Air Opening |                      |                       |            |             |
|-------|------------|-----------------|---------------|--------------|---|------------|-------------|------------|----------------------|--------------|--------------|------------|----------------------|------------|-------------|--------------|--|----------------------|-----------------------|------------|-------------|
|       |            | A<br>Width      | B<br>Depth    | C<br>Height  | D<br>Supply<br>Height   | E          | F           | G          | H<br>Supply<br>Depth | K            | L            | M          | N                    | O          | P           | Q            | R  | S<br>Return<br>Depth | T<br>Return<br>Height | U          | V           |
| 096   | in.<br>cm. | 36.3<br>92.2    | 72.3<br>183.6 | 21.6<br>54.9 | 13.1<br>33.3  | 2.9<br>7.4 | 3.8<br>9.7  | 1.0<br>2.5 | 15.1<br>38.4         | 20.7<br>52.6 | 18.6<br>47.3 | 3.8<br>9.7 | 22.4<br>56.9         | 2.0<br>5.1 | 5.6<br>14.2 | 18.3<br>46.5 | 2.0<br>5.1   | 63.2<br>160.5        | 18.4<br>46.7          | 1.0<br>2.5 | 7.5<br>19.1 |
| 120   | in.<br>cm. | 36.3<br>92.2    | 72.3<br>183.6 | 21.6<br>54.9 | 13.1<br>33.3  | 2.9<br>7.4 | 4.7<br>11.9 | 1.0<br>2.5 | 15.1<br>38.4         | 19.0<br>48.3 | 19.2<br>48.8 | 3.8<br>9.7 | 22.4<br>56.9         | 2.0<br>5.1 | 5.6<br>14.2 | 18.3<br>46.5 | 2.0<br>5.1   | 63.2<br>160.5        | 18.4<br>46.7          | 1.0<br>2.5 | 7.5<br>19.1 |

Condensate is 3/4" IPT copper

Horizontal unit shipped with filter bracket only. This bracket should be removed for return duct connection

GLV080-120 Dimensional Data  
Standard Unit - No Reheat

## NOTES:

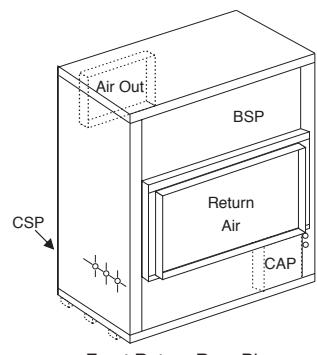
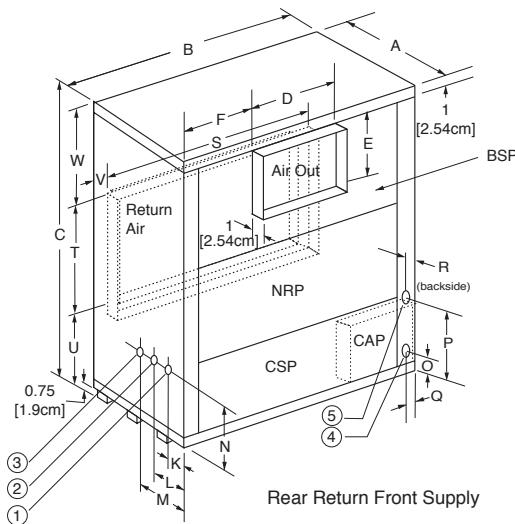
- All Dimensions in inches [cm]
- Units require 3' [91cm] clearance for water connections, CAP, CSP and BSP Service access.
- All side panels are removable Except those identified by NRP(Non-Removable Panel)
- Overall cabinet height dimension does not include duct flange when in the top discharge configuration
- Overall cabinet width dimensions does not include duct flange when in the front or back discharge configuration

- Notes:
1. Front & Side access is preferred for service access. However, all components may be serviced from the front access panel if side access is not available.
  2. While clear access to all removable panels is not required, installer should take care to comply with all building codes and allow adequate clearance for future field service.

| Model       | Overall Cabinet |              |               | Discharge Connections<br>Duct Flange<br>(± 0.10in, ±2.5mm) |                      |              | Water Connections        |                           |                      |              | Electrical Knockouts |            |              |            | Return Air Connections<br>Using Return Air Opening |                       |              |              |            |              |
|-------------|-----------------|--------------|---------------|--|----------------------|--------------|--------------------------|---------------------------|----------------------|--------------|----------------------|------------|--------------|------------|--|-----------------------|--------------|--------------|------------|--------------|
|             | A<br>Width      | B<br>Depth   | C<br>Height   | D<br>Supply<br>Width                                       | E<br>Supply<br>Depth | F            | K<br>1<br>Water<br>Inlet | L<br>2<br>Water<br>Outlet | M<br>3<br>Condensate | N            | O                    | P          | Q            | R          | S<br>Return<br>Depth                               | T<br>Return<br>Height | U            | V            | W          |              |
| 080         | in.<br>cm.      | 29.0<br>73.7 | 41.0<br>104.1 | 71.5<br>181.6  | 14.7<br>37.3         | 15.8<br>40.1 | 11.2<br>28.4             | 4.0<br>10.2               | 7.4<br>18.7          | 14.5<br>36.8 | 20.5<br>52.1         | 2.1<br>5.3 | 20.6<br>52.3 | 1.0<br>2.5 | 3.1<br>7.9   | 34.8<br>88.4          | 23.4<br>59.4 | 25.4<br>64.5 | 3.1<br>7.9 | 22.6<br>57.4 |
| 100-<br>120 | in.<br>cm.      | 29.0<br>73.7 | 41.0<br>104.1 | 71.5<br>181.6  | 18.8<br>47.6         | 16.1<br>40.9 | 5.8<br>14.7              | 4.0<br>10.2               | 7.4<br>18.7          | 14.5<br>36.8 | 20.5<br>52.1         | 2.1<br>5.3 | 20.6<br>52.3 | 1.0<br>2.5 | 3.1<br>7.9   | 34.8<br>88.4          | 23.4<br>59.4 | 25.4<br>65.4 | 3.1<br>7.9 | 22.6<br>57.4 |

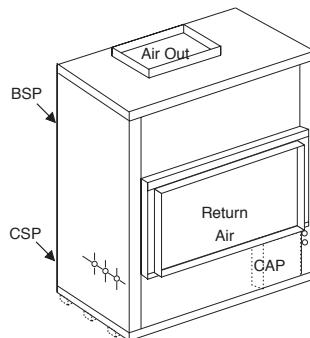
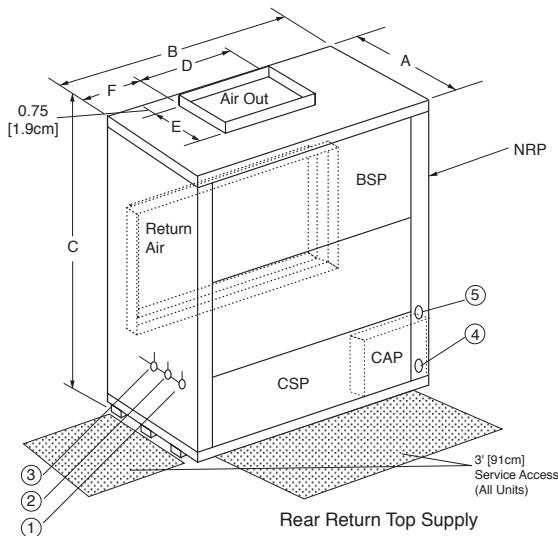
## Genesis Large (GL) Series

Rev.: 05/23/07D

GLV080-120 Dimensional Data  
with ClimaDry Reheat

Front Return Rear Blow

| Legend                         |   |
|--------------------------------|---|
| ① Water Inlet                  | 1-1/2" IPT                                |
| ② Water Outlet                 | 1-1/2" IPT                                |
| ③ Condensate Drain             | 1" IPT                                    |
| ④ High Voltage Access          | 1-3/8" or 1-3/4" K.O.<br>[3.49 or 4.45cm] |
| ⑤ Low Voltage Access           | 1/2" [12.7cm] K.O.                        |
| NRP - Non-Removable Panel      |   |
| CAP - Control Access Panel     |   |
| BSP - Blower Service Panel     |   |
| CSP - Compressor Service Panel |   |
| NRP Non-Removable Panel        |   |



Front Return Top Blow

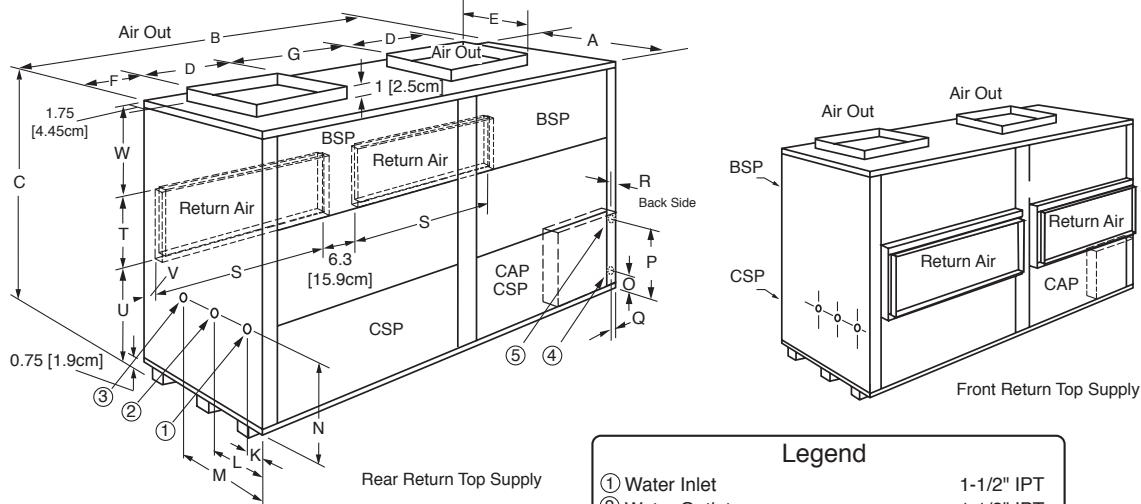
## NOTES:

- All Dimensions in inches [cm].
- Units require 3' [91cm] clearance for water connections, CAP, CSP and BSP Service access.
- All side panels are removable Except those identified by NRP(Non-Removable Panel)
- Overall cabinet height dimension does not include duct flange when in the top discharge configuration
- Overall cabinet width dimensions does not include duct flange when in the front or back discharge configuration

## Notes:

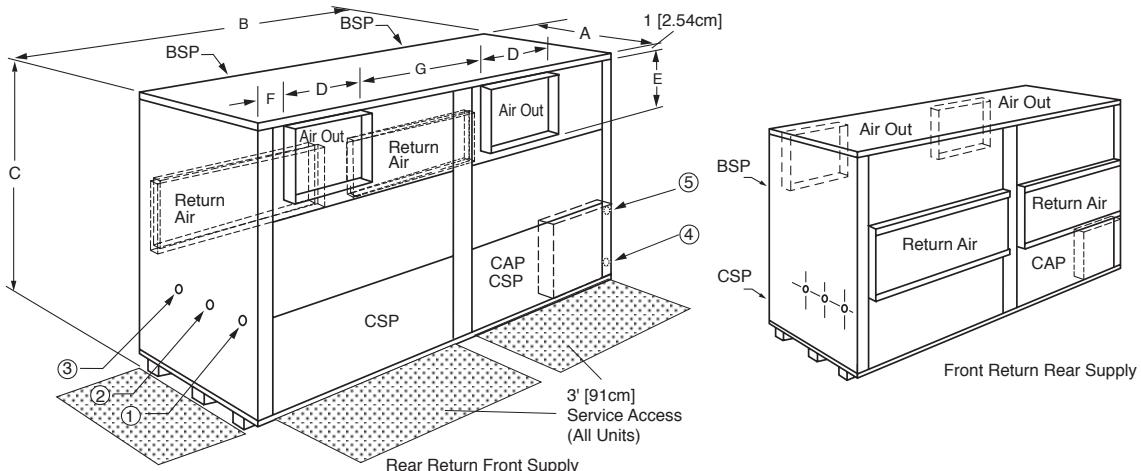
- Front & Side access is preferred for service access. However, all components may be serviced from the front access panel if side access is not available.
- While clear access to all removable panels is not required, installer should take care to comply with all building codes and allow adequate clearance for future field service.

| Reheat Model |            | Overall Cabinet |               |               | Discharge Connections<br>Duct Flange<br>(± 0.10in, ±2.5mm) |                   |              | Water Connections        |                           |                      |             | Electrical Knockouts |             |             |            | Return Air Connections<br>Using Return Air Opening |              |              |              |            |             |
|--------------|------------|-----------------|---------------|---------------|--|-------------------|--------------|--------------------------|---------------------------|----------------------|-------------|----------------------|-------------|-------------|------------|--|--------------|--------------|--------------|------------|-------------|
|              |            | A<br>Width      | B<br>Depth    | C<br>Height   | D<br>Supply Width  | E<br>Supply Depth | F            | K<br>1<br>Water<br>Inlet | L<br>2<br>Water<br>Outlet | M<br>3<br>Condensate |             | N                    | O           | P           | Q          | R  | S            | T            | U            | V          | W           |
| 080          | in.<br>cm. | 34.0<br>86.4    | 41.0<br>104.1 | 71.0<br>180.3 | 14.5<br>36.7   | 15.8<br>40.1      | 11.2<br>28.4 | 3.0                      | 7.5<br>7.6                | 26.5<br>67.3         | 7.4<br>18.8 | 17.8<br>45.2         | 5.8<br>14.7 | 8.5<br>21.6 | 1.0<br>2.5 | 3.1<br>7.9   | 36.2<br>91.9 | 38.2<br>97.0 | 24.9<br>63.2 | 2.4<br>6.1 | 8.6<br>21.8 |
| 100-<br>120  | in.<br>cm. | 34.0<br>86.4    | 41.0<br>104.1 | 71.0<br>180.3 | 14.5<br>36.7   | 16.2<br>41.1      | 5.8<br>14.7  | 3.0                      | 7.5<br>7.6                | 26.5<br>67.3         | 7.4<br>18.8 | 17.8<br>45.2         | 5.8<br>14.7 | 8.5<br>21.6 | 1.0<br>2.5 | 3.1<br>7.9   | 36.2<br>91.9 | 38.2<br>97.0 | 24.9<br>63.2 | 2.4<br>6.1 | 8.6<br>21.8 |

GLV160-240 Dimensional Data  
Standard Unit - No Reheat

- Notes:
- Front & Side access is preferred for service access. However, all components may be serviced from the front access panel if side access is not available.
  - While clear access to all removable panels is not required, installer should take care to comply with all building codes and allow adequate clearance for future field service.

