

ALLIEDTM Commercial

PRODUCT SPECIFICATIONS

PACKAGED ELECTRIC / ELECTRIC

LCH
E-SeriesTM Rooftop Units
60 HZ

Bulletin No. LCH-156-300 (04/2019)

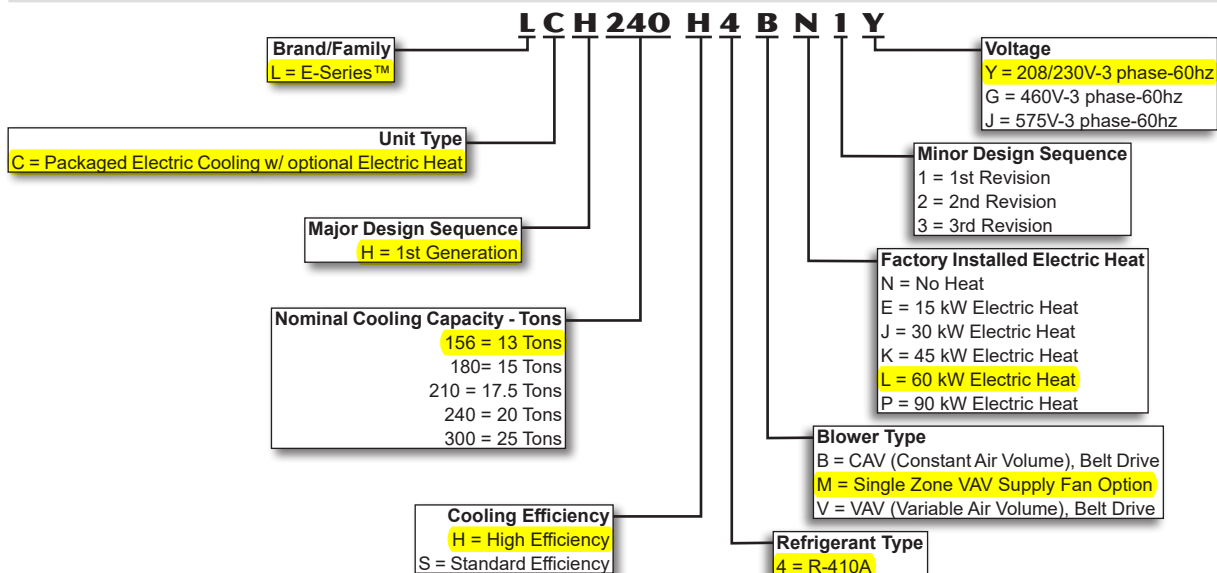


**ASHRAE 90.1
COMPLIANT**

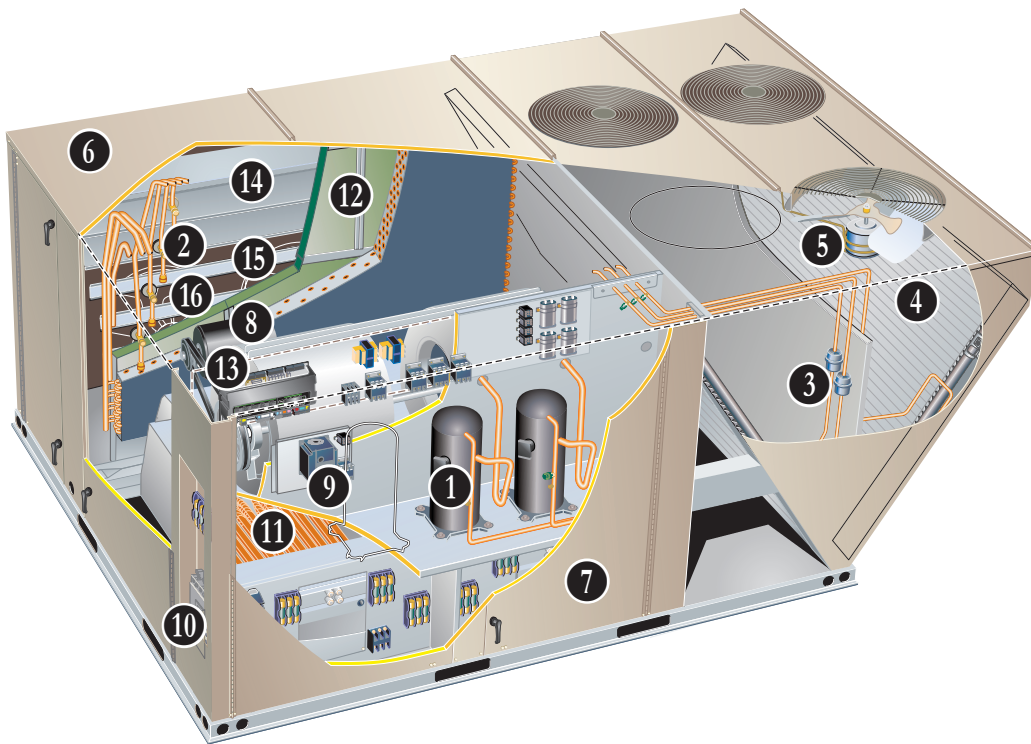


13 to 25 Tons
Net Cooling Capacity – 152,000 to 270,000 Btuh
Optional Electric Heat - 15 to 90 kW

MODEL NUMBER IDENTIFICATION



FEATURES AND BENEFITS



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

Allied's E-Series™ packaged rooftop units feature:

- **Hinged Access Panels** - Provide quick access to components and protect panels and roof from damage during servicing.
- **Isolated Compressor Compartment** - Allows performance check during normal compressor operation without disrupting airflow.
- **Corrosion-Resistant Removable Drain Pan** - End or bottom drain connection capability. Provides application flexibility, durability and improved serviceability.
- **Thermostatic Expansion Valves** - Provide peak cooling performance across the entire application range.
- **Scroll Compressors** - Standard on all units for reliable, long-term operation.
- **Eco-Last™ Coil System** - Smaller, lighter condenser coil.
- **Dehumidification System** - Patented system allows for independent control of temperature and humidity, providing enhanced comfort control.
- **Constant Air Volume (CAV), Variable Air Volume (VAV) or Single Zone VAV Supply Fan Blower Option** - Allows constant, variable or multi-staged air delivery. NOTE - Variable Air Volume is only available for 180 and 240 models.
- **Auto-Tensioner for Blower Belt** - Factory option ensures blower is delivering the proper airflow for comfort, while maximizing efficiency and belt life.
- **MERV 13 Filters** - Available as factory or field option, provide an enhanced level of indoor air quality, and can help the building qualify for additional LEED credits.
- **Foil-Faced Insulation** - Insulation on all internal surfaces that have contact with airflow helps minimize airborne fibers and improve IAQ.
- **Common Components** - Many maintenance items are standard throughout the entire product line, reducing the need to carry different parts to the job or maintain in inventory.

Intelli-Guide™ Control System

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



WireRight™ System

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

FEATURES AND BENEFITS

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APPROVALS

AHRI Certified to AHRI Standard 340/360.

ETL listed.

Efficiency ratings are certified by CSA.

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

All models are ASHRAE 90.1 compliant.

All models meet DOE 2018 energy efficiency standards.

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

ISO 9001 Registered Manufacturing Quality System.

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

WARRANTY

Limited five years on compressors.

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

Limited three years on Intelli-Guide™ unit controller.

Limited five years Optional High Performance Economizers.

Limited one year all other covered components.

COOLING SYSTEM

Designed to maximize sensible and latent cooling performance at design conditions.

System can operate from 0°F to 125°F without any additional controls.

R-410A Refrigerant

Non-chlorine based, ozone friendly, R-410A.

1 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.

2 Thermal Expansion Valves

Assures optimal performance throughout the application range.

Removable element head.

3 Filter/Driers

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

High Pressure Switches

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

Low Pressure Switches

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

Freezestats

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

FEATURES AND BENEFITS

COOLING SYSTEM (continued)

4 Eco-Last™ Coil System

Condenser coil features lightweight, all aluminum brazed fin construction.

Constructed of three components:

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

Eco-Last™ System Features:

- Improved heat transfer performance due to high primary surface area (flat tubes) versus secondary surface (fins).
- Smaller internal volume (reduced refrigerant charge).
- High durability (all aluminum construction).
- Fewer brazed joints.
- Compact design (reduces unit weight).
- Easy maintenance/cleaning.

Face split design.

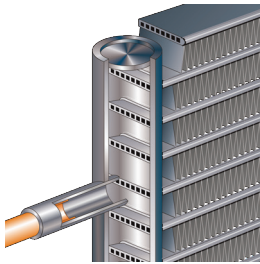
Mounting brackets with rubber inserts secure coil to unit providing vibration dampening and corrosion protection.

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

Evaporator Coil

Copper tube construction, enhanced rippled-edge aluminum fins, flared shoulder tubing connections, silver soldered construction for improved heat transfer. Factory leak tested. Cross row circuiting with rifled tubing optimizes both sensible and latent cooling capacity.

Constant air volume (CAV) and **Single Zone VAV** 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.

Condensate Drain Pan

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

Side or bottom drain connections.

5 Outdoor Coil Fan Motors

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

Outdoor Coil Fans

PVC coated fan guard furnished.

Required Selections

Cooling Capacity

Specify nominal cooling capacity of the unit.

Options/Accessories

Factory Installed

Conventional Fin/Tube

Condenser Coil

(replaces Eco-Last™ Coil System)

Copper tube construction, enhanced rippled-edge aluminum fins, flared shoulder tubing connections, silver soldered construction.

NOTE - Not available for VAV equipped models.

Discharge Air Temperature Sensor

Sensor sends information to the unit controller to cycle up to 2 stages of heating or 4 stages of cooling to maintain the discharge air setpoints for heating or cooling. Optional for CAV units (single zone or bypass zoning control). Automatically furnished with all Variable Air Volume (VAV) units. Sensor is shipped with the unit for remote field installation in the supply duct.

Service Valves

Fully serviceable brass valves installed in discharge & liquid lines.

Not available for units equipped with Eco-Last™ Coil System or Dehumidification option.

Factory or Field Installed

Condensate Drain Trap

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

Available in copper or PVC.

Drain Pan Overflow Switch

Monitors condensate level in drain pan, shuts down unit if drain becomes clogged.

CABINET

6 Construction

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

Base rails have rigging holes.

Three sides of the base rail have forklift slots.

Raised edges around duct and power entry openings in the bottom of the unit provide additional protection against water entering the building.

Airflow Choice

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

Horizontal air flow requires Horizontal Roof Curb.

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

Power Entry

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

Exterior Panels

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

Insulation

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

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

FEATURES AND BENEFITS

CABINET (continued)

7 Hinged Access Panels

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

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

Required Selections

Airflow Configuration

Specify downflow or horizontal.

Options/Accessories

Factory Installed

Corrosion Protection

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

Indoor Corrosion Protection:

- Coated coil
- Coated reheat coil
- Painted blower housing
- Painted indoor base

Outdoor Corrosion Protection:

- Coated coil
- Painted outdoor base

Field Installed

Combination Coil/Hail Guards

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

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.

8 BLOWER

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

Motor

Overload protected, equipped with ball bearings.

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

Motor Efficiency

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

Supply Air Blower

Forward curved blades, double inlet, blower wheel is statically and dynamically balanced. Equipped with ball bearings and adjustable pulley (allows speed change).

Blower assembly slides out of unit for servicing.

Grease fittings furnished.

Supply Static Pressure Transducer (VAV 180/240 Models Only)

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

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

Required Selections

Specify Air Blower Selection

Constant Air Volume (CAV), Variable Air Volume (VAV) or Single Zone VAV Supply Air Blower Option

Constant Air Volume (CAV)

The supply air blower provides a constant volume of air.

Variable Air Volume (VAV) (180/240 Models Only)

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

Single Zone VAV

The supply air variable frequency drive (VFD) will stage the amount of airflow according to compressor stages, heating demand, ventilation demand or smoke alarm.

NOTE - Units with the Single Zone VAV supply air blower option have the same face split indoor coils as units with the CAV supply air blower option. Part load airflow in cooling mode on Single Zone VAV units should not be set below 220 cfm/nominal full load ton to reduce the risk of evaporator coil freeze-up.

9 Single Zone VAV Supply

Fan models utilize a Variable Frequency Drive (VFD) to stage the supply air blower airflow. The VFD alters the frequency and voltage of the power supply to the blower to control blower speed.

The amount of airflow for each stage can be set according to a parameter in the Intelli-Guide™ unit controller. Unit is shipped from the factory with preset airflow.

The Single Zone VAV supply air blower option can be ordered with or without an Electronic Bypass Control. If equipped with the bypass control the Single Zone VAV features automatic electronic bypass control of the VFD. In case of a VFD malfunction, a VFD alarm is generated by the Intelli-Guide™ unit controller. The VFD can be manually bypassed to continue unit operation at full blower speed. Or the unit controller can be set to automatically switch to full blower speed if a VFD alarm is generated.

The VFD has an operational range of -40 to 125°F outdoor air ambient temperature.

Lower operating costs are obtained when the blower is operated on lower speeds.

Ordering Information

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

Options/Accessories

Factory Installed

Blower Belt Auto-Tensioner

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

FEATURES AND BENEFITS

ELECTRICAL

All units include terminal block and fuse block in power entry junction box for single power entry application.

WireRight™ System

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

Electrical Plugs

Positive connection electrical plugs are used to connect common accessories or maintenance parts for easy removal or installation.

Required Selections

Voltage Choice

Specify when ordering base unit.

Options/Accessories

Factory Installed

Circuit Breakers

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

SCR (Silicon Controlled Rectifier) Electric Heat Control

The SCR Electric Heat Control modulates small, precise increments of power to the electric heat load eliminating temperature fluctuations associated with mechanical controls.

Almost instantaneous operation with no moving parts.

Zero-Cross (fast cycling) feature improves electric heater life with less contraction and expansion of the heating elements.

The SCR operates when there is no call for heat from the building control system or thermostat. SCR air tempering is controlled by a secondary thermostat and remote duct sensor (ordered separately). A call for heat overrides the SCR and modulates the SCR to 100% heat output. A call for cooling overrides the SCR.

NOTE - The SCR option is not available with 45 kW, 60 kW and 90kW electric heat (208/230V) models.

NOTE - Blower Proving Switch is required and must be ordered separately for factory installation. See Controls in the Options/Accessories table.

NOTE - Available for use with conventional thermostat controls or Novar® control systems only.

Phase/Voltage Detection (Optional for CAV Models Only)

Phase detection monitors power supply to assure phase is correct at unit start-up. If phase is incorrect, the unit will not start and an alarm code is reported to the unit controller. Protects unit from being started with incorrect phasing which could lead to issues such as compressors running backwards.

Voltage detection monitors power supply voltage to assure proper voltage. If voltage is not correct (over/under voltage conditions) the unit will not start and an alarm code is reported to the unit controller.

NOTE - Phase/voltage detection is furnished when the Single Zone VAV Supply Fan or VAV (Variable Air Volume) option is ordered.

Factory or Field Installed

10 Disconnect Switch

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

11 Electric Heat

Helix wound nichrome elements, individual element limit controls, wiring harness. Unit fuse block is furnished as standard. See Options / Accessories tables for ordering information.

GFI Service Outlets (2)

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

Field Installed

GFI Weatherproof Cover

Single-gang cover.

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

FEATURES AND BENEFITS

INDOOR AIR QUALITY

12 Air Filters

Disposable 2 inch filters furnished as standard.

Options/Accessories

Factory or Field Installed

High Efficiency Air Filters

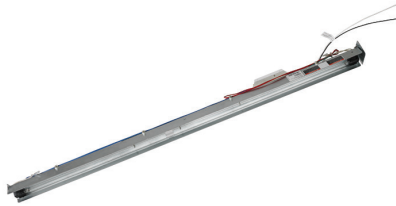
Disposable MERV 8 or MERV 13 (Minimum Efficiency Reporting Value based on ASHRAE 52.2) efficiency 2 inch pleated filters.

Replacement Filter Media Kit With Frame

Replaces existing pleated filter media. Includes washable metal mesh screen and metal frame with clip for holding replaceable non-pleated filter.

Field Installed

UVC Germicidal Light Kit



Germicidal lamps emit ultra-violet (UV-C) energy, which has been proven to be effective in reducing microbes such as viruses, bacteria, yeasts, and molds. This process either destroys the organism or controls its ability to reproduce.

UV-C energy greatly reduces the growth and proliferation of mold and other bioaerosols (bacteria and viruses) on illuminated surfaces (particularly coil and drain pan).

Lamps are field installed in the blower/evaporator coil section.

All necessary hardware for installation is included.

Lamps operate on 110/230V, 1 phase power supply. Step-down transformer must be field supplied when used with 460V and 575V rooftop units. Step-down transformer is furnished with lamps when factory installed.

Approved by ETL.

Indoor Air Quality (CO₂) Sensors

Monitors CO₂ levels, reports to the Intelli-Guide™ unit controller which adjusts economizer dampers as needed.

INTELLI-GUIDE™ CONTROL SYSTEM

13 INTELLI-GUIDE UNIT CONTROLLER



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

Features:

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

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

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

Scroll, Value Adjustment Select and Save Buttons

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

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

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

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



Unit Controller Software

Unit Self-Test - Unit Controller can perform a rooftop unit self-test to verify individual critical component and system performance. Included is an economizer test function that helps assure the economizer is operating correctly.

Time Clock with Run-time Information

Built-In Functions Include:

Adjustable Blower On/Off Delay

Built-in Control Parameter Defaults

Compressor Time-Off Delay

DDC Compatible

Dirty Filter Switch Input

Discharge Air Temperature Control

Display/Sensor Readout

Economizer Control Options - See Economizer / Outdoor Air / Exhaust Options.

Fresh Air Tempering

Extensive Unit Diagnostics - Over 100 diagnostic and status messages in English.

Exhaust Fan Control Modes - Fresh air damper position, differential pressure transducer or pressure switches.

Permanent Diagnostic Code Storage

Field Adjustable Control Parameters - Over 200 different control settings.

Indoor Air Quality Input - Demand Control Ventilation ready

Low Ambient Controls - Cooling operation down to 0°F.

Gas Valve Time Delay Between First and Second Stage

Minimum Compressor Run Time

Network Capable - Can be daisy chained to other units or controls.

Night Setback Mode

Return Air Temperature Limit Control

Safety Switch Input - Allows Controller to respond to a external safety switch trip.

Service Relay Output

Smoke Alarm Mode - Four choices (unit off, positive pressure, negative pressure, purge).

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

“Strike Three” Protection

Gas Reheat Control -

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

On Demand Dehumidification -

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

Thermostat Bounce Delay

Warm Up Mode Delay

LED Indicators

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

Room Sensor Operation - Controls temperature.

Options / Accessories

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.

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

INTELLI-GUIDE™ CONTROL SYSTEM

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

Controls Options

Factory or Field Installed

Fresh Air Tempering

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

Smoke Detector

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

Interoperability via BACnet® or LonTalk® Protocols

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

Commercial Control Systems **Aftermarket DDC**

Novar® Unit ETM modules and options.

Thermostats

Control system and thermostat options. Aftermarket unit controller options.

Field Installed

General Purpose Control Kit

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

Humidity Sensor Kit

Humidity sensor required with factory installed dehumidification option or Supermarket reheat field selectable option.

14 ECONOMIZER OPTIONS

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

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

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

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

Factory or Field Installed

Economizer

(Standard and High Performance Common Features)

Outdoor Air Hood with mist elimination filter is furnished.

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

Standard Economizer Features (Not for Title 24)

Gear-driven action, return air and outdoor air dampers, plug-in connections to unit, nylon bearings, neoprene seals, 24-volt, fully-modulating spring return motor.

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

High Performance Economizer Features

Approved for California Title 24 building standards.

Low leakage dampers are Air Movement and Control Association International (AMCA) Class 1A Certified - Maximum 3 CFM per sq. ft. leakage at 1 in. w.g.

ASHRAE 90.1 compliant.

Gear-driven action, high torque 24-volt fully-modulating spring return damper motor, return air and outdoor air dampers, plug-in connections to unit, stainless steel bearings, enhanced neoprene blade edge seals and flexible

stainless steel jamb seals to minimize air leakage.

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

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.

Refer to Installation Instructions for complete setup information.

Differential Sensible Control

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

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

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

In Single Sensible Control mode, the economizer is enabled when outdoor air temperature falls below the configured setpoint.

Global Control

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

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

Factory or Field Installed

Single Enthalpy Temperature Control

(Not for Title 24)

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

Differential Enthalpy Control (Not for Title 24)

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

Field Installed

Outdoor Air CFM Control

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

NOTE - Not available with Demand Control Ventilation (CO₂ 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 Intelli-Guide™ unit controller changes the economizer position to help maintain a constant building pressure.

NOTE - Not available with Demand Control Ventilation (CO₂ Sensor) or Outdoor Air CFM Control.

OPTIONS / ACCESSORIES

EXHAUST OPTIONS

Factory or Field Installed

Downflow Barometric Relief Dampers

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

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

16 Power Exhaust Fans

Install internal to unit for downflow applications only with economizer option. Provides exhaust air pressure relief. Interlocked to run when supply air blower is operating, fans run when outdoor air dampers are 50% open (adjustable), motor is overload protected. Requires Economizer with Outdoor Air Hood and Downflow Barometric Relief Dampers. Dual fans are 20 in. diameter with 5 blades with (2) 1/3 hp motors.

NOTE - Single Zone VAV Supply Fan and VAV (Variable Air Volume) models are equipped with 2-stage power exhaust fans. Power exhaust operates in 1st stage (one fan) up to 70% of supply air blower speed. Both exhaust fans operate in 2nd stage when supply air blower speed is above 70% (adjustable) of full speed.

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.

OUTDOOR AIR OPTIONS

Factory or Field Installed

Outdoor Air Damper - Downflow or Horizontal With Air Hood

Linked mechanical dampers, 0 to 25% (fixed) outdoor air adjustable, installs in unit. Includes outdoor air hood.

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

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

ROOF CURBS

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

Downflow

Hybrid Roof Curbs

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

Curb can also be fastened together with furnished hardware.

Available in 8, 14, 18, and 24 inch heights.

See Options/Accessories table.

Adjustable Pitch Curb

Fully adjustable pitch curbs (3/4 in. per foot in any direction) provide a level platform for rooftop units allowing flexible installations on roofs with uneven or sloped angles.

Uses interlocking tabs to fasten corners together. No tools required.

Hardware is furnished to connect upper curb with lower curb.

Available in 14 inch height.

Horizontal

Converts unit from downflow to horizontal (side) air flow, return air is on unit, supply air is on curb, see dimension drawings. Curbs for rooftop applications meet National Roofing Code requirements. Requires Horizontal Return Air Panel Kit.

Available in 26, 30, 37 and 41 inch heights.

Optional Insulation Kit is available to help prevent sweating.

Adaptor Curbs (not shown)

Curbs are regionally sourced. Dimensions will vary based upon the source. Contact your local sales representative for a detailed cut sheet with applicable dimensions.

CEILING DIFFUSERS

Ceiling Diffusers (Flush or Step-Down)

Diffuser face and grilles with white powder coat finish, insulated (UL listed duct liner), diffuser box with collars for duct connection, fixed blades (flush diffusers) and double deflection blades (step-down diffusers), provisions for suspending, internally sealed (prevents recirculation), removable return air grille, adapts to T-bar ceiling grids or plaster ceilings.

Transitions (Supply and Return)

Used with diffusers, installs in roof curb, galvanized steel construction, flanges furnished for duct connection to diffusers, fully insulated.

DEHUMIDIFICATION SYSTEM

NOTE - Dehumidification System Only Available For CAV And Single Zone VAV Supply Fan Models.

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.

The humidity sensor provides input to the Unit Controller which is used to control activation of the dehumidification operation.

Reheat controls are located in the compressor control section of the unit for easy access.

Benefits

Improves indoor air quality.

Helps prevent damage due to high humidity levels.

Improves comfort levels by reducing space humidity levels.

OPERATION

No Dehumidification Demand

The unit will operate conventionally whenever there is a demand for cooling or heating and no dehumidification demand.

Free cooling is only permitted when there is no demand for dehumidification.

Dehumidification Demand Only

The Unit Controller is factory set at 60% relative humidity setpoint and can be adjusted at the Unit Controller or with optional Unit Controller Software.

Reheat operation will initiate on a dehumidification demand and does not require a cooling demand.

The unit will operate in the dehumidification mode until the relative humidity of the conditioned space is below the setpoint.

The reheat coil is sized to provide 68°F to 75°F supply air during reheat operation.

This reduces sensible cooling capacity and extends compressor run time to control humidity when the cooling load is low.

A solenoid valve diverts hot gas from the compressor to the reheat coil.

The cooled and dehumidified air from the evaporator is reheated as it passes through the reheat coil.

The de-superheated and partially condensed refrigerant continues to the outdoor condenser coil where condensing is completed. The unit will continue to operate in this mode until the dehumidification demand is satisfied.

See Sequence of Operation for additional information.

Dehumidification and Cooling Demand (Thermostat/Room Sensor Application)

If both a dehumidification and a

full cooling load 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

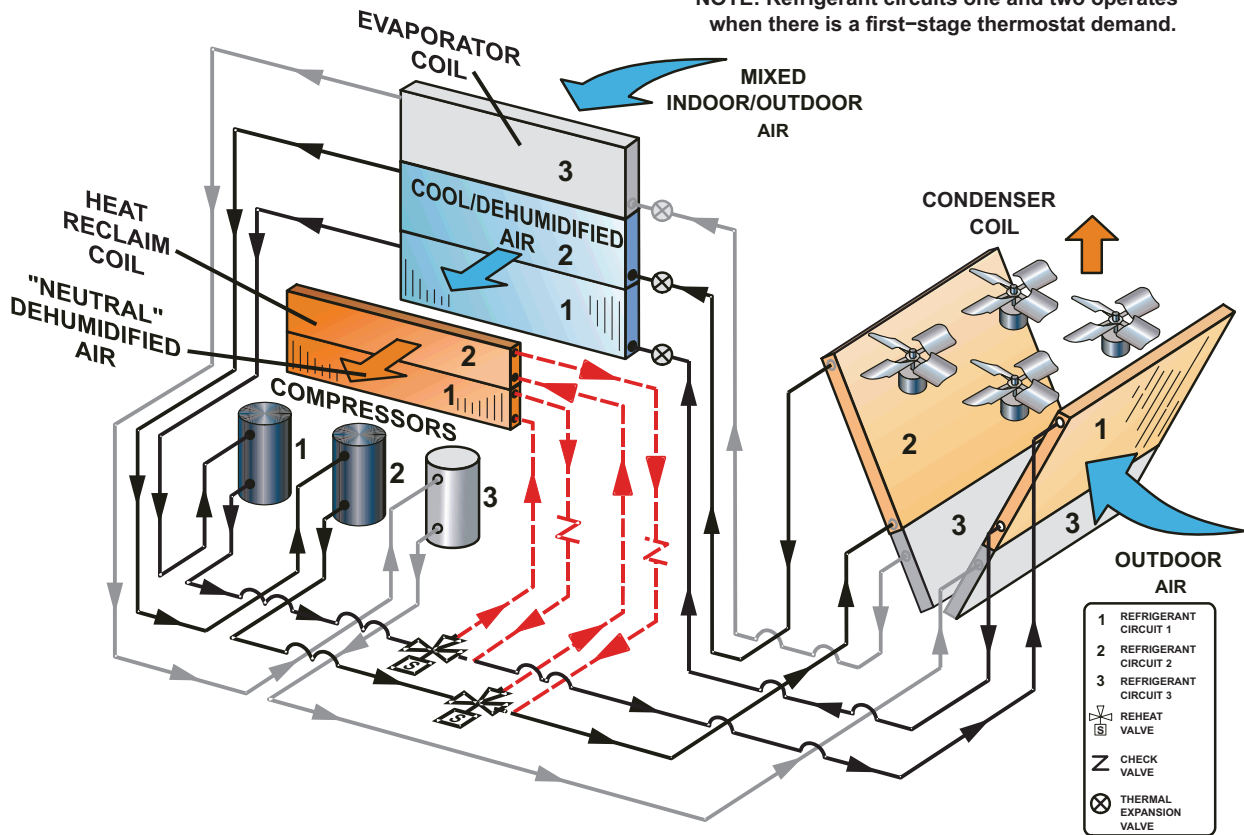
Remote Mounted Humidity sensor required with factory installed Dehumidification Option or Supermarket reheat field selectable option.

