



**Energence® Rooftop Units**  
**High Efficiency - 60 Hz**

**COMMERCIAL  
PRODUCT SPECIFICATIONS**

Bulletin No. 210609  
August 2023  
Supersedes March 2023



**ENERGENCE™**  
Saving Energy with Intelligence

**PRODIGY™**  
CONTROL SYSTEM



**ASHRAE 90.1  
COMPLIANT**

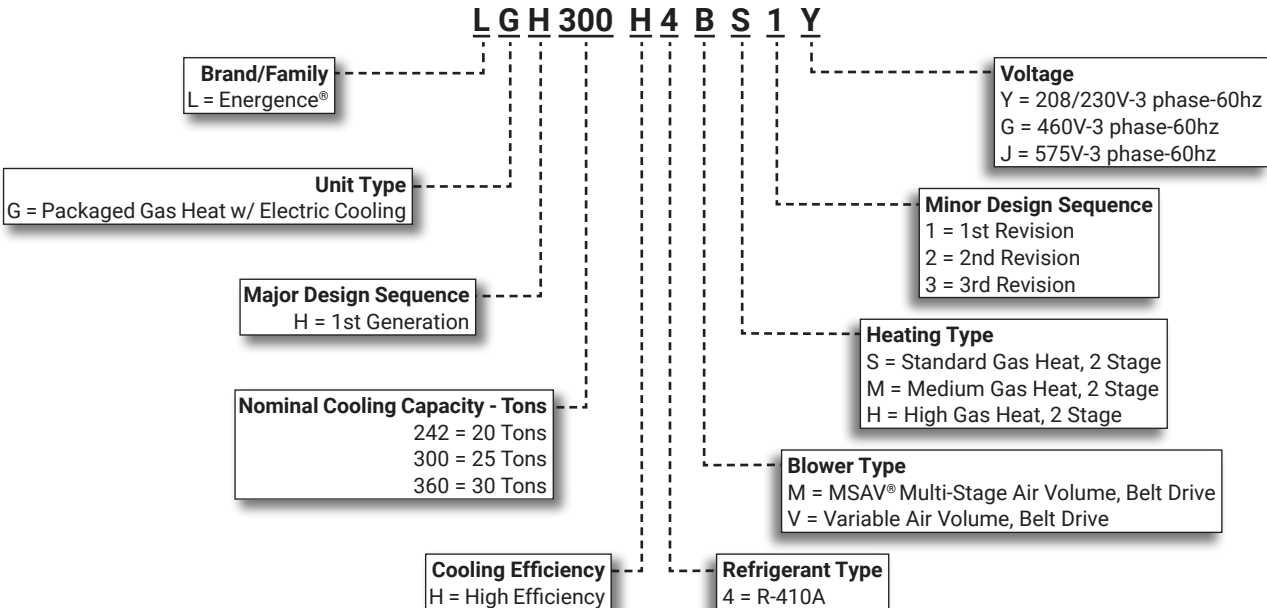


**SMART WIRE™ SYSTEM**

**20 to 30 Tons**

**Net Cooling Capacity - 238,000 to 354,000 Btuh**  
**Gas Input Heat Capacity - 260,000 to 480,000 Btuh**

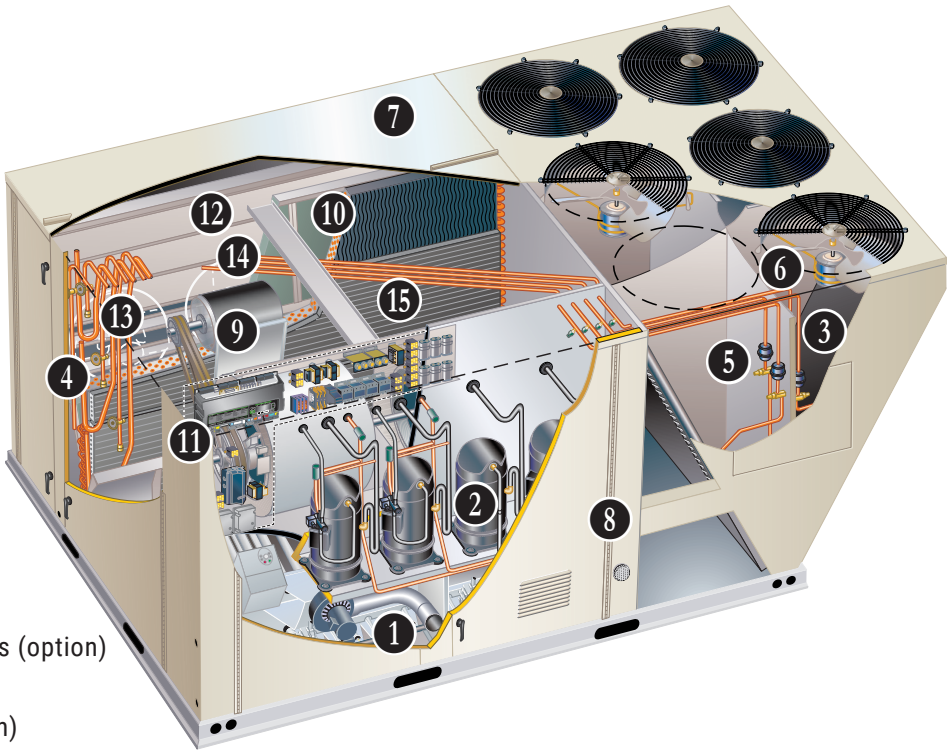
**MODEL NUMBER IDENTIFICATION**



FEATURE HIGHLIGHTS

Lennox' Energence® packaged rooftop unit product line was created to save energy with intelligence by offering some of the highest energy efficiency ratings available with a powerful, easy to use unit controller. This makes Energence rooftop units perfect for business owners looking for an HVAC product with the lowest total cost of ownership.

- 1. Heat Exchanger/Inshot Burners
- 2. Scroll Compressors
- 3. Environ™ Coil System
- 4. Thermal Expansion Valves
- 5. Filters/Driers
- 6. Outdoor Coil Fan Motors
- 7. Heavy Gauge Steel Cabinet
- 8. Hinged Access Panels
- 9. Variable or MSAV® Multi-Stage Air Volume Blower
- 10. Air Filters
- 11. Prodigy® Control System
- 12. Economizer (option)
- 13. Downflow Barometric Relief Dampers (option)
- 14. Power Exhaust (option)
- 15. Humiditrol® Dehumidification (option)



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## APPROVALS AND WARRANTY

### **APPROVALS**

- AHRI Standard 340/360 certified (242 models)
- Tested at conditions included in AHRI Standard 340/360 (300 and 360 models)
- ETL and CSA listed
- CSA certified energy ratings
- Unit and components ETL, NEC and CEC bonded for grounding to meet safety standards for servicing
- All models are ASHRAE 90.1-2019 energy efficiency compliant and meet or exceed requirements of Section 6.8
- All models meet DOE 2023 energy efficiency standards
- MSAV models meet California Code of Regulations, Title 24 and ASHRAE 90.1-2019 Section 6.4.3.10 requirements for staged airflow
- ENERGY STAR® certified
- ISO 9001 Registered Manufacturing Quality System

### **WARRANTY**

- Aluminized Heat Exchanger - Limited ten years
- Stainless Steel Heat Exchanger (optional) - Limited fifteen years
- Compressors - Limited five years
- Environ™ Coil System - Limited three years
- Prodigy® 2.0 Unit Controller - Limited three years
- Variable-Frequency Drive (VFD) - Limited five years
- High Performance Economizers (optional) - Limited five years
- All other covered components - Limited one year

## FEATURES AND BENEFITS

### **HEATING SYSTEM**

#### **1 Heat Exchanger**

- Tubular construction, aluminized steel
- Life-cycle tested

**NOTE** - Optional Stainless Steel Heat Exchanger is required if mixed air temperature is below 45°F.

#### **2 Aluminized steel inshot burners**

- Direct spark ignition
- Electronic flame sensor
- Combustion air inducer
- Redundant automatic dual stage gas valve with manual shut-off

#### **Electronic Pilot Ignition**

- Electronic spark igniter provides positive direct ignition of burners on each operating cycle
- Permits main gas valve to stay open only when the burners are proven to be lit
- If loss of flame occurs, gas valve closes, shutting off the gas to the burners
- LED indicates status and aids in troubleshooting
- Factory installed in the control section

#### **Limit Controls**

- Redundant limit controls with fixed temperature setting
- Protects heat exchanger and other components from overheating

#### **Safety Switches**

- Flame roll-out switch

- Flame sensor
- Combustion air inducer proving switch
- Protects system operation

### **Required Selections**

#### **Gas Input Choice - Order one:**

- Standard Gas Heat, 2 Stage (169,000/260,000 Btuh)
- Medium Gas Heat, 2 Stage (234,000/360,000 Btuh)
- High Gas Heat, 2 Stage (312,000/480,000 Btuh)

**NOTE** – Two-stage heat models can be operated with four stages of gas heating when controlled in either zone sensor, Discharge Air Control, or fresh air tempering mode on the Prodigy 2.0 unit controller (available when using the CS8500 thermostat or when connected to Building Automation Systems using BACnet, LonTalk, or S-Bus protocols). See Gas Heating Specifications table.

### **Options/Accessories**

#### **Factory Installed**

##### **Stainless Steel Heat Exchanger**

- Required if mixed air temperature is below 45°F

#### **Field Installed**

##### **Low Temperature Vestibule Heater**

- Electric heater automatically controls minimum temperature in gas burner compartment when temperature is below -40°F
- CSA certified to allow operation of unit down to -60°F

## FEATURES AND BENEFITS

### HEATING SYSTEM (continued)

#### Field Installed

##### Combustion Air Intake Extensions

- Recommended for use with existing flue extension kits in areas where high snow areas can block intake air
- Order two kits

##### LPG/Propane Kits

- Conversion kit to field change over units from Natural Gas to LPG/Propane
- Order two kits

##### Vertical Vent Extension Kit

- Use to exhaust flue gases vertically above unit
- Required when unit vent is too close to fresh air intakes per building codes
- Also prevents ice formation on intake louvers
- Kit contains vent transition, vent tee, drain cap and installation hardware
- Order two kits.

**NOTE** - Straight vent pipes (4 in. B-Vent) and caps are not furnished and must be field supplied. Refer to kit instructions for additional information.

### COOLING SYSTEM

- Designed to maximize sensible and latent cooling performance at design conditions
- System can operate from 0°F to 125°F without any additional controls

#### R-410A Refrigerant

- Non-chlorine based
- Ozone friendly

#### 3 Scroll Compressors

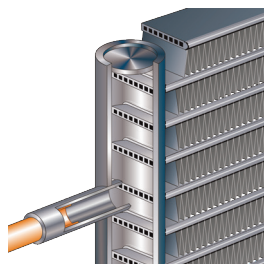
- Scroll compressors on all models for high performance, reliability and quiet operation
- Resiliently mounted on rubber grommets for quiet operation

#### Compressor Crankcase Heaters

- Protects against refrigerant migration that can occur during low ambient operation or during extended off cycles

#### 4 Condenser Coil - Environ™ Coil System

- Lightweight, all aluminum brazed fin construction
- Constructed of three components
  - A flat extrusion tube
  - Fins in-between the flat extrusion tube
  - Two refrigerant manifolds



#### Environ™ Coil System Features:

- Improved heat transfer performance due to high primary surface area (flat tubes) versus secondary surface (fins)
- Smaller internal volume (reduced refrigerant charge)
- High durability
- All aluminum construction

- Fewer brazed joints
- Compact design
- Reduced unit weight
- Easy maintenance/cleaning
- Mounting brackets with rubber inserts secure coil to unit providing vibration dampening and corrosion protection
- Angled cabinet design protects coil from damage

#### Evaporator Coil

- Copper tube construction
- Enhanced rippled-edge aluminum fins
- Flared shoulder tubing connections
- Silver soldered construction
- Factory leak tested
- Cross-row circuiting with rifled tubing

**NOTE** - MSAV® Multi-Stage Air Volume models have face-split evaporator coils designed to keep condensate water off of an inactive part of the coil so the condensate will not re-enter the air stream. Variable air volume (VAV) models have row-split, intertwined evaporator coils.

#### 5 Thermal Expansion Valves

- Ensures optimal performance throughout the application range
- Removable element head

#### 6 Filter/Driers

- High capacity filter/drier protects the system from dirt and moisture

#### High Pressure Switches

Protects the compressor from overload conditions such as dirty condenser coils, blocked refrigerant flow or loss of outdoor fan operation

#### Low Pressure Switches

- Protects the compressors from low pressure conditions such as low refrigerant charge or low/no airflow

#### Antimicrobial Condensate Drain Pan

- Composite pan, sloped to meet drainage requirements per ASHRAE 62.1
- Antimicrobial additive prevents growth of mold and mildew, which improves indoor air quality and reduces drain line blockage
- Side drain connections

**NOTE** - Stainless steel drain pan available as a factory installed option.

#### Indoor Coil Freeze Protection

- Protects the evaporator coil from damaging ice build-up due to conditions such as low/no airflow or low refrigerant charge

#### 7 Outdoor Coil Fan Motors

- Thermal overload protected
- Totally enclosed
- Permanently lubricated ball bearings
- Shaft up
- Wire basket mount

## FEATURES AND BENEFITS

### **COOLING SYSTEM (continued)**

#### **Outdoor Coil Fans**

- PVC coated fan guard furnished

#### **Required Selections**

#### **Cooling Capacity**

- Specify nominal cooling capacity

#### **Options/Accessories**

### **Factory Installed**

#### **Discharge Air Temperature Sensor**

- Sensor sends information to the unit controller to cycle up to 2 stages of heating or 4 stages of cooling to maintain the discharge air setpoints for heating or cooling

**NOTE** - Automatically furnished with all Variable Air Volume (VAV) units. Sensor is shipped with the unit for remote field installation in the supply duct

### **Factory or Field Installed**

#### **Condensate Drain Trap**

- Available in copper or PVC
- Field installed only, may be factory ordered to ship with unit

#### **Drain Pan Overflow Switch**

- Monitors condensate level in drain pan
- Shuts down unit if drain becomes clogged

#### **Stainless Steel Drain Pan**

- Non-corrosive drain pan

### **CABINET**

#### **8 Construction**

- Heavy-gauge steel panels
- Full perimeter heavy-gauge galvanized steel base rail
- Base rails have rigging holes
- Three sides of the base rail have forklift slots
- Raised edges around duct and power entry openings in the bottom of the unit for water protection

#### **Airflow Choice**

- Units are shipped in downflow (vertical) return air flow configuration

**NOTE** - Units can be field converted to horizontal air flow with optional Horizontal Return Air Panel Kit and Horizontal Roof Curb.

#### **Power/Gas Entry**

- Electrical and gas lines can be routed through the unit base or through horizontal access knock-outs

#### **Exterior Panels**

- Constructed of heavy-gauge, galvanized steel
- Textured pre-paint with polyurethane finish
- Cyclic salt fog and UV exposure up to 1,680 hours per ASTM D5894

#### **Insulation**

- Fully insulated with non-hygroscopic fiberglass insulation (conditioned areas)
- Unit base is fully insulated
- Base insulation serves as an air seal to the roof curb, eliminating the need to add a seal during installation

#### **9 Hinged Access Panels**

- Filter section
- Blower section
- Heating section
- Compressor/controls section
- Panel seals and quarter-turn latching handles provide a tight air and water seal

#### **Options/Accessories**

### **Factory Installed**

#### **Corrosion Protection**

- Completely flexible immersed coating
- Electrodeposited dry film process (AST ElectroFin E-Coat)
- ASTM B117 / DIN 53167 Salt Spray - 15,000+ hours
- ASTM G85 Annex A3 SWAAT Modified Salt Spray - 3000 hours
- VA Master Construction Specification Division 23 for High Humidity Installations
- CID AA-52474A (GSA)
- Indoor Corrosion Protection:
  - Coated coil
  - Coated reheat coil
  - Painted blower housing
  - Painted base
- Outdoor Corrosion Protection:
  - Coated coil
  - Painted outdoor base

### **Field Installed**

#### **Combination Coil/Hail Guards**

- Heavy gauge steel frame
- Painted to match cabinet
- Expanded metal mesh protects outdoor coil

#### **Grille Guards**

- Protects the space between outdoor coils and main cabinet

#### **Horizontal Return Air Panel Kit**

- Required for horizontal applications with Horizontal Roof Curb
- Contains panel with return air opening for field replacement of existing unit panel and panel to cover bottom return air opening in unit
- See dimension drawings.

## FEATURES AND BENEFITS

### **BLOWER**

- A wide selection of supply air blower options are available to meet a variety of airflow requirements

### **10 Motor**

- Overload protected
- Ball bearings
- Belt drive motors are offered on all models and are available in several different sizes to maximize air performance

**NOTE** - All blower motors 5 hp and above meet minimum energy efficiency standards in accordance with the Energy Independence and Security Act (EISA) of 2007

### **Supply Air Blower**

- Forward curved blades
- Double inlet
- Blower wheel statically and dynamically balanced
- Ball bearings
- Adjustable pulley (allows speed change)
- Blower assembly slides out of unit for servicing
- Grease fittings furnished

### **Supply Static Pressure Transducer (VAV Models Only)**

- Sends information to the Prodigy® 2.0 unit controller to control VFD blower speed
- Shipped with the unit for remote field installation in the supply duct

### **Required Selections**

#### **Supply Air Blower Selection**

- Specify MSAV® Multi-Stage Air Volume or Variable Air Volume (VAV)
- Variable Air Volume (VAV) variable frequency drive (VFD) varies the air volume to maintain a constant duct static pressure
- MSAV Multi-Stage Air Volume models stage the amount of airflow according to compressor stages, heating demand, ventilation demand or smoke alarm
  - Utilizes a Variable Frequency Drive (VFD) to stage the supply air blower airflow
  - VFD alters the frequency and voltage of the power supply to the blower to control blower speed
  - The amount of airflow for each stage can be set according to a parameter in the Prodigy® 2.0 unit controller
  - Unit is shipped from the factory with preset airflows
  - The MSAV® Multi-Stage Air Volume supply air blower option can be ordered with or without an Electronic Bypass Control
  - If equipped with the bypass control the MSAV® Multi-Stage Air Volume features automatic electronic bypass control of the VFD
  - In case of a VFD malfunction, a VFD alarm is generated by the Prodigy® 2.0 unit controller
  - Unit controller will automatically switch to full blower speed if a VFD alarm is generated

- VFD has an operational range of 0 to 125° F outdoor air ambient temperature
- Lower operating costs are obtained when the blower is operated on lower speeds

**NOTE** - Units equipped a Variable Frequency Drive (VFD) are designed to operate on balanced, three-phase power. Operating units on unbalanced three-phase power will reduce the reliability of all electrical components in the unit. Unbalanced power is a result of the power delivery system supplied by the local utility company. Factory-installed inverters are sized to drive blower motors with an equivalent current rating using balanced three-phase power. If unbalanced three-phase power is supplied the installer must replace the existing factory-installed inverter with an inverter that has a higher current rating to allow for the imbalance. Refer to the installation instructions for additional information and replacement information.

### **Ordering Information**

- Specify motor horsepower and drive kit number when base unit is ordered

### **Options/Accessories**

#### **Factory Installed**

##### **Supply VFD Blower Bypass Control**

- Allows MSAV® Multi-Stage Air Volume units to operate as a constant air volume (CAV) unit in case of variable frequency drive (VFD) failure

**NOTE** - Bypass control for VAV models is a manual operation only. All supply air duct registers must be opened manually before operating bypass control.

#### **Field Installed**

##### **Supply Static Limit Switch**

- Manual reset switch for supply static high pressure limit
- Prevents exceeding pressure limit in supply air duct
- Optional Mounting Kit includes tubing and adaptors

## FEATURES AND BENEFITS

### **ELECTRICAL**

#### **SmartWire™ System**

- Keyed and color-coded wiring connectors prevent miswiring
- Wire coloring scheme is standardized across all models
- Each connection is intuitively labeled to make troubleshooting and servicing quick and easy

#### **Electrical Plugs**

- Positive connection electrical plugs connect common accessories or maintenance parts for easy removal or installation

#### **Required Selections**

#### **Voltage Choice**

- Specify when ordering base unit

#### **Options/Accessories**

### **Factory Installed**

#### **Circuit Breakers**

- HACR type
- Overload and short circuit protection
- Factory wired and mounted in the power entry panel
- Current sensitive and temperature activated
- Manual reset

#### **Phase/Voltage Detection**

- Monitors power supply to assure phase is correct at unit start-up
- If phase is incorrect, the unit will not start and an alarm code is reported to the unit controller
- Protects unit from being started with incorrect phasing which could lead to issues such as compressors running backwards
- Voltage detection monitors power supply voltage to assure proper voltage
- If voltage is not correct (over/under voltage conditions) the unit will not start and an alarm code is reported to the unit controller

**NOTE** - Phase/voltage detection is furnished when the MSAV® Multi-Stage Air Volume or VAV (Variable Air Volume) option is ordered.

#### **Factory or Field Installed**

#### **Disconnect Switch**

- Accessible outside of unit
- Spring loaded weatherproof cover furnished

#### **GFI Service Outlets (2)**

- 115V ground fault circuit interrupter (GFCI) type
- Available non-powered, field-wired or factory-wired and powered

### **Field Installed**

#### **GFI Weatherproof Cover**

- Single-gang cover
- Heavy-duty UV-resistant polycarbonate case construction
- Hinged base cover with gasket

### **INDOOR AIR QUALITY**

#### **11 Air Filters**

- Disposable 2 inch filters furnished as standard

#### **Options/Accessories**

### **Factory or Field Installed**

#### **Healthy Climate® High Efficiency Air Filters**

- Disposable MERV 8 or MERV 13 (Minimum Efficiency Reporting Value based on ASHRAE 52.2) efficiency 2-inch pleated filters
- Replacement Filter Media Kit With Frame
- Replaces existing pleated filter media
- Includes washable metal mesh screen and metal frame with clip for holding replaceable non-pleated filter

### **Field Installed**

#### **Healthy Climate® High Efficiency MERV 16 Air Filters**

- Disposable MERV 16 (Minimum Efficiency Reporting Value based on ASHRAE 52.2) efficiency 2-inch pleated filters

#### **Indoor Air Quality (CO<sub>2</sub>) Sensors**

- Monitors CO<sub>2</sub> levels, reports to the Prodigy® 2.0 unit controller which adjusts economizer dampers as needed

### PRODIGY® CONTROL SYSTEM



**12** The Prodigy 2.0 unit controller is a microprocessor-based controller that provides flexible control of all unit functions.

#### Features:

- LCD Display
- Easy to read menu (4 lines x 20 character display)
- Buttons for menu navigation during setup and diagnostic
- Menu navigation LEDs for Data, Setup, Service, Settings
- Main Menu and Help Buttons for quick navigation to home screen and built-in help functions
- Scroll, Value Adjustment Select and Save Buttons
- Setup menu insures proper installation and simplified setup of the rooftop unit
- Profile setup copies key settings between units with the same configuration to reduce setup time
- USB port allows a technician to download and transfer unit information to help verify service was performed
- USB software updates on the Prodigy Control System enhance functionality without the need to change components
- Unit Controller Software
- Unit self-test verifies individual critical component and system performance
- Economizer test function assures economizer is operating correctly
- Time Clock with Run-Time Information

#### Built-In Functions Include:

- Adjustable Blower On/Off Delay
- Built-in Control Parameter Defaults
- Compressor Time-Off Delay
- DDC Compatible
- Dirty Filter Switch Input
- Discharge Air Temperature Control
- Display/Sensor Readout
- Economizer Control Options (See Economizer / Exhaust Air / Outdoor Air sections)
- Fresh Air Tempering
- Over 100 diagnostic and status messages in English
- Exhaust Fan Control Modes for fresh air damper position
- Permanent Diagnostic Code Storage
- Field Adjustable Control Parameters (Over 200 settings)
- Indoor Air Quality Input (Demand Control Ventilation)
- Low Ambient Controls for cooling operation down to 0°F
- Gas Valve Time Delay Between First and Second Stage

- Minimum Compressor Run Time
- Network Capable (Can be daisy chained to other units or controls)
- Night Setback Mode
- Return Air Temperature Limit Control
- Safety Switch Input allows Controller to respond to a external safety switch trip
- Service Relay Output
- Smoke Alarm Mode has four choices (unit off, positive pressure, negative pressure, purge)
- Up to 2 heat/2 cool (standard Prodigy unit controller thermostat input)
- Up to 3 cool with additional relay
- Up to 4 cool with room sensor or network operation
- "Strike Three" Protection
- Gas Reheat Control allows simultaneous heating and cooling operation for humidity control of process air applications such as supermarkets
- On Demand Dehumidification monitors and controls condenser hot gas reheat operation with Humiditrol® dehumidification option
- Thermostat Bounce Delay
- Warm Up Mode Delay
- LED Indicators
- PC Interface connects the Prodigy 2.0 unit controller to a PC with the Lennox Unit Controller Software
- Room Sensor Operation controls temperature

**NOTE** - Prodigy Control System features shown vary with the type of rooftop unit the control is installed in.

## CONTROL SYSTEM

### **PRODIGY® CONTROL SYSTEM (continued)**

#### **Controls Options**

##### **Factory or Field Installed**

###### **Blower Proving Switch**

- Monitors blower operation, shuts down unit if blower fails

###### **Dirty Filter Switch**

- Senses static pressure increase indicating dirty filter condition

###### **Fresh Air Tempering**

- Used in applications with high outside air requirements
- Controller energizes the first stage heat as needed to maintain a minimum supply air temperature for comfort, regardless of the thermostat demand
- When ordered as a factory option, sensor ships with the unit for field installation

###### **Smoke Detector**

- Photoelectric type
- Installed in supply air section, return air section or both sections
- Available with power board and single sensor (supply or return) or power board and two sensors (supply and return)
- Power board located in unit control compartment

###### **Interoperability via BACnet® or LonTalk® Protocols**

- Communication compatible with third-party automation systems that support the BACnet Application Specific Controller device profile, LonMark® Space Comfort Controller functional profile, or LonMark Discharge Air Controller functional profile

##### **Commercial Control Systems**

###### **After-Market DDC**

- Novar® Unit Controller and options

###### **Thermostats**

- Control system and thermostat options
- After-Market unit controller options

##### **Field Installed**

###### **General Purpose Control Kit**

- Plug-in control provides additional analog and digital inputs/outputs for field installed options

## OPTIONS / ACCESSORIES

### **ECONOMIZER**

- Economizer operation is set and controlled by the Prodigy 2.0 unit controller
- Simple plug-in connections from economizer to unit controller for easy installation
- All Emergence rooftop units are equipped with factory installed CEC Title 24 approved sensors for outside, return and discharge air temperature monitoring

**NOTE** - Optional sensors may be used instead of unit sensors to determine whether outdoor air is suitable for free cooling. See Options/Accessories table.

##### **Factory or Field Installed**

#### **13 High Performance Economizer**

- Approved for California Title 24 building standards
- Low leakage dampers are Air Movement and Control Association International (AMCA) Class 1A Certified - Maximum 3 CFM per sq. ft. leakage at 1 in. w.g.
- ASHRAE 90.1-2010 compliant
- Outdoor Air Hood with mist elimination is included when economizer is factory installed and is furnished with economizer when ordered for field installation
- Gear-driven action
- High torque 24-volt fully-modulating spring return damper motor
- Return air and outdoor air dampers
- Plug-in connections to unit
- Stainless steel bearings
- Enhanced neoprene blade edge seals
- Flexible stainless steel jamb seals

**NOTE** - High Performance Economizers are not approved for use with enthalpy controls in Title 24 applications.

**NOTE** - The Free Cooling setpoint for Title 24 applications must be set based on the Climate Zone where the system is installed. See Section 140.4 "Prescriptive Requirements for Space Conditioning Systems" of the California Energy Commission's 2013 Building Energy Efficiency Standards.

**NOTE** - Refer to Installation Instructions for complete setup information.

### **ECONOMIZER (continued)**

#### **Differential Sensible Control**

- Factory setting
- Uses outdoor air and return air sensors that are furnished with the unit
- The Prodigy® 2.0 unit controller compares outdoor air temperature with return air
- When the outdoor air is below the configured setpoint and cooler than return air, the controller activates the economizer

**NOTE** - Differential Sensible Control can be configured in the field to provide Offset Differential Sensible Control or Single Sensible Control.

**NOTE** - In Offset Differential Sensible Control mode, the economizer is enabled if the temperature differential (offset) between outdoor air and return air reaches the configured setpoint. In Single Sensible Control mode, the economizer is enabled when outdoor air temperature falls below the configured setpoint.

#### **Global Control**

- The unit controller communicates with a DDC system with one global sensor (enthalpy or sensible)
- Determines whether outside air is suitable for free cooling on all units connected to the control system
- Sensor must be field provided

**NOTE** - Global control with enthalpy is not approved for Title 24 applications.

### **Factory or Field Installed**

#### **Single Enthalpy Temperature Control (Not for Title 24)**

- Outdoor air enthalpy sensor enables Economizer if the outdoor enthalpy is less than the setpoint of the control

#### **Differential Enthalpy Control (Not for Title 24)**

- Order two Single Enthalpy Controls
- One is field installed in the return air section
- One is installed in the outdoor air section
- Allows the economizer control to select between outdoor air or return air, whichever has lower enthalpy

### **Field Installed**

#### **Outdoor Air CFM Control**

- Maintains constant outdoor air volume levels on the supply air fan and varying unit airflows
- Velocity sensor located in the rooftop unit outdoor air section, the Prodigy® 2.0 unit controller changes the economizer position to help minimize the effect of supply fan speed changes on outdoor air volume levels
- Setpoint for outdoor air volume is established by field testing

**NOTE** - Not available with Demand Control Ventilation (CO<sub>2</sub> Sensor) or Building Pressure Control.

#### **Building Pressure Control**

- Maintains constant building pressure level
- Includes a static pressure transducer and outdoor static pressure assembly
- Using differential pressure information between the outdoor air and the building air, the Prodigy® 2.0 unit controller changes the economizer position to help maintain a constant building pressure

**NOTE** - Not available with Demand Control Ventilation (CO<sub>2</sub> Sensor) or Outdoor Air CFM Control.

### **EXHAUST**

#### **Factory or Field Installed**

- 14** **Downflow Barometric Relief Dampers**
- Allow relief of excess air
  - Aluminum blade dampers prevent blow back and outdoor air infiltration during off cycle
  - Exhaust hood is factory installed when dampers are factory installed with economizer
  - Exhaust hood is furnished with dampers when ordered for field installation
  - Bird screen furnished
- 15** **Standard Static Power Exhaust Fans**
- Installs internal to unit for downflow applications only with economizer option
  - Provides exhaust air pressure relief
  - Interlocked to run when return air dampers are closed and supply air blower is operating
  - Fans run based on air damper position (adjustable)
  - Three 1/3 hp motors
  - 20 in. diameter propeller-type fans
  - Five blades
  - Total power input of 1125 Watts
  - Total air volume of 12,800 cfm at 0 in. w.g.
  - Motor is inherently protected
  - Totally enclosed
  - Steel cabinet and hood painted to match unit

**NOTE** - Requires optional Downflow Economizer Barometric Relief Dampers. See Standard Static Power Exhaust Blower Tables.

