LGH

Energence® Rooftop Units
High Efficiency - 60 Hz

Bulletin No. 210609
September 2023
Supersedes August 2023

COMMERCIAL
PRODUCT SPECIFICATIONS

ENERGENCE™ Saving Energy with *Intelligence*

PRODiGY™ CONTROL SYSTEM

PRODiGY™ CONTROL SYSTEM SmartWire™ System

Environ™ Coil System

MSAV™ MULTI-STAGE AIR VOLUME

Humiditrol

ASHRAE 90.1 COMPLIANT

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

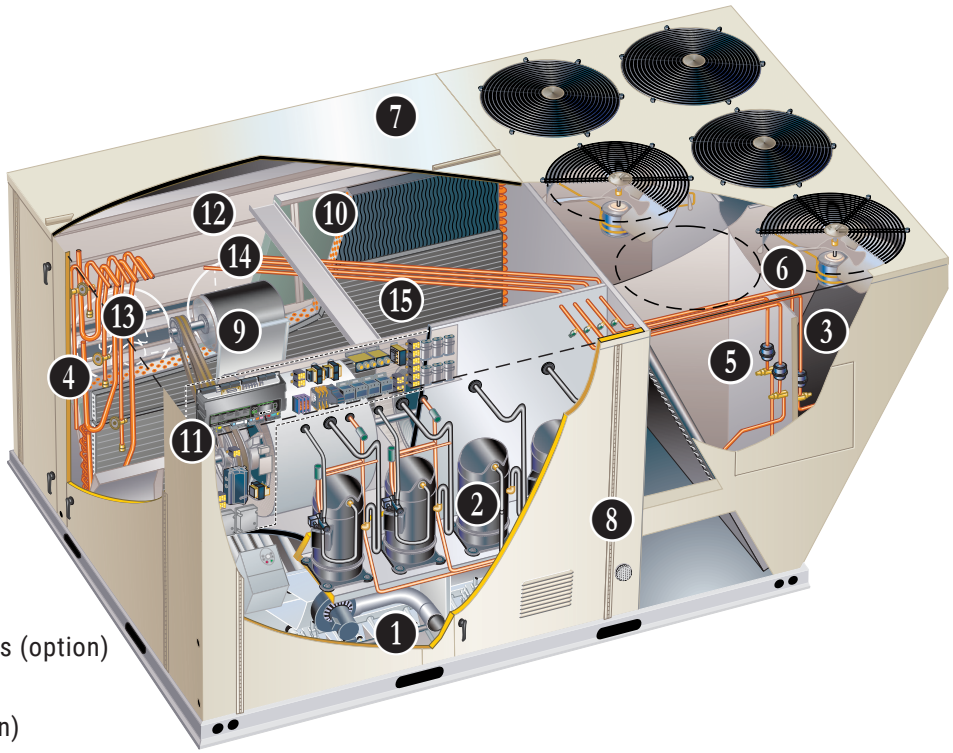
L G H 300 H 4 B S 1 Y

- **Brand/Family**
  L = Energence®
- **Unit Type**
  G = Packaged Gas Heat w/ Electric Cooling
- **Major Design Sequence**
  H = 1st Generation
- **Nominal Cooling Capacity - Tons**
  242 = 20 Tons
  300 = 25 Tons
  360 = 30 Tons
- **Cooling Efficiency**
  H = High Efficiency
- **Refrigerant Type**
  4 = R-410A
- **Blower Type**
  M = MSAV® Multi-Stage Air Volume, Belt Drive
  V = Variable Air Volume, Belt Drive
- **Heating Type**
  S = Standard Gas Heat, 2 Stage
  M = Medium Gas Heat, 2 Stage
  H = High Gas Heat, 2 Stage
- **Minor Design Sequence**
  1 = 1st Revision
  2 = 2nd Revision
  3 = 3rd Revision
- **Voltage**
  Y = 208/230V-3 phase-60hz
  G = 460V-3 phase-60hz
  J = 575V-3 phase-60hz

FEATURE HIGHLIGHTS

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

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



CONTENTS

APPROVALS AND WARRANTY

APPROVALS

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

WARRANTY

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

FEATURES AND BENEFITS

HEATING SYSTEM

1 Heat Exchanger
- Tubular construction, aluminized steel
- Life-cycle tested

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

2
- Aluminized steel inshot burners
- Direct spark ignition
- Electronic flame sensor
- Combustion air inducer
- Redundant automatic dual stage gas valve with manual shut-off

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

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

Safety Switches
- Flame roll-out switch
- Flame sensor
- Combustion air inducer proving switch
- Protects system operation

Required Selections

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

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

Options/Accessories

Factory Installed

Stainless Steel Heat Exchanger
- Required if mixed air temperature is below 45°F

Field Installed

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

HEATING SYSTEM (continued)

Field Installed

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

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

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

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

COOLING SYSTEM

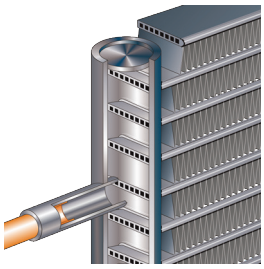
- Designed to maximize sensible and latent cooling performance at design conditions
- System can operate from 0°F to 125°F without any additional controls

R-410A Refrigerant
- Non-chlorine based
- Ozone friendly

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

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

4 Condenser Coil - Environ™ Coil System
- Lightweight, all aluminum brazed fin construction
- Constructed of three components
  - A flat extrusion tube
  - Fins in-between the flat extrusion tube
  - Two refrigerant manifolds



Environ™ Coil System Features:
- Improved heat transfer performance due to high primary surface area (flat tubes) versus secondary surface (fins)
- Smaller internal volume (reduced refrigerant charge)
- High durability
- All aluminum construction
- Fewer brazed joints
- Compact design
- Reduced unit weight
- Easy maintenance/cleaning
- Mounting brackets with rubber inserts secure coil to unit providing vibration dampening and corrosion protection
- Angled cabinet design protects coil from damage

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

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

5 Thermal Expansion Valves
- Ensures optimal performance throughout the application range
- Removable element head

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

High Pressure Switches

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

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

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

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

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

7 Outdoor Coil Fan Motors
- Thermal overload protected
- Totally enclosed
- Permanently lubricated ball bearings
- Shaft up
- Wire basket mount

FEATURES AND BENEFITS

COOLING SYSTEM (continued)

Outdoor Coil Fans
- PVC coated fan guard furnished

Required Selections

Cooling Capacity
- Specify nominal cooling capacity

Options/Accessories

Factory Installed

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

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

Factory or Field Installed

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

Drain Pan Overflow Switch
- Monitors condensate level in drain pan
- Shuts down unit if drain becomes clogged

Stainless Steel Drain Pan
- Non-corrosive drain pan

CABINET

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

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

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

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

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

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

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

Options/Accessories

Factory Installed

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

Field Installed

Combination Coil/Hail Guards
- Heavy gauge steel frame
- Painted to match cabinet
- Expanded metal mesh protects outdoor coil

Grille Guards
- Protects the space between outdoor coils and main cabinet

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

FEATURES AND BENEFITS

BLOWER

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

10 Motor

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

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

Supply Air Blower

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

Supply Static Pressure Transducer (VAV Models Only)

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

Required Selections

Supply Air Blower Selection

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

NOTE - For all MSAV® Multi-Stage Air Volume equipped units with serial numbers 5623F* through 5624A*, the Electronic Bypass Control is factory installed as standard and does not need to be ordered separately.

  - If equipped with the bypass control the MSAV® Multi-Stage Air Volume features automatic electronic bypass control of the VFD
  - In case of a VFD malfunction, a VFD alarm is generated by the Prodigy® 2.0 unit controller
  - Unit controller will automatically switch to full blower speed if a VFD alarm is generated
  - VFD has an operational range of 0 to 125° F outdoor air ambient temperature
- Lower operating costs are obtained when the blower is operated on lower speeds

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

Ordering Information

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

Options/Accessories

Factory Installed

Supply VFD Blower Bypass Control

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

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

Field Installed

Supply Static Limit Switch

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

FEATURES AND BENEFITS

ELECTRICAL

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

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

Required Selections

Voltage Choice
- Specify when ordering base unit

Options/Accessories

Factory Installed

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

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

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

Factory or Field Installed

Disconnect Switch
- Accessible outside of unit
- Spring loaded weatherproof cover furnished

GFI Service Outlets (2)
- 115V ground fault circuit interrupter (GFCI) type
- Available non-powered, field-wired or factory-wired and powered

Field Installed

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

INDOOR AIR QUALITY

11 Air Filters
- Disposable 2 inch filters furnished as standard

Options/Accessories

Factory or Field Installed

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

Field Installed

Healthy Climate® High Efficiency MERV 16 Air Filters
- Disposable MERV 16 (Minimum Efficiency Reporting Value based on ASHRAE 52.2) efficiency 2-inch pleated filters

Indoor Air Quality (CO_2) Sensors
- Monitors CO_2 levels, reports to the Prodigy® 2.0 unit controller which adjusts economizer dampers as needed

CONTROL SYSTEM

PRODIGY® CONTROL SYSTEM

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

Features:

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

Built-In Functions Include:

