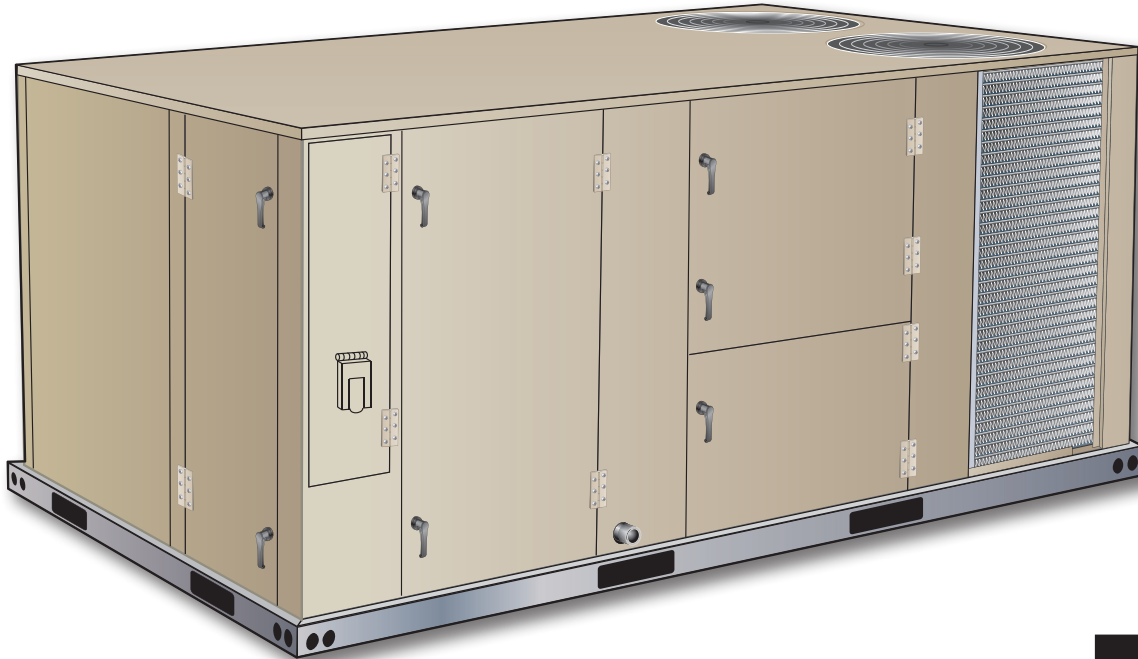


PRODUCT SPECIFICATIONS

Bulletin No. LCH-092-150 (6/2016)