#### **Factory or Field Installed**

##### **Horizontal Barometric Relief Dampers**

- For use when unit is configured for horizontal applications requiring an economizer
- Allows relief of excess air
- Aluminum blade dampers prevent blow back and outdoor air infiltration during off cycle
- Field installed in return air duct
- Bird screen and hood furnished

**NOTE** - Horizontal Economizer Conversion kit is available for field installation.

### **Field Installed**

#### **High Static Power Exhaust**

- Constant volume high static power exhaust blowers
- Choice of 50% (two, 2 hp motors) or 100% (three, 2 hp motors)
- Centrifugal-type power exhaust blowers
- Overload and sub-fuse protected
- Ball bearings
- Forward curved blades
- Blower wheel is statically and dynamically balanced
- Adjustable pulleys for speed adjustments
- Controlled by damper position.

**NOTE** - VAV/MSAV® Multi-Stage Air Volume units can be ordered with High Static Power Exhaust (with VFD) and an optional factory installed Manual Supply VFD Blower Bypass for the Power Exhaust VFD's (see page 6).

High Static Power Exhaust (with VFD) features a solid-state analog pressure transducer control which senses differential pressure between conditioned space and outdoor air to regulate exhaust blower speed. See High Static Power Exhaust Blower Tables.

**NOTE** - High Static Power Exhaust is field installed but must be ordered at the same time as the rooftop unit so the unit can be factory configured for this option.

### **Power Exhaust Control Options**

#### **Damper Position Control**

- For Standard Static Power Exhaust without VFD
- Prodigy® 2.0 unit controller controls the power exhaust based on economizer damper position

#### **Differential Pressure Transducer**

- For High Static Power Exhaust with VFD
- Prodigy® 2.0 unit controller controls the power exhaust system based on a 0-10VDC signal from a differential pressure transducer, which compares atmospheric pressure to conditioned space static pressure
- The transducer is factory installed in the power exhaust section

### **Field Installed**

#### **Pressure Switch**

- For Standard Static Power Exhaust without VFD
- Prodigy® 2.0 unit controller controls the power exhaust system based on one or two pressure switch(es)

**NOTE** - Order one per unit without VFD.

**NOTE** - Order two per unit for MSAV or VAV models.

## OPTIONS / ACCESSORIES

### **OUTDOOR AIR**

#### **Factory or Field Installed**

Outdoor Air Damper - Downflow or Horizontal With Air Hood

- Linked mechanical dampers
- 0 to 25% (fixed) outdoor air adjustable
- Installs in unit
- Includes outdoor air hood
- Motorized model features fully modulating spring return damper motor with plug-in connection
- Manual model features parallel blade, gear-driven dampers with adjustable fixed position

**NOTE** - Minimum mixed air temperature in heating mode is 30°F. Maximum mixed air temperature in cooling mode is 90°F.

**NOTE** - Manual Outdoor Air Damper is a field installed option only.

**NOTE** - Outdoor Air Hood is included when motorized damper is factory installed. Outdoor Air Hood is furnished with motorized or manual damper when ordered for field installation.

### **ROOF CURBS**

- Nailer strip furnished (downflow only)
- Mates to unit
- US National Roofing Contractors Approved
- Shipped knocked down

#### **Downflow**

##### **Hybrid Roof Curbs**

- Interlocking tabs fasten corners together
- No tools required for assembly
- Can also be fastened together with furnished hardware
- Available in 14, 18, and 24 inch heights

#### **Horizontal**

- Converts unit from downflow to horizontal (side) air flow
- Return air is on unit
- Supply air is on curb
- Available in 37 inch and 41 inch heights.
- See dimension drawings

**NOTE** - Requires Horizontal Return Air Panel Kit.

**NOTE** - Optional Insulation Kit is available to help prevent sweating.

### **CEILING DIFFUSERS**

#### **Field Installed**

Ceiling Diffusers  
(Flush or Step-Down)

- White powder coat finish on diffuser face and grilles
- Insulated UL listed duct liner
- Diffuser box has collars for duct connection
- Step-down diffusers have double deflection blades
- Flush diffusers have fixed blades
- Provisions for suspending
- Internally sealed to prevent recirculation
- Removable return air grille
- Adapts to T-bar ceiling grids or plaster ceilings

#### **Transitions (Supply and Return)**

- Used with diffusers
- Installs in roof curb
- Galvanized steel construction
- Flanges furnished for duct connection to diffusers
- Fully insulated

### 16 OVERVIEW

**NOTE** - Available for 300H and 360H models only with MSAV® Multi-Stage Air Volume option and without VFD Bypass Option.

- Factory installed option designed to control humidity
- Provides dehumidification on demand using ASHRAE 90.1 recommended method for comfort conditioning humidity control
- Unit comes equipped with one row reheat coil, solenoid valve and humidity controller
- In addition to a thermostat or room sensor used for conventional operation, a humidity sensor is required and must be located in the occupied space
- Remote Mounted Humidity Sensor Kit is required for field installation
- Humidity sensor provides input to the Unit Controller which is used to control activation of the dehumidification operation
- Reheat controls are located in the compressor control section of the unit for easy access

### **BENEFITS**

- Improves indoor air quality
- Helps prevent damage due to high humidity levels
- Improves comfort levels by reducing space humidity levels

### **OPERATION**

#### **No Dehumidification Demand**

- The unit will operate conventionally whenever there is a demand for cooling or heating and no dehumidification demand
- Free cooling is only permitted when there is no demand for dehumidification

#### **Dehumidification Demand Only**

- The Unit Controller is factory set at 60% relative humidity setpoint and can be adjusted at the Unit Controller or with optional Unit Controller Software
- Reheat operation will initiate on a dehumidification demand and does not require a cooling demand
- The unit will operate in the dehumidification mode until the relative humidity of the conditioned space is below the setpoint
- The reheat coil is sized to provide 68°F to 75°F supply air during reheat operation
- This reduces sensible cooling capacity and extends compressor run time to control humidity when the cooling load is low
- A solenoid valve diverts hot gas from the compressor to the reheat coil
- The cooled and dehumidified air from the evaporator is reheated as it passes through the reheat coil
- The de-superheated and partially condensed refrigerant continues to the outdoor condenser coil where condensing is completed
- The unit will continue to operate in this mode until the dehumidification demand is satisfied

**NOTE** - See Sequence of Operation for additional information.

#### **Dehumidification and Cooling Demand (Thermostat/ Room Sensor Application)**

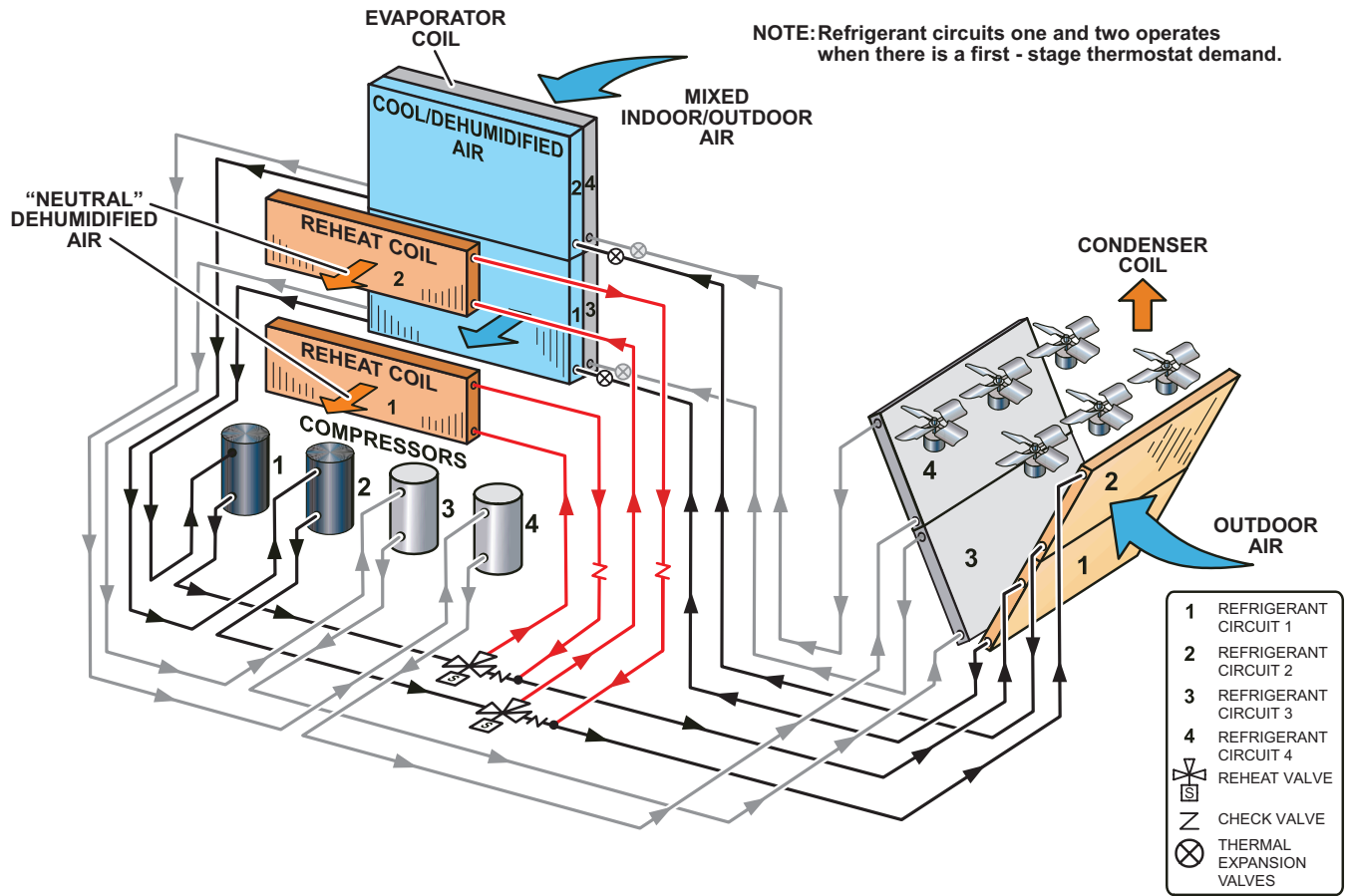
- If both a dehumidification and a full cooling demand occur, the system will operate in cooling until the cooling demand is satisfied
- Then the system will energize the dehumidification mode

### **Options/Accessories**

#### **Humidity Sensor Kit**

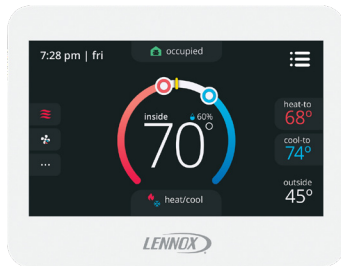
- Remote Mounted Humidity sensor required with factory installed Humiditrol® Dehumidification Option or Supermarket reheat field selectable option

## REFRIGERANT SCHEMATIC



## OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

### CS8500 Commercial 7-Day Programmable Thermostat



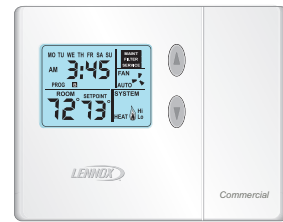
- Fully Communicating Sensor
- Full Color Touchscreen Interface
- Variable Speed System Control (On Compatible Units)
- Up To 4 Heat / 4 Cool
- Built-In Sensors For Temperature, Humidity And Optional CO<sub>2</sub>
- Remote Sensor Options For Occupancy, Temperature
- BACnet Capable Options
- 5-2 or 7-Day Scheduling
- Smooth Setback Recovery
- Heat/Cool Auto-Changeover
- Four-Wire Installation
- FDD, ASHRAE, IECC Compliant

### CS7500 Commercial 7-Day Programmable Thermostat



- Premium Universal Thermostat
- Full Color Touchscreen Interface
- Up To 4 Heat / 4 Cool
- Built-In Sensors For Temperature and Humidity
- Remote Sensors Options For Temperature, Discharge Air, Outdoor Air
- 5-2 or 7-Day Scheduling
- Smooth Setback Recovery
- Heat/Cool Auto-Changeover
- FDD, ASHRAE, IECC Compliant

### CS3000 Commercial 5-2 Day Programmable Thermostat



- Conventional Multi-Stage Thermostat
- Intuitive Display
- Push-Button Operation
- Up To 2 Heat / 2 Cool
- Built-In Temperature Sensor
- Remote Temperature Sensing
- Up to 5-2 Day Scheduling
- Smooth Setback Recovery
- Heat/Cool Auto-changeover

### Wired Temperature/Humidity Room Sensor (LCS-5030)



- Simple Push-Button Override
- Variable Speed System Control (On Compatible Units)
- Up To 4 Heat / 4 Cool
- AA Battery / 24VAC Powered
- SBUS Wired Operation
- Automatic Sensor Averaging
- Locking Hex Screw

### Wired Temperature/Humidity Room Sensor



- Terminal blocks for wiring connections
- Five-wire sensor connection
- Off-white plastic enclosure
- Non-adjustable
- Relative humidity range: 0 -100%
- +/- 3% Accuracy

## OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

| Description                                                                                                                                                       |                                                   | Catalog No.  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|--------------|
| <b>CS8500 Commercial 7 Day Programmable Thermostat</b>                                                                                                            |                                                   |              |
| CS8500 7-Day Thermostat                                                                                                                                           | No CO <sub>2</sub> Sensing                        | <b>17G75</b> |
|                                                                                                                                                                   | With CO <sub>2</sub> Sensing                      | <b>17G76</b> |
| Sensors/Accessories                                                                                                                                               | <sup>1</sup> Remote non-adjustable wall-mount 10k | <b>47W37</b> |
|                                                                                                                                                                   | <sup>1</sup> Remote non-adjustable wall-mount 11k | <b>94L61</b> |
| <b>Sysbus Network Cable (Yellow) for ComfortSense 8500 and LCS-5030 Wired Room Sensor</b>                                                                         |                                                   |              |
| Twisted pair 100% shielded communication cable, Red and Black<br>22 AWG, yellow jacket, rated at 75°C, 300V, Plenum rated<br>Insulation - Low smoke PVC, NEC, CMP | 500 ft. box                                       | <b>27M19</b> |
|                                                                                                                                                                   | 1000 ft. box                                      | <b>94L63</b> |
|                                                                                                                                                                   | 2500 ft. roll                                     | <b>68M25</b> |
| <b>CS7500 Commercial 7-Day Programmable Thermostat</b>                                                                                                            |                                                   |              |
| CS7500 7-Day Thermostat                                                                                                                                           |                                                   | <b>17G74</b> |
| Sensors/Accessories                                                                                                                                               | <sup>2</sup> Remote non-adjustable wall-mount 20k | <b>47W36</b> |
|                                                                                                                                                                   | <sup>2</sup> Remote non-adjustable wall-mount 10k | <b>47W37</b> |
|                                                                                                                                                                   | Remote non-adjustable discharge air (duct mount)  | <b>19L22</b> |
|                                                                                                                                                                   | Outdoor temperature sensor                        | <b>X2658</b> |
| <b>CS3000 Commercial 5-2 Day Programmable Thermostat</b>                                                                                                          |                                                   |              |
| CS3000 5-2 Day Thermostat                                                                                                                                         |                                                   | <b>11Y05</b> |
| Sensors/Accessories                                                                                                                                               | Remote non-adjustable wall mount 10k averaging    | <b>47W37</b> |
|                                                                                                                                                                   | Thermostat wall mounting plate                    | <b>X2659</b> |
| <b>CS3000 Non-Programmable Thermostat</b>                                                                                                                         |                                                   |              |
| CS3000 Non-Programmable Thermostat                                                                                                                                |                                                   | <b>51M32</b> |
| <b>Universal Thermostat Guard with Lock (clear)</b>                                                                                                               |                                                   |              |
|                                                                                                                                                                   | Inside Dimensions (H x W) 5 7/8 x 8 3/8 in.       | <b>39P21</b> |
| <b>Temperature/Humidity Room Sensors</b>                                                                                                                          |                                                   |              |
| LCS-5030 Wired Temperature/Humidity Room Sensor                                                                                                                   |                                                   | <b>21L07</b> |
| A335MT13AE1 Wired Temperature/Humidity Room Sensor                                                                                                                |                                                   | <b>21W06</b> |

<sup>1</sup> Up to nine of the same type remote temperature sensors can be connected in parallel.

<sup>2</sup> Remote wall-mount sensors can be applied in any of the following combinations:

One Sensor - (1) 47W36, Two Sensors - (2) 47W37, Three Sensors - (2) 47W36 and (1) 47W37

Four Sensors - (4) 47W36, Five Sensors - (3) 47W36 and (2) 47W37

**UNIT OPERATION WITH 2-STAGE THERMOSTAT OR THIRD PARTY UNIT CONTROLLERS (2 HEAT / 2 COOL)  
(THIS SECTION NOT APPLICABLE FOR DISCHARGE AIR TEMPERATURE CONTROL)****SUPPLY AIR BLOWER SPEED**

Unit has the following supply air blower speed settings:

- Ventilation Speed
- Low Cooling Speed
- High Cooling Speed
- Heating Speed
- Smoke Speed (Used only in smoke removal option - not discussed)

**COOLING MODE (2 Cool)****<sup>1</sup> Unit Features An Economizer And Outdoor Air Is Suitable****Y1 Demand:**

All compressors are off, supply air blower is set to Low Cooling Speed; economizer modulates (minimum to maximum open position) to maintain 55°F discharge air temperature.

**Y2 Demand:**

All compressors are off, supply air blower is set to High Cooling Speed, and economizer modulates (minimum to maximum open position) to maintain 55°F discharge air temperature.

*NOTE - If economizer stays at maximum open for 3 minutes, 1st stage compressors (compressor 1 and 2) are energized while supply air blower stays on high cooling speed providing maximum cooling capacity.*

*<sup>1</sup> Outdoor air suitability is determined by the energy state of outdoor ambient (enthalpy or sensible) and its ability to achieve the desired free cooling effects. Outdoor air suitability can also be determined by a third party controller and provided to the RTU via a network connection.*

**Unit Does Not Feature An Economizer Or Outdoor Air Is Not Suitable****Y1 Demand:**

The first two compressors operate and the supply air blower is activated. The blower is set to the Low Cooling Speed.

**Y2 Demand:**

All compressors operate and supply air blower is activated. The blower is set to the High Cooling Speed.

**Dehumidification Mode**

If a unit with Humiditrol® Dehumidification Option receives a call for dehumidification, economizer free cooling is locked out.

**Call For Dehumidification, No Y1, Y2 Demand:**

Compressors 1 and 2 operate, supply air blower operates at low cooling speed, and both reheat valves are energized.

**Y1 Demand With A Call For Dehumidification:**

All compressors operate, supply air blower operates at high cooling speed and both reheat valves are energized.

**Y2 Demand With A Call For Dehumidification:**

All compressors operate, supply air blower operates at high cooling speed, and the reheat valves are de-energized.

**HEATING MODE (2 Heat)****W1 Demand:**

The first two stages of mechanical heat are activated; the blower is set to Heating Speed.

**W2 Demand:**

The third and fourth stages of mechanical heat are activated; the blower is set to the Heating Speed.

**UNIT OPERATION IN ROOM SENSOR MODE OR DISCHARGE AIR TEMPERATURE CONTROL  
(4 HEAT / 4 COOL)****SUPPLY AIR BLOWER SPEED**

Unit has the following supply air blower speed settings:

- Ventilation speed
- Cooling Speed 1 (low)
- Cooling Speed 2 (medium-low)
- Cooling Speed 3 (medium-high)
- Cooling Speed 4 (high)
- Heating Speed
- Smoke Speed (Used only in smoke removal option - not discussed)

**COOLING MODE (4 Cool)**

- Room sensors (when connected to S-Bus) or Discharge air temperature (DAT) can be used to control unit staging.
- DAT default setpoint = 55°F. Unit will stage compressors as required to maintain the setpoint when provided with Y1 thermostat demand.
- Room sensor occupied default setpoint = 75°F. Unit will stage compressors as required to maintain the setpoint.
- Increasing compressor stages provides more cooling capacity while decreasing compressor stages provides less cooling capacity.

**<sup>1</sup> Unit Features An Economizer And Outdoor Air Is Suitable****Cooling Stage 1:**

All compressors are off, supply air blower is on Cooling Speed 1 to minimize blower power consumption, economizer modulates (minimum to maximum open position) to maintain setpoint.

**Cooling Stage 2:**

All compressors are off, supply air blower is on Cooling Speed 4 to provide higher cooling capacity, and economizer modulates to maintain setpoint. If economizer stays at maximum open for 3 minutes, compressor 1 is energized while supply air blower stays on Cooling Speed 4. After compressor 1 is energized, the economizer stays at maximum open.

**Cooling Stage 3:**

Compressor 1 and 2 are energized while supply air blower is on Cooling speed 4 to provide even higher cooling capacity.

**Cooling Stage 4:**

All compressors are energized while supply air blower is on Cooling speed 4 to provide maximum cooling capacity. 1 Outdoor air suitability is determined by the energy state of outdoor ambient (enthalpy or sensible) and its ability to achieve the desired free cooling effects. Outdoor air suitability can also be determined by a third party controller and provided to the RTU via a network connection.

**Unit Does Not Feature An Economizer Or Outdoor Air Is Not Suitable****Cooling Stage 1:**

Compressor 1 operates and supply air blower operates at Cooling Speed 1.

**Cooling Stage 2:**

Compressors 1 and 2 operate and supply air blower operates at Cooling Speed 2.

**Cooling Stage 3:**

Compressors 1, 2, and 3 operate and supply air blower operates at Cooling Speed 3.

**Cooling Stage 4:**

All compressors operate and supply air blower operates at Cooling Speed 4.

**UNIT OPERATION IN ROOM SENSOR MODE OR DISCHARGE AIR TEMPERATURE CONTROL  
(4 HEAT / 4 COOL) (CONTINUED)****Dehumidification Mode**

If a unit with Humiditrol® Dehumidification Option receives a call for dehumidification, economizer free cooling is locked out.

**Call For Dehumidification, No Y1, Y2, Y3, Y4 Demand:**

Compressors 1 and 2 operate, supply air blower operates at medium-low cooling speed, and both reheat valves are energized.

**Y1 Demand With A Call For Dehumidification:**

Compressors 1, 2, and 3 operate, supply air blower operates at high cooling speed and both reheat valves are energized.

**Y2 Demand With A Call For Dehumidification:**

All compressors operate, supply air blower operates at high cooling speed and both reheat valves are energized.

**Y3 Demand With A Call For Dehumidification:**

All compressors operate, supply air blower operates at high cooling speed, and the reheat valve of compressor 1 is energized while the reheat valve of compressor 2 is de-energized.

**Y4 Demand With A Call For Dehumidification:**

All compressors operate, supply air blower operates at high cooling speed, and the reheat valves are de-energized.

**HEATING MODE (4 Heat) HEATING MODE (4 Heat)**

- Room sensors (when connected to S-Bus) or Discharge air temperature (DAT) can be used to control up to four stages of electric heat.
- DAT default setpoint = 110°F. Unit will stage heating as required to maintain the setpoint when provided with W1 demand.
- Room sensor occupied setpoint default = 70°F. Unit will stage heating as required to maintain the setpoint.
- Increasing heat stages provides more heating capacity while decreasing heat stages provides less heating capacity.
- Blower set to Heating Speed for all stages.

**Heating Stage 1:**

The first stage of mechanical heat is activated; gas valve one is in low fire mode. This is ~33% of heating capacity.

**Heating Stage 2 :**

The first and second stages of mechanical heat are activated; gas valves one and two are in low fire mode. This is ~66% of heating capacity.

**Heating Stage 3:**

Gas valve one is in high fire mode; gas valve two is in low fire mode. This is ~83% of heating capacity.

**Heating Stage 4:**

Gas valves one and two are in high fire mode. This is 100% of heating capacity.

**UNITS IN ZONING APPLICATIONS OPERATING WITH DISCHARGE AIR CONTROL (4 HEAT / 4 COOL)****SUPPLY AIR BLOWER SPEED**

Unit has the following supply air blower speed settings:

- Ventilation Speed
- Cooling Speed - Fully modular based on supply duct static pressure
- Heating Speed
- Smoke Speed (Used only in smoke removal option - not discussed)

**COOLING MODE (4 Cool)**

- Discharge air temperature (DAT) can be used to control unit staging.
- DAT default setpoint = 55°F. Unit will stage compressors as required to maintain the setpoint when provided with Y1 thermostat demand.
- Increasing compressor stages provides more cooling capacity while decreasing compressor stages provides less cooling capacity.

**<sup>1</sup> Unit Features An Economizer And Outdoor Air Is Suitable****Cooling Stage 1:**

All compressors are off, supply air blower operates to maintain duct static pressure, economizer modulates (minimum to maximum open position) to maintain 55°F supply air temperature (default unit controller setting).

**Cooling Stage 2:**

All compressors are off, supply air blower operates to maintain duct static pressure, and economizer modulates to maintain 55°F supply air temperature. If economizer stays at maximum open for 3 minutes, compressor 1 is energized while supply air blower operates to maintain duct static pressure. After compressor 1 is energized, the economizer stays at maximum open.

**Cooling Stage 3:**

Compressor 1 and 2 are energized while supply air blower operates to maintain duct static pressure.

**Cooling Stage 4:**

All compressors are energized while supply air blower operates to maintain duct static pressure.

<sup>1</sup> Outdoor air suitability is determined by the energy state of outdoor ambient (enthalpy or sensible) and its ability to achieve the desired free cooling effects. Outdoor air suitability can also be determined by a third party controller and provided to the RTU via a network connection.

**Unit Does Not Feature An Economizer Or Outdoor Air Is Not Suitable****Cooling Stage 1:**

Compressor 1 operates and supply air blower operates to maintain duct static pressure.

**Cooling Stage 2:**

Compressors 1 and 2 operate and supply air blower operates to maintain duct static pressure.

**Cooling Stage 3:**

Compressors 1, 2, and 3 operate and supply air blower operates to maintain duct static pressure.

**Cooling Stage 4:**

All compressors operate and supply air blower operates to maintain duct static pressure.

**UNITS IN ZONING APPLICATIONS OPERATING WITH DISCHARGE AIR CONTROL (4 HEAT / 4 COOL)  
(CONTINUED)****HEATING MODE (4 Heat)**

Discharge air temperature (DAT) can be used to control unit staging.

- DAT default setpoint = 110°F. Unit will stage heating as required to maintain the setpoint when provided with W1 demand.
- Increasing heat stages provides more heating capacity while decreasing heat stages provides less heating capacity.
- Blower set to Heating Speed for all stages.

**Heating Stage 1:**

The first stage of mechanical heat is activated; gas valve one is in low fire mode. This is ~33% of heating capacity.

**Heating Stage 2:**

The first and second stages of mechanical heat are activated; gas valves one and two are in low fire mode. This is ~66% of heating capacity.

**Heating Stage 3:**

Gas valve one is in high fire mode; gas valve two is in low fire mode. This is ~83% of heating capacity.

**Heating Stage 4:**

Gas valves one and two are in high fire mode. This is 100% of heating capacity.

**Modulating Outdoor Air Damper**

The minimum damper position for “occupied low blower” and “occupied high blower” is adjusted during unit setup to provide minimum fresh air requirements per ASHRAE 62.1 at the corresponding supply air blower speeds.

- When supply air blower is off or the unit is in unoccupied mode, the outdoor air damper is closed.
- When unit is in occupied mode and supply air blower is operating at a speed below the “midpoint” blower speed, the outdoor air damper is at minimum “low blower” position.
- When unit is in occupied mode and supply air blower is operating at a speed equal to or above the “midpoint” blower speed, the outdoor air damper is at minimum “high blower” position.

*NOTE - The “midpoint” blower speed is an average of the minimum and maximum blower speed ((minimum speed + maximum speed) divided by 2).*

## OPTIONS / ACCESSORIES

| Item Description                                             |                                           | Catalog Number | Unit Model No. |     |     |
|--------------------------------------------------------------|-------------------------------------------|----------------|----------------|-----|-----|
|                                                              |                                           |                | 242            | 300 | 360 |
| COOLING SYSTEM                                               |                                           |                |                |     |     |
| Condensate Drain Trap                                        | PVC                                       | 22H54          | OX             | OX  | OX  |
|                                                              | Copper                                    | 76W27          | OX             | OX  | OX  |
| Drain Pan Overflow Switch                                    |                                           | 21Z07          | OX             | OX  | OX  |
| Stainless Steel Condensate Drain Pan                         |                                           | 83W42          | OX             | OX  | OX  |
| GAS HEAT                                                     |                                           |                |                |     |     |
| Combustion Air Intake Extensions (Order 2 Kits)              |                                           | 89L97          | X              | X   | X   |
| Gas Heat Input                                               | Standard - 260 kBtuh input                | Factory        | O              | O   | O   |
|                                                              | Medium - 360 kBtuh input                  | Factory        | O              | O   | O   |
|                                                              | High - 480 kBtuh input                    | Factory        | O              | O   | O   |
| LPG/Propane Conversion Kits (Order 2 Kits)                   | Standard Heat                             | 14N28          | X              | X   | X   |
|                                                              | Medium Heat                               | 14N29          | X              | X   | X   |
|                                                              | High Heat                                 | 14N30          | X              | X   | X   |
| Low Temperature Vestibule Heater                             | 208/230V-3ph                              | 58W28          | X              | X   | X   |
|                                                              | 460V-3ph                                  | 58W29          | X              | X   | X   |
|                                                              | 575V-3ph                                  | 58W30          | X              | X   | X   |
| Stainless Steel Heat Exchanger                               |                                           | Factory        | O              | O   | O   |
| Vertical Vent Extension                                      |                                           | 42W16          | X              | X   | X   |
| BLOWER - SUPPLY AIR                                          |                                           |                |                |     |     |
| Blower Type                                                  | MSAV® Multi-Stage Air Volume              | Factory        | O              | O   | O   |
|                                                              | VAV Variable Air Volume                   | Factory        | O              | O   | O   |
| Motors                                                       | Belt Drive (standard efficiency) - 5 hp   | Factory        | O              | O   | O   |
|                                                              | Belt Drive (standard efficiency) - 7.5 hp | Factory        | O              | O   | O   |
|                                                              | Belt Drive (standard efficiency) - 10 hp  | Factory        | O              | O   | O   |
|                                                              | Supply VFD Blower Bypass                  | Factory        | O              | O   | O   |
| Drive Kits<br>See Blower Data Tables for usage and selection | Kit #1 740-895 rpm                        | Factory        | O              | O   | O   |
|                                                              | Kit #2 870-1045 rpm                       | Factory        | O              | O   | O   |
|                                                              | Kit #3 715-880 rpm                        | Factory        | O              | O   | O   |
|                                                              | Kit #4 770-965 rpm                        | Factory        | O              | O   | O   |
|                                                              | Kit #5 660-810 rpm                        | Factory        | O              | O   | O   |
|                                                              | Kit #6 770-965 rpm                        | Factory        | O              | O   | O   |
|                                                              | Kit #7 570-720 rpm                        | Factory        | O              | O   | O   |
|                                                              | Kit #8 480-630 rpm                        | Factory        | O              | O   | O   |
|                                                              | Kit #9 410-535 rpm                        | Factory        | O              | O   | O   |
| CABINET                                                      |                                           |                |                |     |     |
| Combination Coil/Hail Guards                                 |                                           | 13T16          | X              | X   | X   |
| Corrosion Protection                                         |                                           | Factory        | O              | O   | O   |
| Grille Guards                                                |                                           | 86K30          | X              | X   | X   |
| Horizontal Return Air Panel Kit                              |                                           | 38K48          | X              | X   | X   |

NOTE - Catalog numbers shown are for ordering field installed accessories.