- Adjustable Blower On/Off Delay
- Built-in Control Parameter Defaults
- Compressor Time-Off Delay
- DDC Compatible
- Dirty Filter Switch Input
- Discharge Air Temperature Control
- Display/Sensor Readout
- Economizer Control Options (See Economizer / Exhaust Air / Outdoor Air sections)
- Fresh Air Tempering
- Over 100 diagnostic and status messages in English
- Exhaust Fan Control Modes for fresh air damper position
- Permanent Diagnostic Code Storage
- Field Adjustable Control Parameters (Over 200 settings)
- Indoor Air Quality Input (Demand Control Ventilation)
- Low Ambient Controls for cooling operation down to 0°F
- Gas Valve Time Delay Between First and Second Stage
- Minimum Compressor Run Time
- Network Capable (Can be daisy chained to other units or controls)
- Night Setback Mode
- Return Air Temperature Limit Control
- Safety Switch Input allows Controller to respond to a external safety switch trip
- Service Relay Output
- Smoke Alarm Mode has four choices (unit off, positive pressure, negative pressure, purge)
- Up to 2 heat/2 cool (standard Prodigy unit controller thermostat input)
- Up to 3 cool with additional relay
- Up to 4 cool with room sensor or network operation
- "Strike Three" Protection
- Gas Reheat Control allows simultaneous heating and cooling operation for humidity control of process air applications such as supermarkets
- On Demand Dehumidification monitors and controls condenser hot gas reheat operation with Humiditrol® dehumidification option
- Thermostat Bounce Delay
- Warm Up Mode Delay
- LED Indicators
- PC Interface connects the Prodigy 2.0 unit controller to a PC with the Lennox Unit Controller Software
- Room Sensor Operation controls temperature

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

CONTROL SYSTEM

PRODIGY® CONTROL SYSTEM (continued)

Controls Options

Factory or Field Installed

Blower Proving Switch
- Monitors blower operation, shuts down unit if blower fails

Dirty Filter Switch
- Senses static pressure increase indicating dirty filter condition

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

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

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

Commercial Control Systems

After-Market DDC
- Novar® Unit Controller and options

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

Field Installed

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

OPTIONS / ACCESSORIES

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

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

Factory or Field Installed

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

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

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

NOTE - Refer to Installation Instructions for complete setup information.

ECONOMIZER (continued)

Differential Sensible Control

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

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

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

Global Control

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

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

Factory or Field Installed

Single Enthalpy Temperature Control (Not for Title 24)

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

Differential Enthalpy Control (Not for Title 24)

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

Field Installed

Outdoor Air CFM Control

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

NOTE - Not available with Demand Control Ventilation (CO_2 Sensor) or Building Pressure Control.

Building Pressure Control

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

NOTE - Not available with Demand Control Ventilation (CO_2 Sensor) or Outdoor Air CFM Control.

OPTIONS / ACCESSORIES

EXHAUST

Factory or Field Installed

14 Downflow Barometric Relief Dampers

- Allow relief of excess air
- Aluminum blade dampers prevent blow back and outdoor air infiltration during off cycle
- Exhaust hood is factory installed when dampers are factory installed with economizer
- Exhaust hood is furnished with dampers when ordered for field installation
- Bird screen furnished

15 Standard Static Power Exhaust Fans

- Installs internal to unit for downflow applications only with economizer option
- Provides exhaust air pressure relief
- Interlocked to run when return air dampers are closed and supply air blower is operating
- Fans run based on air damper position (adjustable)
- Three 1/3 hp motors
- 20 in. diameter propeller-type fans
- Five blades
- Total power input of 1125 Watts
- Total air volume of 12,800 cfm at 0 in. w.g.
- Motor is inherently protected
- Totally enclosed
- Steel cabinet and hood painted to match unit

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

Factory or Field Installed

Horizontal Barometric Relief Dampers

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

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

Field Installed

High Static Power Exhaust

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

NOTE - VAV/MSAV® Multi-Stage Air Volume units can be ordered with High Static Power Exhaust (with VFD) and an optional factory installed Manual Supply VFD Blower Bypass for the Power Exhaust VFD's (see page 6).
High Static Power Exhaust (with VFD) features a solid-state analog pressure transducer control which senses differential pressure between conditioned space and outdoor air to regulate exhaust blower speed. See High Static Power Exhaust Blower Tables.

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

Power Exhaust Control Options

Damper Position Control

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

Differential Pressure Transducer

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

Field Installed

Pressure Switch

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

NOTE - Order one per unit without VFD.

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

OPTIONS / ACCESSORIES

OUTDOOR AIR

Factory or Field Installed

Outdoor Air Damper - Downflow or Horizontal With Air Hood

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

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

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

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

ROOF CURBS

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

Downflow

Hybrid Roof Curbs

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

Horizontal

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

NOTE - Requires Horizontal Return Air Panel Kit.

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

CEILING DIFFUSERS

Field Installed

Ceiling Diffusers
(Flush or Step-Down)

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

Transitions (Supply and Return)

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

HUMIDITROL® DEHUMIDIFICATION SYSTEM OPTION

16 OVERVIEW

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

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

BENEFITS

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

OPERATION

No Dehumidification Demand

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

Dehumidification Demand Only

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

NOTE - See Sequence of Operation for additional information.

Dehumidification and Cooling Demand (Thermostat/ Room Sensor Application)

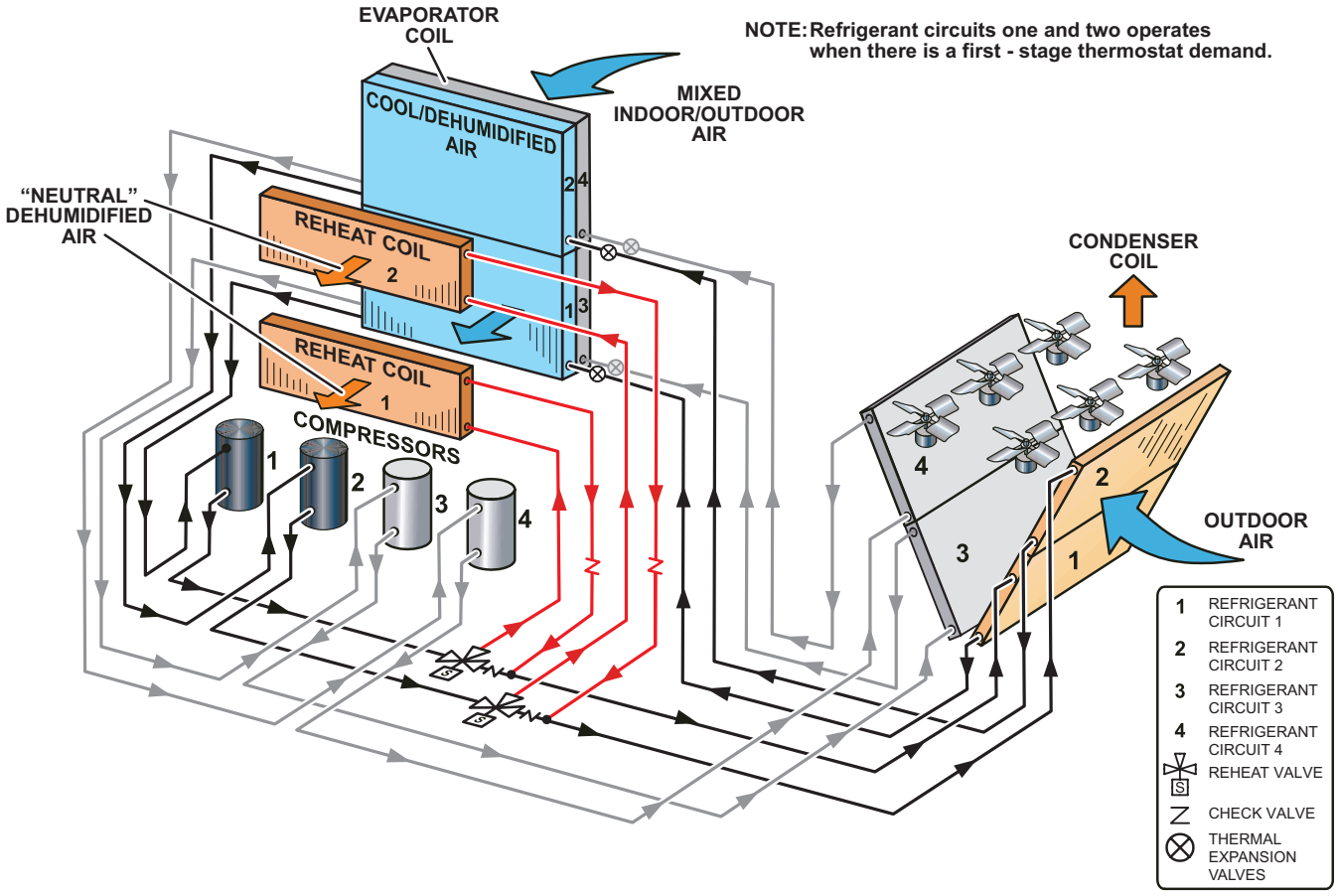
- If both a dehumidification and a full cooling demand occur, the system will operate in cooling until the cooling demand is satisfied
- Then the system will energize the dehumidification mode

Options/Accessories

Humidity Sensor Kit

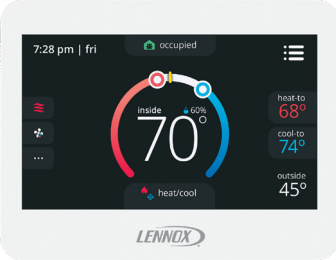
- Remote Mounted Humidity sensor required with factory installed Humiditrol® Dehumidification Option or Supermarket reheat field selectable option

REFRIGERANT SCHEMATIC



OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

CS8500 Commercial 7-Day Programmable Thermostat



- Fully Communicating Sensor
- Full Color Touchscreen Interface
- Variable Speed System Control (On Compatible Units)
- Up To 4 Heat / 4 Cool
- Built-In Sensors For Temperature, Humidity And Optional CO_2
- Remote Sensor Options For Occupancy, Temperature
- BACnet Capable Options
- 5-2 or 7-Day Scheduling
- Smooth Setback Recovery
- Heat/Cool Auto-Changeover
- Four-Wire Installation
- FDD, ASHRAE, IECC Compliant

CS7500 Commercial 7-Day Programmable Thermostat

- Premium Universal Thermostat
- Full Color Touchscreen Interface
- Up To 4 Heat / 3 Cool
- Built-In Sensors For Temperature and Humidity
- Remote Sensors Options For Temperature, Discharge Air, Outdoor Air
- 5-2 or 7-Day Scheduling
- Smooth Setback Recovery
- Heat/Cool Auto-Changeover
- FDD, ASHRAE, IECC Compliant

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

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

Wireless Repeater for LCS-5030

- Extends Effective Range of Wireless Sensor (LCS-5030)
- 24VAC Only
- Locking Hex Screw

NOTE - Wireless only.

OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

Wired Temperature/Humidity Room Sensor (Non-Communicating)

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

OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

Description		Catalog No.
CS8500 Commercial 7 Day Programmable Thermostat		
CS8500 7-Day Thermostat	No CO_2 Sensing	**24K55**
	With CO_2 Sensing	**24K53**
Sensors/Accessories	[1] Remote non-adjustable wall-mount 10k	**47W37**
	[1] Remote non-adjustable wall-mount 11k	**94L61**
Sysbus Network Cable (Yellow) for CS8500 and LCS-5030 Wired Room Sensor		
Twisted pair 100% shielded communication cable, Red and Black 22 AWG, yellow jacket, rated at 75°C, 300V, Plenum rated Insulation - Low smoke PVC, NEC, CMP	500 ft. box	**27M19**
	1000 ft. box	**94L63**
	2500 ft. roll	**68M25**
CS7500 Commercial 7-Day Programmable Thermostat		
CS7500 7-Day Thermostat		**24K41**
Sensors/Accessories	[2] Remote non-adjustable wall-mount 20k	**47W36**
	[2] Remote non-adjustable wall-mount 10k	**47W37**
	Remote non-adjustable discharge air (duct mount)	**19L22**
	Outdoor temperature sensor	**X2658**
Universal Thermostat Guard with Lock (clear)		
	Inside Dimensions (H x W x D) 5-7/8 x 8-3/8 x 3 in.	**39P21**
Temperature/Humidity Room Sensors		
LCS-5030 Wireless/Wired Temperature/Humidity Room Sensor		**21L07**
Wireless Repeater for LCS-5030		**21L09**
A335MT13AE1 Wired Temperature/Humidity Room Sensor (Non-Communicating)		**21W06**

[1] Up to nine of the same type remote temperature sensors can be connected in parallel.

[2] Remote wall-mount sensors can be applied in any of the following combinations:
One Sensor - (1) 47W36, Two Sensors - (2) 47W37, Three Sensors - (2) 47W36 and (1) 47W37
Four Sensors - (4) 47W36, Five Sensors - (3) 47W36 and (2) 47W37

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

SUPPLY AIR BLOWER SPEED

Unit has the following supply air blower speed settings:

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

COOLING MODE (2 Cool)

[1] 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 55ºF 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 55ºF 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.

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

Unit Does Not Feature An Economizer Or Outdoor Air Is Not Suitable

Y1 Demand:

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

Y2 Demand:

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

Dehumidification Mode

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

Call For Dehumidification, No Y1, Y2 Demand:

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

Y1 Demand With A Call For Dehumidification:

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

Y2 Demand With A Call For Dehumidification:

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

HEATING MODE (2 Heat)

W1 Demand:

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

W2 Demand:

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

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

SUPPLY AIR BLOWER SPEED

Unit has the following supply air blower speed settings:

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

COOLING MODE (4 Cool)

- Room sensors (when connected to S-Bus) or Discharge air temperature (DAT) can be used to control unit staging.
- DAT default setpoint = 55ºF. Unit will stage compressors as required to maintain the setpoint when provided with Y1 thermostat demand.
- Room sensor occupied default setpoint = 75ºF. 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. 1 Outdoor air suitability is determined by the energy state of outdoor ambient (enthalpy or sensible) and its ability to achieve the desired free cooling effects. Outdoor air suitability can also be determined by a third party controller and provided to the RTU via a network connection.

Unit <u>Does Not</u> Feature An Economizer Or Outdoor Air Is Not Suitable

Cooling Stage 1:

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

Cooling Stage 2:

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

Cooling Stage 3:

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

Cooling Stage 4:

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

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

Dehumidification Mode

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

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

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

Y1 Demand With A Call For Dehumidification:

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

Y2 Demand With A Call For Dehumidification:

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

Y3 Demand With A Call For Dehumidification:

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

Y4 Demand With A Call For Dehumidification:

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

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

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

Heating Stage 1:

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

Heating Stage 2 :

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

Heating Stage 3:

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

Heating Stage 4:

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

UNITS IN ZONING APPLICATIONS OPERATING WITH DISCHARGE AIR CONTROL (4 HEAT / 4 COOL)

SUPPLY AIR BLOWER SPEED

Unit has the following supply air blower speed settings:

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

COOLING MODE (4 Cool)

- Discharge air temperature (DAT) can be used to control unit staging.
- DAT default setpoint = 55ºF. 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.

[1] 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.

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

Unit Does Not Feature An Economizer Or Outdoor Air Is Not Suitable

Cooling Stage 1:

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

Cooling Stage 2:

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

Cooling Stage 3:

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

Cooling Stage 4:

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

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

HEATING MODE (4 Heat)

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

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

Heating Stage 1:

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

Heating Stage 2:

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

Heating Stage 3:

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

Heating Stage 4:

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

Modulating Outdoor Air Damper

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

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

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

OPTIONS / ACCESSORIES

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

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

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

O = Configure To Order (Factory Installed)

X = Field Installed

OPTIONS / ACCESSORIES

Item Description		Catalog Number	Unit Model No. 242	300	360
CONTROLS					
Blower Proving Switch		**88W59**	OX	OX	OX
Commercial Controls	CPC Einstein Integration	Factory	O	O	O
	Prodigy® Control System - BACnet® Module	**59W51**	OX	OX	OX
	Prodigy® Control System - LonTalk® Module	**54W27**	OX	OX	OX
	Novar® LSE	Factory	O	O	O
Dirty Filter Switch		**53W68**	OX	OX	OX
Discharge Air Temperature Sensor		Factory	O	O	O
Fresh Air Tempering		**21Z08**	OX	OX	OX
General Purpose Control Kit		**13J78**	X	X	X
Smoke Detector - Supply or Return (Power board and one sensor)		**22H56**	OX	OX	OX
Smoke Detector - Supply and Return (Power board and two sensors)		**22H57**	OX	OX	OX
Supply Static Limit Switch		**79M80**	X	X	X
Supply Static Limit Switch - Mounting Kit		**79M81**	X	X	X
INDOOR AIR QUALITY					
Air Filters					
Healthy Climate® High Efficiency Air Filters 20 x 20 x 2 - order 12 per unit	MERV 8	**54W21**	OX	OX	OX
	MERV 13	**52W39**	OX	OX	OX
	MERV 16	**21U40**	X	X	X
Replaceable Media Filter with Metal Mesh Frame (includes Non-Pleated Filter Media) 20 x 20 x 2- order 12 per unit		**44N60**	X	X	X
Indoor Air Quality (CO_2) Sensors					
Sensor - Wall-mount, off-white plastic cover with LCD display		**77N39**	X	X	X
Sensor - Wall-mount, off-white plastic cover, no display		**23V86**	X	X	X
Sensor - Black plastic case with LCD display, rated for plenum mounting		**87N52**	X	X	X
Sensor - Wall-mount, black plastic case, no display, rated for plenum mounting		**87N54**	X	X	X
CO_2 Sensor Duct Mounting Kit - for downflow applications		**85L43**	X	X	X
Aspiration Box - for duct mounting non-plenum rated CO_2 sensors (**77N39**)		**90N43**	X	X	X
ELECTRICAL					
Voltage 60 hz	208/230V - 3 phase	Factory	O	O	O
	460V - 3 phase	Factory	O	O	O
	575V - 3 phase	Factory	O	O	O
Disconnect Switch - See Electrical Accessories Tables on page 41 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 only)	**74M70**	OX	OX	OX
	15 amp factory-wired and powered (208/230V, 460V only)	Factory	O	O	O
	[1] 20 amp non-powered, field-wired (208/230V, 460V, 575V)	**67E01**	OX	OX	OX
	[1] 20 amp non-powered, field-wired (575V)	Factory	O	O	O
Weatherproof Cover for GFI		**10C89**	X	X	X
Phase/Voltage Detection		Factory	O	O	O
[2] HUMIDITROL® CONDENSER REHEAT OPTION					
Humiditrol® Dehumidification Option		Factory		O	O
Humidity Sensor Kit, Remote mounted (required)		**17M50**		X	X

[1] Canada requires a minimum 20 amp circuit. Select 20 amp, non-powered, field wired GFI.

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

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

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OPTIONS / ACCESSORIES

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

[1] Order one per unit with Standard Static Power Exhaust without VFD. Order two per unit with standard static power exhaust for MSAV or VAV models.

