



PACKAGED GAS ELECTRIC

**LGH**

**E-Series™ Rooftop Units**  
**60 HZ**

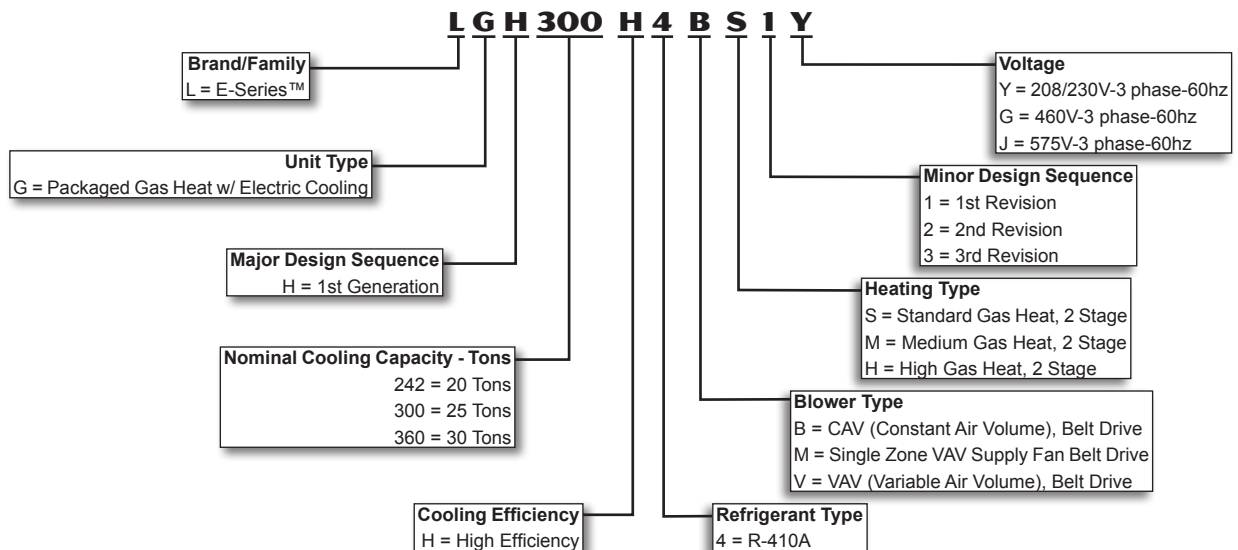
**PRODUCT SPECIFICATIONS**

Bulletin No. LGH-242-360 (6/2019)

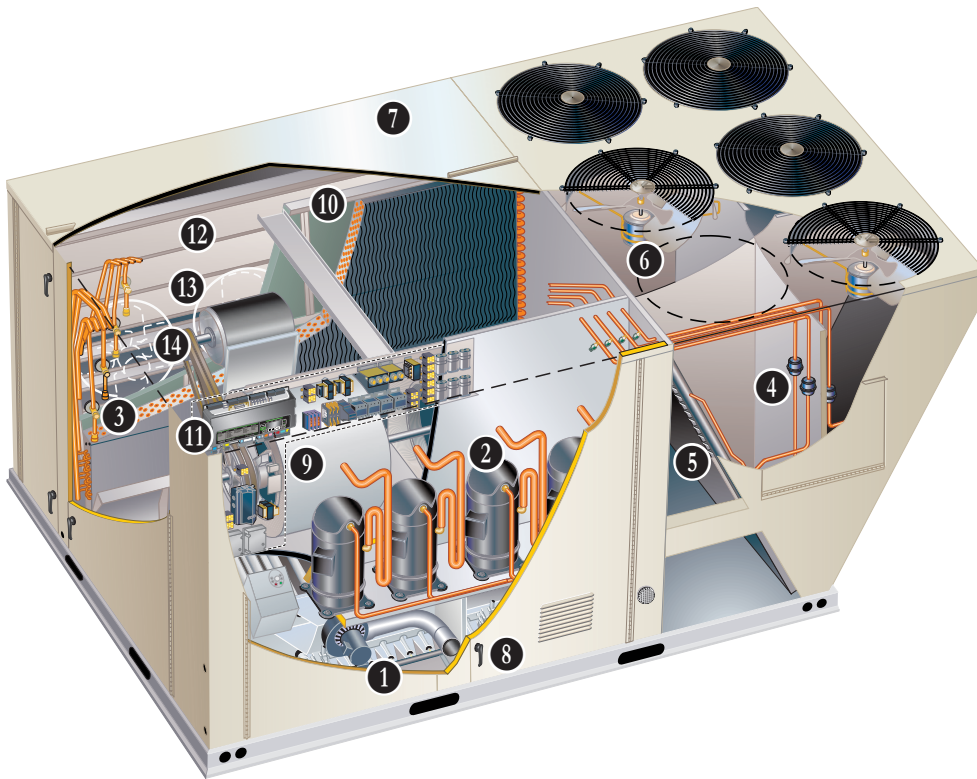


**20 to 30 Tons**  
**Net Cooling Capacity - 238,000 to 354,000 Btuh**  
**Gas Input Heat Capacity - 260,000 to 480,000 Btuh**

**MODEL NUMBER IDENTIFICATION**



## FEATURES AND BENEFITS



E-Series™ 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 E-Series™ rooftop units perfect for business owners looking for an HVAC product with the lowest total cost of ownership.

E-Series™ rooftop units feature:

- **Hinged Access Panels** - Provide quick access to components and protect panels and roof from damage during servicing.
- **Isolated Compressor Compartment** - Allows performance check during normal compressor operation without disrupting airflow.
- **Corrosion-Resistant Removable Drain Pan** - Provides improved serviceability.
- **Thermostatic Expansion Valves** - Provide peak cooling performance across the entire application range.
- **Scroll Compressors** - Standard on all units for reliable, long-term operation.
- **Eco-Last™ Coil System** - Smaller, lighter condenser coil.
- **Constant Air Volume (CAV), Variable Air Volume (VAV) Blower Option or Single Zone VAV Supply Fan** - Allows constant air, variable air or multi-staged air delivery.
- **Auto-Tensioner for Blower Belt** - Factory option ensures blower is delivering the proper airflow for comfort, while maximizing efficiency and belt life.
- **MERV 13 Filters** - Available as factory or field option, provide an enhanced level of indoor air quality, and can help the building qualify for additional LEED credits.
- **Foil-Faced Insulation** - Insulation on all internal surfaces that have contact with airflow helps minimize airborne fibers and improve IAQ.
- **Common Components** - Many maintenance items are standard throughout the entire product line, reducing the need to carry different parts to the job or maintain in inventory.

### Intelli-Guide™ Control System

Standard on every E-Series™ rooftop unit, the new Intelli-Guide™ unit controller is the heart of the Allied controls offering. The intuitive user interface makes setup, troubleshooting and service easier than ever. Each unit tracks the runtime of every major component and records the date and time when service or maintenance is performed.



### WireRight™ System

The WireRight™ system simplifies field sensor or thermostat installation through advanced connectors that are keyed and color-coded to help prevent miswiring. Not only is the wire coloring scheme standardized across all models, each connection is intuitively labeled to make troubleshooting and servicing quick and easy.

## FEATURES AND BENEFITS

### CONTENTS

Blower Data . . . . .	.30
Dimensions - Accessories. . . . .	.46
Dimensions - Unit . . . . .	.45
Electrical Accessories. . . . .	.39
Electrical Data. . . . .	.34
Features And Benefits . . . . .	2
High Altitude Derate . . . . .	.24
Model Number Identification . . . . .	1
Options / Accessories. . . . .	.18
Outdoor Sound Data . . . . .	.41
Control System . . . . .	8
Ratings . . . . .	.25
Sequence Of Operation. . . . .	.12
Specifications . . . . .	.22
Specifications - Gas Heat. . . . .	.24
Unit Clearances. . . . .	.40
Weight Data. . . . .	.44

### APPROVALS

242 models are AHRI Certified to AHRI Standard 340/360-2015.

300 and 360 models are tested at conditions included in AHRI Standard 340/360-2015.

ETL listed.

Units are certified by CSA International.

Components bonded for grounding to meet safety standards for servicing required by UL, ULC and National and Canadian Electrical Codes.

All models are ASHRAE 90.1 compliant.

All models meet DOE 2018 energy efficiency standards.

Single Zone VAV Supply Fan models meet California Code of Regulations, Title 24 requirements for staged airflow.

ENERGY STAR® certified units are designed to use less energy, help save money on utility bills, and help protect the environment.

ISO 9001 Registered Manufacturing Quality System.

### WARRANTY

Limited ten years aluminized heat exchanger, limited fifteen years optional stainless steel heat exchanger.

Limited five years on compressors.

Limited three years on the Eco-Last™ Coil System.

Limited three years on Intelli-Guide™ unit controller.

Limited five years Optional High Performance Economizers.

Limited one year all other covered components.

### HEATING SYSTEM

- 1 Aluminized steel inshot burners, direct spark ignition, electronic flame sensor, combustion air inducer, redundant automatic single or dual stage gas valve with manual shut-off.

#### Heat Exchanger

Tubular construction, aluminized steel, life cycle tested.

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

#### Electronic Pilot Ignition

Electronic spark igniter provides positive direct ignition of burners on each operating cycle. The system permits main gas valve to stay open only when the burners are proven to be lit. Should a loss of flame occur, the gas valve closes, shutting off the gas to the burners. Ignition module has LED to indicate status and aid in troubleshooting.

Ignition control is factory installed in the controls section.

#### Limit Controls

Factory installed, redundant limit controls with fixed temperature setting. Heat limit controls protect heat exchanger and other components from overheating.

#### Safety Switches

Flame roll-out switch, flame sensor and combustion air inducer proving switch protect 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 - Up to four stages of gas heating can be field configured on the Intelli-Guide™ unit controller. See Gas Heating Specifications table.*

## FEATURES AND BENEFITS

### HEATING SYSTEM (continued)

#### Options/Accessories

##### Factory Installed

##### Stainless Steel Heat Exchanger

Required if mixed air temperature is below 45°F.

##### Factory or 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.

##### 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. The vent kit also prevents ice formation on intake louvers.

Kit contains vent transition, vent tee, drain cap and installation hardware.

*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, R-410A.

#### 2 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.

#### 3 Thermal Expansion Valves

Assures optimal performance throughout the application range. Removable element head.

#### 4 Filter/Driers

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

##### High Pressure Switches

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

##### Low Pressure Switches

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

##### Freezestats

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

#### 5 Eco-Last™ Coil System

Condenser coil features lightweight, all aluminum brazed fin construction.

Constructed of three components:

a flat extrusion tube, fins in-between the flat extrusion tube and two refrigerant manifolds.

Eco-Last™ 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 (reduces unit weight).
- Easy maintenance/cleaning.

Face split design.

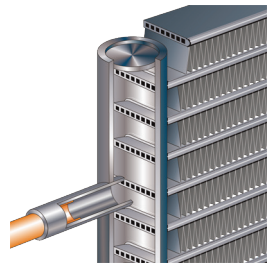
Mounting brackets with rubber inserts secure coil to unit providing vibration dampening and corrosion protection.

Angled design in cabinet helps protect coil from possible contact or hail damage.