OX - Configure To Order (Factory Installed) or Field Installed

O = Configure To Order (Factory Installed)

X = Field Installed

## OPTIONS / ACCESSORIES

| Item Description                                                                                                  |  |  | Catalog Number                                           | Unit Model No. |     |     |    |
|-------------------------------------------------------------------------------------------------------------------|--|--|----------------------------------------------------------|----------------|-----|-----|----|
|                                                                                                                   |  |  |                                                          | 242            | 300 | 360 |    |
| CONTROLS                                                                                                          |  |  |                                                          |                |     |     |    |
| Blower Proving Switch                                                                                             |  |  | 88W59                                                    | OX             | OX  | OX  |    |
| Commercial Controls                                                                                               |  |  | CPC Einstein Integration                                 | Factory        | O   | O   | O  |
|                                                                                                                   |  |  | Prodigy® Control System - BACnet® Module                 | 59W51          | OX  | OX  | OX |
|                                                                                                                   |  |  | Prodigy® Control System - LonTalk® Module                | 54W27          | OX  | OX  | OX |
|                                                                                                                   |  |  | Novar® LSE                                               | Factory        | O   | O   | O  |
| Dirty Filter Switch                                                                                               |  |  | 53W68                                                    | OX             | OX  | OX  |    |
| Discharge Air Temperature Sensor                                                                                  |  |  | Factory                                                  | O              | O   | O   |    |
| Fresh Air Tempering                                                                                               |  |  | 21Z08                                                    | OX             | OX  | OX  |    |
| General Purpose Control Kit                                                                                       |  |  | 13J78                                                    | X              | X   | X   |    |
| Smoke Detector - Supply or Return (Power board and one sensor)                                                    |  |  | 22H56                                                    | OX             | OX  | OX  |    |
| Smoke Detector - Supply and Return (Power board and two sensors)                                                  |  |  | 22H57                                                    | OX             | OX  | OX  |    |
| Supply Static Limit Switch                                                                                        |  |  | 79M80                                                    | X              | X   | X   |    |
| Supply Static Limit Switch - Mounting Kit                                                                         |  |  | 79M81                                                    | X              | X   | X   |    |
| INDOOR AIR QUALITY                                                                                                |  |  |                                                          |                |     |     |    |
| Air Filters                                                                                                       |  |  |                                                          |                |     |     |    |
| Healthy Climate® High Efficiency Air Filters<br>20 x 20 x 2 - order 12 per unit                                   |  |  | MERV 8                                                   | 54W21          | OX  | OX  | OX |
|                                                                                                                   |  |  | MERV 13                                                  | 52W39          | OX  | OX  | OX |
|                                                                                                                   |  |  | MERV 16                                                  | 21U40          | X   | X   | X  |
| Replaceable Media Filter with Metal Mesh Frame (includes Non-Pleated Filter Media) 20 x 20 x 2- order 12 per unit |  |  | 44N60                                                    | X              | X   | X   |    |
| Indoor Air Quality (CO2) Sensors                                                                                  |  |  |                                                          |                |     |     |    |
| Sensor - Wall-mount, off-white plastic cover with LCD display                                                     |  |  | 77N39                                                    | X              | X   | X   |    |
| Sensor - Wall-mount, off-white plastic cover, no display                                                          |  |  | 23V86                                                    | X              | X   | X   |    |
| Sensor - Black plastic case with LCD display, rated for plenum mounting                                           |  |  | 87N52                                                    | X              | X   | X   |    |
| Sensor - Wall-mount, black plastic case, no display, rated for plenum mounting                                    |  |  | 87N54                                                    | X              | X   | X   |    |
| CO2 Sensor Duct Mounting Kit - for downflow applications                                                          |  |  | 85L43                                                    | X              | X   | X   |    |
| Aspiration Box - for duct mounting non-plenum rated CO2 sensors (77N39)                                           |  |  | 90N43                                                    | X              | X   | X   |    |
| ELECTRICAL                                                                                                        |  |  |                                                          |                |     |     |    |
| Voltage 60 hz                                                                                                     |  |  | 208/230V - 3 phase                                       | Factory        | O   | O   | O  |
|                                                                                                                   |  |  | 460V - 3 phase                                           | Factory        | O   | O   | O  |
|                                                                                                                   |  |  | 575V - 3 phase                                           | Factory        | O   | O   | O  |
| Disconnect Switch - See Electrical<br>Accessories Tables on page 41 for<br>selection                              |  |  | 80 amp                                                   | 54W88          | OX  | OX  | OX |
|                                                                                                                   |  |  | 150 amp                                                  | 54W89          | OX  | OX  | OX |
|                                                                                                                   |  |  | 250 amp                                                  | 90W82          | OX  | OX  | OX |
| GFI Service<br>Outlets                                                                                            |  |  | 15 amp non-powered, field-wired (208/230V, 460V only)    | 74M70          | OX  | OX  | OX |
|                                                                                                                   |  |  | 15 amp factory-wired and powered (208/230V, 460V only)   | Factory        | O   | O   | O  |
|                                                                                                                   |  |  | 1 20 amp non-powered, field-wired (208/230V, 460V, 575V) | 67E01          | OX  | OX  | OX |
|                                                                                                                   |  |  | 1 20 amp non-powered, field-wired (575V)                 | Factory        | O   | O   | O  |
| Weatherproof Cover for GFI                                                                                        |  |  | 10C89                                                    | X              | X   | X   |    |
| Phase/Voltage Detection                                                                                           |  |  | Factory                                                  | O              | O   | O   |    |
| 2 HUMIDITROL® CONDENSER REHEAT OPTION                                                                             |  |  |                                                          |                |     |     |    |
| Humiditrol® Dehumidification Option                                                                               |  |  | Factory                                                  |                | O   | O   |    |
| Humidity Sensor Kit, Remote mounted (required)                                                                    |  |  | 17M50                                                    |                | X   | X   |    |

<sup>1</sup> Canada requires a minimum 20 amp circuit. Select 20 amp, non-powered, field wired GFI.

<sup>2</sup> Available for 300H and 360H models only with MSAV® Multi-Stage Air Volume option and without VFD Bypass Option.

NOTE - Catalog numbers shown are for ordering field installed accessories.

OX - Configure To Order (Factory Installed) or Field Installed

O = Configure To Order (Factory Installed)

X = Field Installed

## OPTIONS / ACCESSORIES

| Item Description                                                                                                                    | Catalog Number                | Unit Model No. |     |     |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------|-----|-----|
|                                                                                                                                     |                               | 242            | 300 | 360 |
| ECONOMIZER                                                                                                                          |                               |                |     |     |
| High Performance Economizer (Approved for California Title 24 Building Standards / AMCA Class 1A Certified)                         |                               |                |     |     |
| High Performance Economizer                                                                                                         | 18X87                         | OX             | OX  | OX  |
| Downflow or Horizontal Applications - Includes Outdoor Air Hood, order Downflow or Horizontal Barometric Relief Dampers separately. |                               |                |     |     |
| Economizer Controls                                                                                                                 |                               |                |     |     |
| Differential Enthalpy (Not for Title 24)                                                                                            | Order 2 21Z09                 | OX             | OX  | OX  |
| Sensible Control                                                                                                                    | Sensor is Furnished Factory   | O              | O   | O   |
| Single Enthalpy (Not for Title 24)                                                                                                  | 21Z09                         | OX             | OX  | OX  |
| Global, Enthalpy                                                                                                                    | Sensor Field Provided Factory | O              | O   | O   |
| Building Pressure Control                                                                                                           | 13J77                         | X              | X   | X   |
| Differential Sensible                                                                                                               | Sensor is Furnished Factory   | O              | O   | O   |
| Outdoor Air CFM Control                                                                                                             | 13J76                         | OX             | OX  | OX  |
| Barometric Relief Dampers With Exhaust Hood                                                                                         |                               |                |     |     |
| Downflow Barometric Relief Dampers                                                                                                  | 76W17                         | OX             | OX  | OX  |
| Horizontal Barometric Relief Dampers                                                                                                | 33K78                         | OX             | OX  | OX  |
| OUTDOOR AIR                                                                                                                         |                               |                |     |     |
| Outdoor Air Dampers With Outdoor Air Hood                                                                                           |                               |                |     |     |
| Motorized                                                                                                                           | 18X89                         | OX             | OX  | OX  |
| Manual                                                                                                                              | 18X88                         | X              | X   | X   |
| POWER EXHAUST                                                                                                                       |                               |                |     |     |
| Standard Static without VFD                                                                                                         | 208/230V                      | 74W21          | OX  | OX  |
|                                                                                                                                     | 460V                          | 74W22          | OX  | OX  |
|                                                                                                                                     | 575V                          | 74W23          | OX  | OX  |
| High Static with VFD<br>2 hp (731 - 932 rpm)                                                                                        | 208/230V                      | 83M89          | X   | X   |
|                                                                                                                                     | 460V                          | 83M90          | X   | X   |
|                                                                                                                                     | 575V                          | 83M91          | X   | X   |
| High Static with VFD and Bypass<br>2 hp (731-932 rpm)                                                                               | 208/230V                      | 83M92          | X   | X   |
|                                                                                                                                     | 460V                          | 83M93          | X   | X   |
|                                                                                                                                     | 575V                          | 83M94          | X   | X   |
| Power Exhaust Control                                                                                                               |                               |                |     |     |
| <sup>1</sup> Pressure Switch                                                                                                        | 79M79                         | X              | X   | X   |

<sup>1</sup> Order one per unit with Standard Static Power Exhaust without VFD. Order two per unit with standard static power exhaust for MSAV or VAV models.

NOTE - Catalog numbers shown are for ordering field installed accessories.

OX - Configure To Order (Factory Installed) or Field Installed

O = Configure To Order (Factory Installed)

X = Field Installed

## OPTIONS / ACCESSORIES

| Item Description                                                           |             | Catalog Number | Unit Model No. |     |     |
|----------------------------------------------------------------------------|-------------|----------------|----------------|-----|-----|
|                                                                            |             |                | 242            | 300 | 360 |
| ROOF CURBS                                                                 |             |                |                |     |     |
| Hybrid Roof Curbs, Downflow                                                |             |                |                |     |     |
| 14 in. height                                                              | 11F62       | X              | X              | X   |     |
| 18 in. height                                                              | 11F63       | X              | X              | X   |     |
| 24 in. height                                                              | 11F64       | X              | X              | X   |     |
| Standard Roof Curbs, Horizontal - Requires Horizontal Return Air Panel Kit |             |                |                |     |     |
| 30 in. height - slab applications                                          | 11T90       | X              | X              | X   |     |
| 41 in. height - rooftop applications                                       | 11T97       | X              | X              | X   |     |
| Horizontal Return Air Panel Kit                                            |             |                |                |     |     |
| Required for Horizontal Applications with Roof Curb                        | 38K48       | X              | X              | X   |     |
| Insulation Kit For Standard Horizontal Roof Curbs                          |             |                |                |     |     |
| For 30 in. Curb                                                            | 73K33       | X              | X              | X   |     |
| For 41 in. Curb                                                            | 73K35       | X              | X              | X   |     |
| CEILING DIFFUSERS                                                          |             |                |                |     |     |
| Step-Down - Order one                                                      | LARTD30/36S | 45K74          | X              | X   | X   |
| Flush - Order one                                                          | LAFD30/36S  | 45K75          | X              | X   | X   |
| Transitions (Supply and Return) - Order one                                | LASRT30/36  | 33K80          | X              | X   | X   |

NOTE - Catalog numbers shown are for ordering field installed accessories.

OX - Configure To Order (Factory Installed) or Field Installed

O = Configure To Order (Factory Installed)

X = Field Installed

## SPECIFICATIONS

| General Data                                        |                                       | Nominal Tonnage | 20 Ton                                                                                                                                                                                                                                                                                                    | 25 Ton                       | 25 Ton                          |
|-----------------------------------------------------|---------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------|
|                                                     |                                       | Model Number    | LGH242H4V                                                                                                                                                                                                                                                                                                 | LGH300H4V                    | LGH300H4M                       |
|                                                     |                                       | Efficiency Type | High                                                                                                                                                                                                                                                                                                      | High                         | High                            |
|                                                     |                                       | Blower Type     | VAV<br>(Variable Air Volume)                                                                                                                                                                                                                                                                              | VAV<br>(Variable Air Volume) | MSAV®<br>Multi-Stage Air Volume |
| <b>Cooling Performance</b>                          | Gross Cooling Capacity - Btuh         |                 | 244,000                                                                                                                                                                                                                                                                                                   | 310,000                      | 310,000                         |
|                                                     | Net Cooling Capacity - Btuh           |                 | <sup>1</sup> 238,000                                                                                                                                                                                                                                                                                      | <sup>2</sup> 300,000         | <sup>2</sup> 300,000            |
|                                                     | AHRI Rated Air Flow - cfm             |                 | 6800                                                                                                                                                                                                                                                                                                      | 8100                         | 8100                            |
|                                                     | Total Unit Power - kW                 |                 | 19.3                                                                                                                                                                                                                                                                                                      | 25.8                         | 25.8                            |
|                                                     | EER (Btuh/Watt)                       |                 | <sup>1</sup> 12.3                                                                                                                                                                                                                                                                                         | <sup>2</sup> 11.6            | <sup>2</sup> 11.6               |
|                                                     | IEER (Btuh/Watt)                      |                 | <sup>1</sup> 15.5                                                                                                                                                                                                                                                                                         | <sup>2</sup> 14.3            | <sup>2</sup> 14.4               |
| <b>Refrigerant Charge</b>                           | Refrigerant Type                      |                 | R-410A                                                                                                                                                                                                                                                                                                    | R-410A                       | R-410A                          |
|                                                     | Circuit 1                             |                 | 8 lbs. 0 oz.                                                                                                                                                                                                                                                                                              | 8 lbs. 0 oz.                 | 8 lbs. 0 oz.                    |
|                                                     | Circuit 2                             |                 | 8 lbs. 0 oz.                                                                                                                                                                                                                                                                                              | 8 lbs. 0 oz.                 | 8 lbs. 0 oz.                    |
|                                                     | Circuit 3                             |                 | 8 lbs. 8 oz.                                                                                                                                                                                                                                                                                              | 8 lbs. 0 oz.                 | 8 lbs. 0 oz.                    |
|                                                     | Circuit 4                             |                 | 8 lbs. 8 oz.                                                                                                                                                                                                                                                                                              | 8 lbs. 8 oz.                 | 8 lbs. 8 oz.                    |
| <b>Gas Heating Options Available</b>                |                                       |                 | See page 28                                                                                                                                                                                                                                                                                               |                              |                                 |
| <b>Compressor Type (number)</b>                     |                                       |                 | Scroll (4)                                                                                                                                                                                                                                                                                                | Scroll (4)                   | Scroll (4)                      |
| <b>Outdoor Coils</b>                                | Net face area (total) - sq. ft.       |                 | 68.3                                                                                                                                                                                                                                                                                                      | 68.3                         | 68.3                            |
|                                                     | Number of rows                        |                 | 1                                                                                                                                                                                                                                                                                                         | 1                            | 1                               |
|                                                     | Fins per inch                         |                 | 23                                                                                                                                                                                                                                                                                                        | 23                           | 23                              |
| <b>Outdoor Coil Fans</b>                            | Motor - (No.) horsepower              |                 | (6) 1/3                                                                                                                                                                                                                                                                                                   | (6) 1/3                      | (6) 1/3                         |
|                                                     | Motor rpm                             |                 | 1075                                                                                                                                                                                                                                                                                                      | 1075                         | 1075                            |
|                                                     | Total Motor watts                     |                 | 2500                                                                                                                                                                                                                                                                                                      | 2500                         | 2500                            |
|                                                     | Diameter - (No.) in.                  |                 | (6) 24                                                                                                                                                                                                                                                                                                    | (6) 24                       | (6) 24                          |
|                                                     | Number of blades                      |                 | 3                                                                                                                                                                                                                                                                                                         | 3                            | 3                               |
|                                                     | Total Air volume - cfm                |                 | 21,500                                                                                                                                                                                                                                                                                                    | 21,500                       | 21,500                          |
| <b>Indoor Coils</b>                                 | Net face area (total) - sq. ft.       |                 | 31.40                                                                                                                                                                                                                                                                                                     | 31.40                        | 31.40                           |
|                                                     | Tube diameter - in.                   |                 | 3/8                                                                                                                                                                                                                                                                                                       | 3/8                          | 3/8                             |
|                                                     | Number of rows                        |                 | 4                                                                                                                                                                                                                                                                                                         | 4                            | 4                               |
|                                                     | Fins per inch                         |                 | 14                                                                                                                                                                                                                                                                                                        | 14                           | 14                              |
|                                                     | Drain connection - No. and size       |                 | (1) 1 in. NPT                                                                                                                                                                                                                                                                                             | (1) 1 in. NPT                | (1) 1 in. NPT                   |
|                                                     | Expansion device type                 |                 | Balance port TXV, removable head                                                                                                                                                                                                                                                                          |                              |                                 |
| <b><sup>3</sup> Indoor Blower and Kit Selection</b> | Nominal motor output                  |                 | 5 hp, 7.5 hp, 10 hp                                                                                                                                                                                                                                                                                       |                              |                                 |
|                                                     | Maximum usable motor output (US Only) |                 | 5.75 hp, 8.63 hp, 11.5 hp                                                                                                                                                                                                                                                                                 |                              |                                 |
|                                                     | Motor - Kit kit number                |                 | <b>5 hp</b><br><b>Kit 5</b> 660-810 rpm<br><b>Kit 6</b> 770-965 rpm<br><b>Kit 7</b> 570-720 rpm<br><b>Kit 8</b> 480-630 rpm<br><b>Kit 9</b> 410-535 rpm<br><b>7.5 hp</b><br><b>Kit 3</b> 715-880 rpm<br><b>Kit 4</b> 770-965 rpm<br><b>10 hp</b><br><b>Kit 1</b> 740-895 rpm<br><b>Kit 2</b> 870-1045 rpm |                              |                                 |
|                                                     | Blower wheel nom. D x W - in.         |                 | (2) 18 x 15                                                                                                                                                                                                                                                                                               |                              |                                 |
|                                                     | Type of filter                        |                 | Fiberglass, disposable                                                                                                                                                                                                                                                                                    |                              |                                 |
|                                                     | Number and size - in.                 |                 | (12) 20 x 20 x 2                                                                                                                                                                                                                                                                                          |                              |                                 |
| <b>Electrical characteristics</b>                   |                                       |                 | 208/230V, 460V or 575V - 60 hertz - 3 phase                                                                                                                                                                                                                                                               |                              |                                 |

NOTE - Net capacity includes evaporator blower motor heat deduction. Gross capacity does not include evaporator blower motor heat deduction.

<sup>1</sup> AHRI Certified to AHRI Standard 340/360; 95°F outdoor air temperature and 80°F db/67°F wb entering evaporator air; minimum external duct static pressure.

<sup>2</sup> Tested at conditions included in with AHRI Standard 340/360.

<sup>3</sup> Using total air volume and system static pressure requirements determine from blower performance tables rpm and motor output required. Maximum usable output of motors furnished are shown. In Canada, nominal motor output is also maximum usable motor output. If motors of comparable output are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

| SPECIFICATIONS                                      |                                          |                                                                                                                                                                                                                                                                                                           |                                 |
|-----------------------------------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| General Data                                        | Nominal Tonnage                          | 30 Ton                                                                                                                                                                                                                                                                                                    | 30 Ton                          |
|                                                     | Model Number                             | LGH360H4V                                                                                                                                                                                                                                                                                                 | LGH360H4M                       |
|                                                     | Efficiency Type                          | High                                                                                                                                                                                                                                                                                                      | High                            |
|                                                     | Blower Type                              | VAV<br>(Variable Air Volume)                                                                                                                                                                                                                                                                              | MSAV®<br>Multi-Stage Air Volume |
| <b>Cooling Performance</b>                          | Gross Cooling Capacity - Btuh            | 370,000                                                                                                                                                                                                                                                                                                   | 370,000                         |
|                                                     | <sup>1</sup> Net Cooling Capacity - Btuh | 350,000                                                                                                                                                                                                                                                                                                   | 350,000                         |
|                                                     | AHRI Rated Air Flow - cfm                | 8600                                                                                                                                                                                                                                                                                                      | 8600                            |
|                                                     | Total Unit Power - kW                    | 33.0                                                                                                                                                                                                                                                                                                      | 33.0                            |
|                                                     | <sup>1</sup> EER (Btuh/Watt)             | 10.6                                                                                                                                                                                                                                                                                                      | 10.6                            |
|                                                     | <sup>1</sup> IEER (Btuh/Watt)            | 13.5                                                                                                                                                                                                                                                                                                      | 14.0                            |
| <b>Refrigerant Charge</b>                           | Refrigerant Type                         | R-410A                                                                                                                                                                                                                                                                                                    | R-410A                          |
|                                                     | Circuit 1                                | 8 lbs. 0 oz.                                                                                                                                                                                                                                                                                              | 8 lbs. 0 oz.                    |
|                                                     | Circuit 2                                | 8 lbs. 0 oz.                                                                                                                                                                                                                                                                                              | 8 lbs. 0 oz.                    |
|                                                     | Circuit 3                                | 8 lbs. 0 oz.                                                                                                                                                                                                                                                                                              | 8 lbs. 0 oz.                    |
|                                                     | Circuit 4                                | 8 lbs. 0 oz.                                                                                                                                                                                                                                                                                              | 8 lbs. 0 oz.                    |
| <b>Gas Heating Options Available</b>                |                                          | See page 28                                                                                                                                                                                                                                                                                               |                                 |
| <b>Compressor Type (number)</b>                     |                                          | Scroll (4)                                                                                                                                                                                                                                                                                                | Scroll (4)                      |
| <b>Outdoor Coils</b>                                | Net face area (total) - sq. ft.          | 68.3                                                                                                                                                                                                                                                                                                      | 68.3                            |
|                                                     | Number of rows                           | 1                                                                                                                                                                                                                                                                                                         | 1                               |
|                                                     | Fins per inch                            | 23                                                                                                                                                                                                                                                                                                        | 23                              |
| <b>Outdoor Coil Fans</b>                            | Motor - (No.) horsepower                 | (6) 1/3                                                                                                                                                                                                                                                                                                   | (6) 1/3                         |
|                                                     | Motor rpm                                | 1075                                                                                                                                                                                                                                                                                                      | 1075                            |
|                                                     | Total Motor watts                        | 2500                                                                                                                                                                                                                                                                                                      | 2500                            |
|                                                     | Diameter - (No.) in.                     | (6) 24                                                                                                                                                                                                                                                                                                    | (6) 24                          |
|                                                     | Number of blades                         | 3                                                                                                                                                                                                                                                                                                         | 3                               |
|                                                     | Total Air volume - cfm                   | 21,500                                                                                                                                                                                                                                                                                                    | 21,500                          |
| <b>Indoor Coils</b>                                 | Net face area (total) - sq. ft.          | 31.40                                                                                                                                                                                                                                                                                                     | 31.40                           |
|                                                     | Tube diameter - in.                      | 3/8                                                                                                                                                                                                                                                                                                       | 3/8                             |
|                                                     | Number of rows                           | 4                                                                                                                                                                                                                                                                                                         | 4                               |
|                                                     | Fins per inch                            | 14                                                                                                                                                                                                                                                                                                        | 14                              |
|                                                     | Drain connection - No. and size          | (1) 1 in. NPT                                                                                                                                                                                                                                                                                             | (1) 1 in. NPT                   |
|                                                     | Expansion device type                    | Balance port TXV, removable head                                                                                                                                                                                                                                                                          |                                 |
| <b><sup>3</sup> Indoor Blower and Kit Selection</b> | Nominal motor output                     | 5 hp, 7.5 hp, 10 hp                                                                                                                                                                                                                                                                                       |                                 |
|                                                     | Maximum usable motor output (US Only)    | 5.75 hp, 8.63 hp, 11.5 hp                                                                                                                                                                                                                                                                                 |                                 |
|                                                     | Motor - Kit kit number                   | <b>5 hp</b><br><b>Kit 5</b> 660-810 rpm<br><b>Kit 6</b> 770-965 rpm<br><b>Kit 7</b> 570-720 rpm<br><b>Kit 8</b> 480-630 rpm<br><b>Kit 9</b> 410-535 rpm<br><b>7.5 hp</b><br><b>Kit 3</b> 715-880 rpm<br><b>Kit 4</b> 770-965 rpm<br><b>10 hp</b><br><b>Kit 1</b> 740-895 rpm<br><b>Kit 2</b> 870-1045 rpm |                                 |
|                                                     | Blower wheel nom. D x W - in.            | (2) 18 x 15                                                                                                                                                                                                                                                                                               |                                 |
| <b>Filters</b>                                      | Type of filter                           | Fiberglass, disposable                                                                                                                                                                                                                                                                                    |                                 |
|                                                     | Number and size - in.                    | (12) 20 x 20 x 2                                                                                                                                                                                                                                                                                          |                                 |
| <b>Electrical characteristics</b>                   |                                          | 208/230V, 460V or 575V - 60 hertz - 3 phase                                                                                                                                                                                                                                                               |                                 |

NOTE - Net capacity includes evaporator blower motor heat deduction. Gross capacity does not include evaporator blower motor heat deduction.

<sup>1</sup> AHRI Certified to AHRI Standard 340/360; 95°F outdoor air temperature and 80°F db/67°F wb entering evaporator air; minimum external duct static pressure.

<sup>3</sup> Using total air volume and system static pressure requirements determine from blower performance tables rpm and motor output required. Maximum usable output of motors furnished are shown. In Canada, nominal motor output is also maximum usable motor output. If motors of comparable output are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

## SPECIFICATIONS - GAS HEAT

| Usage Data                                        |               | Model Number              | LGH242<br>LGH300<br>LGH360 |            |          |
|---------------------------------------------------|---------------|---------------------------|----------------------------|------------|----------|
|                                                   |               | Heat Input Type           | Standard (S)               | Medium (M) | High (H) |
|                                                   |               | Number of Gas Heat Stages | 2                          | 2          | 2        |
| Gas Heating Performance (Two-Stage)               | Input - Btuh  | First Stage               | 169,000                    | 234,000    | 312,000  |
|                                                   |               | Second Stage              | 260,000                    | 360,000    | 480,000  |
|                                                   | Output - Btuh | First Stage               | - - -                      | - - -      | - - -    |
|                                                   |               | Second Stage              | 211,000                    | 292,000    | 389,000  |
| <sup>1</sup> Gas Heating Performance (Four-Stage) | Input - Btuh  | First Stage               | 85,000                     | 117,000    | 156,000  |
|                                                   |               | Second Stage              | 169,000                    | 234,000    | 312,000  |
|                                                   |               | Third Stage               | 214,000                    | 297,000    | 396,000  |
|                                                   |               | Fourth Stage              | 260,000                    | 360,000    | 480,000  |
|                                                   | Output - Btuh | First Stage               | - - -                      | - - -      | - - -    |
|                                                   |               | Second Stage              | - - -                      | - - -      | - - -    |
|                                                   |               | Third Stage               | - - -                      | - - -      | - - -    |
|                                                   |               | Fourth Stage              | 211,000                    | 292,000    | 389,000  |
| Temperature Rise Range - °F                       |               | 15 - 45                   | 30 - 60                    | 40 - 70    |          |
| Thermal Efficiency                                |               | 81%                       | 81%                        | 81%        |          |
| Gas Supply Connections                            |               | 1 in. npt                 | 1 in. npt                  | 1 in. npt  |          |
| Recommended Gas Supply Pressure - in. w.g.        | Natural       | 7                         | 7                          | 7          |          |
|                                                   | LPG/Propane   | 11                        | 11                         | 11         |          |

<sup>1</sup> Four-Stage Gas Heating is field configured.

## HIGH ALTITUDE DERATE

Units may be installed at altitudes up to 2000 feet above sea level without any modification.

At altitudes above 2000 feet, units must be derated to match gas manifold pressures shown in table below.

At altitudes above 4500 feet unit must be derated 2% for each 1000 feet above sea level.

NOTE – This is the only permissible derate for these units.

### TWO-STAGE

| Gas Heat Type (Two-Stage) | Altitude - ft. | Gas Manifold Pressure - in. w.g. |                 | Input Rate<br>Natural Gas or LPG/Propane - Btuh |              |
|---------------------------|----------------|----------------------------------|-----------------|-------------------------------------------------|--------------|
|                           |                | Natural Gas                      | LPG/Propane Gas | First Stage                                     | Second Stage |
| Standard (S)              | 2001 - 4500    | 3.4                              | 9.6             | 169,000                                         | 249,000      |
| Medium (M)                | 2001 - 4500    | 3.4                              | 9.6             | 234,000                                         | 345,000      |
| High (H)                  | 2001 - 4500    | 3.4                              | 9.6             | 312,000                                         | 460,000      |

### FOUR-STAGE

| <sup>1</sup> Gas Heat Type (Four-Stage) | Altitude - ft. | Gas Manifold Pressure - in. w.g. |                 | Input Rate<br>Natural Gas or LPG/Propane - Btuh |              |             |              |
|-----------------------------------------|----------------|----------------------------------|-----------------|-------------------------------------------------|--------------|-------------|--------------|
|                                         |                | Natural Gas                      | LPG/Propane Gas | First Stage                                     | Second Stage | Third Stage | Fourth Stage |
| Standard (S)                            | 2001 - 4500    | 3.4                              | 9.6             | 84,000                                          | 169,000      | 209,000     | 249,000      |
| Medium (M)                              | 2001 - 4500    | 3.4                              | 9.6             | 117,000                                         | 234,000      | 289,000     | 345,000      |
| High (H)                                | 2001 - 4500    | 3.4                              | 9.6             | 156,000                                         | 312,000      | 386,000     | 460,000      |

<sup>1</sup> Four-Stage Gas Heating is field configured.