OPTIONS / ACCESSORIES

DEHUMIDIFICATION SYSTEM (continued)

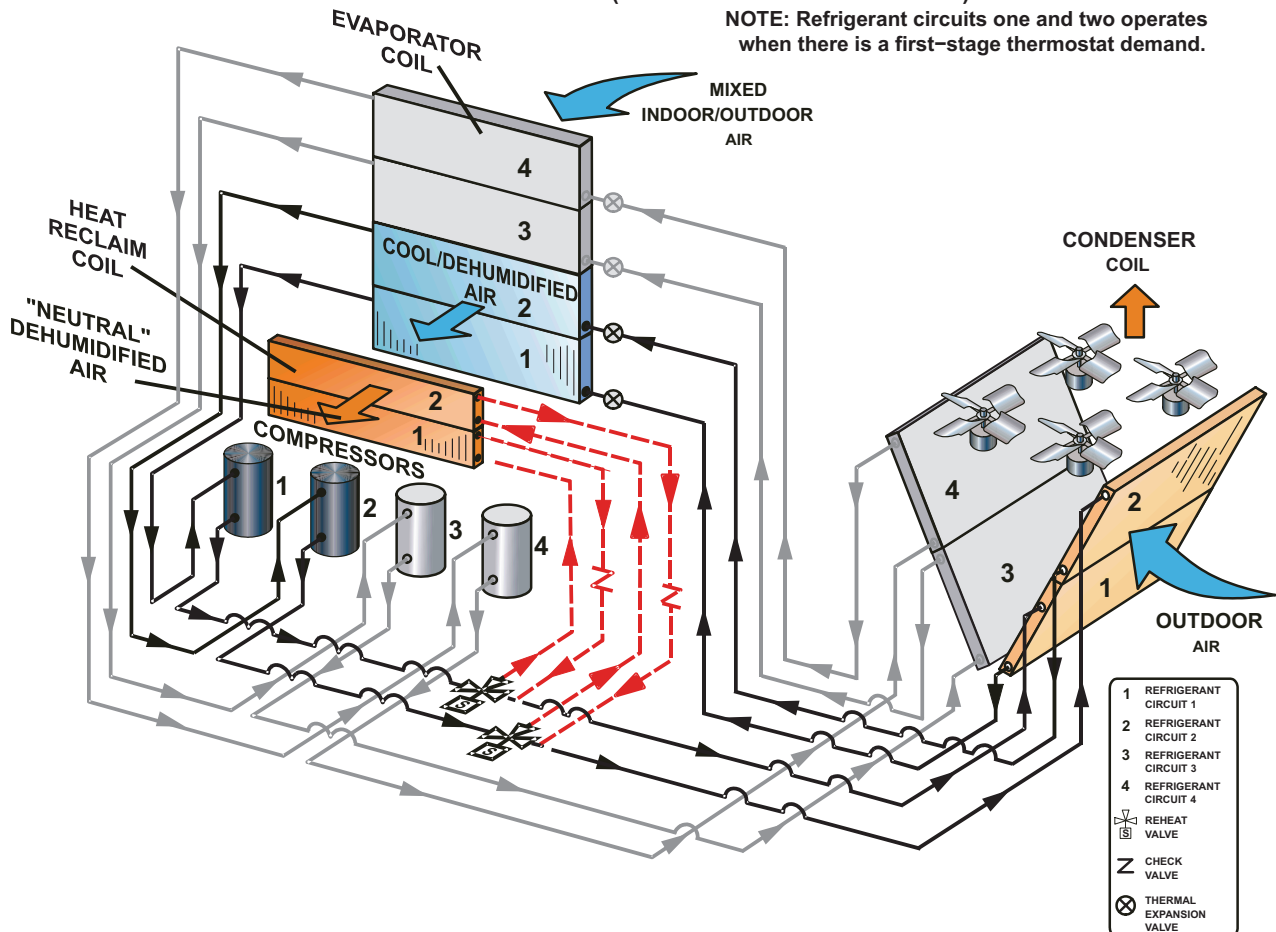
REFRIGERANT SCHEMATIC (156H, 180H and 210H MODELS ONLY)

NOTE: Refrigerant circuits one and two operates when there is a first-stage thermostat demand.



REFRIGERANT SCHEMATIC (240H and 300S MODELS ONLY)

NOTE: Refrigerant circuits one and two operates when there is a first-stage thermostat demand.



SEQUENCE OF OPERATION - SINGLE ZONE VAV SUPPLY FAN MODELS

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

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

Unit With 2-Stage Thermostat (2 Cooling Stages, Y1, Y2) - 3 And 4 Compressors Models

SUPPLY AIR BLOWER SPEED

Unit has the following supply air blower speed settings:

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

¹ UNIT FEATURES AN ECONOMIZER AND OUTDOOR AIR IS SUITABLE

Y1 Demand:

All compressors are off, supply air blower is on low cooling speed to minimize blower power consumption, economizer modulates (minimum to maximum open position) to maintain 55°F supply air temperature (default unit controller setting).

Y2 Demand:

All compressors are off, supply air blower is on high cooling speed providing higher cooling capacity, and economizer modulates to maintain 55°F supply air temperature.

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:

1st stage compressors operate and supply air blower operates at low cooling speed.

Y2 Demand:

All compressors operate and supply air blower operates at high cooling speed.

DEHUMIDIFICATION MODE

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

Call For Dehumidification, No Y1, Y2 Demand:

1st stage compressors (1 & 2) operate, supply air blower operates at high cooling speed, and the reheat valves are energized.

Y1 Demand With A Call For Dehumidification:

All compressors operate, supply air blower operates at high cooling speed and the 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.

SEQUENCE OF OPERATION - SINGLE ZONE VAV SUPPLY FAN MODELS

Unit With 3-Stage Thermostat (3 Cooling Stages, Y1, Y2, Y3) - 3 And 4 Compressors Models, Or Zone Sensor (4 Cooling Stages, Y1, Y2, Y3, Y4) - 3 Compressors Models

SUPPLY AIR BLOWER SPEED

Unit has following supply air blower speed setting:

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

¹ UNIT FEATURES AN ECONOMIZER AND OUTDOOR AIR IS SUITABLE

3 Compressor Models

Y1 Demand:

All compressors are off, supply air blower is on low cooling speed to minimize blower power consumption, economizer modulates (minimum to maximum open position) to maintain 55°F supply air temperature (default unit controller setting).

Y2 Demand:

All compressors are off, supply air blower is on high cooling speed providing higher cooling capacity, economizer modulates (minimum to maximum open position) to maintain 55°F supply air temperature (default unit controller setting).

If economizer stays at maximum open for 3 minutes then compressor 1 is energized while supply air blower stays on high cooling speed. After compressor is energized the economizer stays at maximum open.

Y3 Demand:

Compressors 1 and 2 are energized while supply air blower stays on high cooling speed. After compressors are energized the economizer stays at maximum.

Y4 (Zone Sensor Only) Demand:

All compressors are energized and supply air blower stays on high cooling speed.

4 Compressor Models

Y1 Demand:

All compressors are off, supply air blower is on low cooling speed to minimize blower power consumption, economizer modulates (minimum to maximum open position) to maintain 55°F supply air temperature (default unit controller setting).

Y2 Demand:

All compressors are off, supply air blower is on high cooling speed providing higher cooling capacity, economizer modulates (minimum to maximum open position) to maintain 55°F supply air temperature (default unit controller setting).

If economizer stays at maximum open for 3 minutes then compressors 1 and 2 are energized while supply air blower stays on high cooling speed. After compressors are energized the economizer stays at maximum open.

Y3 Demand:

Compressors 1, 2 and 3 are energized and supply air blower stays on high cooling speed.

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.*

SEQUENCE OF OPERATION - SINGLE ZONE VAV SUPPLY FAN MODELS

Unit With 3-Stage Thermostat (3 Cooling Stages, Y1, Y2, Y3) - 3 And 4 Compressors Models, Or Zone Sensor (4 Cooling Stages, Y1, Y2, Y3, Y4) - 3 Compressors Models (continued)

UNIT DOES NOT FEATURE AN ECONOMIZER OR OUTDOOR AIR IS NOT SUITABLE

3 Compressor Units

Y1 Demand:

Compressor 1 operates and supply air blower operates at low cooling speed.

Y2 Demand:

Compressors 1 and 2 operate and supply air blower operates at medium cooling speed.

Y3 or Y4 (Zone Sensor Only) Demand:

All compressors operate and supply air blower operates at high cooling speed .

4 Compressor Units

Y1 Demand:

Compressors 1 and 2 operate and supply air blower operates at low cooling speed.

Y2 demand:

Compressors 1, 2, and 3 operate and supply air blower operates at medium cooling speed.

Y3 demand:

All compressors operate and supply air blower operates at high cooling speed.

DEHUMIDIFICATION MODE

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

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

Compressor 1 and 2 operate, supply air blower operates at high 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 valve of refrigeration circuit 1 is energized while the reheat valve of refrigeration circuit 2 is de-energized.

Y3 or Y4 (Zone Sensor Only) Demand:

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

SEQUENCE OF OPERATION - SINGLE ZONE VAV SUPPLY FAN MODELS

Unit With Zone Sensor (4 Cooling Stages, Y1, Y2, Y3, Y4) – 4 Compressors Models

SUPPLY AIR BLOWER SPEED

Unit has following supply air blower speed setting:

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

¹ UNIT FEATURES AN ECONOMIZER AND OUTDOOR AIR IS SUITABLE

Y1 Demand:

All compressors are off, supply air blower is on low cooling speed to minimize blower power consumption, economizer modulates (minimum to maximum open position) to maintain 55°F supply air temperature (default unit controller setting).

Y2 Demand:

All compressors are off, supply air blower is on high cooling speed providing higher cooling capacity, 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 stays on high cooling speed. After compressor 1 is energized the economizer stays at maximum open.

Y3 Demand:

Compressor 1 and 2 are energized while supply air blower is on high cooling speed providing even higher cooling capacity.

Y4 Demand:

All compressors are energized while supply air blower is 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:

Compressor 1 operates and supply air blower operates at low cooling speed.

Y2 demand:

Compressors 1 and 2 operate and supply air blower operates at medium-low cooling speed.

Y3 demand:

Compressors 1, 2, and 3 operate and supply air blower operates at medium-high cooling speed.

Y4 demand:

All compressors operate and supply air blower operates at high cooling speed.

SEQUENCE OF OPERATION - SINGLE ZONE VAV SUPPLY FAN MODELS

Unit With Zone Sensor (4 Cooling Stages, Y1, Y2, Y3, Y4) – 4 Compressors Models (continued)

DEHUMIDIFICATION MODE

If a unit with 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 high 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 (Electric Heat)

NOTE - HEATING MODE IS THE SAME FOR ALL CONTROL OPTIONS.

W1 Demand:

1st stage electric heat is energized and the supply air blower operates at heating speed.

W2 Demand:

2nd stage electric heat is energized and the supply air blower operates at heating speed (45, 60 or 90 kW electric heat option only).

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).

Power Exhaust Operation

NOTE - POWER EXHAUST OPERATION IS THE SAME FOR ALL CONTROL OPTIONS

Single Zone VAV models are equipped with 2-stage power exhaust fans. Power exhaust fans operate when economizer outdoor air dampers are 50% open (adjustable). Power exhaust operates in 1st stage (one fan) up to 70% of supply air blower speed. 2nd stage power exhaust fans (both fans) operate when supply air blower speed is above 70% (adjustable) of full speed.

SEQUENCE OF OPERATION - VAV MODELS

VAV Units in Zoning Applications Operating with Discharge Air Control - 180 Models Only (4 Heat / 3 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 (3 Cool)

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

- DAT default setpoint = 55°F. Unit will stage compressors as required to maintain the setpoint when provided with Y1 thermostat demand.
- Increasing compressor stages provides more cooling capacity while decreasing compressor stages provides less cooling capacity.

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.

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.

HEATING MODE (4 Heat)

Room sensors (when connected to S-Bus) or Discharge air temperature (DAT) can be used to control up to four stages of electric heat.

- DAT default setpoint = 110°F. Unit will stage heating as required to maintain the setpoint when provided with W1 demand.
- Room sensor occupied setpoint default = 70°F. Unit will stage heating as required to maintain the setpoint.
- Increasing heat stages provides more heating capacity while decreasing heat stages provides less heating capacity.
- Blower set to Heating Speed for all stages.

SEQUENCE OF OPERATION - VAV MODELS

VAV Units in Zoning Applications Operating with Discharge Air Control - 240 Models Only (4 Heat / 4 Cool)

SUPPLY AIR BLOWER SPEED

Unit has the following supply air blower speed settings:

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

COOLING MODE (4 Cool)

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

- DAT default setpoint = 55°F. Unit will stage compressors as required to maintain the setpoint when provided with Y1 thermostat demand.
- Increasing compressor stages provides more cooling capacity while decreasing compressor stages provides less cooling capacity.

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.

HEATING MODE (4 Heat)

Room sensors (when connected to S-Bus) or Discharge air temperature (DAT) can be used to control up to four stages of electric heat.

- DAT default setpoint = 110°F. Unit will stage heating as required to maintain the setpoint when provided with W1 demand.
- Room sensor occupied setpoint default = 70°F. Unit will stage heating as required to maintain the setpoint.
- Increasing heat stages provides more heating capacity while decreasing heat stages provides less heating capacity.
- Blower set to Heating Speed for all stages.

SEQUENCE OF OPERATION - VAV MODELS

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

Modulating Outdoor Air Damper

The minimum damper position for “occupied low blower” and “occupied high blower” is adjusted during unit setup to provide minimum fresh air requirements per ASHRAE 62.1 at the corresponding supply air blower speeds. When supply air blower is off or the unit is in unoccupied mode, the outdoor air damper is closed.

When unit is in occupied mode and supply air blower is operating at a speed below the “midpoint” blower speed, the outdoor air damper is at minimum “low blower” position.

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

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

OPTIONS / ACCESSORIES

Item Description	Model Number	Catalog Number	Unit Model No				
			156	180	210	240	300
COOLING SYSTEM							
Condensate Drain Trap	PVC - C1TRAP20AD2	76W26	OX	OX	OX	OX	OX
	Copper - C1TRAP10AD2	76W27	OX	OX	OX	OX	OX
Conventional Fin/Tube Condenser Coil (replaces Eco-Last™ Coil System)		Factory	O	O	O	O	O
Corrosion Protection		Factory	O	O	O	O	O
Drain Pan Overflow Switch	E1SNSR71AD1	68W88	OX	OX	OX	OX	OX
Efficiency	High		O	O	O	O	
	Standard						O
Refrigerant Type		R-410A	O	O	O	O	O
Service valves (not for Eco-Last™ Coil System or Dehumidification)		Factory	O	O	O	O	O
BLOWER - SUPPLY AIR							
Blower Option	CAV (Constant Air Volume)	Factory	O	O	O	O	O
	VAV (Variable Air Volume) supply air blower option (Without VFD Bypass Control)	Factory		O		O	
	Single Zone VAV supply air blower option (With VFD Bypass Control)	Factory	O	O	O	O	O
	Single Zone VAV supply air blower option (Without VFD Bypass Control)	Factory	O	O	O	O	O
Motors - CAV (Constant Air Volume)	Belt Drive (standard efficiency) - 2 hp	Factory	O				
	Belt Drive (standard or high efficiency) - 3 hp	Factory	O	O	O		
	Belt Drive (standard efficiency) - 5 hp	Factory	O	O	O	O	O
	Belt Drive (standard efficiency) - 7.5 hp	Factory		O	O	O	O
	Belt Drive (standard efficiency) - 10 hp	Factory				O	O
Motors - VAV (Variable Air Volume)	Belt Drive (standard or high efficiency) - 3 hp	Factory		O			
	Belt Drive (standard efficiency) - 5 hp	Factory		O		O	
	Belt Drive (standard efficiency) - 7.5 hp	Factory		O		O	
	Belt Drive (standard efficiency) - 10 hp	Factory				O	
Motors - Single Zone VAV	Belt Drive (standard efficiency) - 2 hp	Factory	O				
	Belt Drive (standard efficiency) - 3 hp	Factory	O	O	O		
	Belt Drive (standard efficiency) - 5 hp	Factory	O	O	O	O	O
	Belt Drive (standard efficiency) - 7.5 hp	Factory		O	O	O	O
	Belt Drive (standard efficiency) - 10 hp	Factory				O	O
Drive Kits	Kit #1 535-725 rpm	Factory	O	O	O		
See Blower Data Tables for usage and selection	Kit #2 710-965 rpm	Factory	O	O	O		
	Kit #3 685-856 rpm	Factory	O	O	O	O	O
	Kit #4 850-1045 rpm	Factory	O	O	O	O	O
	Kit #5 945-1185 rpm	Factory	O	O	O	O	O
	Kit #6 850-1045 rpm	Factory		O	O	O	O
	Kit #7 945-1185 rpm	Factory		O	O	O	O
	Kit #8 1045-1285 rpm	Factory		O	O	O	O
	Kit #10 1045-1285 rpm	Factory				O	O
	Kit #11 1135-1365 rpm	Factory				O	O
	Blower Belt Auto-Tensioner	Factory	O	O	O	O	O
CABINET							
Combination Coil/ Hail Guards	Eco-Last™ Coil System - C1GARD52C12	15T92	X				
	Eco-Last™ Coil System - C1GARD52C22	15T93		X	X	X	X
	Conventional Fin/Tube Condenser Coil - C1GARD51C11	13T08	X				
	Conventional Fin/Tube Condenser Coil - C1GARD51C21	13T12		X	X	X	X

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

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

O = Configure To Order (Factory Installed)

X = Field Installed

OPTIONS / ACCESSORIES

Item Description		Model Number	Catalog Number	Unit Model No				
				156	180	210	240	300
CONTROLS								
Blower Proving Switch		C1SNSR35FF1	53W65	OX	OX	OX	OX	OX
Commercial Controls	Intelli-Guide™ Control System - BACnet® Module - C0CTRL60AE1L	59W51	OX	OX	OX	OX	OX	OX
	Intelli-Guide™ Control System - LonTalk® Module - C0CTRL65FF1	54W27	OX	OX	OX	OX	OX	OX
	Novar® LSE	Factory	O	O	O	O	O	O
Dirty Filter Switch		E1SNSR55C-1	53W68	OX	OX	OX	OX	OX
Fresh Air Tempering		C1SNSR75AD1	58W63	OX	OX	OX	OX	OX
General Purpose Control Kit		E1GPBK30C1	13J78	X	X	X	X	X
Smoke Detector - Supply or Return (Power board and one sensor)		C1SNSR44C-1	83W40	OX	OX	OX	OX	OX
Smoke Detector - Supply and Return (Power board and two sensors)		C1SNSR43C-1	83W41	OX	OX	OX	OX	OX
INDOOR AIR QUALITY								
Air Filters								
High Efficiency Air Filters 24 x 24 x 2 (Order 6 per unit)	MERV 8 - C1FLTR15C-1-	54W67	OX	OX	OX	OX	OX	OX
	MERV 13 - C1FLTR40C-1-	52W40	OX	OX	OX	OX	OX	OX
Replacement Media Filter With Metal Mesh Frame (includes non-pleated filter media)	C1FLTR30C-1-	44N61	OX	OX	OX	OX	OX	OX
Indoor Air Quality (CO ₂) Sensors								
Sensor - Wall-mount, off-white plastic cover with LCD display		C0SNSR50AE1L	77N39	X	X	X	X	X
Sensor - Wall-mount, off-white plastic cover, no display		C0SNSR52AE1L	87N53	X	X	X	X	X
Sensor - Black plastic case with LCD display, rated for plenum mounting		C0SNSR51AE1L	87N52	X	X	X	X	X
Sensor - Wall-mount, black plastic case, no display, rated for plenum mounting		C0MISC19AE1	87N54	X	X	X	X	X
CO ₂ Sensor Duct Mounting Kit - for downflow applications		C0MISC19AE1-	85L43	X	X	X	X	X
Aspiration Box - for duct mounting non-plenum rated CO ₂ sensors (87N53 or 77N39)		C0MISC16AE1-	90N43	X	X	X	X	X
UVC Germicidal Light Kit								
¹ UVC Light Kit (110/230v-1ph)		C1UVCL10C-1	54W65	X	X	X	X	X
ELECTRICAL								
Voltage 60 hz	208/230V - 3 phase	Factory	O	O	O	O	O	O
	460V - 3 phase	Factory	O	O	O	O	O	O
	575V - 3 phase	Factory	O	O	O	O	O	O
Disconnect Switch (see Electric Heat Tables for usage, page 44)	80 amp - C1DISC080C-1	54W85	OX	OX	OX	OX	OX	OX
	150 amp - C1DISC150C-1	54W86	OX	OX	OX	OX	OX	OX
	250 amp - C1DISC250C-1	54W87	OX	OX	OX	OX	OX	OX
GFI Service Outlets	15 amp non-powered, field-wired (208/230V, 460V, 575V) LTAGFIK10/15	74M70	OX	OX	OX	OX	OX	OX
	15 amp factory-wired and powered (208/230V, 460V, 575V)	Factory	O	O	O	O	O	O
	20 amp non-powered, field-wired (575V only) C1GFCI20FF1	67E01	OX	OX	OX	OX	OX	OX
Weatherproof Cover for GFI		C1GFCI99FF1	10C89	X	X	X	X	X
Phase/Voltage Detection (Optional for CAV options only, furnished with VAV or Single Zone VAV option)		Factory	O	O	O	O	O	O

¹ Lamps operate on 110-230V single-phase power supply. Step-down transformer must be field supplied for field installation in 460V and 575V rooftop units (transformer is furnished for factory installed light kits). Alternately, a separate 110V power supply may be used to directly power the UVC ballast(s)

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

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

O = Configure To Order (Factory Installed)

X = Field Installed

OPTIONS / ACCESSORIES

Item Description	Model Number	Catalog Number	Unit Model No				
			156	180	210	240	300
ELECTRIC HEAT							
15 kW	208/230V-3ph - C1EH0150C-1Y	53W84	OX	OX	OX	OX	OX
	460V-3ph - C1EH0150C-1G	53W86	OX	OX	OX	OX	OX
	575V-3ph - C1EH0150C-1J	53W87	OX	OX	OX	OX	OX
30 kW	208/230V-3ph - C1EH0300C11Y	53W88	OX				
	460V-3ph - C1EH0300C11G	53W90	OX				
	575V-3ph - C1EH0300C11J	53W91	OX				
	208/230V-3ph - C1EH0300C21Y	53W92		OX	OX	OX	OX
	460V-3ph - C1EH0300C21G	53W94		OX	OX	OX	OX
	575V-3ph - C1EH0300C21J	53W95		OX	OX	OX	OX
	208/230V-3ph - C1EH0450C11Y	53W96	OX				
	460V-3ph - C1EH0450C11G	53W98	OX				
	575V-3ph - C1EH0450C11J	53W99	OX				
45 kW	208/230V-3ph - C1EH0450C21Y	54W00		OX	OX	OX	OX
	460V-3ph - C1EH0450C21G	54W02		OX	OX	OX	OX
	575V-3ph - C1EH0450C21J	54W03		OX	OX	OX	OX
	208/230V-3ph - C1EH0600C11Y	54W04	OX				
	460V-3ph - C1EH0600C11G	54W06	OX				
	575V-3ph - C1EH0600C11J	54W07	OX				
60 kW	208/230V-3ph - C1EH0600C21Y	54W08		OX	OX	OX	OX
	460V-3ph - C1EH0600C21G	54W10		OX	OX	OX	OX
	575V-3ph - C1EH0600C21J	54W11		OX	OX	OX	OX
	208/230V-3ph - C1EH0900C-1Y	54W12			OX	OX	OX
	460V-3ph - C1EH0900C-1G	54W14			OX	OX	OX
	575V-3ph - C1EH0900C-1J	54W15			OX	OX	OX
SCR (Silicon Controlled Rectifier) Electric Heat Control		Factory	O	O	O	O	O
NOTE - The SCR option is not available with 45 kW, 60 kW and 90kW electric heat (208/230V) models.							
Thermostat (required)		Y9682	X	X	X	X	X
Duct Sensor (required)		Y9683	X	X	X	X	X
ECONOMIZER							
Standard Economizer (Not for Title 24)							
Standard Economizer	E1ECON15C-2	13U47	OX	OX	OX	OX	OX
Downflow or Horizontal - Includes Outdoor Air Hood.							
Order Downflow or Horizontal Barometric Relief Dampers separately.							
High Performance Economizer (Approved for California Title 24 Building Standards / AMCA Class 1A Certified)							
High Performance Economizer	E1ECON17C-2	16Y98	OX	OX	OX	OX	OX
Downflow or Horizontal - Includes Outdoor Air Hood.							
Order Downflow or Horizontal Barometric Relief Dampers separately.							
Economizer Controls							
Differential Enthalpy (Not for Title 24)	Order 2 - C1SNSR64FF1	53W64	OX	OX	OX	OX	OX
Sensible Control	Sensor is Furnished	Factory	O	O	O	O	O
Single Enthalpy (Not for Title 24)	C1SNSR64FF1	53W64	OX	OX	OX	OX	OX
Global Control	Sensor Field Provided	Factory	O	O	O	O	O
Building Pressure Control	E1GPBK20C1	13J77	X	X	X	X	X
Outdoor Air CFM Control	E1GPBK10C1	13J76	X	X	X	X	X
Barometric Relief Dampers With Exhaust Hood							
Downflow Barometric Relief Dampers	C1DAMP50C	54W78	OX	OX	OX	OX	OX
Horizontal Barometric Relief Dampers	LAGEDH18/24	16K99	X	X	X	X	X
OUTDOOR AIR							
Outdoor Air Dampers With Outdoor Air Hood							
Motorized	C1DAMP20C-1	13U04	OX	OX	OX	OX	OX
Manual	C1DAMP10C-2	13U05	OX	OX	OX	OX	OX

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

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

O = Configure To Order (Factory Installed)

X = Field Installed

OPTIONS / ACCESSORIES

Item Description	Model Number	Catalog Number	Unit Model No				
			156	180	210	240	300
POWER EXHAUST							
Standard Static	208/230V - C1PWRE11C-1Y	75W90	OX	OX	OX	OX	OX
	460V - C1PWRE11C-1G	75W91	OX	OX	OX	OX	OX
	575V - C1PWRE11C-1J	75W92	OX	OX	OX	OX	OX
CONDENSER REHEAT OPTION (CAV AND SINGLE ZONE VAV) MODELS ONLY							
Dehumidification Option		Factory	O	O	O	O	O
Humidity Sensor Kit, Remote mounted (required)	C0SNSR31AE-1	17M50	X	X	X	X	X
ROOF CURBS							
Hybrid Roof Curbs, Downflow							
8 in. height	C1CURB70C-1	11F58	X	X	X	X	X
14 in. height	C1CURB71C-1	11F59	X	X	X	X	X
18 in. height	C1CURB72C-1	11F60	X	X	X	X	X
24 in. height	C1CURB73C-1	11F61	X	X	X	X	X
Adjustable Pitch Curb							
14 in. height	L1CURB55C	43W26	X	X	X	X	X
Standard Roof Curbs, Horizontal - Requires Horizontal Return Air Panel Kit							
26 in. height - slab applications	C1CURB14C-1	11T89	X	X	X	X	
30 in. height - slab applications	C1CURB15C-1	11T90					X
37 in. height - rooftop applications	C1CURB16C-1	11T96	X	X	X	X	
41 in. height - rooftop applications	C1CURB17C-1	11T97					X
Insulation Kit For Standard Horizontal Roof Curbs							
for C1CURB14C-1 (26 in.)	C1INSU11C-1-	73K32	X	X	X	X	
for C1CURB15C-1 (30 in.)	C1INSU12C-1-	73K33					X
for C1CURB16C-1 (37 in.)	C1INSU13C-1-	73K34	X	X	X	X	
for C1CURB17C-1 (41 in.)	C1INSU14C-1-	73K35					X
Horizontal Return Air Panel Kit							
Required for Horizontal Applications with Roof Curb	C1HRAP10C-1-	87M00	X	X	X	X	X
CEILING DIFFUSERS							
Step-Down - Order one	RTD11-185S	13K63	X	X			
	RTD11-275S	13K64			X	X	X
Flush - Order one	FD11-185S	13K58	X	X			
	FD11-275S	13K59			X	X	X
Transitions (Supply and Return) - Order one	C1DIFF33C-1	12X68	X	X			
	C1DIFF34C-1	12X70			X	X	X

¹ Order one 6 kW transformer per array (up to 24 solar modules each). Up to two arrays can be used per rooftop unit (total 48 modules). Arrays are field wired in parallel to the Solar Power Entry

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

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

O = Configure To Order (Factory Installed)

X = Field Installed

SPECIFICATIONS

General Data		Nominal Tonnage	13 Ton	13 Ton
		Model Number	LCH156H4B	LCH156H4M
		Efficiency Type	High	High
		Blower Type	CAV (Constant Air Volume)	Single Zone VAV Supply Fan
Cooling Performance	Gross Cooling Capacity - Btuh		156,000	156,000
	¹ Net Cooling Capacity - Btuh		152,000	152,000
	AHRI Rated Air Flow - cfm		5000	5000
	Total Unit Power - kW		12.7	12.7
	¹ EER (Btuh/Watt)		12.0	12.0
	² IEER (Btuh/Watt)		13.6	14.1
AHRI Reference No.		N/A	N/A	
Refrigerant Charge	Refrigerant Type		R-410A	R-410A
	Eco-Last™ Coil System	Circuit 1	5 lbs. 14 oz.	5 lbs. 14 oz.
		Circuit 2	5 lbs. 8 oz.	5 lbs. 8 oz.
		Circuit 3	5 lbs. 12 oz.	5 lbs. 12 oz.
	Eco-Last™ Coil System with Dehumidification	Circuit 1	6 lbs. 6 oz.	6 lbs. 6 oz.
		Circuit 2	5 lbs. 12 oz.	5 lbs. 12 oz.
		Circuit 3	5 lbs. 10 oz.	5 lbs. 10 oz.
	Conventional Fin/Tube Coil Option	Circuit 1	10 lbs. 2 oz.	10 lbs. 2 oz.
		Circuit 2	10 lbs. 0 oz.	10 lbs. 0 oz.
		Circuit 3	10 lbs. 2 oz.	10 lbs. 2 oz.
	Conventional Fin/Tube With	Circuit 1	12 lbs. 10 oz.	12 lbs. 10 oz.
		Circuit 2	12 lbs. 8 oz.	12 lbs. 8 oz.
Circuit 3		10 lbs. 2 oz.	10 lbs. 2 oz.	
Electric Heat (kW) Available - See page 24		15-30-45-60		
Compressor Type (number)		Scroll (3)	Scroll (3)	
Outdoor Coils	Net face area (total) - sq. ft.		41.4	41.4
	Eco-Last™ Number of rows		1 (2)	1 (2)
	(Fin/Tube) Fins per inch		23 (20)	23 (20)
Outdoor Coil Fans	Motor - (No.) horsepower		(3) 1/3	(3) 1/3
	Motor rpm		1075	1075
	Total Motor watts		1100	1100
	Diameter - (No.) in.		(3) 24	(3) 24
	Number of blades		3	3
	Total Air volume - cfm		12,000	12,000
Indoor Coils	Net face area (total) - sq. ft.		21.4	21.4
	Tube diameter - in.		3/8	3/8
	Number of rows		3	3
	Fins per inch		14	14
	Drain connection - No. and size		(1) 1 in. FPT	(1) 1 in. FPT
	Expansion device type		Balance port TXV, removable head	
³ Indoor Blower and Drive Selection	Nominal motor output		2 hp, 3 hp, 5 hp	
	Max. usable motor output (US)		2.3 hp, 3.45 hp, 5.75 hp	
	Motor - Drive kit number		2 hp Kit 1 535-725 rpm Kit 2 710-965 rpm 3 hp Std. Eff. Kit 1 535-725 rpm Kit 2 710-965 rpm 3 hp High. Eff. Kit 3 685-856 rpm Kit 4 850-1045 rpm 5 hp Kit 3 - 685-856 rpm Kit 4 850-1045 rpm Kit 5 945-1185 rpm	
	Blower wheel nominal D x W - in.		(2) 15 x 15 in.	(2) 15 x 15 in.
	Filters		Fiberglass, disposable	
	Type of filter		(6) 24 x 24 x 2	
	Number and size - in.			
	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 Integrated Energy Efficiency Ratio tested according to 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.