| Legend                         |   |
|--------------------------------|---|
| ① Water Inlet                  | 1-1/2" IPT                                |
| ② Water Outlet                 | 1-1/2" IPT                                |
| ③ Condensate Drain             | 1" IPT                                    |
| ④ High Voltage Access          | 1-3/8" or 1-3/4" K.O.<br>[3.49 or 4.45cm] |
| ⑤ Low Voltage Access           | 1/2" [12.7mm] K.O.                        |
| NRP - Non-Removable Panel      |   |
| CAP - Control Access Panel     |   |
| BSP - Blower Service Panel     |   |
| CSP - Compressor Service Panel |   |
| NRP Non-Removable Panel        |   |



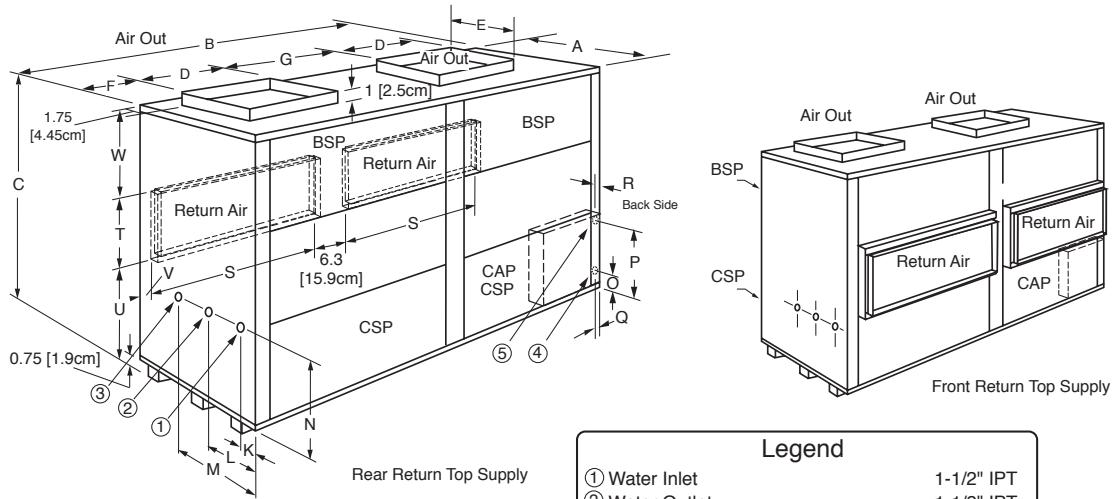
## NOTES:

- All Dimensions in inches [cm]
- Units require 3' [91cm] clearance for water connections, CAP, CSP and BSP Service access.
- All side panels are removable Except those identified by NRP(Non-Removable Panel)
- Overall cabinet height dimension does not include duct flange when in the top discharge configuration
- Overall cabinet width dimension does not include duct flange when in the front or back discharge configuration

| Model       | Overall Cabinet |              |               | Discharge Connections<br>Duct Flange<br>(± 0.10in, ±2.5mm) |                   |              |              | Water Connections        |                           |                           |              | Electrical Knockouts |            |              |            | Return Air Connections<br>Using Duct Flange |              |              |              |            |              |
|-------------|-----------------|--------------|---------------|--|-------------------|--------------|--------------|--------------------------|---------------------------|---------------------------|--------------|----------------------|------------|--------------|------------|---|--------------|--------------|--------------|------------|--------------|
|             | A<br>Width      | B<br>Depth   | C<br>Height   | D<br>Supply Width  | E<br>Supply Depth | F            | G            | K<br>1<br>Water<br>Inlet | L<br>2<br>Water<br>Outlet | M<br>3<br>Con-<br>densate | N            | O                    | P          | Q            | R          | S   | T            | U            | V            | W          |              |
| 160         | in.<br>cm.      | 29.0<br>73.7 | 82.0<br>208.3 | 71.5<br>181.6  | 14.7<br>37.3      | 15.8<br>40.1 | 19.4<br>49.3 | 13.8<br>35.1             | 4.0<br>10.2               | 7.4<br>18.7               | 14.5<br>36.8 | 20.5<br>52.1         | 2.1<br>5.3 | 20.6<br>52.3 | 1.0<br>2.5 | 3.1<br>7.9                                  | 34.8<br>88.4 | 23.4<br>59.4 | 25.4<br>64.5 | 3.1<br>7.9 | 22.6<br>57.4 |
| 200-<br>240 | in.<br>cm.      | 29.0<br>73.7 | 82.0<br>208.3 | 71.5<br>181.6  | 18.8<br>47.6      | 16.1<br>40.9 | 5.8<br>14.7  | 22.3<br>56.6             | 4.0<br>10.2               | 7.4<br>18.7               | 14.5<br>36.8 | 20.5<br>52.1         | 2.1<br>5.3 | 20.6<br>52.3 | 1.0<br>2.5 | 3.1<br>7.9                                  | 34.8<br>88.4 | 23.4<br>59.4 | 25.4<br>65.4 | 3.1<br>7.9 | 22.6<br>57.4 |

## Genesis Large (GL) Series

Rev.: 05/23/07D

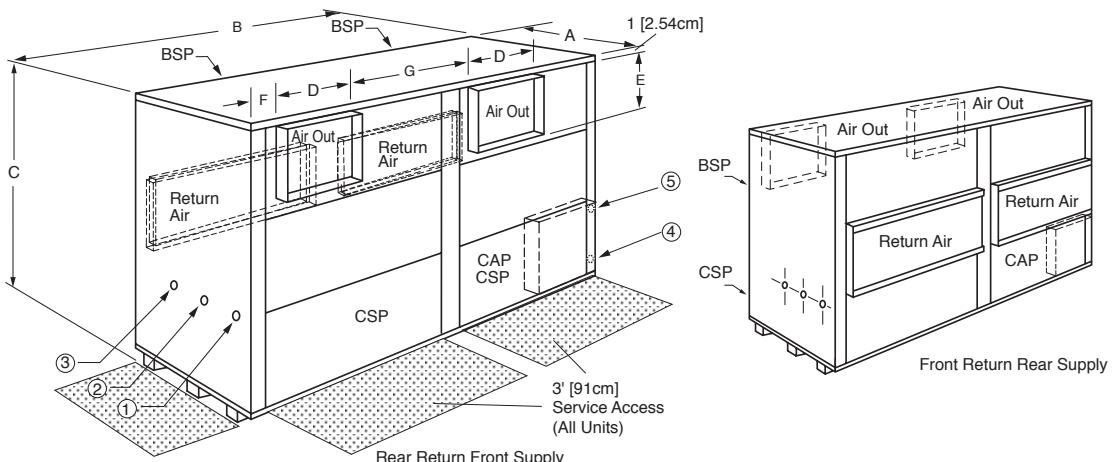
**GLV160-240 Dimensional Data  
with ClimaDry Reheat**


## Notes:

- Front & Side access is preferred for service access. However, all components may be serviced from the front access panel if side access is not available.
- While clear access to all removable panels is not required, installer should take care to comply with all building codes and allow adequate clearance for future field service.

## Legend

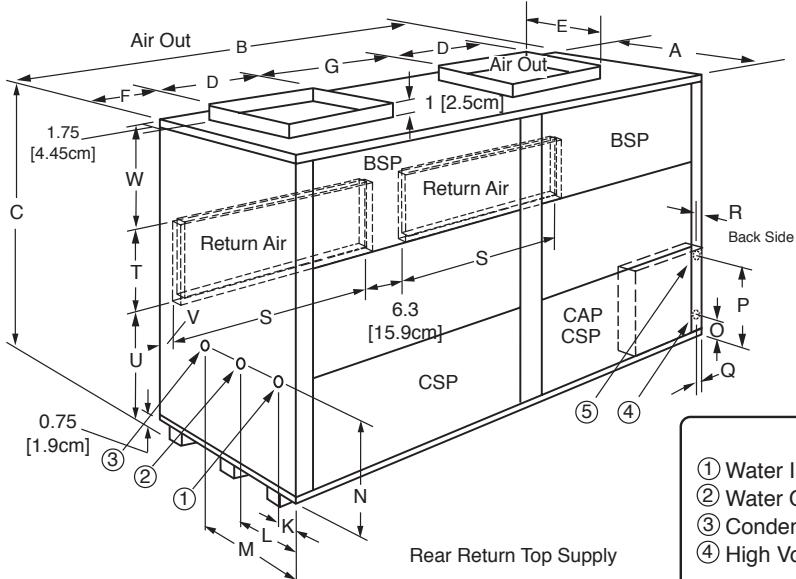
|                                |   |
|--------------------------------|---|
| ① Water Inlet                  | 1-1/2" IPT                                |
| ② Water Outlet                 | 1-1/2" IPT                                |
| ③ Condensate Drain             | 1" IPT                                    |
| ④ High Voltage Access          | 1-3/8" or 1-3/4" K.O.<br>[3.49 or 4.45cm] |
| ⑤ Low Voltage Access           | 1/2" [12.7mm] K.O.                        |
| NRP - Non-Removable Panel      |   |
| CAP - Control Access Panel     |   |
| BSP - Blower Service Panel     |   |
| CSP - Compressor Service Panel |   |
| NRP Non-Removable Panel        |   |



## NOTES:

- All Dimensions in inches [cm]
- Units require 3' [91cm] clearance for water connections, CAP, CSP and BSP Service access.
- All side panels are removable Except those identified by NRP (Non-Removable Panel)
- Overall cabinet height dimension does not include duct flange when in the top discharge configuration
- Overall cabinet width dimension does not include duct flange when in the front or back discharge configuration

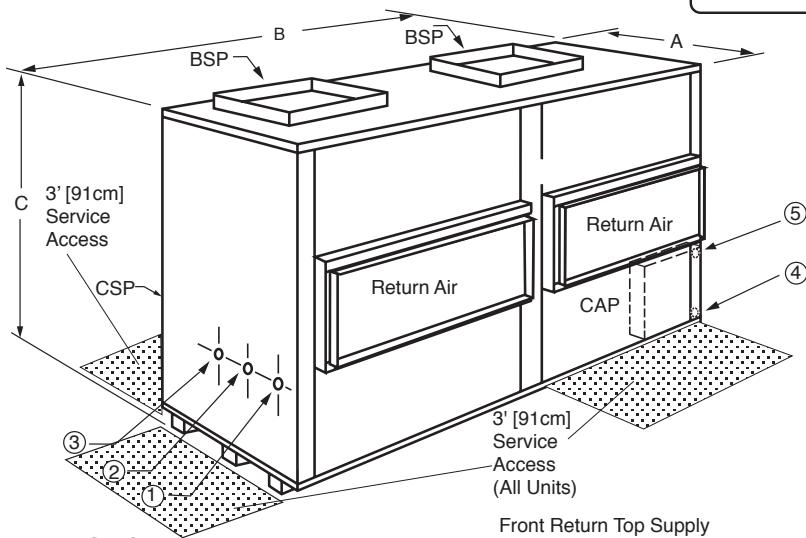
| Reheat Model |            | Overall Cabinet |               |               | Discharge Connections Duct Flange ( $\pm 0.10\text{in}, \pm 2.5\text{mm}$ ) |              |              |              | Water Connections |             |              |             | Electrical Knockouts |             |             |            | Return Air Connections Using Duct Flange |               |              |              |            |             |
|--------------|------------|-----------------|---------------|---------------|---|--------------|--------------|--------------|-------------------|-------------|--------------|-------------|----------------------|-------------|-------------|------------|--|---------------|--------------|--------------|------------|-------------|
|              |            | Width           | Depth         | Height        | Supply Width  | Supply Depth |              |              |                   |             |              |             |                      |             |             |            | Return Depth                             | Return Height |              |              |            |             |
| 160          | in.<br>cm. | 34.0<br>86.4    | 82.0<br>208.3 | 71.0<br>180.3 | 14.5<br>36.7  | 15.8<br>40.1 | 19.5<br>49.5 | 13.8<br>35.0 | 3.0<br>7.6        | 7.5<br>19.0 | 26.5<br>67.3 | 7.4<br>18.8 | 17.8<br>45.2         | 5.8<br>14.7 | 8.5<br>21.6 | 1.0<br>2.5 | 3.1<br>7.9                               | 36.2<br>91.9  | 38.2<br>97.0 | 24.9<br>63.2 | 2.4<br>6.1 | 8.6<br>21.8 |
| 200-<br>240  | in.<br>cm. | 34.0<br>86.4    | 82.0<br>208.3 | 71.0<br>180.3 | 19.0<br>48.3  | 16.2<br>41.1 | 5.8<br>14.7  | 22.0<br>55.9 | 3.0<br>7.6        | 7.5<br>19.0 | 26.5<br>67.3 | 7.4<br>18.8 | 17.8<br>45.2         | 5.8<br>14.7 | 8.5<br>21.6 | 1.0<br>2.5 | 3.1<br>7.9                               | 36.2<br>91.9  | 38.2<br>97.0 | 24.9<br>63.2 | 2.4<br>6.1 | 8.6<br>21.8 |

**GLV300 Dimensional Data  
Standard Unit - No Reheat**

## Notes:

1. Front & Side access is preferred for service access. However, all components may be serviced from the front access panel if side access is not available.
2. While clear access to all removable panels is not required, installer should take care to comply with all building codes and allow adequate clearance for future field service.

| Legend                         |   |
|--------------------------------|---|
| ① Water Inlet                  | 1-1/2" IPT                                |
| ② Water Outlet                 | 1-1/2" IPT                                |
| ③ Condensate Drain             | 1" IPT                                    |
| ④ High Voltage Access          | 1-3/8" or 1-3/4" K.O.<br>[3.49 or 4.45cm] |
| ⑤ Low Voltage Access           | 1/2" [12.7mm] K.O.                        |
| NRP - Non-Removable Panel      |   |
| CAP - Control Access Panel     |   |
| BSP - Blower Service Panel     |   |
| CSP - Compressor Service Panel |   |
| NRP - Non-Removable Panel      |   |



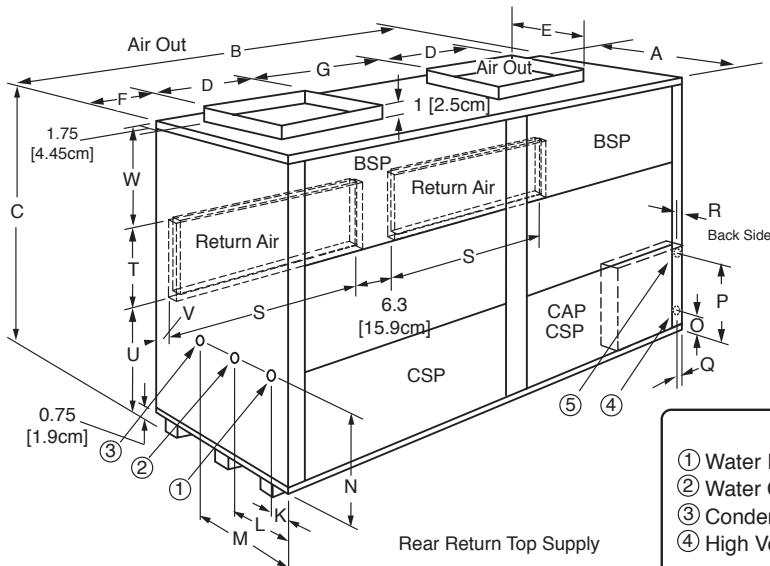
## NOTES:

- All Dimensions in inches [cm]
- Units require 3' [91cm] clearance for water connections, CAP, CSP and BSP Service access.
- All side panels are removable Except those identified by NRP(Non-Removable Panel)
- Overall cabinet height dimension does not include duct flange when in the top discharge configuration
- Overall cabinet width dimension does not include duct flange when in the front or back discharge configuration

| Model | Overall Cabinet |              |               | Discharge Connections<br>Duct Flange<br>(± 0.10in, ±2.5mm) |                      |              |             | Water Connections        |                           |                     |              | Electrical Knockouts |            |              |            | Return Air Connections<br>Using Duct Flange |                       |              |              |            |              |
|-------|-----------------|--------------|---------------|--|----------------------|--------------|-------------|--------------------------|---------------------------|---------------------|--------------|----------------------|------------|--------------|------------|---|-----------------------|--------------|--------------|------------|--------------|
|       | A<br>Width      | B<br>Depth   | C<br>Height   | D<br>Supply<br>Width                                       | E<br>Supply<br>Depth | F            | G           | K<br>1<br>Water<br>Inlet | L<br>2<br>Water<br>Outlet | M<br>3<br>Condense- | N            | O                    | P          | Q            | R          | S<br>Return<br>Depth                        | T<br>Return<br>Height | U            | V            | W          |              |
| 300   | in.<br>cm.      | 29.0<br>73.7 | 82.0<br>208.3 | 71.5<br>181.6  | 18.8<br>47.6         | 16.1<br>40.9 | 5.8<br>14.7 | 22.1<br>56.1             | 4.0<br>10.2               | 7.4<br>18.7         | 14.5<br>36.8 | 20.5<br>52.1         | 2.1<br>5.3 | 20.6<br>52.3 | 1.0<br>2.5 | 3.1<br>7.9                                  | 34.8<br>88.4          | 23.4<br>59.4 | 25.4<br>65.4 | 3.1<br>7.9 | 22.6<br>57.4 |

## Genesis Large (GL) Series

Rev.: 05/23/07D

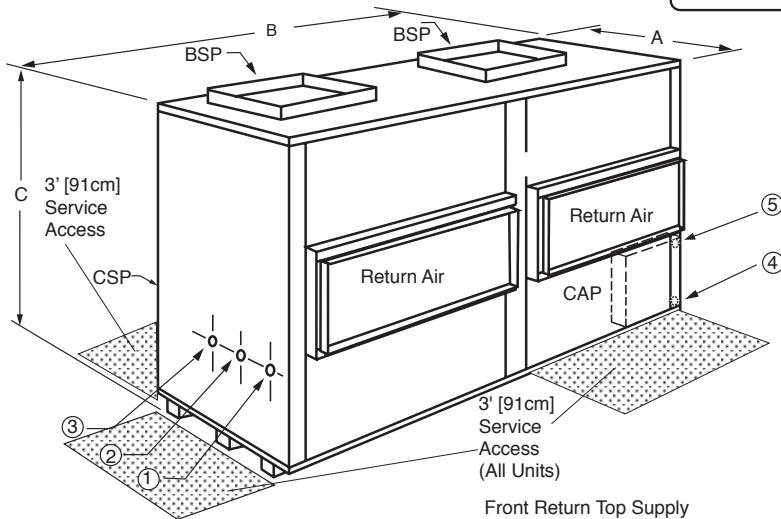
GLV300 Dimensional Data  
with ClimaDry Reheat

## Notes:

- Front & Side access is preferred for service access. However, all components may be serviced from the front access panel if side access is not available.
- While clear access to all removable panels is not required, installer should take care to comply with all building codes and allow adequate clearance for future field service.

## Legend

|                                |   |
|--------------------------------|---|
| ① Water Inlet                  | 1-1/2" IPT                                |
| ② Water Outlet                 | 1-1/2" IPT                                |
| ③ Condensate Drain             | 1" IPT                                    |
| ④ High Voltage Access          | 1-3/8" or 1-3/4" K.O.<br>[3.49 or 4.45cm] |
| ⑤ Low Voltage Access           | 1/2" [12.7mm] K.O.                        |
| NRP - Non-Removable Panel      |   |
| CAP - Control Access Panel     |   |
| BSP - Blower Service Panel     |   |
| CSP - Compressor Service Panel |   |
| NRP - Non-Removable Panel      |   |



## NOTES:

- All Dimensions in inches [cm]
- Units require 3' [91cm] clearance for water connections, CAP, CSP and BSP Service access.
- All side panels are removable Except those identified by NRP(Non-Removable Panel)
- Overall cabinet height dimension does not include duct flange when in the top discharge configuration
- Overall cabinet width dimension does not include duct flange when in the front or back discharge configuration

| Reheat Model |            |              | Overall Cabinet |               |              | Discharge Connections<br>Duct Flange<br>(± 0.10in, ± 2.5mm) |                   |              |            | Water Connections        |                           |                      |              | Electrical Knockouts |             |            |            | Return Air Connections<br>Using Duct Flange |              |              |            |             |
|--------------|------------|--------------|-----------------|---------------|--------------|---|-------------------|--------------|------------|--------------------------|---------------------------|----------------------|--------------|----------------------|-------------|------------|------------|---|--------------|--------------|------------|-------------|
|              |            |              | A<br>Width      | B<br>Depth    | C<br>Height  | D<br>Supply Width   | E<br>Supply Depth | F            | G          | K<br>1<br>Water<br>Inlet | L<br>2<br>Water<br>Outlet | M<br>3<br>Condensate | N            | O                    | P           | Q          | R          | S   | T            | U            | V          | W           |
| 300          | in.<br>cm. | 34.0<br>86.4 | 82.0<br>208.3   | 71.0<br>180.3 | 19.0<br>48.3 | 16.2<br>41.1  | 5.8<br>14.7       | 22.0<br>55.9 | 3.0<br>7.6 | 7.5<br>19.0              | 26.5<br>67.3              | 7.4<br>18.8          | 17.8<br>45.2 | 5.8<br>14.7          | 8.5<br>21.6 | 1.0<br>2.5 | 3.1<br>7.9 | 36.2<br>91.9                                | 38.2<br>97.0 | 24.9<br>63.2 | 2.4<br>6.1 | 8.6<br>21.8 |

**GLH Electrical Data**

| Model  | Voltage Code | Voltage      | Min/Max Voltage | Blower Option | Compressor |      |       | Fan Motor FLA | Total Unit FLA | Min Circuit Amps | Max Fuse/HACR |
|--------|--------------|--------------|-----------------|---------------|------------|------|-------|---------------|----------------|------------------|---------------|
|        |              |              |                 |               | QTY        | RLA  | LRA   |               |                |                  |               |
| GLH072 | H            | 208-230/60/3 | 187/253         | A, B, C       | 2          | 10.4 | 65.5  | 5             | 25.8           | 28.4             | 35            |
| GLH072 | H            | 208-230/60/3 | 187/253         | E             | 2          | 10.4 | 65.5  | 6.2           | 27             | 29.6             | 40            |
| GLH072 | F            | 460/60/3     | 414/506         | A, B, C       | 2          | 4.9  | 33.0  | 2.4           | 12.2           | 13.4             | 15            |
| GLH072 | F            | 460/60/3     | 414/506         | E             | 2          | 4.9  | 33.0  | 3.1           | 12.9           | 14.1             | 15            |
| GLH096 | H            | 208-230/60/3 | 187/253         | A, B, C       | 2          | 14.3 | 91.0  | 6.5           | 35.1           | 38.7             | 50            |
| GLH096 | H            | 208-230/60/3 | 187/253         | D, E          | 2          | 14.3 | 91.0  | 8.8           | 37.4           | 41.0             | 50            |
| GLH096 | F            | 460/60/3     | 414/506         | A, B, C       | 2          | 7.2  | 46.0  | 3.1           | 17.5           | 19.3             | 25            |
| GLH096 | F            | 460/60/3     | 414/506         | D, E          | 2          | 7.2  | 46.0  | 4.2           | 18.6           | 20.4             | 25            |
| GLH096 | N            | 575/60/3     | 518/633         | A, B, C       | 2          | 5.7  | 37.0  | 2.8           | 14.2           | 15.6             | 20            |
| GLH096 | N            | 575/60/3     | 518/633         | D, E          | 2          | 5.7  | 37.0  | 3.4           | 14.8           | 16.2             | 20            |
| GLH120 | H            | 208-230/60/3 | 187/253         | A, B, C       | 2          | 19.3 | 123.0 | 6.5           | 45.1           | 49.9             | 60            |
| GLH120 | H            | 208-230/60/3 | 187/253         | D, E          | 2          | 19.3 | 123.0 | 8.8           | 47.4           | 52.2             | 70            |
| GLH120 | F            | 460/60/3     | 414/506         | A, B, C       | 2          | 7.5  | 49.5  | 3.1           | 18.1           | 20.0             | 25            |
| GLH120 | F            | 460/60/3     | 414/506         | D, E          | 2          | 7.5  | 49.5  | 4.2           | 19.2           | 21.1             | 25            |
| GLH120 | N            | 575/60/3     | 518/633         | A, B, C       | 2          | 6.4  | 40.0  | 2.8           | 15.6           | 17.2             | 20            |
| GLH120 | N            | 575/60/3     | 518/633         | D, E          | 2          | 6.4  | 40.0  | 3.4           | 16.2           | 17.8             | 20            |

HACR circuit breaker in USA only

All fuses Class RK-5

Note: Compressor RLA &amp; LRA values are per compressor

## Genesis Large (GL) Series

Rev.: 05/23/07D

## GLV Electrical Data

| All GLV Units |              |              |                 |               |            |      | Standard GLV Unit |               |                | GLV unit with ClimaDry Reheat |               |                 |                |                 |               |
|---------------|--------------|--------------|-----------------|---------------|------------|------|-------------------|---------------|----------------|-------------------------------|---------------|-----------------|----------------|-----------------|---------------|
| Model         | Voltage Code | Voltage      | Min/Max Voltage | Blower Option | Compressor |      |                   | Fan Motor FLA | Total Unit FLA | Min Circuit Amp               | Max Fuse/HACR | Reheat Pump FLA | Total Unit FLA | Min Circuit Amp | Max Fuse/HACR |
|               |              |              |                 |               | QTY        | RLA  | LRA               |               |                |                               |               |                 |                |                 |               |
| GLV080        | H            | 208-230/60/3 | 197/253         | A, B, C       | 1          | 20.7 | 156               | 5.0           | 25.7           | 30.9                          | 50            | 1.1             | 26.8           | 32.0            | 50            |
| GLV080        | H            | 208-230/60/3 | 197/253         | E             | 1          | 20.7 | 156               | 6.2           | 26.9           | 32.1                          | 50            | 1.1             | 28.0           | 33.2            | 50            |
| GLV080        | F            | 460/60/3     | 414/506         | A, B, C       | 1          | 10.0 | 75                | 2.4           | 12.4           | 14.9                          | 20            | 0.6             | 12.9           | 15.4            | 25            |
| GLV080        | F            | 460/60/3     | 414/506         | E             | 1          | 10.0 | 75                | 3.1           | 13.1           | 15.6                          | 25            | 0.6             | 13.7           | 16.2            | 25            |
| GLV080        | N            | 575/60/3     | 518/633         | A, B, C       | 1          | 8.2  | 54                | 1.9           | 10.1           | 12.1                          | 20            | 0.4             | 10.5           | 12.6            | 20            |
| GLV080        | N            | 575/60/3     | 518/633         | E             | 1          | 8.2  | 54                | 2.3           | 10.5           | 12.5                          | 20            | 0.4             | 10.9           | 13.0            | 20            |
| GLV100        | H            | 208-230/60/3 | 197/253         | A, B          | 1          | 32.1 | 195               | 5.8           | 37.9           | 45.9                          | 70            | 2.0             | 39.1           | 47.1            | 70            |
| GLV100        | H            | 208-230/60/3 | 197/253         | E             | 1          | 32.1 | 195               | 6.2           | 38.3           | 46.3                          | 70            | 2.0             | 40.3           | 48.3            | 80            |
| GLV100        | F            | 460/60/3     | 414/506         | A, B          | 1          | 16.4 | 95                | 2.4           | 18.8           | 22.9                          | 35            | 1.0             | 19.8           | 23.9            | 40            |
| GLV100        | F            | 460/60/3     | 414/506         | E             | 1          | 16.4 | 95                | 3.1           | 19.5           | 23.6                          | 40            | 1.0             | 20.5           | 24.6            | 40            |
| GLV100        | N            | 575/60/3     | 518/633         | A, B          | 1          | 12.0 | 80                | 1.9           | 13.9           | 16.9                          | 25            | 0.8             | 14.7           | 17.7            | 25            |
| GLV100        | N            | 575/60/3     | 518/633         | E             | 1          | 12.0 | 80                | 2.3           | 14.3           | 17.3                          | 25            | 0.8             | 15.1           | 18.1            | 30            |
| GLV120        | H            | 208-230/60/3 | 197/253         | A, B, C       | 1          | 33.6 | 225               | 6.2           | 39.8           | 48.2                          | 80            | 2.0             | 41.8           | 50.2            | 80            |
| GLV120        | H            | 208-230/60/3 | 197/253         | E             | 1          | 33.6 | 225               | 8.4           | 42.0           | 50.4                          | 80            | 2.0             | 44.4           | 52.8            | 80            |
| GLV120        | F            | 460/60/3     | 414/506         | A, B, C       | 1          | 17.3 | 114               | 3.1           | 20.4           | 24.5                          | 40            | 1.0             | 21.4           | 25.7            | 40            |
| GLV120        | F            | 460/60/3     | 414/506         | E             | 1          | 17.3 | 114               | 4.2           | 21.5           | 25.8                          | 40            | 1.0             | 22.5           | 26.8            | 40            |
| GLV120        | N            | 575/60/3     | 518/633         | A, B, C       | 1          | 13.5 | 80                | 2.3           | 15.8           | 19.2                          | 30            | 0.8             | 16.6           | 20.0            | 30            |
| GLV120        | N            | 575/60/3     | 518/633         | E             | 1          | 13.5 | 80                | 3.4           | 16.9           | 20.3                          | 30            | 0.8             | 17.7           | 21.1            | 30            |
| GLV160        | H            | 208-230/60/3 | 197/253         | A, B, C       | 2          | 20.7 | 156               | 8.4           | 49.8           | 55.0                          | 70            | 2.0             | 52.2           | 57.3            | 70            |
| GLV160        | F            | 460/60/3     | 414/506         | A, B, C       | 2          | 10.0 | 74                | 4.2           | 24.2           | 26.7                          | 35            | 1.0             | 25.2           | 27.7            | 35            |
| GLV160        | N            | 575/60/3     | 518/633         | A, B, C       | 2          | 8.2  | 54                | 3.4           | 19.8           | 21.9                          | 30            | 0.8             | 20.6           | 22.6            | 30            |
| GLV200        | H            | 208-230/60/3 | 197/253         | A, B          | 2          | 32.1 | 195               | 5.0           | 74.2           | 75.8                          | 110           | 2.0             | 76.2           | 84.2            | 110           |
| GLV200        | H            | 208-230/60/3 | 197/253         | E             | 2          | 32.1 | 195               | 6.2           | 76.6           | 84.6                          | 110           | 2.0             | 78.6           | 86.6            | 110           |
| GLV200        | F            | 460/60/3     | 414/506         | A, B          | 2          | 16.4 | 95                | 2.4           | 37.6           | 41.7                          | 50            | 1.0             | 38.6           | 42.7            | 50            |
| GLV200        | F            | 460/60/3     | 414/506         | E             | 2          | 16.4 | 95                | 3.1           | 39.0           | 43.1                          | 50            | 1.0             | 40.0           | 44.1            | 60            |
| GLV200        | N            | 575/60/3     | 518/633         | A, B          | 2          | 12.0 | 80                | 1.9           | 27.8           | 30.8                          | 40            | 0.8             | 28.6           | 31.6            | 40            |
| GLV200        | N            | 575/60/3     | 518/633         | E             | 2          | 12.0 | 80                | 2.3           | 28.6           | 31.6                          | 40            | 0.8             | 29.4           | 32.4            | 40            |
| GLV240        | H            | 208-230/60/3 | 197/253         | A, B, C       | 2          | 33.6 | 225               | 6.2           | 79.6           | 88.0                          | 110           | 4.5             | 84.1           | 92.5            | 125           |
| GLV240        | H            | 208-230/60/3 | 197/253         | E             | 2          | 33.6 | 225               | 8.4           | 84.0           | 92.4                          | 125           | 4.5             | 89.3           | 97.7            | 125           |
| GLV240        | F            | 460/60/3     | 414/506         | A, B, C       | 2          | 17.3 | 114               | 3.1           | 40.8           | 45.1                          | 60            | 2.3             | 43.0           | 47.4            | 60            |
| GLV240        | F            | 460/60/3     | 414/506         | E             | 2          | 17.3 | 114               | 4.2           | 43.0           | 47.3                          | 60            | 2.3             | 45.3           | 49.6            | 60            |
| GLV240        | N            | 575/60/3     | 518/633         | A, B, C       | 2          | 13.5 | 80                | 2.3           | 31.6           | 35.0                          | 45            | 1.8             | 33.4           | 36.8            | 50            |
| GLV240        | N            | 575/60/3     | 518/633         | E             | 2          | 13.5 | 80                | 3.4           | 33.8           | 37.2                          | 50            | 1.8             | 35.6           | 39.0            | 50            |
| GLV300        | H            | 208-230/60/3 | 197/253         | A, C          | 2          | 47.1 | 245               | 8.4           | 111.0          | 122.8                         | 150           | 4.5             | 116.3          | 128.1           | 175           |
| GLV300        | F            | 460/60/3     | 414/506         | A, C          | 2          | 19.6 | 125               | 4.2           | 47.6           | 52.5                          | 70            | 2.3             | 49.8           | 54.8            | 70            |
| GLV300        | N            | 575/60/3     | 518/633         | A, C          | 2          | 15.8 | 100               | 3.4           | 38.4           | 42.4                          | 50            | 1.8             | 40.2           | 44.2            | 50            |