## RATINGS

NOTE – For Temperatures and Capacities not shown in tables, see bulletin – Cooling Unit Rating Table Correction Factor Data in Miscellaneous Engineering Data section.

### 20 TON HIGH EFFICIENCY LGH242H4V (1 COMPRESSOR OPERATING) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |                               |      |      |                 |                   |                               |      |      |                 |                   |                               |      |      |                 |                   |                               |      |      |
|-------------------------------|------------------|-----------------------------------------------|-------------------|-------------------------------|------|------|-----------------|-------------------|-------------------------------|------|------|-----------------|-------------------|-------------------------------|------|------|-----------------|-------------------|-------------------------------|------|------|
|                               |                  | 65°F                                          |                   |                               |      |      | 75°F            |                   |                               |      |      | 85°F            |                   |                               |      |      | 95°F            |                   |                               |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      |
|                               |                  |                                               |                   | Dry Bulb                      |      |      |                 |                   | Dry Bulb                      |      |      |                 |                   | Dry Bulb                      |      |      |                 |                   | Dry Bulb                      |      |      |
|                               |                  |                                               |                   |                               |      |      |                 |                   |                               |      |      |                 |                   |                               |      |      |                 |                   |                               |      |      |
|                               | cfm              | kBtuh                                         | kW                | 75°F                          | 80°F | 85°F | kBtuh           | kW                | 75°F                          | 80°F | 85°F | kBtuh           | kW                | 75°F                          | 80°F | 85°F | kBtuh           | kW                | 75°F                          | 80°F | 85°F |
| 63°F                          | 1600             | 47.2                                          | 2.44              | 0.62                          | 0.7  | 0.79 | 45.3            | 2.83              | 0.62                          | 0.7  | 0.79 | 43.1            | 3.25              | 0.61                          | 0.7  | 0.79 | 40.9            | 3.72              | 0.6                           | 0.7  | 0.8  |
|                               | 2000             | 51.5                                          | 2.44              | 0.63                          | 0.73 | 0.82 | 49.6            | 2.83              | 0.63                          | 0.73 | 0.83 | 47.6            | 3.26              | 0.63                          | 0.73 | 0.83 | 45              | 3.73              | 0.63                          | 0.74 | 0.85 |
|                               | 2400             | 55.2                                          | 2.44              | 0.65                          | 0.76 | 0.86 | 53.2            | 2.84              | 0.65                          | 0.76 | 0.87 | 50.9            | 3.27              | 0.65                          | 0.77 | 0.88 | 48.2            | 3.74              | 0.65                          | 0.78 | 0.89 |
| 67°F                          | 1600             | 49.3                                          | 2.44              | 0.51                          | 0.59 | 0.67 | 47.6            | 2.83              | 0.5                           | 0.58 | 0.67 | 45.5            | 3.25              | 0.5                           | 0.58 | 0.67 | 43.3            | 3.73              | 0.49                          | 0.58 | 0.67 |
|                               | 2000             | 54.3                                          | 2.44              | 0.52                          | 0.6  | 0.7  | 52.4            | 2.83              | 0.52                          | 0.6  | 0.7  | 50.1            | 3.27              | 0.51                          | 0.6  | 0.7  | 47.6            | 3.74              | 0.51                          | 0.61 | 0.71 |
|                               | 2400             | 58.1                                          | 2.44              | 0.53                          | 0.63 | 0.73 | 56.1            | 2.84              | 0.53                          | 0.63 | 0.73 | 53.8            | 3.28              | 0.52                          | 0.63 | 0.73 | 51              | 3.75              | 0.52                          | 0.63 | 0.74 |
| 71°F                          | 1600             | 51.7                                          | 2.44              | 0.41                          | 0.49 | 0.57 | 49.9            | 2.83              | 0.4                           | 0.49 | 0.56 | 47.9            | 3.26              | 0.39                          | 0.48 | 0.56 | 45.5            | 3.74              | 0.38                          | 0.47 | 0.56 |
|                               | 2000             | 56.8                                          | 2.44              | 0.41                          | 0.5  | 0.58 | 54.9            | 2.84              | 0.41                          | 0.5  | 0.58 | 52.6            | 3.27              | 0.4                           | 0.5  | 0.58 | 50              | 3.75              | 0.39                          | 0.49 | 0.58 |
|                               | 2400             | 60.9                                          | 2.43              | 0.42                          | 0.52 | 0.6  | 58.8            | 2.84              | 0.41                          | 0.51 | 0.6  | 56.4            | 3.28              | 0.4                           | 0.51 | 0.6  | 53.5            | 3.75              | 0.4                           | 0.51 | 0.61 |

### 20 TON HIGH EFFICIENCY LGH242H4V (2 COMPRESSORS OPERATING) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |      |
|-------------------------------|------------------|-----------------------------------------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|------|
|                               |                  | 65°F                                          |                   |                               |      |       | 75°F            |                   |                               |      |       | 85°F            |                   |                               |      |       | 95°F            |                   |                               |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      |
|                               |                  |                                               |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |      |
|                               |                  |                                               |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F |
| cfm                           | kBtuh            | kW                                            | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F |      |
| 63°F                          | 3200             | 106.4                                         | 4.89              | 0.63                          | 0.71 | 0.78  | 102.2           | 5.67              | 0.63                          | 0.71 | 0.78  | 97.6            | 6.52              | 0.62                          | 0.71 | 0.79  | 92.3            | 7.46              | 0.61                          | 0.71 | 0.8  |
|                               | 4000             | 114.4                                         | 4.89              | 0.64                          | 0.73 | 0.82  | 109.9           | 5.68              | 0.64                          | 0.73 | 0.82  | 105             | 6.54              | 0.63                          | 0.74 | 0.83  | 99.3            | 7.48              | 0.63                          | 0.74 | 0.84 |
|                               | 4800             | 120.9                                         | 4.89              | 0.66                          | 0.76 | 0.85  | 116.2           | 5.69              | 0.65                          | 0.76 | 0.86  | 110.7           | 6.55              | 0.65                          | 0.77 | 0.86  | 105             | 7.5               | 0.66                          | 0.78 | 0.88 |
| 67°F                          | 3200             | 113.1                                         | 4.89              | 0.52                          | 0.6  | 0.67  | 108.6           | 5.68              | 0.51                          | 0.59 | 0.67  | 104             | 6.54              | 0.5                           | 0.59 | 0.67  | 98.7            | 7.48              | 0.5                           | 0.58 | 0.67 |
|                               | 4000             | 121.9                                         | 4.89              | 0.52                          | 0.61 | 0.7   | 117.2           | 5.69              | 0.52                          | 0.61 | 0.7   | 112             | 6.56              | 0.52                          | 0.61 | 0.7   | 106.1           | 7.5               | 0.51                          | 0.61 | 0.71 |
|                               | 4800             | 128.6                                         | 4.89              | 0.53                          | 0.63 | 0.73  | 123.6           | 5.69              | 0.53                          | 0.63 | 0.73  | 117.8           | 6.57              | 0.53                          | 0.64 | 0.74  | 111.8           | 7.52              | 0.53                          | 0.63 | 0.74 |
| 71°F                          | 3200             | 119.9                                         | 4.89              | 0.42                          | 0.5  | 0.57  | 115.4           | 5.69              | 0.41                          | 0.49 | 0.57  | 110.6           | 6.56              | 0.4                           | 0.49 | 0.56  | 105.1           | 7.5               | 0.39                          | 0.48 | 0.56 |
|                               | 4000             | 129.2                                         | 4.88              | 0.42                          | 0.5  | 0.58  | 124.4           | 5.69              | 0.41                          | 0.5  | 0.59  | 119             | 6.57              | 0.4                           | 0.5  | 0.59  | 113             | 7.53              | 0.4                           | 0.5  | 0.59 |
|                               | 4800             | 136.4                                         | 4.88              | 0.42                          | 0.51 | 0.61  | 131.4           | 5.7               | 0.41                          | 0.51 | 0.61  | 125.4           | 6.58              | 0.41                          | 0.51 | 0.61  | 119             | 7.54              | 0.4                           | 0.51 | 0.62 |

### 20 TON HIGH EFFICIENCY LGH242H4V (3 COMPRESSORS OPERATING) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |      |
|-------------------------------|------------------|-----------------------------------------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|------|
|                               |                  | 65°F                                          |                   |                               |      |       | 75°F            |                   |                               |      |       | 85°F            |                   |                               |      |       | 95°F            |                   |                               |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      |
|                               |                  |                                               |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |      |
|                               |                  |                                               |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F |
| cfm                           | kBtuh            | kW                                            | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F |      |
| 63°F                          | 4800             | 190.6                                         | 7.35              | 0.69                          | 0.82 | 0.9   | 182.8           | 8.56              | 0.7                           | 0.83 | 0.91  | 173.9           | 9.86              | 0.7                           | 0.84 | 0.91  | 164.5           | 11.27             | 0.71                          | 0.86 | 0.92 |
|                               | 6000             | 201.5                                         | 7.35              | 0.73                          | 0.87 | 0.93  | 193.6           | 8.57              | 0.74                          | 0.87 | 0.94  | 184.9           | 9.88              | 0.75                          | 0.88 | 0.95  | 175.5           | 11.31             | 0.77                          | 0.89 | 0.96 |
|                               | 7200             | 211.3                                         | 7.34              | 0.78                          | 0.9  | 0.96  | 203.1           | 8.58              | 0.78                          | 0.9  | 0.97  | 193.9           | 9.89              | 0.8                           | 0.91 | 0.98  | 183.9           | 11.33             | 0.82                          | 0.92 | 0.99 |
| 67°F                          | 4800             | 202.1                                         | 7.35              | 0.56                          | 0.67 | 0.79  | 194             | 8.57              | 0.56                          | 0.67 | 0.79  | 184.6           | 9.88              | 0.56                          | 0.68 | 0.81  | 174.7           | 11.3              | 0.56                          | 0.69 | 0.82 |
|                               | 6000             | 212.7                                         | 7.34              | 0.58                          | 0.71 | 0.85  | 203.9           | 8.58              | 0.58                          | 0.72 | 0.85  | 194.2           | 9.9               | 0.59                          | 0.73 | 0.86  | 183.2           | 11.32             | 0.58                          | 0.74 | 0.87 |
|                               | 7200             | 220.2                                         | 7.34              | 0.61                          | 0.76 | 0.88  | 211.2           | 8.58              | 0.61                          | 0.76 | 0.88  | 201.1           | 9.91              | 0.61                          | 0.78 | 0.89  | 189.8           | 11.34             | 0.62                          | 0.79 | 0.9  |
| 71°F                          | 4800             | 213.3                                         | 7.34              | 0.43                          | 0.54 | 0.65  | 205.1           | 8.58              | 0.43                          | 0.54 | 0.66  | 195.5           | 9.9               | 0.42                          | 0.54 | 0.66  | 185.2           | 11.33             | 0.41                          | 0.55 | 0.67 |
|                               | 6000             | 224.4                                         | 4.92              | 0.44                          | 0.55 | 0.66  | 215.7           | 8.58              | 0.43                          | 0.57 | 0.7   | 205.5           | 9.91              | 0.43                          | 0.57 | 0.7   | 194.4           | 11.35             | 0.43                          | 0.58 | 0.72 |
|                               | 7200             | 232.4                                         | 4.91              | 0.45                          | 0.56 | 0.68  | 223.4           | 8.58              | 0.45                          | 0.6  | 0.74  | 212.7           | 9.92              | 0.45                          | 0.6  | 0.75  | 201             | 11.37             | 0.44                          | 0.61 | 0.77 |

### 20 TON HIGH EFFICIENCY LGH242H4V (ALL COMPRESSORS OPERATING) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |      |
|-------------------------------|------------------|-----------------------------------------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|------|
|                               |                  | 85°F                                          |                   |                               |      |       | 95°F            |                   |                               |      |       | 105°F           |                   |                               |      |       | 115°F           |                   |                               |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      |
|                               |                  |                                               |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |      |
|                               |                  |                                               |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F |
| cfm                           | kBtuh            | kW                                            | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F |      |
| 63°F                          | 6400             | 244                                           | 13.17             | 0.71                          | 0.83 | 0.94  | 231.5           | 15.08             | 0.71                          | 0.84 | 0.96  | 217.6           | 17.18             | 0.73                          | 0.86 | 0.98  | 202.5           | 19.57             | 0.73                          | 0.88 | 1    |
|                               | 8000             | 258                                           | 13.19             | 0.75                          | 0.89 | 1     | 244.4           | 15.1              | 0.76                          | 0.91 | 1     | 229.6           | 17.21             | 0.78                          | 0.93 | 1     | 213.7           | 19.61             | 0.8                           | 0.96 | 1    |
|                               | 9600             | 268.4                                         | 13.21             | 0.8                           | 0.95 | 1     | 254.2           | 15.13             | 0.82                          | 0.97 | 1     | 238.9           | 17.25             | 0.84                          | 0.99 | 1     | 222.6           | 19.65             | 0.86                          | 1    | 1    |
| 67°F                          | 6400             | 255.5                                         | 13.19             | 0.55                          | 0.68 | 0.8   | 241.4           | 15.09             | 0.56                          | 0.69 | 0.81  | 226.8           | 17.2              | 0.55                          | 0.7  | 0.83  | 210.4           | 19.59             | 0.56                          | 0.71 | 0.85 |
|                               | 8000             | 267.3                                         | 13.21             | 0.58                          | 0.72 | 0.86  | 252.6           | 15.12             | 0.58                          | 0.74 | 0.88  | 236.9           | 17.24             | 0.59                          | 0.76 | 0.9   | 220.3           | 19.63             | 0.59                          | 0.77 | 0.92 |
|                               | 9600             | 276.4                                         | 13.22             | 0.61                          | 0.78 | 0.92  | 261.4           | 15.15             | 0.62                          | 0.79 | 0.94  | 245.5           | 17.27             | 0.63                          | 0.81 | 0.97  | 228.4           | 19.67             | 0.64                          | 0.83 | 0.99 |
| 71°F                          | 6400             | 271.1                                         | 13.21             | 0.42                          | 0.55 | 0.66  | 256.7           | 15.13             | 0.41                          | 0.54 | 0.67  | 240.9           | 17.26             | 0.41                          | 0.55 | 0.68  | 224.1           | 19.65             | 0.4                           | 0.55 | 0.69 |
|                               | 8000             | 283.4                                         | 13.23             | 0.42                          | 0.57 | 0.7   | 267.9           | 15.17             | 0.42                          | 0.58 | 0.72  | 251.4           | 17.29             | 0.42                          | 0.58 | 0.74  | 233             | 19.7              | 0.41                          | 0.59 | 0.76 |
|                               | 9600             | 291.8                                         | 13.24             | 0.43                          | 0.6  | 0.76  | 275.4           | 15.18             | 0.43                          | 0.61 | 0.78  | 258.1           | 17.32             | 0.43                          | 0.62 | 0.8   | 239.1           | 19.72             | 0.43                          | 0.63 | 0.82 |

## RATINGS

NOTE – For Temperatures and Capacities not shown in tables, see bulletin – Cooling Unit Rating Table Correction Factor Data in Miscellaneous Engineering Data section.

### 25 TON HIGH EFFICIENCY LGH300H4M (1ST STAGE) - MSAV® MULTI-STAGE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |      |
|-------------------------------|------------------|-----------------------------------------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|------|
|                               |                  | 65°F                                          |                   |                               |      |       | 75°F            |                   |                               |      |       | 85°F            |                   |                               |      |       | 95°F            |                   |                               |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      |
|                               |                  |                                               |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |      |
|                               |                  |                                               |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F |
| cfm                           | kBtuh            | kW                                            | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F |      |
| 63°F                          | 4000             | 157.6                                         | 7.58              | 0.71                          | 0.82 | 0.93  | 152             | 8.45              | 0.72                          | 0.83 | 0.94  | 146             | 9.42              | 0.73                          | 0.85 | 0.96  | 139.3           | 10.52             | 0.74                          | 0.86 | 0.98 |
|                               | 5000             | 166.4                                         | 7.72              | 0.74                          | 0.87 | 0.99  | 160.3           | 8.58              | 0.75                          | 0.89 | 1     | 153.5           | 9.55              | 0.77                          | 0.9  | 1     | 146.4           | 10.64             | 0.78                          | 0.92 | 1    |
|                               | 6000             | 172.9                                         | 7.81              | 0.78                          | 0.92 | 1     | 166.3           | 8.68              | 0.79                          | 0.94 | 1     | 159.4           | 9.64              | 0.8                           | 0.96 | 1     | 151.8           | 10.73             | 0.82                          | 0.98 | 1    |
| 67°F                          | 4000             | 165.1                                         | 7.7               | 0.57                          | 0.68 | 0.79  | 159.3           | 8.56              | 0.58                          | 0.69 | 0.8   | 153             | 9.53              | 0.58                          | 0.7  | 0.82  | 146.2           | 10.64             | 0.59                          | 0.71 | 0.83 |
|                               | 5000             | 174.5                                         | 7.84              | 0.59                          | 0.72 | 0.84  | 168.2           | 8.71              | 0.6                           | 0.73 | 0.86  | 161.4           | 9.68              | 0.61                          | 0.74 | 0.87  | 153.9           | 10.77             | 0.62                          | 0.76 | 0.89 |
|                               | 6000             | 181.4                                         | 7.95              | 0.61                          | 0.76 | 0.89  | 174.6           | 8.81              | 0.62                          | 0.77 | 0.91  | 167.4           | 9.78              | 0.63                          | 0.78 | 0.93  | 159.5           | 10.87             | 0.64                          | 0.8  | 0.95 |
| 71°F                          | 4000             | 171.7                                         | 7.8               | 0.45                          | 0.56 | 0.66  | 165.8           | 8.67              | 0.45                          | 0.56 | 0.67  | 159.5           | 9.65              | 0.45                          | 0.57 | 0.68  | 152.4           | 10.75             | 0.45                          | 0.57 | 0.69 |
|                               | 5000             | 181.8                                         | 7.96              | 0.45                          | 0.58 | 0.7   | 175.5           | 8.83              | 0.45                          | 0.59 | 0.71  | 168.3           | 9.8               | 0.46                          | 0.59 | 0.72  | 160.6           | 10.89             | 0.46                          | 0.6  | 0.74 |
|                               | 6000             | 189.2                                         | 8.08              | 0.47                          | 0.6  | 0.74  | 182.3           | 8.95              | 0.46                          | 0.61 | 0.75  | 174.9           | 9.91              | 0.47                          | 0.62 | 0.76  | 166.7           | 11.01             | 0.46                          | 0.63 | 0.78 |

### 25 TON HIGH EFFICIENCY LGH300H4M (2ND STAGE) - MSAV® MULTI-STAGE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |      |  |
|-------------------------------|------------------|-----------------------------------------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|------|--|
|                               |                  | 85°F                                          |                   |                               |      |       |                 | 95°F              |                               |      |       |                 | 105°F             |                               |      |       |                 | 115°F             |                               |      |      |  |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      |  |
|                               |                  |                                               |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |      |  |
|                               |                  |                                               |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F |  |
| cfm                           | kBtuh            | kW                                            | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F |      |  |
| 63°F                          | 8000             | 308.3                                         | 19.12             | 0.72                          | 0.85 | 0.94  | 294.8           | 21.33             | 0.74                          | 0.86 | 0.95  | 279.7           | 23.81             | 0.75                          | 0.88 | 0.97  | 263.4           | 26.66             | 0.77                          | 0.89 | 1    |  |
|                               | 10000            | 324.8                                         | 19.41             | 0.77                          | 0.9  | 1     | 309.6           | 21.59             | 0.79                          | 0.91 | 1     | 293.4           | 24.07             | 0.8                           | 0.93 | 1     | 276             | 26.92             | 0.83                          | 0.95 | 1    |  |
|                               | 12000            | 336.6                                         | 19.63             | 0.82                          | 0.94 | 1     | 320.9           | 21.8              | 0.83                          | 0.96 | 1     | 303.8           | 24.28             | 0.85                          | 0.98 | 1     | 285.5           | 27.12             | 0.87                          | 1    | 1    |  |
| 67°F                          | 8000             | 323.4                                         | 19.39             | 0.57                          | 0.7  | 0.82  | 307.9           | 21.55             | 0.58                          | 0.71 | 0.83  | 291.3           | 24.03             | 0.58                          | 0.72 | 0.85  | 272.6           | 26.84             | 0.59                          | 0.74 | 0.87 |  |
|                               | 10000            | 336.5                                         | 19.62             | 0.6                           | 0.75 | 0.87  | 319.9           | 21.78             | 0.6                           | 0.76 | 0.89  | 302.3           | 24.25             | 0.62                          | 0.78 | 0.91  | 283.2           | 27.06             | 0.64                          | 0.8  | 0.93 |  |
|                               | 12000            | 346.3                                         | 19.79             | 0.63                          | 0.8  | 0.92  | 329.4           | 21.96             | 0.65                          | 0.81 | 0.94  | 311.1           | 24.42             | 0.66                          | 0.83 | 0.96  | 291.7           | 27.25             | 0.67                          | 0.85 | 0.99 |  |
| 71°F                          | 8000             | 341.9                                         | 19.72             | 0.43                          | 0.55 | 0.67  | 325.4           | 21.88             | 0.43                          | 0.56 | 0.68  | 307.1           | 24.35             | 0.43                          | 0.58 | 0.7   | 288.4           | 27.17             | 0.43                          | 0.58 | 0.73 |  |
|                               | 10000            | 355                                           | 19.95             | 0.44                          | 0.58 | 0.72  | 337.6           | 22.12             | 0.44                          | 0.59 | 0.75  | 318.5           | 24.57             | 0.44                          | 0.61 | 0.76  | 298.1           | 27.38             | 0.45                          | 0.62 | 0.79 |  |
|                               | 12000            | 364.5                                         | 20.13             | 0.44                          | 0.61 | 0.78  | 345.9           | 22.28             | 0.45                          | 0.63 | 0.8   | 326.3           | 24.74             | 0.46                          | 0.65 | 0.82  | 304.7           | 27.53             | 0.47                          | 0.67 | 0.84 |  |

### 25 TON HIGH EFFICIENCY LGH300H4V (3 COMPRESSORS OPERATING) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |                               |      |        |                 |                   |                               |      |        |                 |                   |                               |      |        |                 |                   |                               |      |      |  |
|-------------------------------|------------------|-----------------------------------------------|-------------------|-------------------------------|------|--------|-----------------|-------------------|-------------------------------|------|--------|-----------------|-------------------|-------------------------------|------|--------|-----------------|-------------------|-------------------------------|------|------|--|
|                               |                  | 65°F                                          |                   |                               |      |        |                 | 75°F              |                               |      |        |                 | 85°F              |                               |      |        |                 | 95°F              |                               |      |      |  |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |        | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |        | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |        | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      |  |
|                               |                  |                                               |                   | Dry Bulb                      |      |        |                 |                   | Dry Bulb                      |      |        |                 |                   | Dry Bulb                      |      |        |                 |                   | Dry Bulb                      |      |      |  |
|                               |                  |                                               |                   | 75°F                          | 80°F | 85°F   |                 |                   | 75°F                          | 80°F | 85°F   |                 |                   | 75°F                          | 80°F | 85°F   |                 |                   | 75°F                          | 80°F | 85°F |  |
| cfm                           | kBtu/h           | kW                                            | 75°F              | 80°F                          | 85°F | kBtu/h | kW              | 75°F              | 80°F                          | 85°F | kBtu/h | kW              | 75°F              | 80°F                          | 85°F | kBtu/h | kW              | 75°F              | 80°F                          | 85°F |      |  |
| 63°F                          | 6000             | 247.6                                         | 11.46             | 0.69                          | 0.81 | 0.9    | 236.6           | 12.72             | 0.7                           | 0.82 | 0.9    | 224.8           | 14.12             | 0.7                           | 0.83 | 0.91   | 212.3           | 15.72             | 0.71                          | 0.84 | 0.92 |  |
|                               | 7500             | 261.7                                         | 11.61             | 0.72                          | 0.86 | 0.93   | 250.1           | 12.85             | 0.73                          | 0.87 | 0.93   | 237.6           | 14.24             | 0.74                          | 0.88 | 0.94   | 225.2           | 15.86             | 0.76                          | 0.89 | 0.95 |  |
|                               | 9000             | 273                                           | 11.73             | 0.76                          | 0.89 | 0.95   | 261.6           | 12.98             | 0.77                          | 0.9  | 0.96   | 249.3           | 14.38             | 0.79                          | 0.9  | 0.97   | 236.2           | 16                | 0.8                           | 0.91 | 0.98 |  |
| 67°F                          | 6000             | 262.6                                         | 11.63             | 0.56                          | 0.66 | 0.77   | 251.2           | 12.87             | 0.56                          | 0.67 | 0.78   | 238.9           | 14.27             | 0.56                          | 0.68 | 0.8    | 225.8           | 15.87             | 0.56                          | 0.69 | 0.81 |  |
|                               | 7500             | 276.9                                         | 11.78             | 0.58                          | 0.7  | 0.83   | 264.6           | 13.01             | 0.58                          | 0.71 | 0.84   | 251.5           | 14.41             | 0.58                          | 0.72 | 0.86   | 237.2           | 15.99             | 0.59                          | 0.73 | 0.87 |  |
|                               | 9000             | 287.4                                         | 11.89             | 0.6                           | 0.74 | 0.87   | 274.3           | 13.12             | 0.6                           | 0.75 | 0.88   | 260.3           | 14.52             | 0.6                           | 0.77 | 0.89   | 245.2           | 16.11             | 0.61                          | 0.79 | 0.89 |  |
| 71°F                          | 6000             | 277                                           | 11.78             | 0.43                          | 0.54 | 0.64   | 265.4           | 13.03             | 0.43                          | 0.54 | 0.65   | 252.4           | 14.43             | 0.42                          | 0.55 | 0.65   | 239.1           | 16.03             | 0.42                          | 0.55 | 0.66 |  |
|                               | 7500             | 291.9                                         | 11.95             | 0.44                          | 0.57 | 0.68   | 279.3           | 13.19             | 0.44                          | 0.57 | 0.69   | 266             | 14.59             | 0.43                          | 0.57 | 0.7    | 251.2           | 16.18             | 0.43                          | 0.57 | 0.71 |  |
|                               | 9000             | 303.1                                         | 12.08             | 0.45                          | 0.59 | 0.72   | 289.6           | 13.32             | 0.45                          | 0.6  | 0.73   | 275.3           | 14.71             | 0.44                          | 0.6  | 0.74   | 259.9           | 16.3              | 0.44                          | 0.6  | 0.76 |  |

### 25 TON HIGH EFFICIENCY LGH300H4V (ALL COMPRESSORS OPERATING) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |       |      |  |  |  |  |
|-------------------------------|------------------|-----------------------------------------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|-------|------|--|--|--|--|
|                               |                  | 85°F                                          |                   |                               |      |       |                 | 95°F              |                               |      |       |                 |                   | 105°F                         |      |       |                 |                   |                               | 115°F |      |  |  |  |  |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |       |      |  |  |  |  |
|                               |                  |                                               |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |       |      |  |  |  |  |
|                               |                  |                                               |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F  | 85°F |  |  |  |  |
| cfm                           | kBtuh            | kW                                            | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F  |      |  |  |  |  |
| 63°F                          | 8000             | 308.3                                         | 19.12             | 0.72                          | 0.85 | 0.94  | 294.8           | 21.33             | 0.74                          | 0.86 | 0.95  | 279.7           | 23.81             | 0.75                          | 0.88 | 0.97  | 263.4           | 26.66             | 0.77                          | 0.89  | 1    |  |  |  |  |
|                               | 10000            | 324.8                                         | 19.41             | 0.77                          | 0.9  | 1     | 309.6           | 21.59             | 0.79                          | 0.91 | 1     | 293.4           | 24.07             | 0.8                           | 0.93 | 1     | 276             | 26.92             | 0.83                          | 0.95  | 1    |  |  |  |  |
|                               | 12000            | 336.6                                         | 19.63             | 0.82                          | 0.94 | 1     | 320.9           | 21.8              | 0.83                          | 0.96 | 1     | 303.8           | 24.28             | 0.85                          | 0.98 | 1     | 285.5           | 27.12             | 0.87                          | 1     | 1    |  |  |  |  |
| 67°F                          | 8000             | 323.4                                         | 19.39             | 0.57                          | 0.7  | 0.82  | 307.9           | 21.55             | 0.58                          | 0.71 | 0.83  | 291.3           | 24.03             | 0.58                          | 0.72 | 0.85  | 272.6           | 26.84             | 0.59                          | 0.74  | 0.87 |  |  |  |  |
|                               | 10000            | 336.5                                         | 19.62             | 0.6                           | 0.75 | 0.87  | 319.9           | 21.78             | 0.6                           | 0.76 | 0.89  | 302.3           | 24.25             | 0.62                          | 0.78 | 0.91  | 283.2           | 27.06             | 0.64                          | 0.8   | 0.93 |  |  |  |  |
|                               | 12000            | 346.3                                         | 19.79             | 0.63                          | 0.8  | 0.92  | 329.4           | 21.96             | 0.65                          | 0.81 | 0.94  | 311.1           | 24.42             | 0.66                          | 0.83 | 0.96  | 291.7           | 27.25             | 0.67                          | 0.85  | 0.99 |  |  |  |  |
| 71°F                          | 8000             | 341.9                                         | 19.72             | 0.43                          | 0.55 | 0.67  | 325.4           | 21.88             | 0.43                          | 0.56 | 0.68  | 307.1           | 24.35             | 0.43                          | 0.58 | 0.7   | 288.4           | 27.17             | 0.43                          | 0.58  | 0.73 |  |  |  |  |
|                               | 10000            | 355                                           | 19.95             | 0.44                          | 0.58 | 0.72  | 337.6           | 22.12             | 0.44                          | 0.59 | 0.75  | 318.5           | 24.57             | 0.44                          | 0.61 | 0.76  | 298.1           | 27.38             | 0.45                          | 0.62  | 0.79 |  |  |  |  |
|                               | 12000            | 364.5                                         | 20.13             | 0.44                          | 0.61 | 0.78  | 345.9           | 22.28             | 0.45                          | 0.63 | 0.8   | 326.3           | 24.74             | 0.46                          | 0.65 | 0.82  | 304.7           | 27.53             | 0.47                          | 0.67  | 0.84 |  |  |  |  |

## RATINGS

NOTE – For Temperatures and Capacities not shown in tables, see bulletin – Cooling Unit Rating Table Correction Factor Data in Miscellaneous Engineering Data section.