##### Evaporator Coil

Copper tube construction, enhanced rippled-edge aluminum fins, flared shoulder tubing connections, silver soldered construction for improved heat transfer. Factory leak tested. Cross row circuiting with rifled tubing optimizes both sensible and latent cooling capacity. Low fin per inch count minimizes air pressure drop. Constant air volume (CAV) 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) and Single Zone VAV Supply Fan models have row-split evaporator coils.





## FEATURES AND BENEFITS

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

#### **Condensate Drain Pan**

Plastic pan, sloped to meet drainage requirements of ASHRAE 62.1.

Side drain connections.

Stainless steel drain pan available as a factory installed option.

#### **6 Outdoor Coil Fan Motors**

Thermal overload protected, totally enclosed, permanently lubricated ball bearings, shaft up, wire basket mount.

#### **Outdoor Coil Fans**

PVC coated fan guard furnished.

### **Required Selections**

#### **Cooling Capacity**

Specify nominal cooling capacity of the unit

### **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. Optional for CAV units (single zone or bypass zoning control). 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**

Field installed only, may be factory enclosed to ship with unit.

Available in copper or PVC.

#### **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**

#### **7 Construction**

Heavy-gauge steel panels and full perimeter heavy-gauge galvanized steel base rail provides structural integrity for transportation, handling, and installation.

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 provide additional protection against water entering the building.

#### **Airflow Choice**

Units are available in downflow (vertical) or horizontal return air flow configuration.

Horizontal air flow requires Horizontal Roof Curb.

Horizontal Return Air Panel Kit is also required if converting a downflow configured unit to horizontal air flow.

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

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

#### **Exterior Panels**

Constructed of heavy-gauge, galvanized steel with a two-layer enamel paint finish.

#### **Insulation**

All panels adjacent to conditioned air are fully insulated with non-hygroscopic fiberglass insulation.

Unit base is fully insulated. The insulation also serves as an air seal to the roof curb, eliminating the need to add a seal during installation.

#### **8 Hinged Access Panels**

Hinged tool-less access panels are provided for the filter section, the blower section and compressor/controls section.

All hinged panels have seals and quarter-turn latching handles to provide a tight air and water seal.

### **Options/Accessories**

#### **Factory Installed**

#### **Corrosion Protection**

A completely flexible immersed coating with an electrodeposited dry film process. (AST ElectroFin E-Coat) Meets Mil Spec MIL-P-53084, ASTM B117 Standard Method Salt Spray Testing.

Indoor Corrosion Protection:

- Coated coil
- Painted blower housing
- Painted indoor base

Outdoor Corrosion Protection:

- Coated coil
- Painted outdoor base

#### **Field Installed**

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

Heavy gauge steel frame painted to match cabinet with expanded metal mesh to protect the outdoor coil from damage.

#### **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

### 9 BLOWER

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

#### Motor

Overload protected, equipped with ball bearings.

Belt drive motors are offered on all models and are available in several different sizes to maximize air performance.

#### Motor Efficiency

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 is statically and dynamically balanced. Equipped with ball bearings and adjustable pulley for speed change.

Blower assembly slides out of unit for servicing.

Grease fittings furnished.

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

Transducer sends information to the Intelli-Guide™ unit controller to control VFD blower speed.

Transducer is shipped with the unit for remote field installation in the supply duct.

### Required Selections

#### Supply Air Blower Selection

Specify Constant Air Volume (CAV), Variable Air Volume (VAV) or Single Zone VAV Supply Fan.

#### Constant Air Volume (CAV)

The supply air blower provides a constant volume of air.

#### Variable Air Volume (VAV)

The supply air variable frequency drive (VFD) will vary the cfm to maintain a constant duct static pressure.

#### Single Zone VAV

The supply air variable frequency drive (VFD) will 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. The 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 Single Zone VAV supply air blower option can be ordered with or without an Electronic Bypass Control. If equipped with the bypass control the Single Zone VAV features automatic electronic bypass control of the VFD. In case of a VFD malfunction, a VFD alarm is generated by the Intelli-Guide™ unit controller. The unit controller will automatically switch to full blower speed if a VFD alarm is generated.

The 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.

#### Drive Kit

Order one drive kit, see Drive Kit Specifications Table.

### Options/Accessories

#### Factory Installed

##### Blower Belt Auto-Tensioner

Provides proper tension to belt drive blower belt without the need for regular adjustments. Maintains airflow and proper performance.

##### Supply VFD Blower Bypass Control

Allows Single Zone VAV or VAVSingle Zone VAV Supply Fan 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

Field installed 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**

#### **WireRight™ System**

Advanced wiring connectors are keyed and color-coded to 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 are used to connect common accessories or maintenance parts for easy removal or installation.

### **Required Selections**

#### **Voltage Choice**

Specify when ordering base unit.

#### **Circuit Breakers**

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

### **Options/Accessories**

#### **Factory Installed**

#### **Circuit Breakers**

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

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

Phase 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 Single Zone VAV Supply Fan or VAV (Variable Air Volume) option is ordered.*

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

#### **Disconnect Switch**

Accessible from outside of unit, spring loaded weatherproof cover furnished.

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

115V ground fault circuit interrupter (GFCI) type, 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**

#### **10 Air Filters**

Disposable 2 inch filters furnished as standard.

### **Options/Accessories**

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

#### **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**

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

Monitors CO<sub>2</sub> levels, reports to the Intelli-Guide™ Unit Controller which adjusts economizer dampers as needed.

## INTELLI-GUIDE™ CONTROL SYSTEM

### INTELLI-GUIDE 2.0 UNIT CONTROLLER



The Intelli-Guide™ unit controller is a microprocessor-based controller that provides flexible control of all unit functions.

#### Features:

**LCD Display** - Easy to read menu with buttons for menu navigation during setup and diagnostics. 4 lines x 20 character display.

**Menu LEDs** - Four LEDs (*Data, Setup, Service, Settings*) aid in menu navigation.

**Main Menu and Help Buttons** - Quick navigation to home screen and built-in help functions.

**Scroll, Value Adjustment Select and Save Buttons**

**Simplified Setup Procedure** - SETUP menu insures proper installation and setup of the rooftop unit.

**Profile Setup** - Copy key settings between units with the same configuration greatly reducing setup time.

**USB Port** - Allows a technician to download and transfer unit information to help verify service was performed.

USB drive will also allow updating software on the Intelli-Guide Control System to obtain enhanced functionality without the need to change components.



#### **Unit Controller Software**

**Unit Self-Test** - Unit Controller can perform a rooftop unit self-test to verify individual critical component and system performance. Included is an economizer test function that helps assure the 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 / Outdoor Air / Exhaust Options.

**Fresh Air Tempering**

**Extensive Unit Diagnostics** -

Over 100 diagnostic and status messages in English.

**Exhaust Fan Control Modes** -

Fresh air damper position, differential pressure transducer or pressure switches.

**Permanent Diagnostic Code Storage**

**Field Adjustable Control**

**Parameters** - Over 200 different control settings.

**Indoor Air Quality Input** -

Demand Control Ventilation ready

**Low Ambient Controls** - 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** - Four choices (unit off, positive pressure, negative pressure, purge).

**Staging** - Up to 2 heat/2 cool (standard Intelli-Guide unit controller thermostat input). Up to 3 cool with additional relay. Up to 4 cool with room sensor or network operation.

NOTE - Intelli-Guide™ Control System features shown vary with the type of rooftop unit the control is installed in.

**“Strike Three” Protection**

**Gas Reheat Control** -

Simultaneous heating and cooling operation for controlling humidity for process air applications such as supermarkets.

**On Demand Dehumidification** -

Monitors and controls condenser hot gas reheat operation with Dehumidification option.

**Thermostat Bounce Delay**

**Warm Up Mode Delay**

**LED Indicators**

**PC Interface** - Connect to the Intelli-Guide unit controller from a PC with the Unit Controller Software.

**Room Sensor Operation** - Controls temperature.

### Controls Options

#### Factory or Field Installed

**Fresh Air Tempering**

Used in applications with high outside air requirements. The 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, the sensor ships with the unit but must be field installed.

**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.



## OPTIONS / ACCESSORIES

### **INTELLI-GUIDE 2.0 UNIT CONTROLLER (continued)**

#### **Controls Options (continued)Commercial Control Systems**

##### **Thermostats**

Control system and thermostat options. Aftermarket unit controller options.

##### **Field Installed**

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

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

### **12 ECONOMIZER OPTIONS**

Economizer operation is set and controlled by the Intelli-Guide™ unit controller.

Simple plug-in connections from economizer to unit controller for easy installation.

All E-Series™ rooftop units are equipped with factory installed CEC Title 24 approved sensors for outside, return and discharge air temperature monitoring.

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**

##### **Economizer Features**

Outdoor air hoods for economizer dampers furnished.

Outdoor Air Hood is included when economizer is factory installed and is furnished with economizer when ordered for field installation.

##### **High Performance Economizer Features**

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 compliant.

IECC compliant.

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 and flexible stainless steel jamb seals to minimize air leakage.

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

##### **Differential Sensible Control**

Factory setting. Uses outdoor air and return air sensors that are furnished with the unit. The Intelli-Guide™ unit controller compares outdoor air and return air and using setpoints, enables the economizer when the outdoor air temperature is below the configured setpoint and cooler than return air.

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

*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.*

*NOTE: The Free Cooling default setting for outdoor air temperature sensor is 55°F.*

##### **Global Control**

The unit controller communicates with a DDC system with one global sensor (enthalpy or sensible) to determine 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, the other in the outdoor air section. Allows the economizer control to select between outdoor air or return air, whichever has lower enthalpy.

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

Maintains constant outdoor air CFM levels for VAV units with variable frequency drives on the supply fan and varying unit airflows. Using information from a velocity sensor located in the units' outdoor air section, the Intelli-Guide™ unit controller changes the economizer position to help minimize the effect of supply fan speed changes on outdoor air CFM levels. Setpoint for outdoor air CFM is established by field testing.

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

### **ECONOMIZER OPTIONS** **(continued)**

#### **Field Installed**

#### **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 Intelli-Guide™ 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 OPTIONS**

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

#### **Downflow Barometric Relief Dampers**

- 13 Allow relief of excess air, aluminum blade dampers prevent blow back and outdoor air infiltration during off cycle, bird screen furnished.

Hood for downflow barometric relief dampers is factory installed when dampers are factory installed with economizer. Hood is furnished with dampers when ordered for field installation.

#### **14 Standard Static Power Exhaust**

Three, 1/3 hp motors with 20 in., five blade propeller-type fans with a total power input of 1125 Watts and a total air volume of 12,800 cfm at 0 in. w.g.

Motor is inherently protected and enclosed for maximum protection from weather, dust and corrosion. 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), motor is overload protected, steel cabinet and hood painted to match unit, requires optional Downflow Economizer Barometric Relief Dampers. See Standard Static Power Exhaust Blower Tables.

#### **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.

Horizontal Economizer Conversion kit is available for field installation.

#### **Field Installed**

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

Choice of 50% (two, 2 hp motors) or 100% (three, 2 hp motors) centrifugal-type power exhaust blowers. Overload and sub-fuse protected, equipped with ball bearings. Forward curved blades, blower wheel is statically and dynamically balanced. Constant volume high static power exhaust blowers have adjustable pulleys for speed adjustments and are controlled by damper position.

VAV/Single Zone VAV Supply Fan 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 or High Static Power Exhaust without VFD. Intelli-Guide™ Unit Controller controls the power exhaust based on economizer damper position.