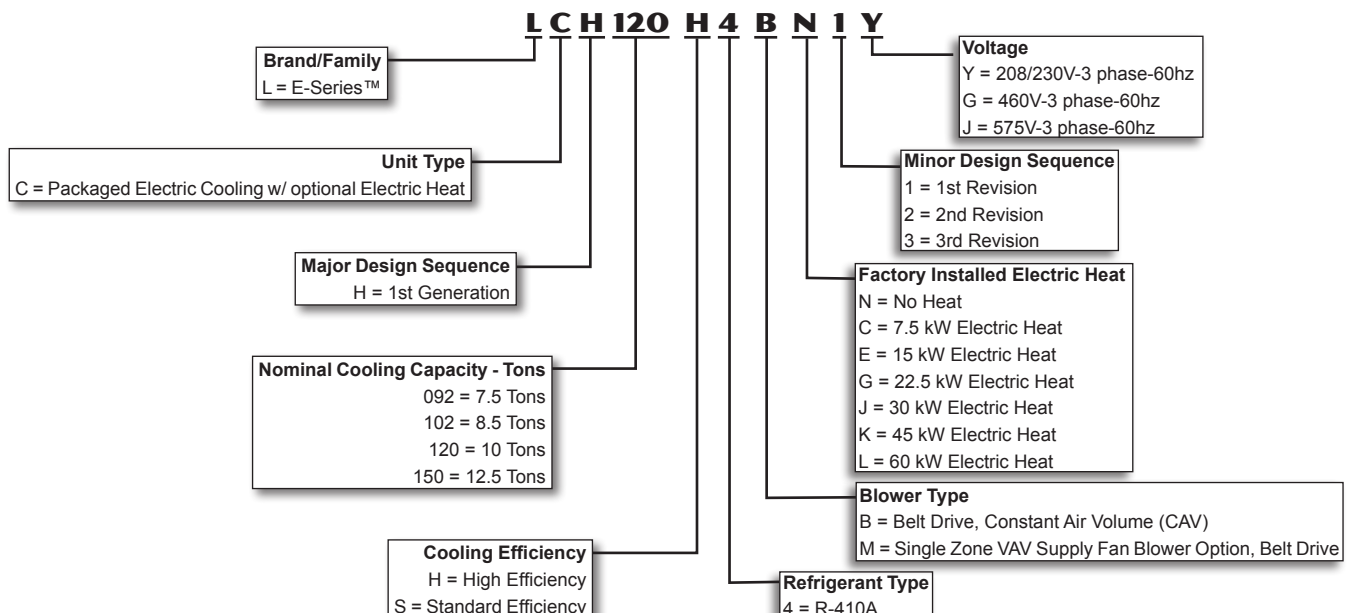


**ASHRAE 90.1
COMPLIANT**

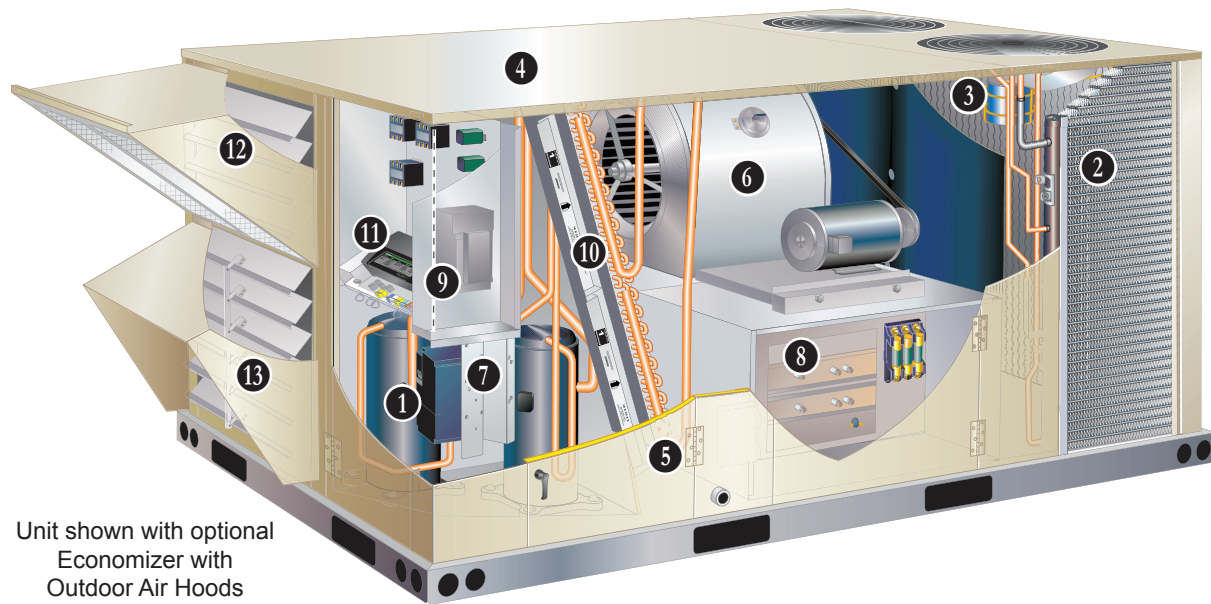


7.5 to 12.5 Tons
Net Cooling Capacity – 90,000 to 136,000 Btuh
Optional Electric Heat - 7.5 to 60 kW

MODEL NUMBER IDENTIFICATION



FEATURES AND BENEFITS



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

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

Intelli-Guide™ Control System

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



WireRight™ System

The SmartWire 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 340/360-2007.

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 90.1-2010 energy efficiency compliant and meet or exceed requirements of Section 6.8.

VAV models meet California Code of Regulations, Title 24 and ASHRAE 90.1-2010 Section 6.4.3.10 requirements for staged airflow.

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

The ENERGY STAR® Partner of the Year Award signifies that Allied has made outstanding contributions to design energy efficient units that will lower energy bills, while meeting industry standards for comfort and indoor air quality.

ISO 9001 Registered
Manufacturing Quality System.

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 on 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.

Thermal Expansion Valves (High Efficiency Models)

Assures optimal performance throughout the application range.

Removable element head.

Refrigerant Metering Orifice (Standard Efficiency Models)

Accurately meters refrigerant in system.

Refrigerant control is accomplished by exact sizing of refrigerant metering orifice.

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.

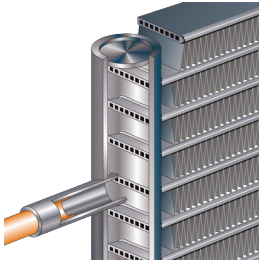
FEATURES AND BENEFITS

COOLING SYSTEM (continued)

2 Eco-last™ Coil System

Condenser coil features lightweight, all aluminum brazed fin construction.

Constructed of three components: a flat extrusion tube, fins in-between the flat extrusion tube and two refrigerant manifolds.



Eco-last™ Coil System Features:

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

Face-split design.

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

Evaporator Coil

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

Cross row circuiting with rifled copper tubing optimizes both sensible and latent cooling capacity.

Condensate Drain Pan

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

Side or bottom drain connections.

Reversible to allow connection at back of unit.

3 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 - Required if Dehumidification System is ordered.

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

Available in copper or PVC.

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

Drain Pan Overflow Switch

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

FEATURES AND BENEFITS

CABINET

4 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 shipped in downflow (vertical) configuration, can be field converted to horizontal airflow with optional Horizontal Discharge Kit.

Duct Flanges

Provided for horizontal duct attachment.

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.

5 Hinged Access Panels

Hinged tool-less access panels are provided for the filter section, blower/heating 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 or Field Installed

Return Air Adaptor Plate

For same size LC/LG/LH and TC/TG/TH unit replacement.

Installs on return air opening in unit to match return air opening on existing roof curbs. Also see Accessory Air Resistance table.

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 (Humiditrol)
- Painted blower housing
- Painted base

Outdoor Corrosion Protection:

- Coated coil
- Painted 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 Discharge Kit

Consists of duct covers to block off downflow supply and return air openings for horizontal applications.

Also includes return air duct flanges for end return air when economizer is used in horizontal applications.

NOTE - When configuring unit for horizontal application with economizer, a separate Horizontal Barometric Relief Damper with Hood must be ordered separately for installation in the return air duct.

6 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.

Required Selections

Select Constant Air Volume (CAV) or Single Zone VAV Supply Fan Supply Air Blower Option

On Constant Air Volume (CAV) models, the supply air blower will provide a constant volume of air.

On Single Zone VAV Supply Fan supply air blower option models the supply air blower 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 Fan 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 Supply Fan units should not be set below 220 cfm/nominal full load ton to reduce the risk of evaporator coil freeze-up.

FEATURES AND BENEFITS

BLOWER (continued)

- 7 Utilizes a Variable Frequency Drive (VFD) to stage the supply 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 an ECTO parameter in the Intelli-guide Unit Controller. Unit is shipped from the factory with preset airflow.