### 25 TON HIGH EFFICIENCY LGH300H4V (1 COMPRESSOR OPERATING) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |                               |      |      |                 |                   |                               |      |      |                 |                   |                               |      |      |                 |                   |                               |      |      |
|-------------------------------|------------------|-----------------------------------------------|-------------------|-------------------------------|------|------|-----------------|-------------------|-------------------------------|------|------|-----------------|-------------------|-------------------------------|------|------|-----------------|-------------------|-------------------------------|------|------|
|                               |                  | 65°F                                          |                   |                               |      |      | 75°F            |                   |                               |      |      | 85°F            |                   |                               |      |      | 95°F            |                   |                               |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      |
|                               |                  |                                               |                   | Dry Bulb                      |      |      |                 |                   | Dry Bulb                      |      |      |                 |                   | Dry Bulb                      |      |      |                 |                   | Dry Bulb                      |      |      |
|                               |                  |                                               |                   | 75°F                          | 80°F | 85°F |                 |                   | 75°F                          | 80°F | 85°F |                 |                   | 75°F                          | 80°F | 85°F |                 |                   | 75°F                          | 80°F | 85°F |
| 63°F                          | cfm              | kBtu/h                                        | kW                | 75°F                          | 80°F | 85°F | kBtu/h          | kW                | 75°F                          | 80°F | 85°F | kBtu/h          | kW                | 75°F                          | 80°F | 85°F | kBtu/h          | kW                | 75°F                          | 80°F | 85°F |
|                               | 2000             | 61.6                                          | 3.65              | 0.63                          | 0.7  | 0.78 | 58.9            | 4.07              | 0.63                          | 0.71 | 0.79 | 55.9            | 4.57              | 0.62                          | 0.7  | 0.79 | 52.7            | 5.13              | 0.61                          | 0.7  | 0.8  |
|                               | 2500             | 67.4                                          | 3.68              | 0.63                          | 0.72 | 0.81 | 64.5            | 4.1               | 0.63                          | 0.73 | 0.82 | 61.5            | 4.59              | 0.63                          | 0.73 | 0.83 | 58.2            | 5.15              | 0.63                          | 0.74 | 0.84 |
| 67°F                          | 3000             | 72.3                                          | 3.73              | 0.65                          | 0.75 | 0.84 | 69.2            | 4.15              | 0.65                          | 0.75 | 0.85 | 66              | 4.63              | 0.65                          | 0.76 | 0.87 | 62.4            | 5.19              | 0.66                          | 0.77 | 0.88 |
|                               | 2000             | 64.9                                          | 3.67              | 0.53                          | 0.6  | 0.67 | 61.6            | 4.09              | 0.52                          | 0.59 | 0.67 | 58.8            | 4.58              | 0.51                          | 0.59 | 0.67 | 55.8            | 5.15              | 0.5                           | 0.59 | 0.67 |
|                               | 2500             | 70.9                                          | 3.72              | 0.52                          | 0.6  | 0.69 | 68              | 4.14              | 0.52                          | 0.6  | 0.69 | 64.9            | 4.62              | 0.52                          | 0.61 | 0.7  | 61.5            | 5.18              | 0.51                          | 0.61 | 0.7  |
| 71°F                          | 3000             | 76.2                                          | 3.76              | 0.53                          | 0.62 | 0.72 | 73.1            | 4.17              | 0.53                          | 0.62 | 0.72 | 69.7            | 4.64              | 0.53                          | 0.63 | 0.73 | 66              | 5.2               | 0.53                          | 0.63 | 0.74 |
|                               | 2000             | 67.3                                          | 3.68              | 0.42                          | 0.5  | 0.56 | 64.6            | 4.11              | 0.41                          | 0.49 | 0.57 | 61.8            | 4.59              | 0.4                           | 0.49 | 0.57 | 58.7            | 5.16              | 0.39                          | 0.48 | 0.56 |
|                               | 2500             | 74.2                                          | 3.73              | 0.42                          | 0.51 | 0.58 | 71.2            | 4.15              | 0.41                          | 0.5  | 0.58 | 68              | 4.63              | 0.41                          | 0.5  | 0.59 | 64.6            | 5.19              | 0.4                           | 0.5  | 0.59 |
|                               | 3000             | 79.8                                          | 3.79              | 0.42                          | 0.51 | 0.6  | 76.6            | 4.2               | 0.42                          | 0.51 | 0.6  | 73              | 4.68              | 0.41                          | 0.51 | 0.61 | 69.3            | 5.23              | 0.41                          | 0.51 | 0.61 |

### 25 TON HIGH EFFICIENCY LGH300H4V (2 COMPRESSORS OPERATING) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |      |
|-------------------------------|------------------|-----------------------------------------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|------|
|                               |                  | 65°F                                          |                   |                               |      |       | 75°F            |                   |                               |      |       | 85°F            |                   |                               |      |       | 95°F            |                   |                               |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      |
|                               |                  |                                               |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |      |
|                               |                  |                                               |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F |
| cfm                           | kBtuh            | kW                                            | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F |      |
| 63°F                          | 4000             | 137.9                                         | 7.46              | 0.61                          | 0.68 | 0.76  | 131.9           | 8.29              | 0.62                          | 0.71 | 0.78  | 125.6           | 9.23              | 0.63                          | 0.71 | 0.79  | 118.8           | 10.31             | 0.62                          | 0.71 | 0.8  |
|                               | 5000             | 149.2                                         | 7.52              | 0.65                          | 0.73 | 0.81  | 142.4           | 8.37              | 0.63                          | 0.73 | 0.81  | 135.4           | 9.31              | 0.64                          | 0.74 | 0.83  | 128.1           | 10.4              | 0.63                          | 0.74 | 0.84 |
|                               | 6000             | 157.3                                         | 7.59              | 0.65                          | 0.75 | 0.84  | 150.7           | 8.44              | 0.66                          | 0.76 | 0.85  | 143.3           | 9.38              | 0.66                          | 0.77 | 0.86  | 135.4           | 10.44             | 0.66                          | 0.77 | 0.87 |
| 67°F                          | 4000             | 146.8                                         | 7.51              | 0.53                          | 0.6  | 0.67  | 140.8           | 8.35              | 0.52                          | 0.6  | 0.67  | 134             | 9.31              | 0.51                          | 0.59 | 0.68  | 126.9           | 10.37             | 0.51                          | 0.59 | 0.68 |
|                               | 5000             | 158.5                                         | 7.61              | 0.53                          | 0.61 | 0.69  | 151.9           | 8.44              | 0.53                          | 0.61 | 0.7   | 144.7           | 9.39              | 0.52                          | 0.61 | 0.7   | 136.9           | 10.46             | 0.51                          | 0.62 | 0.7  |
|                               | 6000             | 167.6                                         | 7.7               | 0.54                          | 0.62 | 0.72  | 160.5           | 8.53              | 0.53                          | 0.63 | 0.72  | 152.7           | 9.46              | 0.53                          | 0.64 | 0.74  | 144.4           | 10.53             | 0.53                          | 0.64 | 0.74 |
| 71°F                          | 4000             | 155.5                                         | 7.58              | 0.43                          | 0.5  | 0.57  | 149.2           | 8.42              | 0.42                          | 0.49 | 0.57  | 142.5           | 9.37              | 0.41                          | 0.49 | 0.57  | 135.4           | 10.45             | 0.4                           | 0.49 | 0.57 |
|                               | 5000             | 168.1                                         | 7.71              | 0.43                          | 0.51 | 0.59  | 161.2           | 8.52              | 0.42                          | 0.5  | 0.58  | 154.1           | 9.47              | 0.41                          | 0.5  | 0.59  | 146.1           | 10.55             | 0.41                          | 0.49 | 0.59 |
|                               | 6000             | 177.8                                         | 7.79              | 0.43                          | 0.52 | 0.6   | 170.5           | 8.62              | 0.42                          | 0.51 | 0.61  | 162.2           | 9.56              | 0.41                          | 0.52 | 0.61  | 153.7           | 10.63             | 0.4                           | 0.51 | 0.61 |

### 30 TON HIGH EFFICIENCY LGH360H4M (1ST STAGE) - MSAV® MULTI-STAGE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |       |       |       |      |      |      |
|-------------------------------|------------------|-----------------------------------------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-------|-------|------|------|------|
|                               |                  | 65°F                                          |                   |                               |      |       | 75°F            |                   |                               |      |       | 85°F            |                   |                               |      |       | 95°F  |       |      |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       |       |       |      |      |      |
|                               |                  |                                               |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |       |       |      |      |      |
|                               |                  |                                               |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F  |                 |                   | 75°F                          | 80°F | 85°F  |       |       |      |      |      |
| cfm                           | kBtuh            | kW                                            | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW    | 75°F  | 80°F | 85°F |      |
| 63°F                          | 4800             | 188.6                                         | 9.73              | 0.7                           | 0.81 | 0.92  | 181.6           | 10.79             | 0.7                           | 0.82 | 0.94  | 174             | 11.99             | 0.71                          | 0.83 | 0.95  | 165.9 | 13.35 | 0.72 | 0.85 | 0.97 |
|                               | 6000             | 198.4                                         | 9.9               | 0.73                          | 0.86 | 0.98  | 190.9           | 10.97             | 0.74                          | 0.88 | 1     | 182.6           | 12.16             | 0.75                          | 0.89 | 1     | 173.7 | 13.52 | 0.76 | 0.91 | 1    |
|                               | 7200             | 205.5                                         | 10.03             | 0.77                          | 0.91 | 1     | 197.7           | 11.09             | 0.78                          | 0.93 | 1     | 189.1           | 12.29             | 0.79                          | 0.95 | 1     | 180.1 | 13.64 | 0.81 | 0.97 | 1    |
| 67°F                          | 4800             | 197.2                                         | 9.88              | 0.56                          | 0.67 | 0.78  | 190             | 10.95             | 0.57                          | 0.68 | 0.79  | 182.2           | 12.15             | 0.57                          | 0.69 | 0.8   | 173.7 | 13.51 | 0.58 | 0.7  | 0.82 |
|                               | 6000             | 207.8                                         | 10.07             | 0.59                          | 0.71 | 0.83  | 200             | 11.13             | 0.59                          | 0.72 | 0.85  | 191.5           | 12.33             | 0.59                          | 0.73 | 0.86  | 182.5 | 13.7  | 0.6  | 0.74 | 0.88 |
|                               | 7200             | 215.4                                         | 10.21             | 0.61                          | 0.75 | 0.88  | 207.1           | 11.27             | 0.61                          | 0.76 | 0.9   | 198.2           | 12.47             | 0.62                          | 0.77 | 0.92  | 188.8 | 13.83 | 0.63 | 0.79 | 0.94 |
| 71°F                          | 4800             | 204.9                                         | 10.02             | 0.44                          | 0.55 | 0.65  | 197.7           | 11.09             | 0.44                          | 0.55 | 0.66  | 189.9           | 12.3              | 0.44                          | 0.56 | 0.67  | 181   | 13.66 | 0.43 | 0.56 | 0.68 |
|                               | 6000             | 216.1                                         | 10.22             | 0.45                          | 0.57 | 0.69  | 208.2           | 11.29             | 0.44                          | 0.58 | 0.7   | 199.7           | 12.5              | 0.45                          | 0.58 | 0.71  | 190.3 | 13.86 | 0.45 | 0.59 | 0.72 |
|                               | 7200             | 224.4                                         | 10.38             | 0.45                          | 0.6  | 0.73  | 215.7           | 11.44             | 0.45                          | 0.6  | 0.74  | 206.6           | 12.64             | 0.45                          | 0.61 | 0.75  | 197   | 14.02 | 0.45 | 0.62 | 0.77 |

### 30 TON HIGH EFFICIENCY LGH360H4M (2ND STAGE) - MSAV® MULTI-STAGE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |      |
|-------------------------------|------------------|-----------------------------------------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|------|
|                               |                  | 85°F                                          |                   |                               |      |       | 95°F            |                   |                               |      |       | 105°F           |                   |                               |      |       | 115°F           |                   |                               |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      |
|                               |                  |                                               |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |      |
|                               |                  |                                               |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |      |
| cfm                           | kBtuh            | kW                                            | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F |      |
| 63°F                          | 9600             | 366.9                                         | 24.6              | 0.71                          | 0.84 | 0.94  | 350             | 27.35             | 0.72                          | 0.85 | 0.95  | 332.2           | 30.52             | 0.74                          | 0.87 | 0.97  | 312.1           | 34.14             | 0.76                          | 0.89 | 0.99 |
|                               | 12000            | 385.3                                         | 24.99             | 0.76                          | 0.89 | 0.99  | 366.8           | 27.74             | 0.78                          | 0.91 | 1     | 347.1           | 30.89             | 0.79                          | 0.93 | 1     | 325.6           | 34.48             | 0.81                          | 0.95 | 1    |
|                               | 14400            | 398.1                                         | 25.26             | 0.81                          | 0.94 | 1     | 378.9           | 28.01             | 0.83                          | 0.96 | 1     | 358.6           | 31.15             | 0.84                          | 0.98 | 1     | 336.4           | 34.78             | 0.86                          | 1    | 1    |
| 67°F                          | 9600             | 384.1                                         | 24.96             | 0.56                          | 0.69 | 0.82  | 365.7           | 27.7              | 0.56                          | 0.7  | 0.83  | 345.3           | 30.82             | 0.58                          | 0.71 | 0.84  | 323.1           | 34.42             | 0.59                          | 0.74 | 0.86 |
|                               | 12000            | 398.9                                         | 25.26             | 0.59                          | 0.73 | 0.87  | 379             | 28                | 0.6                           | 0.75 | 0.88  | 357.3           | 31.12             | 0.6                           | 0.78 | 0.9   | 334.9           | 34.72             | 0.62                          | 0.79 | 0.93 |
|                               | 14400            | 409.7                                         | 25.5              | 0.63                          | 0.79 | 0.92  | 389.2           | 28.24             | 0.63                          | 0.81 | 0.94  | 367.3           | 31.36             | 0.65                          | 0.82 | 0.96  | 343.5           | 34.93             | 0.66                          | 0.84 | 0.98 |
| 71°F                          | 9600             | 404.4                                         | 25.39             | 0.42                          | 0.55 | 0.68  | 385.4           | 28.15             | 0.42                          | 0.55 | 0.68  | 363.8           | 31.26             | 0.43                          | 0.56 | 0.7   | 339.7           | 34.83             | 0.43                          | 0.57 | 0.71 |
|                               | 12000            | 419.5                                         | 25.72             | 0.44                          | 0.57 | 0.71  | 398.4           | 28.44             | 0.43                          | 0.58 | 0.73  | 375.1           | 31.53             | 0.43                          | 0.61 | 0.75  | 351.1           | 35.12             | 0.43                          | 0.61 | 0.78 |
|                               | 14400            | 428.8                                         | 25.92             | 0.44                          | 0.62 | 0.77  | 407.6           | 28.66             | 0.44                          | 0.62 | 0.79  | 384.2           | 31.77             | 0.45                          | 0.64 | 0.81  | 358.5           | 35.33             | 0.45                          | 0.66 | 0.83 |

## RATINGS

NOTE – For Temperatures and Capacities not shown in tables, see bulletin – Cooling Unit Rating Table Correction Factor Data in Miscellaneous Engineering Data section.

### 30 TON HIGH EFFICIENCY LGH360H4V (1 COMPRESSOR OPERATING) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |                               |       |      |                 |                   |                               |      |      |                 |                   |                               |      |      |                 |                   |                               |      |       |
|-------------------------------|------------------|-----------------------------------------------|-------------------|-------------------------------|-------|------|-----------------|-------------------|-------------------------------|------|------|-----------------|-------------------|-------------------------------|------|------|-----------------|-------------------|-------------------------------|------|-------|
|                               |                  | 65°F                                          |                   |                               |       |      | 75°F            |                   |                               |      |      | 85°F            |                   |                               |      |      | 95°F            |                   |                               |      |       |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) |       |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       |
|                               |                  |                                               |                   | Dry Bulb                      |       |      |                 |                   | Dry Bulb                      |      |      |                 |                   | Dry Bulb                      |      |      |                 |                   | Dry Bulb                      |      |       |
|                               |                  |                                               |                   | cfm                           | kBtuh | kW   |                 |                   | 75°F                          | 80°F | 85°F |                 |                   | kBtuh                         | kW   | 75°F |                 |                   | 80°F                          | 85°F | kBtuh |
| 63°F                          | 2360             | 72.8                                          | 4.44              | 0.63                          | 0.71  | 0.79 | 69.7            | 4.96              | 0.63                          | 0.71 | 0.79 | 66.3            | 5.54              | 0.63                          | 0.71 | 0.8  | 62.7            | 6.19              | 0.62                          | 0.71 | 0.8   |
|                               | 2950             | 78.9                                          | 4.53              | 0.64                          | 0.73  | 0.82 | 75.6            | 5.05              | 0.64                          | 0.73 | 0.83 | 72.2            | 5.63              | 0.64                          | 0.74 | 0.84 | 68.4            | 6.29              | 0.64                          | 0.75 | 0.85  |
|                               | 3540             | 84.1                                          | 4.6               | 0.66                          | 0.75  | 0.85 | 80.6            | 5.13              | 0.66                          | 0.76 | 0.86 | 76.9            | 5.7               | 0.66                          | 0.77 | 0.88 | 72.8            | 6.36              | 0.67                          | 0.78 | 0.89  |
| 67°F                          | 2360             | 76.1                                          | 4.49              | 0.53                          | 0.6   | 0.67 | 72.8            | 5                 | 0.52                          | 0.6  | 0.67 | 69.5            | 5.59              | 0.51                          | 0.6  | 0.68 | 66.1            | 6.25              | 0.5                           | 0.59 | 0.68  |
|                               | 2950             | 82.8                                          | 4.58              | 0.53                          | 0.61  | 0.7  | 79.5            | 5.1               | 0.52                          | 0.62 | 0.7  | 75.9            | 5.68              | 0.52                          | 0.62 | 0.71 | 72.1            | 6.35              | 0.52                          | 0.62 | 0.71  |
|                               | 3540             | 88.3                                          | 4.66              | 0.54                          | 0.63  | 0.72 | 84.8            | 5.19              | 0.54                          | 0.63 | 0.73 | 80.9            | 5.77              | 0.54                          | 0.64 | 0.74 | 76.7            | 6.43              | 0.53                          | 0.64 | 0.75  |
| 71°F                          | 2360             | 79.3                                          | 4.53              | 0.42                          | 0.5   | 0.57 | 76.2            | 5.05              | 0.41                          | 0.5  | 0.57 | 72.9            | 5.64              | 0.4                           | 0.49 | 0.57 | 69.2            | 6.29              | 0.39                          | 0.49 | 0.57  |
|                               | 2950             | 86.5                                          | 4.63              | 0.42                          | 0.51  | 0.59 | 83.2            | 5.16              | 0.41                          | 0.51 | 0.59 | 79.4            | 5.74              | 0.41                          | 0.51 | 0.59 | 75.4            | 6.4               | 0.4                           | 0.5  | 0.6   |
|                               | 3540             | 92.3                                          | 4.72              | 0.43                          | 0.52  | 0.61 | 88.6            | 5.25              | 0.42                          | 0.52 | 0.61 | 84.6            | 5.83              | 0.42                          | 0.52 | 0.62 | 80.4            | 6.49              | 0.41                          | 0.52 | 0.62  |

### 30 TON HIGH EFFICIENCY LGH360H4V (2 COMPRESSORS OPERATING) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |      |
|-------------------------------|------------------|-----------------------------------------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|-------|-----------------|-------------------|-------------------------------|------|------|
|                               |                  | 65°F                                          |                   |                               |      |       | 75°F            |                   |                               |      |       | 85°F            |                   |                               |      |       | 95°F            |                   |                               |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      |
|                               |                  |                                               |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |       |                 |                   | Dry Bulb                      |      |      |
|                               |                  |                                               |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |       |                 |                   |                               |      |      |
| cfm                           | kBtuh            | kW                                            | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F | kBtuh | kW              | 75°F              | 80°F                          | 85°F |      |
| 63°F                          | 4720             | 188.3                                         | 9.54              | 0.69                          | 0.8  | 0.92  | 180.7           | 10.59             | 0.69                          | 0.81 | 0.93  | 172.1           | 11.74             | 0.7                           | 0.83 | 0.95  | 162.3           | 13.04             | 0.71                          | 0.84 | 0.97 |
|                               | 5900             | 198.9                                         | 9.7               | 0.72                          | 0.86 | 0.98  | 190.5           | 10.74             | 0.73                          | 0.87 | 1     | 181.1           | 11.9              | 0.74                          | 0.89 | 1     | 170.8           | 13.19             | 0.75                          | 0.91 | 1    |
|                               | 7080             | 206.4                                         | 9.82              | 0.76                          | 0.91 | 1     | 197.8           | 10.86             | 0.77                          | 0.93 | 1     | 188             | 12.02             | 0.78                          | 0.95 | 1     | 177.2           | 13.31             | 0.8                           | 0.97 | 1    |
| 67°F                          | 4720             | 197.6                                         | 9.68              | 0.56                          | 0.67 | 0.77  | 189.7           | 10.73             | 0.56                          | 0.67 | 0.78  | 180.7           | 11.89             | 0.56                          | 0.68 | 0.8   | 171             | 13.2              | 0.56                          | 0.69 | 0.81 |
|                               | 5900             | 208.9                                         | 9.86              | 0.58                          | 0.7  | 0.83  | 200.3           | 10.91             | 0.58                          | 0.71 | 0.84  | 190.5           | 12.06             | 0.58                          | 0.72 | 0.86  | 180             | 13.36             | 0.59                          | 0.73 | 0.88 |
|                               | 7080             | 216.8                                         | 9.99              | 0.6                           | 0.74 | 0.88  | 207.9           | 11.03             | 0.6                           | 0.75 | 0.9   | 197.6           | 12.19             | 0.61                          | 0.76 | 0.92  | 186.6           | 13.48             | 0.61                          | 0.78 | 0.94 |
| 71°F                          | 4720             | 206                                           | 9.81              | 0.44                          | 0.54 | 0.65  | 198.1           | 10.87             | 0.43                          | 0.54 | 0.65  | 189             | 12.03             | 0.43                          | 0.54 | 0.66  | 178.8           | 13.33             | 0.42                          | 0.55 | 0.67 |
|                               | 5900             | 217.8                                         | 10.01             | 0.44                          | 0.57 | 0.68  | 209.2           | 11.05             | 0.44                          | 0.57 | 0.69  | 199.2           | 12.21             | 0.44                          | 0.57 | 0.7   | 188.4           | 13.51             | 0.44                          | 0.58 | 0.71 |
|                               | 7080             | 226.4                                         | 10.15             | 0.45                          | 0.59 | 0.72  | 217.4           | 11.2              | 0.45                          | 0.59 | 0.73  | 206.9           | 12.36             | 0.45                          | 0.6  | 0.74  | 195.6           | 13.66             | 0.45                          | 0.61 | 0.76 |

### 30 TON HIGH EFFICIENCY LGH360H4V (3 COMPRESSORS OPERATING) - VARIABLE AIR VOLUME

| Entering<br>Wet Bulb<br>Temperature | Total<br>Air<br>Volume | Outdoor Air Temperature Entering Outdoor Coil |                         |                                  |       |      |                       |                         |                                  |      |      |                       |                         |                                  |      |      |                       |                         |                                  |      |       |
|-------------------------------------|------------------------|-----------------------------------------------|-------------------------|----------------------------------|-------|------|-----------------------|-------------------------|----------------------------------|------|------|-----------------------|-------------------------|----------------------------------|------|------|-----------------------|-------------------------|----------------------------------|------|-------|
|                                     |                        | 65°F                                          |                         |                                  |       |      | 75°F                  |                         |                                  |      |      | 85°F                  |                         |                                  |      |      | 95°F                  |                         |                                  |      |       |
|                                     |                        | Total<br>Cool<br>Cap.                         | Comp.<br>Motor<br>Input | Sensible To Total<br>Ratio (S/T) |       |      | Total<br>Cool<br>Cap. | Comp.<br>Motor<br>Input | Sensible To Total<br>Ratio (S/T) |      |      | Total<br>Cool<br>Cap. | Comp.<br>Motor<br>Input | Sensible To Total<br>Ratio (S/T) |      |      | Total<br>Cool<br>Cap. | Comp.<br>Motor<br>Input | Sensible To Total<br>Ratio (S/T) |      |       |
|                                     |                        |                                               |                         | Dry Bulb                         |       |      |                       |                         | Dry Bulb                         |      |      |                       |                         | Dry Bulb                         |      |      |                       |                         | Dry Bulb                         |      |       |
|                                     |                        |                                               |                         | cfm                              | kBtuh | kW   |                       |                         | 75°F                             | 80°F | 85°F |                       |                         | kBtuh                            | kW   | 75°F |                       |                         | 80°F                             | 85°F | kBtuh |
| 63°F                                | 7080                   | 289.6                                         | 14.37                   | 0.7                              | 0.81  | 0.9  | 279.4                 | 15.96                   | 0.7                              | 0.82 | 0.91 | 266.5                 | 17.72                   | 0.71                             | 0.83 | 0.91 | 251.4                 | 19.67                   | 0.71                             | 0.84 | 0.92  |
|                                     | 8850                   | 304.2                                         | 14.6                    | 0.73                             | 0.86  | 0.93 | 293.5                 | 16.19                   | 0.74                             | 0.87 | 0.94 | 279.4                 | 17.94                   | 0.74                             | 0.88 | 0.95 | 264.5                 | 19.9                    | 0.76                             | 0.89 | 0.95  |
|                                     | 10620                  | 315.8                                         | 14.79                   | 0.77                             | 0.9   | 0.96 | 305.2                 | 16.39                   | 0.78                             | 0.9  | 0.97 | 291.4                 | 18.15                   | 0.79                             | 0.91 | 0.98 | 276                   | 20.12                   | 0.81                             | 0.92 | 0.99  |
| 67°F                                | 7080                   | 305.3                                         | 14.62                   | 0.56                             | 0.67  | 0.78 | 295                   | 16.22                   | 0.56                             | 0.67 | 0.79 | 281.3                 | 17.97                   | 0.56                             | 0.68 | 0.8  | 265.9                 | 19.93                   | 0.56                             | 0.69 | 0.82  |
|                                     | 8850                   | 320.2                                         | 14.87                   | 0.58                             | 0.71  | 0.84 | 309.1                 | 16.46                   | 0.59                             | 0.71 | 0.85 | 294.5                 | 18.21                   | 0.59                             | 0.72 | 0.86 | 278                   | 20.16                   | 0.59                             | 0.74 | 0.87  |
|                                     | 10620                  | 330.9                                         | 15.04                   | 0.6                              | 0.75  | 0.88 | 319.2                 | 16.63                   | 0.61                             | 0.76 | 0.89 | 303.9                 | 18.38                   | 0.61                             | 0.77 | 0.89 | 286.2                 | 20.31                   | 0.62                             | 0.79 | 0.9   |
| 71°F                                | 7080                   | 320.8                                         | 14.87                   | 0.44                             | 0.55  | 0.65 | 310                   | 16.47                   | 0.43                             | 0.54 | 0.66 | 296.1                 | 18.24                   | 0.43                             | 0.55 | 0.66 | 280.2                 | 20.21                   | 0.43                             | 0.55 | 0.67  |
|                                     | 8850                   | 336.1                                         | 15.13                   | 0.44                             | 0.57  | 0.69 | 324.8                 | 16.72                   | 0.44                             | 0.57 | 0.69 | 309.8                 | 18.49                   | 0.44                             | 0.57 | 0.71 | 292.6                 | 20.44                   | 0.43                             | 0.58 | 0.72  |
|                                     | 10620                  | 347.4                                         | 15.34                   | 0.44                             | 0.59  | 0.7  | 335.4                 | 16.92                   | 0.44                             | 0.6  | 0.74 | 319.6                 | 18.66                   | 0.43                             | 0.6  | 0.75 | 301.9                 | 20.61                   | 0.43                             | 0.61 | 0.77  |

### 30 TON HIGH EFFICIENCY LGH360H4V (ALL COMPRESSORS OPERATING) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |                               |       |      |                 |                   |                               |      |      |                 |                   |                               |      |      |                 |                   |                               |      |       |
|-------------------------------|------------------|-----------------------------------------------|-------------------|-------------------------------|-------|------|-----------------|-------------------|-------------------------------|------|------|-----------------|-------------------|-------------------------------|------|------|-----------------|-------------------|-------------------------------|------|-------|
|                               |                  | 85°F                                          |                   |                               |       |      | 95°F            |                   |                               |      |      | 105°F           |                   |                               |      |      | 115°F           |                   |                               |      |       |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) |       |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |       |
|                               |                  |                                               |                   | Dry Bulb                      |       |      |                 |                   | Dry Bulb                      |      |      |                 |                   | Dry Bulb                      |      |      |                 |                   | Dry Bulb                      |      |       |
|                               |                  |                                               |                   | cfm                           | kBtuh | kW   |                 |                   | 75°F                          | 80°F | 85°F |                 |                   | kBtuh                         | kW   | 75°F |                 |                   | 80°F                          | 85°F | kBtuh |
| 63°F                          | 9600             | 366.9                                         | 24.6              | 0.71                          | 0.84  | 0.94 | 350             | 27.35             | 0.72                          | 0.85 | 0.95 | 332.2           | 30.52             | 0.74                          | 0.87 | 0.97 | 312.1           | 34.14             | 0.76                          | 0.89 | 0.99  |
|                               | 12000            | 385.3                                         | 24.99             | 0.76                          | 0.89  | 0.99 | 366.8           | 27.74             | 0.78                          | 0.91 | 1    | 347.1           | 30.89             | 0.79                          | 0.93 | 1    | 325.6           | 34.48             | 0.81                          | 0.95 | 1     |
|                               | 14400            | 398.1                                         | 25.26             | 0.81                          | 0.94  | 1    | 378.9           | 28.01             | 0.83                          | 0.96 | 1    | 358.6           | 31.15             | 0.84                          | 0.98 | 1    | 336.4           | 34.78             | 0.86                          | 1    | 1     |
| 67°F                          | 9600             | 384.1                                         | 24.96             | 0.56                          | 0.69  | 0.82 | 365.7           | 27.7              | 0.56                          | 0.7  | 0.83 | 345.3           | 30.82             | 0.58                          | 0.71 | 0.84 | 323.1           | 34.42             | 0.59                          | 0.74 | 0.86  |
|                               | 12000            | 398.9                                         | 25.26             | 0.59                          | 0.73  | 0.87 | 379             | 28                | 0.6                           | 0.75 | 0.88 | 357.3           | 31.12             | 0.6                           | 0.78 | 0.9  | 334.9           | 34.72             | 0.62                          | 0.79 | 0.93  |
|                               | 14400            | 409.7                                         | 25.5              | 0.63                          | 0.79  | 0.92 | 389.2           | 28.24             | 0.63                          | 0.81 | 0.94 | 367.3           | 31.36             | 0.65                          | 0.82 | 0.96 | 343.5           | 34.93             | 0.66                          | 0.84 | 0.98  |
| 71°F                          | 9600             | 404.4                                         | 25.39             | 0.42                          | 0.55  | 0.68 | 385.4           | 28.15             | 0.42                          | 0.55 | 0.68 | 363.8           | 31.26             | 0.43                          | 0.56 | 0.7  | 339.7           | 34.83             | 0.43                          | 0.57 | 0.71  |
|                               | 12000            | 419.5                                         | 25.72             | 0.44                          | 0.57  | 0.71 | 398.4           | 28.44             | 0.43                          | 0.58 | 0.73 | 375.1           | 31.53             | 0.43                          | 0.61 | 0.75 | 351.1           | 35.12             | 0.43                          | 0.61 | 0.78  |
|                               | 14400            | 428.8                                         | 25.92             | 0.44                          | 0.62  | 0.77 | 407.6           | 28.66             | 0.44                          | 0.62 | 0.79 | 384.2           | 31.77             | 0.45                          | 0.64 | 0.81 | 358.5           | 35.33             | 0.45                          | 0.66 | 0.83  |