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

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

O = Configure To Order (Factory Installed)

X = Field Installed

OPTIONS / ACCESSORIES

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

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

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

O = Configure To Order (Factory Installed)

X = Field Installed

SPECIFICATIONS

General Data		Nominal Tonnage	20 Ton	25 Ton	25 Ton
		Model Number	LGH242H4V	LGH300H4V	LGH300H4M
		Efficiency Type	High	High	High
		Blower Type	VAV (Variable Air Volume)	VAV (Variable Air Volume)	MSAV® Multi-Stage Air Volume
Cooling Performance		Gross Cooling Capacity - Btuh	244,000	310,000	310,000
		Net Cooling Capacity - Btuh	[1] 238,000	[2] 300,000	[2] 300,000
		AHRI Rated Air Flow - cfm	6800	8100	8100
		Total Unit Power - kW	19.3	25.8	25.8
		EER (Btuh/Watt)	[1] 12.3	[2] 11.6	[2] 11.6
		IEER (Btuh/Watt)	[1] 15.5	[2] 14.3	[2] 14.4
Refrigerant Charge		Refrigerant Type	R-410A	R-410A	R-410A
		Circuit 1	8 lbs. 0 oz.	8 lbs. 0 oz.	8 lbs. 0 oz.
		Circuit 2	8 lbs. 0 oz.	8 lbs. 0 oz.	8 lbs. 0 oz.
		Circuit 3	8 lbs. 8 oz.	8 lbs. 0 oz.	8 lbs. 0 oz.
		Circuit 4	8 lbs. 8 oz.	8 lbs. 8 oz.	8 lbs. 8 oz.
Gas Heating Options Available			See page 28		
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		
[3] 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	**5 hp** **Kit 5** 660-810 rpm **Kit 6** 770-965 rpm **Kit 7** 570-720 rpm **Kit 8** 480-630 rpm **Kit 9** 410-535 rpm **7.5 hp** **Kit 3** 715-880 rpm **Kit 4** 770-965 rpm 1**0 hp** **Kit 1** 740-895 rpm **Kit 2** 870-1045 rpm		
		Blower wheel nom. D x W - in.	(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.

[1] 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.

[2] Tested at conditions included in with AHRI Standard 340/360.

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

SPECIFICATIONS

General Data		Nominal Tonnage	30 Ton	30 Ton
		Model Number	**LGH360H4V**	**LGH360H4M**
		Efficiency Type	**High**	**High**
		Blower Type	VAV (Variable Air Volume)	MSAV® Multi-Stage Air Volume
Cooling Performance		Gross Cooling Capacity - Btuh	370,000	370,000
		[1] Net Cooling Capacity - Btuh	350,000	350,000
		AHRI Rated Air Flow - cfm	8600	8600
		Total Unit Power - kW	33.0	33.0
		[1] EER (Btuh/Watt)	10.6	10.6
		[1] IEER (Btuh/Watt)	13.5	14.0
Refrigerant Charge		Refrigerant Type	R-410A	R-410A
		Circuit 1	8 lbs. 0 oz.	8 lbs. 0 oz.
		Circuit 2	8 lbs. 0 oz.	8 lbs. 0 oz.
		Circuit 3	8 lbs. 0 oz.	8 lbs. 0 oz.
		Circuit 4	8 lbs. 0 oz.	8 lbs. 0 oz.
Gas Heating Options Available			See page 28	
Compressor Type (number)			Scroll (4)	Scroll (4)
Outdoor Coils		Net face area (total) - sq. ft.	68.3	68.3
		Number of rows	1	1
		Fins per inch	23	23
Outdoor Coil Fans		Motor - (No.) horsepower	(6) 1/3	(6) 1/3
		Motor rpm	1075	1075
		Total Motor watts	2500	2500
		Diameter - (No.) in.	(6) 24	(6) 24
		Number of blades	3	3
		Total Air volume - cfm	21,500	21,500
Indoor Coils		Net face area (total) - sq. ft.	31.40	31.40
		Tube diameter - in.	3/8	3/8
		Number of rows	4	4
		Fins per inch	14	14
		Drain connection - No. and size	(1) 1 in. NPT	(1) 1 in. NPT
		Expansion device type	Balance port TXV, removable head	
[3] **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	**5 hp** **Kit 5** 660-810 rpm **Kit 6** 770-965 rpm **Kit 7** 570-720 rpm **Kit 8** 480-630 rpm **Kit 9** 410-535 rpm **7.5 hp** **Kit 3** 715-880 rpm **Kit 4** 770-965 rpm 1**0 hp** **Kit 1** 740-895 rpm **Kit 2** 870-1045 rpm	
		Blower wheel nom. D x W - in.	(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.

[1] 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.

[3] 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	211,000	292,000	389,000
[1] Gas Heating Performance (Four-Stage)	Input - Btuh	First Stage	85,000	117,000	156,000
		Second Stage	169,000	234,000	312,000
		Third Stage	214,000	297,000	396,000
		Fourth Stage	260,000	360,000	480,000
	Output - Btuh	First Stage	- - -	- - -	- - -
		Second Stage	- - -	- - -	- - -
		Third Stage	- - -	- - -	- - -
		Fourth Stage	211,000	292,000	389,000
		Temperature Rise Range - °F	15 - 45	30 - 60	40 - 70
		Thermal Efficiency	81%	81%	81%
		Gas Supply Connections	1 in. npt	1 in. npt	1 in. npt
Recommended Gas Supply Pressure - in. w.g.		Natural	7	7	7
		LPG/Propane	11	11	11

[1] 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
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

[1] 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
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

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

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

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) 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	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) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) 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) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) 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	6400	244	13.17	0.71	0.83	0.94	231.5	15.08	0.71	0.84	0.96	217.6	17.18	0.73	0.86	0.98	202.5	19.57	0.73	0.88	1
	8000	258	13.19	0.75	0.89	1	244.4	15.1	0.76	0.91	1	229.6	17.21	0.78	0.93	1	213.7	19.61	0.8	0.96	1
	9600	268.4	13.21	0.8	0.95	1	254.2	15.13	0.82	0.97	1	238.9	17.25	0.84	0.99	1	222.6	19.65	0.86	1	1
67°F	6400	255.5	13.19	0.55	0.68	0.8	241.4	15.09	0.56	0.69	0.81	226.8	17.2	0.55	0.7	0.83	210.4	19.59	0.56	0.71	0.85
	8000	267.3	13.21	0.58	0.72	0.86	252.6	15.12	0.58	0.74	0.88	236.9	17.24	0.59	0.76	0.9	220.3	19.63	0.59	0.77	0.92
	9600	276.4	13.22	0.61	0.78	0.92	261.4	15.15	0.62	0.79	0.94	245.5	17.27	0.63	0.81	0.97	228.4	19.67	0.64	0.83	0.99
71°F	6400	271.1	13.21	0.42	0.55	0.66	256.7	15.13	0.41	0.54	0.67	240.9	17.26	0.41	0.55	0.68	224.1	19.65	0.4	0.55	0.69
	8000	283.4	13.23	0.42	0.57	0.7	267.9	15.17	0.42	0.58	0.72	251.4	17.29	0.42	0.58	0.74	233	19.7	0.41	0.59	0.76
	9600	291.8	13.24	0.43	0.6	0.76	275.4	15.18	0.43	0.61	0.78	258.1	17.32	0.43	0.62	0.8	239.1	19.72	0.43	0.63	0.82

RATINGS

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

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

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

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

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

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

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

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

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F					95°F					105°F					115°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) 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	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) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) 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	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) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) 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	4000	137.9	7.46	0.61	0.68	0.76	131.9	8.29	0.62	0.71	0.78	125.6	9.23	0.63	0.71	0.79	118.8	10.31	0.62	0.71	0.8
	5000	149.2	7.52	0.65	0.73	0.81	142.4	8.37	0.63	0.73	0.81	135.4	9.31	0.64	0.74	0.83	128.1	10.4	0.63	0.74	0.84
	6000	157.3	7.59	0.65	0.75	0.84	150.7	8.44	0.66	0.76	0.85	143.3	9.38	0.66	0.77	0.86	135.4	10.44	0.66	0.77	0.87
67°F	4000	146.8	7.51	0.53	0.6	0.67	140.8	8.35	0.52	0.6	0.67	134	9.31	0.51	0.59	0.68	126.9	10.37	0.51	0.59	0.68
	5000	158.5	7.61	0.53	0.61	0.69	151.9	8.44	0.53	0.61	0.7	144.7	9.39	0.52	0.61	0.7	136.9	10.46	0.51	0.62	0.7
	6000	167.6	7.7	0.54	0.62	0.72	160.5	8.53	0.53	0.63	0.72	152.7	9.46	0.53	0.64	0.74	144.4	10.53	0.53	0.64	0.74
71°F	4000	155.5	7.58	0.43	0.5	0.57	149.2	8.42	0.42	0.49	0.57	142.5	9.37	0.41	0.49	0.57	135.4	10.45	0.4	0.49	0.57
	5000	168.1	7.71	0.43	0.51	0.59	161.2	8.52	0.42	0.5	0.58	154.1	9.47	0.41	0.5	0.59	146.1	10.55	0.41	0.49	0.59
	6000	177.8	7.79	0.43	0.52	0.6	170.5	8.62	0.42	0.51	0.61	162.2	9.56	0.41	0.52	0.61	153.7	10.63	0.4	0.51	0.61

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

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

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

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F					95°F					105°F					115°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) 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) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) 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	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) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) 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) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) 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	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) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) 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

HUMIDITROL® DEHUMIDIFICATION SYSTEM RATINGS

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

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

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

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

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

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

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

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

BLOWER DATA

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

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

Then determine from blower table blower motor output and drive required.
See page 35 for wet coil and option/accessory air resistance data.
See page 35 for factory installed drive kit specifications.