The Single Zone VAV Supply Fan supply air blower option can be ordered with or without an Electronic Bypass Control. If equipped with the bypass control the Single Zone VAV Supply Fan features manual (default) or 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.

ELECTRICAL

WireRight™ System

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

Electrical Plugs

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

Required Selections

Voltage Choice

Specify when ordering base unit.

Options/Accessories

Factory Installed

Circuit Breakers

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

Phase/Voltage Detection (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 option is ordered.

Factory or Field Installed

Disconnect Switch

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

FEATURES AND BENEFITS

ELECTRICAL (continued)

- 8 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.
- 9 GFI Service Outlets (2)**
115V ground fault circuit interrupter (GFCI) type, non-powered, field-wired.

Field Installed

GFI Weatherproof Cover

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

INDOOR AIR QUALITY

- 10 Air Filters**
Disposable 2-inch filters furnished as standard.

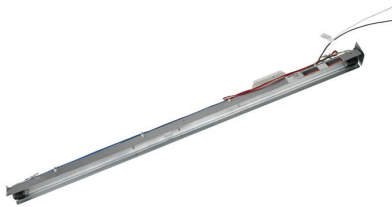
Options/Accessories

Factory or Field Installed

Healthy Climate® High Efficiency Air Filters

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

Healthy Climate® UVC Germicidal Lamps



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 208/230V power supply. Step-down transformer must be field supplied when used with 460V and 575V rooftop units.

Magnetic safety interlock terminates power when access panels are removed.

Approved by ETL.

Field Installed

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.

Indoor Air Quality (CO₂) Sensors

Monitors CO₂ levels, reports to the Intelli-guide™ Unit Controller which adjusts economizer dampers as needed.

11 INTELLI-GUIDE CONTROLLER



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

Unit 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 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.

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.

Permanent Diagnostic Code Storage

Field Changeable Control Setpoints - Over 200 different control setpoints.

Indoor Air Quality Input - Demand Control Ventilation ready

Low Ambient Controls - Cooling operation down to 40°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.

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 zone 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.

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

NOTE - See separate Intelli-guide Control System Product Specifications Bulletin for additional information.

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 - For use with PC with optional 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.

Controls Options

Factory or Field Installed

Fresh Air Tempering

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

Smoke Detector

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

Interoperability via BACnet® or LonTalk® Protocols

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

OPTIONS / ACCESSORIES

Controls Options (continued)

Commercial Control Systems

Network Control System

Complete building automation control system for single or multi-zone applications. Options include local interface, software for local or remote communication, and hardware for networking other control functions. See Network Control System Product Specifications Bulletin for details.

Aftermarket DDC

Novar® 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.

12 ECONOMIZER OPTIONS

Standard and High Performance Models available.

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)

Downflow or Horizontal with Outdoor Air Hood.

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

- 13 Downflow Barometric Relief Dampers with Exhaust Hood is also furnished.

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.

ASHRAE 90.1-2010 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 temperature with return air. When the outdoor air is below the configured setpoint and cooler than return air, the controller activates the economizer.

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

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.

OPTIONS / ACCESSORIES

ECONOMIZER OPTIONS **(continued)**

Field Installed

Outdoor Air CFM Control

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

NOTE - Not available with Demand Control Ventilation (CO₂ Sensor) or Building Pressure Control.

Building Pressure Control

Maintains constant building pressure level.

Using information from a differential pressure between the outdoor air and the building air, the Prodigy® 2.0 unit controller changes the economizer position to help maintain a constant building pressure.

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

EXHAUST OPTIONS

Factory or Field Installed

Power Exhaust Fans

Installs 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 and Downflow Barometric Relief Dampers. Fan is 20 in. diameter with 5 blades (K1PWRE10B) WITH 1/3 hp motor.

Field Installed

Horizontal Low Profile 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 exhaust hood furnished.

Requires Horizontal Discharge Kit.

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 a slide damper.

Maximum mixed air temperature in cooling mode: 100°F.

ROOF CURBS

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

Hybrid Roof Curbs, Downflow

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.

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.

OPTIONS / ACCESSORIES

DEHUMIDIFICATION SYSTEM

NOTE - Not available with Eco-last™ Coil System. Conventional Fin/Tube condenser coil must be ordered as a factory option.

Factory installed option designed to control humidity.

Provides dehumidification on demand using ASHRAE 90.1 recommended method for comfort conditioning humidity control.

Unit comes equipped with one row reheat coil, solenoid valve and humidity controller.

In addition to a thermostat or room sensor used for conventional operation, a humidity sensor is required and must be located in the occupied space. Remote Mounted Humidity Sensor Kit is required for field installation.

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.

For Network Control Panel (NCP) applications, the humidity setpoint can be adjusted at the NCP.

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.

NOTE - 150 models ordered with the Dehumidification option are equipped with factory installed expansion valves.