#### **Differential Pressure Transducer**

For High Static Power Exhaust with VFD. Intelli-Guide™ 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 or High Static Power Exhaust without VFD, Intelli-Guide™ Unit Controller controls the power exhaust system based on one or two pressure switch(es).

*NOTE - Order one per unit with Standard or High Static Power Exhaust without VFD.*

*NOTE - Order two per unit with Standard Static Power Exhaust for Single Zone VAV Supply Fan or VAV models.*

## OPTIONS / ACCESSORIES

### **OUTDOOR AIR OPTIONS**

#### **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.

Automatic model features fully modulating spring return damper motor with plug-in connection.

Manual model features parallel blade, gear-driven dampers with adjustable fixed position.

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

### **ROOF CURBS**

Nailer strip furnished (downflow only), mates to unit, US National Roofing Contractors Approved, shipped knocked down.

#### **Downflow**

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

Roof curb can be assembled using interlocking tabs to fasten corners together. No tools required.

Curb can also be fastened together with furnished hardware.

Available in 14, 18, and 24 inch heights.

See Options/Accessories table.

#### **Horizontal**

Converts unit from downflow to horizontal (side) air flow, return air is on unit, supply air is on curb, see dimension drawings.

Requires Horizontal Return Air Panel Kit.

Available in 37 inch and 41 inch heights.

Optional Insulation Kit is available to help prevent sweating.

### **CEILING DIFFUSERS**

#### **Ceiling Diffusers**

##### **(Flush or Step-Down)**

Diffuser face and grilles with white powder coat finish, insulated (UL listed duct liner), diffuser box with collars for duct connection, fixed blades (flush diffusers) and double deflection blades (step-down diffusers), provisions for suspending, internally sealed (prevents 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.

## SEQUENCE OF OPERATION

**Objective:** Outline the unit functions as a result of room thermostat or room sensor demands.

**Given:** When economizer is present, it will function as an integral part of the unit cooling system. When not present, unit will function as if economizer is present but outdoor ambient is high and sensed as not suitable.

### **CAV Units 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 one blower speed for all modes of operation.

#### **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 on; economizer modulates (minimum to maximum open position) to satisfy thermostat demand.

**Y2 Demand** - All compressors are off, supply air blower is on, 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, compressors 1 and 2 are energized with the supply air blower on, providing maximum cooling capacity.*

*NOTE - The thermostat or third party unit controller has direct control over the rooftop unit's staging capability. While the unit controller typically has direct control over the economizer, it is possible for a thermostat or third party unit controller to directly control this functionality*

<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. This is ~50% of the cooling capacity.

**Y2 Demand** - All compressors operate and supply air blower is activated. This is 100% of the cooling capacity.

#### **HEATING MODE (2 Heat)**

**W1 Demand** - The first two stages of mechanical heat are activated, providing ~66% heating capacity

**W2 Demand** - The third and fourth stages of mechanical heat are activated, providing 100% of mechanical heating capacity.



## SEQUENCE OF OPERATION

### CAV Units Operating in Room Sensor Mode or Discharge Air Temperature Control (4 Heat / 4 Cool)

#### SUPPLY AIR BLOWER SPEED

Unit has one blower speed for all modes of operation.

#### 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; economizer modulates (minimum to maximum open position) to maintain setpoint.

**Cooling Stage 2** - One compressor is activated; supply air blower is on; economizer modulates (minimum to maximum open position) to maintain setpoint.

**Cooling Stage 3** - Two compressors are activated; supply air blower is on; economizer modulates (minimum to maximum open position) to maintain setpoint.

**Cooling Stage 4** - All compressors are activated; supply air blower is on; economizer modulates (minimum to maximum open position) to maintain setpoint.

*NOTE - The thermostat or third party unit controller has direct control over the rooftop unit's staging capability. While the unit controller typically has direct control over the economizer, it is possible for a thermostat or third party unit controller to directly control this functionality*

*<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** - The first compressor is activated; supply air blower is on. This is ~25% of the cooling capacity.

**Cooling Stage 2** - The first and second compressors are activated; supply air blower is on. This is ~50% of the cooling capacity.

**Cooling Stage 3** - The first three compressors are activated; supply air blower is on. This is ~75% of the cooling capacity.

**Cooling Stage 4** - All compressors operate and supply air blower is activated. This is 100% of the cooling capacity.

#### HEATING MODE (4 Heat)

Room sensors (when connected to S-Bus) or 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.
- 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.

**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.

## SEQUENCE OF OPERATION

Single Zone VAV **Units 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.

### 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.

## SEQUENCE OF OPERATION

### Single Zone VAV Units Operating 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.

#### **1 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.

<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 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.

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

Room sensors (when connected to S-Bus) or 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.
- 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.

## SEQUENCE OF OPERATION

**Heating Stage 4** - Gas valves one and two are in high fire mode. This is 100% of heating capacity.

### **VAV 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.*



## SEQUENCE OF OPERATION

### VAV Units in Zoning Applications Operating with Discharge Air Control (4 Heat / 4 Cool) (Continued)

#### COOLING MODE (4 Cool)

##### **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.

#### 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	Model Number	Catalog Number	Unit Model No.		
			242	300	360
COOLING SYSTEM					
Condensate Drain Trap	PVC - C1TRAP20AD2	76W26	OX	OX	OX
	Copper - C1TRAP10AD2	76W27	OX	OX	OX
Corrosion Protection		Factory	O	O	O
Drain Pan Overflow Switch	E1SNSR71AD1	68W88	OX	OX	OX
Efficiency	High	Factory	O	O	O
Refrigerant Type	R-410A	Factory	O	O	O
Plastic Condensate Drain Pan		Factory	O	O	O
Stainless Steel Condensate Drain Pan	C1DPAN10D-1-	83W42	OX	OX	OX
GAS HEAT					
Combustion Air Intake Extensions (Order 2 Kits)	C1EXTN10FF1	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 - LTALPGK-130	72M94	X	X	X
	Medium Heat - LTALPGK-180	72M95	X	X	X
	High Heat - LTALPGK-240	72M96	X	X	X
Low Temperature Vesibule Heater	208/230V-3ph - C1LTVH10C-1Y	58W28	OX	OX	OX
	460V-3ph - C1LTVH10C-1G	58W29	OX	OX	OX
	575V-3ph - C1LTVH10C-1J	58W30	OX	OX	OX
Stainless Steel Heat Exchanger		Factory	O	O	O
Vertical Vent Extension	C1EXTN2021	42W16	X	X	X
BLOWER - SUPPLY AIR					
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 (VAV/Single Zone VAV Supply Fan units w/VFD only)		Factory	O	O	O
Drive Kits 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
Blower Belt Auto-Tensioner		Factory	O	O	O
CABINET					
Combination Coil/Hail Guards	C1GARD52D-1	13T16	X	X	X
Grille Guards	C1GARD39D-1-	86K30	X	X	X
Horizontal Return Air Panel Kit		38K48	X	X	X

NOTE - Catalog and model 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	Model Number	Catalog Number	Unit Model No.		
			242	300	360
CONTROLS					
Blower Proving Switch	C1SNSR35FF1	53W65	OX	OX	OX
Commercial Controls	CPC Einstein Integration	Factory	O	O	O
	Intelli-Guide™ System - BACnet® Module - C0CTRL60AE1L	59W51	OX	OX	OX
	Intelli-Guide™ System - LonTalk® Module - C0CTRL65FF1	54W27	OX	OX	OX
	Novar® LSE	Factory	O	O	O
Dirty Filter Switch	E1SNSR55C-1	53W68	OX	OX	OX
Discharge Air Temperature Sensor		Factory	O	O	O
Fresh Air Tempering	C1SNSR75AD1	58W63	OX	OX	OX
General Purpose Control Kit	E1GPBK30C1	13J78	X	X	X
Smoke Detector - Supply or Return (Power board and one sensor)	C1SNSR44C-1	83W40	OX	OX	OX
Smoke Detector - Supply and Return (Power board and two sensors)	C1SNSR43C-1	83W41	OX	OX	OX
Supply Static Limit Switch	C0SNSR11AE1	79M80	X	X	X
Supply Static Limit Switch - Mounting Kit	C0SNSR12AE1	79M81	X	X	X
INDOOR AIR QUALITY					
Air Filters					
High Efficiency Air Filters 20 x 20 x 2 - order 12 per unit	MERV 8 - C1FLTR15D-1-	54W21	OX	OX	OX
	MERV 13 - C1FLTR40D-1-	52W39	OX	OX	OX
Replaceable Media Filter with Metal Mesh Frame (includes Non-Pleated Filter Media) 20 x 20 x 2- order 12 per unit	C1FLTR30D-1-	44N60	X	X	X
Indoor Air Quality (CO₂) Sensors					
Sensor - Wall-mount, off-white plastic cover with LCD display	C0SNSR50AE1L	77N39	X	X	X
Sensor - Wall-mount, off-white plastic cover, no display	C0SNSR52AE1L	87N53	X	X	X
Sensor - Black plastic case with LCD display, rated for plenum mounting	C0SNSR51AE1L	87N52	X	X	X
Sensor - Wall-mount, black plastic case, no display, rated for plenum mounting	C0MISC19AE1	87N54	X	X	X
CO₂ Sensor Duct Mounting Kit - for downflow applications	C0MISC19AE1-	85L43	X	X	X
Aspiration Box - for duct mounting non-plenum rated CO₂ sensors (87N53 or 77N39)	C0MISC16AE1-	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 Accessories Tables on page 39 for selection	80 amp	54W88	OX	OX	OX
	150 amp	54W89	OX	OX	OX
	250 amp	90W82	OX	OX	OX
GFI Service Outlets	15 amp non-powered, field-wired (208/230V, 460V) LTAGFIK10/15	74M70	OX	OX	OX
	15 amp factory-wired and powered (208/230V, 460V, 575V)	Factory	O	O	O
	20 amp non-powered, field-wired (575V only) C1GFCI20FF1	67E01	OX	OX	OX
Weatherproof Cover for GFI	C1GFCI99FF1	10C89	X	X	X
Phase/Voltage Detection		Factory	O	O	O