# HUMIDITROL® DEHUMIDIFICATION SYSTEM RATINGS

## 25 TON HIGH EFFICIENCY LGH300H4M WITH HUMIDITROL® OPERATING (1ST STAGE)

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |                               |      |      |                 |                   |                               |      |      |                 |                   |                               |      |      |                 |                   |                               |      |      |
|-------------------------------|------------------|-----------------------------------------------|-------------------|-------------------------------|------|------|-----------------|-------------------|-------------------------------|------|------|-----------------|-------------------|-------------------------------|------|------|-----------------|-------------------|-------------------------------|------|------|
|                               |                  | 65°F                                          |                   |                               |      |      | 75°F            |                   |                               |      |      | 85°F            |                   |                               |      |      | 95°F            |                   |                               |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      |
|                               |                  |                                               |                   | Dry Bulb                      |      |      |                 |                   | Dry Bulb                      |      |      |                 |                   | Dry Bulb                      |      |      |                 |                   | Dry Bulb                      |      |      |
|                               |                  |                                               |                   | 75°F                          | 80°F | 85°F |                 |                   | 75°F                          | 80°F | 85°F |                 |                   | 75°F                          | 80°F | 85°F |                 |                   | 75°F                          | 80°F | 85°F |
| 63°F                          | cfm              | kBtuh                                         | kW                | 75°F                          | 80°F | 85°F | kBtuh           | kW                | 75°F                          | 80°F | 85°F | kBtuh           | kW                | 75°F                          | 80°F | 85°F | kBtuh           | kW                | 75°F                          | 80°F | 85°F |
|                               | 4000             | 92.2                                          | 8.4               | 0.48                          | 0.73 | 0.92 | 74.0            | 9.0               | 0.40                          | 0.72 | 0.87 | 55.0            | 9.6               | 0.29                          | 0.71 | 0.86 | 37.6            | 10.3              | 0.11                          | 0.70 | 0.85 |
|                               | 5000             | 95.5                                          | 8.5               | 0.56                          | 0.78 | 0.94 | 76.2            | 9.1               | 0.47                          | 0.76 | 0.91 | 56.5            | 9.7               | 0.33                          | 0.74 | 0.89 | 37.5            | 10.3              | 0.12                          | 0.71 | 0.87 |
| 67°F                          | 6000             | 98.8                                          | 8.6               | 0.64                          | 0.83 | 0.96 | 78.4            | 9.2               | 0.53                          | 0.80 | 0.94 | 58.0            | 9.8               | 0.36                          | 0.77 | 0.92 | 37.4            | 10.4              | 0.13                          | 0.72 | 0.90 |
|                               | 4000             | 102.6                                         | 8.7               | 0.30                          | 0.48 | 0.67 | 83.4            | 9.3               | 0.22                          | 0.44 | 0.65 | 63.9            | 9.9               | 0.08                          | 0.35 | 0.61 | 44.9            | 10.6              | -0.08                         | 0.22 | 0.60 |
|                               | 5000             | 105.2                                         | 8.8               | 0.32                          | 0.54 | 0.76 | 84.8            | 9.3               | 0.24                          | 0.49 | 0.74 | 64.3            | 9.9               | 0.09                          | 0.41 | 0.72 | 43.9            | 10.6              | -0.09                         | 0.23 | 0.70 |
| 71°F                          | 6000             | 107.8                                         | 8.9               | 0.34                          | 0.60 | 0.85 | 86.2            | 9.5               | 0.26                          | 0.55 | 0.83 | 64.7            | 10.1              | 0.10                          | 0.46 | 0.81 | 42.9            | 10.6              | -0.10                         | 0.24 | 0.79 |
|                               | 4000             | 117.8                                         | 8.9               | 0.13                          | 0.31 | 0.49 | 98.8            | 9.6               | 0.07                          | 0.21 | 0.42 | 79.7            | 10.2              | -0.15                         | 0.10 | 0.35 | 60.6            | 10.9              | -0.44                         | 0.05 | 0.25 |
|                               | 5000             | 119.7                                         | 9.0               | 0.16                          | 0.34 | 0.53 | 99.4            | 9.6               | 0.03                          | 0.23 | 0.47 | 79.1            | 10.2              | -0.17                         | 0.12 | 0.41 | 58.7            | 10.9              | -0.51                         | 0.06 | 0.30 |
|                               | 6000             | 121.5                                         | 9.1               | 0.18                          | 0.37 | 0.56 | 99.9            | 9.7               | -0.01                         | 0.25 | 0.52 | 78.4            | 10.3              | -0.20                         | 0.13 | 0.46 | 56.8            | 10.9              | -0.58                         | 0.07 | 0.35 |

## 25 TON HIGH EFFICIENCY LGH300H4M WITH HUMIDITROL® OPERATING (2ND STAGE)

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil |                   |                               |      |      |                 |                   |                               |      |      |                 |                   |                               |      |      |                 |                   |                               |      |      |
|-------------------------------|------------------|-----------------------------------------------|-------------------|-------------------------------|------|------|-----------------|-------------------|-------------------------------|------|------|-----------------|-------------------|-------------------------------|------|------|-----------------|-------------------|-------------------------------|------|------|
|                               |                  | 65°F                                          |                   |                               |      |      | 75°F            |                   |                               |      |      | 85°F            |                   |                               |      |      | 95°F            |                   |                               |      |      |
|                               |                  | Total Cool Cap.                               | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) |      |      |
|                               |                  |                                               |                   | Dry Bulb                      |      |      |                 |                   | Dry Bulb                      |      |      |                 |                   | Dry Bulb                      |      |      |                 |                   | Dry Bulb                      |      |      |
|                               |                  |                                               |                   | 75°F                          | 80°F | 85°F |                 |                   | 75°F                          | 80°F | 85°F |                 |                   | 75°F                          | 80°F | 85°F |                 |                   | 75°F                          | 80°F | 85°F |
| 63°F                          | cfm              | kBtuh                                         | kW                | 75°F                          | 80°F | 85°F | kBtuh           | kW                | 75°F                          | 80°F | 85°F | kBtuh           | kW                | 75°F                          | 80°F | 85°F | kBtuh           | kW                | 75°F                          | 80°F | 85°F |
|                               | 8000             | 240.9                                         | 15.5              | 0.61                          | 0.82 | 0.91 | 214.1           | 17.0              | 0.59                          | 0.79 | 0.90 | 187.3           | 18.5              | 0.56                          | 0.77 | 0.89 | 160.5           | 20.0              | 0.53                          | 0.74 | 0.88 |
|                               | 10000            | 257.1                                         | 15.8              | 0.65                          | 0.85 | 0.94 | 224.8           | 17.2              | 0.64                          | 0.84 | 0.94 | 192.2           | 18.7              | 0.63                          | 0.83 | 0.95 | 160.3           | 20.1              | 0.62                          | 0.82 | 0.94 |
| 67°F                          | 12000            | 273.3                                         | 16.1              | 0.68                          | 0.88 | 0.97 | 235.4           | 17.4              | 0.69                          | 0.89 | 0.99 | 197.0           | 18.8              | 0.71                          | 0.89 | 1.00 | 160.2           | 20.2              | 0.72                          | 0.90 | 1.00 |
|                               | 8000             | 272.1                                         | 16.0              | 0.45                          | 0.56 | 0.75 | 242.0           | 17.5              | 0.41                          | 0.55 | 0.73 | 212.2           | 19.0              | 0.37                          | 0.54 | 0.71 | 181.9           | 20.5              | 0.32                          | 0.51 | 0.69 |
|                               | 10000            | 286.7                                         | 16.2              | 0.47                          | 0.62 | 0.78 | 251.6           | 17.6              | 0.44                          | 0.61 | 0.78 | 216.5           | 19.0              | 0.41                          | 0.60 | 0.77 | 181.4           | 20.4              | 0.38                          | 0.58 | 0.76 |
| 71°F                          | 12000            | 301.3                                         | 16.5              | 0.49                          | 0.68 | 0.82 | 261.3           | 17.8              | 0.47                          | 0.67 | 0.83 | 220.8           | 19.2              | 0.45                          | 0.66 | 0.83 | 180.9           | 20.5              | 0.43                          | 0.65 | 0.83 |
|                               | 8000             | 284.6                                         | 16.5              | 0.28                          | 0.43 | 0.58 | 257.7           | 18.0              | 0.23                          | 0.39 | 0.55 | 230.9           | 19.5              | 0.17                          | 0.35 | 0.52 | 204.0           | 21.0              | 0.11                          | 0.30 | 0.49 |
|                               | 10000            | 297.6                                         | 16.7              | 0.29                          | 0.46 | 0.63 | 266.4           | 18.1              | 0.24                          | 0.42 | 0.61 | 234.6           | 19.5              | 0.19                          | 0.39 | 0.59 | 203.2           | 20.9              | 0.13                          | 0.35 | 0.57 |
|                               | 12000            | 310.5                                         | 16.8              | 0.30                          | 0.49 | 0.67 | 275.0           | 18.2              | 0.25                          | 0.46 | 0.67 | 238.3           | 19.5              | 0.20                          | 0.43 | 0.66 | 202.3           | 20.9              | 0.14                          | 0.40 | 0.65 |

## 30 TON HIGH EFFICIENCY LGH360H4M WITH HUMIDITROL® OPERATING (1ST STAGE)

| Entering<br>Wet Bulb<br>Tem-<br>perature | Total<br>Air<br>Volume | Outdoor Air Temperature Entering Outdoor Coil |                         |                                  |      |        |                       |                         |                                  |      |        |                       |                         |                                  |      |        |                       |                         |                                  |      |      |
|------------------------------------------|------------------------|-----------------------------------------------|-------------------------|----------------------------------|------|--------|-----------------------|-------------------------|----------------------------------|------|--------|-----------------------|-------------------------|----------------------------------|------|--------|-----------------------|-------------------------|----------------------------------|------|------|
|                                          |                        | 65°F                                          |                         |                                  |      |        | 75°F                  |                         |                                  |      |        | 85°F                  |                         |                                  |      |        | 95°F                  |                         |                                  |      |      |
|                                          |                        | Total<br>Cool<br>Cap.                         | Comp.<br>Motor<br>Input | Sensible To Total<br>Ratio (S/T) |      |        | Total<br>Cool<br>Cap. | Comp.<br>Motor<br>Input | Sensible To Total<br>Ratio (S/T) |      |        | Total<br>Cool<br>Cap. | Comp.<br>Motor<br>Input | Sensible To Total<br>Ratio (S/T) |      |        | Total<br>Cool<br>Cap. | Comp.<br>Motor<br>Input | Sensible To Total<br>Ratio (S/T) |      |      |
|                                          |                        |                                               |                         | Dry Bulb                         |      |        |                       |                         | Dry Bulb                         |      |        |                       |                         | Dry Bulb                         |      |        |                       |                         | Dry Bulb                         |      |      |
|                                          |                        |                                               |                         | 75°F                             | 80°F | 85°F   |                       |                         | 75°F                             | 80°F | 85°F   |                       |                         | 75°F                             | 80°F | 85°F   |                       |                         | 75°F                             | 80°F | 85°F |
| cfm                                      | kBtu/h                 | kW                                            | 75°F                    | 80°F                             | 85°F | kBtu/h | kW                    | 75°F                    | 80°F                             | 85°F | kBtu/h | kW                    | 75°F                    | 80°F                             | 85°F | kBtu/h | kW                    | 75°F                    | 80°F                             | 85°F |      |
| 63°F                                     | 4800                   | 102.0                                         | 11.0                    | 0.47                             | 0.72 | 0.95   | 82.1                  | 11.8                    | 0.37                             | 0.68 | 0.93   | 62.2                  | 12.6                    | 0.26                             | 0.64 | 0.92   | 42.3                  | 13.4                    | 0.14                             | 0.57 | 0.91 |
|                                          | 6000                   | 103.4                                         | 11.1                    | 0.58                             | 0.77 | 0.97   | 82.9                  | 11.8                    | 0.44                             | 0.73 | 0.96   | 62.4                  | 12.6                    | 0.29                             | 0.70 | 0.95   | 41.9                  | 13.4                    | 0.03                             | 0.63 | 0.96 |
|                                          | 7200                   | 104.8                                         | 11.1                    | 0.68                             | 0.83 | 0.98   | 83.7                  | 11.9                    | 0.50                             | 0.79 | 0.98   | 62.6                  | 12.6                    | 0.31                             | 0.75 | 0.97   | 41.4                  | 13.3                    | -0.07                            | 0.68 | 1.00 |
| 67°F                                     | 4800                   | 113.7                                         | 11.4                    | 0.28                             | 0.47 | 0.66   | 92.2                  | 12.1                    | 0.21                             | 0.42 | 0.64   | 72.4                  | 12.9                    | 0.10                             | 0.36 | 0.62   | 51.7                  | 13.8                    | -0.03                            | 0.28 | 0.60 |
|                                          | 6000                   | 115.3                                         | 11.5                    | 0.32                             | 0.51 | 0.71   | 94.0                  | 12.2                    | 0.23                             | 0.46 | 0.69   | 72.0                  | 12.9                    | 0.13                             | 0.40 | 0.67   | 50.2                  | 13.8                    | -0.05                            | 0.30 | 0.66 |
|                                          | 7200                   | 116.2                                         | 11.6                    | 0.35                             | 0.56 | 0.77   | 94.7                  | 12.3                    | 0.25                             | 0.50 | 0.76   | 71.9                  | 12.9                    | 0.15                             | 0.45 | 0.75   | 49.0                  | 13.8                    | -0.10                            | 0.32 | 0.73 |
| 71°F                                     | 4800                   | 123.3                                         | 11.7                    | 0.10                             | 0.23 | 0.37   | 102.3                 | 12.3                    | 0.04                             | 0.19 | 0.33   | 82.5                  | 13.2                    | -0.02                            | 0.14 | 0.30   | 61.0                  | 13.9                    | -0.25                            | 0.05 | 0.29 |
|                                          | 6000                   | 126.7                                         | 11.8                    | 0.11                             | 0.28 | 0.46   | 104.0                 | 12.4                    | 0.03                             | 0.22 | 0.42   | 81.8                  | 13.3                    | -0.06                            | 0.16 | 0.38   | 58.8                  | 14.0                    | -0.31                            | 0.07 | 0.37 |
|                                          | 7200                   | 130                                           | 11.9                    | 0.12                             | 0.33 | 0.55   | 105.6                 | 12.6                    | 0.01                             | 0.26 | 0.51   | 81.1                  | 13.3                    | -0.10                            | 0.19 | 0.48   | 56.5                  | 14.0                    | -0.51                            | 0.07 | 0.46 |

## 30 TON HIGH EFFICIENCY LGH360H4M WITH HUMIDITROL® OPERATING (2ND STAGE)

| Entering<br>Wet Bulb<br>Tem-<br>perature | Total<br>Air<br>Volume | Outdoor Air Temperature Entering Outdoor Coil |                         |                                  |      |      |       |                       |                         |                                  |      |       |      |                       |                         |                                  |       |      |      |                       |                         |                                  |      |      |      |
|------------------------------------------|------------------------|-----------------------------------------------|-------------------------|----------------------------------|------|------|-------|-----------------------|-------------------------|----------------------------------|------|-------|------|-----------------------|-------------------------|----------------------------------|-------|------|------|-----------------------|-------------------------|----------------------------------|------|------|------|
|                                          |                        | 65°F                                          |                         |                                  |      |      |       | 75°F                  |                         |                                  |      |       |      | 85°F                  |                         |                                  |       |      |      | 95°F                  |                         |                                  |      |      |      |
|                                          |                        | Total<br>Cool<br>Cap.                         | Comp.<br>Motor<br>Input | Sensible To Total<br>Ratio (S/T) |      |      |       | Total<br>Cool<br>Cap. | Comp.<br>Motor<br>Input | Sensible To Total<br>Ratio (S/T) |      |       |      | Total<br>Cool<br>Cap. | Comp.<br>Motor<br>Input | Sensible To Total<br>Ratio (S/T) |       |      |      | Total<br>Cool<br>Cap. | Comp.<br>Motor<br>Input | Sensible To Total<br>Ratio (S/T) |      |      |      |
|                                          |                        |                                               |                         | Dry Bulb                         |      |      |       |                       |                         | Dry Bulb                         |      |       |      |                       |                         | Dry Bulb                         |       |      |      |                       |                         | Dry Bulb                         |      |      |      |
|                                          |                        |                                               |                         | 75°F                             | 80°F | 85°F | 85°F  |                       |                         | 75°F                             | 80°F | 85°F  | 85°F |                       |                         | 75°F                             | 80°F  | 85°F | 85°F |                       |                         | 75°F                             | 80°F | 85°F | 85°F |
| 63°F                                     | 9600                   | 286.4                                         | 20.3                    | 0.60                             | 0.80 | 0.89 | 254.8 | 22.2                  | 0.59                    | 0.79                             | 0.88 | 223.2 | 24.1 | 0.57                  | 0.77                    | 0.87                             | 191.6 | 25.9 | 0.55 | 0.74                  | 0.86                    |                                  |      |      |      |
|                                          | 12,000                 | 298.4                                         | 20.6                    | 0.65                             | 0.85 | 0.93 | 263.3 | 22.4                  | 0.64                    | 0.84                             | 0.93 | 228.2 | 24.2 | 0.63                  | 0.83                    | 0.94                             | 193.1 | 26.0 | 0.63 | 0.82                  | 0.94                    |                                  |      |      |      |
|                                          | 14,400                 | 310.4                                         | 20.9                    | 0.70                             | 0.90 | 0.97 | 271.8 | 22.6                  | 0.69                    | 0.89                             | 0.98 | 233.2 | 24.4 | 0.69                  | 0.89                    | 1.00                             | 194.6 | 26.1 | 0.70 | 0.89                  | 1.00                    |                                  |      |      |      |
| 67°F                                     | 9600                   | 307.4                                         | 20.7                    | 0.43                             | 0.57 | 0.71 | 274.5 | 22.6                  | 0.40                    | 0.55                             | 0.74 | 241.6 | 24.5 | 0.36                  | 0.53                    | 0.74                             | 208.8 | 26.4 | 0.31 | 0.52                  | 0.73                    |                                  |      |      |      |
|                                          | 12,000                 | 322.1                                         | 20.9                    | 0.50                             | 0.64 | 0.78 | 284.7 | 22.8                  | 0.45                    | 0.63                             | 0.79 | 247.3 | 24.7 | 0.41                  | 0.61                    | 0.81                             | 209.9 | 26.6 | 0.37 | 0.60                  | 0.83                    |                                  |      |      |      |
|                                          | 14,400                 | 336.8                                         | 21.0                    | 0.57                             | 0.71 | 0.85 | 294.9 | 23.0                  | 0.49                    | 0.67                             | 0.84 | 253.0 | 24.9 | 0.46                  | 0.67                    | 0.88                             | 211.0 | 26.8 | 0.43 | 0.68                  | 0.93                    |                                  |      |      |      |
| 71°F                                     | 9600                   | 337.5                                         | 21.2                    | 0.27                             | 0.42 | 0.56 | 302.7 | 23.1                  | 0.22                    | 0.39                             | 0.55 | 266.8 | 25.0 | 0.18                  | 0.36                    | 0.54                             | 231.4 | 26.9 | 0.12 | 0.33                  | 0.53                    |                                  |      |      |      |
|                                          | 12,000                 | 349.9                                         | 21.7                    | 0.31                             | 0.47 | 0.62 | 310.0 | 23.4                  | 0.24                    | 0.43                             | 0.61 | 270.1 | 25.2 | 0.19                  | 0.40                    | 0.60                             | 230.2 | 27.0 | 0.12 | 0.36                  | 0.59                    |                                  |      |      |      |
|                                          | 14,400                 | 362.3                                         | 22.1                    | 0.35                             | 0.52 | 0.68 | 317.3 | 23.8                  | 0.26                    | 0.47                             | 0.67 | 273.4 | 25.4 | 0.20                  | 0.43                    | 0.66                             | 229.0 | 27.1 | 0.12 | 0.39                  | 0.65                    |                                  |      |      |      |

## BLOWER DATA

BLOWER TABLE INCLUDES RESISTANCE FOR BASE UNIT ONLY WITH DRY INDOOR COIL & AIR FILTERS IN PLACE FOR ALL UNITS ADD:

- 1 - Wet indoor coil air resistance of selected unit.
- 2 - Any factory installed options air resistance (heat section, economizer, etc.)
- 3 - Any field installed accessories air resistance (duct resistance, diffuser, etc.)

Then determine from blower table blower motor output and drive required.

See page 35 for wet coil and option/accessory air resistance data.

See page 35 for factory installed drive kit specifications.

| Air<br>Volume<br>cfm | TOTAL STATIC PRESSURE - In. w.g. |      |      |      |      |      |      |      |      |       |      |       |      |       |      |       |      |       |
|----------------------|----------------------------------|------|------|------|------|------|------|------|------|-------|------|-------|------|-------|------|-------|------|-------|
|                      | 0.20                             |      | 0.40 |      | 0.60 |      | 0.80 |      | 1.00 |       | 1.20 |       | 1.40 |       | 1.60 |       | 1.80 |       |
|                      | RPM                              | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP   | RPM  | BHP   | RPM  | BHP   | RPM  | BHP   | RPM  | BHP   |
| 4000                 | 372                              | 0.26 | 433  | 0.65 | 497  | 0.99 | 565  | 1.27 | 630  | 1.54  | 687  | 1.79  | 738  | 2.04  | 784  | 2.30  | 824  | 2.56  |
| 4500                 | 382                              | 0.41 | 441  | 0.79 | 506  | 1.12 | 574  | 1.41 | 638  | 1.69  | 694  | 1.95  | 744  | 2.22  | 790  | 2.50  | 831  | 2.77  |
| 5000                 | 392                              | 0.56 | 451  | 0.93 | 516  | 1.25 | 584  | 1.55 | 646  | 1.85  | 702  | 2.12  | 751  | 2.41  | 796  | 2.70  | 837  | 3.00  |
| 5500                 | 402                              | 0.73 | 462  | 1.08 | 527  | 1.40 | 594  | 1.72 | 655  | 2.02  | 710  | 2.31  | 758  | 2.61  | 802  | 2.92  | 843  | 3.24  |
| 6000                 | 414                              | 0.89 | 473  | 1.24 | 539  | 1.56 | 605  | 1.90 | 665  | 2.21  | 718  | 2.51  | 766  | 2.83  | 809  | 3.16  | 850  | 3.51  |
| 6500                 | 426                              | 1.07 | 486  | 1.41 | 551  | 1.74 | 616  | 2.10 | 675  | 2.42  | 727  | 2.73  | 774  | 3.07  | 817  | 3.43  | 857  | 3.80  |
| 7000                 | 439                              | 1.26 | 499  | 1.60 | 565  | 1.93 | 628  | 2.31 | 685  | 2.64  | 737  | 2.97  | 782  | 3.34  | 825  | 3.72  | 864  | 4.11  |
| 7500                 | 453                              | 1.46 | 513  | 1.79 | 579  | 2.14 | 641  | 2.55 | 696  | 2.88  | 747  | 3.24  | 792  | 3.63  | 833  | 4.04  | 872  | 4.45  |
| 8000                 | 467                              | 1.66 | 528  | 2.00 | 593  | 2.38 | 653  | 2.81 | 708  | 3.15  | 757  | 3.53  | 801  | 3.95  | 843  | 4.39  | 881  | 4.82  |
| 8500                 | 483                              | 1.88 | 544  | 2.22 | 608  | 2.65 | 667  | 3.10 | 720  | 3.44  | 768  | 3.85  | 812  | 4.30  | 852  | 4.78  | 890  | 5.22  |
| 9000                 | 499                              | 2.11 | 561  | 2.47 | 624  | 2.95 | 681  | 3.41 | 733  | 3.76  | 780  | 4.20  | 823  | 4.69  | 862  | 5.19  | 900  | 5.65  |
| 9500                 | 516                              | 2.36 | 578  | 2.75 | 640  | 3.26 | 696  | 3.73 | 746  | 4.10  | 792  | 4.58  | 834  | 5.11  | 873  | 5.64  | 910  | 6.12  |
| 10,000               | 534                              | 2.64 | 596  | 3.06 | 657  | 3.60 | 711  | 4.07 | 760  | 4.48  | 805  | 5.00  | 845  | 5.57  | 884  | 6.12  | 921  | 6.61  |
| 10,500               | 553                              | 2.93 | 615  | 3.39 | 674  | 3.95 | 727  | 4.44 | 775  | 4.90  | 817  | 5.46  | 857  | 6.06  | 895  | 6.62  | 932  | 7.12  |
| 11,000               | 572                              | 3.24 | 634  | 3.74 | 692  | 4.31 | 744  | 4.83 | 789  | 5.35  | 830  | 5.95  | 869  | 6.58  | 907  | 7.16  | 943  | 7.65  |
| 11,500               | 592                              | 3.58 | 653  | 4.12 | 711  | 4.70 | 760  | 5.27 | 803  | 5.85  | 843  | 6.49  | 881  | 7.13  | 918  | 7.71  | 954  | 8.21  |
| 12,000               | 613                              | 3.95 | 674  | 4.53 | 729  | 5.14 | 776  | 5.75 | 818  | 6.39  | 857  | 7.06  | 894  | 7.71  | 930  | 8.30  | 965  | 8.80  |
| 12,500               | 635                              | 4.37 | 695  | 4.98 | 748  | 5.62 | 792  | 6.29 | 832  | 6.98  | 870  | 7.67  | 906  | 8.33  | 941  | 8.91  | 976  | 9.42  |
| 13,000               | 657                              | 4.83 | 715  | 5.50 | 766  | 6.18 | 808  | 6.89 | 847  | 7.61  | 883  | 8.32  | 918  | 8.98  | 953  | 9.56  | 988  | 10.06 |
| 13,500               | 680                              | 5.35 | 736  | 6.06 | 784  | 6.78 | 824  | 7.53 | 861  | 8.29  | 896  | 9.00  | 930  | 9.66  | 965  | 10.24 | ---  | ---   |
| 14,000               | 704                              | 5.92 | 757  | 6.67 | 801  | 7.44 | 839  | 8.23 | 875  | 9.00  | 909  | 9.72  | 943  | 10.38 | ---  | ---   | ---  | ---   |
| 14,500               | 727                              | 6.55 | 777  | 7.34 | 818  | 8.16 | 854  | 8.97 | 889  | 9.75  | 922  | 10.48 | ---  | ---   | ---  | ---   | ---  | ---   |
| 15,000               | 750                              | 7.23 | 797  | 8.07 | 834  | 8.92 | 868  | 9.75 | 902  | 10.54 | ---  | ---   | ---  | ---   | ---  | ---   | ---  | ---   |

## BLOWER DATA

### DRIVE KIT SPECIFICATIONS

| Motor Efficiency | Nominal<br>hp | Maximum<br>hp | Drive Kit Number | RPM Range  |
|------------------|---------------|---------------|------------------|------------|
| Standard         | 5             | 5.75          | 5                | 660 - 810  |
| Standard         | 5             | 5.75          | 6                | 770 - 965  |
| Standard         | 5             | 5.75          | 7                | 570 - 720  |
| Standard         | 5             | 5.75          | 8                | 480 - 630  |
| Standard         | 5             | 5.75          | 9                | 410 - 535  |
| Standard         | 7.5           | 8.63          | 3                | 715 - 880  |
| Standard         | 7.5           | 8.63          | 4                | 770 - 965  |
| Standard         | 10            | 11.50         | 1                | 740 - 895  |
| Standard         | 10            | 11.50         | 2                | 870 - 1045 |

NOTE - Using total air volume and system static pressure requirements determine from blower performance tables rpm and motor output required. Maximum usable output of motors furnished are shown. In Canada, nominal motor output is also maximum usable motor output. If motors of comparable output are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

For VFD applications, nominal motor output is also maximum usable motor output.