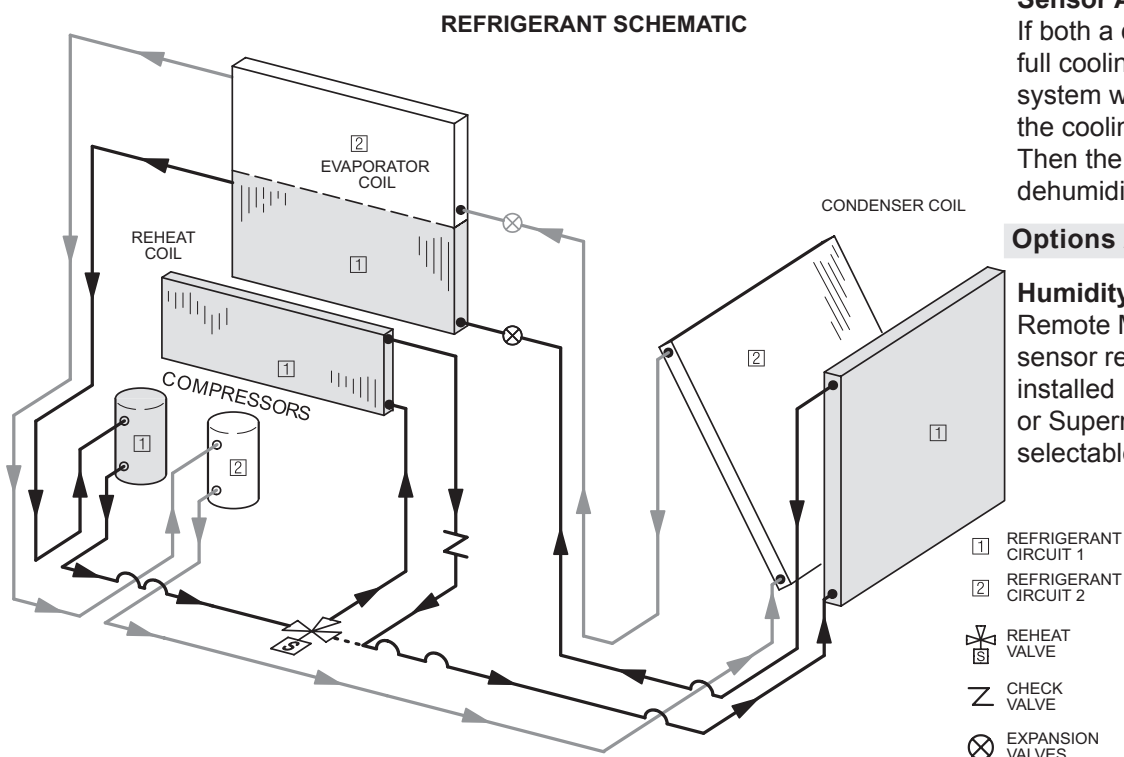
Dehumidification and Cooling Demand (Thermostat/Room Sensor Application)

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.



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 OPERATION WITH 2-STAGE THERMOSTAT (2 COOL AND 2 HEAT STAGES, Y1, Y2, W1, W2)

SUPPLY AIR BLOWER SPEED

Unit has following supply air blower speed setting:

- 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

Cooling - Thermostat Mode (Y1, Y2)

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 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 rooftop unit 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:

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 compressor operates, supply air blower operates at high cooling speed, and the reheat valve is energized.

Y1 Demand With A Call For Dehumidification:

All compressors operate, supply air blower operates at high cooling speed and the reheat valve is energized.

Y2 Demand With A Call For Dehumidification:

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

SEQUENCE OF OPERATION - SINGLE ZONE VAV SUPPLY FAN MODELS

UNIT OPERATION WITH 3-STAGE THERMOSTAT OR ZONE SENSOR (3 COOL AND 2 HEAT STAGES, Y1, Y2, Y3 AND W1, W2)

SUPPLY AIR BLOWER SPEED

Unit has following supply air blower speed setting:

- 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

Cooling - Thermostat or Zone Sensor Mode (Y1, Y2, Y3)

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 providing maximum cooling capacity. After compressors are energized the economizer stays at maximum open.

Y3 Demand:

Compressors 1 and 2 are energized while 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 rooftop unit 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 or 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 demand:

1st stage compressor operates, supply air blower operates at high cooling speed, and the reheat valve is energized.

Y1 Demand With A Call For Dehumidification:

All compressors operate, supply air blower operates at high cooling speed and the reheat valve is energized.

Y2 Or Y3 Demand With A Call For Dehumidification:

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

SEQUENCE OF OPERATION - SINGLE ZONE VAV SUPPLY FAN MODELS

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 or 60 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

Power exhaust blower operates when economizer outdoor air dampers are 50% open (adjustable) and when supply air blower speed is above 70% (adjustable) of full speed.