NOTE - Catalog and model 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	Model Number	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 Downflow or Horizontal Applications - Includes Outdoor Air Hood, order Downflow or Horizontal Barometric Relief Dampers separately.	E1ECON17D-2	18X87	OX	OX	OX	
Economizer Controls						
Differential Enthalpy (Not for Title 24)	Order 2 - C1SNSR64FF1	53W64	OX	OX	OX	
Sensible Control	Sensor is Furnished	Factory	O	O	O	
Single Enthalpy (Not for Title 24)	C1SNSR64FF1	53W64	OX	OX	OX	
Global, Enthalpy	Sensor Field Provided	Factory	O	O	O	
Building Pressure Control	E1GPBK20C1	13K77	X	X	X	
Differential Sensible	Sensor is Furnished	Factory	O	O	O	
Outdoor Air CFM Control	E1GPBK10C1	13K76	OX	OX	OX	
Barometric Relief Dampers With Exhaust Hood						
Downflow Barometric Relief Dampers	E1DAMP60D-1	76W17	OX	OX	OX	
Horizontal Barometric Relief Dampers	LAGEDH30/36	33K78	OX	OX	OX	
OUTDOOR AIR						
Outdoor Air Dampers With Outdoor Air Hood						
Motorized	E1DAMP25D-2-	18X89	OX	OX	OX	
Manual	E1DAMP15D-2-	18X88	OX	OX	OX	
POWER EXHAUST						
Standard Static	208/230V - E1PWRE40D-1Y	74W21	OX	OX	OX	
	460V - E1PWRE40D-1G	74W22	OX	OX	OX	
	575V - E1PWRE40D-1J	74W23	OX	OX	OX	
High Static - 50%	208/230V - Drive Kit #1 (405-533 rpm) - LAPEB30/36AY	83M83	X	X	X	
	208/230V - Drive Kit #2 (531-731 rpm) - LAPEB30/36BY	84M34	X	X	X	
	208/230V - Drive Kit #3 (731-932 rpm) - LAPEB30/36CY	84M35	X	X	X	
	460V - Drive Kit #1 (405-533 rpm) - LAPEB30/36AG	83M84	X	X	X	
	460V - Drive Kit #2 (531-731 rpm) - LAPEB30/36BG	84M36	X	X	X	
	460V - Drive Kit #3 (731-932 rpm) - LAPEB30/36CG	84M37	X	X	X	
	575V - Drive Kit #1 (405-533 rpm) - LAPEB30/36AJ	83M85	X	X	X	
	575V - Drive Kit #2 (531-731 rpm) - LAPEB30/36BJ	84M38	X	X	X	
	575V - Drive Kit #3 (731-932 rpm) - LAPEB30/36CJ	84M39	X	X	X	
	208/230V - Drive Kit #1 (406-533 rpm) - LAPEB30/36DY	83M86	X	X	X	
	208/230V - Drive Kit #2 (531-731 rpm) - LAPEB30/36EY	84M40	X	X	X	
	208/230V - Drive Kit #3 (731-932 rpm) - LAPEB30/36FY	84M41	X	X	X	
High Static - 100%	460V - Drive Kit #1 (406-533 rpm) - LAPEB30/36DG	83M87	X	X	X	
	460V - Drive Kit #2 (531-731 rpm) - LAPEB30/36EG	84M42	X	X	X	
	460V - Drive Kit #3 (731-932 rpm) - LAPEB30/36FG	84M43	X	X	X	
	575V - Drive Kit #1 (406-533 rpm) - LAPEB30/36DJ	83M88	X	X	X	
	575V - Drive Kit #2 (531-731 rpm) - LAPEB30/36EJ	84M44	X	X	X	
	575V - Drive Kit #3 (731-932 rpm) - LAPEB30/36FJ	84M45	X	X	X	
	100% with VFD	208/230V - LAPEV30/36GY	83M89	X	X	X
	460V - LAPEV30/36GG	83M90	X	X	X	
	575V - LAPEV30/36GJ	83M91	X	X	X	
100% with VFD and Bypass	208/230V - LAPEV30/36HY	83M92	X	X	X	
	460V - LAPEV30/36HG	83M93	X	X	X	
	575V - LAPEV30/36HJ	83M94	X	X	X	

### Power Exhaust Control

<sup>1</sup> Pressure Switch	C0SNSR10AE1	79M79	X	X	X
------------------------------	-------------	-------	---	---	---

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

NOTE - Catalog and model 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	Model Number	Catalog Number	Unit Model No.		
			242	300	360
ROOF CURBS					
Hybrid Roof Curbs, Downflow					
14 in. height	C1CURB71D-1	11F62	X	X	X
18 in. height	C1CURB72D-1	11F63	X	X	X
24 in. height	C1CURB73D-1	11F64	X	X	X
Standard Roof Curbs, Horizontal - Requires Horizontal Return Air Panel Kit					
30 in. height - slab applications	C1CURB15C-1	11T90	X	X	X
41 in. height - rooftop applications	C1CURB17C-1	11T97	X	X	X
Horizontal Return Air Panel Kit (Required)		38K48	X	X	X
Insulation Kit For Standard Horizontal Roof Curbs					
	for C1CURB15C-1	73K33	X	X	X
	for C1CURB17C-1	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 and model 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	25 Ton
Model Number			LGH242H4V	LGH300H4B	LGH300H4V	LGH300H4M
Efficiency Type			High	High	High	High
Blower Type			VAV (Variable Air Volume)	CAV (Constant Air Volume)	VAV (Variable Air Volume)	Single Zone VAV Supply Fan
<b>Cooling Performance</b>	Gross Cooling Capacity - Btuh		244,000	310,000	310,000	310,000
	Net Cooling Capacity - Btuh		<sup>1</sup> 238,000	<sup>2</sup> 300,000	<sup>2</sup> 300,000	<sup>2</sup> 300,000
	AHRI Rated Air Flow - cfm		6800	8100	8100	8100
	Total Unit Power - kW		19.3	25.9	25.8	25.8
	EER (Btuh/Watt)		<sup>1</sup> 12.3	<sup>2</sup> 11.6	<sup>2</sup> 11.6	<sup>2</sup> 11.6
	IEER (Btuh/Watt)		<sup>1</sup> 15.5	<sup>2</sup> 12.5	<sup>2</sup> 14.3	<sup>2</sup> 14.4
<b>AHRI Reference Number</b>			N/A	N/A	N/A	N/A
<b>Refrigerant Charge</b>	Refrigerant Type		R-410A	R-410A	R-410A	R-410A
	Circuit 1		8 lbs. 0 oz.	9 lbs. 4 oz.	8 lbs. 0 oz.	8 lbs. 0 oz.
	Circuit 2		8 lbs. 0 oz.	9 lbs. 0 oz.	8 lbs. 0 oz.	8 lbs. 0 oz.
	Circuit 3		8 lbs. 8 oz.	8 lbs. 12 oz.	8 lbs. 0 oz.	8 lbs. 0 oz.
	Circuit 4		8 lbs. 8 oz.	8 lbs. 8 oz.	8 lbs. 8 oz.	8 lbs. 8 oz.
<b>Gas Heating Options Available</b>			See page 24			
<b>Compressor Type (number)</b>			Scroll (4)	Scroll (4)	Scroll (4)	Scroll (4)
<b>Outdoor Coils</b>	Net face area (total) - sq. ft.		68.3	68.3	68.3	68.3
	Number of rows		1	1	1	1
	Fins per inch		23	23	23	23
<b>Outdoor Coil Fans</b>	Motor - (No.) horsepower		(6) 1/3	(6) 1/3	(6) 1/3	(6) 1/3
	Motor rpm		1075	1075	1075	1075
	Total Motor watts		2500	2500	2500	2500
	Diameter - (No.) in.		(6) 24	(6) 24	(6) 24	(6) 24
	Number of blades		3	3	3	3
	Total Air volume - cfm		21,500	21,500	21,500	21,500
<b>Indoor Coils</b>	Net face area (total) - sq. ft.		31.40	31.40	31.40	31.40
	Tube diameter - in.		3/8	3/8	3/8	3/8
	Number of rows		4	4	4	4
	Fins per inch		14	14	14	14
	Drain connection - No. and size		(1) 1 in. NPT	(1) 1 in. NPT	(1) 1 in. NPT	(1) 1 in. NPT
		Expansion device type	Balance port TXV, removable head			
<sup>3</sup> <b>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> <b>Kit 5</b> 660-810 rpm <b>Kit 6</b> 770-965 rpm <b>Kit 7</b> 570-720 rpm <b>Kit 8</b> 480-630 rpm <b>Kit 9</b> 410-535 rpm <b>7.5 hp</b> <b>Kit 3</b> 715-880 rpm <b>Kit 4</b> 770-965 rpm <b>10 hp</b> <b>Kit 1</b> 740-895 rpm <b>Kit 2</b> 870-1045 rpm			
	Blower wheel nom. D x W - in.		(2) 18 x 15	(2) 18 x 15	(2) 18 x 15	(2) 18 x 15
	Type of filter		Fiberglass, disposable			
<b>Filters</b>		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	30 Ton
		Model Number	LGH360H4B	LGH360H4V	LGH360H4M
		Efficiency Type	High	High	High
		Blower Type	CAV (Constant Air Volume)	VAV (Variable Air Volume)	Single Zone VAV Supply Fan
Cooling Performance	Gross Cooling Capacity - Btuh	370,000	370,000	370,000	
	<sup>1</sup> Net Cooling Capacity - Btuh	354,000	350,000	350,000	
	AHRI Rated Air Flow - cfm	9600	8600	8600	
	Total Unit Power - kW	33.4	33.0	33.0	
	<sup>1</sup> EER (Btuh/Watt)	10.6	10.6	10.6	
	<sup>1</sup> IEER (Btuh/Watt)	11.6	13.5	14.0	
AHRI Reference Number		N/A	N/A	N/A	
Refrigerant Charge	Refrigerant Type	R-410A	R-410A	R-410A	
	Circuit 1	9 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	9 lbs. 0 oz.	8 lbs. 0 oz.	8 lbs. 0 oz.	
	Circuit 4	7 lbs. 8 oz.	8 lbs. 0 oz.	8 lbs. 0 oz.	
Gas Heating Options Available		See page 24			
Compressor Type (number)		Scroll (4)	Scroll (4)	Scroll (4)	
Outdoor Coils	Net face area (total) - sq. ft.	68.3	68.3	68.3	
	Number of rows	1	1	1	
	Fins per inch	23	23	23	
Outdoor Coil Fans	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	
Indoor Coils	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			
<sup>3</sup> Indoor Blower and Kit Selection	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> <b>Kit 5</b> 660-810 rpm <b>Kit 6</b> 770-965 rpm <b>Kit 7</b> 570-720 rpm <b>Kit 8</b> 480-630 rpm <b>Kit 9</b> 410-535 rpm <b>7.5 hp</b> <b>Kit 3</b> 715-880 rpm <b>Kit 4</b> 770-965 rpm <b>10 hp</b> <b>Kit 1</b> 740-895 rpm <b>Kit 2</b> 870-1045 rpm			
	Blower wheel nom. D x W - in.	(2) 18 x 15	(2) 18 x 15	(2) 18 x 15	
	Filters	Type of filter	Fiberglass, disposable		
Number and size - in.		(12) 20 x 20 x 2			
Electrical characteristics		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 LGH300 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	208,000	288,000	384,000
<sup>1</sup> Gas Heating Performance (Four-Stage)	Input - Btuh	First Stage	84,500	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	208,000	288,000	384,000
Temperature Rise Range - °F		15 - 45	30 - 60	40 - 70	
Thermal Efficiency		80.0%	80.0%	80.0%	
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 Natural Gas or LPG/Propane - Btuh	
		Natural Gas	LPG/Propane Gas	First Stage	Second Stage
Low (L)	No adjustment required				
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 Natural Gas or LPG/Propane - Btuh			
		Natural Gas	LPG/Propane Gas	First Stage	Second Stage	Third Stage	Fourth Stage
Low (L)	No adjustment required						
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
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			
				cfm	kBtuh	kW			75°F	80°F	85°F			kBtuh	kW	75°F			80°F	85°F	kBtuh	kW
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)							
				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	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		
				cfm	kBtuh	kW			75°F	80°F	85°F			kBtuh	kW	75°F			80°F	85°F	kBtuh
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 LGH300H4B (1ST STAGE) - CONSTANT 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
63°F	8000	160.5	7.35	0.73	0.84	0.95	153.9	8.21	0.73	0.85	0.96	146.7	9.16	0.74	0.86	0.98	139	10.27	0.74	0.88	0.99
	10000	169.9	7.48	0.77	0.9	1	162.5	8.33	0.78	0.91	1	154.9	9.29	0.79	0.93	1	147	10.38	0.8	0.94	1
	12000	176.7	7.58	0.81	0.95	1	169.1	8.42	0.82	0.97	1	161.4	9.38	0.83	0.98	1	153.2	10.47	0.84	0.99	1
67°F	8000	171.1	7.5	0.58	0.7	0.81	164	8.35	0.58	0.71	0.82	156.6	9.3	0.58	0.71	0.83	148.5	10.39	0.58	0.72	0.84
	10000	180.3	7.63	0.61	0.75	0.87	172.4	8.47	0.61	0.76	0.89	164.4	9.42	0.61	0.76	0.9	156.2	10.51	0.62	0.78	0.91
	12000	186.5	7.73	0.64	0.8	0.93	178.8	8.57	0.64	0.81	0.94	170.3	9.51	0.65	0.81	0.96	161.5	10.59	0.65	0.83	0.97
71°F	8000	182.5	7.67	0.44	0.56	0.68	175.1	8.51	0.44	0.56	0.68	167.3	9.46	0.43	0.56	0.69	159	10.55	0.43	0.57	0.7
	10000	191.8	7.8	0.45	0.6	0.73	183.9	8.64	0.45	0.59	0.74	175.6	9.59	0.45	0.6	0.75	166.7	10.67	0.45	0.6	0.76
	12000	198.3	7.91	0.47	0.62	0.78	190.1	8.74	0.47	0.63	0.79	181.8	9.69	0.47	0.64	0.8	172.1	10.77	0.46	0.64	0.81