Air Volume cfm	TOTAL STATIC PRESSURE - In. w.g.																									
	0.20		0.40		0.60		0.80		1.00		1.20		1.40		1.60		1.80		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	- - -	- - -
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	- - -	- - -	- - -	- - -
13,000	657	4.83	715	5.50	766	6.18	808	6.89	847	7.61	883	8.32	918	8.98	953	9.56	988	10.06	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
13,500	680	5.35	736	6.06	784	6.78	824	7.53	861	8.29	896	9.00	930	9.66	965	10.24	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
14,000	704	5.92	757	6.67	801	7.44	839	8.23	875	9.00	909	9.72	943	10.38	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
14,500	727	6.55	777	7.34	818	8.16	854	8.97	889	9.75	922	10.48	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
15,000	750	7.23	797	8.07	834	8.92	868	9.75	902	10.54	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -

BLOWER DATA

DRIVE KIT SPECIFICATIONS

Motor Efficiency	Nominal 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.

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

FACTORY INSTALLED OPTIONS/FIELD INSTALLED ACCESSORY AIR RESISTANCE

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

BLOWER DATA

POWER EXHAUST PERFORMANCE - STANDARD STATIC

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

POWER EXHAUST - HIGH STATIC

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

BLOWER DATA

CEILING DIFFUSER AIR RESISTANCE - in. w.g.

Air Volume 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	[1] 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

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

ELECTRICAL DATA — HIGH EFFICIENCY - VARIABLE AIR VOLUME - 20 TON

	Model No.	LGH242H4V								
[1] 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 (total)	2.4 (14.4)			1.3 (7.8)			1 (6)		
Standard Power Exhaust (3) 0.33 HP	Full Load Amps (total)	2.4 (7.2)			1.3 (3.9)			1 (3)		
High Static Power Exhaust (3) 2 HP	Full Load Amps (total)	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
[2] Maximum Overcurrent Protection	Unit Only	100	110	125	50	60	70	35	45	50
	With (3) 0.33 HP Standard Power Exhaust	110	125	125	60	60	70	40	45	50
	With High Static Power Exhaust (3) 2 HP	125	125	150	60	70	80	45	50	50
[3] Minimum Circuit Ampacity	Unit Only	90	99	107	50	54	58	34	38	40
	With (3) 0.33 HP Standard Power Exhaust	97	106	115	54	58	62	37	41	43
	With High Static Power Exhaust (3) 2 HP	112	122	130	60	64	68	42	46	48

ELECTRICAL ACCESSORIES

Disconnect	Unit Only	**54W89**	**54W89**	**54W89**	**54W88**	**54W88**	**54W88**	**54W88**	**54W88**	**54W88**
	Unit + Standard Power Exhaust (3) 0.33 HP	**54W89**	**54W89**	**54W89**	**54W88**	**54W88**	**54W88**	**54W88**	**54W88**	**54W88**
	Unit + High Static Power Exhaust (3) 2 HP	**54W89**	**54W89**	**54W89**	**54W88**	**54W88**	**54W88**	**54W88**	**54W88**	**54W88**
Terminal Block		**30K75**	**30K75**	**30K75**	**30K75**	**30K75**	**30K75**	**30K75**	**30K75**	**30K75**

Disconnects - 54W88 - 80A
54W89 - 150A

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

[1] Extremes of operating range are plus and minus 10% of line voltage.

[2] HACR type breaker or fuse.

[3] Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

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

	Model No.	LGH300H4V, LGH300H4M								
[1] 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 (total)	2.4 (14.4)			1.3 (7.8)			1 (6)		
Standard Power Exhaust (3) 0.33 HP	Full Load Amps (total)	2.4 (7.2)			1.3 (3.9)			1 (3)		
High Static Power Exhaust (3) 2 HP	Full Load Amps (total)	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
[2] Maximum Overcurrent Protection	Unit Only	150	150	150	70	70	80	50	50	60
	With (3) 0.33 HP Standard Power Exhaust	150	150	175	70	70	80	50	60	60
	With High Static Power Exhaust (3) 2 HP	150	175	175	80	80	90	60	60	60
[3] Minimum Circuit Ampacity	Unit Only	127	135	143	61	64	68	45	49	51
	With (3) 0.33 HP Standard Power Exhaust	134	142	150	65	68	72	48	52	54
	With High Static Power Exhaust (3) 2 HP	149	157	165	71	75	78	53	57	59
ELECTRICAL ACCESSORIES										
Disconnect	Unit Only	**54W89**	**54W89**	**90W82**	**54W88**	**54W88**	**54W88**	**54W88**	**54W88**	**54W88**
	Unit + Standard Power Exhaust (3) 0.33 HP	**54W89**	**90W82**	**90W82**	**54W88**	**54W88**	**54W88**	**54W88**	**54W88**	**54W88**
	Unit + High Static Power Exhaust (3) 2 HP	**90W82**	**90W82**	**90W82**	**54W88**	**54W89**	**54W89**	**54W88**	**54W88**	**54W88**
Terminal Block		**30K75**	**30K75**	**30K75**	**30K75**	**30K75**	**30K75**	**30K75**	**30K75**	**30K75**

Disconnects - 54W88 - 80A
54W89 - 150A
90W82 - 250A

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

[1] Extremes of operating range are plus and minus 10% of line voltage.

[2] HACR type breaker or fuse.

[3] Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

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

	Model No.	LGH360H4V, LGH360H4M								
[1] 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 (total)	2.4 (14.4)			1.3 (7.8)			1 (6)		
Standard Power Exhaust (3) 0.33 HP	Full Load Amps (total)	2.4 (7.2)			1.3 (3.9)			1 (3)		
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
[2] Maximum Overcurrent Protection	Unit Only	150	150	175	70	80	80	60	60	60
	With (3) 0.33 HP Standard Power Exhaust	150	175	175	80	80	90	60	60	60
	With High Static Power Exhaust (3) 2 HP	175	175	200	80	90	90	60	70	70
[3] Minimum Circuit Ampacity	Unit Only	138	145	153	68	71	75	51	54	56
	With (3) 0.33 HP Standard Power Exhaust	145	153	161	72	75	78	54	57	59
	With High Static Power Exhaust (3) 2 HP	160	168	176	78	81	85	59	62	64
ELECTRICAL ACCESSORIES										
Disconnect	Unit Only	**90W82**	**90W82**	**90W82**	**54W88**	**54W88**	**54W89**	**54W88**	**54W88**	**54W88**
	Unit + Standard Power Exhaust (3) 0.33 HP	**90W82**	**90W82**	**90W82**	**54W88**	**54W89**	**54W89**	**54W88**	**54W88**	**54W88**
	Unit + High Static Power Exhaust (3) 2 HP	**90W82**	**90W82**	**90W82**	**54W89**	**54W89**	**54W89**	**54W88**	**54W88**	**54W88**
Terminal Block		**30K75**	**30K75**	**30K75**	**30K75**	**30K75**	**30K75**	**30K75**	**30K75**	**30K75**

Disconnects - 54W88 - 80A
54W89 - 150A
90W82 - 250A

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

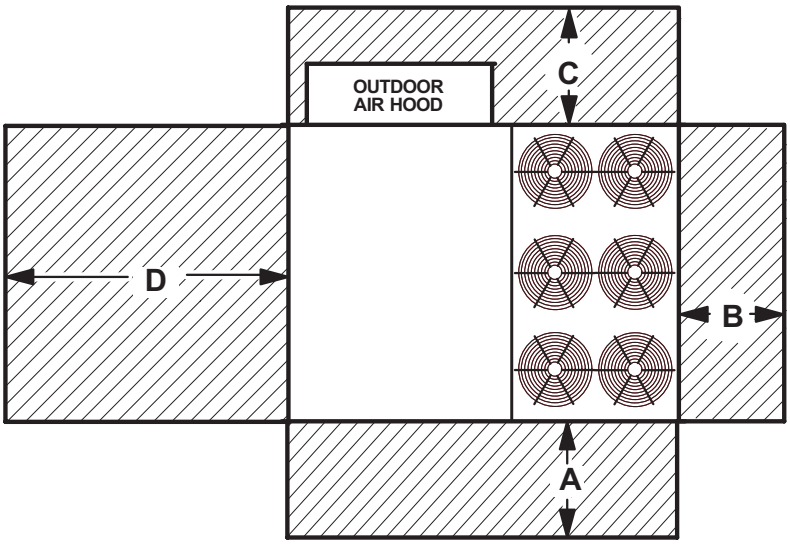
[1] Extremes of operating range are plus and minus 10% of line voltage.

[2] HACR type breaker or fuse.