HACR circuit breaker in USA only

All fuses Class RK-5

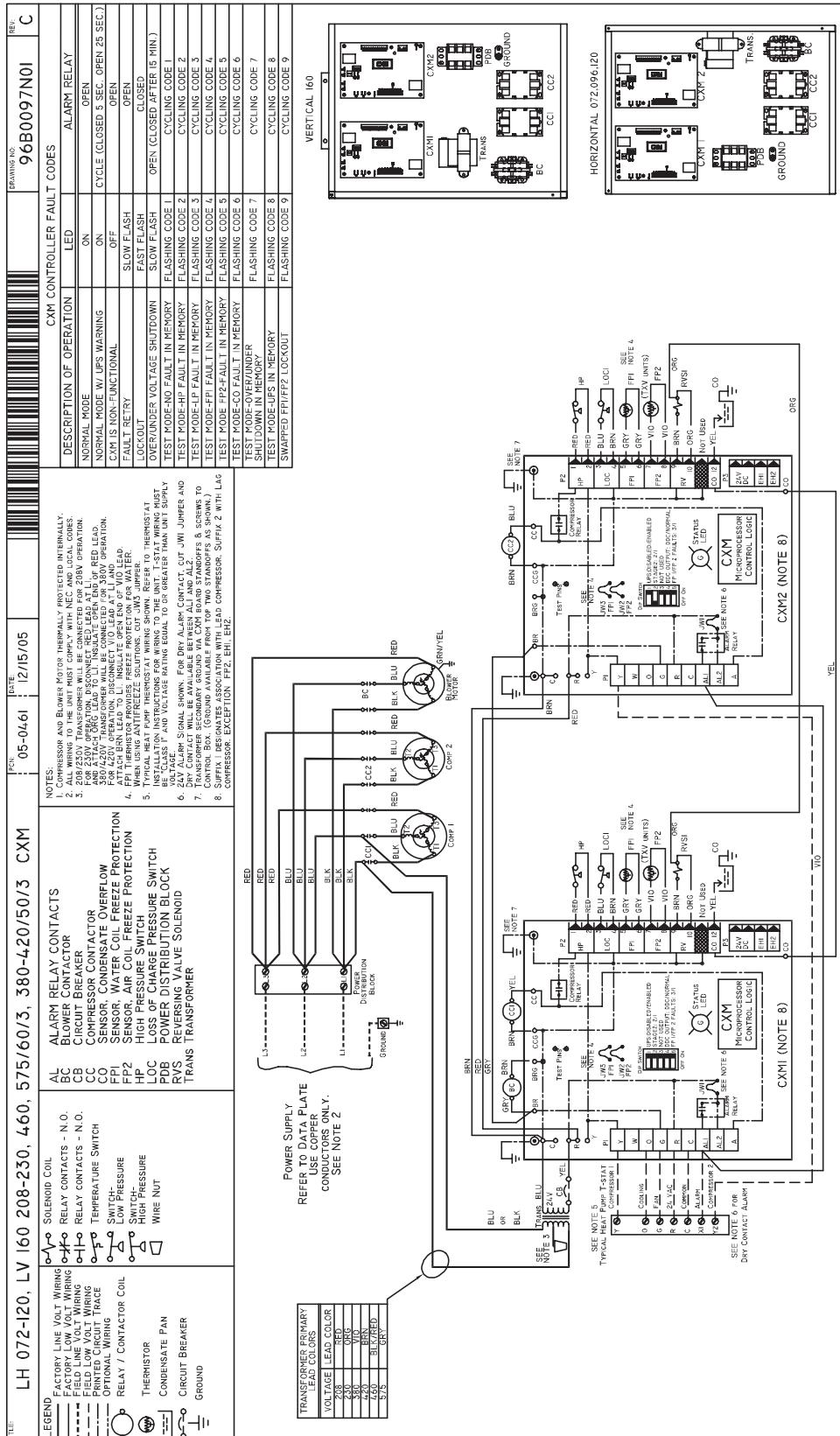
Note: Compressor RLA &amp; LRA values are per compressor

**GL Series Wiring Diagram Matrix**

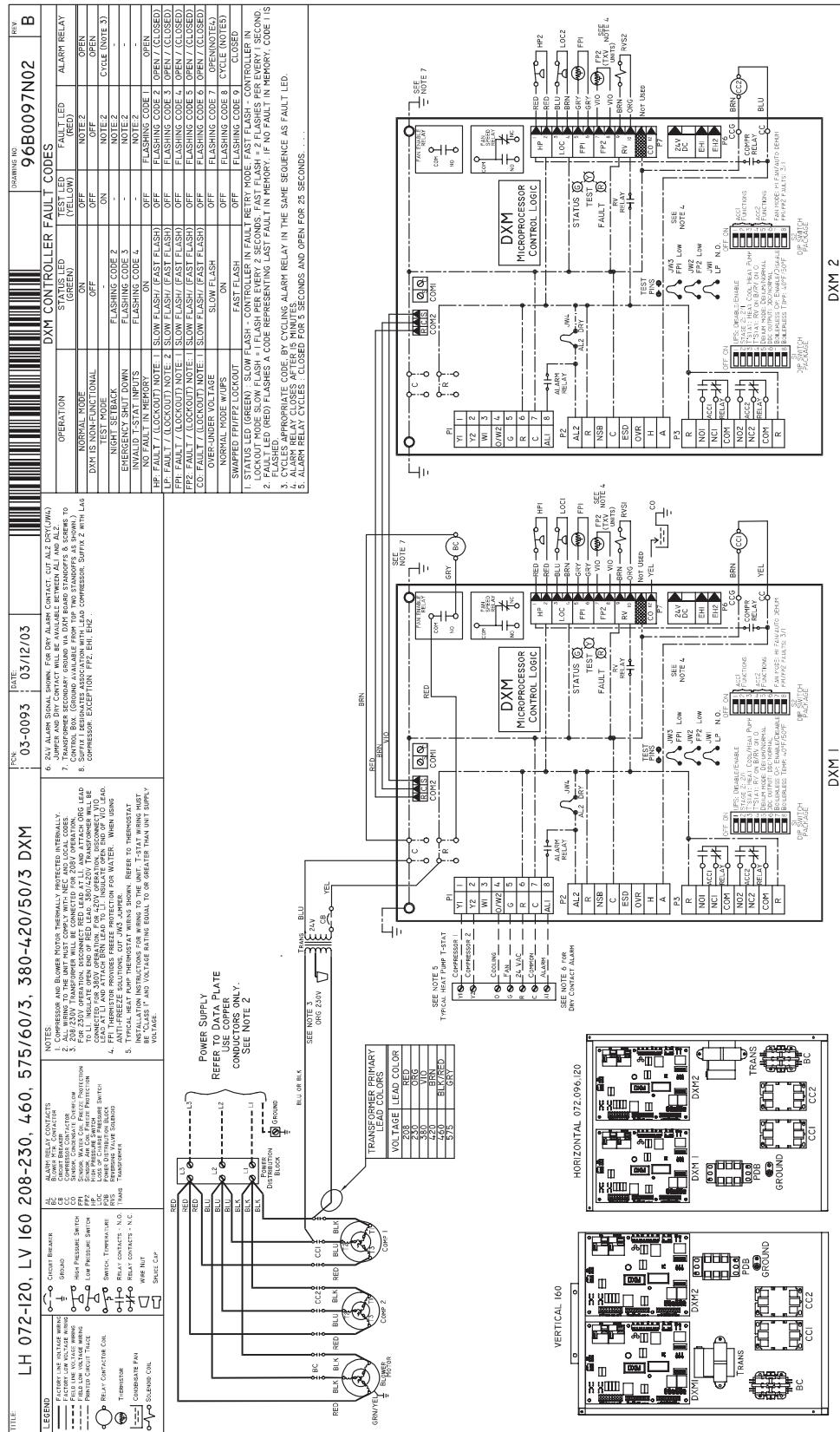
Only CXM and DXM diagrams, with a representative diagram of LON and MPC Options are presented in this submittal.  
 Other diagrams can be located online at [www.climatemaster.com](http://www.climatemaster.com) using the part numbers presented below.

| Model                | Refrigerant | Wiring Diagram Part Number | Electrical  | Control | DDC | ClimaDry (GLV only) | Agency |
|----------------------|-------------|----------------------------|---|---------|-----|---------------------|--------|
| GLV 080-120          | R22         | 96B0091N01                 | 208-230/60/3,<br>460/60/3,<br>575/60/3,<br>380-420/50/3 | CXM     | -   | -                   | -      |
|                      | R22 & R407C | 96B0091N07                 |   |         | -   | -                   | CE     |
|                      | R22         | 96B0091N03                 |   |         | LON | -                   | -      |
|                      | R22 & R407C | 96B0091N08                 |   |         | LON | -                   | CE     |
|                      | R22         | 96B0091N09                 |   |         | MPC | -                   | -      |
|                      | R22 & R407C | 96B0091N13                 |   |         | MPC | -                   | CE     |
|                      | R22         | 96B0091N02                 |   | DXM     | -   | -                   | -      |
|                      | R22 & R407C | 96B0091N06                 |   |         | -   | -                   | CE     |
|                      | R22         | 96B0091N24                 |   |         | -   | X                   | -      |
|                      | R22         | 96B0091N04                 |   |         | LON | -                   | -      |
|                      | R22         | 96B0091N37                 |   |         | LON | X                   | -      |
|                      | R22 & R407C | 96B0091N12                 |   |         | LON | -                   | CE     |
|                      | R22         | 96B0091N10                 |   |         | MPC | -                   | -      |
|                      | R22         | 96B0091N40                 |   |         | MPC | X                   | -      |
|                      | R22 & R407C | 96B0091N15                 |   |         | MPC | -                   | CE     |
| GLH 072-120 & GLV160 | R22         | 96B0097N01                 | 208-230/60/3,<br>460/60/3,<br>575/60/3,<br>380-420/50/3 | CXM     | -   | -                   | -      |
|                      | R22 & R407C | 96B0097N07                 |   |         | -   | -                   | CE     |
|                      | R22         | 96B0097N03                 |   |         | LON | -                   | -      |
|                      | R22 & R407C | 96B0097N08                 |   |         | LON | -                   | CE     |
|                      | R22         | 96B0097N09                 |   |         | MPC | -                   | -      |
|                      | R22 & R407C | 96B0097N13                 |   |         | MPC | -                   | CE     |
|                      | R22         | 96B0097N02                 |   | DXM     | -   | -                   | -      |
|                      | R22         | 96B0091N30                 |   |         | -   | X                   | -      |
|                      | R22 & R407C | 96B0097N06                 |   |         | -   | -                   | CE     |
|                      | R22         | 96B0097N04                 |   |         | LON | -                   | -      |
|                      | R22         | 96B0091N38                 |   |         | LON | X                   | -      |
|                      | R22 & R407C | 96B0097N12                 |   |         | LON | -                   | CE     |
|                      | R22         | 96B0097N10                 |   |         | MPC | -                   | -      |
|                      | R22         | 96B0091N41                 |   |         | MPC | X                   | -      |
|                      | R22 & R407C | 96B0091N15                 |   |         | MPC | -                   | CE     |
| GLV 200-300          | R22         | 96B0090N01                 | 208-230/60/3,<br>460/60/3,<br>575/60/3,<br>380-420/50/3 | CXM     | -   | -                   | -      |
|                      | R22 & R407C | 96B0090N07                 |   |         | -   | -                   | CE     |
|                      | R22         | 96B0090N03                 |   |         | LON | -                   | -      |
|                      | R22 & R407C | 96B0090N08                 |   |         | LON | -                   | CE     |
|                      | R22         | 96B0090N09                 |   |         | MPC | -                   | -      |
|                      | R22 & R407C | 96B0090N13                 |   |         | MPC | -                   | CE     |
|                      | R22         | 96B0090N02                 |   | DXM     | -   | -                   | -      |
|                      | R22         | 96B0091N29                 |   |         | -   | X                   | -      |
|                      | R22 & R407C | 96B0090N06                 |   |         | -   | -                   | CE     |
|                      | R22         | 96B0090N04                 |   |         | LON | -                   | -      |
|                      | R22         | 96B0091N39                 |   |         | LON | X                   | -      |
|                      | R22 & R407C | 96B0090N12                 |   |         | LON | -                   | CE     |
|                      | R22         | 96B0090N10                 |   |         | MPC | -                   | -      |
|                      | R22         | 96B0091N42                 |   |         | MPC | X                   | -      |
|                      | R22 & R407C | 96B0090N15                 |   |         | MPC | -                   | CE     |