NOTE - Units equipped with Single Zone Vav option are limited to a motor service factor of 1.0.

SPECIFICATIONS

General Data		Nominal Tonnage	15 Ton	15 Ton	15 Ton	17.5 Ton	17.5 Ton
		Model Number	LCH180H4B	LCH180H4V	LCH180H4M	LCH210H4B	LCH210H4M
		Efficiency Type	High	High	High	High	High
		Blower Type	CAV (Constant Air Volume)	VAV (Variable Air Volume)	Single Zone VAV Supply Fan	CAV (Constant Air Volume)	Single Zone VAV Supply Fan
Cooling Performance	Gross Cooling Capacity - Btuh		176,000	176,000	176,000	204,000	204,000
	¹ Net Cooling Capacity - Btuh		172,000	172,000	172,000	198,000	198,000
	AHRI Rated Air Flow - cfm		5250	5250	5250	6125	6125
	Total Unit Power - kW		14.3	14.3	14.3	16.5	16.5
	¹ EER (Btuh/Watt)		12.0	12.0	12.0	12.0	12.0
	² IEER (Btuh/Watt)		13.5	15.2	13.7	13.0	14.0
AHRI Reference No.			N/A	N/A	N/A	N/A	N/A
Refrigerant Charge		Refrigerant Type	R-410A	R-410A	R-410A	R-410A	R-410A
	Eco-Last™ Coil System	Circuit 1	6 lbs. 0 oz.	5 lbs. 4 oz.	6 lbs. 0 oz.	6 lbs. 12 oz.	6 lbs. 12 oz.
		Circuit 2	5 lbs. 10 oz.	5 lbs. 8 oz.	5 lbs. 10 oz.	6 lbs. 14 oz.	6 lbs. 14 oz.
		Circuit 3	5 lbs. 14 oz.	5 lbs. 8 oz.	5 lbs. 14 oz.	6 lbs. 14 oz.	6 lbs. 14 oz.
	Eco-Last™ Coil System with Dehumidification	Circuit 1	6 lbs. 8 oz.	---	6 lbs. 8 oz.	7 lbs. 4 oz.	7 lbs. 4 oz.
		Circuit 2	5 lbs. 12 oz.	---	5 lbs. 12 oz.	7 lbs. 0 oz.	7 lbs. 0 oz.
		Circuit 3	6 lbs. 9 oz.	---	6 lbs. 9 oz.	6 lbs. 4 oz.	6 lbs. 4 oz.
	Conventional Fin/Tube Coil Option	Circuit 1	12 lbs. 8 oz.	---	12 lbs. 8 oz.	13 lbs. 0 oz.	13 lbs. 0 oz.
		Circuit 2	12 lbs. 8 oz.	---	12 lbs. 8 oz.	13 lbs. 0 oz.	13 lbs. 0 oz.
		Circuit 3	12 lbs. 8 oz.	---	12 lbs. 8 oz.	13 lbs. 0 oz.	13 lbs. 0 oz.
	Conventional Fin/Tube With	Circuit 1	14 lbs. 8 oz.	---	14 lbs. 8 oz.	15 lbs. 0 oz.	15 lbs. 0 oz.
		Circuit 2	14 lbs. 8 oz.	---	14 lbs. 8 oz.	15 lbs. 0 oz.	15 lbs. 0 oz.
		Circuit 3	12 lbs. 8 oz.	---	12 lbs. 8 oz.	13 lbs. 0 oz.	13 lbs. 0 oz.
Electric Heat (kW) Available - See page 24			15-30-45-60 kW			15-30-45-60-90 kW	
Compressor Type (number)			Scroll (3)	Scroll (3)	Scroll (3)	Scroll (3)	Scroll (3)
Outdoor Coils	Net face area (total) - sq. ft.		55.2	55.2	55.2	55.2	55.2
Eco-Last™ (Fin/Tube)	Number of rows		1 (2)	1 (2)	1 (2)	1 (2)	1 (2)
	Fins per inch		23 (20)	23 (20)	23 (20)	23 (20)	23 (20)
Outdoor Coil Fans	Motor - (No.) horsepower		(4) 1/3	(4) 1/3	(4) 1/3	(6) 1/3	(6) 1/3
	Motor rpm		1075	1075	1075	1075	1075
	Total Motor watts		1500	1500	1500	1950	1950
	Diameter - (No.) in.		(4) 24	(4) 24	(4) 24	(6) 24	(6) 24
	Number of blades		3	3	3	3	3
	Total Air volume - cfm		16,000	16,000	16,000	20,000	20,000
Indoor Coils	Net face area (total) - sq. ft.		21.4	21.4	21.4	21.4	21.4
	Tube diameter - in.		3/8	3/8	3/8	3/8	3/8
	Number of rows		3	3	3	4	4
	Fins per inch		14	14	14	14	14
	Drain connection - No. and size		(1) 1 in. FPT	(1) 1 in. FPT	(1) 1 in. FPT	(1) 1 in. FPT	(1) 1 in. FPT
	Expansion device type		Balance port TXV, removable head				
³ Indoor Blower and Drive Selection	Nominal motor output		3 hp, 5 hp, 7.5 hp				
	Max. usable motor output (US)		3.45 hp, 5.75 hp, 8.62 hp				
	Motor - Drive kit number		3 hp Std. Eff. Kit 1 535-725 rpm Kit 2 710-965 rpm 3 hp High. Eff. Kit 3 - 685-856 rpm Kit 4 850-1045 rpm 5 hp Kit 3 685-856 rpm Kit 4 850-1045 rpm Kit 5 945-1185 rpm 7.5 hp Kit 6 850-1045 rpm Kit 7 945-1185 rpm Kit 8 1045-1285 rpm				
	Blower wheel nominal D x W - in.		(2) 15 x 15				
	Filters	Type of filter	Fiberglass, disposable				
		Number and size - in.	(6) 24 x 24 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 Integrated Energy Efficiency Ratio tested according to 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.

NOTE - Units equipped with Single Zone Vav option are limited to a motor service factor of 1.0.

SPECIFICATIONS

General Data			Nominal Tonnage	20 Ton	20 Ton	20 Ton			
			Model Number	LCH240H4B	LCH240H4V	LCH240H4M			
			Efficiency Type	High	High	High			
			Blower Type	CAV (Constant Air Volume)	VAV (Variable Air Volume)	Single Zone VAV Supply Fan			
Cooling Performance	Gross Cooling Capacity - Btuh		238,000	238,000	238,000				
	¹ Net Cooling Capacity - Btuh		230,000	230,000	230,000				
	AHRI Rated Air Flow - cfm		6400	6400	6400				
	Total Unit Power - kW		19.2	19.2	19.2				
	¹ EER (Btuh/Watt)		12.0	12.0	12.0				
	² IEER (Btuh/Watt)		13.2	16.0	14.5				
AHRI Reference No.			N/A	N/A	N/A				
Refrigerant Charge			Refrigerant Type	R-410A	R-410A	R-410A			
			Eco-Last™ Coil System	Circuit 1	6 lbs. 4 oz.	6 lbs. 2 oz.	6 lbs. 4 oz.		
			Circuit 2	6 lbs. 2 oz.	6 lbs. 6 oz.	6 lbs. 2 oz.			
			Circuit 3	5 lbs. 14 oz.	6 lbs. 0 oz.	5 lbs. 14 oz.			
			Circuit 4	5 lbs. 6 oz.	6 lbs. 10 oz.	5 lbs. 6 oz.			
			Eco-Last™ Coil System with Dehumidification	Circuit 1	6 lbs. 4 oz.	---	6 lbs. 4 oz.		
			Circuit 2	5 lbs. 10 oz.	---	5 lbs. 10 oz.			
			Circuit 3	4 lbs. 14 oz.	---	4 lbs. 14 oz.			
			Circuit 4	4 lbs. 14 oz.	---	4 lbs. 14 oz.			
			Conventional Fin/Tube Coil Option	Circuit 1	10 lbs. 0 oz.	---	10 lbs. 0 oz.		
			Circuit 2	10 lbs. 0 oz.	---	10 lbs. 0 oz.			
			Circuit 3	10 lbs. 0 oz.	---	10 lbs. 0 oz.			
			Circuit 4	8 lbs. 12 oz.	---	8 lbs. 12 oz.			
			Conventional Fin/Tube With	Circuit 1	12 lbs. 0 oz.	---	12 lbs. 0 oz.		
			Circuit 2	12 lbs. 0 oz.	---	12 lbs. 0 oz.			
			Circuit 3	10 lbs. 0 oz.	---	10 lbs. 0 oz.			
			Circuit 4	8 lbs. 12 oz.	---	8 lbs. 12 oz.			
			Electric Heat (kW) Available - See page 24			15-30-45-60, 90 kW			
			Compressor Type (number)			Scroll (4)	Scroll (4)	Scroll (4)	
			Outdoor Coils	Net face area (total) - sq. ft.		55.2	55.2	55.2	
			Eco-Last™ (Fin/Tube)	Number of rows		1 (2)	1 (2)	1 (2)	
	Fins per inch		23 (20)	23 (20)	23 (20)				
Outdoor Coil Fans	Motor - (No.) horsepower		(6) 1/3	(6) 1/3	(6) 1/3				
	Motor rpm -Total Motor watts		1075 - 1950	1075 - 1950	1075 - 1950				
	Diameter - (No.) in. - No. of blades		(6) 24 - 3	(6) 24 - 3	(6) 24 - 3				
	Total Air volume - cfm		20,000	20,000	20,000				
Indoor Coils	Net face area (total) - sq. ft.		21.4	21.4	21.4				
	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. FPT	(1) 1 in. FPT	(1) 1 in. FPT				
	Expansion device type		Balance port TXV, removable head						
³ Indoor Blower and Drive Selection	Nominal motor output		5 hp, 7.5 hp, 10 hp						
	Maximum usable motor output (US Only)		5.75 hp, 8.62 hp, 11.5 hp						
	Motor - Drive kit number		5 hp Kit 3 685-856 rpm Kit 4 850-1045 rpm Kit 5 945-1185 rpm 7.5 hp Kit 6 850-1045 rpm Kit 7 945-1185 rpm Kit 8 1045-1285 rpm 10 hp Kit 7 945-1185 rpm Kit 10 1045-1285 rpm Kit 11 1135-1365 rpm						
	Blower wheel nom. D x W - in.		(2) 15 x 15						
	Filters	Type of filter	Fiberglass, disposable						
		Number and size - in.	(6) 24 x 24 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 Integrated Energy Efficiency Ratio tested according to 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.

NOTE - Units equipped with Single Zone Vav option are limited to a motor service factor of 1.0.

SPECIFICATIONS

General Data			Nominal Tonnage	25 Ton	25 Ton
			Model Number	LCH300S4B	LCH300S4M
			Efficiency Type	Standard	Standard
			Blower Type	CAV (Constant Air Volume)	Single Zone VAV Supply Fan
Cooling Performance	Gross Cooling Capacity - Btuh		281,000	281,000	
	¹ Net Cooling Capacity - Btuh		270,000	270,000	
	AHRI Rated Air Flow - cfm		8400	8400	
	Total Unit Power - kW		25.7	25.7	
	¹ EER (Btuh/Watt)		10.5	10.5	
	² IEER (Btuh/Watt)		11.6	13.8	
AHRI Reference No.			N/A	N/A	
Refrigerant Charge			Refrigerant Type	R-410A	R-410A
	Eco-Last™ Coil System	Circuit 1	6 lbs. 4 oz.	6 lbs. 4 oz.	
		Circuit 2	5 lbs. 10 oz.	5 lbs. 10 oz.	
		Circuit 3	6 lbs. 6 oz.	6 lbs. 6 oz.	
		Circuit 4	6 lbs. 0 oz.	6 lbs. 0 oz.	
	Eco-Last™ Coil System with Dehumidification	Circuit 1	7 lbs. 8 oz.	7 lbs. 8 oz.	
		Circuit 2	6 lbs. 4 oz.	6 lbs. 4 oz.	
		Circuit 3	6 lbs. 2 oz.	6 lbs. 2 oz.	
		Circuit 4	5 lbs. 14 oz.	5 lbs. 14 oz.	
	Conventional Fin/Tube Coil Option	Circuit 1	10 lbs. 8 oz.	10 lbs. 8 oz.	
		Circuit 2	10 lbs. 0 oz.	10 lbs. 0 oz.	
		Circuit 3	9 lbs. 12 oz.	9 lbs. 12 oz.	
		Circuit 4	9 lbs. 12 oz.	9 lbs. 12 oz.	
	Conventional Fin/Tube With	Circuit 1	12 lbs. 12 oz.	12 lbs. 12 oz.	
		Circuit 2	11 lbs. 12 oz.	11 lbs. 12 oz.	
		Circuit 3	9 lbs. 12 oz.	9 lbs. 12 oz.	
		Circuit 4	9 lbs. 12 oz.	9 lbs. 12 oz.	
Electric Heat (kW) Available - See page 24			15-30-45-60, 90 kW		
Compressor Type (number)			Scroll (4)	Scroll (4)	
Outdoor Coils	Net face area (total) - sq. ft.		55.2	55.2	
Eco-Last™ (Fin/Tube)	Number of rows		1 (2)	1 (2)	
	Fins per inch		23 (20)	23 (20)	
Outdoor Coil Fans	Motor - (No.) horsepower		(6) 1/3	(6) 1/3	
	Motor rpm -Total Motor watts		1075 - 1950	1075 - 1950	
	Diameter - (No.) in. - No. of blades		(6) 24 - 3	(6) 24 - 3	
	Total Air volume - cfm		20,000	20,000	
Indoor Coils	Net face area (total) - sq. ft.		21.4	21.4	
	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. FPT	(1) 1 in. FPT	
	Expansion device type		Balance port TXV, removable head		
³ Indoor Blower and Drive Selection	Nominal motor output		5 hp, 7.5 hp, 10 hp		
	Maximum usable motor output (US Only)		5.75 hp, 8.62 hp, 11.5 hp		
	Motor - Drive kit number		5 hp Kit 3 685-856 rpm Kit 4 850-1045 rpm Kit 5 945-1185 rpm 7.5 hp Kit 6 850-1045 rpm Kit 7 945-1185 rpm Kit 8 1045-1285 rpm 10 hp Kit 7 945-1185 rpm Kit 10 1045-1285 rpm Kit 11 1135-1365 rpm		
	Blower wheel nom. D x W - in.		(2) 15 x 15		
	Filters	Type of filter	Fiberglass, disposable		
		Number and size - in.	(6) 24 x 24 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 Integrated Energy Efficiency Ratio tested according to 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.

NOTE - Units equipped with Single Zone Vav option are limited to a motor service factor of 1.0.

RATINGS

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

13 TON HIGH EFFICIENCY LCH156H4B (1ST STAGE) - CONSTANT AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				cfm	kBtuh	kW			75°F	80°F	85°F			kBtuh	kW	75°F			80°F	85°F	kBtuh
63°F	4160	110.6	4.68	0.67	0.80	0.93	103.7	5.30	0.68	0.81	0.95	96.4	5.97	0.68	0.82	0.97	88.8	6.74	0.68	0.84	0.99
	5200	117.9	4.73	0.72	0.87	0.99	110.4	5.34	0.72	0.88	1.00	102.7	6.01	0.73	0.90	1.00	94.7	6.78	0.74	0.93	1.00
	6240	123.1	4.77	0.76	0.93	1.00	115.4	5.38	0.77	0.95	1.00	107.5	6.05	0.79	0.97	1.00	99.3	6.81	0.80	0.99	1.00
67°F	4160	118.4	4.73	0.54	0.65	0.77	111.2	5.34	0.53	0.65	0.78	103.8	6.02	0.52	0.66	0.79	96.0	6.79	0.52	0.66	0.80
	5200	126.0	4.79	0.57	0.70	0.83	118.4	5.39	0.56	0.70	0.85	110.5	6.07	0.56	0.71	0.86	102.2	6.83	0.56	0.72	0.89
	6240	131.7	4.83	0.59	0.74	0.90	123.6	5.43	0.59	0.75	0.91	115.4	6.11	0.59	0.76	0.94	106.7	6.87	0.59	0.78	0.96
71°F	4160	126.1	4.78	0.42	0.53	0.63	118.8	5.39	0.40	0.52	0.63	111.2	6.07	0.39	0.52	0.63	103.1	6.84	0.37	0.51	0.64
	5200	134.1	4.84	0.43	0.55	0.67	126.1	5.45	0.41	0.55	0.68	118.0	6.13	0.4	0.55	0.69	109.6	6.89	0.39	0.55	0.70
	6240	140.0	4.88	0.44	0.58	0.72	131.7	5.49	0.42	0.58	0.73	123.3	6.17	0.42	0.59	0.74	114.3	6.93	0.40	0.59	0.76

13 TON HIGH EFFICIENCY LCH156H4B (2ND STAGE) - CONSTANT AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F					95°F					105°F					115°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				cfm	kBtuh	kW			75°F	80°F	85°F			kBtuh	kW	75°F			80°F	85°F	kBtuh
63°F	4160	148.1	9.05	0.70	0.85	0.99	136.5	10.20	0.71	0.87	1.00	124.5	11.51	0.72	0.9	1.00	112.1	13.01	0.73	0.93	1.00
	5200	157.1	9.11	0.76	0.94	1.00	145.1	10.26	0.77	0.96	1.00	132.6	11.57	0.79	0.99	1.00	120.5	13.08	0.81	1.00	1.00
	6240	164.5	9.17	0.82	0.99	1.00	152.7	10.32	0.83	1.00	1.00	141.1	11.64	0.86	1.00	1.00	129.1	13.15	0.89	1.00	1.00
67°F	4160	159.3	9.13	0.54	0.68	0.82	147.4	10.28	0.54	0.69	0.84	135.3	11.59	0.53	0.70	0.86	122.4	13.09	0.53	0.71	0.89
	5200	169.0	9.20	0.58	0.74	0.90	156.5	10.35	0.58	0.75	0.92	143.4	11.66	0.58	0.77	0.95	129.8	13.16	0.58	0.79	0.98
	6240	175.9	9.25	0.61	0.80	0.97	162.7	10.40	0.62	0.81	0.99	149.1	11.71	0.62	0.83	1.00	135.2	13.2	0.63	0.86	1.00
71°F	4160	170.4	9.21	0.40	0.53	0.66	158.1	10.36	0.38	0.53	0.66	145.8	11.68	0.37	0.53	0.67	132.6	13.18	0.35	0.52	0.69
	5200	180.5	9.29	0.41	0.57	0.72	167.6	10.44	0.41	0.57	0.73	154.2	11.75	0.39	0.57	0.74	140.5	13.25	0.37	0.58	0.76
	6240	187.9	9.35	0.43	0.61	0.77	174.4	10.50	0.42	0.61	0.79	160.4	11.81	0.41	0.61	0.81	146.2	13.31	0.40	0.62	0.84

15 TON HIGH EFFICIENCY LCH180H4B (1ST STAGE) - CONSTANT AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				cfm	kBtuh	kW			75°F	80°F	85°F			kBtuh	kW	75°F			80°F	85°F	kBtuh
63°F	4800	127.8	5.04	0.70	0.82	0.93	120.4	5.79	0.7	0.82	0.94	112.8	6.62	0.70	0.83	0.96	104.8	7.53	0.70	0.85	0.98
	6000	136.3	5.05	0.74	0.87	0.99	128.3	5.81	0.75	0.88	1.00	120.1	6.64	0.75	0.90	1.00	111.6	7.56	0.76	0.92	1.00
	7200	142.4	5.05	0.78	0.92	1.00	134.1	5.82	0.79	0.94	1.00	125.4	6.66	0.80	0.96	1.00	116.7	7.58	0.81	0.98	1.00
67°F	4800	136.5	5.05	0.56	0.68	0.79	129.0	5.81	0.55	0.68	0.79	121.1	6.65	0.55	0.68	0.80	112.8	7.56	0.54	0.68	0.81
	6000	145.4	5.06	0.59	0.72	0.84	137.2	5.83	0.58	0.72	0.85	128.8	6.67	0.58	0.73	0.86	120.1	7.60	0.58	0.74	0.88
	7200	151.9	5.06	0.61	0.76	0.89	143.3	5.84	0.61	0.77	0.91	134.5	6.69	0.61	0.78	0.93	125.3	7.62	0.61	0.79	0.95
71°F	4800	145.1	5.06	0.44	0.55	0.65	137.2	5.83	0.42	0.54	0.65	129.2	6.67	0.41	0.54	0.66	120.6	7.60	0.40	0.53	0.66
	6000	154.3	5.07	0.45	0.57	0.70	145.9	5.85	0.43	0.57	0.70	137.2	6.70	0.42	0.57	0.71	128.1	7.63	0.41	0.57	0.71
	7200	161.0	5.08	0.46	0.6	0.74	152.3	5.86	0.44	0.6	0.74	143.1	6.72	0.44	0.6	0.76	133.6	7.66	0.43	0.61	0.77

15 TON HIGH EFFICIENCY LCH180H4B (2ND STAGE) - CONSTANT AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F					95°F					105°F					115°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				cfm	kBtuh	kW			75°F	80°F	85°F			kBtuh	kW	75°F			80°F	85°F	kBtuh
63°F	4800	172.5	9.96	0.71	0.85	0.99	160.1	11.32	0.71	0.87	1.00	146.8	12.83	0.72	0.90	1.00	132.7	14.51	0.74	0.93	1.00
	6000	182.6	9.99	0.77	0.93	1.00	169.5	11.37	0.78	0.95	1.00	155.7	12.89	0.79	0.98	1.00	141.3	14.57	0.81	1.00	1.00
	7200	190.3	10.02	0.82	0.99	1.00	177.3	11.41	0.83	1.00	1.00	164.3	12.94	0.86	1.00	1.00	150.5	14.64	0.89	1.00	1.00
67°F	4800	185.0	10.00	0.55	0.69	0.82	172.1	11.38	0.55	0.69	0.84	158.6	12.90	0.54	0.70	0.86	144.0	14.59	0.54	0.72	0.89
	6000	195.8	10.04	0.58	0.74	0.90	182.1	11.43	0.58	0.76	0.92	167.5	12.96	0.59	0.77	0.95	152.2	14.65	0.59	0.79	0.98
	7200	203.7	10.07	0.62	0.8	0.97	189.3	11.46	0.62	0.81	0.99	173.9	13.00	0.63	0.84	1.00	157.8	14.69	0.63	0.86	1.00
71°F	4800	197.2	10.04	0.41	0.54	0.67	183.9	11.43	0.39	0.54	0.67	169.9	12.97	0.38	0.53	0.68	155.0	14.67	0.36	0.53	0.69
	6000	208.4	10.09	0.42	0.58	0.72	194.2	11.48	0.41	0.58	0.73	179.4	13.03	0.4	0.58	0.75	163.3	14.73	0.38	0.59	0.77
	7200	216.6	10.12	0.43	0.61	0.78	201.8	11.52	0.42	0.62	0.79	186.2	13.07	0.42	0.62	0.81	169.7	14.78	0.41	0.63	0.84

RATINGS

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

17.5 TON HIGH EFFICIENCY LCH210H4B (1ST STAGE) - CONSTANT AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)							
				Dry Bulb					Dry Bulb					Dry Bulb							
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F					
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	5600	142.9	5.49	0.71	0.85	0.97	134.4	6.23	0.72	0.86	0.99	125.5	7.05	0.72	0.88	1.00	116.4	7.97	0.74	0.9	1.00
	7000	151.1	5.54	0.76	0.92	1.00	142.3	6.29	0.77	0.94	1.00	133	7.11	0.79	0.96	1.00	123.5	8.03	0.80	0.98	1.00
	8400	157.9	5.58	0.82	0.98	1.00	148.7	6.34	0.83	1.00	1.00	139.3	7.16	0.84	1.00	1.00	130.5	8.08	0.87	1.00	1.00
67°F	5600	153.6	5.55	0.56	0.69	0.81	144.5	6.30	0.56	0.69	0.83	135.3	7.13	0.56	0.70	0.84	125.7	8.04	0.56	0.71	0.86
	7000	161.9	5.61	0.60	0.74	0.88	152.1	6.36	0.6	0.75	0.90	142.5	7.19	0.60	0.77	0.92	132.2	8.10	0.61	0.78	0.95
	8400	167.9	5.65	0.63	0.79	0.95	157.9	6.41	0.63	0.81	0.97	147.6	7.23	0.63	0.82	0.99	137.0	8.14	0.63	0.84	1.00
71°F	5600	164.4	5.63	0.43	0.55	0.67	154.9	6.38	0.42	0.55	0.67	145.2	7.21	0.41	0.54	0.68	135.3	8.13	0.4	0.55	0.69
	7000	172.9	5.69	0.45	0.59	0.72	162.9	6.45	0.44	0.59	0.73	152.6	7.27	0.43	0.59	0.74	142.1	8.19	0.42	0.60	0.76
	8400	179.1	5.74	0.45	0.62	0.77	168.6	6.49	0.46	0.63	0.79	157.8	7.32	0.45	0.63	0.8	146.5	8.24	0.44	0.64	0.82

17.5 TON HIGH EFFICIENCY LCH210H4B (2ND STAGE) - CONSTANT AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F					95°F					105°F					115°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)							
				Dry Bulb					Dry Bulb					Dry Bulb							
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F	75°F	80°F	85°F		
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	5600	197.5	11.26	0.71	0.86	0.99	183.2	12.71	0.73	0.89	1.00	168.8	14.37	0.74	0.91	1.00	153.6	16.25	0.75	0.94	1.00
	7000	209.3	11.34	0.78	0.95	1.00	194.5	12.8	0.79	0.97	1.00	179.6	14.45	0.81	0.99	1.00	164.6	16.33	0.83	1.00	1.00
	8400	219.3	11.42	0.83	0.99	1.00	205.2	12.89	0.85	1.00	1.00	190.5	14.55	0.88	1.00	1.00	175.2	16.42	0.91	1.00	1.00
67°F	5600	212.6	11.36	0.55	0.69	0.83	198.1	12.83	0.55	0.70	0.85	182.6	14.48	0.55	0.71	0.87	166.4	16.34	0.55	0.73	0.90
	7000	224.4	11.46	0.59	0.76	0.91	208.9	12.92	0.60	0.77	0.94	192.3	14.56	0.60	0.79	0.96	175.2	16.41	0.60	0.81	0.98
	8400	232.7	11.52	0.62	0.81	0.98	216.2	12.98	0.63	0.83	0.99	199.3	14.62	0.64	0.85	1.00	181.7	16.47	0.64	0.88	1.00
71°F	5600	228.4	11.49	0.41	0.54	0.67	212.9	12.95	0.40	0.54	0.68	197.0	14.60	0.39	0.55	0.69	180.1	16.46	0.38	0.55	0.71
	7000	240.3	11.59	0.42	0.59	0.73	223.9	13.05	0.42	0.59	0.75	206.9	14.69	0.41	0.59	0.76	189.0	16.54	0.40	0.60	0.78
	8400	248.5	11.66	0.44	0.62	0.79	231.5	13.12	0.44	0.63	0.81	214.0	14.75	0.43	0.64	0.83	195.1	16.60	0.42	0.64	0.86