[3] Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

UNIT CLEARANCES

Unit With Economizer

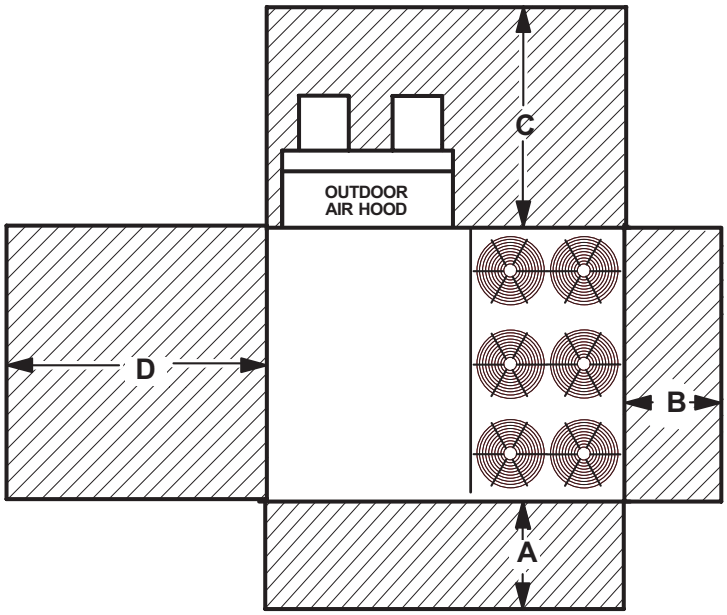


[1] Unit Clearance	A		B		C		D		Top Clearance
	in.	mm	in.	mm	in.	mm	in.	mm	
Service Clearance	60	1524	36	914	36	914	66	1676	Unobstructed
Clearance to Combustibles	36	914	1	25	1	25	1	25	
Minimum Operation Clearance	45	1143	36	914	36	914	41	1041	

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

[1] 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



[1] Unit Clearance	A		B		C		D		Top Clearance
	in.	mm	in.	mm	in.	mm	in.	mm	
Service Clearance	60	1524	36	914	80	2032	66	1676	Unobstructed
Clearance to Combustibles	36	914	1	25	1	25	1	25	
Minimum Operation Clearance	45	1143	36	914	80	2032	41	1041	

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

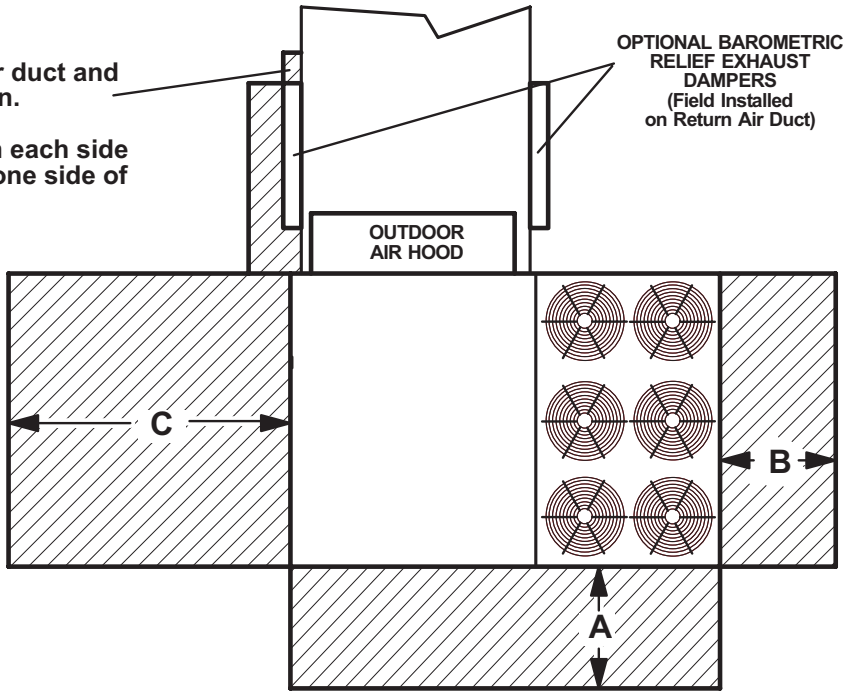
[1] **Service Clearance** - Required for removal of serviceable parts.
Clearance to Combustibles - Required clearance to combustible material.
Minimum Operation Clearance - Required clearance for proper unit operation.

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.



[1] Unit Clearance	A		B		C		Top Clearance
	in.	mm	in.	mm	in.	mm	
Service Clearance	60	1524	36	914	66	1676	Unobstructed
Clearance to Combustibles	36	914	1	25	1	25	
Minimum Operation Clearance	45	1143	36	914	41	1041	

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

[1] **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^{-12} Watts - Center Frequency - Hz							[1] 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.

[1] Sound Rating Number according to ARI Standard 370-2001 (includes pure tone penalty).
The Sound Rating Number is the overall A-Weighted Sound Power Level, (LWA), dB (100 Hz to 10,000 Hz)

WEIGHT DATA

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

OPTIONS / ACCESSORIES

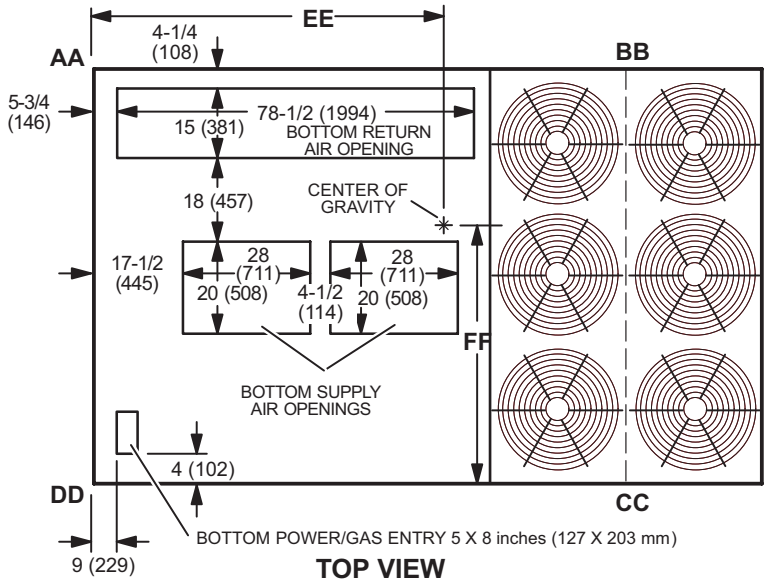
Description		Shipping Weight	
		lbs.	kg
CEILING DIFFUSERS			
Step-Down	LARTD30/36S	625	283
Flush	LAFD30/36S	625	283
Transitions	LASRT30/36	85	39
ECONOMIZER / OUTDOOR AIR / EXHAUST			
Economizer		138	63
Barometric Relief			
Downflow Barometric Relief Dampers		45	20
Horizontal Barometric Relief Dampers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

DIMENSIONS - UNIT

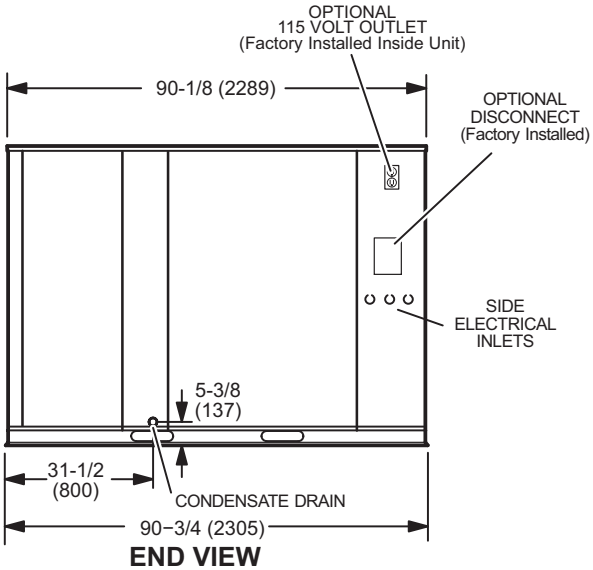
CORNER WEIGHTS									CENTER OF GRAVITY			
Model No.	AA		BB		CC		DD		EE		FF	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm
LGH242 Base Unit	632	287	635	288	912	414	928	421	60	1524	37	940
LGH242 Max. Unit	709	322	712	323	1023	464	1041	472	60	1524	37	940
LGH300 Base Unit	632	287	635	288	912	414	928	421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

Base Unit - The unit with NO INTERNAL OPTIONS.

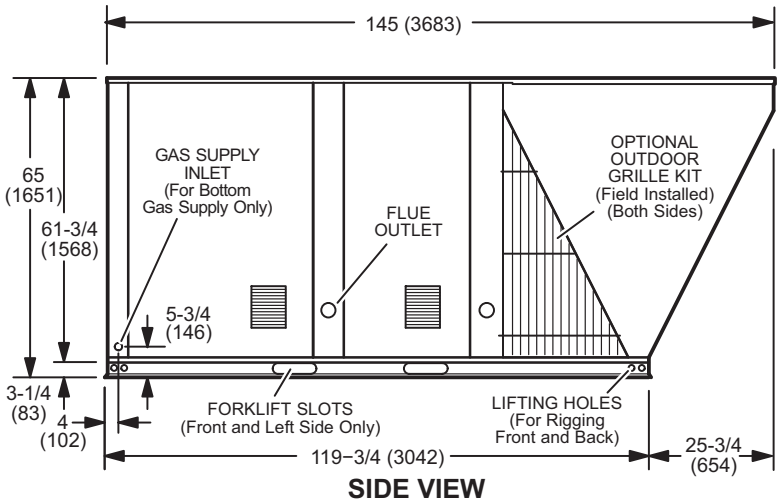
Max. Unit - The unit with ALL INTERNAL OPTIONS Installed. (Economizer, Standard Static Power Exhaust, Controls, etc.). Does not include accessories external to unit or high static power exhaust.