All wiring diagrams available at [www.climatemaster.com](http://www.climatemaster.com). R407C submittals will only contain CE Mark wiring diagrams

Genesis Large (GL) Series  
Rev.: 05/23/07DTypical Wiring Diagram  
Three Phase GLH072-120 &  
GLV160 Units With CXM Controller

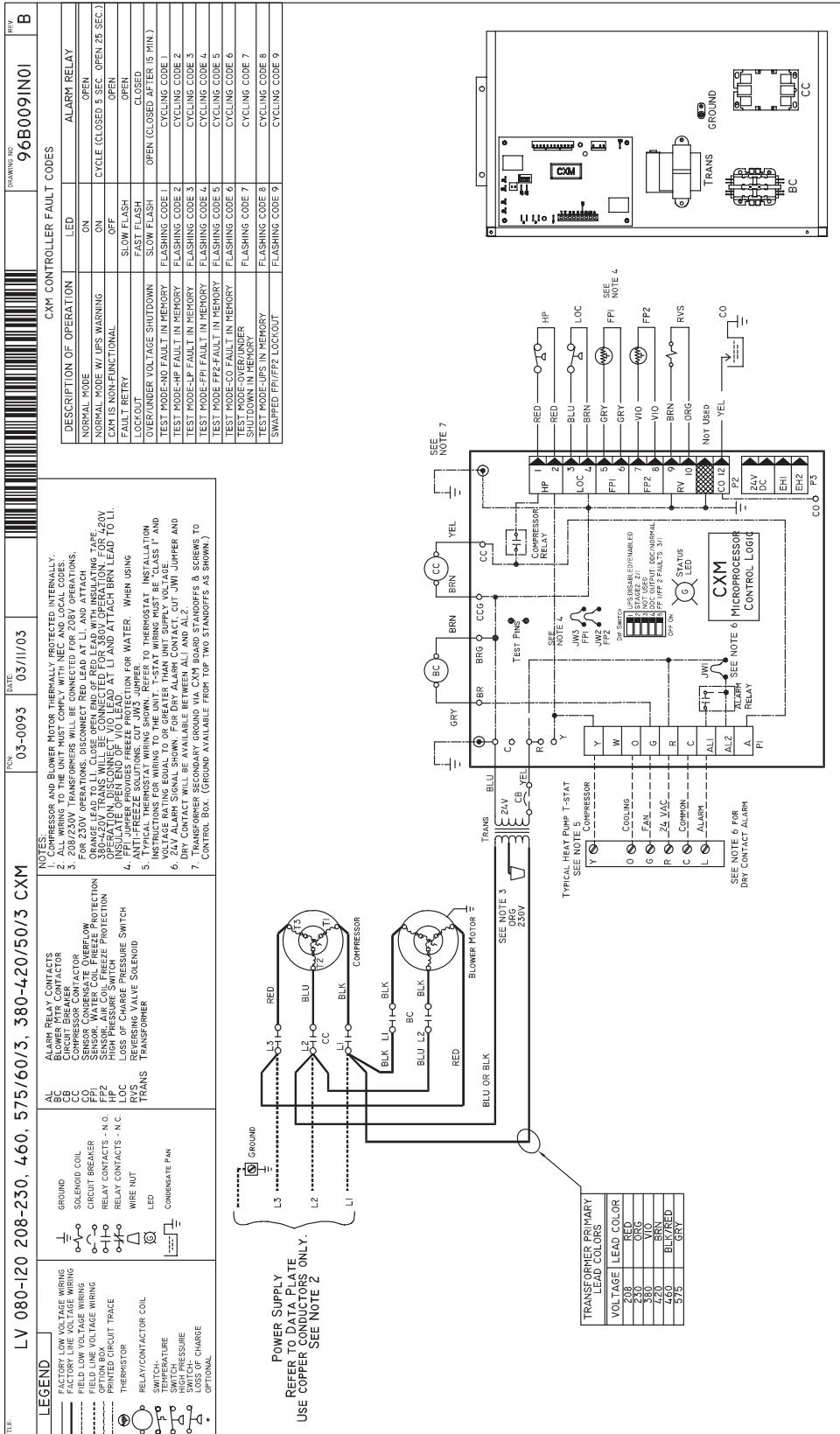
## Typical Wiring Diagram Three Phase GLH072-120 & GLV160 Units With DXM Controller



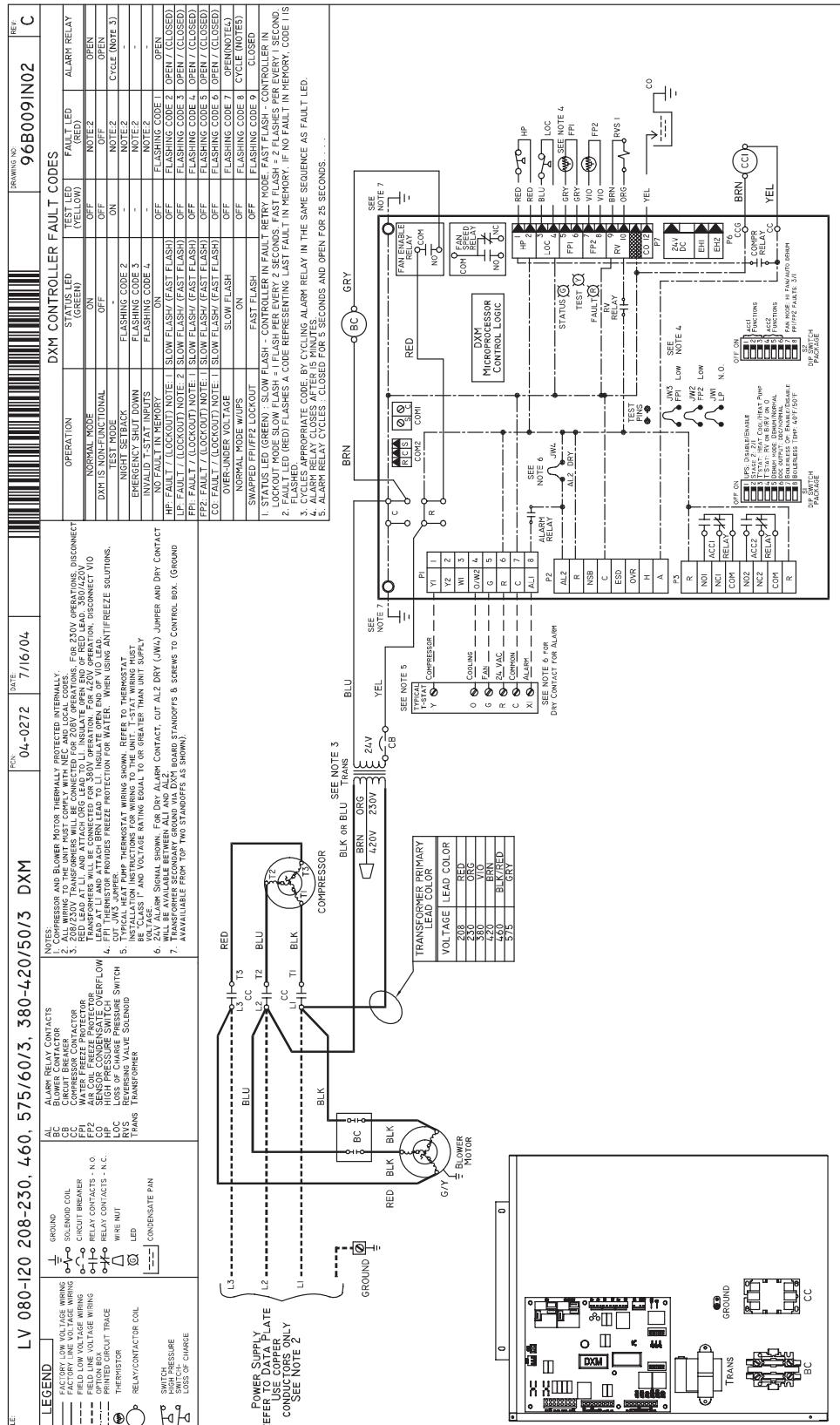
# CLIMATEMASTER WATER-SOURCE HEAT PUMPS

Genesis Large (GL) Series  
Rev.: 05/23/07D

## Typical Wiring Diagram Three Phase GLV080-120 Units With CXM Controller



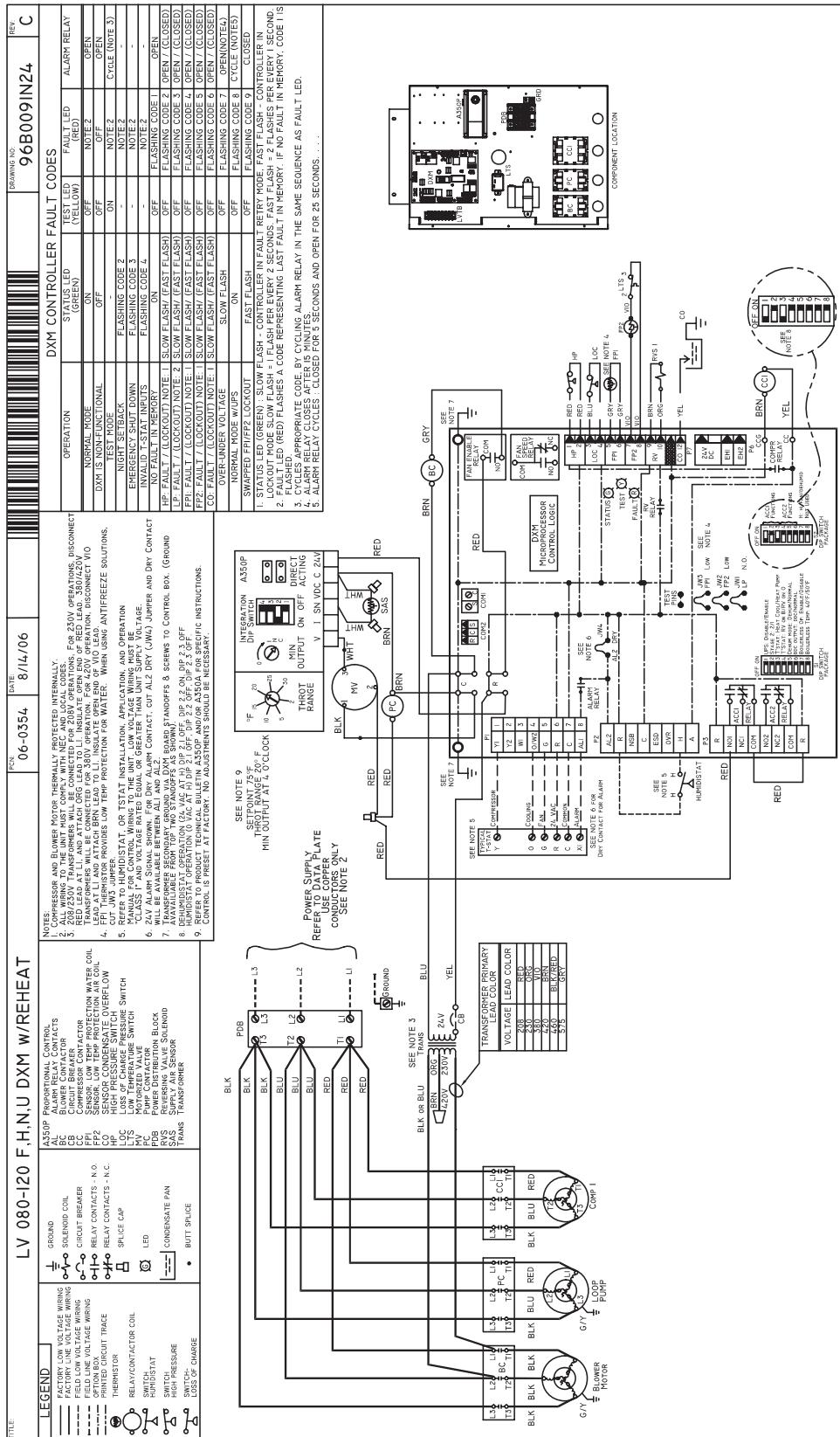
## Typical Wiring Diagram Three Phase GLV080-120 Units With DXM Controller