### FACTORY INSTALLED OPTIONS/FIELD INSTALLED ACCESSORY AIR RESISTANCE

| Air<br>Volume<br>cfm | Wet Indoor<br>Coil | Reheat<br>Coil | Gas Heat Exchanger |                |              | Economizer | Filters  |          |          | Horizontal<br>Roof Curb |
|----------------------|--------------------|----------------|--------------------|----------------|--------------|------------|----------|----------|----------|-------------------------|
|                      |                    |                | Standard<br>Heat   | Medium<br>Heat | High<br>Heat |            | MERV 8   | MERV 13  | MERV 16  |                         |
|                      | in. w.g.           | in. w.g.       | in. w.g.           | in. w.g.       | in. w.g.     | in. w.g.   | in. w.g. | in. w.g. | in. w.g. | in. w.g.                |
| 4000                 | 0.04               | 0.04           | 0.08               | 0.08           | 0.11         | 0.00       | 0.00     | 0.00     | 0.06     | 0.04                    |
| 4500                 | 0.04               | 0.04           | 0.09               | 0.10           | 0.13         | 0.00       | 0.00     | 0.00     | 0.07     | 0.05                    |
| 5000                 | 0.05               | 0.04           | 0.10               | 0.12           | 0.15         | 0.00       | 0.00     | 0.00     | 0.08     | 0.06                    |
| 5500                 | 0.06               | 0.06           | 0.11               | 0.14           | 0.17         | 0.01       | 0.00     | 0.01     | 0.09     | 0.07                    |
| 6000                 | 0.07               | 0.06           | 0.12               | 0.16           | 0.19         | 0.01       | 0.00     | 0.02     | 0.10     | 0.08                    |
| 6500                 | 0.08               | 0.08           | 0.13               | 0.18           | 0.21         | 0.01       | 0.01     | 0.02     | 0.11     | 0.09                    |
| 7000                 | 0.09               | 0.08           | 0.14               | 0.20           | 0.24         | 0.02       | 0.01     | 0.03     | 0.12     | 0.10                    |
| 7500                 | 0.10               | 0.10           | 0.15               | 0.21           | 0.25         | 0.02       | 0.01     | 0.04     | 0.13     | 0.11                    |
| 8000                 | 0.11               | 0.10           | 0.17               | 0.24           | 0.28         | 0.02       | 0.01     | 0.04     | 0.14     | 0.13                    |
| 8500                 | 0.12               | 0.10           | 0.20               | 0.27           | 0.31         | 0.03       | 0.01     | 0.04     | 0.15     | 0.15                    |
| 9000                 | 0.13               | 0.12           | 0.22               | 0.29           | 0.34         | 0.04       | 0.01     | 0.04     | 0.16     | 0.17                    |
| 9500                 | 0.14               | 0.14           | 0.24               | 0.32           | 0.38         | 0.04       | 0.02     | 0.06     | 0.17     | 0.19                    |
| 10,000               | 0.15               | 0.16           | 0.27               | 0.36           | 0.42         | 0.05       | 0.02     | 0.06     | 0.18     | 0.21                    |
| 10,500               | 0.16               | 0.17           | 0.30               | 0.40           | 0.46         | 0.06       | 0.02     | 0.06     | 0.19     | 0.24                    |
| 11,000               | 0.18               | 0.18           | 0.33               | 0.43           | 0.50         | 0.07       | 0.02     | 0.07     | 0.20     | 0.27                    |
| 11,500               | 0.19               | 0.19           | 0.37               | 0.48           | 0.55         | 0.08       | 0.02     | 0.08     | 0.22     | 0.30                    |
| 12,000               | 0.20               | 0.20           | 0.40               | 0.52           | 0.60         | 0.10       | 0.02     | 0.08     | 0.23     | 0.33                    |
| 12,500               | 0.21               | 0.22           | 0.44               | 0.57           | 0.65         | 0.11       | 0.03     | 0.10     | 0.24     | 0.37                    |
| 13,000               | 0.23               | 0.23           | 0.48               | 0.61           | 0.70         | 0.13       | 0.03     | 0.10     | 0.25     | 0.40                    |
| 13,500               | 0.24               | 0.25           | 0.53               | 0.67           | 0.76         | 0.14       | 0.03     | 0.11     | 0.26     | 0.44                    |
| 14,000               | 0.26               | 0.26           | 0.57               | 0.72           | 0.82         | 0.16       | 0.03     | 0.12     | 0.27     | 0.49                    |
| 14,500               | 0.27               | 0.27           | 0.62               | 0.78           | 0.89         | 0.18       | 0.04     | 0.13     | 0.28     | 0.53                    |
| 15,000               | 0.29               | 0.29           | 0.68               | 0.84           | 0.95         | 0.21       | 0.04     | 0.13     | 0.29     | 0.58                    |

## BLOWER DATA

### POWER EXHAUST PERFORMANCE - STANDARD STATIC

| Return Duct Negative Static Pressure | Air Volume Exhausted |
|--------------------------------------|----------------------|
| in. w.g.                             | cfm                  |
| 0.00                                 | 12,800               |
| 0.05                                 | 12,200               |
| 0.10                                 | 11,500               |
| 0.15                                 | 10,800               |
| 0.20                                 | 9900                 |
| 0.25                                 | 9000                 |
| 0.30                                 | 7900                 |
| 0.35                                 | 6750                 |
| 0.40                                 | 5450                 |
| 0.45                                 | 4150                 |
| 0.50                                 | 2900                 |

### POWER EXHAUST - HIGH STATIC

| Air<br>Volume<br>cfm | Return Duct Negative Static Pressure - In. w.g. |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |     |      |
|----------------------|-------------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|------|
|                      | 0                                               |      | 0.10 |      | 0.20 |      | 0.30 |      | 0.40 |      | 0.50 |      | 0.60 |      | 0.70 |      | 0.80 |      | 0.90 |      | 1.0 |      |
|                      | RPM                                             | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM | BHP  |
| 8500                 | 487                                             | 0.43 | 501  | 0.44 | 521  | 0.46 | 548  | 0.49 | 584  | 0.53 | 625  | 0.58 | 667  | 0.64 | 708  | 0.70 | 746  | 0.75 | 783  | 0.81 | 818 | 0.87 |
| 9000                 | 515                                             | 0.51 | 528  | 0.52 | 547  | 0.54 | 570  | 0.57 | 601  | 0.61 | 638  | 0.66 | 678  | 0.71 | 717  | 0.77 | 755  | 0.83 | 791  | 0.90 | 826 | 0.96 |
| 9500                 | 544                                             | 0.60 | 556  | 0.61 | 573  | 0.63 | 594  | 0.66 | 620  | 0.69 | 652  | 0.74 | 689  | 0.80 | 727  | 0.86 | 765  | 0.93 | 800  | 0.99 | 834 | 1.05 |
| 10,000               | 572                                             | 0.70 | 584  | 0.71 | 599  | 0.73 | 618  | 0.76 | 641  | 0.79 | 669  | 0.83 | 702  | 0.89 | 738  | 0.95 | 774  | 1.02 | 810  | 1.09 | 843 | 1.15 |
| 10,500               | 601                                             | 0.81 | 612  | 0.82 | 626  | 0.84 | 643  | 0.87 | 663  | 0.90 | 688  | 0.94 | 718  | 0.99 | 750  | 1.05 | 785  | 1.12 | 819  | 1.19 | 853 | 1.27 |
| 11,000               | 629                                             | 0.93 | 640  | 0.95 | 653  | 0.97 | 668  | 0.99 | 687  | 1.02 | 709  | 1.06 | 735  | 1.11 | 764  | 1.16 | 796  | 1.23 | 830  | 1.31 | 862 | 1.38 |
| 11,500               | 658                                             | 1.06 | 668  | 1.08 | 680  | 1.10 | 694  | 1.12 | 711  | 1.15 | 731  | 1.19 | 754  | 1.24 | 780  | 1.29 | 810  | 1.36 | 841  | 1.43 | 872 | 1.50 |
| 12,000               | 686                                             | 1.21 | 696  | 1.22 | 707  | 1.24 | 721  | 1.27 | 736  | 1.30 | 754  | 1.34 | 774  | 1.38 | 798  | 1.43 | 825  | 1.49 | 853  | 1.56 | 883 | 1.64 |

## BLOWER DATA

### CEILING DIFFUSER AIR RESISTANCE - in. w.g.

| Air Volume<br>cfm | Step-Down Diffuser |                    |                       | Flush Diffuser |
|-------------------|--------------------|--------------------|-----------------------|----------------|
|                   | LARTD30/36S        |                    |                       | LAFD30/36S     |
|                   | 2 Ends Open        | 1 Side/2 Ends Open | All Ends & Sides Open |                |
| 7500              | 0.37               | 0.31               | 0.25                  | 0.29           |
| 8000              | 0.42               | 0.36               | 0.29                  | 0.34           |
| 8500              | 0.48               | 0.41               | 0.34                  | 0.39           |
| 9000              | 0.55               | 0.47               | 0.39                  | 0.44           |
| 9500              | 0.62               | 0.53               | 0.45                  | 0.51           |
| 10,000            | 0.70               | 0.60               | 0.51                  | 0.57           |
| 10,500            | 0.78               | 0.68               | 0.58                  | 0.65           |
| 11,000            | 0.87               | 0.76               | 0.65                  | 0.72           |
| 11,500            | 0.97               | 0.85               | 0.73                  | 0.81           |
| 12,000            | 1.08               | 0.94               | 0.82                  | 0.9            |
| 12,500            | 1.19               | 1.04               | 0.91                  | 0.99           |
| 13,000            | 1.30               | 1.15               | 1.00                  | 1.10           |
| 13,500            | 1.43               | 1.26               | 1.10                  | 1.20           |
| 14,000            | 1.56               | 1.38               | 1.20                  | 1.31           |
| 14,500            | 1.69               | 1.50               | 1.31                  | 1.43           |
| 15,000            | 1.84               | 1.63               | 1.43                  | 1.56           |

### CEILING DIFFUSER AIR THROW DATA - ft.

| Air Volume<br>cfm | <sup>1</sup> Effective Throw Range - ft. |         |
|-------------------|------------------------------------------|---------|
|                   | Step-Down                                | Flush   |
| 9000              | 40 - 47                                  | 29 - 35 |
| 9500              | 43 - 50                                  | 33 - 41 |
| 10,000            | 46 - 54                                  | 37 - 46 |
| 10,500            | 50 - 58                                  | 42 - 51 |
| 11,000            | 53 - 61                                  | 46 - 56 |
| 11,500            | 55 - 64                                  | 50 - 61 |
| 12,000            | 58 - 67                                  | 54 - 66 |
| 12,500            | 61 - 71                                  | 58 - 71 |
| 13,000            | 64 - 74                                  | 62 - 75 |
| 13,500            | 67 - 77                                  | 66 - 79 |

<sup>1</sup> Throw is the horizontal or vertical distance an airstream travels on leaving the outlet or diffuser before the maximum velocity is reduced to 50 ft. per minute. Four sides open.

## ELECTRICAL DATA

## HIGH EFFICIENCY - VARIABLE AIR VOLUME - 20 TON

| Model No.                                   |                                         | LGH242H4V       |      |      |             |     |    |             |     |    |
|---------------------------------------------|-----------------------------------------|-----------------|------|------|-------------|-----|----|-------------|-----|----|
| <sup>1</sup> Voltage - 60hz                 |                                         | 208/230V - 3 Ph |      |      | 460V - 3 Ph |     |    | 575V - 3 Ph |     |    |
| Compressor 1                                | Rated Load Amps                         | 13.5            |      |      | 8           |     |    | 5           |     |    |
|                                             | Locked Rotor Amps                       | 109             |      |      | 59          |     |    | 40          |     |    |
| Compressor 2                                | Rated Load Amps                         | 13.5            |      |      | 8           |     |    | 5           |     |    |
|                                             | Locked Rotor Amps                       | 109             |      |      | 59          |     |    | 40          |     |    |
| Compressor 3                                | Rated Load Amps                         | 13.5            |      |      | 8           |     |    | 5           |     |    |
|                                             | Locked Rotor Amps                       | 109             |      |      | 59          |     |    | 40          |     |    |
| Compressor 4                                | Rated Load Amps                         | 13.5            |      |      | 8           |     |    | 5           |     |    |
|                                             | Locked Rotor Amps                       | 109             |      |      | 59          |     |    | 40          |     |    |
| Outdoor Fan Motors (6)                      | Full Load Amps                          | 2.4             |      |      | 1.3         |     |    | 1           |     |    |
|                                             | (total)                                 | (14.4)          |      |      | (7.8)       |     |    | (6)         |     |    |
| Standard Power Exhaust (3) 0.33 HP          | Full Load Amps                          | 2.4             |      |      | 1.3         |     |    | 1           |     |    |
|                                             | (total)                                 | (7.2)           |      |      | (3.9)       |     |    | (3)         |     |    |
| High Static Power Exhaust (3) 2 HP          | Full Load Amps                          | 7.5             |      |      | 3.4         |     |    | 2.7         |     |    |
|                                             | (total)                                 | (22.5)          |      |      | (10.2)      |     |    | (8.1)       |     |    |
| Service Outlet 115V GFI (amps)              |                                         | 15              |      |      | 15          |     |    | 20          |     |    |
| Indoor Blower Motor                         | Horsepower                              | 5               | 7.5  | 10   | 5           | 7.5 | 10 | 5           | 7.5 | 10 |
|                                             | Full Load Amps                          | 16.7            | 24.2 | 30.8 | 7.6         | 11  | 14 | 6.1         | 9   | 11 |
| <sup>2</sup> Maximum Overcurrent Protection | Unit Only                               | 100             | 110  | 125  | 50          | 60  | 70 | 35          | 45  | 50 |
|                                             | With (3) 0.33 HP Standard Power Exhaust | 110             | 125  | 125  | 60          | 60  | 70 | 40          | 45  | 50 |
|                                             | With High Static Power Exhaust (3) 2 HP | 125             | 125  | 150  | 60          | 70  | 80 | 45          | 50  | 50 |
| <sup>3</sup> Minimum Circuit Ampacity       | Unit Only                               | 90              | 99   | 107  | 50          | 54  | 58 | 34          | 38  | 40 |
|                                             | With (3) 0.33 HP Standard Power Exhaust | 97              | 106  | 115  | 54          | 58  | 62 | 37          | 41  | 43 |
|                                             | With High Static Power Exhaust (3) 2 HP | 112             | 122  | 130  | 60          | 64  | 68 | 42          | 46  | 48 |

NOTE - All units have a minimum Short Circuit Current Rating (SCCR) of 5000 amps.

<sup>1</sup> Extremes of operating range are plus and minus 10% of line voltage.

<sup>2</sup> HACR type breaker or fuse.

<sup>3</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

# ELECTRICAL DATA HIGH EFFICIENCY - VARIABLE/MULTI-STAGE AIR VOLUME - 25 TON

| Model No.                                   |                                         | LGH300H4V, LGH300H4M |      |      |             |     |    |             |     |    |
|---------------------------------------------|-----------------------------------------|----------------------|------|------|-------------|-----|----|-------------|-----|----|
| <sup>1</sup> Voltage - 60hz                 |                                         | 208/230V - 3 Ph      |      |      | 460V - 3 Ph |     |    | 575V - 3 Ph |     |    |
| Compressor 1                                | Rated Load Amps                         | 22.4                 |      |      | 10.6        |     |    | 7.7         |     |    |
|                                             | Locked Rotor Amps                       | 149                  |      |      | 75          |     |    | 54          |     |    |
| Compressor 2                                | Rated Load Amps                         | 22.4                 |      |      | 10.6        |     |    | 7.7         |     |    |
|                                             | Locked Rotor Amps                       | 149                  |      |      | 75          |     |    | 54          |     |    |
| Compressor 3                                | Rated Load Amps                         | 22.4                 |      |      | 10.6        |     |    | 7.7         |     |    |
|                                             | Locked Rotor Amps                       | 149                  |      |      | 75          |     |    | 54          |     |    |
| Compressor 4                                | Rated Load Amps                         | 22.4                 |      |      | 10.6        |     |    | 7.7         |     |    |
|                                             | Locked Rotor Amps                       | 149                  |      |      | 75          |     |    | 54          |     |    |
| Outdoor Fan Motors (6)                      | Full Load Amps                          | 2.4                  |      |      | 1.3         |     |    | 1           |     |    |
|                                             | (total)                                 | (14.4)               |      |      | (7.8)       |     |    | (6)         |     |    |
| Standard Power Exhaust (3) 0.33 HP          | Full Load Amps                          | 2.4                  |      |      | 1.3         |     |    | 1           |     |    |
|                                             | (total)                                 | (7.2)                |      |      | (3.9)       |     |    | (3)         |     |    |
| High Static Power Exhaust (3) 2 HP          | Full Load Amps                          | 7.5                  |      |      | 3.4         |     |    | 2.7         |     |    |
|                                             | (total)                                 | (22.5)               |      |      | (10.2)      |     |    | (8.1)       |     |    |
| Service Outlet 115V GFI (amps)              |                                         | 15                   |      |      | 15          |     |    | 20          |     |    |
| Indoor Blower Motor                         | Horsepower                              | 5                    | 7.5  | 10   | 5           | 7.5 | 10 | 5           | 7.5 | 10 |
|                                             | Full Load Amps                          | 16.7                 | 24.2 | 30.8 | 7.6         | 11  | 14 | 6.1         | 9   | 11 |
| <sup>2</sup> Maximum Overcurrent Protection | Unit Only                               | 150                  | 150  | 150  | 70          | 70  | 80 | 50          | 50  | 60 |
|                                             | With (3) 0.33 HP Standard Power Exhaust | 150                  | 150  | 175  | 70          | 70  | 80 | 50          | 60  | 60 |
|                                             | With High Static Power Exhaust (3) 2 HP | 150                  | 175  | 175  | 80          | 80  | 90 | 60          | 60  | 60 |
| <sup>3</sup> Minimum Circuit Ampacity       | Unit Only                               | 127                  | 135  | 143  | 61          | 64  | 68 | 45          | 49  | 51 |
|                                             | With (3) 0.33 HP Standard Power Exhaust | 134                  | 142  | 150  | 65          | 68  | 72 | 48          | 52  | 54 |
|                                             | With High Static Power Exhaust (3) 2 HP | 149                  | 157  | 165  | 71          | 75  | 78 | 53          | 57  | 59 |

NOTE - All units have a minimum Short Circuit Current Rating (SCCR) of 5000 amps.

<sup>1</sup> Extremes of operating range are plus and minus 10% of line voltage.

<sup>2</sup> HACR type breaker or fuse.

<sup>3</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

# ELECTRICAL DATA HIGH EFFICIENCY - VARIABLE/MULTI-STAGE AIR VOLUME - 30 TON

| Model No.                                   |                                         | LGH360H4V, LGH360H4M |      |      |               |     |    |              |     |    |
|---------------------------------------------|-----------------------------------------|----------------------|------|------|---------------|-----|----|--------------|-----|----|
| <sup>1</sup> Voltage - 60hz                 |                                         | 208/230V - 3 Ph      |      |      | 460V - 3 Ph   |     |    | 575V - 3 Ph  |     |    |
| Compressor 1                                | Rated Load Amps                         | 25                   |      |      | 12.2          |     |    | 9            |     |    |
|                                             | Locked Rotor Amps                       | 164                  |      |      | 100           |     |    | 78           |     |    |
| Compressor 2                                | Rated Load Amps                         | 25                   |      |      | 12.2          |     |    | 9            |     |    |
|                                             | Locked Rotor Amps                       | 164                  |      |      | 100           |     |    | 78           |     |    |
| Compressor 3                                | Rated Load Amps                         | 25                   |      |      | 12.2          |     |    | 9            |     |    |
|                                             | Locked Rotor Amps                       | 164                  |      |      | 100           |     |    | 78           |     |    |
| Compressor 4                                | Rated Load Amps                         | 25                   |      |      | 12.2          |     |    | 9            |     |    |
|                                             | Locked Rotor Amps                       | 164                  |      |      | 100           |     |    | 78           |     |    |
| Outdoor Fan Motors (6)                      | Full Load Amps                          | 2.4                  |      |      | 1.3           |     |    | 1            |     |    |
|                                             | (total)                                 | (14.4)               |      |      | (7.8)         |     |    | (6)          |     |    |
| Standard Power Exhaust (3) 0.33 HP          | Full Load Amps                          | 2.4                  |      |      | 1.3           |     |    | 1            |     |    |
|                                             | (total)                                 | (7.2)                |      |      | (3.9)         |     |    | (3)          |     |    |
| High Static Power Exhaust (3) 2 HP          |                                         | 7.5<br>(22.5)        |      |      | 3.4<br>(10.2) |     |    | 2.7<br>(8.1) |     |    |
| Service Outlet 115V GFI (amps)              |                                         | 15                   |      |      | 15            |     |    | 20           |     |    |
| Indoor Blower Motor                         | Horsepower                              | 5                    | 7.5  | 10   | 5             | 7.5 | 10 | 5            | 7.5 | 10 |
|                                             | Full Load Amps                          | 16.7                 | 24.2 | 30.8 | 7.6           | 11  | 14 | 6.1          | 9   | 11 |
| <sup>2</sup> Maximum Overcurrent Protection | Unit Only                               | 150                  | 150  | 175  | 70            | 80  | 80 | 60           | 60  | 60 |
|                                             | With (3) 0.33 HP Standard Power Exhaust | 150                  | 175  | 175  | 80            | 80  | 90 | 60           | 60  | 60 |
|                                             | With High Static Power Exhaust (3) 2 HP | 175                  | 175  | 200  | 80            | 90  | 90 | 60           | 70  | 70 |
| <sup>3</sup> Minimum Circuit Ampacity       | Unit Only                               | 138                  | 145  | 153  | 68            | 71  | 75 | 51           | 54  | 56 |
|                                             | With (3) 0.33 HP Standard Power Exhaust | 145                  | 153  | 161  | 72            | 75  | 78 | 54           | 57  | 59 |
|                                             | With High Static Power Exhaust (3) 2 HP | 160                  | 168  | 176  | 78            | 81  | 85 | 59           | 62  | 64 |

NOTE - All units have a minimum Short Circuit Current Rating (SCCR) of 5000 amps.

<sup>1</sup> Extremes of operating range are plus and minus 10% of line voltage.

<sup>2</sup> HACR type breaker or fuse.

<sup>3</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

# ELECTRICAL ACCESSORIES HIGH EFFICIENCY - 20 TON

| Model No.                      | LGH242H4                                  |       |       |       |       |       |       |       |       |
|--------------------------------|-------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Voltage - 60hz - 3 phase       | 208/230V                                  |       |       | 460V  |       |       | 575V  |       |       |
| Indoor Blower Motor Horsepower | 5                                         | 7.5   | 10    | 5     | 7.5   | 10    | 5     | 7.5   | 10    |
| Disconnect                     | Unit Only                                 | 54W89 | 54W89 | 54W89 | 54W88 | 54W88 | 54W88 | 54W88 | 54W88 |
|                                | Unit + Standard Power Exhaust (3) 0.33 HP | 54W89 | 54W89 | 54W89 | 54W88 | 54W88 | 54W88 | 54W88 | 54W88 |
|                                | Unit + High Static Power Exhaust (3) 2 HP | 54W89 | 54W89 | 54W89 | 54W88 | 54W88 | 54W88 | 54W88 | 54W88 |
| Terminal Block                 | 30K75                                     | 30K75 | 30K75 | 30K75 | 30K75 | 30K75 | 30K75 | 30K75 | 30K75 |

# ELECTRICAL ACCESSORIES HIGH EFFICIENCY - 25 TON

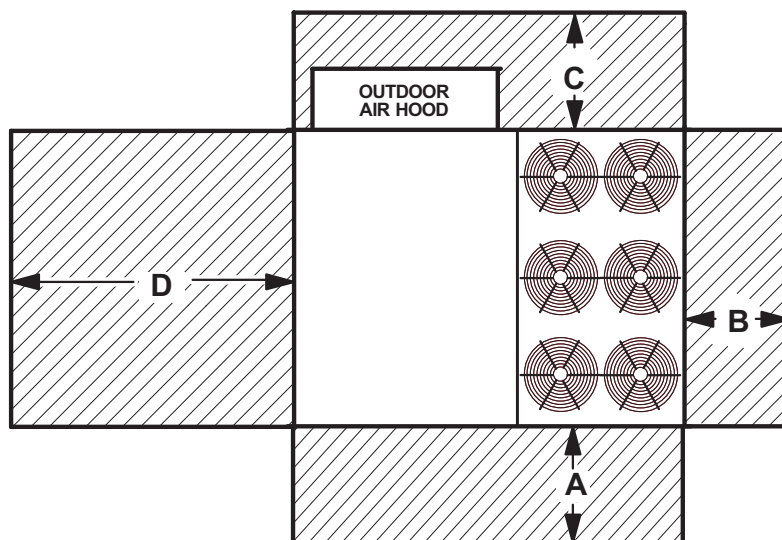
| Model No.                      | LGH300H4                                  |       |       |       |       |       |       |       |       |
|--------------------------------|-------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Voltage - 60hz - 3 phase       | 208/230V                                  |       |       | 460V  |       |       | 575V  |       |       |
| Indoor Blower Motor Horsepower | 5                                         | 7.5   | 10    | 5     | 7.5   | 10    | 5     | 7.5   | 10    |
| Disconnect                     | Unit Only                                 | 54W89 | 54W89 | 90W82 | 54W88 | 54W88 | 54W88 | 54W88 | 54W88 |
|                                | Unit + Standard Power Exhaust (3) 0.33 HP | 54W89 | 90W82 | 90W82 | 54W88 | 54W88 | 54W88 | 54W88 | 54W88 |
|                                | Unit + High Static Power Exhaust (3) 2 HP | 90W82 | 90W82 | 90W82 | 54W88 | 54W89 | 54W89 | 54W88 | 54W88 |
| Terminal Block                 | 30K75                                     | 30K75 | 30K75 | 30K75 | 30K75 | 30K75 | 30K75 | 30K75 | 30K75 |

# ELECTRICAL ACCESSORIES HIGH EFFICIENCY - 30 TON

| Model No.                      | LGH360H4                                  |       |       |       |       |       |       |       |       |
|--------------------------------|-------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Voltage - 60hz - 3 phase       | 208/230V                                  |       |       | 460V  |       |       | 575V  |       |       |
| Indoor Blower Motor Horsepower | 5                                         | 7.5   | 10    | 5     | 7.5   | 10    | 5     | 7.5   | 10    |
| Disconnect                     | Unit Only                                 | 90W82 | 90W82 | 90W82 | 54W88 | 54W88 | 54W89 | 54W88 | 54W88 |
|                                | Unit + Standard Power Exhaust (3) 0.33 HP | 90W82 | 90W82 | 90W82 | 54W88 | 54W89 | 54W89 | 54W88 | 54W88 |
|                                | Unit + High Static Power Exhaust (3) 2 HP | 90W82 | 90W82 | 90W82 | 54W89 | 54W89 | 54W89 | 54W88 | 54W88 |
| Terminal Block                 | 30K75                                     | 30K75 | 30K75 | 30K75 | 30K75 | 30K75 | 30K75 | 30K75 | 30K75 |

## UNIT CLEARANCES

### Unit With Economizer



| <sup>1</sup> Unit Clearance        | A   |      | B   |     | C   |     | D   |      | Top Clearance |
|------------------------------------|-----|------|-----|-----|-----|-----|-----|------|---------------|
|                                    | in. | mm   | in. | mm  | in. | mm  | in. | mm   |               |
| <b>Service Clearance</b>           | 60  | 1524 | 36  | 914 | 36  | 914 | 66  | 1676 | Unobstructed  |
| <b>Clearance to Combustibles</b>   | 36  | 914  | 1   | 25  | 1   | 25  | 1   | 25   |               |
| <b>Minimum Operation Clearance</b> | 45  | 1143 | 36  | 914 | 36  | 914 | 41  | 1041 |               |

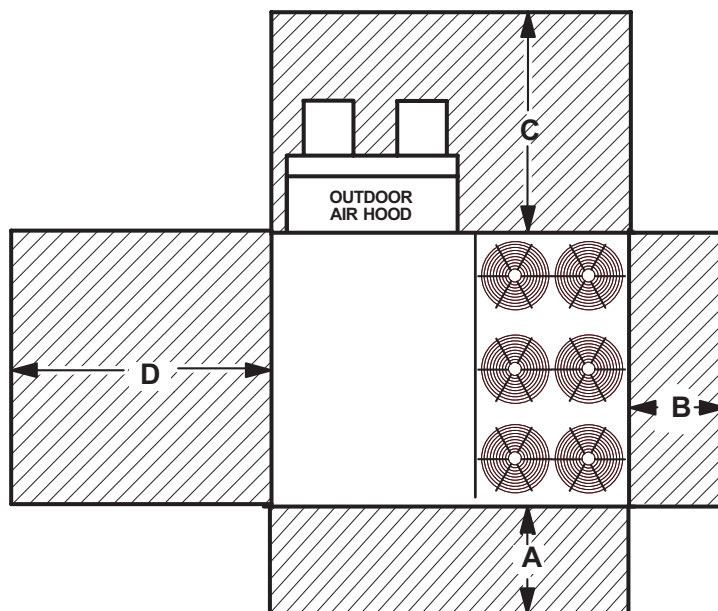
NOTE - Entire perimeter of unit base requires support when elevated above the mounting surface.

<sup>1</sup> Service Clearance - Required for removal of serviceable parts.

Clearance to Combustibles - Required clearance to combustible material.

Minimum Operation Clearance - Required clearance for proper unit operation.

### Unit With High Static Power Exhaust Fans



| <sup>1</sup> Unit Clearance        | A   |      | B   |     | C   |      | D   |      | Top Clearance |
|------------------------------------|-----|------|-----|-----|-----|------|-----|------|---------------|
|                                    | in. | mm   | in. | mm  | in. | mm   | in. | mm   |               |
| <b>Service Clearance</b>           | 60  | 1524 | 36  | 914 | 80  | 2032 | 66  | 1676 | Unobstructed  |
| <b>Clearance to Combustibles</b>   | 36  | 914  | 1   | 25  | 1   | 25   | 1   | 25   |               |
| <b>Minimum Operation Clearance</b> | 45  | 1143 | 36  | 914 | 80  | 2032 | 41  | 1041 |               |

NOTE - Entire perimeter of unit base requires support when elevated above the mounting surface.

<sup>1</sup> Service Clearance - Required for removal of serviceable parts.

Clearance to Combustibles - Required clearance to combustible material.

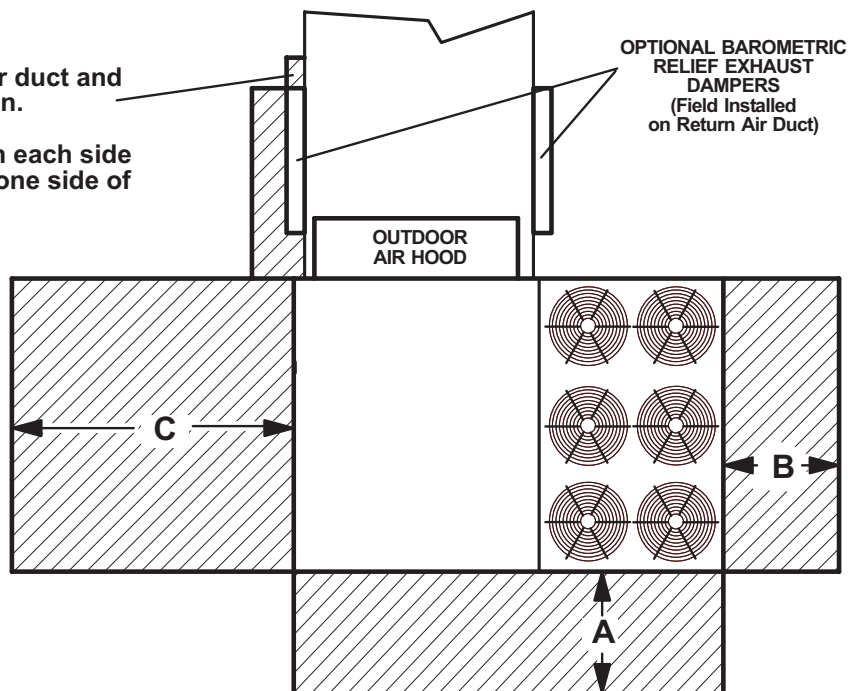
Minimum Operation Clearance - Required clearance for proper unit operation.

## UNIT CLEARANCES

### Unit With Horizontal Barometric Relief Dampers

**NOTE** Allow adequate clearance for duct and barometric relief damper installation.

**NOTE** Dampers may be installed on each side of return air duct or end to end on one side of return air duct.



| <sup>1</sup> Unit Clearance        | A   |      | B   |     | C   |      | Top Clearance |
|------------------------------------|-----|------|-----|-----|-----|------|---------------|
|                                    | in. | mm   | in. | mm  | in. | mm   |               |
| <b>Service Clearance</b>           | 60  | 1524 | 36  | 914 | 66  | 1676 | Unobstructed  |
| <b>Clearance to Combustibles</b>   | 36  | 914  | 1   | 25  | 1   | 25   |               |
| <b>Minimum Operation Clearance</b> | 45  | 1143 | 36  | 914 | 41  | 1041 |               |

NOTE - Entire perimeter of unit base requires support when elevated above the mounting surface.

<sup>1</sup> **Service Clearance** - Required for removal of serviceable parts.