### 25 TON HIGH EFFICIENCY LGH300H4B (2ND STAGE) - CONSTANT 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	296.2	18.34	0.74	0.87	0.98	281.2	20.54	0.75	0.88	1	264.8	23.12	0.76	0.9	1	245.8	26.15	0.77	0.92	1
	10000	312	18.57	0.79	0.94	1	296.6	20.78	0.8	0.95	1	279.7	23.34	0.82	0.97	1	260	26.33	0.84	0.99	1
	12000	324.6	18.75	0.84	0.99	1	308.9	20.94	0.85	1	1	292.8	23.53	0.87	1	1	275	26.56	0.89	1	1
67°F	8000	316.1	18.62	0.58	0.71	0.84	300.8	20.82	0.58	0.72	0.85	283.8	23.4	0.58	0.73	0.87	263.9	26.39	0.59	0.75	0.89
	10000	331.9	18.86	0.61	0.77	0.91	315.7	21.05	0.62	0.78	0.92	298	23.61	0.63	0.8	0.94	276.9	26.57	0.63	0.81	0.97
	12000	343.8	19.04	0.65	0.82	0.97	326.6	21.22	0.65	0.83	0.98	308.3	23.78	0.66	0.85	1	286.7	26.73	0.67	0.87	1
71°F	8000	336.9	18.93	0.43	0.57	0.69	321	21.12	0.43	0.57	0.7	303.8	23.7	0.42	0.57	0.71	283.2	26.66	0.42	0.57	0.73
	10000	353.5	19.19	0.45	0.6	0.75	336.7	21.38	0.45	0.61	0.76	318.6	23.94	0.45	0.62	0.78	296.9	26.89	0.44	0.62	0.79
	12000	365.8	19.38	0.47	0.64	0.8	347.7	21.55	0.46	0.64	0.81	328.6	24.1	0.46	0.65	0.83	306.2	27.06	0.46	0.67	0.85

### 25 TON HIGH EFFICIENCY LGH300H4M (1ST STAGE) - SINGLE ZONE VAV SUPPLY FAN

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	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) - SINGLE ZONE VAV SUPPLY FAN

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
	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	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
	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
67°F	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
	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
71°F	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)							
				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	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

### 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
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
	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
67°F	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
	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
71°F	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
	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.

### 30 TON HIGH EFFICIENCY LGH360H4B (1ST STAGE) - CONSTANT 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	9440	193.7	9.57	0.71	0.83	0.94	185.6	10.61	0.71	0.84	0.96	177.6	11.79	0.72	0.85	0.97	168.9	13.16	0.72	0.86	0.98
	11800	204.3	9.73	0.75	0.89	1	195.5	10.76	0.76	0.9	1	187	11.95	0.77	0.92	1	177.8	13.31	0.78	0.93	1
	14160	212.1	9.86	0.8	0.95	1	202.9	10.89	0.81	0.96	1	194.1	12.07	0.82	0.98	1	184.9	13.44	0.83	0.99	1
67°F	9440	206.1	9.76	0.57	0.68	0.8	197.7	10.8	0.56	0.69	0.81	189	11.98	0.56	0.69	0.82	180	13.35	0.56	0.7	0.83
	11800	215.9	9.92	0.59	0.73	0.86	206.7	10.95	0.6	0.74	0.87	197.7	12.13	0.6	0.75	0.89	188.1	13.5	0.6	0.76	0.9
	14160	222.9	10.04	0.62	0.78	0.92	213.4	11.07	0.62	0.79	0.94	204.1	12.24	0.63	0.8	0.95	194.4	13.6	0.63	0.81	0.97
71°F	9440	218.8	9.97	0.43	0.55	0.66	209.8	11	0.43	0.56	0.67	200.8	12.19	0.43	0.55	0.67	191.4	13.55	0.42	0.55	0.68
	11800	228.7	10.14	0.45	0.58	0.71	219.1	11.17	0.44	0.58	0.72	210	12.35	0.44	0.59	0.73	200	13.71	0.43	0.59	0.74
	14160	236.2	10.27	0.46	0.61	0.76	226.3	11.3	0.45	0.62	0.77	216.6	12.47	0.46	0.62	0.78	206.8	13.83	0.45	0.63	0.79

### 30 TON HIGH EFFICIENCY LGH360H4B (2ND STAGE) - CONSTANT 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	9440	357.9	23.62	0.72	0.85	0.98	339.6	26.32	0.73	0.87	0.99	320.3	29.45	0.74	0.88	1	298.7	33.06	0.75	0.91	1
	11800	376.2	23.92	0.77	0.92	1	356.7	26.61	0.78	0.94	1	336.8	29.76	0.8	0.96	1	314.1	33.33	0.82	0.98	1
	14160	390.1	24.16	0.82	0.98	1	371	26.86	0.84	0.99	1	351.1	30	0.85	1	1	329.1	33.62	0.88	1	1
67°F	9440	380.8	24	0.57	0.7	0.82	361.9	26.69	0.57	0.7	0.83	341.9	29.83	0.57	0.71	0.85	318.5	33.41	0.57	0.73	0.87
	11800	398.8	24.3	0.6	0.75	0.89	378.5	27.01	0.6	0.76	0.91	357.2	30.12	0.61	0.78	0.93	332.8	33.7	0.62	0.8	0.96
	14160	411.3	24.53	0.63	0.81	0.96	390.7	27.22	0.64	0.82	0.98	368.6	30.34	0.64	0.83	0.99	342.8	33.9	0.65	0.86	1
71°F	9440	403.5	24.4	0.43	0.55	0.68	383.9	27.09	0.42	0.55	0.68	363.4	30.23	0.42	0.56	0.69	339.3	33.82	0.41	0.56	0.71
	11800	422.3	24.72	0.44	0.59	0.73	401.5	27.42	0.44	0.59	0.74	379.4	30.54	0.43	0.6	0.76	353.9	34.12	0.43	0.61	0.78
	14160	435	24.95	0.45	0.62	0.79	414.7	27.65	0.45	0.63	0.8	390.6	30.75	0.45	0.63	0.81	363.9	34.32	0.45	0.65	0.84

### 30 TON HIGH EFFICIENCY LGH360H4M (1ST STAGE) - SINGLE ZONE VAV SUPPLY FAN

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	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) - Single Zone VAV Supply Fan

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	kW
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)							
				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 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	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



## 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 31 for wet coil and option/accessory air resistance data.

See page 31 for factory installed drive kit specifications.

TOTAL STATIC PRESSURE - In. w.g.

Air Volume cfm	0.20		0.40		0.60		0.80		1.00		1.20		1.40		1.60		1.80		2.00		2.20		2.40		2.60	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	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	861	2.82	897	3.10	932	3.40	---	---
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	868	3.05	903	3.35	938	3.66	974	4.01
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	874	3.30	909	3.61	944	3.93	980	4.30
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	880	3.56	916	3.88	951	4.22	987	4.60
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	887	3.84	922	4.18	957	4.52	994	4.91
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	894	4.15	929	4.49	964	4.85	1001	5.24
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	901	4.48	937	4.83	971	5.19	1008	5.59
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	909	4.83	945	5.20	979	5.56	1016	5.97
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	918	5.22	953	5.59	988	5.96	1025	6.37
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	927	5.63	962	6.01	997	6.39	1034	6.81
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	936	6.07	972	6.46	1007	6.85	1044	7.28
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	946	6.54	982	6.93	1018	7.34	1055	7.78
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	957	7.03	992	7.43	1028	7.86	1066	8.32
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	967	7.55	1003	7.96	1039	8.40	1077	8.89
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	978	8.09	1013	8.51	1050	8.98	1089	9.49
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	989	8.65	1025	9.10	1062	9.59	1101	10.12
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	1000	9.25	1036	9.71	1073	10.22	1112	10.77
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	1011	9.87	1048	10.35	1085	10.86	1124	11.42
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	1023	10.52	1059	11.00	---	---	---	---
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	1000	10.74	1035	11.20	---	---	---	---	---	---
14,000	704	5.92	757	6.67	801	7.44	839	8.23	875	9.00	909	9.72	943	10.38	977	10.94	1012	11.43	---	---	---	---	---	---	---	---
14,500	727	6.55	777	7.34	818	8.16	854	8.97	889	9.75	922	10.48	955	11.12	---	---	---	---	---	---	---	---	---	---	---	---
15,000	750	7.23	797	8.07	834	8.92	868	9.75	902	10.54	935	11.26	---	---	---	---	---	---	---	---	---	---	---	---	---	---

## BLOWER DATA

### DRIVE KIT SPECIFICATIONS

Motor Efficiency	Nominal hp	Maximum 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.