TOP VIEW

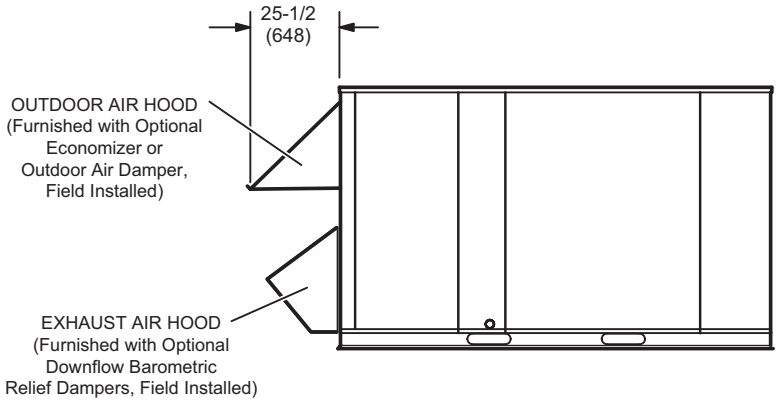


END VIEW

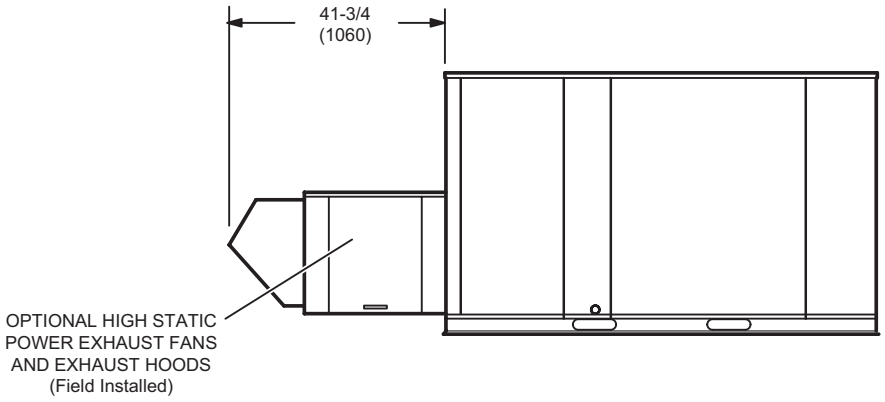


SIDE VIEW

OUTDOOR AIR HOOD DETAIL

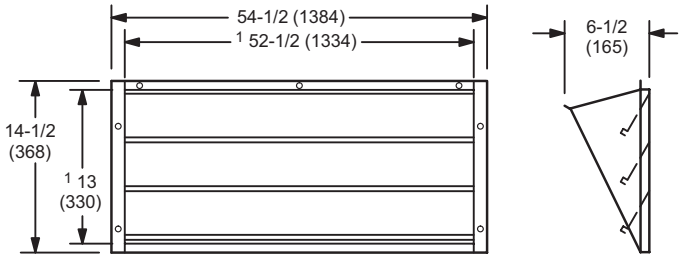


OPTIONAL HIGH STATIC POWER EXHAUST FANS DETAIL



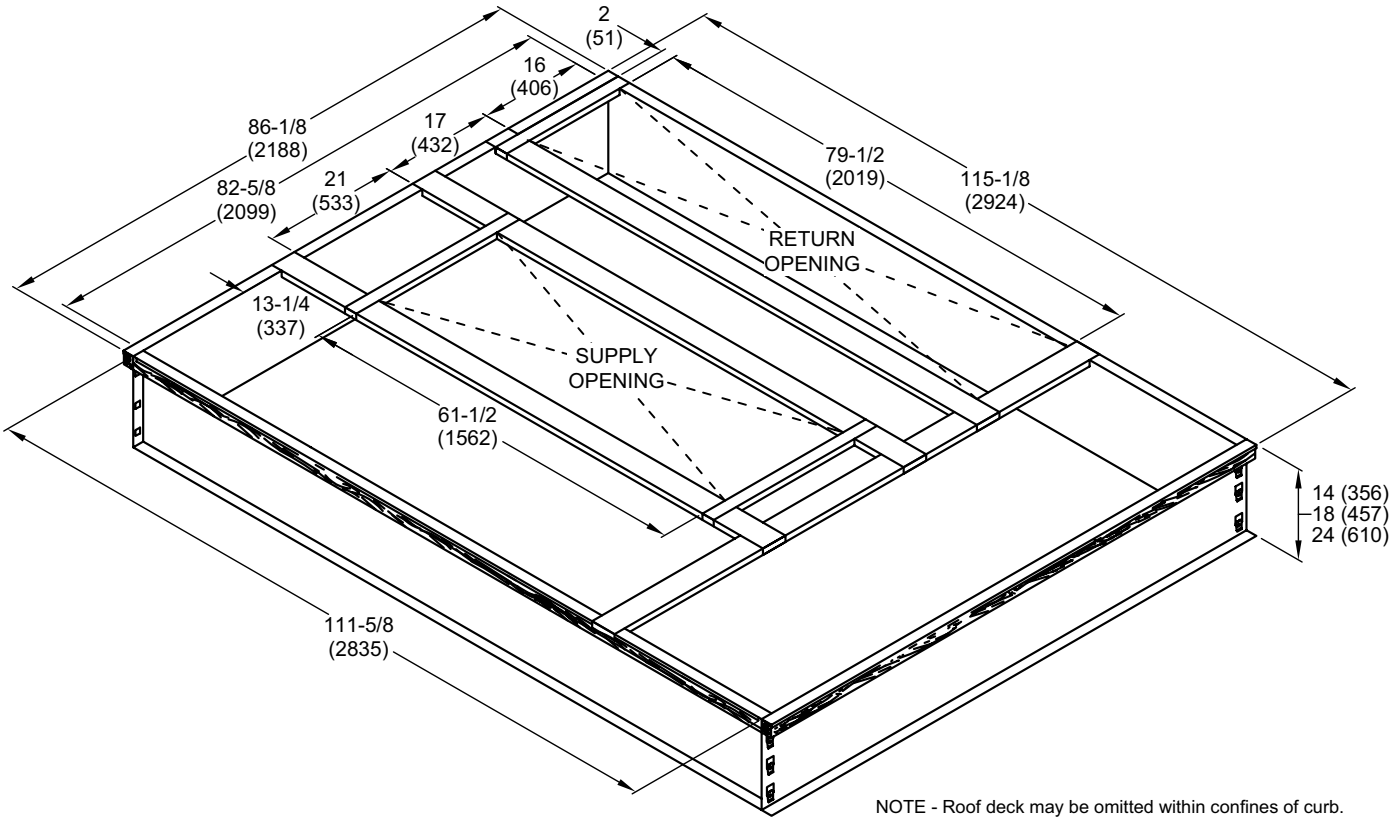
OPTIONAL HORIZONTAL BAROMETRIC RELIEF DAMPERS WITH HOOD

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



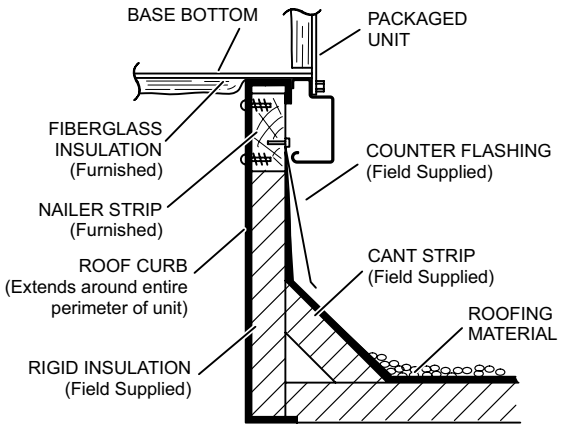
NOTE - Two furnished per order no.
[1] NOTE - Opening size required in return air duct.

HYBRID ROOF CURBS - DOUBLE DUCT OPENING

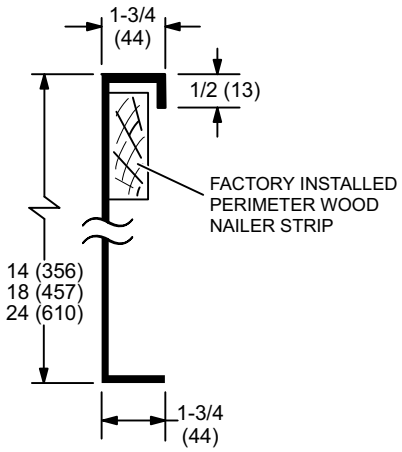


NOTE - Roof deck may be omitted within confines of curb.