OPTIONS / ACCESSORIES

Item Description	Model Number	Catalog Number	Unit Model No			
			092	102	120	150
COOLING SYSTEM						
Condensate Drain Trap	PVC - C1TRAP20AD2	76W26	OX	OX	OX	OX
	Copper - C1TRAP10AD2	76W27	OX	OX	OX	OX
Conventional Fin/Tube Condenser Coil (replaces Eco-last™ Coil System)		Factory	O	O	O	O
Corrosion Protection		Factory	O	O	O	O
Drain Pan Overflow Switch	E1SNSR71AD1	68W88	OX	OX	OX	OX
Refrigerant Type		R-410A	O	O	O	O
Service valves (not for Eco-last™ Coil System or Dehumidification equipped units)		Factory	O	O	O	O
BLOWER - SUPPLY AIR						
Blower Option	CAV (Constant Air Volume)	Factory	O	O	O	O
	Single Zone VAV Supply Fan blower option (With VFD Bypass Control)	Factory	O	O	O	O
	Single Zone VAV Supply Fan blower option (Without VFD Bypass Control)	Factory	O	O	O	O
Motors - Constant Air Volume (CAV)	Belt Drive (standard efficiency) - 2 hp	Factory	O	O	O	O
	Belt Drive (standard or high efficiency) - 3 hp	Factory	O	O	O	O
	Belt Drive (standard efficiency) - 5 hp	Factory	O	O	O	O
Motors - Single Zone VAV Supply Fan	Belt Drive (standard efficiency) - 2 hp	Factory	O	O	O	O
	Belt Drive (standard efficiency) - 3 hp	Factory	O	O	O	O
	Belt Drive (standard efficiency) - 5 hp	Factory	O	O	O	O
Drive Kits	Kit #1 590-890 rpm	Factory	O	O	O	O
See Blower Data Tables for selection	Kit #2 800-1105 rpm	Factory	O	O	O	O
	Kit #3 795-1195 rpm	Factory	O	O	O	O
	Kit #4 730-970 rpm	Factory	O	O	O	O
	Kit #5 940-1200 rpm	Factory	O	O	O	O
	Kit #6 1015-1300 rpm	Factory	O	O	O	O
	Kit #7 730-970 rpm	Factory	O	O	O	O
	Kit #8 940-1200 rpm	Factory	O	O	O	O
	Kit #9 1015-1300 rpm	Factory	O	O	O	O
	Kit #10 900-1135 rpm	Factory	O	O	O	O
	Kit #11 1040-1315 rpm	Factory	O	O	O	O
	Kit #12 1125-1425 rpm	Factory	O	O	O	O
		Blower Belt Auto-Tensioner	Factory	O	O	O
CABINET						
Combination Coil/Hail Guards	Eco-last Coil System - C1GARD52B-1	13T05	X	X	X	X
	Conventional Fin/Tube Condenser Coil - E1GARD51B-1	13T04	X	X	X	X
Horizontal Discharge Kit	K1HECK00B-1	51W25	X	X	X	X
Return Air Adaptor Plate (for LC/LG/LH and TC/TG/TH unit replacement)	C1CONV10B-1	54W96	OX	OX	OX	OX
CONTROLS						
Blower Proving Switch	C1SNSR35FF1	53W65	OX	OX	OX	OX
Commercial Controls	Building Automation System	Factory	X	X	X	X
	Intelli-guide™ System - BACnet® Module - C0CTRL60AE1L	59W51	OX	OX	OX	OX
	Intelli-guide™ System - LonTalk® Module - C0CTRL65FF1	54W27	OX	OX	OX	OX
	Novar® ETM-2051 - E0CTRL30B1	64W73	OX	OX	OX	OX
	Novar® LSM	Factory	O	O	O	O
General Purpose Control Kit	E1GPBK30C1	13J78	X	X	X	X
Dirty Filter Switch	E1SNSR55B-1	53W67	OX	OX	OX	OX
Fresh Air Tempering	C1SNSR75AD1	58W63	OX	OX	OX	OX
Smoke Detector - Supply or Return (Power board and one sensor)	C1SNSR44B-1	53W80	OX	OX	OX	OX
Smoke Detector - Supply and Return (Power board and two sensors)	C1SNSR43B-1	53W81	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			
			092	102	120	150
INDOOR AIR QUALITY						
Air Filters						
Healthy Climate® High Efficiency Air Filters	MERV 8 - C1FLTR15B-1	50W61	OX	OX	OX	OX
20 x 25 x 2 (Order 4 per unit)	MERV 13 - C1FLTR40B-1	52W41	OX	OX	OX	OX
Replacement Media Filter With Metal Mesh Frame (includes non-pleated filter media)	C1FLTR30B-1-	Y3063	X	X	X	X
Indoor Air Quality (CO ₂) Sensors						
Sensor - Wall-mount, off-white plastic cover with LCD display	C0SNSR50AE1L	77N39	X	X	X	X
Sensor - Wall-mount, off-white plastic cover, no display	C0SNSR52AE1L	87N53	X	X	X	X
Sensor - Black plastic case with LCD display, rated for plenum mounting	C0SNSR51AE1L	87N52	X	X	X	X
Sensor - Wall-mount, black plastic case, no display, rated for plenum mounting	C0MISC19AE1	87N54	X	X	X	X
CO ₂ Sensor Duct Mounting Kit - for downflow applications	C0MISC19AE1-	85L43	X	X	X	X
Aspiration Box - for duct mounting non-plenum rated CO ₂ sensors (87N53 or 77N39)	C0MISC16AE1-	90N43	X	X	X	X
UVC Germicidal Lamps						
¹ Healthy Climate® UVC Light Kit (208/230v-1ph)	C1UVCL10B-1	54W62	OX	OX	OX	OX
CONDENSER REHEAT OPTION						
Humiditrol Dehumidification Option (NOTE - Not available with Eco-last™ Coil System. Conventional Fin/Tube condenser coil must be ordered as a factory option)		Factory	O	O	O	O
Humidity Sensor Kit, Remote mounted (required)	C0SNSR31AE-1	17M50	X	X	X	X
ELECTRICAL						
Voltage 60 hz	208/230V - 3 phase	Factory	O	O	O	O
	460V - 3 phase	Factory	O	O	O	O
	575V - 3 phase	Factory	O	O	O	O
HACR Circuit Breakers		Factory	O	O	O	O
Disconnect Switch - See Electrical/Electric Heat tables for selection	80 amp - C1DISC080B-1	54W56	OX	OX	OX	OX
	150 amp - C1DISC150B-1	54W57	OX	OX	OX	OX
GFI Service Outlets	15 amp non-powered, field-wired (208/230V, 460V only) LTAGFIK10/15	74M70	OX	OX	OX	OX
	20 amp non-powered, field-wired (575V only) C1GFCI20FF1	67E01	OX	OX	OX	OX
Weatherproof Cover for GFI	C1GFCI99FF1	10C89	X	X	X	X
Phase/Voltage Detection (Optional for CAV options only, furnished with Single Zone VAV Supply Fan option)		Factory	O	O	O	O
ELECTRIC HEAT						
7.5 kW	208/230V-3ph - C1EH0075B-1Y	56W38	OX	OX		
	460V-3ph - C1EH0075B-1G	56W39	OX	OX		
	575V-3ph - C1EH0075B-1J	56W40	OX	OX		
15 kW	208/230V-3ph - C1EH0015B-1Y	56W41	OX	OX	OX	OX
	460V-3ph - C1EH0150B-1G	56W42	OX	OX	OX	OX
	575V-3ph - C1EH0150B-1J	56W43	OX	OX	OX	OX
22.5 kW	208/230V-3ph - C1EH0225B-1Y	56W44	OX	OX	OX	OX
	460V-3ph - C1EH0225B-1G	56W45	OX	OX	OX	OX
	575V-3ph - C1EH0225B-1J	56W46	OX	OX	OX	OX
30 kW	208/230V-3ph - C1EH0300B-1Y	56W47	OX	OX	OX	OX
	460V-3ph - C1EH0300B-1G	56W48	OX	OX	OX	OX
	575V-3ph - C1EH0300B-1J	56W49	OX	OX	OX	OX
45 kW	208/230V-3ph - C1EH0450B-1Y	56W50	OX	OX	OX	OX
	460V-3ph - C1EH0450B-1G	56W51	OX	OX	OX	OX
	575V-3ph - C1EH0450B-1J	56W52	OX	OX	OX	OX
60 kW	208/230V-3ph - C1EH0600B-1Y	55W02			OX	OX
	460V-3ph - C1EH0600B-1G	55W03			OX	OX
	575V-3ph - C1EH0600B-1J	55W04			OX	OX