# Genesis Large (GL) Series

Rev.: 05/23/07D

## Typical Wiring Diagram Three Phase GLV080-120 Units With DXM Controller & ClimaDry

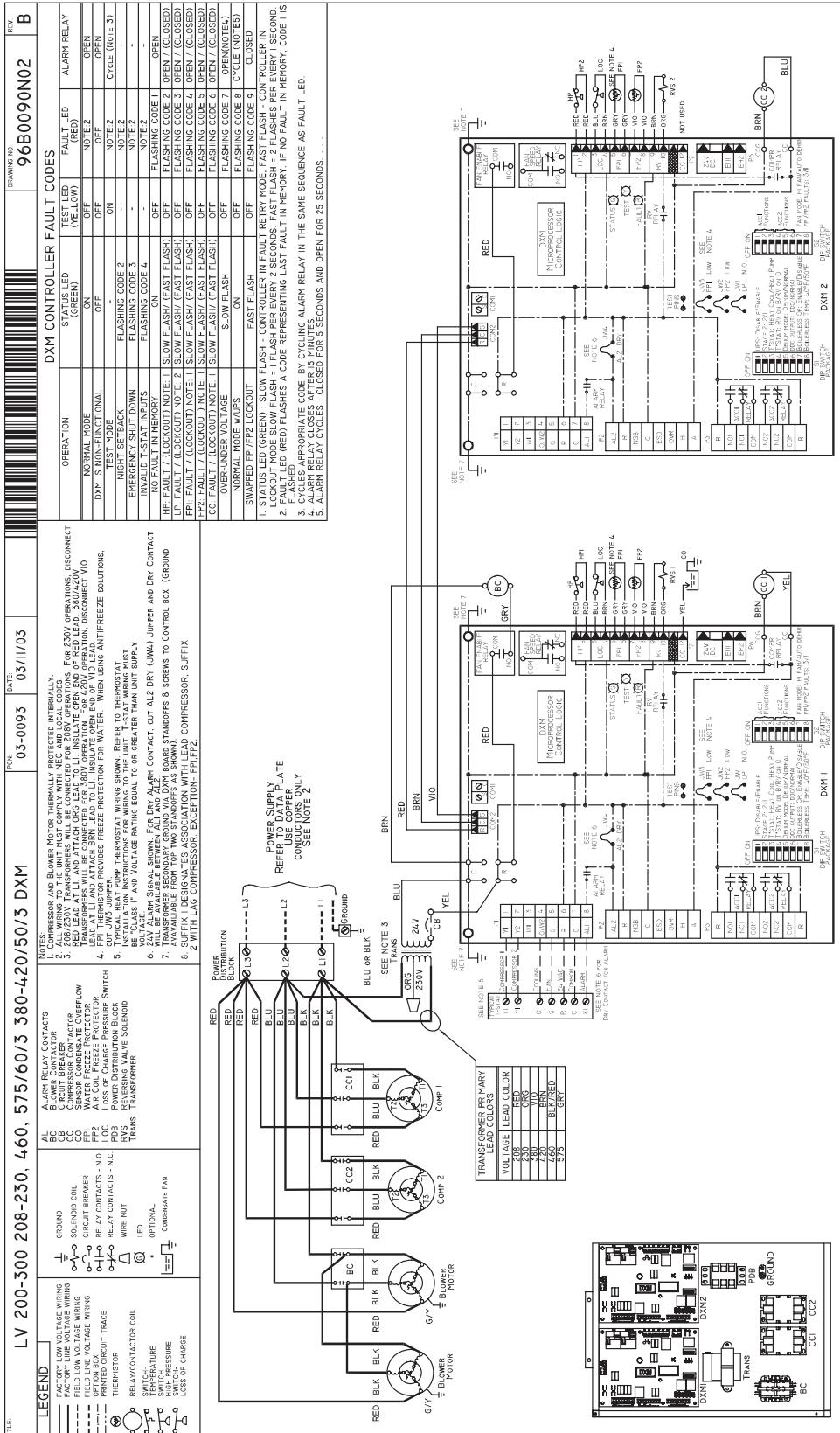


## Typical Wiring Diagram Three Phase GLV200-300 Units With CXM Controller

# CLIMATEMASTER WATER-SOURCE HEAT PUMPS

Genesis Large (GL) Series  
Rev.: 05/23/07D

## Typical Wiring Diagram Three Phase GLV200-300 Units With DXM Controller

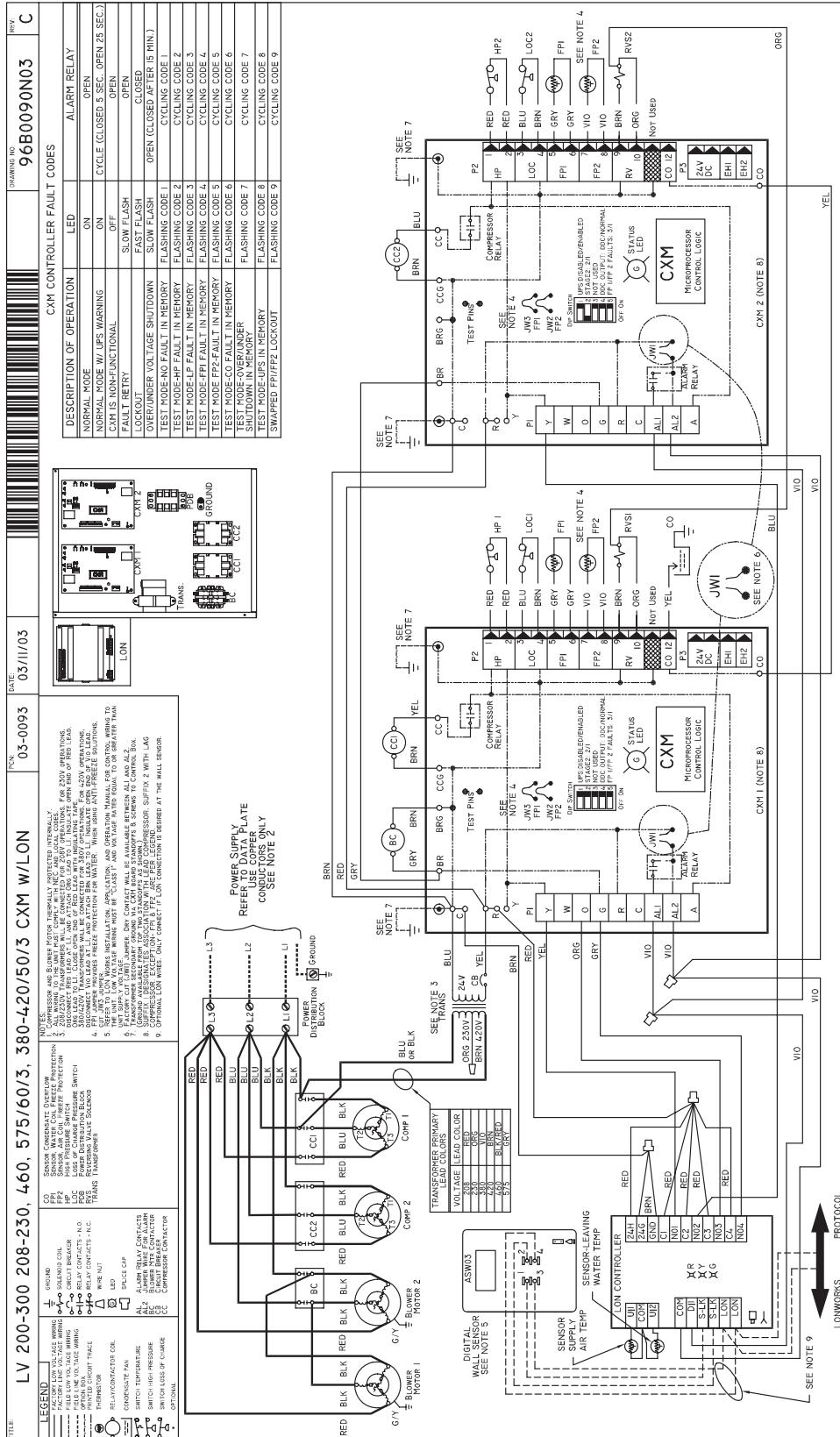


## Typical Wiring Diagram Three Phase GLV200-300 Units With DXM Controller & ClimaDry

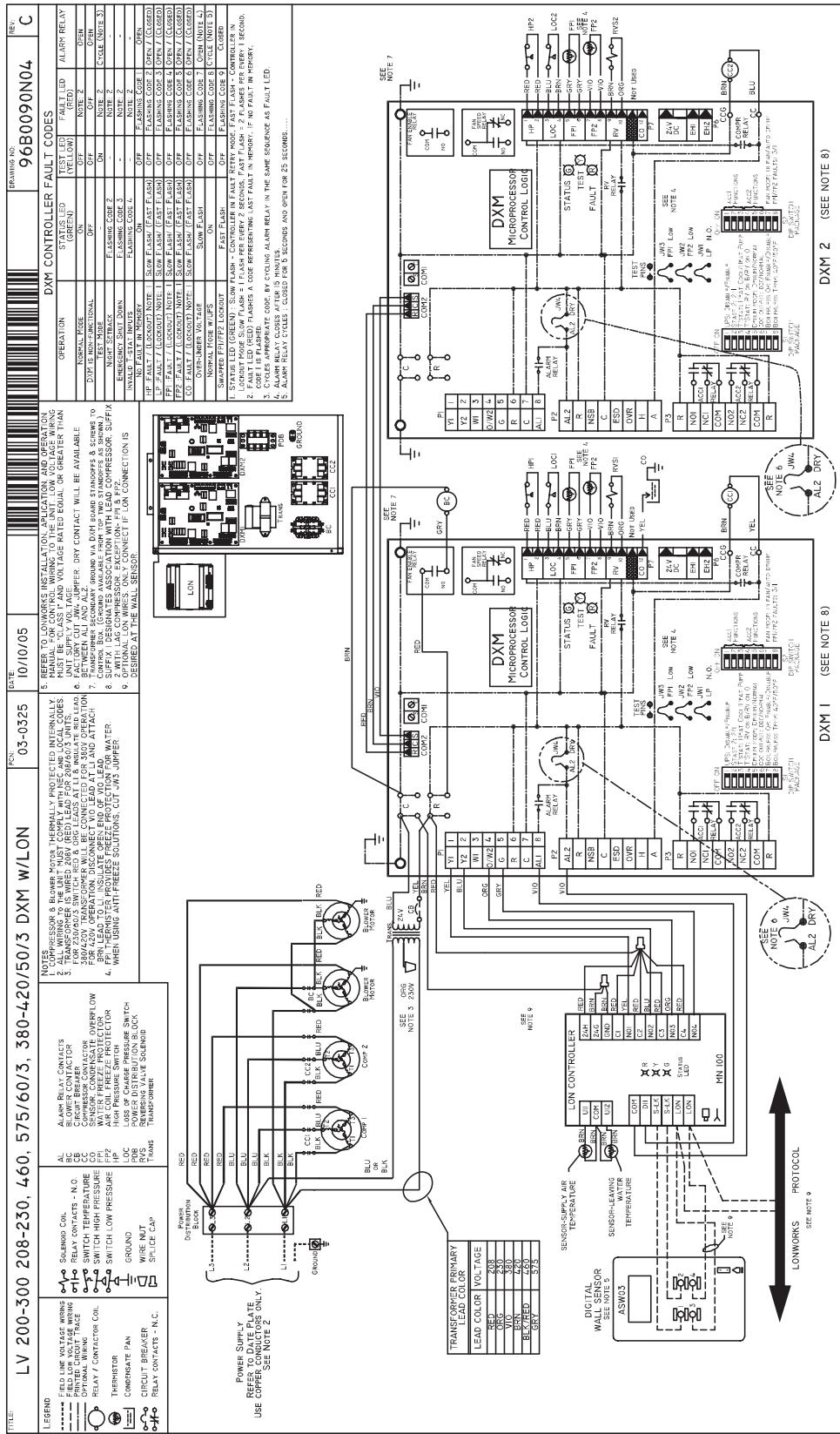
# Genesis Large (GL) Series

Rev.: 05/23/07D

## Typical Wiring Diagram Three Phase GLV200-300 Units With CXM & LON Controller



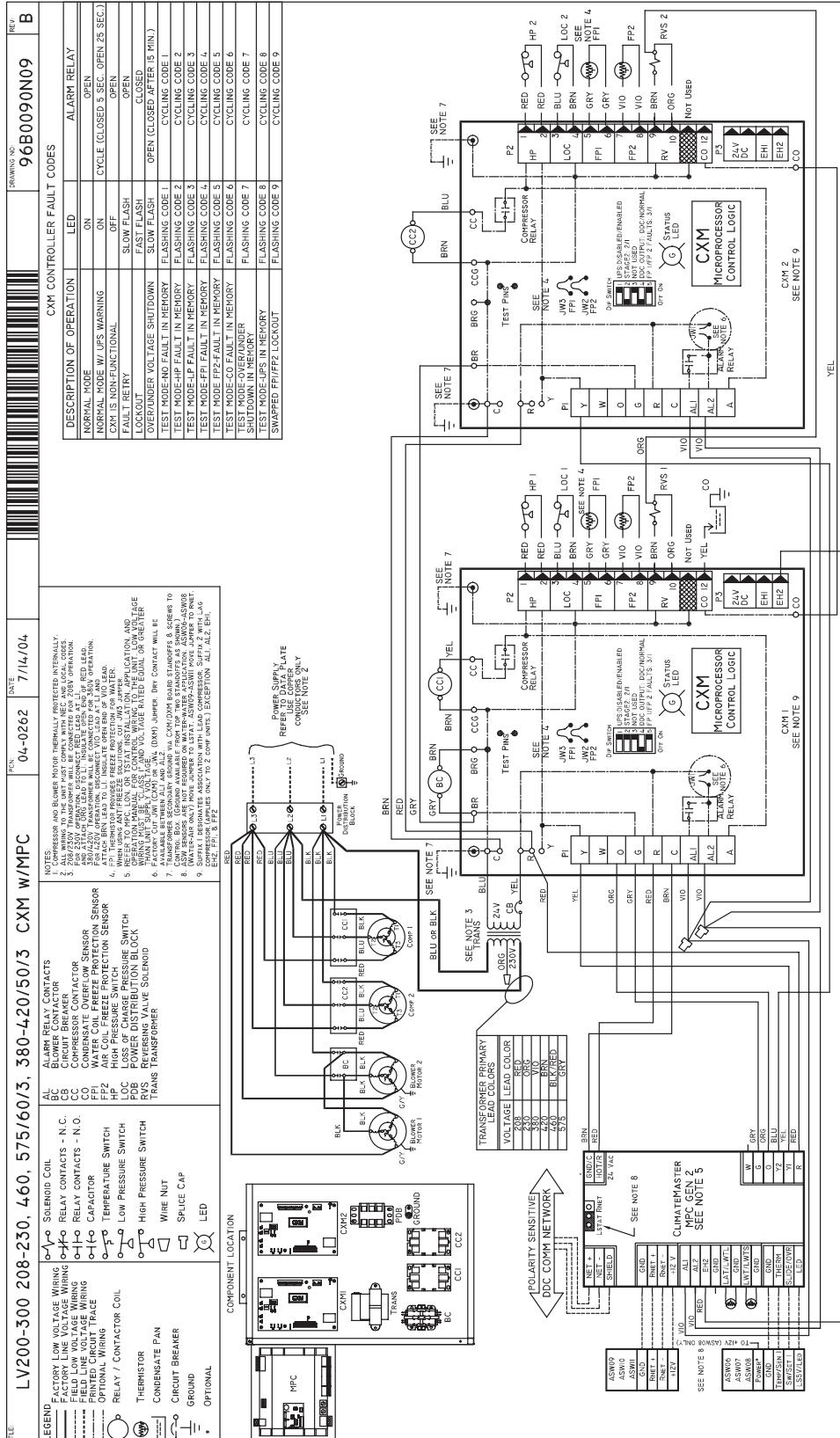
## Typical Wiring Diagram Three Phase GLV200-300 Units With DXM & LON Controller