20 TON HIGH EFFICIENCY LCH240H4B (1ST STAGE) - CONSTANT AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	6400	130.1	5.15	0.69	0.81	0.94	123.5	5.86	0.69	0.83	0.96	116.6	6.64	0.70	0.84	0.98	109.3	7.52	0.71	0.86	0.99
	8000	137.5	5.20	0.73	0.88	0.99	130.5	5.91	0.74	0.90	1.00	123.1	6.69	0.75	0.92	1.00	115.6	7.57	0.77	0.94	1.00
	9600	143.4	5.25	0.78	0.94	1.00	136.1	5.96	0.79	0.96	1.00	128.4	6.74	0.81	0.98	1.00	120.6	7.62	0.83	0.99	1.00
67°F	6400	139.2	5.22	0.55	0.66	0.78	132.2	5.93	0.55	0.67	0.79	124.7	6.71	0.55	0.68	0.81	117.0	7.58	0.55	0.69	0.83
	8000	146.6	5.27	0.57	0.71	0.85	139.1	5.99	0.58	0.72	0.86	131.3	6.77	0.58	0.73	0.88	123.0	7.64	0.58	0.75	0.91
	9600	152.1	5.31	0.60	0.76	0.91	144.2	6.03	0.61	0.77	0.93	135.9	6.81	0.62	0.79	0.96	127.2	7.68	0.62	0.81	0.98
71°F	6400	148.1	5.28	0.42	0.53	0.64	140.8	6.00	0.42	0.53	0.65	133.2	6.79	0.41	0.54	0.65	125.1	7.66	0.41	0.53	0.66
	8000	155.9	5.34	0.43	0.56	0.69	148.1	6.06	0.43	0.56	0.69	139.8	6.85	0.42	0.57	0.71	131.2	7.73	0.42	0.58	0.73
	9600	161.6	5.39	0.44	0.59	0.73	153.2	6.11	0.44	0.60	0.75	144.7	6.90	0.44	0.61	0.76	135.7	7.77	0.44	0.62	0.78

20 TON HIGH EFFICIENCY LCH240H4B (2ND STAGE) - CONSTANT AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F					95°F					105°F					115°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	6400	236.6	13.31	0.73	0.88	1.00	221.6	15.06	0.74	0.91	1.00	205.8	17.06	0.76	0.94	1.00	189.2	19.35	0.78	0.97	1.00
	8000	249.2	13.43	0.79	0.97	1.00	233.7	15.17	0.80	0.98	1.00	217.5	17.17	0.83	0.99	1.00	201.1	19.47	0.86	1.00	1.00
	9600	260.1	13.53	0.85	1.00	1.00	244.7	15.28	0.87	1.00	1.00	228.9	17.29	0.90	1.00	1.00	212.1	19.59	0.94	1.00	1.00
67°F	6400	252.7	13.46	0.56	0.71	0.85	236.8	15.20	0.57	0.72	0.87	220.0	17.20	0.57	0.73	0.90	202.2	19.48	0.58	0.76	0.93
	8000	264.4	13.57	0.60	0.77	0.93	247.3	15.31	0.61	0.78	0.96	229.6	17.30	0.62	0.81	0.98	210.9	19.57	0.63	0.84	0.99
	9600	272.8	13.66	0.64	0.83	0.99	255.3	15.39	0.64	0.85	1.00	236.8	17.38	0.65	0.88	1.00	217.9	19.65	0.67	0.92	1.00
71°F	6400	269.2	13.62	0.41	0.55	0.68	252.6	15.37	0.41	0.56	0.70	235.2	17.36	0.41	0.56	0.71	216.6	19.64	0.40	0.57	0.73
	8000	281.5	13.75	0.43	0.59	0.74	263.7	15.49	0.43	0.60	0.76	245.0	17.48	0.43	0.61	0.78	225.2	19.74	0.42	0.62	0.81
	9600	289.9	13.83	0.45	0.63	0.81	271.3	15.57	0.45	0.64	0.83	252.0	17.55	0.45	0.65	0.86	231.3	19.81	0.44	0.67	0.89

RATINGS

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

25 TON STANDARD EFFICIENCY LCH300S4B (1ST STAGE) - CONSTANT AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	8000	147.3	6.36	0.70	0.82	0.95	140.6	7.18	0.71	0.84	0.97	134.8	8.10	0.72	0.86	0.99	129.1	9.16	0.73	0.88	1.00
	9500	152.7	6.41	0.73	0.87	0.99	145.9	7.24	0.74	0.90	1.00	140.0	8.16	0.75	0.92	1.00	133.8	9.22	0.77	0.94	1.00
	11000	157.6	6.47	0.75	0.92	1.00	150.5	7.29	0.78	0.95	1.00	144.1	8.22	0.80	0.97	1.00	137.6	9.27	0.82	0.98	1.00
67°F	8000	156.1	6.45	0.55	0.67	0.79	149.2	7.27	0.56	0.68	0.81	142.8	8.20	0.57	0.70	0.83	136.3	9.25	0.57	0.70	0.84
	9500	161.6	6.51	0.57	0.70	0.84	154.0	7.33	0.58	0.71	0.86	147.3	8.26	0.59	0.73	0.88	140.8	9.31	0.60	0.75	0.91
	11000	165.6	6.55	0.59	0.73	0.89	158.2	7.38	0.60	0.76	0.92	151.1	8.31	0.61	0.77	0.94	144.2	9.37	0.63	0.79	0.96
71°F	8000	165.2	6.55	0.42	0.54	0.65	157.7	7.38	0.42	0.54	0.66	151.1	8.31	0.42	0.55	0.67	144.2	9.37	0.43	0.56	0.69
	9500	170.7	6.61	0.43	0.56	0.68	162.8	7.44	0.43	0.57	0.70	155.4	8.37	0.44	0.57	0.71	148.2	9.42	0.44	0.58	0.72
	11000	174.8	6.66	0.44	0.58	0.71	166.6	7.49	0.45	0.59	0.73	159.1	8.42	0.44	0.60	0.75	151.8	9.47	0.45	0.61	0.77

25 TON STANDARD EFFICIENCY LCH300S4B (2ND STAGE) - CONSTANT AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																							
		85°F						95°F						105°F						115°F					
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)						
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb						
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F	75°F	80°F	85°F	
63°F	8000	277.2	17.80	0.72	0.87	1.00	264.6	19.95	0.74	0.89	1.00	251.7	22.43	0.75	0.92	1.00	238.5	25.35	0.78	0.95	1.00				
	9500	287.2	17.97	0.76	0.93	1.00	273.8	20.12	0.78	0.96	1.00	260.1	22.59	0.80	0.98	1.00	246.0	25.49	0.83	1.00	1.00				
	11000	295.0	18.11	0.80	0.98	1.00	280.6	20.25	0.83	1.00	1.00	267.4	22.73	0.85	1.00	1.00	254.5	25.68	0.88	1.00	1.00				
67°F	8000	293.2	18.08	0.57	0.70	0.83	279.6	20.23	0.58	0.71	0.86	265.8	22.71	0.59	0.73	0.88	251.7	25.63	0.60	0.75	0.91				
	9500	302.9	18.25	0.59	0.74	0.89	288.4	20.39	0.60	0.76	0.92	273.9	22.86	0.62	0.78	0.95	258.8	25.78	0.63	0.80	0.98				
	11000	310.1	18.38	0.62	0.78	0.95	295.3	20.52	0.63	0.80	0.98	279.9	22.99	0.64	0.83	1.00	264.5	25.89	0.65	0.85	1.00				
71°F	8000	310.0	18.38	0.43	0.56	0.68	295.5	20.53	0.43	0.57	0.69	280.6	23.00	0.43	0.58	0.71	265.8	25.92	0.44	0.59	0.73				
	9500	319.0	18.54	0.44	0.58	0.72	304.0	20.68	0.44	0.59	0.74	288.9	23.17	0.45	0.61	0.75	273.0	26.07	0.45	0.62	0.78				
	11000	326.9	18.68	0.44	0.61	0.76	311.2	20.82	0.45	0.62	0.78	294.9	23.29	0.46	0.63	0.80	278.5	26.19	0.47	0.65	0.83				

RATINGS

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

15 TON HIGH EFFICIENCY LCH180H4V (1 COMPRESSOR OPERATING) - VARIABLE AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	1600	58.6	2.51	0.58	0.73	0.87	55.8	2.87	0.59	0.74	0.89	52.7	3.25	0.59	0.75	0.9	49.5	3.67	0.59	0.77	0.93
	2000	62.3	2.53	0.62	0.78	0.93	59.2	2.89	0.62	0.79	0.95	55.9	3.27	0.63	0.81	0.97	52.4	3.68	0.64	0.83	0.99
	2400	65	2.55	0.64	0.83	0.98	61.7	2.9	0.65	0.85	0.99	58.3	3.28	0.67	0.87	1	54.7	3.7	0.68	0.89	1
67°F	1600	61.7	2.53	0.39	0.54	0.68	58.7	2.88	0.39	0.55	0.69	55.6	3.26	0.38	0.55	0.7	52.2	3.68	0.37	0.55	0.72
	2000	65.3	2.55	0.4	0.58	0.73	62.1	2.91	0.4	0.58	0.75	58.8	3.28	0.4	0.59	0.77	55.2	3.7	0.39	0.6	0.78
	2400	68.1	2.57	0.42	0.61	0.78	64.7	2.92	0.42	0.62	0.8	61.2	3.3	0.42	0.63	0.82	57.4	3.71	0.42	0.64	0.84
71°F	1600	64.9	2.55	0.2	0.36	0.5	61.8	2.9	0.19	0.35	0.5	58.6	3.28	0.18	0.35	0.51	55.2	3.7	0.16	0.34	0.51
	2000	68.5	2.57	0.2	0.37	0.53	65.3	2.92	0.18	0.37	0.54	61.9	3.3	0.17	0.37	0.54	58.2	3.71	0.16	0.36	0.56
	2400	71.3	2.59	0.19	0.39	0.57	67.9	2.94	0.19	0.39	0.58	64.3	3.32	0.17	0.39	0.59	60.5	3.73	0.16	0.39	0.61

15 TON HIGH EFFICIENCY LCH180H4V (2 COMPRESSORS OPERATING) - VARIABLE AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)							
				Dry Bulb					Dry Bulb					Dry Bulb							
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	3200	124.3	5.08	0.7	0.82	0.94	117.9	5.79	0.71	0.83	0.95	111.2	6.55	0.71	0.85	0.97	104.2	7.38	0.72	0.86	0.98
	4000	131.8	5.13	0.74	0.87	0.99	125	5.83	0.75	0.89	0.99	117.8	6.59	0.76	0.91	1	110.2	7.42	0.77	0.93	1
	4800	137.2	5.16	0.78	0.93	1	130.1	5.86	0.79	0.94	1	122.9	6.62	0.8	0.96	1	115.5	7.45	0.81	0.98	1
67°F	3200	131.5	5.13	0.56	0.68	0.79	124.9	5.83	0.56	0.68	0.8	118.2	6.59	0.56	0.69	0.81	111.1	7.42	0.56	0.7	0.83
	4000	139.8	5.18	0.58	0.72	0.84	132.7	5.88	0.59	0.73	0.86	125.3	6.63	0.59	0.74	0.88	117.7	7.47	0.59	0.75	0.9
	4800	145.6	5.22	0.61	0.76	0.9	138.3	5.92	0.61	0.77	0.91	130.6	6.67	0.62	0.78	0.93	122.5	7.5	0.62	0.8	0.96
71°F	3200	138	5.16	0.43	0.55	0.66	131.5	5.87	0.43	0.55	0.66	124.5	6.63	0.42	0.55	0.67	117.2	7.46	0.42	0.55	0.68
	4000	146.8	5.22	0.44	0.57	0.69	139.7	5.93	0.43	0.58	0.71	132.2	6.68	0.44	0.58	0.72	124.3	7.51	0.43	0.58	0.73
	4800	153.2	5.27	0.45	0.6	0.73	145.7	5.97	0.45	0.6	0.75	137.9	6.72	0.44	0.61	0.76	129.7	7.55	0.44	0.61	0.77

15 TON HIGH EFFICIENCY LCH180H4V (3 COMPRESSORS OPERATING) - VARIABLE AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F					95°F					105°F					115°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	4800	176.3	9.9	0.72	0.83	0.95	165.8	11.16	0.72	0.85	0.96	154.7	12.56	0.73	0.86	0.98	142.9	14.15	0.74	0.88	0.99
	6000	186.7	9.96	0.76	0.89	0.99	175.2	11.21	0.77	0.91	1	163.4	12.62	0.79	0.93	1	151.1	14.22	0.8	0.96	1
	7200	193.9	10.01	0.8	0.95	1	182.5	11.26	0.82	0.97	1	170.8	12.67	0.83	0.99	1	158.6	14.27	0.86	1	1
67°F	4800	185.5	9.96	0.55	0.69	0.8	174.1	11.2	0.55	0.7	0.82	162.3	12.61	0.57	0.71	0.83	150	14.21	0.57	0.73	0.85
	6000	195.1	10.01	0.59	0.74	0.86	183.2	11.26	0.6	0.74	0.88	171.2	12.67	0.59	0.76	0.9	158.6	14.26	0.61	0.78	0.93
	7200	202.7	10.06	0.62	0.78	0.92	190.7	11.32	0.62	0.79	0.94	178.1	12.72	0.64	0.81	0.96	164.7	14.3	0.64	0.83	0.99
71°F	4800	197	10.03	0.42	0.55	0.67	185.4	11.28	0.42	0.54	0.67	173.3	12.68	0.42	0.54	0.69	160.4	14.27	0.41	0.55	0.7
	6000	207.2	10.09	0.43	0.57	0.71	194.6	11.34	0.44	0.59	0.73	181.8	12.74	0.43	0.6	0.74	168.5	14.34	0.43	0.6	0.76
	7200	214.6	10.14	0.45	0.6	0.76	201.4	11.39	0.46	0.62	0.78	188.3	12.79	0.45	0.62	0.79	174.1	14.38	0.44	0.64	0.81

RATINGS

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

20 TON HIGH EFFICIENCY LCH240H4V (1 COMPRESSOR OPERATING) - VARIABLE AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	1600	58.5	2.59	0.59	0.74	0.87	56	2.96	0.6	0.75	0.89	53.3	3.36	0.6	0.76	0.91	50.4	3.79	0.61	0.78	0.93
	2000	62	2.59	0.62	0.79	0.93	59.3	2.97	0.63	0.8	0.95	56.5	3.36	0.64	0.82	0.96	53.4	3.79	0.65	0.84	0.98
	2400	64.6	2.6	0.66	0.83	0.97	61.9	2.98	0.66	0.85	0.99	58.9	3.37	0.68	0.87	1	55.7	3.81	0.69	0.89	1
67°F	1600	61.3	2.59	0.4	0.55	0.69	58.7	2.96	0.39	0.55	0.7	56	3.36	0.39	0.56	0.71	53.1	3.8	0.39	0.57	0.73
	2000	64.8	2.61	0.41	0.58	0.74	62.1	2.97	0.41	0.59	0.75	59.2	3.37	0.41	0.6	0.77	56.1	3.81	0.41	0.61	0.79
	2400	67.6	2.62	0.43	0.62	0.78	64.7	2.98	0.43	0.62	0.8	61.6	3.38	0.43	0.64	0.82	58.3	3.81	0.43	0.65	0.84
71°F	1600	64.3	2.6	0.21	0.36	0.51	61.6	2.97	0.2	0.36	0.51	58.8	3.36	0.19	0.36	0.52	55.9	3.8	0.18	0.36	0.52
	2000	67.9	2.61	0.2	0.37	0.54	65.1	2.98	0.19	0.38	0.55	62.1	3.38	0.18	0.38	0.56	58.9	3.81	0.18	0.38	0.57
	2400	70.7	2.63	0.2	0.39	0.57	67.7	2.99	0.19	0.4	0.58	64.5	3.39	0.19	0.4	0.6	61.2	3.82	0.18	0.4	0.62

20 TON HIGH EFFICIENCY LCH240H4V (2 COMPRESSORS OPERATING) - VARIABLE AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	3200	123.6	5.16	0.71	0.82	0.94	118	5.89	0.71	0.83	0.95	112.2	6.68	0.72	0.85	0.97	105.9	7.54	0.73	0.86	0.98
	4000	130.9	5.19	0.74	0.88	0.99	124.9	5.92	0.75	0.89	0.99	118.5	6.7	0.76	0.91	1	111.8	7.56	0.77	0.93	1
	4800	136.2	5.21	0.78	0.93	1	129.9	5.94	0.79	0.94	1	123.5	6.72	0.8	0.96	1	116.9	7.58	0.82	0.98	1
67°F	3200	130.5	5.19	0.57	0.68	0.79	124.8	5.92	0.57	0.69	0.8	118.9	6.71	0.57	0.7	0.81	112.4	7.56	0.57	0.71	0.83
	4000	138.5	5.22	0.58	0.72	0.84	132.3	5.95	0.59	0.73	0.86	125.9	6.73	0.6	0.74	0.87	119	7.59	0.6	0.75	0.9
	4800	144.3	5.25	0.61	0.75	0.9	137.9	5.98	0.61	0.77	0.91	130.9	6.75	0.62	0.78	0.93	123.8	7.61	0.63	0.8	0.95
71°F	3200	136.8	5.22	0.44	0.55	0.66	131	5.95	0.43	0.55	0.67	124.9	6.73	0.43	0.55	0.68	118.4	7.59	0.42	0.56	0.68
	4000	145.2	5.26	0.44	0.57	0.7	139	5.98	0.44	0.58	0.71	132.4	6.76	0.44	0.59	0.72	125.5	7.62	0.44	0.59	0.73
	4800	151.6	5.29	0.45	0.59	0.73	145	6.01	0.45	0.6	0.74	137.9	6.78	0.44	0.61	0.76	130.6	7.64	0.45	0.62	0.78

20 TON HIGH EFFICIENCY LCH240H4V (3 COMPRESSORS OPERATING) - VARIABLE AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F
63°F	4800	193.8	7.85	0.7	0.82	0.92	185.4	8.96	0.7	0.83	0.93	176.5	10.15	0.71	0.84	0.95	167.1	11.48	0.72	0.85	0.97
	6000	205	7.89	0.73	0.87	0.98	196	8.99	0.75	0.88	0.99	186.4	10.18	0.76	0.9	1	176.4	11.5	0.76	0.91	1
	7200	213.2	7.93	0.78	0.92	1	203.7	9.02	0.78	0.93	1	193.6	10.2	0.81	0.95	1	183.3	11.51	0.81	0.97	1
67°F	4800	204.8	7.89	0.55	0.67	0.78	195.9	9	0.55	0.68	0.8	186.3	10.18	0.55	0.69	0.81	176.2	11.5	0.56	0.7	0.82
	6000	215.3	7.94	0.57	0.72	0.84	205.7	9.02	0.59	0.72	0.85	195.7	10.21	0.59	0.73	0.87	184.7	11.51	0.6	0.75	0.88
	7200	223	7.97	0.61	0.76	0.89	212.8	9.05	0.6	0.77	0.9	202.3	10.23	0.61	0.78	0.92	191.3	11.53	0.62	0.79	0.94
71°F	4800	217.5	7.95	0.42	0.53	0.65	208.3	9.04	0.42	0.53	0.66	198.2	10.21	0.4	0.54	0.67	187.7	11.53	0.41	0.55	0.68
	6000	228.1	8	0.43	0.57	0.69	218.1	9.08	0.43	0.57	0.69	207.6	10.27	0.43	0.57	0.72	196.2	11.56	0.43	0.58	0.73
	7200	235.7	8.04	0.44	0.59	0.73	225.3	9.12	0.43	0.6	0.74	214.2	10.29	0.43	0.6	0.76	202.6	11.59	0.43	0.61	0.77

20 TON HIGH EFFICIENCY LCH240H4V (4 COMPRESSORS OPERATING) - VARIABLE AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F					95°F					105°F					115°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F
cfm	kBtu/h	kW	75°F	80°F	85°F	kBtu/h	kW	75°F	80°F	85°F	kBtu/h	kW	75°F	80°F	85°F	kBtu/h	kW	75°F	80°F	85°F	
63°F	6400	239.3	13.51	0.71	0.84	0.94	226.8	15.27	0.72	0.85	0.96	213.6	17.22	0.74	0.87	0.98	199.4	19.49	0.75	0.89	0.99
	8000	253.6	13.55	0.76	0.89	0.99	240	15.3	0.79	0.91	1	225.8	17.26	0.79	0.93	1	210.7	19.47	0.82	0.95	1
	9600	263.9	13.6	0.81	0.94	1	249.8	15.33	0.83	0.96	1	235.5	17.29	0.84	0.98	1	220.7	19.52	0.86	1	1
67°F	6400	252.7	13.55	0.56	0.69	0.81	238.7	15.3	0.55	0.7	0.82	223.8	17.25	0.56	0.71	0.84	208.4	19.48	0.57	0.74	0.86
	8000	264.1	13.59	0.59	0.74	0.87	249.5	15.33	0.59	0.76	0.88	234.4	17.28	0.6	0.78	0.9	218.8	19.51	0.6	0.8	0.92
	9600	273.4	13.64	0.62	0.8	0.92	258.5	15.36	0.63	0.82	0.94	243.2	17.32	0.63	0.84	0.96	227.4	19.56	0.65	0.84	0.98
71°F	6400	269.1	13.62	0.41	0.54	0.67	254.6	15.34	0.41	0.55	0.67	239.8	17.32	0.4	0.55	0.69	223.6	19.53	0.41	0.56	0.7
	8000	281.4	13.67	0.43	0.58	0.72	266.1	15.41	0.43	0.59	0.74	250.2	17.33	0.41	0.58	0.75	233.4	19.57	0.43	0.59	0.77
	9600	290.2	13.71	0.43	0.61	0.78	274.1	15.44	0.44	0.62	0.79	257.7	17.38	0.46	0.64	0.81	239.9	19.61	0.45	0.65	0.82

RATINGS

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

13 TON HIGH EFFICIENCY LCH156H4M (1ST STAGE) - SINGLE ZONE VAV SUPPLY AIR BLOWER

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																				
		65°F						75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb			
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F		
63°F	3000	98.5	4.61	0.63	0.73	0.84	92.2	5.23	0.62	0.73	0.84	85.8	5.90	0.61	0.74	0.86	78.9	6.67	0.61	0.74	0.87	
	3500	104.4	4.64	0.65	0.76	0.88	97.8	5.26	0.65	0.77	0.89	91.0	5.94	0.64	0.77	0.91	83.8	6.70	0.64	0.79	0.93	
	4000	109.2	4.67	0.67	0.79	0.92	102.4	5.29	0.67	0.80	0.93	95.2	5.96	0.67	0.81	0.95	87.7	6.73	0.67	0.83	0.98	
67°F	3000	105.7	4.65	0.51	0.60	0.70	99.3	5.27	0.50	0.60	0.70	92.6	5.94	0.48	0.59	0.70	85.6	6.71	0.47	0.59	0.71	
	3500	111.8	4.69	0.52	0.62	0.73	105.1	5.30	0.51	0.62	0.73	98.0	5.98	0.50	0.62	0.74	90.7	6.75	0.49	0.62	0.75	
	4000	116.9	4.72	0.53	0.65	0.76	109.9	5.33	0.53	0.65	0.77	102.5	6.01	0.52	0.65	0.78	94.8	6.78	0.51	0.65	0.79	
71°F	3000	112.9	4.69	0.40	0.49	0.58	106.3	5.31	0.39	0.48	0.58	99.4	5.99	0.37	0.47	0.57	92.2	6.75	0.35	0.46	0.57	
	3500	119.3	4.73	0.41	0.51	0.60	112.3	5.35	0.39	0.50	0.60	105.1	6.03	0.38	0.49	0.60	97.4	6.79	0.36	0.48	0.60	
	4000	124.5	4.77	0.41	0.52	0.62	117.3	5.38	0.40	0.51	0.62	109.7	6.06	0.39	0.51	0.63	101.7	6.83	0.37	0.50	0.63	

13 TON HIGH EFFICIENCY LCH156H4M (2ND STAGE) - SINGLE ZONE VAV SUPPLY AIR BLOWER

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F					95°F					105°F					115°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)							
				Dry Bulb					Dry Bulb					Dry Bulb							
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F					
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	4160	148.1	9.05	0.70	0.85	0.99	136.5	10.20	0.71	0.87	1.00	124.5	11.51	0.72	0.9	1.00	112.1	13.01	0.73	0.93	1.00
	5200	157.1	9.11	0.76	0.94	1.00	145.1	10.26	0.77	0.96	1.00	132.6	11.57	0.79	0.99	1.00	120.5	13.08	0.81	1.00	1.00
	6240	164.5	9.17	0.82	0.99	1.00	152.7	10.32	0.83	1.00	1.00	141.1	11.64	0.86	1.00	1.00	129.1	13.15	0.89	1.00	1.00
67°F	4160	159.3	9.13	0.54	0.68	0.82	147.4	10.28	0.54	0.69	0.84	135.3	11.59	0.53	0.70	0.86	122.4	13.09	0.53	0.71	0.89
	5200	169.0	9.20	0.58	0.74	0.90	156.5	10.35	0.58	0.75	0.92	143.4	11.66	0.58	0.77	0.95	129.8	13.16	0.58	0.79	0.98
	6240	175.9	9.25	0.61	0.80	0.97	162.7	10.40	0.62	0.81	0.99	149.1	11.71	0.62	0.83	1.00	135.2	13.20	0.63	0.86	1.00
71°F	4160	170.4	9.21	0.40	0.53	0.66	158.1	10.36	0.38	0.53	0.66	145.8	11.68	0.37	0.53	0.67	132.6	13.18	0.35	0.52	0.69
	5200	180.5	9.29	0.41	0.57	0.72	167.6	10.44	0.41	0.57	0.73	154.2	11.75	0.39	0.57	0.74	140.5	13.25	0.37	0.58	0.76
	6240	187.9	9.35	0.43	0.61	0.77	174.4	10.50	0.42	0.61	0.79	160.4	11.81	0.41	0.61	0.81	146.2	13.31	0.40	0.62	0.84

15 TON HIGH EFFICIENCY LCH180H4M (1ST STAGE) - SINGLE ZONE VAV SUPPLY AIR BLOWER

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	3500	114.2	5.02	0.65	0.75	0.84	107.7	5.76	0.65	0.75	0.85	100.8	6.58	0.64	0.75	0.86	93.7	7.47	0.64	0.76	0.87
	4000	120.2	5.03	0.67	0.77	0.88	113.3	5.78	0.67	0.78	0.89	106.0	6.59	0.67	0.78	0.9	98.6	7.50	0.66	0.79	0.91
	4500	125.2	5.03	0.69	0.8	0.91	117.9	5.79	0.69	0.8	0.92	110.5	6.61	0.69	0.81	0.93	102.7	7.52	0.69	0.82	0.95
67°F	3500	122.4	5.03	0.53	0.63	0.72	115.6	5.78	0.52	0.62	0.72	108.6	6.60	0.51	0.62	0.72	101.1	7.51	0.5	0.62	0.73
	4000	128.6	5.04	0.54	0.64	0.74	121.4	5.79	0.53	0.64	0.75	114.1	6.62	0.53	0.64	0.75	106.3	7.53	0.52	0.64	0.76
	4500	133.7	5.04	0.55	0.66	0.77	126.3	5.81	0.55	0.66	0.77	118.7	6.64	0.54	0.66	0.78	110.6	7.55	0.53	0.67	0.79
71°F	3500	130.5	5.04	0.42	0.51	0.60	123.5	5.80	0.41	0.51	0.60	116.2	6.63	0.39	0.5	0.6	108.6	7.54	0.37	0.49	0.59
	4000	136.9	5.04	0.43	0.53	0.62	129.5	5.81	0.41	0.52	0.62	121.9	6.65	0.40	0.51	0.62	113.8	7.56	0.38	0.5	0.62
	4500	142.3	5.05	0.43	0.54	0.64	134.6	5.82	0.42	0.53	0.64	126.7	6.66	0.41	0.53	0.64	118.3	7.58	0.39	0.52	0.64