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

Air Volume cfm	Wet Indoor Coil  in. w.g.	Gas Heat Exchanger			Economizer  in. w.g.	Filters		Horizontal Roof Curb  in. w.g.
		Standard Heat	Medium Heat	High Heat		MERV 8	MERV 13	
		in. w.g.	in. w.g.	in. w.g.		in. w.g.	in. w.g.	
4000	0.04	0.08	0.08	0.11	0.00	0.00	0.00	0.04
4500	0.04	0.09	0.10	0.13	0.00	0.00	0.00	0.05
5000	0.05	0.10	0.12	0.15	0.00	0.00	0.00	0.06
5500	0.06	0.11	0.14	0.17	0.01	0.00	0.01	0.07
6000	0.07	0.12	0.16	0.19	0.01	0.00	0.02	0.08
6500	0.08	0.13	0.18	0.21	0.01	0.01	0.02	0.09
7000	0.09	0.14	0.20	0.24	0.02	0.01	0.03	0.10
7500	0.10	0.15	0.21	0.25	0.02	0.01	0.04	0.11
8000	0.11	0.17	0.24	0.28	0.02	0.01	0.04	0.13
8500	0.12	0.20	0.27	0.31	0.03	0.01	0.04	0.15
9000	0.13	0.22	0.29	0.34	0.04	0.01	0.04	0.17
9500	0.14	0.24	0.32	0.38	0.04	0.02	0.06	0.19
10,000	0.15	0.27	0.36	0.42	0.05	0.02	0.06	0.21
10,500	0.16	0.30	0.40	0.46	0.06	0.02	0.06	0.24
11,000	0.18	0.33	0.43	0.50	0.07	0.02	0.07	0.27
11,500	0.19	0.37	0.48	0.55	0.08	0.02	0.08	0.30
12,000	0.20	0.40	0.52	0.60	0.10	0.02	0.08	0.33
12,500	0.21	0.44	0.57	0.65	0.11	0.03	0.10	0.37
13,000	0.23	0.48	0.61	0.70	0.13	0.03	0.10	0.40
13,500	0.24	0.53	0.67	0.76	0.14	0.03	0.11	0.44
14,000	0.26	0.57	0.72	0.82	0.16	0.03	0.12	0.49
14,500	0.27	0.62	0.78	0.89	0.18	0.04	0.13	0.53
15,000	0.29	0.68	0.84	0.95	0.21	0.04	0.13	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 - 50% HIGH STATIC OPERATION

Air Volume 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
4000	---	---	---	---	430	0.40	475	0.45	520	0.50	570	0.55	615	0.65	665	0.70	710	0.75	755	0.85	---	---
4500	---	---	415	0.45	460	0.55	500	0.60	545	0.65	585	0.70	625	0.80	670	0.85	710	0.95	750	1.00	795	1.10
5000	415	0.55	455	0.65	490	0.70	530	0.75	570	0.85	605	0.90	645	1.00	680	1.05	720	1.15	755	1.20	795	1.30
5500	460	0.75	495	0.85	525	0.90	560	0.95	595	1.05	630	1.10	665	1.20	700	1.30	735	1.35	765	1.45	800	1.55
6000	500	1.00	530	1.05	565	1.15	595	1.20	625	1.30	660	1.40	690	1.45	720	1.55	750	1.65	785	1.70	815	1.80
6500	540	1.25	570	1.30	600	1.40	630	1.50	660	1.60	685	1.65	715	1.75	745	1.85	775	1.95	805	2.05	830	2.10
7000	585	1.55	610	1.65	635	1.70	665	1.85	690	1.90	720	2.00	745	2.10	770	2.20	800	2.30	825	2.40	855	2.50
7500	625	1.90	650	2.00	675	2.10	700	2.20	725	2.30	750	2.40	775	2.50	800	2.60	825	2.70	850	2.80	875	2.90
8000	665	2.30	690	2.40	715	2.55	735	2.60	760	2.70	785	2.85	810	2.95	830	3.05	855	3.15	880	3.25	905	3.40
8500	710	2.80	730	2.90	755	3.00	775	3.10	795	3.20	820	3.35	840	3.45	865	3.55	885	3.65	910	3.80	930	3.90

### POWER EXHAUST - 100% HIGH STATIC OPERATION

Air Volume 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	475	1.30	500	1.30	525	1.40	550	1.50	585	1.60	625	1.75	670	1.90	710	2.10	745	2.30	780	2.50	815	2.70
9000	520	1.55	535	1.60	550	1.65	570	1.70	605	1.85	640	1.95	685	2.15	720	2.35	760	2.55	790	2.75	825	3.00
9500	550	1.80	560	1.85	575	1.90	600	2.00	620	2.10	655	2.20	695	2.40	735	2.60	770	2.80	800	3.00	835	3.25
10,000	575	2.10	590	2.15	605	2.20	620	2.30	645	2.40	675	2.50	710	2.65	745	2.85	780	3.05	815	3.30	845	3.50
10,500	605	2.45	615	2.45	625	2.50	645	2.60	670	2.75	690	2.80	725	3.00	755	3.15	790	3.35	825	3.60	855	3.80
11,000	630	2.80	645	2.85	660	2.95	675	3.00	685	3.05	715	3.20	740	3.30	770	3.50	805	3.70	835	3.90	870	4.20
11,500	665	3.25	675	3.30	680	3.30	695	3.40	715	3.50	735	3.60	755	3.70	785	3.85	815	4.05	850	4.30	880	4.50
12,000	685	3.60	700	3.70	710	3.75	725	3.85	740	3.95	755	4.00	780	4.15	805	4.30	830	4.45	860	4.65	890	4.90
12,500	720	4.10	730	4.20	740	4.25	750	4.30	765	4.40	780	4.50	800	4.60	820	4.75	845	4.90	875	5.10	905	5.35
13,000	745	4.60	750	4.65	765	4.75	780	4.85	790	4.90	805	5.00	820	5.10	840	5.25	865	5.40	890	5.60	915	5.80
13,500	775	5.15	785	5.25	795	5.35	805	5.40	815	5.50	830	5.60	845	5.70	865	5.80	880	5.95	905	6.10	930	6.30
14,000	805	5.80	810	5.80	820	5.90	830	6.00	845	6.10	855	6.20	870	6.30	885	6.40	905	6.55	925	6.70	---	---

### HIGH STATIC POWER EXHAUST WITH CONSTANT AIR VOLUME - DRIVE KIT SPECIFICATIONS

Power Exhaust Model No.	Motor HP	Drive Kit Number	RPM Range
LAPEB30/36A (50%)	(2) 2 hp	1	406 - 533
LAPEB30/36B (50%)	(2) 2 hp	2	531 - 731
LAPEB30/36C (50%)	(2) 2 hp	3	731 - 932
LAPEB30/36D (100%)	(3) 2 hp	1	406 - 533
LAPEB30/36E (100%)	(3) 2 hp	2	531 - 731
LAPEB30/36F (100%)	(3) 2 hp	3	731 - 932

NOTE - Using total air volume and system static pressure requirements, determine from blower performance tables rpm and motor output required.

## BLOWER DATA

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

Air Volume 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 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 outletor diffuser before the maximum velocity is reduced to 50 ft. per minute. Four sides open.

**ELECTRICAL DATA****20 TON****20 TON HIGH EFFICIENCY - VARIABLE AIR VOLUME (VAV)****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)		
50% High Static Power Exhaust (2) 2 HP	Full Load Amps	7.5			3.4			2.7		
	(total)	(15)			(6.8)			(5.4)		
100% 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 50% High Static Power Exhaust (2) 2 HP	110	125	150	60	70	70	45	50	50
	With 100% 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 50% High Static Power Exhaust (2) 2 HP	105	114	122	57	61	65	40	43	46
	With 100% 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****25 TON****25 TON HIGH EFFICIENCY - CONSTANT AIR VOLUME (CAV)****LGH300H4B**

<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)		
50% High Static Power Exhaust (2) 2 HP	Full Load Amps	7.5			3.4			2.7		
	(total)	(15)			(6.8)			(5.4)		
100% 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	150	70	70	80	60	60	60
	With 50% High Static Power Exhaust (2) 2 HP	150	150	175	70	80	80	60	60	60
	With 100% 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	128	134	142	62	65	68	46	48	52
	With 50% High Static Power Exhaust (2) 2 HP	142	150	158	68	71	75	51	54	56
	With 100% 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****25 TON****25 TON HIGH EFFICIENCY - VARIABLE AND MULTI-STAGE AIR VOLUME****LGH300H4V,M**

<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)		
50% High Static Power Exhaust (2) 2 HP	Full Load Amps	7.5			3.4			2.7		
	(total)	(15)			(6.8)			(5.4)		
100% 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 50% High Static Power Exhaust (2) 2 HP	150	150	175	70	80	80	60	60	60
	With 100% 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 50% High Static Power Exhaust (2) 2 HP	142	150	158	68	71	75	51	54	56
	With 100% 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****30 TON****30 TON HIGH EFFICIENCY - CONSTANT AIR VOLUME (CAV)****LGH360H4B**

<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)		
50% High Static Power Exhaust (2) 2 HP	Full Load Amps	7.5			3.4			2.7		
	(total)	(15)			(6.8)			(5.4)		
100% 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	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 50% High Static Power Exhaust (2) 2 HP	175	175	175	80	80	90	60	60	70
	With 100% 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 50% High Static Power Exhaust (2) 2 HP	153	160	168	75	78	81	56	59	62
	With 100% 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 DATA****30 TON****30 TON HIGH EFFICIENCY - VARIABLE AND MULTI-STAGE AIR VOLUME****LGH360H4V,M**

<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)		
50% High Static Power Exhaust (2) 2 HP		7.5 (15)			3.4 (6.8)			2.7 (5.4)		
100% High Static Power Exhaust (3) 2 HP		7.5 (22.5)			3.4 (10.2)			2.7 (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 50% High Static Power Exhaust (2) 2 HP	175	175	175	80	80	90	60	60	70
	With 100% 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 50% High Static Power Exhaust (2) 2 HP	153	160	168	75	78	81	56	59	62
	With 100% 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

### 20 TON HIGH EFFICIENCY

**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	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Standard Power Exhaust (3) 0.33 HP	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + 50% High Static Power Exhaust (2) 2 HP	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + 100% High Static Power Exhaust (3) 2 HP	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85
Terminal Block		30K75	30K75	30K75	30K75	30K75	30K75	30K75	30K75	30K75

### 25 TON HIGH EFFICIENCY

**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	54W86	54W86	54W87	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Standard Power Exhaust (3) 0.33 HP	54W86	54W87	54W87	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + 50% High Static Power Exhaust (2) 2 HP	54W87	54W87	54W87	54W85	54W85	54W86	54W85	54W85	54W85
	Unit + 100% High Static Power Exhaust (3) 2 HP	54W7	54W87	54W87	54W85	54W86	54W86	54W85	54W85	54W85
Terminal Block		30K75	30K75	30K75	30K75	30K75	30K75	30K75	30K75	30K75

### 30 TON HIGH EFFICIENCY

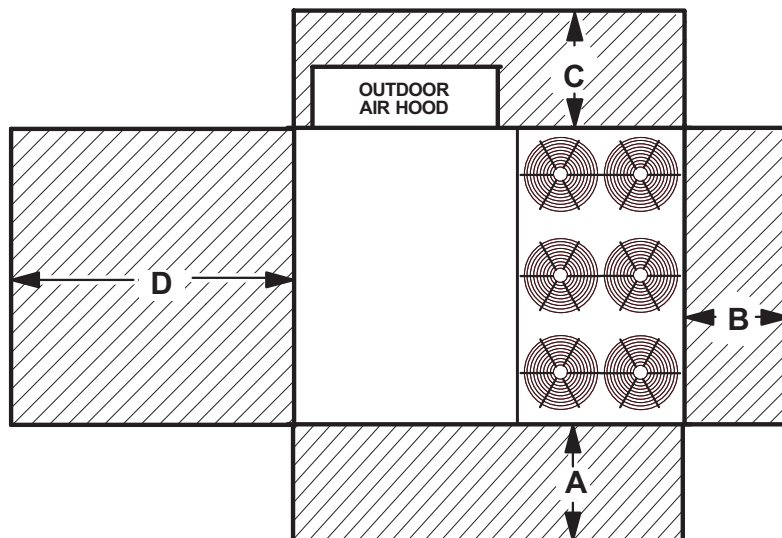
**LGH360H4**

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	54W87	54W87	54W87	54W85	54W85	54W86	54W85	54W85	54W85
	Unit + Standard Power Exhaust (3) 0.33 HP	54W87	54W87	54W87	54W85	54W86	54W86	54W85	54W85	54W85
	Unit + 50% High Static Power Exhaust (2) 2 HP	54W87	54W87	54W87	54W86	54W86	54W86	54W85	54W85	54W85
	Unit + 100% High Static Power Exhaust (3) 2 HP	54W87	54W87	54W87	54W86	54W86	54W86	54W85	54W85	54W85
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	