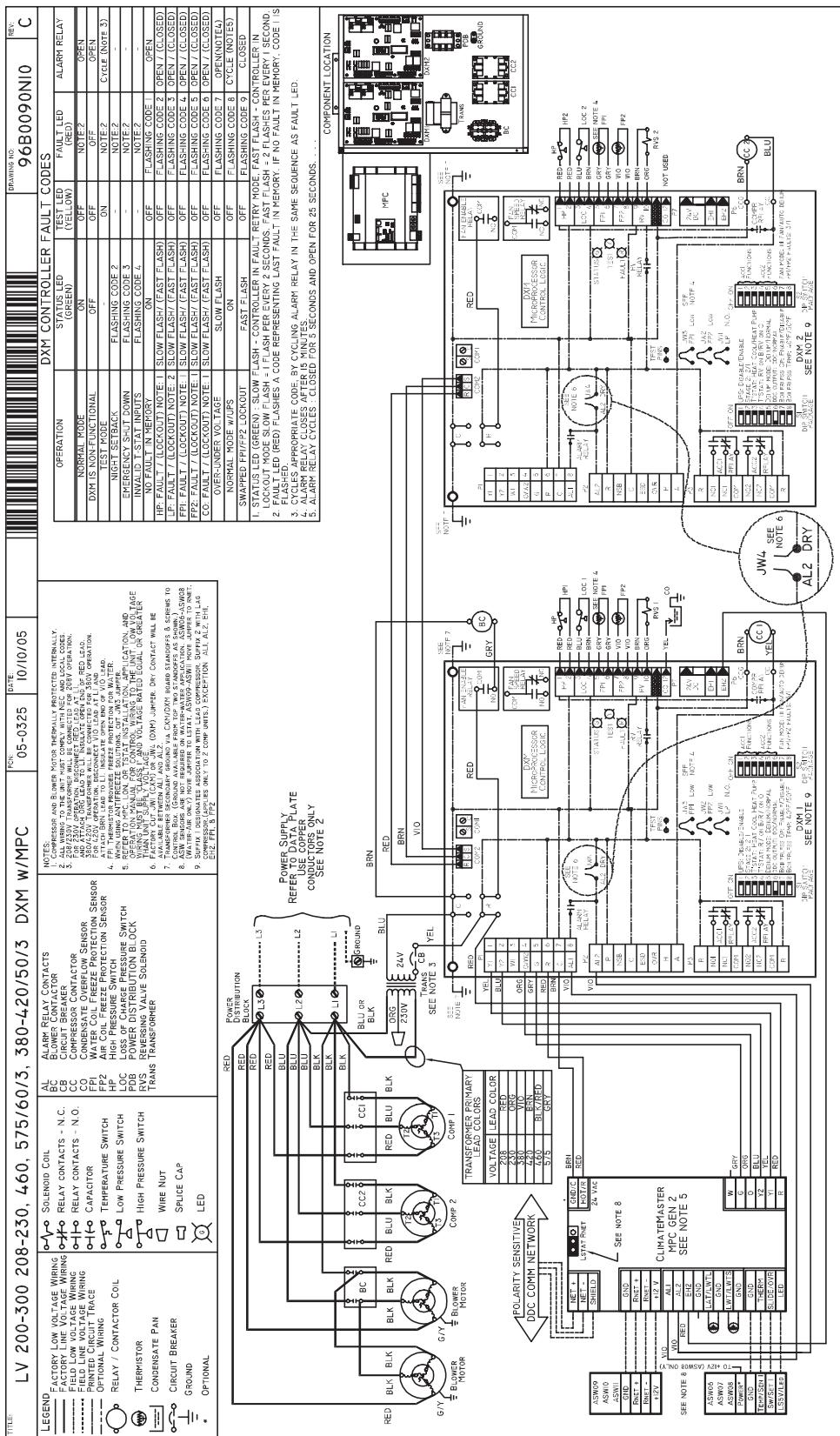
# Genesis Large (GL) Series

Rev.: 05/23/07D

## Typical Wiring Diagram Three Phase GLV200-300 Units With CXM & MPC Controller



## Typical Wiring Diagram Three Phase GLV200-300 Units With DXM & MPC Controller



## Genesis Large (GL) Series

Rev.: 05/23/07D

## Genesis Large (GL) Series 60Hz

### Engineering Specifications Rev.: 04/02/07

**General:**

Furnish and install ClimateMaster "Genesis" Water Source Heat Pumps, as indicated on the plans. Equipment shall be completely assembled, piped and internally wired. Capacities and characteristics as listed in the schedule and the specifications that follow.

**Horizontal / Vertical Water Source Heat Pumps:**

Units shall be supplied completely factory built for an entering water temperature range from 20° to 110°F (-6.7° to 43.3°C) as standard. Equivalent units from other manufacturers can be proposed provided approval to bid is given 10 days prior to bid closing. All equipment listed in this section must be rated and certified in accordance with American Refrigeration Institute / International Standards Organization (ARI / ISO) and Environmental Testing Laboratories for United States and Canada (ETL-US-C). The units shall have ARI / ISO and ETL-US-C labels. All units shall be fully quality tested by factory run testing under normal operating conditions as described herein. Quality control system shall automatically perform via computer: triple leak check, pressure tests, evacuate and accurately charge system, perform detailed heating and cooling mode tests, and quality cross check all operational and test conditions to pass/fail criteria. **Units tested without water flow are not acceptable.**

**Basic Construction:**

Horizontal Units shall have the following air flow arrangement: Left Inlet/Straight (Right) Discharge as shown on the plans. Units will have factory installed hanger brackets with rubber isolation grommets packaged separately. Vertical Units shall have one of the following air flow arrangements: Back Return/Top Discharge, Front Return/Top Discharge, Back Return/Front Discharge, Front Return/Back Discharge as shown on the plans (GLV300 is top discharge only).

If units with these arrangements are not used, the contractor is responsible for any extra costs incurred by other trades. All units (horizontal and vertical) must have a minimum of two access panels for serviceability of compressor compartment. **Units having only one access panel to compressor/heat exchangers/expansion device/refrigerant piping shall not be acceptable.**

The heat pumps shall be fabricated from heavy gauge galvanized steel. All interior surfaces shall be lined with 1/2 inch (12.7mm) thick, dual density, 1-3/4 lb/ft<sup>3</sup> (28 kg/m<sup>3</sup>) acoustic type glass fiber insulation. Insulation placement shall be designed in a manner that will eliminate any exposed edges to prevent the introduction of glass fibers into the air stream.

Vertical heat pumps shall be fabricated from heavy gauge galvanized steel with powder coat paint finish. The color will be Polar Ice. Both sides of the steel shall be painted for added protection.

Standard cabinet panel insulation must meet NFPA 90A requirements, air erosion and mold growth limits of UL-181, stringent fungal resistance test per ASTM-C1071 and ASTM G21, and shall meet zero level bacteria growth per ASTM G22. **Unit insulation must meet these stringent requirements or unit(s) will not be accepted.**

All horizontal units to have factory installed 1" (25.4mm) discharge air duct collars, 1" (25.4mm) filter rails with 1" (25.4mm) filters factory installed, and factory installed unit-mounting brackets. Vertical units to have field installed discharge air duct collar, shipped loose and 1" (25.4mm) filter rails with 1" (25.4mm) filters factory installed. **If units with these factory installed provisions are not used, the contractor is responsible for any extra costs to field install these provisions, and/or the extra costs for his sub-contractor to install these provisions.**

All units must have an insulated panel separating the fan compartment from the compressor compartment. Units with the compressor in the air stream are not acceptable. Units shall have a factory installed 1 inch (25.4mm) wide filter bracket for filter removal from either side. Units shall have a 1 inch (25.4mm) thick throwaway type glass fiber filter. The contractor shall purchase one spare set of filters and replace factory shipped filters on completion of start-up. Filters shall be standard sizes. If units utilize non-standard filter sizes then the contractor shall provide 12 spare filters for each unit.

Cabinets shall have separate holes and knockouts for entrance of line voltage and low voltage control wiring. All factory-installed wiring passing through factory knockouts and openings shall be protected from sheet metal edges at openings by plastic ferrules. Supply and return water connections shall be copper IPT fittings, and shall be securely mounted flush to the cabinet corner post allowing for connection to a flexible hose without the use of a back-up wrench. **Water connections that protrude through the cabinet or require the use of a backup wrench shall not be allowed.** All water connections and electrical knockouts must be in the compressor compartment corner post as to not interfere with the serviceability of unit. **Contractor shall be responsible for any extra costs involved in the installation of units that do not have this feature.** Contractor must ensure that units can be easily removed for servicing and coordinate locations of electrical conduit and lights with the electrical contractor.

**Option:** Contractor shall install 2-inch (50.8mm) filter brackets and 2 inch(50.8mm) glass fiber throwaway filters on all units.

Option: UltraQuiet package shall consist of high technology sound attenuating material that is strategically applied to the compressor and air handling compartment casings and fan scroll in addition to the standard ClimaQuiet system design, to further dampen and attenuate sound transmissions.

Option: The unit will be supplied with cupro nickel coaxial water to refrigerant heat exchanger.

Option: The unit shall be supplied with extended range Insulation option, which adds closed cell insulation to internal water lines, and provides insulation on suction side refrigeration tubing including refrigerant to water heat exchanger.

Option: The refrigerant to air heat exchanger shall be "electro-coated" with a low cure cathodic epoxy material a minimum of 0.4 mils thick (0.4 – 1.5 mils range) on all surfaces. The black colored coating shall provide a minimum of 1000 hours salt spray protection per ASTM B117-97 on all galvanized end plates and copper tubing, and a minimum of 2000 hours of salt spray on all aluminum fins. The material shall be formulated without the inclusion of any heavy metals and shall exhibit a pencil hardness of 2H (ASTM D3363-92A), crosshatch adhesion of 4B-5B (ASTM D3359-95), and impact resistance of 160 in-lbs (184 kg-cm) direct (ASTM D2794-93).

Option (vertical units only): Unit shall include ClimaDry reheat option. Only modulating reheat that will adjust capacity based upon supply air temperature to provide "neutral" (72°F, 22.2°C) constant air temperature will be accepted. "Neutral" supply air temperature shall be provided regardless of entering loop water temperatures (above 55°F, 12.8°C) or refrigerant condensing pressures. Control of reheat must be accomplished via a humidistat or dehumidistat contact closure. Refrigerant circuit must be ARI certified. Approved equal manufacturers may provide pre-engineered integrated modulating hot gas reheat within the unit cabinet, or the installing contractor in conjunction with the "approved equal" unit manufacturer can provide for approval (during the submittal phase) an engineered system consisting of: a duct mounted hot water coil, small circulating pump, modulating control valve, and associated piping using the discharge condenser water off of the unit as the heating medium. All design costs and costs of field installed items including additional power wiring to pump, and control wiring to and from pump and control valve to unit shall be borne by mechanical contractor. **Refrigerant circuits that are not ARI certified when the reheat option is applied will not be accepted.**

#### Fan and Motor Assembly:

All units shall have belt-driven single or dual centrifugal fans. Fan motors shall be permanently lubricated with thermal overload protection. Units supplied without permanently lubricated motors must provide external oilers for easy service. The fan motor shall be isolated from the fan housing by flexible rubber type isolation grommets. The fan and motor assembly must be capable of overcoming the external static pressures as shown on the schedule. Airflow / Static pressure rating of the unit shall be based on a wet coil and a clean filter in place. **Ratings based on a dry coil and/or no filter, or on an ESP less than 0.25" (6.35 mm w.g.) shall NOT be acceptable.**

Option: Various blower drive packages for selectable static pressure/airflow.

#### Refrigerant Circuit:

Units shall have two sealed refrigerant circuits, each including a high efficiency scroll compressor (only GLH 072 utilizes reciprocating compressors) designed for heat pump operation, a thermostatic expansion valve for refrigerant metering, an enhanced corrugated lanced fin and rifled copper tube refrigerant to air heat exchanger, reversing valve, coaxial (tube in tube) refrigerant to water heat exchanger, and safety controls including a high pressure switch, low pressure switch (loss of charge), water coil low temperature sensor, and air coil low temperature sensor. Access fittings shall be factory installed on high and low pressure refrigerant lines to facilitate field service. Activation of any safety device shall prevent compressor operation via a microprocessor lockout circuit. The lockout circuit shall be reset at the thermostat or at the contractor supplied disconnect switch. **Units that cannot be reset at the thermostat shall not be acceptable.**

Hermetic compressors shall be internally sprung. The scroll compressors (only GLH072 utilizes reciprocating compressors) shall have a dual level vibration isolation system. The compressor(s) will be mounted on computer selected vibration isolation grommets to a large heavy gauge compressor mounting tray plate, which is then isolated from the cabinet base with rubber grommets for maximized vibration attenuation. Compressor shall have thermal overload protection. Compressor shall be located in an insulated compartment away from air stream to minimize sound transmission.

Refrigerant to air heat exchangers shall utilize enhanced corrugated lanced aluminum fins and rifled copper tube construction rated to withstand 450 PSIG (3101 kPa) refrigerant working pressure. Refrigerant to water heat exchangers shall be of copper inner water tube and steel refrigerant outer tube design, rated to withstand 450 PSIG (3101 kPa) working refrigerant pressure and 450 PSIG (3101 kPa) working water pressure. The refrigerant to water heat exchanger shall be "electro-coated" with a low cure cathodic epoxy material a minimum of 0.4 mils thick (0.4 – 1.5 mils range) on all surfaces. The black colored coating shall provide a minimum of 1000 hours salt spray protection per ASTM B117-97 on all external steel and copper tubing. The material shall be formulated without the inclusion of any heavy metals and shall exhibit a pencil hardness of 2H (ASTM D3363-92A), crosshatch adhesion of 4B-5B (ASTM D3359-95), and impact resistance of 160 in-lbs (184 kg-cm) direct (ASTM D2794-93). **Plate to plate heat exchangers are not acceptable.**

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Refrigerant metering shall be accomplished by thermostatic expansion valve only. Expansion valves shall be dual port balanced types with external equalizer for optimum refrigerant metering. Units shall be designed and tested for operating ranges of entering water temperatures from 20° to 110°F (-6.7° to 43.3°C). Reversing valve shall be four-way solenoid activated refrigerant valve, which shall default to heating mode should the solenoid fail to function. If the reversing valve solenoid defaults to cooling mode, an additional low temperature thermostat must be provided to prevent over-cooling an already cold room.

**Drain Pan:**

The drain pan shall be constructed of galvanized steel and have a powder coat paint application to further inhibit corrosion. This corrosion protection system shall meet the stringent 1000 hour salt spray test per ASTM B117. If plastic type material is used, it must be HDPE (High Density Polyethylene) to avoid thermal cycling shock stress failure over the lifetime of the unit. Stainless Steel materials are also acceptable. Drain pan shall be fully insulated. Drain outlet shall be located at pan as to allow complete and unobstructed drainage of condensate. Drain outlet for shall be connected from pan directly to IPT fitting. **No hidden internal tubing extensions from pan outlet extending to unit casing (that can create drainage problems) will be accepted.** The unit as standard will be supplied with solid-state electronic condensate overflow protection. **Mechanical float switches will NOT be accepted.**

**Electrical:**

A control box shall be located within the unit compressor compartment and shall contain a 75VA transformer with load side circuit breaker protection, 24 volt activated, 2 or 3 pole compressor contactor, terminal block for thermostat wiring and solid-state controller for complete unit operation. Reversing valve and fan motor wiring shall be routed through this electronic controller. Units shall be name-plated for use with time delay fuses or HACR circuit breakers. Unit controls shall be 24 Volt and provide heating or cooling as required by the remote thermostat / sensor. Two compressor units shall have a solid-state time delay relay and random start to prevent both compressors from starting simultaneously.