**Clearance to Combustibles** - Required clearance to combustible material.

**Minimum Operation Clearance** - Required clearance for proper unit operation.

## OUTDOOR SOUND DATA

| Unit Model Number | Octave Band Sound Power Levels dBA, re 10 <sup>-12</sup> Watts - Center Frequency - Hz |     |     |      |      |      |      | <sup>1</sup> Sound Rating Number (dBA) |
|-------------------|----------------------------------------------------------------------------------------|-----|-----|------|------|------|------|----------------------------------------|
|                   | 125                                                                                    | 250 | 500 | 1000 | 2000 | 4000 | 8000 |                                        |
| 242, 300, 360     | 84                                                                                     | 85  | 90  | 90   | 85   | 80   | 72   | 95                                     |

Note - The octave sound power data does not include tonal corrections.

<sup>1</sup> Sound Rating Number according to ARI Standard 370-2001 (includes pure tone penalty).

The Sound Rating Number is the overall A-Weighted Sound Power Level, (LWA), dB (100 Hz to 10,000 Hz)

## WEIGHT DATA

| Model Number  | Net  |      | Shipping |      |
|---------------|------|------|----------|------|
|               | lbs. | kg   | lbs.     | kg   |
| 242 Base Unit | 3107 | 1435 | 3317     | 1505 |
| 242 Max. Unit | 3485 | 1581 | 3695     | 1676 |
| 300 Base Unit | 3107 | 1435 | 3317     | 1505 |
| 300 Max. Unit | 3585 | 1626 | 3795     | 1721 |
| 360 Base Unit | 3107 | 1435 | 3317     | 1505 |
| 360 Max. Unit | 3585 | 1626 | 3795     | 1721 |

## OPTIONS / ACCESSORIES

| Description                                      |             | Shipping Weight |     |
|--------------------------------------------------|-------------|-----------------|-----|
|                                                  |             | lbs.            | kg  |
| CEILING DIFFUSERS                                |             |                 |     |
| Step-Down                                        | LARTD30/36S | 625             | 283 |
| Flush                                            | LAFD30/36S  | 625             | 283 |
| Transitions                                      | LASRT30/36  | 85              | 39  |
| ECONOMIZER / OUTDOOR AIR / EXHAUST               |             |                 |     |
| Economizer                                       |             | 138             | 63  |
| Barometric Relief                                |             |                 |     |
| Downflow Barometric Relief Dampers               |             | 45              | 20  |
| Horizontal Barometric Relief Dampers             |             | 20              | 9   |
| Outdoor Air Dampers                              |             |                 |     |
| Damper Section (downflow)                        | Motorized   | 72              | 33  |
| Damper Section (downflow)                        | Manual      | 68              | 31  |
| Outdoor Air Hood (downflow)                      |             | 76              | 34  |
| Power Exhaust                                    |             |                 |     |
| Standard Static                                  |             | 99              | 45  |
| High Static with or without VFD                  |             | 525             | 238 |
| GAS HEAT EXCHANGER (NET WEIGHT)                  |             |                 |     |
| Medium Heat (adder over standard heat)           |             | 18              | 8   |
| High Heat (adder over standard heat)             |             | 64              | 29  |
| HUMIDITROL® DEHUMIDIFICATION SYSTEM              |             |                 |     |
| Humiditrol® Dehumidification Option (Net Weight) |             | 100             | 45  |
| ROOF CURBS                                       |             |                 |     |
| Hybrid Roof Curbs, Downflow                      |             |                 |     |
| 14 in. height                                    |             | 205             | 93  |
| 18 in. height                                    |             | 235             | 107 |
| 24 in. height                                    |             | 270             | 123 |
| Standard Curbs, Horizontal                       |             |                 |     |
| 30 in. height                                    |             | 495             | 225 |
| 41 in. height                                    |             | 575             | 261 |
| Insulation Kit for Horizontal Curbs              |             |                 |     |
| 30 in. height                                    |             | 45              | 21  |
| 41 in. height                                    |             | 55              | 25  |

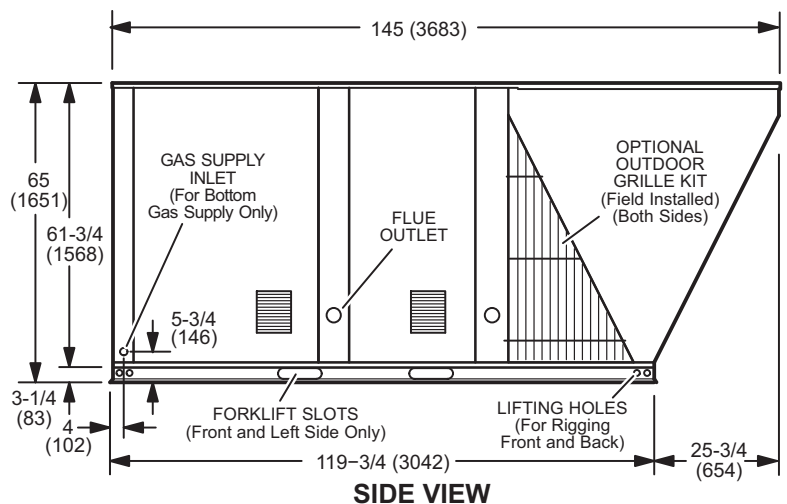
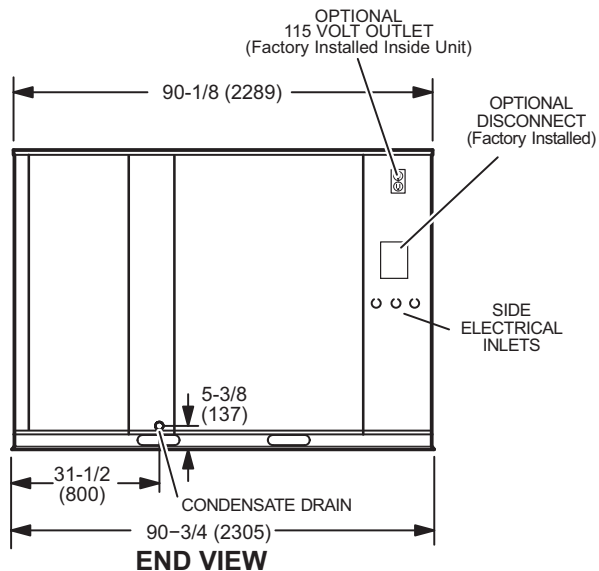
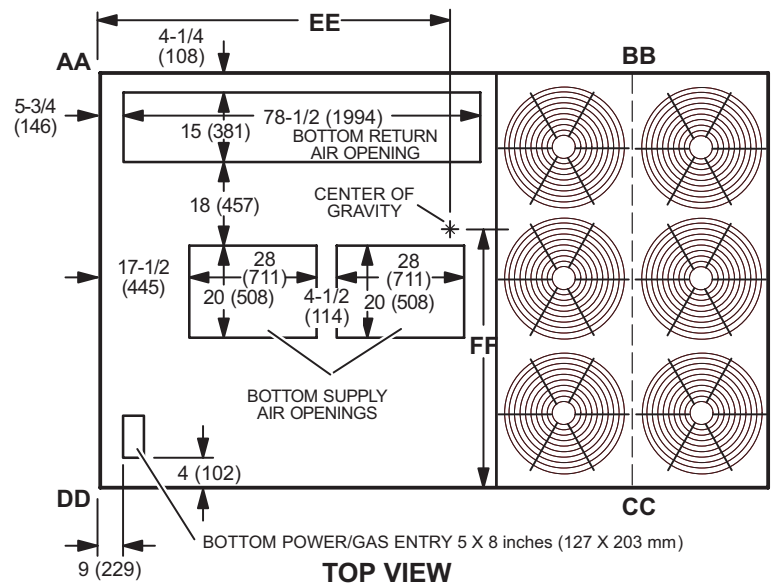
## DIMENSIONS - UNIT

### CORNER WEIGHTS

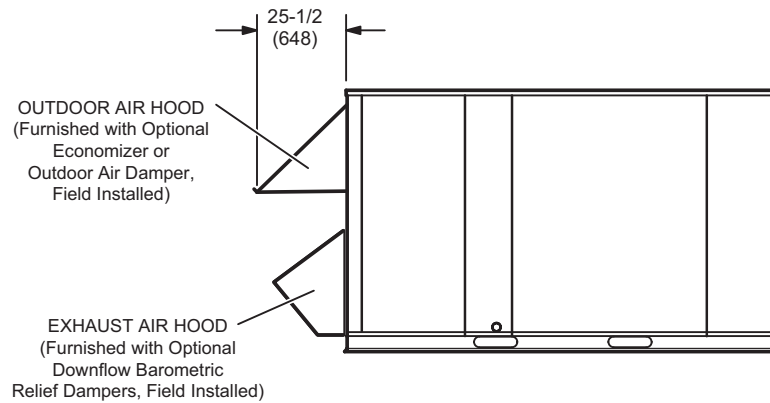
| Model No.        | AA   |     | BB   |     | CC   |     | DD   |     | CENTER OF GRAVITY |      | FF  |     |
|------------------|------|-----|------|-----|------|-----|------|-----|-------------------|------|-----|-----|
|                  | lbs. | kg  | lbs. | kg  | lbs. | kg  | lbs. | kg  | in.               | mm   | in. | mm  |
| LGH242 Base Unit | 632  | 287 | 635  | 288 | 912  | 414 | 928  | 421 | 60                | 1524 | 37  | 940 |
| LGH242 Max. Unit | 709  | 322 | 712  | 323 | 1023 | 464 | 1041 | 472 | 60                | 1524 | 37  | 940 |
| LGH300 Base Unit | 632  | 287 | 635  | 288 | 912  | 414 | 928  | 421 | 60                | 1524 | 37  | 940 |
| LGH300 Max. Unit | 709  | 322 | 712  | 323 | 1023 | 464 | 1041 | 472 | 60                | 1524 | 37  | 940 |
| LGH360 Base Unit | 632  | 287 | 635  | 288 | 912  | 414 | 928  | 421 | 60                | 1524 | 37  | 940 |
| LGH360 Max. Unit | 709  | 322 | 712  | 323 | 1023 | 464 | 1041 | 472 | 60                | 1524 | 37  | 940 |

Base Unit - The unit with NO INTERNAL OPTIONS.

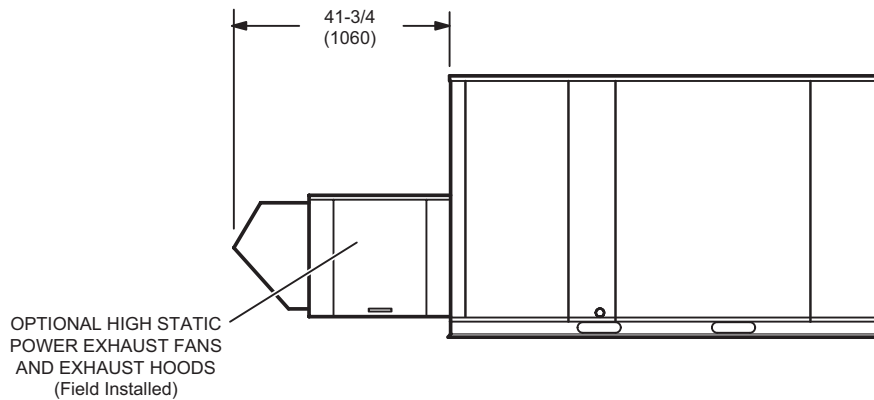
Max. Unit - The unit with ALL INTERNAL OPTIONS Installed. (Economizer, Standard Static Power Exhaust, Controls, etc.). Does not include accessories external to unit or high static power exhaust.



**OUTDOOR AIR HOOD DETAIL**

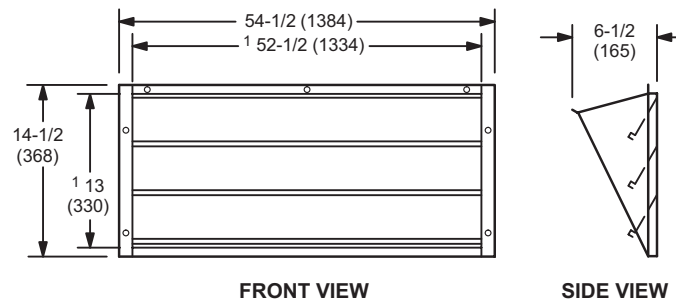


**OPTIONAL HIGH STATIC POWER EXHAUST FANS DETAIL**



**OPTIONAL HORIZONTAL BAROMETRIC RELIEF DAMPERS WITH HOOD**

(Field installed in horizontal return air duct adjacent to unit)



**FRONT VIEW**

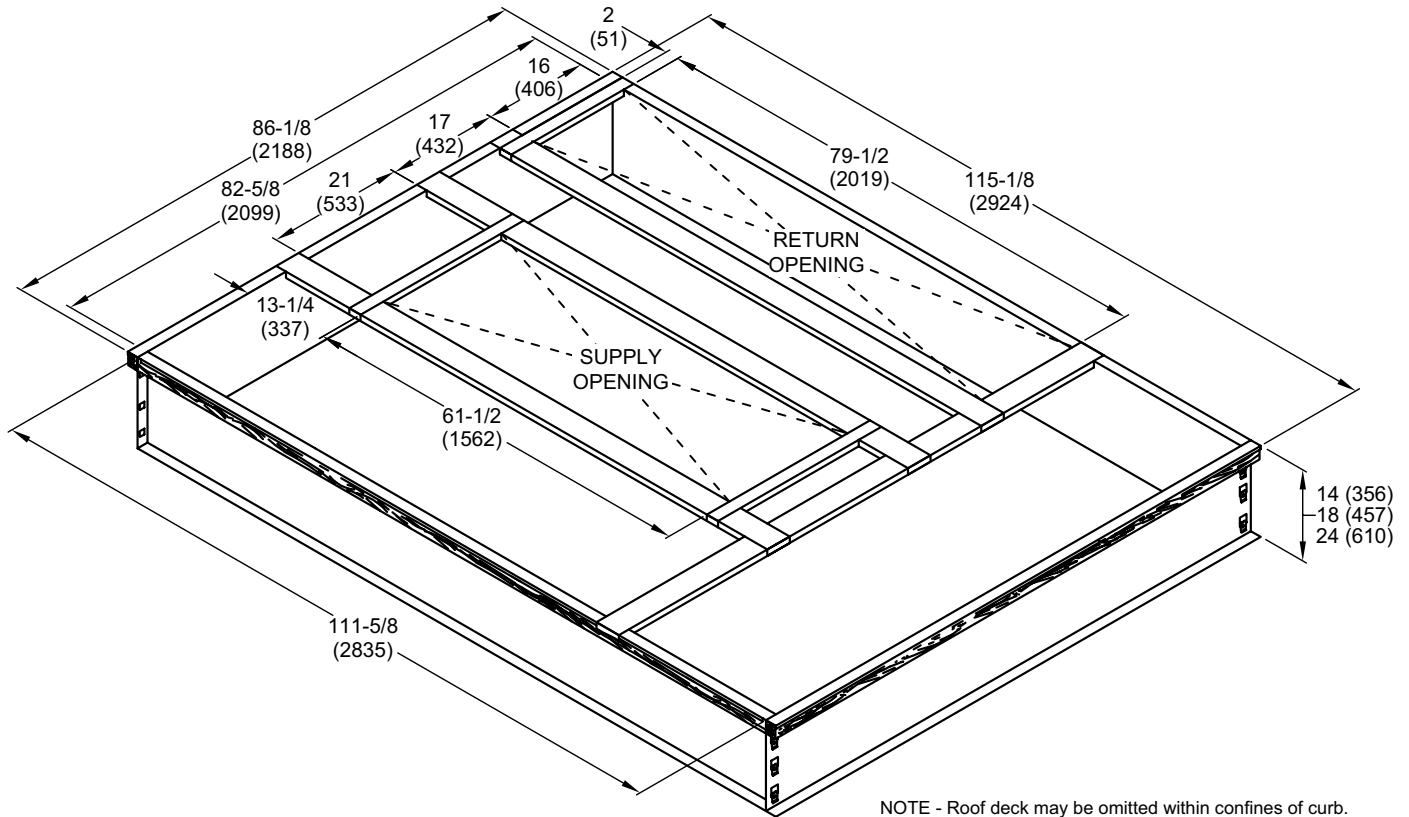
**SIDE VIEW**

NOTE - Two furnished per order no.

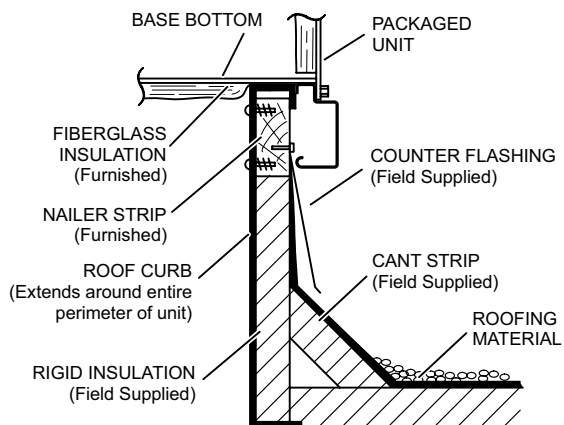
<sup>1</sup> NOTE - Opening size required in return air duct.

## DIMENSIONS - ACCESSORIES

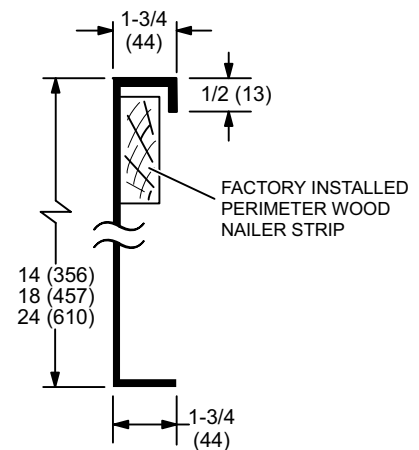
### HYBRID ROOF CURBS - DOUBLE DUCT OPENING



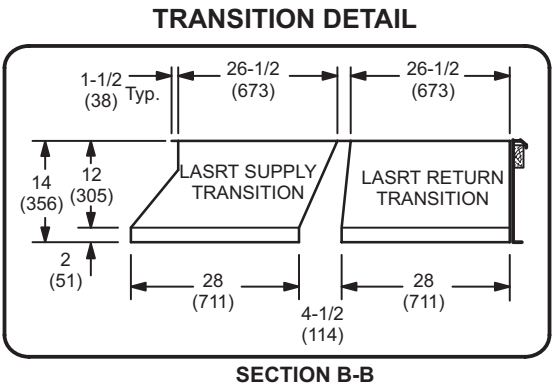
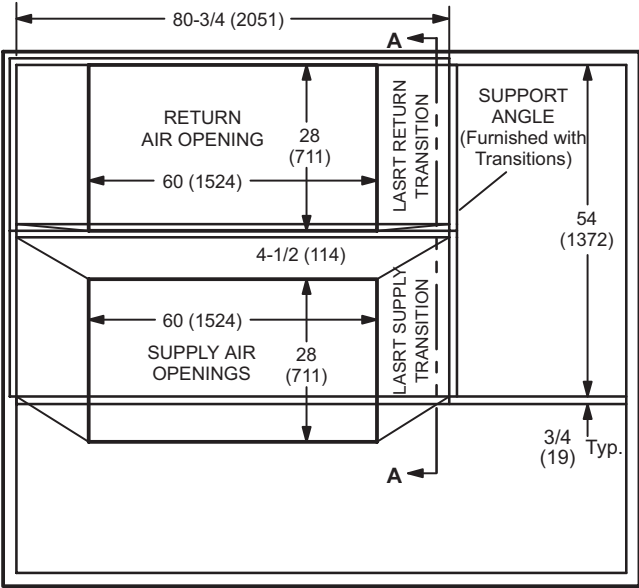
#### TYPICAL FLASHING DETAIL FOR ROOF CURB



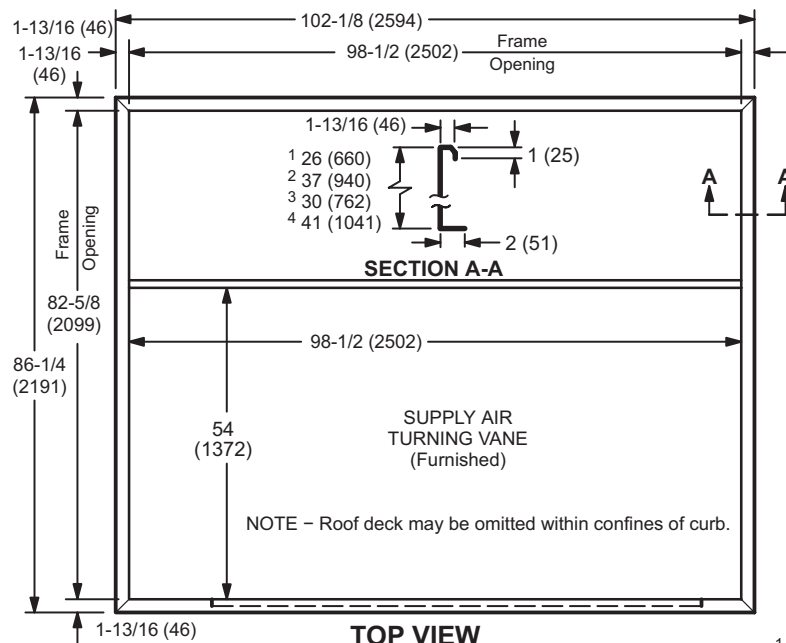
#### DETAIL ROOF CURB



ROOF CURBS WITH SUPPLY & RETURN AIR TRANSITIONS FOR CEILING DIFFUSERS

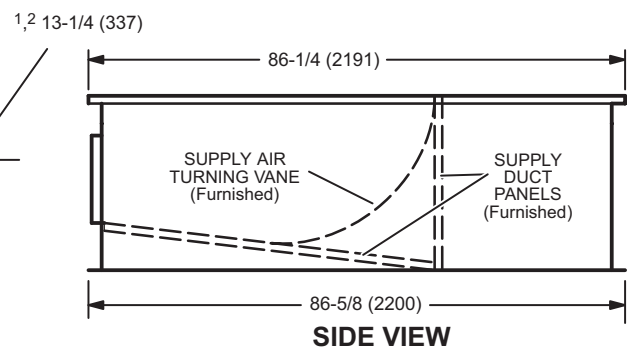
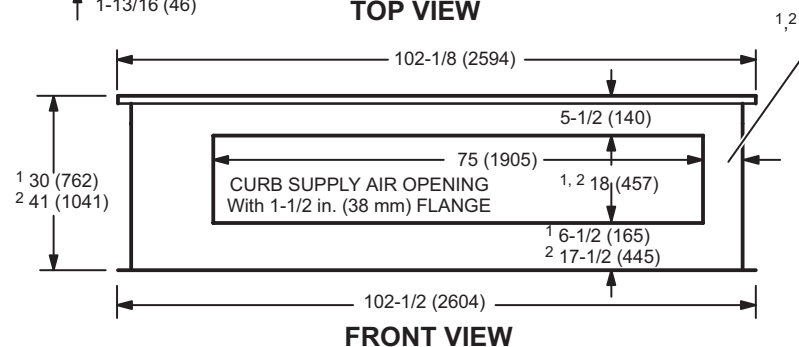
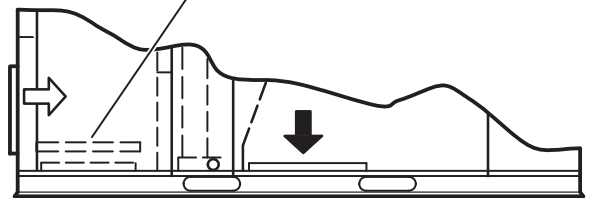


## HORIZONTAL ROOF CURBS – Requires Optional Horizontal Return Air Panel Kit



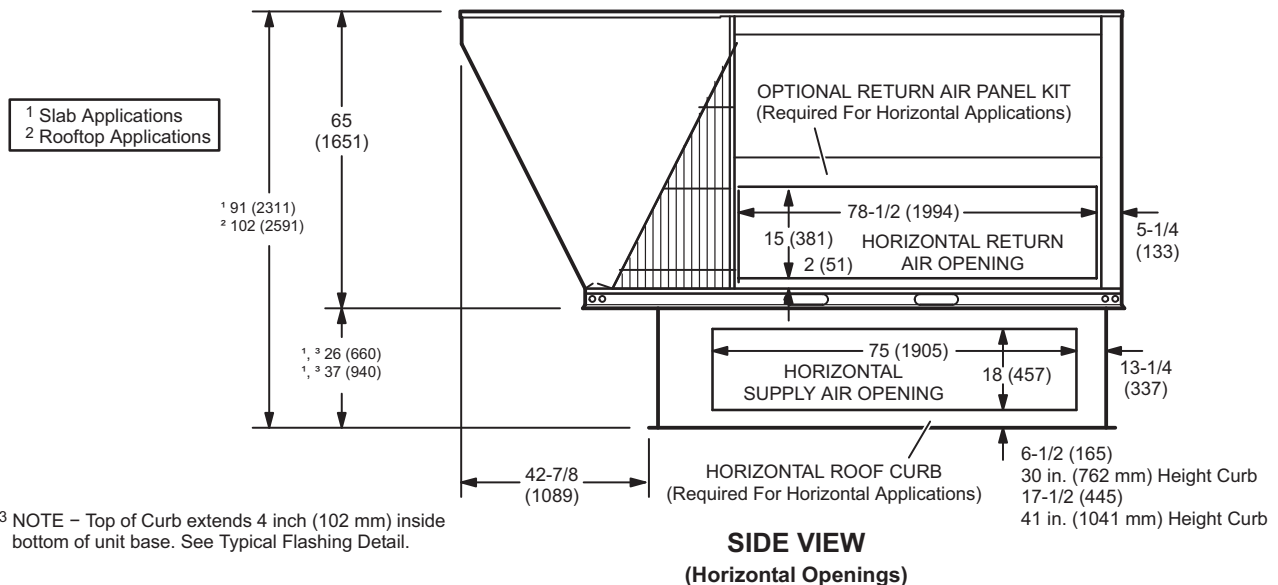
NOTE - 30 in. (762 mm) height Curb is designed for horizontal discharge when unit is mounted on a slab.  
41 in. (1041 mm) height Curb is designed for horizontal discharge when unit is mounted on a rooftop.

PANEL TO COVER RETURN AIR OPENING IN BOTTOM OF UNIT  
(Furnished With Optional Horizontal Return Air Panel Kit)



<sup>1</sup> Slab Applications <sup>2</sup> Rooftop Applications

## HORIZONTAL SUPPLY AND RETURN AIR OPENINGS ROOFTOP UNIT WITH HORIZONTAL ROOF CURB

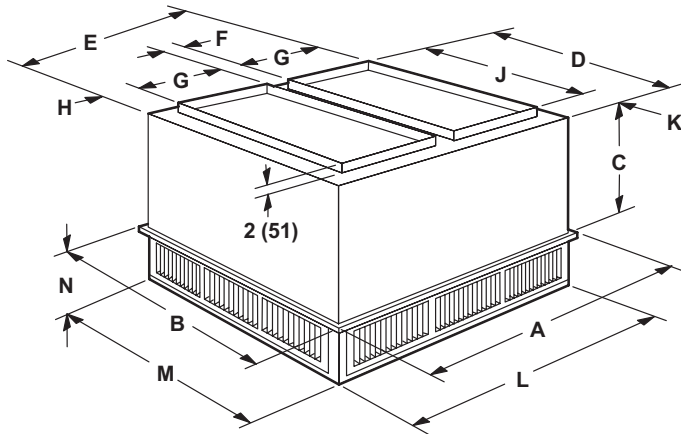


<sup>3</sup> NOTE – Top of Curb extends 4 inch (102 mm) inside bottom of unit base. See Typical Flashing Detail.

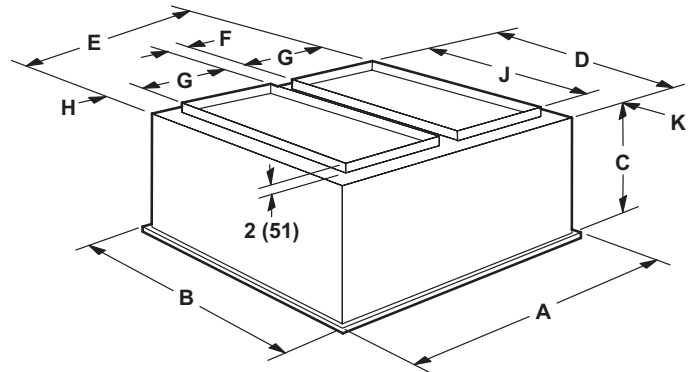
## DIMENSIONS - ACCESSORIES

### COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

#### STEP-DOWN CEILING DIFFUSER



#### FLUSH CEILING DIFFUSER



| Model Number |     | LARTD30/36S |
|--------------|-----|-------------|
| A            | in. | 65-5/8      |
|              | mm  | 1667        |
| B            | in. | 65-5/8      |
|              | mm  | 1667        |
| C            | in. | 40-1/2      |
|              | mm  | 1029        |
| D            | in. | 63-1/2      |
|              | mm  | 1613        |
| E            | in. | 63-1/2      |
|              | mm  | 1613        |
| F            | in. | 4-1/2       |
|              | mm  | 114         |
| G            | in. | 28          |
|              | mm  | 711         |
| H            | in. | 1-1/2       |
|              | mm  | 38          |
| J            | in. | 60          |
|              | mm  | 1524        |
| K            | in. | 1-3/4       |
|              | mm  | 44          |
| L            | in. | 63-1/2      |
|              | mm  | 1613        |
| M            | in. | 63-1/2      |
|              | mm  | 1613        |
| N            | in. | 12-1/8      |
|              | mm  | 308         |
| Duct Size    | in. | 28 x 60     |
|              | mm  | 711 x 1524  |

| Model Number |     | LAFD30/36S |
|--------------|-----|------------|
| A            | in. | 65-5/8     |
|              | mm  | 1667       |
| B            | in. | 65-5/8     |
|              | mm  | 1667       |
| C            | in. | 40         |
|              | mm  | 1016       |
| D            | in. | 63-1/2     |
|              | mm  | 1613       |
| E            | in. | 63-1/2     |
|              | mm  | 1613       |
| F            | in. | 4-1/4      |
|              | mm  | 108        |
| G            | in. | 28         |
|              | mm  | 711        |
| H            | in. | 1-5/8      |
|              | mm  | 32         |
| J            | in. | 60         |
|              | mm  | 1524       |
| K            | in. | 1-3/4      |
|              | mm  | 44         |
| Duct Size    | in. | 28 x 60    |
|              | mm  | 711 x 1524 |



## REVISIONS

| Sections            | Description of Change          |
|---------------------|--------------------------------|
| Options/Accessories | Blower Proving Switch updated. |
| Weights             | Roof Curb weights updated.     |



**Intertek**

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