¹ Lamps operate on 110-230V single-phase power supply. Step-down transformer may be ordered separately for 460V and 575V units. Alternately, 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			
			092	102	120	150
ECONOMIZER						
Standard Economizer (Not for Title 24)						
Standard Economizer	E1ECON20B-2	13U45	OX	OX	OX	OX
Downflow or Horizontal - Includes Outdoor Air Hood and Downflow						
Barometric Relief Dampers with Exhaust Hood						
Order Horizontal Barometric Relief Dampers separately						
High Performance Economizer (Approved for California Title 24 Building Standards)						
High Performance Economizer	E1ECON17B-1	10U59	OX	OX	OX	OX
Downflow or Horizontal - Includes Outdoor Air Hood and Downflow						
Barometric Relief Dampers with Exhaust Hood						
Order Horizontal Barometric Relief Dampers separately						
Horizontal Barometric Relief Dampers						
Horizontal Low Profile Barometric With Exhaust Hood	LAGEDH03/15	53K04	X	X	X	X
Economizer Controls (Not for Title 24)						
Differential Enthalpy	Order 2 - C1SNSR64FF1	53W64	OX	OX	OX	OX
Sensible Control	Sensor is Furnished	Factory	O	O	O	O
Single Enthalpy	C1SNSR64FF1	53W64	OX	OX	OX	OX
Building Pressure Control	E1GPBK20C1	13J77	X	X	X	X
Outdoor Air CFM Control	E1GPBK10C1	13J76	X	X	X	X
Global Control	Sensor Field Provided	Factory	O	O	O	O
OUTDOOR AIR						
Outdoor Air Dampers						
Motorized Dampers (Hood furnished)	C1DAMP20B-1	14G28	OX	OX	OX	OX
Manual Dampers (Hood furnished)	C1DAMP10B-2	14G29	OX	OX	OX	OX
POWER EXHAUST						
Standard Static	208/230V-3ph - K1PWRE10B-1Y	53W44	OX	OX	OX	OX
	460V-3ph - K1PWRE10B-1G	53W45	OX	OX	OX	OX
	575V-3ph - K1PWRE10B-1J	53W46	OX	OX	OX	OX
ROOF CURBS						
Hybrid Roof Curbs, Downflow						
8 in. height	C1CURB70B-1	11F54	X	X	X	X
14 in. height	C1CURB71B-1	11F55	X	X	X	X
18 in. height	C1CURB72B-1	11F56	X	X	X	X
24 in. height	C1CURB73B-1	11F57	X	X	X	X
Adjustable Pitch Curb						
14 in. height	C1CURB55B-1	54W50	X	X	X	X
CEILING DIFFUSERS						
Step-Down - Order one	RTD11-95S	13K61	X			
	RTD11-135S	13K62		X	X	
	RTD11-185S	13K63				X
Flush - Order one	FD11-95S	13K56	X			
	FD11-135S	13K57		X	X	
	FD11-185S	13K58				X
Transitions (Supply and Return) - Order one	C1DIFF30B-1	12X65	X			
	C1DIFF31B-1	12X66		X	X	
	C1DIFF32B-1	12X67				X

NOTE - Catalog and model numbers shown are for ordering field installed accessories.
OX = Configure To Order (Factory Installed) or Field Installed
O = Configure To Order (Factory Installed)
X = Field Installed