**Solid State Control System (CXM):**

Units shall have a solid-state control system. **Units utilizing electro-mechanical control shall not be acceptable.** The control system microprocessor board shall be specifically designed to protect against building electrical system noise contamination, EMI, and RFI interference. The control system shall interface with a heat pump type thermostat. The control system shall have the following features:

- a. Anti-short cycle time delay on compressor operation.
- b. Random start on power up mode.
- c. Low voltage protection.
- d. High voltage protection.
- e. Unit shutdown on high or low refrigerant pressures.
- f. Unit shutdown on low water temperature.
- g. Condensate overflow electronic protection.
- h. Option to reset unit at thermostat or disconnect.
- i. Automatic intelligent reset. Unit shall automatically reset the unit 5 minutes after trip if the fault has cleared. If a fault occurs 3 times sequentially without thermostat meeting temperature, then lockout requiring manual reset will occur.
- j. Ability to defeat time delays for servicing.
- k. Light emitting diode (LED) on circuit board to indicate high pressure, low pressure, low voltage, high voltage, low water/air temperature cut-out, condensate overflow, and control voltage status.
- l. The low-pressure switch shall not be monitored for the first 120 seconds after a compressor start command to prevent nuisance safety trips.
- m. 24V output to cycle a motorized water valve or other device with compressor contactor.
- n. Unit Performance Sentinel (UPS). The UPS warns when the heat pump is running inefficiently.
- o. Water coil low temperature sensing (selectable for water or anti-freeze).
- p. Air coil low temperature sensing.

**NOTE: Units not providing the 8 safety protections of anti-short cycle, low voltage, high voltage, high refrigerant pressure, low pressure (loss of charge), air coil low temperature cut-out, water coil low temperature cut-out, and condensate overflow protections will not be accepted.**

**Option: Enhanced solid state control system (DXM)**

This control system features two stage control of cooling and two stage control of heating modes for exacting temperature and dehumidification purposes. Control shall have all of the above mentioned features of the CXM control system along with the following expanded features:

- a. Removable thermostat connector.
- b. Night setback control.
- c. Random start on return from night setback.
- d. Minimized reversing valve operation (Unit control logic shall only switch the reversing valve when cooling is demanded for the first time. The reversing valve shall be held in this position until the first call for heating, ensuring quiet operation and increased valve life.).

- e. Override temperature control with 2-hour (adjustable) timer for room occupant to override setback temperature at the thermostat.
- f. Dry contact night setback output for digital night setback thermostats.
- g. Ability to work with heat pump or heat/cool (Y, W) type thermostats.
- h. Ability to work with heat pump thermostats using O or B reversing valve control.
- i. Emergency shutdown contacts.
- j. Boilerless system heat control at low loop water temperature.
- k. Ability to allow up to 3 units to be controlled by one thermostat.
- l. Relay to operate an external damper.
- m. Ability to automatically change fan speed from multistage thermostat.
- n. Relay to start system pump.
- o. 75 VA control transformer. Control transformer shall have load side short circuit and overload protection via a built in circuit breaker.

**Remote Service Sentinel (CXM/DXM):**

Solid state control system shall communicate with thermostat to display (at the thermostat) the unit status, fault status, and specific fault condition, as well as retrieve previously stored fault that caused unit shutdown. The Remote Service Sentinel allows building maintenance personnel or service personnel to diagnose unit from the wall thermostat. The control board shall provide a signal to the thermostat fault light, indicating a lockout. Upon cycling the G (fan) input 3 times within a 60 second time period, the fault light shall display the specific code as indicated by a sequence of flashes. A detailed flashing code shall be provided at the thermostat LED to display unit status and specific fault status such as over/under voltage fault, high pressure fault, low pressure fault, low water temperature fault, condensate overflow fault, etc. **Units that do not provide this remote service sentinel shall not be acceptable.**

**Option: Lonworks interface system**

Units shall have all the features listed above (either CXM or DXM) and the control board will be supplied with a LONWORKS interface board, which is LONMark certified. This will permit all units to be daisy chained via a 2-wire twisted pair shielded cable. The following points must be available at a central or remote computer location:

- a. Space temperature
- b. Leaving water temperature
- c. Discharge air temperature
- d. Command of space temperature setpoint
- e. Cooling status
- f. Heating status
- g. Low temperature sensor alarm
- h. Low pressure sensor alarm
- i. High pressure switch alarm
- j. Condensate sensor alarm
- k. Hi/low voltage alarm
- l. Fan "ON/AUTO" position of space thermostat as specified above
- m. Unoccupied / occupied command
- n. Cooling command
- o. Heating command
- p. Fan "ON / AUTO" command
- q. Fault reset command
- r. Itemized fault code revealing reason for specific shutdown fault (any one of 7)

This option also provides the upgraded 75VA control transformer with load side short circuit and overload protection via a built in circuit breaker.

**Option: MPC (Multiple Protocol Control) interface system**

Units shall have all the features listed above (either CXM or DXM) and the control board will be supplied with a Multiple Protocol interface board. Available protocols are BACnet MS/TP, Modbus, or Johnson Controls N2. The choice of protocol shall be field selectable/changeable via the use of a simple selector switch. Protocol selection shall not require any additional programming or special external hardware or software tools. This will permit all units to be daisy chain connected by a 2-wire twisted pair shielded cable. The following points must be available at a central or remote computer location:

- a. Space temperature
- b. Leaving water temperature
- c. Discharge air temperature
- d. Command of space temperature setpoint
- e. Cooling status
- f. Heating status
- g. Low temperature sensor alarm

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- h. Low pressure sensor alarm
- i. High pressure switch alarm
- j. Condensate overflow alarm
- k. Hi/low voltage alarm
- l. Fan "ON/AUTO" position of space thermostat as specified above
- m. Unoccupied / occupied command
- n. Cooling command
- o. Heating command
- p. Fan "ON / AUTO" command
- q. Fault reset command
- r. Itemized fault code revealing reason for specific shutdown fault (any one of 7)

This option also provides the upgraded 75VA control transformer with load side short circuit and overload protection via a built in circuit breaker.

**Warranty:**

Climate Master shall warranty equipment for a period of 12 months from start up or 18 months from shipping (which ever occurs first).

*Option: Extended 4-year compressor warranty covers compressor for a total of 5 years.*

*Option: Extended 4-year refrigeration circuit warranty covers coils, reversing valve, expansion valve and compressor for a total of 5 years.*

*Option: Extended 4-year control board warranty covers the CXM/DXM control board for a total of 5 years.*

**FIELD INSTALLED OPTIONS****Hose Kits:**

All units 120000 BTUH (35 kW) and below shall be connected with hoses. The hoses shall be 2 feet (61cm) long, braided stainless steel; fire rated hoses complete with adapters. Only fire rated hoses will be accepted.

**Valves:**

The following valves are available and will be shipped loose:

- a. Ball valve; bronze material, standard port full flow design, IPT connections.
- b. Ball valve with memory stop and PT Port; standard port full flow design, IPT connections.
- c. "Y" strainer with cap; bronze material, IPT connections.
- d. "Y" strainer with blowdown valve; bronze material, IPT connections.
- e. Motorized water valve; slow acting, 24v, IPT connections.

**Hose Kit Assemblies:**

The following assemblies ship with the valves already assembled to the hose described:

- a. Supply and return hoses having ball valve with PT port.
- b. Supply hose having ball valve with PT port; return hose having automatic flow regulator valve (Measureflo) with PT ports, and ball valve.
- c. Supply hose having "Y" strainer with blowdown valve, and ball valve with PT port; return hose having automatic flow regulator (Measureflo) with PT ports, and ball valve.

**Thermostats:**

The thermostat shall be a ClimateMaster mechanical or electronic type thermostat as selected below with the described features:

- a. Single Stage Standard Manual Changeover (ATM11C01)  
Thermostat shall be a single-stage, vertical mount, manual changeover with HEAT-OFF-COOL system switch and fan ON-AUTO switch. Thermostat shall have a mechanical temperature indicator and set point indication. Thermostat shall only require 4 wires for connection. Mercury bulb thermostats are not acceptable.
- b. Single Stage Digital Manual Changeover with Two-Speed Fan Control (ATM11C03) – DXM and PSC Fan required  
Thermostat shall be a single-stage, digital, manual changeover with HEAT-OFF-COOL system switch, fan ON-AUTO switch, and fan LO-HI switch. Thermostat shall have an LCD display with temperature and set-point(s) in °F or °C. The Thermostat shall provide permanent memory of set-point(s) without batteries. A fault LED shall be provided to display specific fault condition. Thermostat shall come standard with remote temperature sensor, but may be operated with internal sensor if desired via installation of a jumper.
- c. Single Stage Digital Auto or Manual Changeover (ATA11U01)  
Thermostat shall be a single-stage, digital, auto or manual changeover with HEAT-OFF-COOL-AUTO system switch and fan ON-AUTO switch. Thermostat shall have an LCD display with temperature and set-point(s) in °F or °C. The Thermostat shall

- provide permanent memory of set-point(s) without batteries. A fault LED shall be provided to display specific fault condition. Thermostat shall provide temperature display offset for custom applications.
- d. Single Stage Digital Automatic Changeover with Two-Speed Fan Control (ATA11C04) – DXM and PSC Fan required Thermostat shall be a single-stage, digital, auto or manual changeover with HEAT-OFF-COOL-AUTO system switch, fan ON-AUTO switch, and fan LO-HI switch. Thermostat shall have an LCD display with temperature and set-point(s) in °F or °C. The Thermostat shall provide permanent memory of set-point(s) without batteries. A fault LED shall be provided to display specific fault condition. Thermostat shall come standard with remote temperature sensor, but may be operated with internal sensor if desired via installation of a jumper.
  - e. Multistage Digital Automatic Changeover (ATA22U01) Thermostat shall be multi-stage (2H/2C), manual or automatic changeover with HEAT-OFF-COOL-AUTO system settings and fan ON-AUTO settings. Thermostat shall have an LCD display with temperature, set-point(s), mode, and status indication. The temperature indication shall be selectable for °F or °C. The thermostat shall provide permanent memory of set-point(s) without batteries. A fault LED shall be provided to indicate specific fault condition(s). Thermostat shall provide temperature display offset for custom applications. Thermostat shall allow unit to provide better dehumidification with optional DXM controller by automatically using lower fan speed on stage 1 cooling (higher latent cooling) as main cooling mode, and automatically shifting to high speed fan on stage 2 cooling.
  - f. Single Stage Manual Changeover Programmable 5/2 Day (ATP11N01) Thermostat shall be 5 day/2 day programmable (with up to 4 set points per day), single stage (1H/1C), manual changeover with HEAT-OFF-COOL system settings and fan ON-AUTO settings. Thermostat shall have an LCD display with temperature, set-point(s), mode, and status indication. The temperature indication shall be selectable for °F or °C. The thermostat shall provide permanent memory of set-point(s) without batteries. Thermostat shall provide convenient override feature to temporarily change set point.
  - g. Multistage Automatic or Manual Changeover Programmable 5/2 Day (ATP21U01) Thermostat shall be 5 day/2 day programmable (with up to 4 set points per day), multi-stage (2H/1C), automatic or manual changeover with HEAT-OFF-COOL-AUTO system settings and fan ON-AUTO settings. Thermostat shall have an LCD display with temperature, set-point(s), mode, and status indication. The temperature indication shall be selectable for °F or °C. The thermostat shall provide permanent memory of set-point(s) without batteries. Thermostat shall provide convenient override feature to temporarily change set point.
  - h. Multistage Automatic or Manual Changeover Programmable 7 Day (ATP32U01) Thermostat shall be 7 day programmable (with up to 4 set points per day), multi-stage (3H/2C), automatic or manual changeover with HEAT-OFF-COOL-AUTO system settings and fan ON-AUTO settings. Thermostat shall have a blue backlit dot matrix LCD display with temperature, set-points, mode, and status indication. The temperature indication shall be selectable for °F or °C. Time display shall be selectable for 12 or 24 hour clock. Fault identification shall be provided (when used with ClimateMaster CXM or DXM controls) to simplify troubleshooting by providing specific unit fault at the thermostat with red backlit LCD during unit lockout. The thermostat shall provide permanent memory of set-points without batteries. Thermostat shall provide heating set-point range limit, cooling set-point range limit, temperature display offset, keypad lockout, dead-band range setting, and inter-stage differential settings. Thermostat shall provide progressive recovery to anticipate time required to bring space temperature to the next programmed event. Thermostat shall provide an installer setup for configuring options and for setup of servicing contractor name and contact information. Thermostat shall allow the use of an accessory remote and/or outdoor temperature sensor (AST008). Thermostat navigation shall be accomplished via five buttons (up/down/right/left/select) with menu-driven selections for ease of use and programming.
  - i. Multistage Automatic or Manual Changeover Programmable 7 Day with Humidity Control (ATP32U02) Thermostat shall be 7 day programmable (with up to 4 set points per day), multi-stage (3H/2C), automatic or manual changeover with HEAT-OFF-COOL-AUTO system settings and fan ON-AUTO settings. Separate dehumidification and humidification set points shall be configurable for discreet outputs to a dehumidification option and/or an external humidifier. Installer configuration mode shall allow thermostat dehumidification mode to operate with ClimaDry reheat or with ECM fan dehumidification mode via settings changes. Thermostat shall have a blue backlit dot matrix LCD display with temperature, relative humidity, set-points, mode, and status indication. The temperature indication shall be selectable for °F or °C. Time display shall be selectable for 12 or 24 hour clock. Fault identification shall be provided (when used with ClimateMaster CXM or DXM controls) to simplify troubleshooting by providing specific unit fault at the thermostat with red backlit LCD during unit lockout. The thermostat shall provide permanent memory of set-points without batteries. Thermostat shall provide heating set-point range limit, cooling set-point range limit, temperature display offset, keypad lockout, dead-band range setting, and inter-stage differential settings. Thermostat shall provide progressive recovery to anticipate time required to bring space temperature to the next programmed event. Thermostat shall provide an installer setup for configuring options and for setup of servicing contractor name and contact information. Thermostat shall allow the use of an accessory remote and/or outdoor temperature sensor (AST008). Thermostat navigation shall be accomplished via five buttons (up/down/right/left/select) with menu-driven selections for ease of use and programming.

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**DDC Sensors:**

ClimateMaster wall mounted DDC sensor to monitor room temperature and interfaces with optional interface system described above. Several types as described below:

- a. Sensor only with no display (LON and MPC).
- b. Sensor with override (LON only).
- c. Sensor with setpoint and adjustment override (MPC only).
- d. Sensor with setpoint and adjustment override, LCD display, status/fault indication (LON and MPC).

**Section Change Log**

| Date:    | Item:            | Action:  |
|----------|------------------|--|
| 05/23/07 | Specifications   | Updated for new Safety Agency                          |
| 01/01/07 | Specifications   | Updated thermostat offering                            |
| 01/01/07 | Wiring Diagram   | Added pressure switch for motorized water valve option |
| 01/01/07 | Performance Data | Added low temperature selection notes                  |
| 01/01/06 | First Published  |  |

# CLIMATEMASTER WATER-SOURCE HEAT PUMPS

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