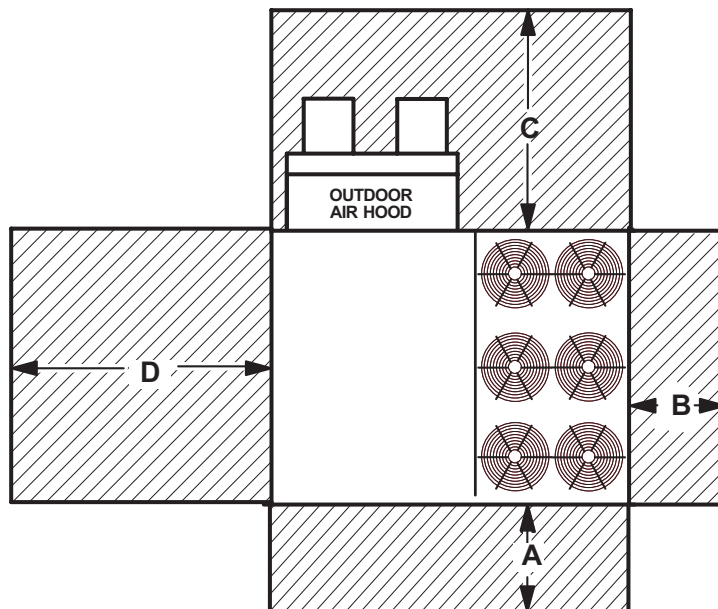
NOTE - Entire perimeter of unit base requires support when elevated above the mounting surface.

<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.

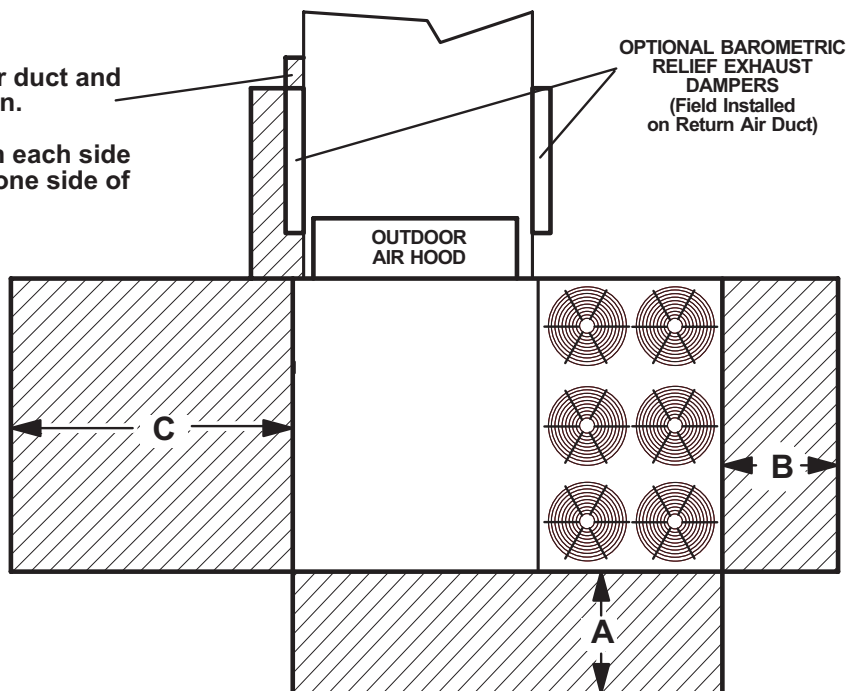
Minimum Operation Clearance - Required clearance for proper unit operation.

## 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)

**THIS PAGE INTENTIONALLY LEFT BLANK**

**THIS PAGE INTENTIONALLY LEFT BLANK**

## 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	3485	1581	3695	1676
360 Base Unit	3107	1435	3317	1505
360 Max. Unit	3485	1581	3695	1676

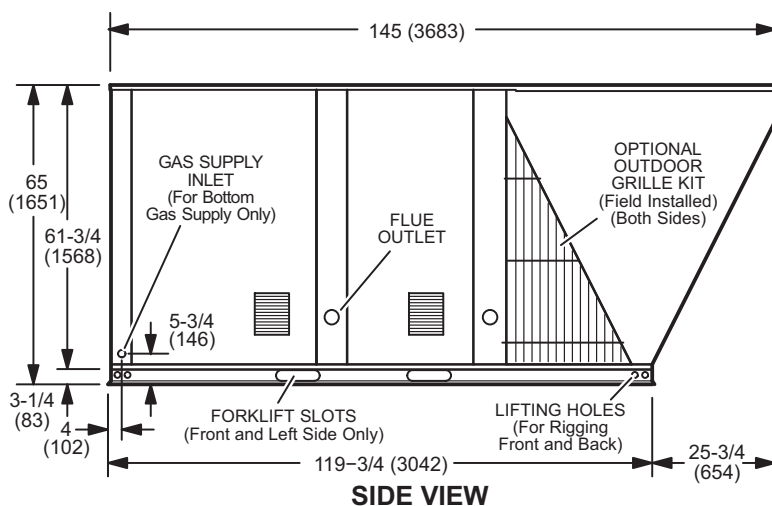
## OPTIONS / ACCESSORIES

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
		50% High Static	460	209
		100% 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	
PACKAGING				
LTL Packaging (less than truck load)		300	136	
ROOF CURBS				
Hybrid Roof Curbs, Downflow				
14 in. height		115	52	
18 in. height		140	64	
24 in. height		170	77	
Standard Curbs, Horizontal				
30 in. height		445	202	
41 in. height		725	329	

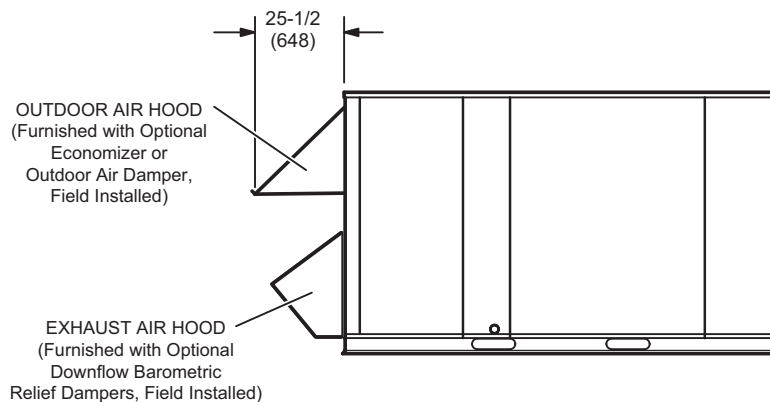


CORNER WEIGHTS									CENTER OF GRAVITY			
Model No.	AA		BB		CC		DD		EE		FF	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm
LGH242 Base Unit	632	287	635	288	912	414	928	421	60	1524	37	940
LGH242 Max. Unit	709	322	712	323	1023	464	1041	472	60	1524	37	940
LGH300 Base Unit	632	287	635	288	912	414	928	421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

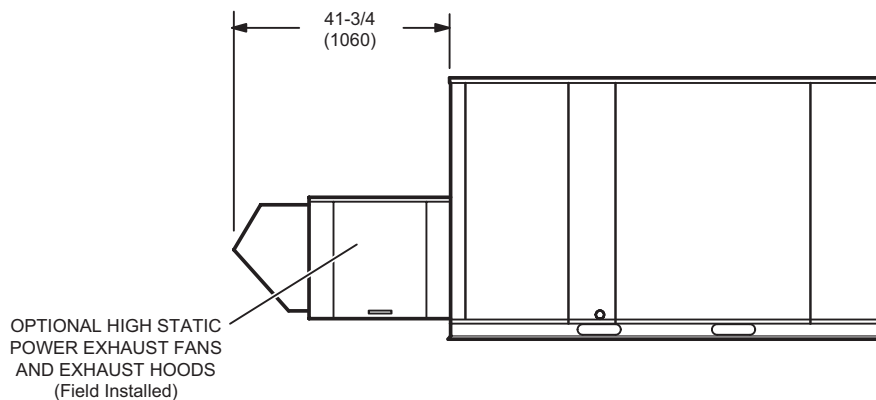
Max. Unit - The unit with ALL INTERNAL OPTIONS installed. (Economizer, Standard Static Power Exhaust, Controls, etc.). Does not include accessories external to unit or high static power exhaust.