15 TON HIGH EFFICIENCY LCH180H4M (2ND STAGE) - SINGLE ZONE VAV SUPPLY AIR BLOWER

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F					95°F					105°F					115°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	4800	172.5	9.96	0.71	0.85	0.99	160.1	11.32	0.71	0.87	1.00	146.8	12.83	0.72	0.90	1.00	132.7	14.51	0.74	0.93	1.00
	6000	182.6	9.99	0.77	0.93	1.00	169.5	11.37	0.78	0.95	1.00	155.7	12.89	0.79	0.98	1.00	141.3	14.57	0.81	1.00	1.00
	7200	190.3	10.02	0.82	0.99	1.00	177.3	11.41	0.83	1.00	1.00	164.3	12.94	0.86	1.00	1.00	150.5	14.64	0.89	1.00	1.00
67°F	4800	185.0	10.00	0.55	0.69	0.82	172.1	11.38	0.55	0.69	0.84	158.6	12.90	0.54	0.70	0.86	144.0	14.59	0.54	0.72	0.89
	6000	195.8	10.04	0.58	0.74	0.90	182.1	11.43	0.58	0.76	0.92	167.5	12.96	0.59	0.77	0.95	152.2	14.65	0.59	0.79	0.98
	7200	203.7	10.07	0.62	0.8	0.97	189.3	11.46	0.62	0.81	0.99	173.9	13.00	0.63	0.84	1.00	157.8	14.69	0.63	0.86	1.00
71°F	4800	197.2	10.04	0.41	0.54	0.67	183.9	11.43	0.39	0.54	0.67	169.9	12.97	0.38	0.53	0.68	155.0	14.67	0.36	0.53	0.69
	6000	208.4	10.09	0.42	0.58	0.72	194.2	11.48	0.41	0.58	0.73	179.4	13.03	0.4	0.58	0.75	163.3	14.73	0.38	0.59	0.77
	7200	216.6	10.12	0.43	0.61	0.78	201.8	11.52	0.42	0.62	0.79	186.2	13.07	0.42	0.62	0.81	169.7	14.78	0.41	0.63	0.84

RATINGS

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

17.5 TON HIGH EFFICIENCY LCH210H4M (1ST STAGE) - SINGLE ZONE VAV SUPPLY AIR BLOWER

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	4000	128.7	5.41	0.66	0.77	0.87	121.1	6.15	0.65	0.77	0.89	113.4	6.96	0.65	0.78	0.90	105.1	7.88	0.65	0.79	0.92
	4750	136.2	5.45	0.68	0.80	0.92	128.2	6.19	0.68	0.81	0.94	119.8	7.01	0.69	0.83	0.96	111.0	7.93	0.69	0.84	0.98
	5500	142.2	5.48	0.71	0.84	0.97	133.7	6.23	0.71	0.85	0.99	124.9	7.05	0.72	0.87	1.00	115.8	7.96	0.73	0.89	1.00
67°F	4000	138.9	5.46	0.53	0.63	0.73	130.9	6.21	0.52	0.63	0.74	122.6	7.03	0.51	0.63	0.74	114.1	7.95	0.51	0.63	0.75
	4750	146.6	5.51	0.55	0.66	0.77	138.2	6.26	0.54	0.66	0.78	129.5	7.08	0.54	0.66	0.79	120.2	8.00	0.53	0.67	0.81
	5500	152.8	5.55	0.56	0.69	0.81	143.8	6.30	0.56	0.69	0.82	134.7	7.12	0.55	0.70	0.84	125.2	8.04	0.56	0.71	0.85
71°F	4000	149.1	5.52	0.41	0.51	0.61	141.2	6.28	0.40	0.51	0.61	132.3	7.10	0.39	0.50	0.61	123.4	8.02	0.38	0.49	0.61
	4750	157.4	5.58	0.42	0.53	0.64	148.4	6.33	0.41	0.53	0.64	139.4	7.16	0.40	0.53	0.64	129.6	8.07	0.39	0.52	0.65
	5500	163.6	5.62	0.43	0.55	0.66	154.3	6.38	0.42	0.55	0.67	144.6	7.20	0.41	0.54	0.67	134.7	8.12	0.40	0.55	0.68

17.5 TON HIGH EFFICIENCY LCH210H4M (2ND STAGE) - SINGLE ZONE VAV SUPPLY AIR BLOWER

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F					95°F					105°F					115°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	5600	197.5	11.26	0.71	0.86	0.99	183.2	12.71	0.73	0.89	1.00	168.8	14.37	0.74	0.91	1.00	153.6	16.25	0.75	0.94	1.00
	7000	209.3	11.34	0.78	0.95	1.00	194.5	12.8	0.79	0.97	1.00	179.6	14.45	0.81	0.99	1.00	164.6	16.33	0.83	1.00	1.00
	8400	219.3	11.42	0.83	0.99	1.00	205.2	12.89	0.85	1.00	1.00	190.5	14.55	0.88	1.00	1.00	175.2	16.42	0.91	1.00	1.00
67°F	5600	212.6	11.36	0.55	0.69	0.83	198.1	12.83	0.55	0.70	0.85	182.6	14.48	0.55	0.71	0.87	166.4	16.34	0.55	0.73	0.90
	7000	224.4	11.46	0.59	0.76	0.91	208.9	12.92	0.60	0.77	0.94	192.3	14.56	0.60	0.79	0.96	175.2	16.41	0.60	0.81	0.98
	8400	232.7	11.52	0.62	0.81	0.98	216.2	12.98	0.63	0.83	0.99	199.3	14.62	0.64	0.85	1.00	181.7	16.47	0.64	0.88	1.00
71°F	5600	228.4	11.49	0.41	0.54	0.67	212.9	12.95	0.40	0.54	0.68	197.0	14.60	0.39	0.55	0.69	180.1	16.46	0.38	0.55	0.71
	7000	240.3	11.59	0.42	0.59	0.73	223.9	13.05	0.42	0.59	0.75	206.9	14.69	0.41	0.59	0.76	189.0	16.54	0.40	0.60	0.78
	8400	248.5	11.66	0.44	0.62	0.79	231.5	13.12	0.44	0.63	0.81	214.0	14.75	0.43	0.64	0.83	195.1	16.60	0.42	0.64	0.86

20 TON HIGH EFFICIENCY LCH240H4M (1ST STAGE) - SINGLE ZONE VAV SUPPLY AIR BLOWER

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	4500	116.8	5.07	0.64	0.74	0.84	111.1	5.77	0.64	0.75	0.85	105.1	6.55	0.64	0.75	0.87	98.7	7.43	0.64	0.76	0.88
	5500	124.7	5.12	0.66	0.78	0.90	118.5	5.83	0.67	0.79	0.91	111.8	6.60	0.67	0.80	0.93	104.9	7.48	0.68	0.82	0.95
	6500	130.6	5.16	0.69	0.82	0.95	124.0	5.87	0.70	0.84	0.96	117.1	6.64	0.70	0.85	0.98	109.7	7.52	0.71	0.87	0.99
67°F	4500	125.3	5.12	0.52	0.61	0.71	119.3	5.83	0.52	0.61	0.71	113.0	6.61	0.51	0.62	0.72	106.2	7.49	0.51	0.62	0.73
	5500	133.4	5.18	0.53	0.64	0.75	126.9	5.89	0.53	0.64	0.76	120.0	6.67	0.53	0.65	0.77	112.8	7.55	0.53	0.65	0.78
	6500	139.7	5.22	0.55	0.67	0.79	132.7	5.93	0.55	0.68	0.80	125.2	6.71	0.55	0.68	0.82	117.4	7.59	0.55	0.69	0.83
71°F	4500	133.9	5.18	0.41	0.50	0.59	127.5	5.89	0.40	0.50	0.59	120.9	6.68	0.39	0.50	0.59	113.7	7.55	0.39	0.49	0.59
	5500	142.3	5.24	0.42	0.52	0.62	135.3	5.95	0.41	0.52	0.62	128.2	6.74	0.40	0.52	0.62	120.8	7.62	0.40	0.52	0.63
	6500	148.8	5.29	0.42	0.54	0.64	141.3	6.01	0.42	0.54	0.65	133.7	6.79	0.41	0.54	0.66	125.4	7.66	0.41	0.54	0.67

20 TON HIGH EFFICIENCY LCH240H4M (2ND STAGE) - SINGLE ZONE VAV SUPPLY AIR BLOWER

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F					95°F					105°F					115°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)							
				Dry Bulb					Dry Bulb					Dry Bulb							
				cfm	kBtuh	kW			75°F	80°F	85°F	kBtuh		kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F
63°F	6400	236.6	13.31	0.73	0.88	1.00	221.6	15.06	0.74	0.91	1.00	205.8	17.06	0.76	0.94	1.00	189.2	19.35	0.78	0.97	1.00
	8000	249.2	13.43	0.79	0.97	1.00	233.7	15.17	0.80	0.98	1.00	217.5	17.17	0.83	0.99	1.00	201.1	19.47	0.86	1.00	1.00
	9600	260.1	13.53	0.85	1.00	1.00	244.7	15.28	0.87	1.00	1.00	228.9	17.29	0.90	1.00	1.00	212.1	19.59	0.94	1.00	1.00
67°F	6400	252.7	13.46	0.56	0.71	0.85	236.8	15.20	0.57	0.72	0.87	220.0	17.20	0.57	0.73	0.90	202.2	19.48	0.58	0.76	0.93
	8000	264.4	13.57	0.60	0.77	0.93	247.3	15.31	0.61	0.78	0.96	229.6	17.30	0.62	0.81	0.98	210.9	19.57	0.63	0.84	0.99
	9600	272.8	13.66	0.64	0.83	0.99	255.3	15.39	0.64	0.85	1.00	236.8	17.38	0.65	0.88	1.00	217.9	19.65	0.67	0.92	1.00
71°F	6400	269.2	13.62	0.41	0.55	0.68	252.6	15.37	0.41	0.56	0.70	235.2	17.36	0.41	0.56	0.71	216.6	19.64	0.40	0.57	0.73
	8000	281.5	13.75	0.43	0.59	0.74	263.7	15.49	0.43	0.60	0.76	245.0	17.48	0.43	0.61	0.78	225.2	19.74	0.42	0.62	0.81
	9600	289.9	13.83	0.45	0.63	0.81	271.3	15.57	0.45	0.64	0.83	252.0	17.55	0.45	0.65	0.86	231.3	19.81	0.44	0.67	0.89

RATINGS

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

25 TON STANDARD EFFICIENCY LCH300S4M (1ST STAGE) - SINGLE ZONE VAV SUPPLY AIR BLOWER

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)							
				Dry Bulb					Dry Bulb					Dry Bulb							
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F					
63°F	cfm	kBtu/h	kW	75°F	80°F	85°F	kBtu/h	kW	75°F	80°F	85°F	kBtu/h	kW	75°F	80°F	85°F	kBtu/h	kW	75°F	80°F	85°F
	5750	135.3	6.25	0.65	0.75	0.86	130.0	7.06	0.66	0.77	0.88	124.8	7.98	0.66	0.78	0.89	119.7	9.04	0.67	0.79	0.91
	6750	141.3	6.30	0.67	0.79	0.90	135.5	7.12	0.68	0.80	0.92	129.8	8.04	0.69	0.82	0.94	124.3	9.10	0.70	0.83	0.96
67°F	7750	146.0	6.35	0.69	0.82	0.94	139.8	7.17	0.70	0.84	0.96	133.9	8.09	0.72	0.86	0.98	128.1	9.14	0.73	0.87	0.99
	5750	143.5	6.32	0.53	0.62	0.72	138.1	7.15	0.53	0.63	0.73	132.4	8.07	0.54	0.64	0.74	126.9	9.13	0.54	0.65	0.76
	6750	149.9	6.39	0.54	0.64	0.75	143.6	7.21	0.54	0.65	0.77	137.7	8.14	0.55	0.67	0.78	131.9	9.19	0.56	0.67	0.80
71°F	7750	155.1	6.44	0.55	0.67	0.79	148.1	7.26	0.56	0.68	0.81	141.9	8.19	0.57	0.69	0.82	135.7	9.25	0.57	0.71	0.84
	5750	151.7	6.41	0.42	0.51	0.60	145.6	7.24	0.42	0.51	0.61	140.1	8.17	0.42	0.52	0.61	134.2	9.23	0.42	0.52	0.62
	6750	158.3	6.48	0.42	0.52	0.62	151.7	7.31	0.42	0.53	0.63	145.6	8.24	0.42	0.53	0.64	139.7	9.30	0.42	0.54	0.65
	7750	164.2	6.54	0.42	0.54	0.64	156.7	7.37	0.41	0.54	0.65	150.2	8.30	0.42	0.55	0.67	143.3	9.35	0.43	0.56	0.68

25 TON STANDARD EFFICIENCY LCH300S4M (2ND STAGE) - SINGLE ZONE VAV SUPPLY AIR BLOWER

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F					95°F					105°F					115°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)							
				Dry Bulb					Dry Bulb					Dry Bulb							
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F					
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	8000	277.2	17.80	0.72	0.87	1.00	264.6	19.95	0.74	0.89	1.00	251.7	22.43	0.75	0.92	1.00	238.5	25.35	0.78	0.95	1.00
	9500	287.2	17.97	0.76	0.93	1.00	273.8	20.12	0.78	0.96	1.00	260.1	22.59	0.80	0.98	1.00	246.0	25.49	0.83	1.00	1.00
	11000	295.0	18.11	0.80	0.98	1.00	280.6	20.25	0.83	1.00	1.00	267.4	22.73	0.85	1.00	1.00	254.5	25.68	0.88	1.00	1.00
67°F	8000	293.2	18.08	0.57	0.70	0.83	279.6	20.23	0.58	0.71	0.86	265.8	22.71	0.59	0.73	0.88	251.7	25.63	0.60	0.75	0.91
	9500	302.9	18.25	0.59	0.74	0.89	288.4	20.39	0.60	0.76	0.92	273.9	22.86	0.62	0.78	0.95	258.8	25.78	0.63	0.80	0.98
	11000	310.1	18.38	0.62	0.78	0.95	295.3	20.52	0.63	0.80	0.98	279.9	22.99	0.64	0.83	1.00	264.5	25.89	0.65	0.85	1.00
71°F	8000	310.0	18.38	0.43	0.56	0.68	295.5	20.53	0.43	0.57	0.69	280.6	23.00	0.43	0.58	0.71	265.8	25.92	0.44	0.59	0.73
	9500	319.0	18.54	0.44	0.58	0.72	304.0	20.68	0.44	0.59	0.74	288.9	23.17	0.45	0.61	0.75	273.0	26.07	0.45	0.62	0.78
	11000	326.9	18.68	0.44	0.61	0.76	311.2	20.82	0.45	0.62	0.78	294.9	23.29	0.46	0.63	0.80	278.5	26.19	0.47	0.65	0.83

DEHUMIDIFICATION SYSTEM RATINGS

13 TON HIGH EFFICIENCY LCH156H4B WITH DEHUMIDIFICATION OPERATING (1ST STAGE) - CONSTANT AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				cfm	kBtuh	kW			75°F	80°F	85°F			kBtuh	kW	75°F			80°F	85°F	kBtuh
63°F	4160	78.9	4.67	.56	.74	.93	66.3	5.28	.50	.73	.96	53.6	5.89	.45	.72	.99	40.9	6.50	.39	.71	1.00
	5200	86.8	4.71	.58	.80	1.00	72.5	5.30	.52	.79	1.00	58.1	5.89	.47	.78	1.00	43.7	6.48	.41	.77	1.00
	6240	94.7	4.74	.60	.86	1.00	78.7	5.32	.54	.85	1.00	62.6	5.89	.49	.83	1.00	46.6	6.47	.43	.82	1.00
67°F	4160	89.4	4.76	.40	.57	.74	77.1	5.37	.33	.53	.74	64.8	5.98	.26	.49	.73	52.5	6.59	.18	.46	.73
	5200	97.5	4.77	.41	.61	.80	83.6	5.38	.34	.57	.80	69.6	5.98	.26	.53	.80	55.7	6.58	.18	.49	.81
	6240	105.7	4.79	.43	.64	.86	90.1	5.38	.34	.60	.87	74.5	5.98	.26	.57	.88	58.9	6.57	.17	.53	.89
71°F	4160	99.9	4.85	.25	.40	.55	87.9	5.46	.16	.33	.51	76.0	6.07	.07	.27	.47	64.1	6.69	-.03	.20	.43
	5200	108.2	4.84	.25	.41	.58	94.7	5.45	.15	.35	.55	81.2	6.07	.05	.28	.52	67.7	6.68	-.06	.22	.49
	6240	116.6	4.84	.25	.43	.61	101.5	5.45	.14	.36	.59	86.4	6.06	.03	.30	.57	71.3	6.68	-.09	.23	.55

13 TON HIGH EFFICIENCY LCH156H4B WITH DEHUMIDIFICATION OPERATING (2ND STAGE) - CONSTANT AIR VOLUME

Entering Wet Bulb Temper- ature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																							
		65°F						75°F						85°F						95°F					
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)						
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb						
				cfm	kBtuh	kW			75°F	80°F	85°F			kBtuh	kW	75°F			80°F	85°F	kBtuh	kW	75°F	80°F	85°F
63°F	4160	131.1	7.12	.64	.82	1.00	116.4	8.10	.62	.83	1.00	101.6	9.08	.60	.84	1.00	86.8	10.05	.57	.85	1.00				
	5200	142.5	7.16	.67	.87	1.00	125.8	8.14	.66	.89	1.00	109.2	9.11	.65	.90	1.00	92.6	10.09	.64	.91	1.00				
	6240	153.8	7.20	.71	.93	1.00	135.3	8.17	.71	.94	1.00	116.8	9.15	.71	.96	1.00	98.3	10.12	.71	.98	1.00				
67°F	4160	148.3	7.23	.47	.63	.79	132.8	8.20	.44	.62	.81	117.3	9.18	.41	.61	.82	101.8	10.15	.37	.61	.84				
	5200	160.5	7.28	.49	.67	.85	143.0	8.25	.46	.67	.87	125.4	9.22	.44	.66	.88	107.8	10.19	.41	.65	.90				
	6240	172.8	7.33	.51	.71	.91	153.1	8.30	.49	.71	.92	133.5	9.26	.47	.70	.94	113.8	10.23	.44	.70	.96				
71°F	4160	165.4	7.34	.31	.45	.59	149.2	8.31	.26	.42	.58	133.0	9.28	.22	.39	.57	116.8	10.24	.17	.36	.56				
	5200	178.6	7.40	.31	.47	.63	160.1	8.37	.27	.44	.62	141.6	9.33	.22	.42	.62	123.0	10.29	.17	.39	.62				
	6240	191.8	7.46	.32	.49	.67	171.0	8.42	.27	.47	.67	150.1	9.38	.22	.45	.67	129.2	10.34	.17	.42	.68				

15 TON HIGH EFFICIENCY LCH180H4B WITH DEHUMIDIFICATION OPERATING (1ST STAGE) - CONSTANT AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				cfm	kBtuh	kW			75°F	80°F	85°F			kBtuh	kW	75°F			80°F	85°F	kBtuh
63°F	4800	91.6	5.36	.56	.74	.91	78.7	6.02	.51	.73	.94	65.8	6.67	.46	.71	.96	52.8	7.33	.41	.70	.98
	6000	97.3	5.40	.60	.80	1.00	82.5	6.03	.56	.81	1.00	67.7	6.65	.53	.82	1.00	52.9	7.28	.49	.83	1.00
	7200	103.0	5.44	.63	.87	1.00	86.4	6.04	.61	.90	1.00	69.7	6.64	.59	.94	1.00	53.0	7.23	.57	.97	1.00
67°F	4800	103.7	5.47	.41	.57	.72	90.4	6.13	.34	.53	.72	77.0	6.78	.28	.49	.71	63.6	7.44	.21	.46	.71
	6000	108.5	5.51	.43	.61	.79	94.0	6.14	.37	.59	.81	79.5	6.76	.31	.56	.82	65.0	7.39	.25	.54	.84
	7200	113.3	5.54	.44	.65	.86	97.6	6.14	.39	.64	.90	82.0	6.75	.33	.63	.93	66.3	7.35	.28	.63	.97
71°F	4800	115.9	5.58	.25	.39	.53	102.1	6.24	.17	.33	.50	88.2	6.90	.09	.28	.46	74.4	7.55	.01	.22	.43
	6000	119.7	5.61	.25	.41	.57	105.5	6.24	.17	.36	.55	91.2	6.87	.08	.30	.52	77.0	7.51	.00	.25	.50
	7200	123.5	5.64	.25	.43	.61	108.9	6.25	.17	.38	.60	94.2	6.85	.08	.33	.58	79.6	7.46	-.01	.28	.57

15 TON HIGH EFFICIENCY LCH180H4B WITH DEHUMIDIFICATION OPERATING (2ND STAGE) - CONSTANT AIR VOLUME

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				cfm	kBtuh	kW			75°F	80°F	85°F			kBtuh	kW	75°F			80°F	85°F	kBtuh
63°F	4800	154.5	8.08	.64	.80	.96	138.5	9.09	.63	.81	.99	122.4	10.11	.62	.82	1.00	106.3	11.13	.61	.83	1.00
	6000	163.3	8.13	.69	.87	1.00	144.9	9.13	.69	.89	1.00	126.4	10.12	.69	.90	1.00	108.0	11.12	.69	.92	1.00
	7200	172.0	8.18	.73	.94	1.00	151.3	9.16	.74	.96	1.00	130.5	10.14	.75	.98	1.00	109.7	11.12	.76	1.00	1.00
67°F	4800	171.4	8.23	.48	.62	.77	155.1	9.24	.45	.62	.79	138.8	10.25	.42	.61	.80	122.6	11.26	.39	.60	.81
	6000	180.3	8.27	.50	.65	.80	161.9	9.27	.48	.65	.83	143.5	10.27	.46	.66	.86	125.1	11.26	.44	.67	.90
	7200	189.2	8.31	.53	.67	.82	168.7	9.30	.51	.69	.87	148.2	10.28	.49	.71	.93	127.7	11.26	.48	.73	.98
71°F	4800	188.2	8.38	.31	.45	.59	171.7	9.39	.27	.42	.58	155.3	10.39	.23	.40	.57	138.9	11.40	.18	.37	.56
	6000	197.3	8.41	.31	.43	.54	179.0	9.41	.27	.42	.57	160.6	10.41	.23	.42	.61	142.3	11.40	.19	.41	.64
	7200	206.4	8.45	.32	.40	.49	186.2	9.43	.27	.42	.57	165.9	10.42	.23	.44	.65	145.7	11.41	.19	.46	.72

DEHUMIDIFICATION SYSTEM RATINGS

17.5 TON HIGH EFFICIENCY LCH210H4 WITH DEHUMIDIFICATION OPERATING (1ST STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)							
				Dry Bulb					Dry Bulb					Dry Bulb							
				75°F	80°F	85°F			75°F	80°F	85°F	75°F					80°F	85°F			
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	5600	105.3	5.76	.58	.77	.96	91.1	6.45	.53	.75	.98	76.8	7.14	.48	.74	1.00	62.6	7.84	.43	.72	1.00
	7000	109.7	5.79	.63	.85	1.00	92.9	6.47	.60	.85	1.00	76.1	7.14	.57	.86	1.00	59.3	7.82	.54	.86	1.00
	8400	114.0	5.82	.68	.93	1.00	94.7	6.48	.67	.95	1.00	75.3	7.14	.65	.98	1.00	56.0	7.81	.64	1.00	1.00
67°F	5600	120.6	5.91	.42	.59	.77	105.7	6.59	.35	.55	.76	90.7	7.27	.29	.52	.74	75.8	7.95	.23	.48	.73
	7000	126.6	5.95	.45	.64	.83	108.8	6.62	.39	.62	.84	91.0	7.28	.33	.59	.86	73.1	7.95	.27	.57	.87
	8400	132.7	5.99	.47	.69	.90	111.9	6.64	.42	.68	.93	91.2	7.29	.37	.67	.97	70.5	7.94	.32	.66	1.00
71°F	5600	135.8	6.07	.26	.42	.58	120.2	6.74	.18	.36	.53	104.7	7.40	.10	.30	.49	89.1	8.06	.02	.23	.45
	7000	143.6	6.11	.26	.43	.60	124.7	6.77	.18	.38	.58	105.9	7.42	.10	.33	.56	87.0	8.07	.01	.28	.55
	8400	151.3	6.16	.27	.44	.62	129.2	6.80	.18	.40	.63	107.1	7.44	.09	.36	.64	84.9	8.08	.00	.32	.65

17.5 TON HIGH EFFICIENCY LCH210H4 WITH DEHUMIDIFICATION OPERATING (2ND STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)							
				Dry Bulb					Dry Bulb					Dry Bulb							
				cfm	kBtuh	kW			75°F	80°F	85°F	kBtuh		kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F
63°F	5600	179.3	9.23	.65	.81	.98	162.1	10.35	.63	.82	1.00	144.9	11.47	.62	.83	1.00	127.6	12.60	.60	.83	1.00
	7000	189.8	9.32	.69	.87	1.00	170.6	10.43	.68	.88	1.00	151.4	11.54	.67	.89	1.00	132.2	12.64	.66	.90	1.00
	8400	200.2	9.42	.74	.94	1.00	179.0	10.51	.73	.95	1.00	157.9	11.60	.73	.96	1.00	136.7	12.69	.72	.98	1.00
67°F	5600	199.6	9.47	.48	.63	.79	181.4	10.58	.45	.62	.80	163.2	11.68	.43	.62	.81	144.9	12.78	.40	.61	.81
	7000	210.4	9.58	.51	.68	.85	190.2	10.67	.48	.67	.87	170.0	11.75	.46	.67	.88	149.8	12.84	.44	.66	.89
	8400	221.3	9.68	.54	.73	.92	199.1	10.76	.51	.72	.94	176.9	11.83	.49	.72	.95	154.6	12.91	.47	.72	.97
71°F	5600	219.9	9.72	.31	.45	.60	200.7	10.80	.28	.43	.59	181.5	11.88	.24	.41	.58	162.2	12.96	.20	.39	.57
	7000	231.1	9.83	.32	.48	.65	209.9	10.90	.28	.46	.64	188.6	11.97	.25	.44	.64	167.4	13.04	.21	.42	.64
	8400	242.4	9.93	.33	.52	.70	219.1	11.00	.29	.50	.70	195.8	12.06	.25	.48	.71	172.6	13.13	.21	.46	.71

20 TON HIGH EFFICIENCY LCH240H4 WITH DEHUMIDIFICATION OPERATING (1ST STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)							
				Dry Bulb					Dry Bulb					Dry Bulb							
				75°F	80°F	85°F			75°F	80°F	85°F	75°F					80°F	85°F			
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	6400	91.1	5.34	.52	.70	.88	75.6	5.99	.43	.68	.93	60.0	6.63	.34	.66	.97	44.4	7.28	.25	.64	1.00
	8000	98.6	5.37	.54	.76	.97	80.6	5.99	.47	.76	1.00	62.7	6.61	.39	.77	1.00	44.7	7.23	.31	.78	1.00
	9600	106.1	5.40	.57	.82	1.00	85.7	5.99	.50	.85	1.00	65.3	6.59	.43	.88	1.00	45.0	7.19	.36	.92	1.00
67°F	6400	106.4	5.48	.37	.52	.68	89.5	6.12	.27	.48	.69	72.6	6.76	.17	.43	.69	55.7	7.40	.07	.38	.69
	8000	112.6	5.50	.38	.57	.75	94.4	6.12	.28	.53	.78	76.2	6.74	.18	.49	.80	58.0	7.36	.09	.46	.83
	9600	118.9	5.52	.39	.61	.82	99.3	6.12	.30	.58	.87	79.7	6.72	.20	.56	.92	60.2	7.32	.11	.54	.96
71°F	6400	121.7	5.62	.22	.35	.49	103.5	6.25	.10	.28	.45	85.3	6.88	-.01	.20	.40	67.1	7.52	-.12	.12	.36
	8000	126.7	5.63	.22	.38	.54	108.2	6.25	.10	.30	.49	89.7	6.87	-.02	.22	.45	71.2	7.49	-.13	.14	.41
	9600	131.6	5.64	.21	.40	.58	112.9	6.25	.09	.32	.54	94.1	6.85	-.02	.24	.49	75.4	7.46	-.14	.15	.45

20 TON HIGH EFFICIENCY LCH240H4 WITH DEHUMIDIFICATION OPERATING (2ND STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)							
				Dry Bulb					Dry Bulb					Dry Bulb							
				cfm	kBtuh	kW			75°F	80°F	85°F	kBtuh		kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F
63°F	6400	215.7	10.70	.64	.79	.93	193.6	12.10	.63	.81	.99	171.4	13.50	.62	.84	1.00	149.3	14.90	.61	.86	1.00
	8000	226.5	10.73	.69	.86	1.00	201.6	12.10	.69	.88	1.00	176.6	13.48	.70	.91	1.00	151.7	14.86	.70	.93	1.00
	9600	237.4	10.76	.73	.94	1.00	209.6	12.11	.75	.96	1.00	181.8	13.46	.77	.98	1.00	154.0	14.81	.80	1.00	1.00
67°F	6400	240.5	10.89	.48	.62	.76	217.4	12.29	.46	.62	.79	194.3	13.69	.44	.63	.82	171.2	15.10	.42	.63	.85
	8000	249.1	10.91	.51	.67	.84	224.6	12.30	.49	.68	.86	200.1	13.69	.48	.68	.88	175.7	15.08	.46	.68	.91
	9600	257.6	10.94	.53	.73	.92	231.8	12.31	.53	.73	.93	206.0	13.68	.52	.73	.95	180.1	15.05	.51	.74	.96
71°F	6400	265.4	11.07	.32	.45	.58	241.3	12.48	.29	.44	.59	217.2	13.88	.25	.42	.59	193.1	15.29	.22	.40	.59
	8000	271.6	11.10	.33	.49	.64	247.6	12.50	.29	.47	.65	223.6	13.89	.26	.45	.65	199.6	15.29	.22	.44	.66
	9600	277.8	11.12	.34	.52	.70	254.0	12.51	.30	.50	.70	230.1	13.90	.26	.49	.71	206.2	15.29	.22	.47	.72