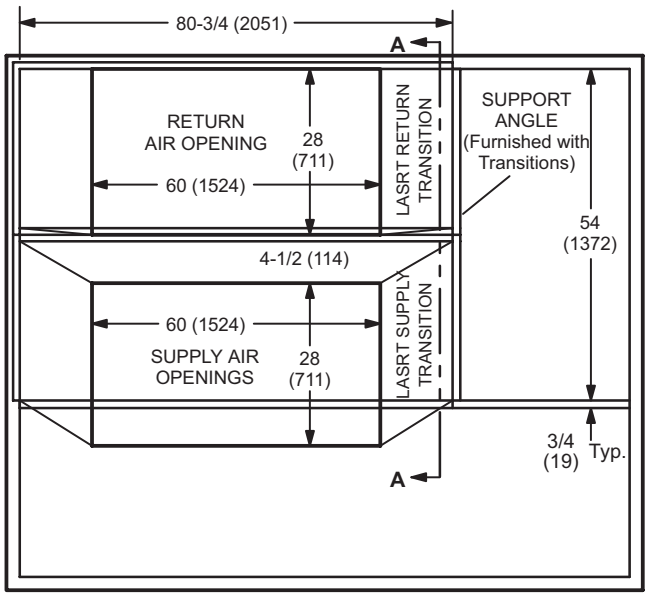
TYPICAL FLASHING DETAIL FOR ROOF CURB



DETAIL ROOF CURB

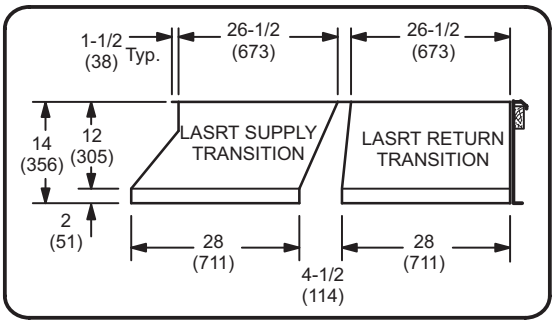


ROOF CURBS WITH SUPPLY & RETURN AIR TRANSITIONS FOR CEILING DIFFUSERS



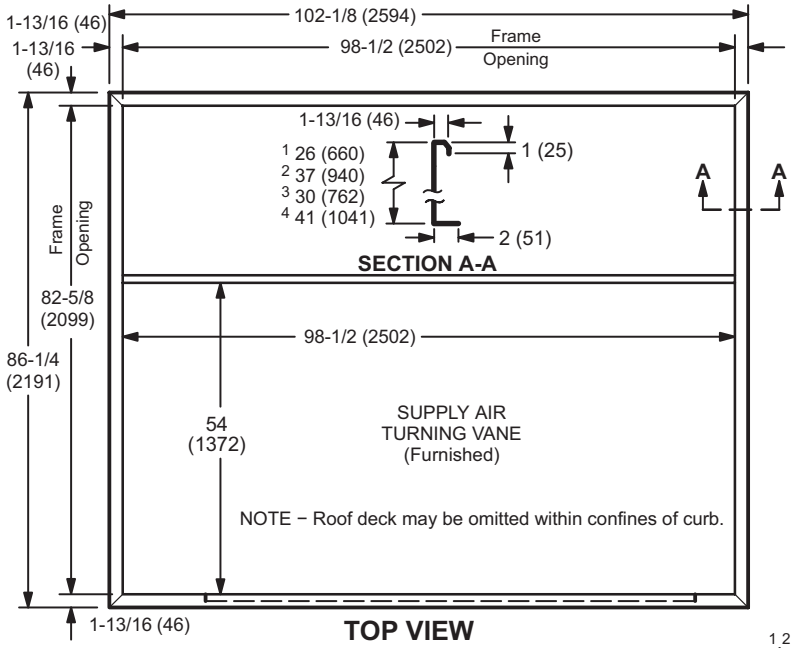
TOP VIEW

TRANSITION DETAIL

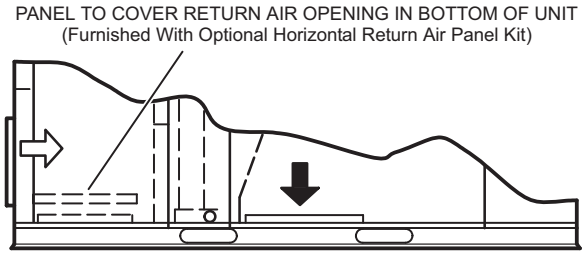


SECTION B-B

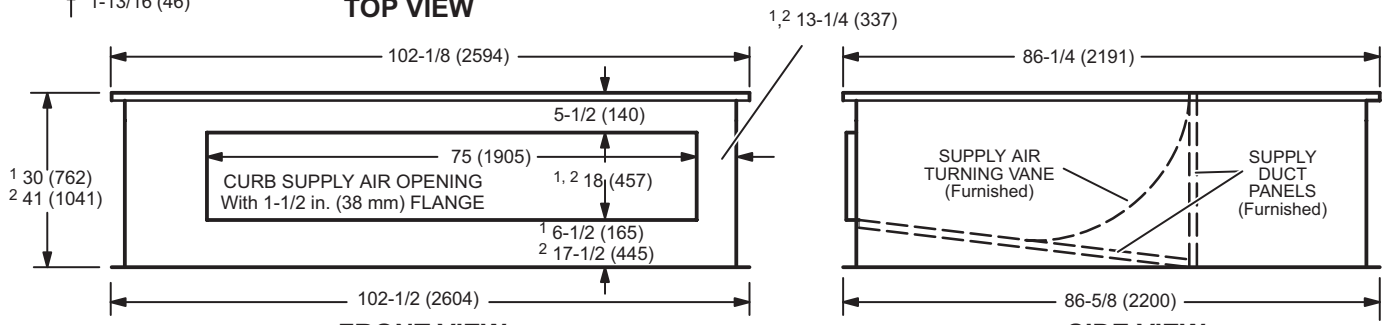
HORIZONTAL ROOF CURBS − Requires Optional Horizontal Return Air Panel Kit



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

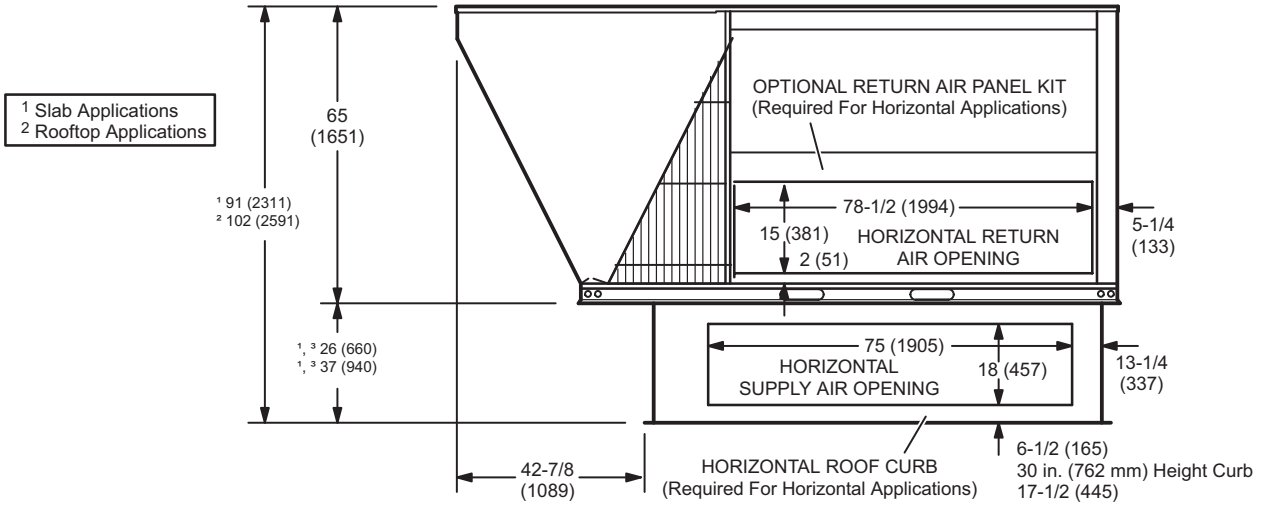


SIDE VIEW
(PACKAGED UNIT)



1 Slab Applications 2 Rooftop Applications

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

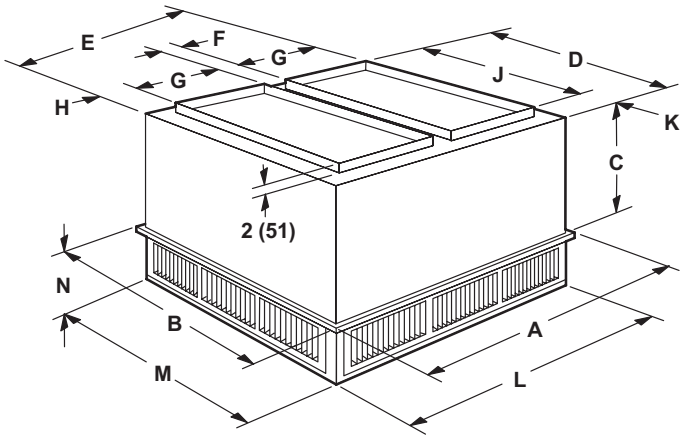


3 NOTE − Top of Curb extends 4 inch (102 mm) inside bottom of unit base. See Typical Flashing Detail.

SIDE VIEW
(Horizontal Openings)

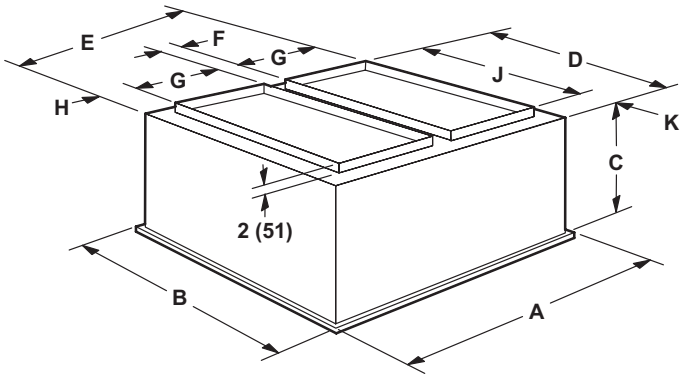
COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

STEP-DOWN 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

FLUSH CEILING DIFFUSER



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

REVISIONS

Sections	Description of Change
Optional Conventional Temperature Control Systems	Removed CS3000 Thermostat (product discontinued)
Options/Accessories	Blower Proving Switch updated.
Weights	Roof Curb weights updated.

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