## OUTDOOR AIR HOOD DETAIL

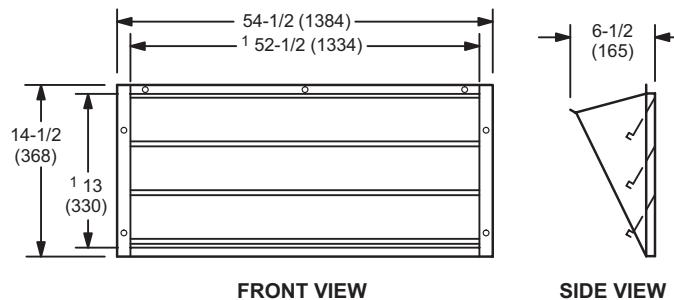


## OPTIONAL HIGH STATIC POWER EXHAUST FANS DETAIL



## OPTIONAL HORIZONTAL BAROMETRIC RELIEF DAMPERS WITH HOOD

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



FRONT VIEW

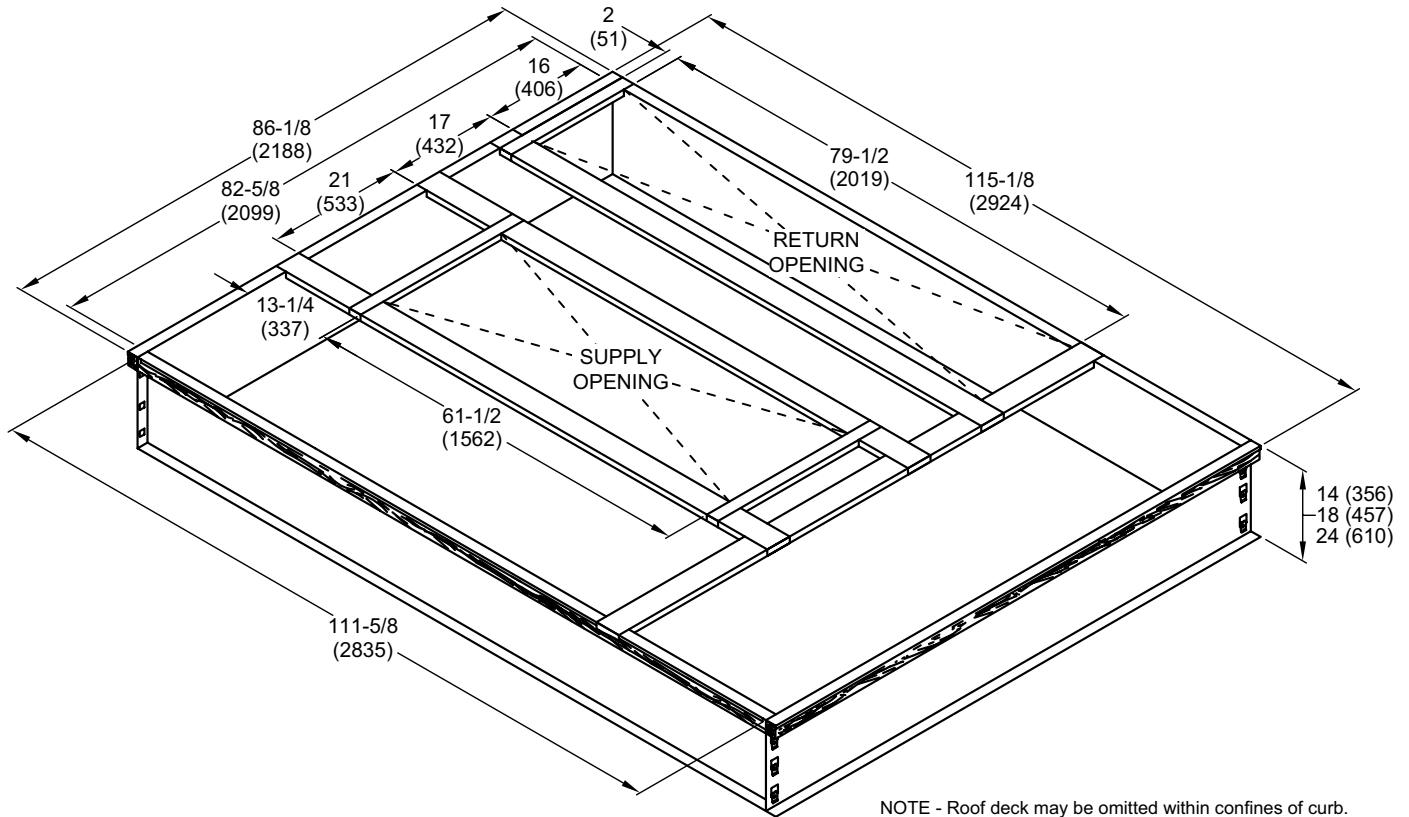
SIDE VIEW

NOTE - Two furnished per order no.

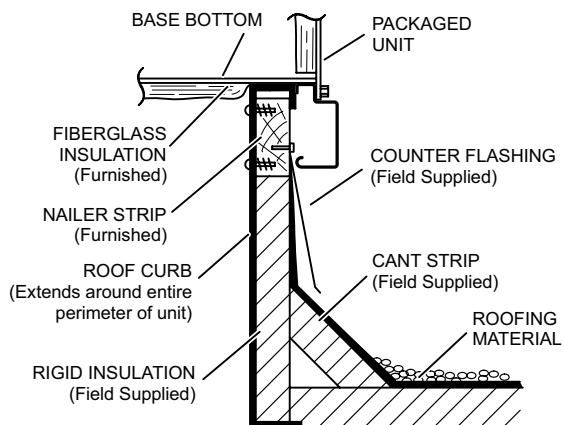
<sup>1</sup> NOTE - Opening size required in return air duct.

## DIMENSIONS - ACCESSORIES

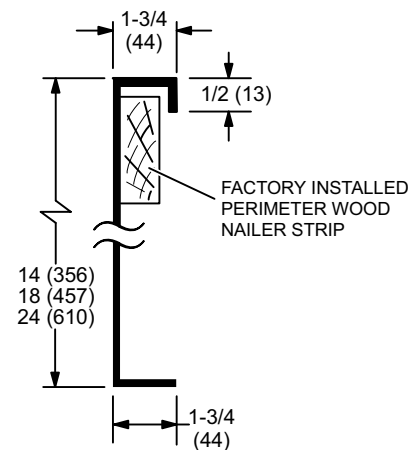
### HYBRID ROOF CURBS - DOUBLE DUCT OPENING



#### TYPICAL FLASHING DETAIL FOR ROOF CURB

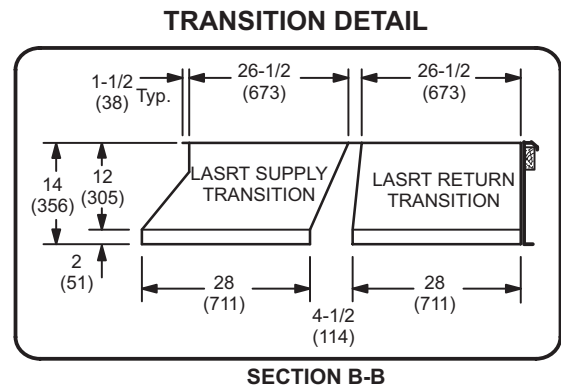
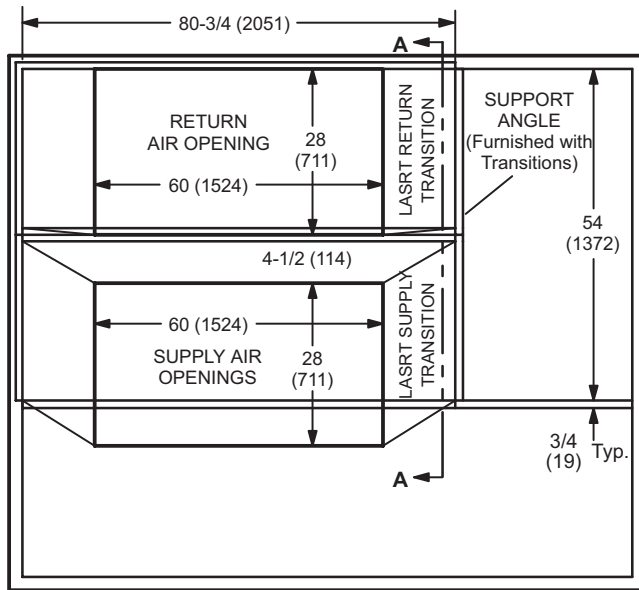


#### DETAIL ROOF CURB

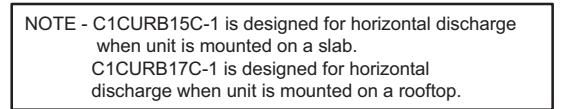


## DIMENSIONS - ACCESSORIES

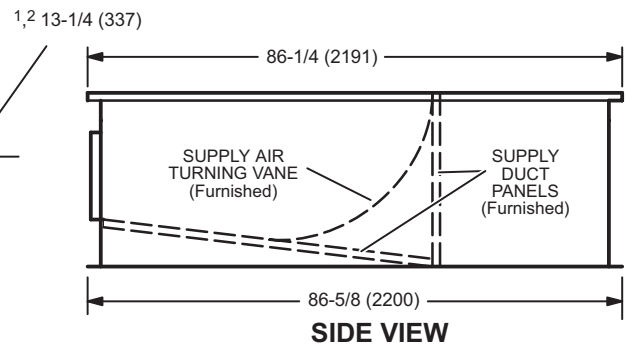
### ROOF CURBS WITH SUPPLY & RETURN AIR TRANSITIONS FOR CEILING DIFFUSERS



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



**SIDE VIEW  
(PACKAGED UNIT)**



<sup>1</sup> C1CURB15C-1      <sup>2</sup> C1CURB17C-1

Technical drawing of a horizontal roof curb, showing side and top views with dimensions in inches (in) and millimeters (mm).

**Side View Dimensions:**

- Overall height: 91 (2311) for C1CURB15C-1, 102 (2591) for C1CURB17C-1.
- Height from base to top of curb: 65 (1651).
- Height from base to bottom of curb: 1 26 (660) for C1CURB15C-1, 1 37 (940) for C1CURB17C-1.
- Horizontal distance from base to curb face: 42-7/8 (1089).

**Top View Dimensions:**

- Overall width: 5-1/4 (133).
- Horizontal return air opening width: 78-1/2 (1994).
- Horizontal return air opening height: 15 (381) for C1CURB15C-1, 2 (51) for C1CURB17C-1.
- Horizontal supply air opening width: 75 (1905).
- Horizontal supply air opening height: 18 (457).
- Horizontal distance from curb face to supply air opening: 6-1/2 (165) for C1CURB15C-1, 17-1/2 (445) for C1CURB17C-1.

**Labels:**

- OPTIONAL RETURN AIR PANEL KIT (Required For Horizontal Applications)
- HORIZONTAL RETURN AIR OPENING
- HORIZONTAL SUPPLY AIR OPENING
- HORIZONTAL ROOF CURB (Required For Horizontal Applications)

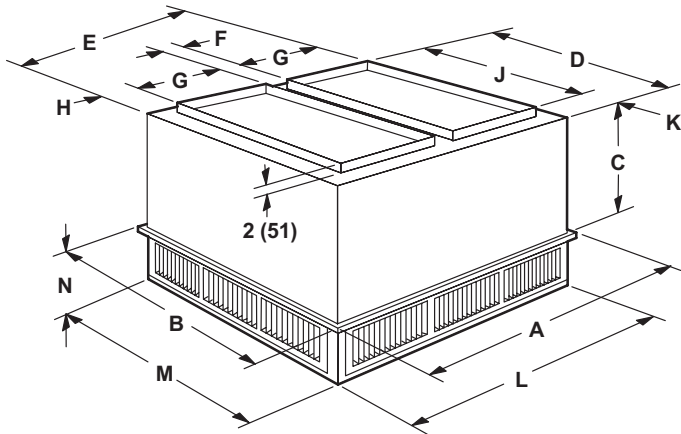
Curb extends 4 inch (102 mm) inside

### SIDE VIEW (Horizontal Openings)

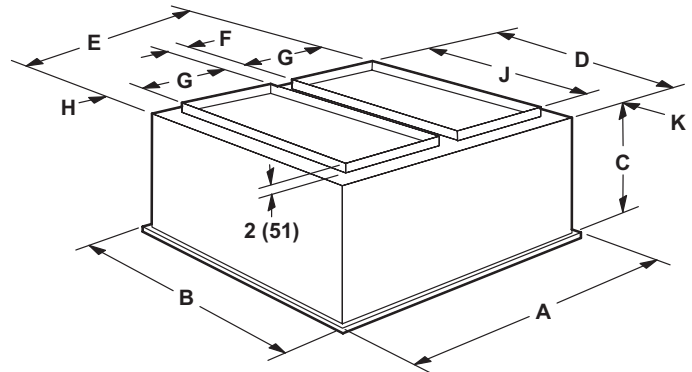
## DIMENSIONS - ACCESSORIES

### 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

Section	Description
Optional Accessories	<p>Removed Standard Efficiency Economizer option.</p> <p>Added new catalog and model numbers for the High Efficiency Economizer.</p> <p>Added new catalog and model numbers for the Outdoor Air Dampers.</p> <p>Removed Novar 2051 option.</p>



**Intertek**

Visit us at [www.allied-commercial.com](http://www.allied-commercial.com)

For the latest technical information, visit us at [www.allied-commercial.com](http://www.allied-commercial.com)

Contact us at 1-800-448-5872

**ALLIED**  
Commercial

NOTE - Due to Allied Commercial ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice and without incurring liability. Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury. Installation and service must be performed by a qualified installer and servicing agency.

©2019 Allied Air Enterprises LLC, a Lennox International Inc. Company