DEHUMIDIFICATION SYSTEM RATINGS

25 TON STANDARD EFFICIENCY LCH300S4 WITH DEHUMIDIFICATION OPERATING (1ST STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																							
		65°F						75°F						85°F						95°F					
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)						
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb						
				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
63°F	8000	100.4	7.25	.55	.74	.93	83.6	7.96	.47	.71	.96	66.7	8.67	.38	.69	.99	49.8	9.38	.29	.66	1.00				
	9500	106.3	7.33	.58	.77	.97	89.3	8.02	.50	.76	.99	72.3	8.71	.42	.74	1.00	55.2	9.40	.34	.72	1.00				
	11,000	112.2	7.40	.61	.81	.99	95.0	8.08	.53	.80	1.00	77.8	8.75	.46	.80	1.00	60.6	9.43	.38	.79	1.00				
67°F	8000	116.1	7.40	.37	.54	.71	98.8	8.14	.27	.48	.70	81.5	8.87	.17	.43	.69	64.2	9.61	.07	.37	.68				
	9500	106.3	7.33	.58	.77	.97	89.3	8.02	.50	.76	.99	72.3	8.71	.42	.74	1.00	55.2	9.40	.34	.72	1.00				
	11,000	129.2	7.52	.40	.58	.77	109.6	8.24	.30	.54	.78	90.1	8.95	.20	.50	.80	70.5	9.66	.09	.46	.82				
71°F	8000	131.7	7.55	.19	.34	.49	114.0	8.31	.07	.25	.44	96.3	9.07	-.04	.17	.38	78.6	9.83	-.16	.09	.33				
	9500	139.0	7.60	.19	.35	.51	119.1	8.36	.07	.27	.46	99.3	9.11	-.06	.19	.43	79.5	9.86	-.18	.11	.38				
	11,000	146.2	7.65	.19	.36	.52	124.2	8.40	.07	.28	.49	102.3	9.14	-.07	.20	.47	80.4	9.89	-.20	.12	.44				

25 TON STANDARD EFFICIENCY LCH300S4 WITH DEHUMIDIFICATION OPERATING (2ND STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																							
		65°F						75°F						85°F						95°F					
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)				Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)				Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)				Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			
				Dry Bulb						Dry Bulb						Dry Bulb						Dry Bulb			
				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
63°F	8000	260.3	14.9	.66	.80	.95	234.7	16.7	.65	.81	.97	209.1	18.5	.65	.82	.98	183.5	20.3	.65	.82	1.00				
	9500	276.4	15.0	.69	.83	.96	248.2	16.8	.70	.84	.97	220.1	18.6	.70	.85	.99	191.9	20.4	.71	.85	1.00				
	11,000	279.6	15.1	.73	.87	1.00	253.1	16.9	.75	.87	1.00	226.7	18.7	.76	.88	1.00	200.3	20.5	.78	.89	1.00				
67°F	8000	283.9	15.2	.50	.64	.78	257.7	17.0	.48	.63	.79	231.5	18.8	.46	.63	.80	205.3	20.7	.44	.62	.81				
	9500	294.1	15.3	.52	.67	.81	266.7	17.1	.51	.66	.82	239.3	18.9	.49	.66	.82	211.9	20.8	.48	.66	.83				
	11,000	302.0	15.4	.54	.69	.84	274.2	17.2	.53	.69	.85	246.3	19.1	.53	.69	.86	218.4	20.9	.52	.69	.87				
71°F	8000	307.5	15.5	.34	.47	.61	280.7	17.3	.31	.46	.61	253.9	19.2	.27	.44	.61	227.2	21.1	.24	.43	.61				
	9500	311.7	15.5	.35	.51	.66	285.1	17.4	.32	.49	.66	258.5	19.3	.28	.47	.66	231.9	21.2	.25	.46	.66				
	11,000	324.5	15.6	.35	.51	.67	295.2	17.5	.32	.51	.69	265.9	19.4	.29	.50	.71	236.6	21.3	.26	.50	.73				

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 (electric heat, economizer, etc.)
- 3 - Any field installed accessories air resistance (electric heat, duct resistance, diffuser, etc.)

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

See page 42 for wet coil and option/accessory air resistance data.

See page 42 for factory installed drive kit specifications.

MINIMUM AIR VOLUME REQUIRED FOR USE WITH OPTIONAL ELECTRIC HEAT

LCH156H units require 5200 cfm minimum air with electric heat.

All other units require 6000 cfm minimum air with electric heat.

Air Volume cfm	TOTAL STATIC PRESSURE - Inches Water Gauge (Pa)																									
	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
2750	385	0.30	505	0.50	600	0.70	680	0.90	755	1.10	820	1.30	885	1.50	950	1.70	1015	1.90	1080	2.10	1145	2.30	1210	2.50	1275	2.70
3000	395	0.35	515	0.55	610	0.75	685	1.00	760	1.20	825	1.45	885	1.70	950	1.90	1015	2.10	1080	2.30	1145	2.50	1210	2.70	1275	2.90
3250	405	0.40	520	0.60	615	0.85	695	1.10	765	1.30	830	1.60	890	1.85	950	2.10	1015	2.30	1080	2.50	1145	2.70	1210	2.90	1275	3.10
3500	415	0.45	530	0.70	620	0.95	700	1.20	775	1.45	840	1.70	900	2.00	955	2.25	1015	2.45	1080	2.65	1145	2.85	1210	3.05	1275	3.25
3750	425	0.50	540	0.75	630	1.05	710	1.30	780	1.60	845	1.85	905	2.15	960	2.40	1015	2.65	1080	2.85	1145	3.05	1210	3.25	1275	3.45
4000	435	0.55	545	0.85	635	1.10	715	1.40	785	1.70	850	2.00	910	2.30	965	2.55	1015	2.80	1080	3.00	1145	3.20	1210	3.40	1275	3.60
4250	445	0.60	555	0.90	645	1.25	725	1.55	795	1.85	855	2.15	915	2.45	970	2.70	1020	2.95	1085	3.15	1145	3.40	1210	3.60	1275	3.80
4500	455	0.70	565	1.00	655	1.35	730	1.65	800	2.00	865	2.35	925	2.65	980	2.90	1030	3.15	1090	3.40	1145	3.65	1210	3.85	1275	4.05
4750	470	0.75	575	1.10	660	1.45	740	1.80	810	2.15	870	2.50	930	2.85	985	3.10	1040	3.40	1095	3.65	1145	3.90	1210	4.10	1275	4.30
5000	480	0.85	585	1.25	670	1.60	750	1.95	815	2.30	880	2.70	940	3.05	995	3.30	1045	3.60	1100	3.85	1145	4.10	1210	4.35	1275	4.55
5250	495	0.95	595	1.35	680	1.70	755	2.10	825	2.50	890	2.90	945	3.25	1000	3.50	1050	3.75	1100	4.00	1145	4.25	1210	4.45	1275	4.65
5500	505	1.05	605	1.45	690	1.85	765	2.25	835	2.65	895	3.05	950	3.40	1005	3.65	1055	3.90	1105	4.15	1145	4.40	1210	4.60	1275	4.80
5750	520	1.15	615	1.60	700	2.00	775	2.45	840	2.85	905	3.25	960	3.65	1015	3.90	1065	4.15	1115	4.40	1145	4.65	1210	4.85	1275	5.00
6000	530	1.30	630	1.75	710	2.15	785	2.60	850	3.05	910	3.45	970	3.90	1025	4.20	1075	4.45	1115	4.65	1145	4.85	1210	5.05	1275	5.20
6250	545	1.40	640	1.90	720	2.35	795	2.80	860	3.25	920	3.70	975	4.15	1030	4.40	1080	4.65	1115	4.85	1145	5.05	1210	5.25	1275	5.40
6500	560	1.55	650	2.05	730	2.50	805	3.00	870	3.45	930	3.95	985	4.40	1040	4.70	1090	4.95	1115	5.15	1145	5.35	1210	5.55	1275	5.70
6750	570	1.70	665	2.20	745	2.70	815	3.20	880	3.70	940	4.20	995	4.65	1045	4.95	1095	5.15	1115	5.35	1145	5.55	1210	5.75	1275	5.90
7000	585	1.85	675	2.35	755	2.90	825	3.40	890	3.95	950	4.45	1005	4.85	1055	5.15	1105	5.35	1115	5.55	1145	5.75	1210	5.95	1275	6.10
7250	600	2.00	690	2.60	765	3.10	835	3.65	900	4.15	955	4.65	1015	5.25	1065	5.55	1115	5.75	1115	5.95	1145	6.15	1210	6.35	1275	6.50
7500	615	2.20	700	2.75	775	3.30	845	3.85	910	4.45	965	4.95	1020	5.50	1075	5.80	1125	6.00	1125	6.20	1145	6.40	1210	6.60	1275	6.75
7750	630	2.40	715	3.00	790	3.55	855	4.10	920	4.70	975	5.25	1030	5.80	1080	6.05	1130	6.30	1130	6.50	1145	6.70	1210	6.90	1275	7.00
8000	640	2.55	725	3.20	800	3.80	865	4.35	930	4.95	985	5.50	1040	6.10	1090	6.35	1140	6.60	1140	6.80	1145	7.00	1210	7.20	1275	7.30
8250	655	2.80	740	3.40	810	4.00	880	4.65	940	5.25	995	5.85	1050	6.45	1100	6.65	1150	6.90	1140	7.10	1145	7.30	1210	7.50	1275	7.60
8500	670	3.00	750	3.65	825	4.30	890	4.90	950	5.55	1005	6.15	1060	6.80	1110	7.00	1160	7.25	1140	7.45	1145	7.65	1210	7.85	1275	7.90
8750	685	3.25	765	3.90	835	4.55	900	5.20	960	5.85	1015	6.45	1070	7.15	1120	7.35	1165	7.55	1140	7.75	1145	7.95	1210	8.05	1275	8.15
9000	700	3.50	780	4.20	850	4.85	910	5.50	970	6.15	1025	6.80	1080	7.50	1130	7.70	1175	7.95	1140	8.15	1145	8.35	1210	8.45	1275	8.55
9250	715	3.75	790	4.45	860	5.15	925	5.85	985	6.55	1040	7.20	1090	7.85	1140	8.05	1185	8.25	1140	8.45	1145	8.65	1210	8.75	1275	8.85
9500	730	4.00	805	4.75	875	5.45	935	6.15	995	6.90	1050	7.60	1100	8.25	1150	8.45	1195	8.65	1140	8.85	1145	9.05	1210	9.15	1275	9.25
9750	745	4.30	820	5.05	885	5.75	950	6.45	1005	7.20	1060	7.95	1110	8.65	1160	8.85	1205	9.05	1140	9.25	1145	9.45	1210	9.55	1275	9.65
10,000	760	4.60	835	5.40	900	6.15	960	6.85	1015	7.60	1070	8.35	1120	9.05	1170	9.25	1215	9.45	1140	9.65	1145	9.85	1210	9.95	1275	10.05
10,250	775	4.90	845	5.65	910	6.45	970	7.20	1030	8.00	1080	8.75	1135	9.55	1180	9.75	1225	9.95	1140	10.05	1145	10.25	1210	10.35	1275	10.45
10,500	790	5.20	860	6.00	925	6.85	985	7.65	1040	8.40	1095	9.20	1145	10.00	1190	10.20	1235	10.40	1140	10.60	1145	10.80	1210	10.90	1275	10.95
10,750	805	5.55	875	6.40	940	7.25	1000	8.05	1055	8.85	1105	9.65	1155	10.45	1200	11.20	1245	10.60	1140	10.80	1145	11.00	1210	11.10	1275	11.15
11,000	820	5.90	890	6.80	950	7.60	1010	8.45	1065	9.30	1115	10.05	1165	10.90	1210	11.70	1255	10.80	1140	11.00	1145	11.20	1210	11.30	1275	11.35

BLOWER DATA

FACTORY INSTALLED BELT DRIVE KIT SPECIFICATIONS

Motor Efficiency	Nominal hp	Maximum hp	Drive Kit Number	RPM Range
Standard or High	2	2.30	1	535 - 725
Standard or High	2	2.30	2	710 - 965
Standard	3	3.45	1	535 - 725
Standard	3	3.45	2	710 - 965
High	3	3.45	3	685 - 856
High	3	3.45	4	850 - 1045
Standard	5	5.75	3	685 - 856
Standard	5	5.75	4	850 - 1045
Standard	5	5.75	5	945 - 1185
Standard	7.5	8.63	6	850 - 1045
Standard	7.5	8.63	7	945 - 1185
Standard	7.5	8.63	8	1045 - 1285
Standard	10	11.50	7	945 - 1185
Standard	10	11.50	10	1045 - 1285
Standard	10	11.50	11	1135 - 1365

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.

NOTE – Units equipped with Single Zone Vav option are limited to a motor service factor of 1.0.

FACTORY INSTALLED OPTIONS/FIELD INSTALLED ACCESSORY AIR RESISTANCE

Air Volume cfm	Wet Indoor Coil		Condenser Reheat Coil	Electric Heat	Economizer	Filters		Horizontal Roof Curb	
	156H, 180H	210H, 240H 300S						156H thru 240H	300S
	in. w.g.	in. w.g.	in. w.g.	in. w.g.	in. w.g.	MERV 8	MERV 13	in. w.g.	in. w.g.
2750	.01	.02	.01	---	---	.01	.03	.03	-
3000	.01	.02	.01	---	---	.01	.03	.04	-
3250	.01	.03	.01	---	---	.01	.04	.04	.01
3500	.01	.03	.02	---	---	.01	.04	.05	.01
3750	.01	.03	.02	---	---	.01	.04	.05	.01
4000	.02	.04	.02	---	---	.01	.04	.06	.02
4250	.02	.04	.02	---	---	.01	.05	.07	.02
4500	.02	.05	.02	---	---	.01	.05	.07	.02
4750	.02	.05	.02	---	---	.02	.05	.08	.03
5000	.02	.05	.02	---	---	.02	.06	.08	.03
5250	.02	.06	.03	---	---	.02	.06	.09	.04
5500	.02	.07	.03	---	---	.02	.06	.10	.04
5750	.03	.07	.03	---	---	.02	.07	.11	.05
6000	.03	.08	.03	.01	---	.03	.07	.11	.06
6250	.03	.08	.03	.01	.01	.03	.07	.12	.07
6500	.03	.09	.04	.01	.02	.03	.08	.13	.08
6750	.04	.10	.04	.01	.03	.03	.08	.14	.08
7000	.04	.10	.04	.01	.04	.04	.08	.15	.09
7250	.04	.11	.04	.01	.05	.04	.09	.16	.10
7500	.05	.12	.05	.01	.06	.04	.09	.17	.11
8000	.05	.13	.05	.02	.09	.05	.10	.19	.13
8500	.06	.15	.05	.02	.11	.05	.10	.21	.15
9000	.07	.16	.06	.04	.14	.06	.11	.24	.17
9500	.08	.18	.07	.05	.16	.07	.12	.26	.19
10,000	.08	.20	.07	.06	.19	.07	.12	.29	.21
10,500	.09	.22	.08	.09	.22	.08	.13	.31	.24
11,000	.11	.24	.08	.11	.25	.09	.14	.34	.27

BLOWER DATA

POWER EXHAUST FAN PERFORMANCE

Return Air System Static Pressure	Air Volume Exhausted
in. w.g.	cfm
0.00	8630
0.05	8210
0.10	7725
0.15	7110
0.20	6470
0.25	5790
0.30	5060
0.35	4300
0.40	3510
0.45	2690
0.50	1840

CEILING DIFFUSER AIR RESISTANCE - in. w.g.

Air Volume cfm	Step-Down Diffuser						Flush Diffuser	
	RTD11-185S			RTD11-275			FD11-185S	FD11-275
	2 Ends Open	1 Side/2 Ends Open	All Ends & Sides Open	2 Ends Open	1 Side/2 Ends Open	All Ends & Sides Open		
5000	.51	.44	.39	---	---	---	.27	---
5200	.56	.48	.42	---	---	---	.30	---
5400	.61	.52	.45	---	---	---	.33	---
5600	.66	.56	.48	---	---	---	.36	---
5800	.71	.59	.51	---	---	---	.39	---
6000	.76	.63	.55	.36	.31	.27	.42	.29
6200	.80	.68	.59	---	---	---	.46	---
6400	.86	.72	.63	---	---	---	.50	---
6500	---	---	---	.42	.36	.31	---	.34
6600	.92	.77	.67	---	---	---	.54	---
6800	.99	.83	.72	---	---	---	.58	---
7000	1.03	.87	.76	.49	.41	.36	.62	.40
7200	1.09	.92	.80	---	---	---	.66	---
7400	1.15	.97	.84	---	---	---	.70	---
7500	---	---	---	.51	.46	.41	---	.45
7600	1.20	1.02	.88	---	---	---	.74	---
8000	---	---	---	.59	.49	.43	---	.50
8500	---	---	---	.69	.58	.50	---	.57
9000	---	---	---	.79	.67	.58	---	.66
9500	---	---	---	.89	.75	.65	---	.74
10,000	---	---	---	1.00	.84	.73	---	.81
10,500	---	---	---	1.10	.92	.80	---	.89
11,000	---	---	---	1.21	1.01	.88	---	.96

CEILING DIFFUSER AIR THROW DATA - ft.

Model No.	Air Volume cfm	¹ Effective Throw Range - ft.		Model No.	Air Volume cfm	¹ Effective Throw Range - ft.	
		RTD11-185S Step-Down	FD11-185S Flush			RTD11-275S Step-Down	FD11-275S Flush
156 180	5600	39 - 49	28 - 37	210 240 300	7200	33 - 38	26 - 35
	5800	42 - 51	29 - 38		7400	35 - 40	28 - 37
	6000	44 - 54	40 - 50		7600	36 - 41	29 - 38
	6200	45 - 55	42 - 51		7800	38 - 43	40 - 50
	6400	46 - 55	43 - 52		8000	39 - 44	42 - 51
	6600	47 - 56	45 - 56		8200	41 - 46	43 - 52
					8400	43 - 49	44 - 54
					8600	44 - 50	46 - 57
					8800	47 - 55	48 - 59

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

ELECTRICAL/ELECTRIC HEAT DATA **13 TON****13 TON HIGH EFFICIENCY****LCH156H4**

¹ Voltage - 60hz		208/230V - 3 Ph			460V - 3 Ph			575V - 3 Ph		
Compressor 1	Rated Load Amps	11.9			6.7			5.4		
	Locked Rotor Amps	109			59			40		
Compressor 2	Rated Load Amps	11.9			6.7			5.4		
	Locked Rotor Amps	109			59			40		
Compressor 3	Rated Load Amps	11.9			6.7			5.4		
	Locked Rotor Amps	109			59			40		
Outdoor Fan	Full Load Amps	2.4			1.3			1		
Motors (3)	(total)	(7.2)			(3.9)			(3)		
Power Exhaust	Full Load Amps	2.4			1.3			1		
(2) 0.33 HP	(total)	(4.8)			(2.6)			(2)		
Service Outlet 115V GFI (amps)		15			15			20		
Indoor Blower Motor	Horsepower	2	3	5	2	3	5	2	3	5
	Full Load Amps	7.5	10.6	16.7	3.4	4.8	7.6	2.7	3.9	6.1
² Maximum Overcurrent Protection	Unit Only	60	60	80	35	35	40	25	25	30
	With (2) 0.33 HP Power Exhaust	70	70	80	35	35	40	30	30	30
³ Minimum Circuit Ampacity	Unit Only	54	57	64	30	31	34	24	25	27
	With (2) 0.33 HP Power Exhaust	59	62	69	32	34	37	26	27	29

ELECTRIC HEAT DATA

Electric Heat Voltage		208V	240V	208V	240V	208V	240V	480V	480V	480V	600V	600V	600V
² Maximum Overcurrent Protection	Unit+ 15 kW	60	60	60	60	80	80	35	35	40	25	25	30
	Electric Heat 30 kW	⁴ 90	100	⁴ 100	110	⁴ 100	125	50	60	60	40	45	45
	45 kW	150	150	150	150	⁴ 150	175	80	80	80	60	60	70
	60 kW	⁴ 150	175	⁴ 150	175	⁴ 150	175	80	80	90	70	70	70
³ Minimum Circuit Ampacity	Unit+ 15 kW	54	55	57	59	64	66	30	31	34	24	25	27
	Electric Heat 30 kW	88	100	92	104	100	112	50	52	55	40	41	44
	45 kW	127	145	131	149	139	157	72	74	78	58	60	62
	60 kW	135	154	139	158	146	166	77	79	82	62	63	66
² Maximum Overcurrent Protection	Unit+ 15 kW	70	70	70	70	80	80	35	35	40	30	30	30
	Electric Heat and (2) 0.33 HP Power Exhaust 30 kW	⁴ 100	110	⁴ 100	110	⁴ 110	125	60	60	60	45	45	50
	45 kW	⁴ 150	175	⁴ 150	175	⁴ 150	175	80	80	90	70	70	70
	60 kW	⁴ 150	175	⁴ 150	175	175	175	80	90	90	70	70	70
³ Minimum Circuit Ampacity	Unit+ 15 kW	59	61	62	65	69	72	32	34	37	26	27	29
	Electric Heat and (2) 0.33 HP Power Exhaust 30 kW	94	106	98	110	106	118	53	55	58	42	44	47
	45 kW	133	151	137	155	145	163	76	77	81	61	62	65
	60 kW	141	160	145	164	152	172	80	82	85	64	66	68

ELECTRICAL ACCESSORIES

Disconnect	Unit Only	54W85	54W85	54W85	54W85	54W85	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Power Exhaust	54W85	54W85	54W85	54W85	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Electric Heat 15 kW	54W85	54W85	54W85	54W85	54W85	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Electric Heat 30 kW	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Electric Heat 45 kW	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Electric Heat 60 kW	54W87	54W87	54W87	54W87	54W87	54W87	54W86	54W86	54W86	54W85	54W85	54W85
	Unit + Power Exhaust + Elec. Heat 15 kW	54W85	54W85	54W85	54W85	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85
Unit + Power Exhaust + Elec. Heat 30 kW		54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85
Unit + Power Exhaust + Elec. Heat 45 kW		54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85
Unit + Power Exhaust + Elec. Heat 60 kW		54W87	54W87	54W87	54W87	54W87	54W87	54W86	54W86	54W86	54W85	54W85	54W85

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.⁴ Factory installed circuit breaker not available.

ELECTRICAL/ELECTRIC HEAT DATA**15 TON****15 TON HIGH EFFICIENCY****LCH180H4**

¹ Voltage - 60hz		208/230V - 3 Ph			460V - 3 Ph			575V - 3 Ph		
Compressor 1	Rated Load Amps	11.6			6.3			4.9		
	Locked Rotor Amps	93			60			41		
Compressor 2	Rated Load Amps	11.6			6.3			4.9		
	Locked Rotor Amps	93			60			41		
Compressor 3	Rated Load Amps	11.6			6.3			4.9		
	Locked Rotor Amps	93			60			41		
Outdoor Fan Motors (3)	Full Load Amps (total)	2.4 (9.6)			1.3 (5.2)			1 (4)		
Power Exhaust (2) 0.33 HP	Full Load Amps (total)	2.4 (4.8)			1.3 (2.6)			1 (2)		
Service Outlet 115V GFI (amps)		15			15			20		
Indoor Blower Motor	Horsepower	3	5	7.5	3	5	7.5	3	5	7.5
	Full Load Amps	10.6	16.7	24.2	4.8	7.6	11	3.9	6.1	9
² Maximum Overcurrent Protection	Unit Only	60	80	90	35	40	45	25	30	35
	With (2) 0.33 HP Power Exhaust	70	80	100	35	40	50	30	30	40
³ Minimum Circuit Ampacity	Unit Only	58	66	75	31	34	38	24	27	30
	With (2) 0.33 HP Power Exhaust	63	71	80	34	37	41	26	29	32

ELECTRIC HEAT DATA

Electric Heat Voltage		208V	240V	208V	240V	208V	240V	480V	480V	480V	600V	600V	600V	
² Maximum Overcurrent Protection	Unit+ Electric Heat	15 kW	60	60	80	80	90	90	35	40	45	25	30	35
		30 kW	⁴ 100	110	⁴ 100	125	⁴ 110	125	60	60	60	45	45	50
		45 kW	150	150	⁴ 150	175	⁴ 150	175	80	80	90	60	70	70
		60 kW	⁴ 150	175	⁴ 150	175	175	175	80	90	90	70	70	70
³ Minimum Circuit Ampacity	Unit+ Electric Heat	15 kW	58	59	66	66	75	76	31	34	38	24	27	30
		30 kW	92	104	100	112	109	121	52	55	59	41	44	48
		45 kW	131	149	139	157	148	166	74	78	82	60	62	66
		60 kW	139	158	146	166	156	175	79	82	86	63	66	69
² Maximum Overcurrent Protection	Unit+ Electric Heat and (2) 0.33 HP Power Exhaust	15 kW	70	70	80	80	100	100	35	40	50	30	30	40
		30 kW	⁴ 100	110	⁴ 110	125	⁴ 125	150	60	60	70	45	50	50
		45 kW	⁴ 150	175	⁴ 150	175	175	175	80	90	90	70	70	70
		60 kW	⁴ 150	175	175	175	⁴ 175	200	90	90	90	70	70	80
³ Minimum Circuit Ampacity	Unit+ Electric Heat and (2) 0.33 HP Power Exhaust	15 kW	63	65	71	72	80	82	34	37	41	26	29	32
		30 kW	98	110	106	118	115	127	55	58	63	44	47	50
		45 kW	137	155	145	163	154	172	77	81	85	62	65	68
		60 kW	145	164	152	172	162	181	82	85	90	66	68	72

ELECTRICAL ACCESSORIES

Disconnect	Unit Only	54W85	54W85	54W85	54W85	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Power Exhaust	54W85	54W85	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Electric Heat 15 kW	54W85	54W85	54W85	54W85	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Electric Heat 30 kW	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Electric Heat 45 kW	54W86	54W86	54W86	54W87	54W87	54W87	54W85	54W85	54W86	54W85	54W85	54W85	54W85
	Unit + Electric Heat 60 kW	54W87	54W87	54W87	54W87	54W87	54W87	54W86	54W86	54W86	54W85	54W85	54W85	54W85
	Unit + Power Exhaust + Elec. Heat 15 kW	54W85	54W85	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Power Exhaust + Elec. Heat 30 kW	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Power Exhaust + Elec. Heat 45 kW	54W86	54W87	54W86	54W87	54W87	54W87	54W85	54W86	54W86	54W85	54W85	54W85	54W85
	Unit + Power Exhaust + Elec. Heat 60 kW	54W87	54W87	54W87	54W87	54W87	54W87	54W86	54W86	54W86	54W85	54W85	54W85	54W85

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.⁴ Factory installed circuit breaker not available.