SPECIFICATIONS

General Data			Nominal Tonnage	7.5 Ton	7.5 Ton	8.5 Ton	8.5 Ton
			Model Number	LCH092H4B	LCH092H4M	LCH102H4B	LCH102H4M
			Efficiency Type	High	High	High	High
			Blower Type	Constant Air Volume CAV	Single Zone VAV Supply Fan	Constant Air Volume CAV	Single Zone VAV Supply Fan
Cooling Performance	Gross Cooling Capacity - Btuh		93,000	93,000	103,800	103,800	
	¹ Net Cooling Capacity - Btuh		90,000	90,000	100,000	100,000	
	AHRI Rated Air Flow - cfm		3000	2800	3400	3400	
	Total Unit Power - kW		7.5	7.5	8.1	8.1	
	¹ EER (Btuh/Watt)		12.7	12.7	12.4	12.4	
	² IEER (Btuh/Watt)		13.0	14.0	12.9	14.0	
	Refrigerant Type		R-410A	R-410A	R-410A	R-410A	
Refrigerant Charge	Eco-last™ Coil System	Circuit 1	6 lbs. 13 oz.	6 lbs. 13 oz.	6 lbs. 8 oz.	6 lbs. 8 oz.	
		Circuit 2	7 lbs. 2 oz.	7 lbs. 2 oz.	6 lbs. 15 oz.	6 lbs. 15 oz.	
	Conventional Fin/Tube Coil Option	Circuit 1	12 lbs. 14 oz.	12 lbs. 14 oz.	13 lbs. 8 oz.	13 lbs. 8 oz.	
		Circuit 2	11 lbs. 3 oz.	11 lbs. 3 oz.	12 lbs. 7 oz.	12 lbs. 7 oz.	
	Conventional Fin/Tube With Dehumidification	Circuit 1	16 lbs. 6 oz.	16 lbs. 6 oz.	17 lbs. 0 oz.	17 lbs. 0 oz.	
		Circuit 2	11 lbs. 3 oz.	11 lbs. 3 oz.	12 lbs. 7 oz.	12 lbs. 7 oz.	
Electric Heat Available - See page 16				7.5,15,22.5,30 & 45 KW			
Compressor Type (number)			Scroll (2)	Scroll (2)	Scroll (2)	Scroll (2)	
Outdoor Coils	Net face area (total) - sq. ft.		28.0 (29.33)	28.0 (29.33)	28.0 (29.33)	28.0 (29.33)	
	Eco-last™ Number of rows		1 (3)	1 (3)	1 (3)	1 (3)	
	(Fin/Tube) Fins per inch		20 (20)	20 (20)	20 (20)	20 (20)	
Outdoor Coil Fans	Motor - (No.) hp		(2) 1/3	(2) 1/3	(2) 1/3	(2) 1/3	
	Motor rpm		1075	1075	1075	1075	
	Total Motor watts		800	800	800	800	
	Diameter - (No.) in.		(2) 24	(2) 24	(2) 24	(2) 24	
	Number of blades		3	3	3	3	
	Total Air volume - cfm		8800	8800	8800	8800	
Indoor Coil	Net face area (total) - sq. ft.		12.78	12.78	12.78	12.78	
	Tube diameter - in.		3/8	3/8	3/8	3/8	
	Number of rows		4	4	4	4	
	Fins per inch		14	14	14	14	
	Drain connection - Number and size		(1) 1 in. NPT coupling				
Expansion device type			Balance port TXV, removable head				
³ Indoor Blower and Drive Selection	Nominal motor output		2 hp, 3 hp, 5 hp				
	Maximum usable motor output (US Only)		2.3 hp, 3.45 hp, 5.75 hp				
	Motor - Drive kit number		2 hp Kit 1 590-890 rpm (std. and high efficiency) Kit 2 800-1105 rpm (std. and high efficiency) Kit 3 795-1195 rpm (std. and high efficiency) 3 hp Kit 4 730-970 rpm (std. efficiency) Kit 5 940-1200 rpm (std. efficiency) Kit 6 1015-1300 rpm (std. efficiency) Kit 7 730-970 rpm (high efficiency) Kit 8 940-1200 rpm (high efficiency) Kit 9 1015-1300 rpm (high efficiency) 5 hp Kit 10 900-1135 rpm (std. efficiency) Kit 11 1040-1315 rpm (std. efficiency) Kit 12 1125-1425 rpm (std. efficiency)				
	Blower wheel nominal diameter x width - in.		(1) 15 X 15	(1) 15 X 15	(1) 15 X 15	(1) 15 X 15	
Filters	Type of filter		Disposable				
	Number and size - in.		(4) 20 x 25 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 certified and 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 Supply Fan option are limited to a motor service factor of 1.0.

SPECIFICATIONS

General Data			Nominal Tonnage	10 Ton	10 Ton	12.5 Ton	12.5 Ton
			Model Number	LCH120H4B	LCH120H4M	LCH150S4B	LCH150S4M
			Efficiency Type	High	High	Standard	Standard
			Blower Type	Constant Air Volume CAV	Single Zone VAV Supply Fan	Constant Air Volume CAV	Single Zone VAV Supply Fan
Cooling Performance	Gross Cooling Capacity - Btuh			122,000	122,000	142,600	142,600
	¹ Net Cooling Capacity - Btuh			118,000	118,000	138,000	138,000
	AHRI Rated Air Flow - cfm			3600	3300	4100	4100
	Total Unit Power - kW			9.9	9.8	12.3	12.3
	¹ EER (Btuh/Watt)			12.2	12.2	11.0	11.0
	² IEER (Btuh/Watt)			13.2	14.0	11.6	13.1
	Refrigerant Type			R-410A	R-410A	R-410A	R-410A
Refrigerant Charge	Eco-last™ Coil System	Circuit 1	7 lbs. 4 oz.	7 lbs. 4 oz.	7 lbs. 4 oz.	7 lbs. 4 oz.	
		Circuit 2	7 lbs. 8 oz.	7 lbs. 8 oz.	6 lbs. 12 oz.	6 lbs. 12 oz.	
	Conventional Fin/Tube Coil Option	Circuit 1	14 lbs. 8 oz.	14 lbs. 8 oz.	17 lbs. 8 oz.	17 lbs. 8 oz.	
		Circuit 2	13 lbs. 8 oz.	13 lbs. 8 oz.	12 lbs. 12 oz.	12 lbs. 12 oz.	
	Conventional Fin/Tube With Dehumidification	Circuit 1	18 lbs. 0 oz.	18 lbs. 0 oz.	18 lbs. 8 oz.	18 lbs. 8 oz.	
		Circuit 2	13 lbs. 8 oz.	13 lbs. 8 oz.	14 lbs. 8 oz.	14 lbs. 8 oz.	
	Electric Heat Available - See page 16				15,22.5,30,45 & 60 KW		
Compressor Type (number)			Scroll (2)	Scroll (2)	Scroll (2)	Scroll (2)	
Outdoor Coils	Net face area (total) - sq. ft.		28.0 (29.33)	28.0 (29.33)	28.0 (29.33)	28.0 (29.33)	
	Eco-last™ Number of rows		1 (3)	1 (3)	1 (3)	1 (3)	
	(Fin/Tube) Fins per inch		20 (20)	20 (20)	20 (20)	20 (20)	
Outdoor Coil Fans	Motor - (No.) hp		(2) 1/3	(2) 1/3	(2) 1/2	(2) 1/2	
	Motor rpm		1075	1075	1075	1075	
	Total Motor watts		800	800	1050	1050	
	Diameter - (No.) in.		(2) 24	(2) 24	(2) 24	(2) 24	
	Number of blades		3	3	3	3	
	Total Air volume - cfm		8800	8800	9700	9700	
	Indoor Coil	Net face area (total) - sq. ft.		13.54	13.54	13.54	13.54
Tube diameter - in.		3/8	3/8	3/8	3/8		
Number of rows		4	4	4	4		
Fins per inch		14	14	14	14		
Drain connection - Number and size		(1) 1 in. NPT coupling					
Expansion device type		Balance port TXV, removable head		⁵ Refrigerant Metering Orifice (RFC)			
³ Indoor Blower and Drive Selection		Nominal motor output		2 hp, 3 hp, 5 hp			
	Maximum usable motor output (US Only)		2.3 hp, 3.45 hp, 5.75 hp				
	Motor - Drive kit number		2 hp Kit 1 590-890 rpm (std. and high efficiency) Kit 2 800-1105 rpm (std. and high efficiency) Kit 3 795-1195 rpm (std. and high efficiency) 3 hp Kit 4 730-970 rpm (std. efficiency) Kit 5 940-1200 rpm (std. efficiency) Kit 6 1015-1300 rpm (std. efficiency) Kit 7 730-970 rpm (high efficiency) Kit 8 940-1200 rpm (high efficiency) Kit 9 1015-1300 rpm (high efficiency) 5 hp Kit 10 900-1135 rpm (std. efficiency) Kit 11 1040-1315 rpm (std. efficiency) Kit 12 1125-1425 rpm (std. efficiency)				
	Blower wheel nominal diameter x width - in.		(1) 15 X 15	(1) 15 X 15	(1) 15 X 15	(1) 15 X 15	
	Filters	Type of filter	Disposable				
		Number and size - in.	(4) 20 x 25 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 certified and 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.