ELECTRICAL/ELECTRIC HEAT DATA

17.5 TON

17.5 TON HIGH EFFICIENCY

LCH210H4B/M

¹ Voltage - 60hz		208/230V - 3 Ph			460V - 3 Ph			575V - 3 Ph		
Compressor 1	Rated Load Amps	15.6			7.8			5.8		
	Locked Rotor Amps	110			52			38.9		
Compressor 2	Rated Load Amps	15.6			7.8			5.8		
	Locked Rotor Amps	110			52			38.9		
Compressor 3	Rated Load Amps	19.6			8.2			6.6		
	Locked Rotor Amps	136			66.1			55.3		
Outdoor Fan Motors (3)	Full Load Amps	2.4			1.3			1		
	(total)	(14.4)			(7.8)			(6)		
Power Exhaust (2) 0.33 HP	Full Load Amps	2.4			1.3			1		
	(total)	(4.8)			(2.6)			(2)		
Service Outlet 115V GFI (amps)		15			15			15		
Indoor Blower Motor	Horsepower	3	5	7.5	3	5	7.5	3	5	7.5
	Full Load Amps	10.6	16.7	24.2	4.8	7.6	11	3.9	6.1	9
² Maximum Overcurrent Protection	Unit Only	100	100	110	45	45	50	35	35	40
	With (2) 0.33 HP Power Exhaust	100	110	110	45	50	50	35	40	45
³ Minimum Circuit Ampacity	Unit Only	81	87	96	39	42	46	30	32	36
	With (2) 0.33 HP Power Exhaust	86	92	101	42	44	48	32	34	38

ELECTRIC HEAT DATA

		Electric Heat Voltage	208V	240V	208V	240V	208V	240V	480V	480V	480V	600V	600V	600V
² Maximum Overcurrent Protection	Unit+	15 kW	100	100	100	100	110	110	45	45	50	35	35	40
	Electric Heat	30 kW	⁴ 100	110	⁴ 100	125	⁴ 110	125	60	60	60	45	45	50
		45 kW	150	150	⁴ 150	175	⁴ 150	175	80	80	90	60	70	70
		60 kW	⁴ 150	175	⁴ 150	175	175	175	80	90	90	70	70	70
		90 kW	⁴ 225	250	⁴ 225	250	⁴ 225	250	125	125	125	100	100	100
³ Minimum Circuit Ampacity	Unit+	15 kW	81	81	87	87	96	96	39	42	46	30	32	36
	Electric Heat	30 kW	92	104	100	112	109	121	52	55	59	41	44	48
		45 kW	131	149	139	157	148	166	74	78	82	60	62	66
		60 kW	139	158	146	166	156	175	79	82	86	63	66	69
		90 kW	201	230	209	238	218	247	115	118	123	92	95	98
² Maximum Overcurrent Protection	Unit+	15 kW	100	100	110	110	110	110	45	50	50	35	40	45
	Electric Heat and (2) 0.33 HP Power Exhaust	30 kW	⁴ 100	110	⁴ 110	125	⁴ 125	150	60	60	70	45	50	50
		45 kW	⁴ 150	175	⁴ 150	175	175	175	80	90	90	70	70	70
		60 kW	⁴ 150	175	175	175	⁴ 175	200	90	90	90	70	70	80
		90 kW	⁴ 225	250	⁴ 225	250	⁴ 225	⁴ 300	125	125	150	100	100	110
³ Minimum Circuit Ampacity	Unit+	15 kW	86	86	92	92	101	101	42	44	48	32	34	38
	Electric Heat and (2) 0.33 HP Power Exhaust	30 kW	98	110	106	118	115	127	55	58	63	44	47	50
		45 kW	137	155	145	163	154	172	77	81	85	62	65	68
		60 kW	145	164	152	172	162	181	82	85	90	66	68	72
		90 kW	207	236	215	244	224	253	118	122	126	94	97	101

ELECTRICAL ACCESSORIES

Disconnect	Unit Only	54W86	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Power Exhaust	54W86	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Electric Heat 15 kW	54W86	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Electric Heat 30 kW	54W86	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Electric Heat 45 kW	54W86	54W86	54W86	54W86	54W87	54W87	54W87	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Electric Heat 60 kW	54W87	54W87	54W87	54W87	54W87	54W87	54W87	54W86	54W86	54W86	54W85	54W85	54W85
	Unit + Electric Heat 90 kW	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	54W86	54W86	54W86	54W86	54W86	54W86
	Unit + Power Exhaust + Elec. Heat 15 kW	54W86	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Power Exhaust + Elec. Heat 30 kW	54W86	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Power Exhaust + Elec. Heat 45 kW	54W86	54W86	54W86	54W86	54W87	54W87	54W87	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Power Exhaust + Elec. Heat 60 kW	54W87	54W87	54W87	54W87	54W87	54W87	54W87	54W86	54W86	54W86	54W85	54W85	54W85
	Unit + Power Exhaust + Elec. Heat 90 kW	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	54W86	54W86	54W86	54W86	54W86	54W86

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.

⁴ Factory installed circuit breaker not available.

⁵ Disconnect must be field furnished.

ELECTRICAL/ELECTRIC HEAT DATA**20 TON****20 TON HIGH EFFICIENCY****LCH240H4**

¹ Voltage - 60hz		208/230V - 3 Ph			460V - 3 Ph			575V - 3 Ph		
Compressor 1	Rated Load Amps	11.6			6.3			4.9		
	Locked Rotor Amps	93			60			41		
Compressor 2	Rated Load Amps	11.6			6.3			4.9		
	Locked Rotor Amps	93			60			41		
Compressor 3	Rated Load Amps	11.6			6.3			4.9		
	Locked Rotor Amps	93			60			41		
Compressor 4	Rated Load Amps	11.6			6.3			4.9		
	Locked Rotor Amps	93			60			41		
Outdoor Fan Motors (6)	Full Load Amps	2.4			1.3			1		
	(total)	(14.4)			(7.8)			(6)		
Power Exhaust (2) 0.33 HP	Full Load Amps	2.4			1.3			1		
	(total)	(4.8)			(2.6)			(2)		
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	90	110	125	50	50	60	35	45	50
	With (2) 0.33 HP Power Exhaust	100	110	125	50	60	60	40	45	50
³ Minimum Circuit Ampacity	Unit Only	82	92	100	43	47	51	34	37	40
	With (2) 0.33 HP Power Exhaust	87	96	105	46	50	54	36	39	42

ELECTRIC HEAT DATA

		Electric Heat Voltage	208V	240V	208V	240V	208V	240V	480V	480V	480V	600V	600V	600V
² Maximum Overcurrent Protection	Unit+	15 kW	90	90	110	110	125	125	50	50	60	35	45	50
	Electric Heat	30 kW	⁴ 100	125	⁴ 110	125	⁴ 125	150	60	60	70	45	50	50
		45 kW	⁴ 150	175	⁴ 150	175	175	175	80	90	90	70	70	70
		60 kW	⁴ 150	175	175	175	⁴ 175	200	90	90	90	70	70	80
		90 kW	⁴ 225	250	⁴ 225	250	⁴ 250	⁴ 300	125	125	150	100	100	110
³ Minimum Circuit Ampacity	Unit+	15 kW	82	82	92	92	100	100	43	47	51	34	37	40
	Electric Heat	30 kW	100	112	109	121	117	129	55	59	63	44	48	50
		45 kW	139	157	148	166	156	174	78	82	86	62	66	68
		60 kW	146	166	156	175	164	183	82	86	90	66	69	72
		90 kW	209	238	218	247	227	256	118	123	126	95	98	101
² Maximum Overcurrent Protection	Unit+	15 kW	100	100	110	110	125	125	50	60	60	40	45	50
	Electric Heat and (2) 0.33 HP Power Exhaust	30 kW	⁴ 110	125	⁴ 125	150	⁴ 125	150	60	70	70	50	50	60
		45 kW	⁴ 150	175	175	175	⁴ 175	200	90	90	90	70	70	80
		60 kW	175	175	⁴ 175	200	⁴ 175	200	90	90	100	70	80	80
		90 kW	⁴ 225	250	⁴ 225	⁴ 300	⁴ 250	⁴ 300	125	150	150	100	110	110
³ Minimum Circuit Ampacity	Unit+	15 kW	87	87	96	96	105	105	46	50	54	36	39	42
	Electric Heat and (2) 0.33 HP Power Exhaust	30 kW	106	118	115	127	123	135	58	63	66	47	50	53
		45 kW	145	163	154	172	162	180	81	85	89	65	68	71
		60 kW	152	172	162	181	170	189	85	90	93	68	72	74
		90 kW	215	244	224	253	233	262	122	126	130	97	101	103

ELECTRICAL ACCESSORIES

Disconnect	Unit Only	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Power Exhaust	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Electric Heat 15 kW	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Electric Heat 30 kW	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Electric Heat 45 kW	54W86	54W87	54W87	54W87	54W87	54W87	54W85	54W86	54W86	54W85	54W85	54W85	54W85
	Unit + Electric Heat 60 kW	54W87	54W87	54W87	54W87	54W87	54W87	54W86	54W86	54W86	54W85	54W85	54W85	54W85
	Unit + Electric Heat 90 kW	⁴ N/A	⁴ N/A	⁴ N/A	⁴ N/A	⁴ N/A	⁴ N/A	54W86	54W86	54W86	54W86	54W86	54W86	54W86
	Unit + Power Exhaust + Elec. Heat 15 kW	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Power Exhaust + Elec. Heat 30 kW	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Power Exhaust + Elec. Heat 45 kW	54W86	54W87	54W87	54W87	54W87	54W87	54W86	54W86	54W86	54W85	54W85	54W85	54W85
	Unit + Power Exhaust + Elec. Heat 60 kW	54W87	54W87	54W87	54W87	54W87	54W87	54W86	54W86	54W86	54W85	54W85	54W85	54W85
	Unit + Power Exhaust + Elec. Heat 90 kW	⁴ N/A	⁴ N/A	⁴ N/A	⁴ N/A	⁴ N/A	⁴ N/A	54W86	54W86	54W86	54W86	54W86	54W86	54W86

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.⁴ Factory installed circuit breaker not available.⁵ Disconnect must be field furnished.

ELECTRICAL/ELECTRIC HEAT DATA

25 TON

25 TON STANDARD EFFICIENCY

LCH300S4B/M

¹ Voltage - 60hz		208/230V - 3 Ph			460V - 3 Ph			575V - 3 Ph		
Compressor 1	Rated Load Amps	19.6			8.2			6.6		
	Locked Rotor Amps	136			66.1			55.3		
Compressor 2	Rated Load Amps	19.6			8.2			6.6		
	Locked Rotor Amps	136			66.1			55.3		
Compressor 3	Rated Load Amps	22.4			10.6			7.7		
	Locked Rotor Amps	149			75			54		
Compressor 4	Rated Load Amps	22.4			10.6			7.7		
	Locked Rotor Amps	149			75			54		
Outdoor Fan Motors (6)	Full Load Amps	2.4			1.3			1		
	(total)	(14.4)			(7.8)			(6)		
Power Exhaust (2) 0.33 HP	Full Load Amps	2.4			1.3			1		
	(total)	(4.8)			(2.6)			(2)		
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	125	150	150	60	70	70	50	50	50
	With (2) 0.33 HP	150	150	150	60	70	70	50	50	60
	Power Exhaust									
³ Minimum Circuit Ampacity	Unit Only	121	129	137	56	60	63	45	46	49
	With (2) 0.33 HP	126	134	142	59	62	66	45	48	51
	Power Exhaust									

ELECTRIC HEAT DATA

		Electric Heat Voltage	208V	240V	208V	240V	208V	240V	480V	480V	480V	600V	600V	600V
² Maximum Overcurrent Protection	Unit+	15 kW	125	125	150	150	150	150	60	70	70	50	50	50
	Electric Heat	30 kW	125	125	150	150	150	150	60	70	70	50	50	50
		45 kW	⁴ 150	175	⁴ 150	175	175	175	80	90	90	70	70	70
		60 kW	⁴ 150	175	175	175	⁴ 175	200	90	90	90	70	70	80
		90 kW	⁴ 225	250	⁴ 225	250	⁴ 250	⁴ 300	125	125	150	100	100	110
³ Minimum Circuit Ampacity	Unit+	15 kW	121	121	129	129	137	137	56	60	63	45	46	49
	Electric Heat	30 kW	121	121	129	129	137	137	56	60	63	45	46	49
		45 kW	139	157	148	166	156	174	78	82	86	62	66	68
		60 kW	146	166	156	175	164	183	82	86	90	66	69	72
		90 kW	209	238	218	247	227	256	118	123	126	95	98	101
² Maximum Overcurrent Protection	Unit+	15 kW	150	150	150	150	150	150	60	70	70	50	50	60
	Electric Heat	30 kW	150	150	150	150	150	150	60	70	70	50	50	60
	and (2) 0.33 HP	45 kW	⁴ 150	175	175	175	⁴ 175	200	90	90	90	70	70	80
	Power Exhaust	60 kW	175	175	⁴ 175	200	⁴ 175	200	90	90	100	70	80	80
		90 kW	⁴ 225	250	⁴ 225	⁴ 300	⁴ 250	⁴ 300	125	150	150	100	110	110
³ Minimum Circuit Ampacity	Unit+	15 kW	126	126	134	134	142	142	59	62	66	45	48	51
	Electric Heat	30 kW	126	126	134	134	142	142	59	62	66	45	48	51
	and (2) 0.33 HP	45 kW	145	163	154	172	162	180	81	85	89	65	68	71
	Power Exhaust	60 kW	152	172	162	181	170	189	85	90	93	68	72	74
		90 kW	215	244	224	253	233	262	122	126	130	97	101	103

ELECTRICAL ACCESSORIES

Disconnect	Unit Only	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Power Exhaust	54W86	54W86	54W86	54W86	54W87	54W87	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Electric Heat 15 kW	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Electric Heat 30 kW	54W86	54W86	54W86	54W86	54W86	54W86	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Electric Heat 45 kW	54W86	54W86	54W87	54W87	54W87	54W87	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Electric Heat 60 kW	54W87	54W87	54W87	54W87	54W87	54W87	54W86	54W86	54W86	54W85	54W85	54W85	54W85
	Unit + Electric Heat 90 kW	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	54W86	54W86	54W86	54W86	54W86	54W86	54W86
	Unit + Power Exhaust + Elec. Heat 15 kW	54W86	54W86	54W86	54W86	54W87	54W87	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Power Exhaust + Elec. Heat 30 kW	54W86	54W86	54W86	54W86	54W87	54W87	54W85	54W85	54W85	54W85	54W85	54W85	54W85
	Unit + Power Exhaust + Elec. Heat 45 kW	54W86	54W86	54W87	54W87	54W87	54W87	54W85	54W85	54W86	54W85	54W85	54W85	54W85
	Unit + Power Exhaust + Elec. Heat 60 kW	54W87	54W87	54W87	54W87	54W87	54W87	54W86	54W86	54W86	54W85	54W85	54W85	54W86
	Unit + Power Exhaust + Elec. Heat 90 kW	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	54W86	54W86	54W86	54W86	54W86	54W86	54W86

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

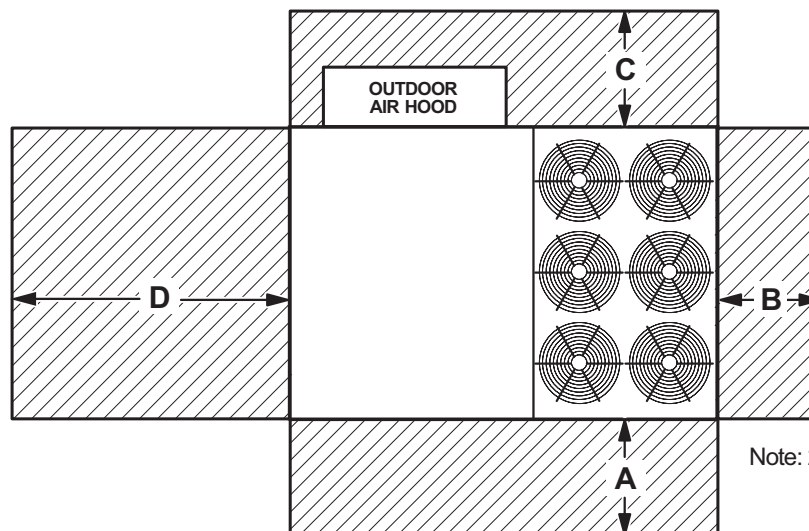
¹ Extremes of operating range are plus and minus 10% of line voltage.² HACR type breaker or fuse.³ Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.⁴ Factory installed circuit breaker not available.⁵ Disconnect must be field furnished.

ELECTRIC HEAT CAPACITIES

Volts Input	15 kW			30 kW			45 kW			60 kW			90 kW		
	kW Input	Btuh Output	No. of Stages	kW Input	Btuh Output	No. of Stages	kW Input	Btuh Output	No. of Stages	kW Input	Btuh Output	No. of Stages	kW Input	Btuh Output	No. of Stages
208	11.3	38,600	1	22.5	76,800	1	33.8	115,300	2	45.0	153,600	2	67.6	230,700	2
220	12.6	43,000	1	25.2	86,000	1	37.8	129,000	2	50.4	172,000	2	75.6	258,000	2
230	13.8	47,100	1	27.5	93,900	1	41.3	141,000	2	55.1	188,000	2	82.7	282,200	2
240	15.0	51,200	1	30.0	102,400	1	45.0	153,600	2	60.0	204,800	2	90.0	307,100	2
440	12.6	43,000	1	25.2	86,000	1	37.8	129,000	2	50.4	172,000	2	75.6	258,000	2
460	13.8	47,100	1	27.5	93,900	1	41.3	141,000	2	55.1	188,000	2	82.7	282,200	2
480	15.0	51,200	1	30.0	102,400	1	45.0	153,600	2	60.0	204,800	2	90.0	307,100	2
550	12.6	43,000	1	25.2	86,000	1	37.8	129,000	2	50.4	172,000	2	75.6	258,000	2
575	13.8	47,100	1	27.5	93,900	1	41.3	141,000	2	55.1	188,000	2	82.7	282,200	2
600	15.0	51,200	1	30.0	102,400	1	45.0	153,600	2	60.0	204,800	2	90.0	307,100	2

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	934	66	1676	Unobstructed
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.

Minimum Operation Clearance - Required clearance for proper unit operation.

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WEIGHT DATA

Model Number	Outdoor Coil	Net		Shipping		Outdoor Coil	Net		Shipping	
		lbs.	kg	lbs.	kg		lbs.	kg	lbs.	kg
156 Base Unit	Eco-Last™	1785	810	1985	900	Fin/Tube	1850	839	2050	930
156 Max. Unit	Eco-Last™	2065	937	2265	1027	Fin/Tube	2130	966	2330	1057
180 Base Unit	Eco-Last™	1965	891	2165	982	Fin/Tube	2070	939	2270	1030
180 Max. Unit	Eco-Last™	2245	1018	2445	1109	Fin/Tube	2350	1066	2550	1157
210 Base Unit	Eco-Last™	2090	948	2290	1039	Fin/Tube	2180	989	2380	1080
210 Max. Unit	Eco-Last™	2380	1080	2580	1170	Fin/Tube	2470	1120	2670	1211
240 Base Unit	Eco-Last™	2175	987	2375	1077	Fin/Tube	2280	1034	2480	1125
240 Max. Unit	Eco-Last™	2465	1118	2665	1209	Fin/Tube	2570	1166	2770	1256
300 Base Unit	Eco-Last™	2300	1043	2500	1134	Fin/Tube	2365	1073	2565	1163
300 Max. Unit	Eco-Last™	2590	1175	2790	1266	Fin/Tube	2655	1204	2855	1295

NOTE - Max. Unit is the unit with ALL INTERNAL OPTIONS Installed. (Economizer, Standard Static Power Exhaust Fans, Controls, etc.). Does not include accessories EXTERNAL to unit.

OPTIONS / ACCESSORIES

Description	Shipping Weight	
	lbs.	kg
CEILING DIFFUSERS		
Step-Down		
RTD11-185S	168	76
RTD11-275S	238	108
Flush		
FD11-185S	168	76
FD11-275S	238	108
Transitions		
C1DIFF33C-1	80	36
C1DIFF34C-1	75	34
ECONOMIZER / OUTDOOR AIR / EXHAUST		
Economizer		
Economizer Dampers	102	46
Barometric Relief Dampers (downflow)	30	14
Barometric Relief Dampers (horizontal)	20	9
Outdoor Air Damper Hood (downflow)	65	29
Outdoor Air Dampers		
Outdoor Air Damper Section (downflow) - Automatic (including Hood)	18	39
Outdoor Air Damper Section (downflow) - Manual (including Hood)	10	22
Power Exhaust	62	28
ELECTRIC HEAT		
15 kW	59	27
30 kW	59	27
45 kW	76	34
60 kW	76	34
90 kW	84	38
DEHUMIDIFICATION SYSTEM		
Dehumidification Option (Net Weight)	50	23
SINGLE ZONE VAV SUPPLY AIR BLOWER OPTION		
Variable Frequency Drive (VFD) and associated components	10	5
ROOF CURBS		
Hybrid Roof Curbs, Downflow		
8 in. height	75	34
14 in. height	105	48
18 in. height	125	57
24 in. height	155	70
Adjustable Pitch Curb, Downflow		
14 in. height	262	119
Horizontal, Standard		
26 in. height	470	213
37 in. height	505	229
30 in. height	575	261
41 in. height	610	277
PACKAGING		
LTL Packaging (less than truck load)	310	141

DIMENSIONS - UNIT

LCH156

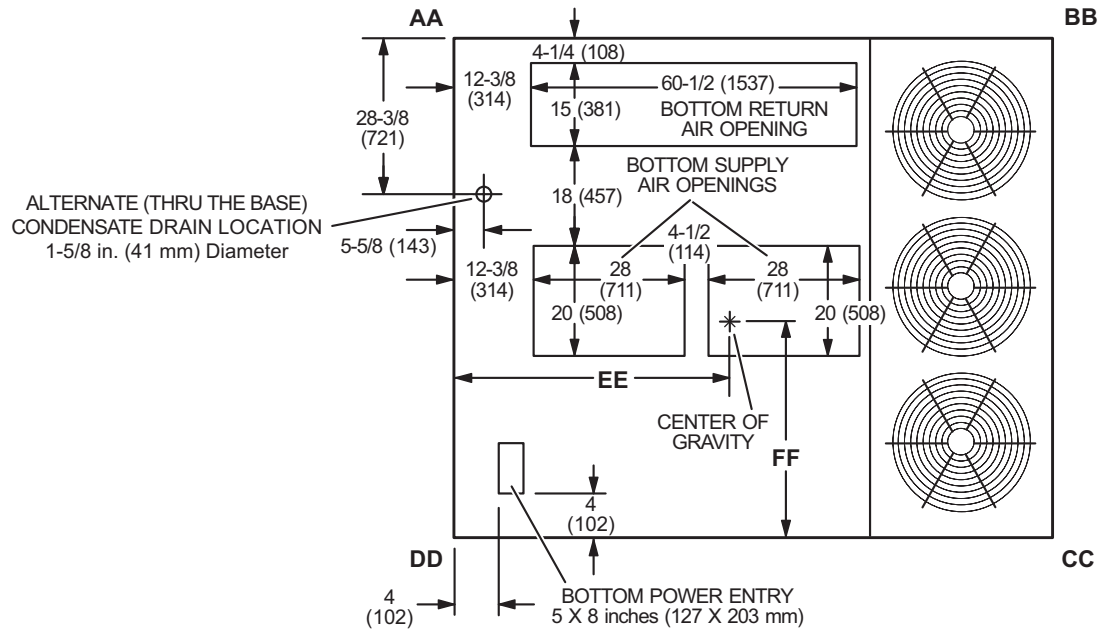
CORNER WEIGHTS

CENTER OF GRAVITY

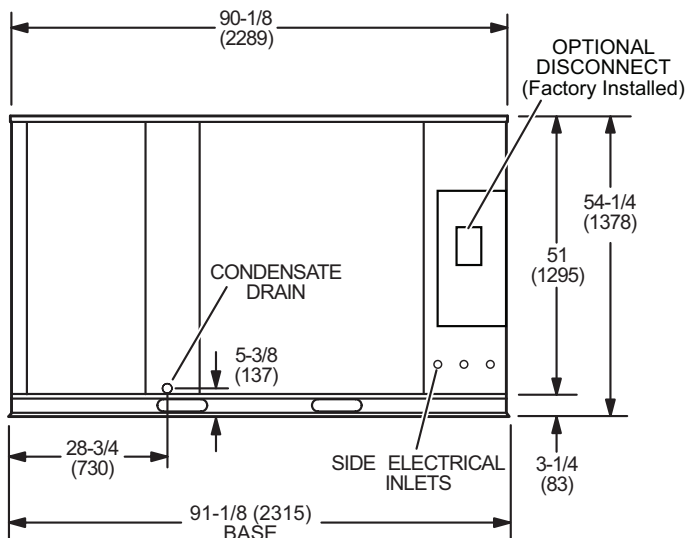
Model No.	AA		BB		CC		DD		EE		FF	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm
LCH156 Base Unit (Eco-Last™ Coil)	428	195	346	157	456	207	554	252	48-1/2	1232	39-1/2	1003
LCH156 Max. Unit (Eco-Last™ Coil)	538	244	429	195	489	222	609	277	48	1219	42-3/4	1086
LCH156 Base Unit (Fin/Tube Coil)	431	195	376	171	486	220	557	253	50-1/4	1276	39-3/4	1010
LCH156 Max. Unit (Fin/Tube Coil)	540	245	459	208	519	235	611	277	49-1/2	1257	42-3/4	1086

Base Unit - The unit with NO INTERNAL OPTIONS.

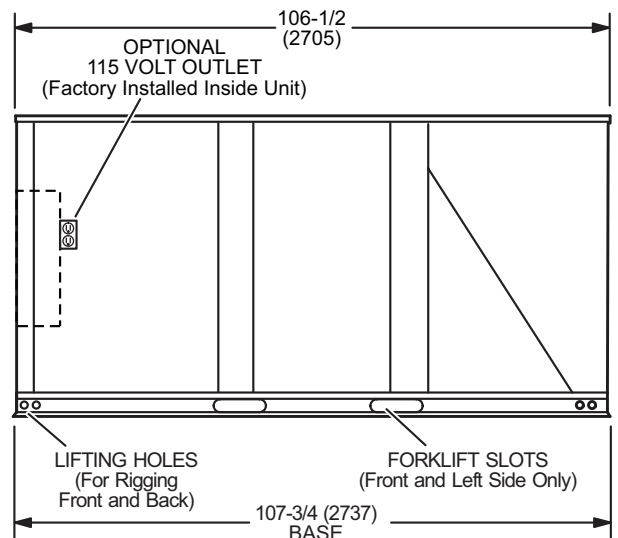
Max. Unit - The unit with ALL INTERNAL OPTIONS Installed. (Economizer, Standard Static Power Exhaust Fans, Controls, etc.). Does not include accessories external to unit.



TOP VIEW



END VIEW



SIDE VIEW

DIMENSIONS - UNIT

LCH180

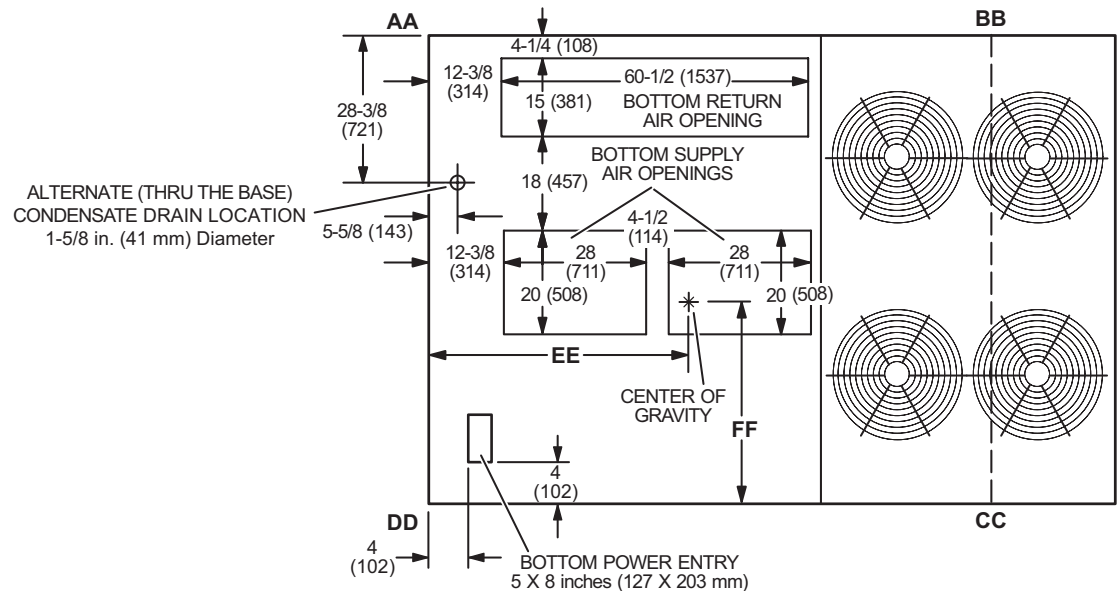
CORNER WEIGHTS

CENTER OF GRAVITY

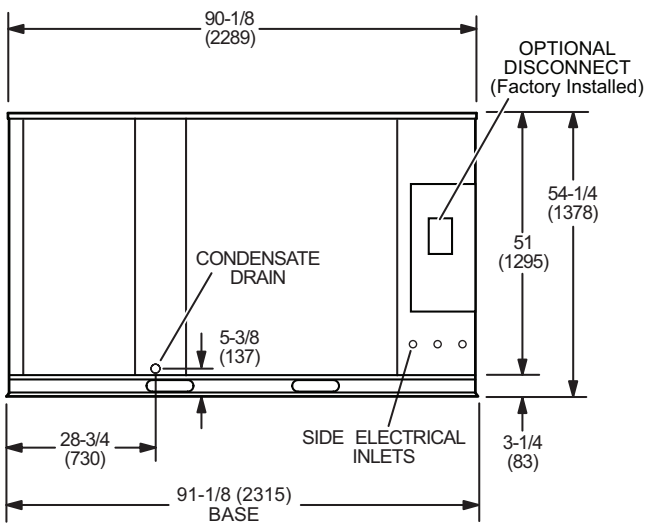
Model No.	AA		BB		CC		DD		EE		FF	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm
LCH180 Base Unit (Eco-Last™ Coil)	441	201	403	183	543	247	577	262	52	1321	39-1/4	997
LCH180 Max. Unit (Eco-Last™ Coil)	545	248	485	221	577	262	638	290	51	1295	42	1067
LCH180 Base Unit (Fin/Tube Coil)	441	200	456	207	596	270	577	262	54-3/4	1391	39-1/2	1003
LCH180 Max. Unit (Fin/Tube Coil)	545	247	538	244	629	285	638	289	53-1/2	1359	42	1067

Base Unit - The unit with NO INTERNAL OPTIONS.

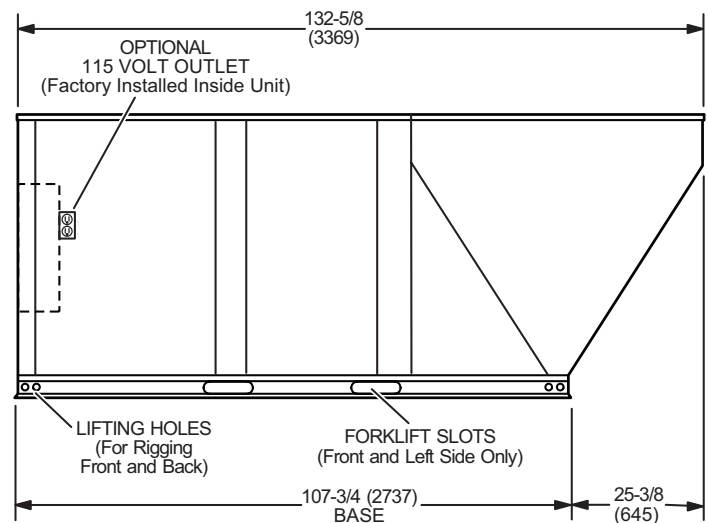
Max. Unit - The unit with ALL INTERNAL OPTIONS Installed. (Economizer, Standard Static Power Exhaust Fans, Controls, etc.). Does not include accessories external to unit.



TOP VIEW



END VIEW



SIDE VIEW

DIMENSIONS - UNIT

LCH210, LCH240, LCH300

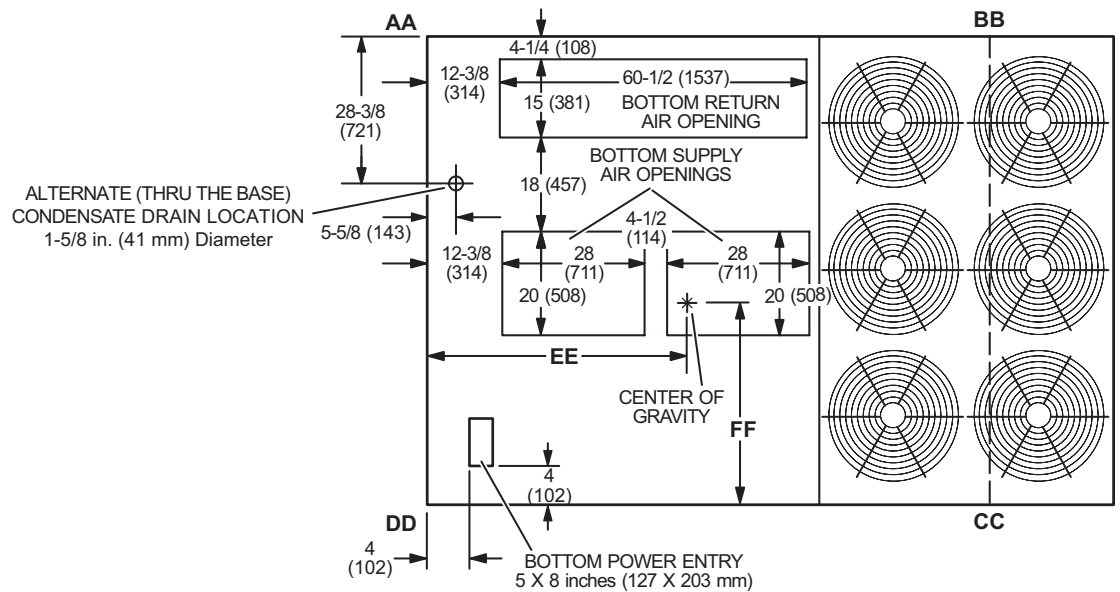
CORNER WEIGHTS

CENTER OF GRAVITY

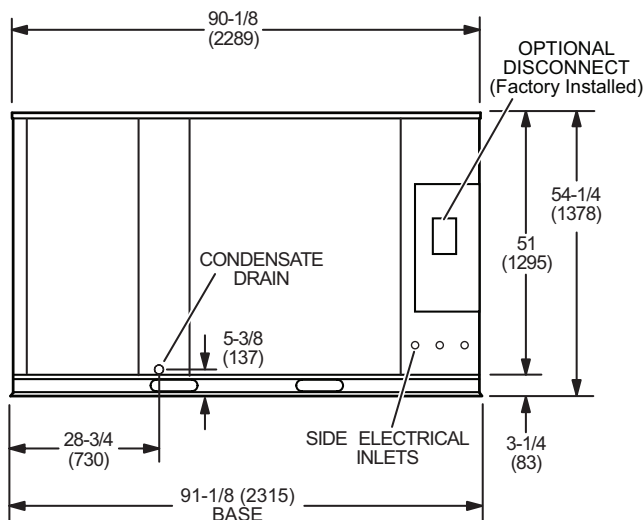
Model No.	AA		BB		CC		DD		EE		FF	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm
LCH210 Base Uni (Eco-Last™ Coil)	452	205	448	204	600	273	590	268	54	1372	39-1/4	997
LCH210 Max. Unit (Eco-Last™ Coil)	557	253	536	244	635	288	652	296	53	1346	42	1067
LCH210 Base Unit (Fin/TubeCoil)	452	205	493	224	645	293	590	268	56-1/4	1429	39-1/2	1003
LCH210 Max. Unit (Fin/TubeCoil)	557	253	581	264	680	308	652	296	55	1397	42	1067
LCH240 Base Unit (Eco-Last™ Coil)	462	210	461	210	634	288	617	281	54-1/2	1384	38-3/4	984
LCH240 Max. Unit (Eco-Last™ Coil)	568	258	550	250	668	304	679	308	53-1/2	1359	41-1/2	1054
LCH240 Base Unit (Fin/TubeCoil)	462	210	514	233	687	312	617	280	56-3/4	1441	39	991
LCH240 Max. Unit (Fin/TubeCoil)	568	258	603	274	721	327	679	308	55-1/2	1410	41-1/2	1054
LCH300 Base Unit (Eco-Last™ Coil)	466	212	487	221	689	313	660	300	55	1397	37-3/4	959
LCH300 Max. Unit (Eco-Last™ Coil)	574	261	578	263	723	329	718	326	54	1372	40-1/2	1029
LCH300 Base Unit (Fin/Tube Coil)	469	213	518	235	724	329	656	298	56-1/2	1435	38	965
LCH300 Max. Unit (Fin/Tube Coil)	575	261	606	275	758	344	719	327	55-1/4	1403	40-1/2	1029

Base Unit - The unit with NO INTERNAL OPTIONS.

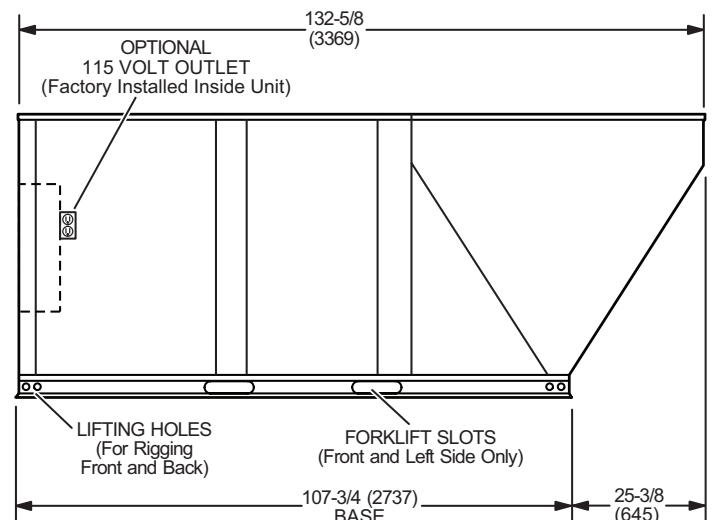
Max. Unit - The unit with ALL INTERNAL OPTIONS Installed. (Economizer, Standard Static Power Exhaust Fans, Controls, etc.). Does not include accessories external to unit.



TOP VIEW

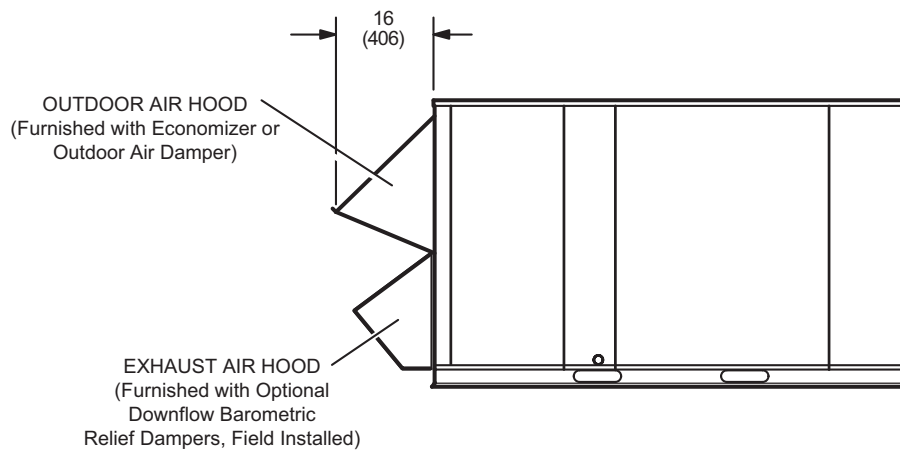


END VIEW



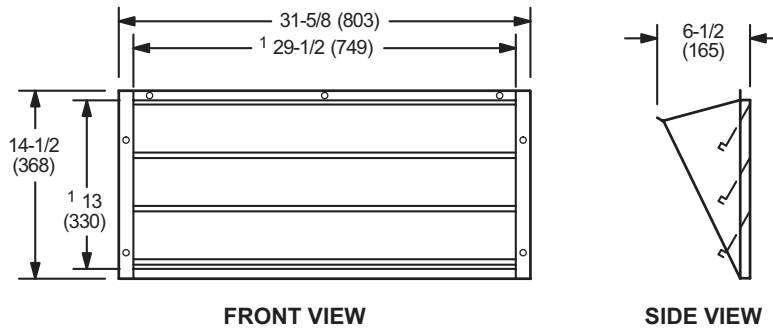
SIDE VIEW

OUTDOOR AIR HOOD DETAIL



OPTIONAL HORIZONTAL BAROMETRIC RELIEF DAMPERS WITH HOOD

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

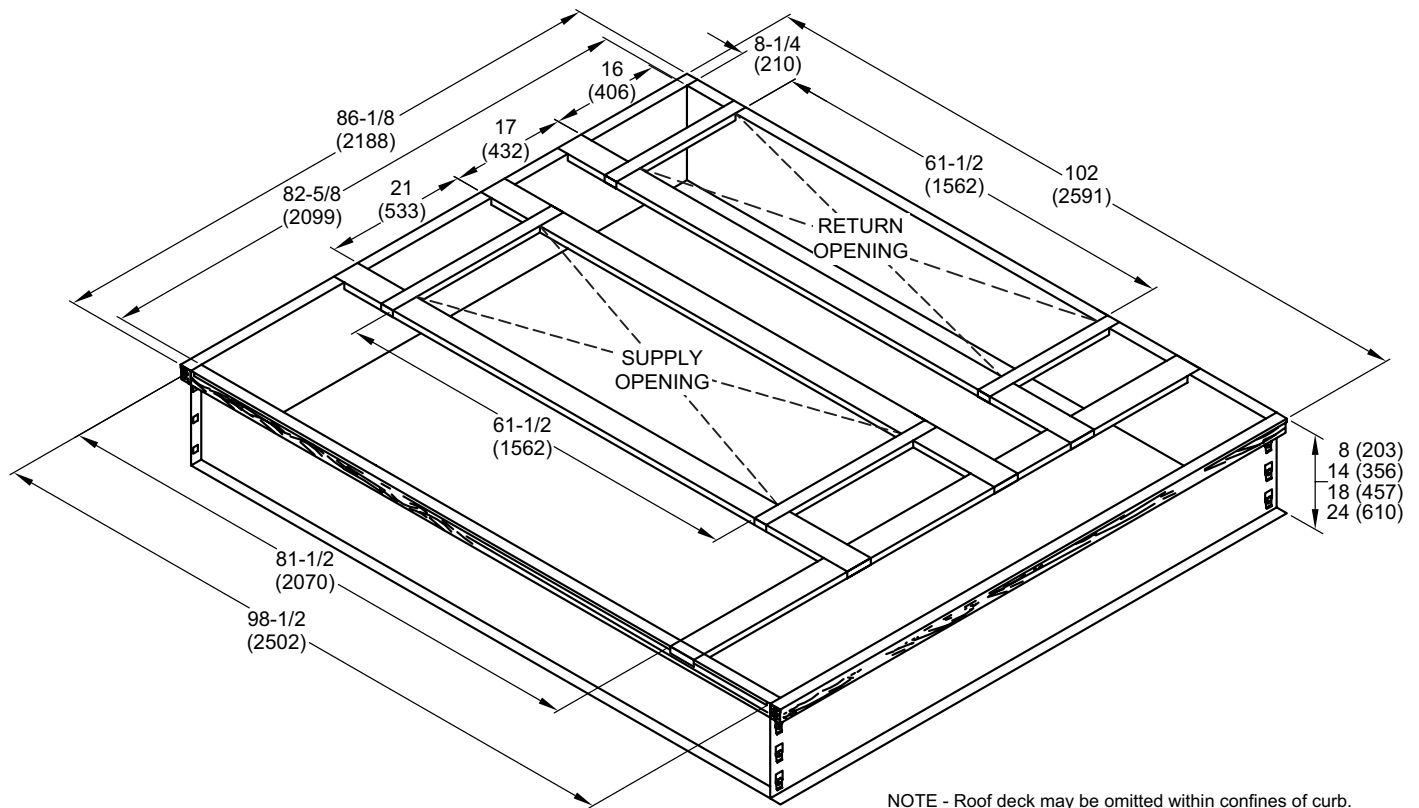


NOTE - Two furnished per order no.

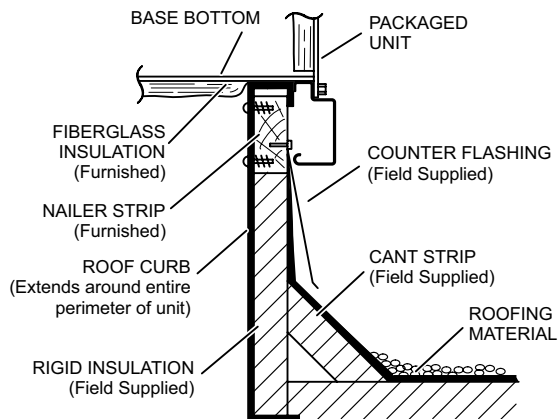
¹ NOTE - Opening size required in return air duct.

DIMENSIONS - ACCESSORIES

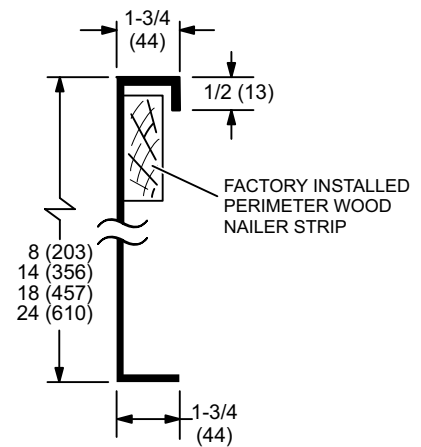
HYBRID ROOF CURBS - DOUBLE DUCT OPENING



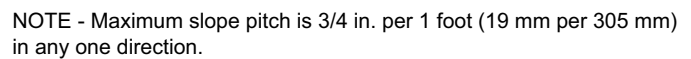
TYPICAL FLASHING DETAIL FOR ROOF CURB



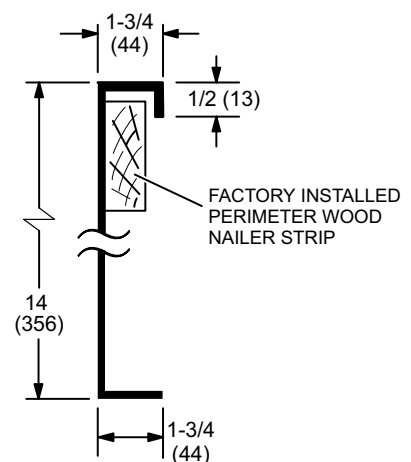
DETAIL ROOF CURB



ADJUSTABLE PITCH CURB - DOUBLE DUCT OPENING

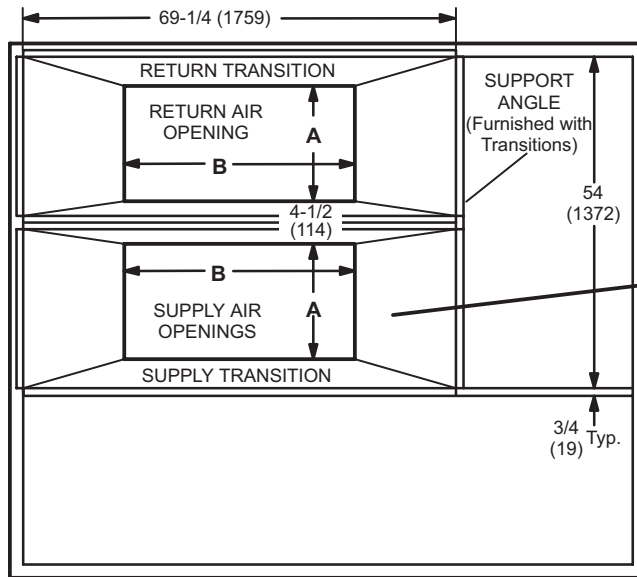


DETAIL ROOF CURB

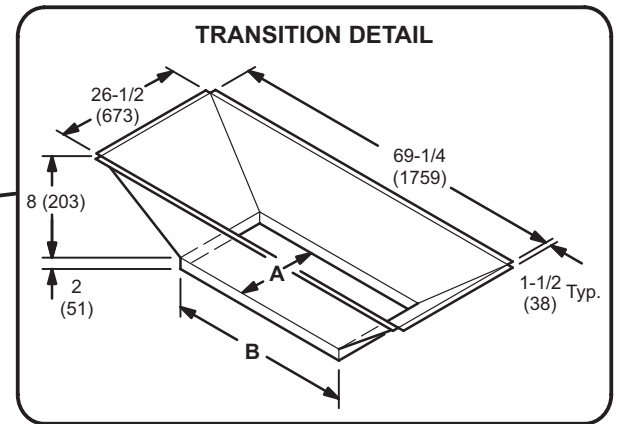


DIMENSIONS - ACCESSORIES

ROOF CURBS WITH SUPPLY & RETURN AIR TRANSITIONS FOR CEILING DIFFUSERS



TOP VIEW

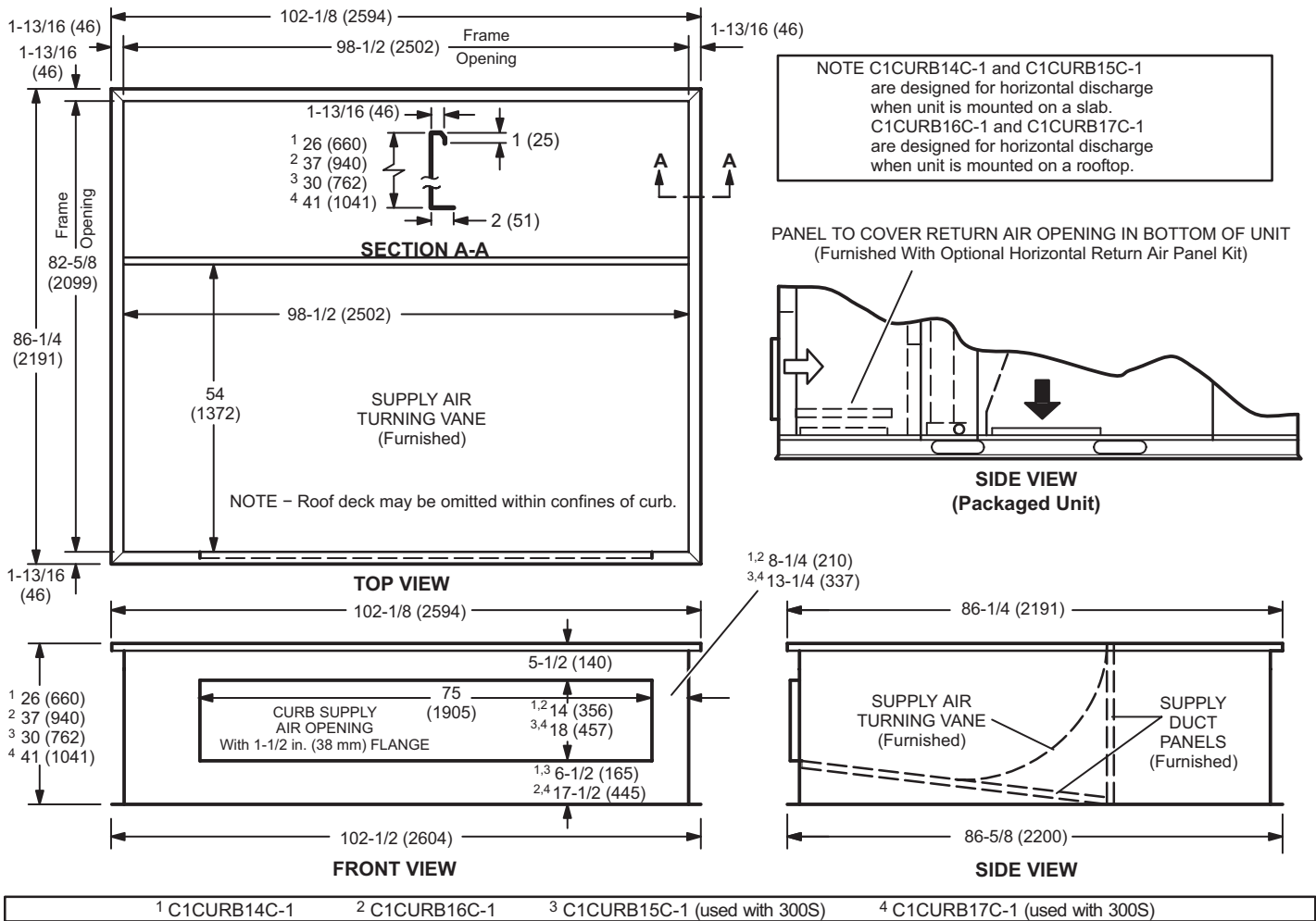


TRANSITION OPENING SIZES

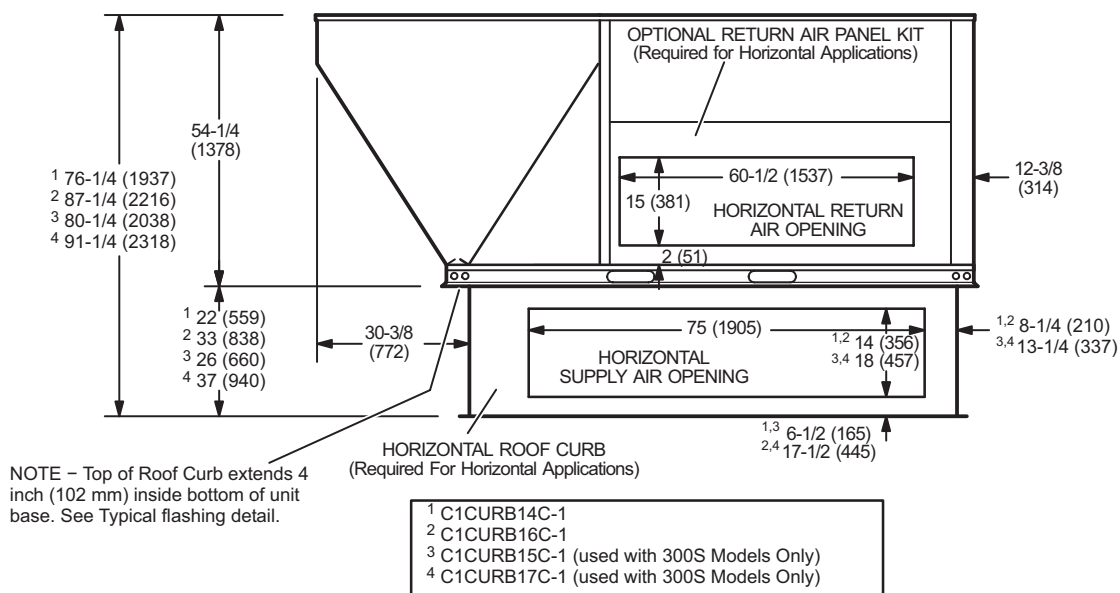
Model Number	A		B	
	inch	mm	inch	mm
C1DIFF33C-1	18	457	36	914
C1DIFF34C-1	24	610	48	1219

DIMENSIONS - ACCESSORIES

HORIZONTAL ROOF CURBS – Requires Optional Horizontal Return Air Panel Kit



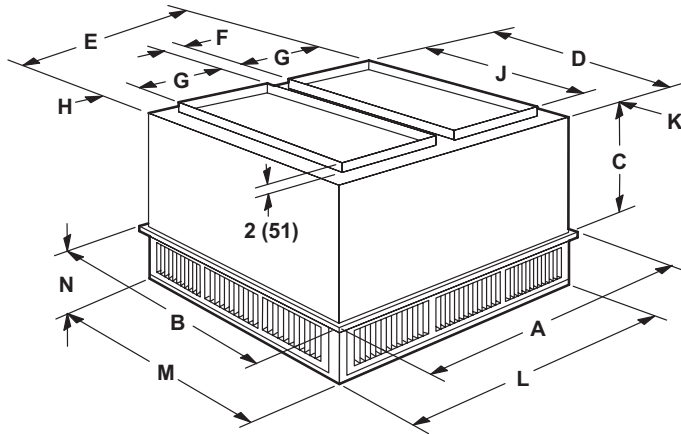
HORIZONTAL SUPPLY AND RETURN AIR OPENINGS WITH HORIZONTAL ROOF CURB



DIMENSIONS - ACCESSORIES

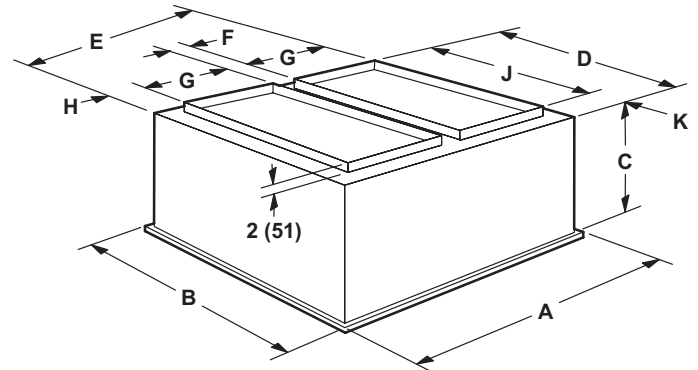
COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

STEP-DOWN CEILING DIFFUSER



Model Number		RTD11-185S	RTD11-275
A	in.	47-5/8	59-5/8
	mm	1210	1514
B	in.	47-5/8	59-5/8
	mm	1210	1514
C	in.	24-5/8	30-5/8
	mm	625	778
D	in.	45-1/2	57-1/2
	mm	1156	1461
E	in.	45-1/2	57-1/2
	mm	1156	1461
F	in.	4-1/2	4-1/2
	mm	114	114
G	in.	18	24
	mm	457	610
H	in.	2-1/2	2-1/2
	mm	64	64
J	in.	36	48
	mm	914	1219
K	in.	4-3/4	4-3/4
	mm	121	121
L	in.	45-1/2	57-1/2
	mm	1156	1461
M	in.	45-1/2	57-1/2
	mm	1156	1461
N	in.	10-1/8	11-1/8
	mm	257	283
Duct Size	in.	18 x 36	24 x 48
	mm	457 x 914	610 x 1219

FLUSH CEILING DIFFUSER



Model Number		FD11-185S	FD11-275
A	in.	47-5/8	59-5/8
	mm	1210	1514
B	in.	47-5/8	59-5/8
	mm	1210	1514
C	in.	29-1/4	35-1/4
	mm	743	895
D	in.	45	57
	mm	1143	1148
E	in.	45	57
	mm	1143	1448
F	in.	4-1/2	4-1/2
	mm	114	114
G	in.	18	24
	mm	457	610
H	in.	2-1/4	2-1/4
	mm	57	57
J	in.	36	48
	mm	914	1219
K	in.	4-1/2	4-1/2
	mm	114	114
Duct Size	in.	18 x 36	24 x 48
	mm	457 x 914	610 x 1219

REVISIONS

Section	Description
Electrical/Electric Heat Data	Updated for 180 and 240 models. New data for LCH180H4V and LCH240H4V Variable Air Volume (VAV) models.
Specifications	New Models - LCH180H4V and LCH240H4V Variable Air Volume (VAV) models.



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