⁵ 150 models ordered with the Dehumidification option are equipped with factory installed expansion valves.

NOTE - Units equipped with Single Zone VAV Supply Fan 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 Engineering Data section.

7.5 TON HIGH EFFICIENCY LCH092H4B (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	2400	48.6	1.95	0.63	0.76	0.93	46.8	2.21	0.64	0.78	0.95	44.9	2.49	0.65	0.80	0.98	42.9	2.81	0.66	0.83	1.00				
	3000	51.0	1.96	0.67	0.85	1.00	49.1	2.22	0.68	0.88	1.00	47.2	2.50	0.70	0.90	1.00	45.0	2.82	0.72	0.94	1.00				
	3600	52.9	1.97	0.72	0.95	1.00	50.9	2.22	0.74	0.97	1.00	48.9	2.50	0.76	0.99	1.00	46.7	2.82	0.79	1.00	1.00				
67°F	2400	51.3	1.96	0.50	0.61	0.72	49.5	2.22	0.51	0.62	0.73	47.6	2.50	0.51	0.63	0.76	45.5	2.82	0.52	0.64	0.78				
	3000	53.9	1.97	0.53	0.65	0.80	51.9	2.22	0.53	0.66	0.83	49.7	2.50	0.55	0.67	0.86	47.7	2.82	0.56	0.69	0.89				
	3600	55.9	1.98	0.55	0.70	0.90	53.7	2.23	0.56	0.71	0.93	51.5	2.51	0.57	0.74	0.96	48.9	2.83	0.58	0.76	0.99				
71°F	2400	54.1	1.97	0.39	0.49	0.59	52.2	2.22	0.39	0.49	0.60	50.2	2.50	0.39	0.51	0.60	48.0	2.82	0.39	0.51	0.61				
	3000	56.8	1.98	0.39	0.51	0.63	54.7	2.23	0.40	0.52	0.64	52.4	2.51	0.40	0.53	0.65	50.1	2.83	0.41	0.55	0.67				
	3600	58.6	1.99	0.41	0.54	0.67	56.5	2.24	0.41	0.55	0.69	54.1	2.51	0.42	0.56	0.71	51.5	2.83	0.42	0.57	0.73				

7.5 TON HIGH EFFICIENCY LCH092H4B (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	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	2400	87.9	5.19	.69	.83	.98	84.0	5.86	.70	.85	1.00	79.8	6.64	.72	.88	1.00	75.2	7.55	.74	.92	1.00				
	3000	92.3	5.20	.74	.92	1.00	88.0	5.87	.76	.95	1.00	83.5	6.64	.78	.98	1.00	78.7	7.54	.81	1.00	1.00				
	3600	95.6	5.21	.79	1.00	1.00	91.4	5.87	.82	1.00	1.00	87.3	6.64	.85	1.00	1.00	82.9	7.55	.88	1.00	1.00				
67°F	2400	93.0	5.20	.55	.66	.79	89.0	5.87	.55	.68	.81	84.5	6.64	.56	.69	.84	79.5	7.54	.58	.71	.87				
	3000	97.3	5.21	.58	.71	.88	93.0	5.88	.59	.73	.91	88.2	6.65	.60	.76	.94	82.8	7.54	.61	.78	.98				
	3600	100.6	5.22	.61	.77	.97	95.7	5.88	.62	.79	.99	90.8	6.65	.63	.82	1.00	85.2	7.54	.64	.86	1.00				
71°F	2400	98.2	5.21	.42	.53	.64	93.8	5.88	.42	.54	.65	89.0	6.65	.42	.54	.67	84.2	7.54	.43	.56	.69				
	3000	102.5	5.23	.43	.56	.69	97.9	5.89	.43	.58	.71	92.9	6.65	.44	.59	.73	87.5	7.54	.44	.60	.76				
	3600	105.9	5.24	.44	.60	.75	100.8	5.89	.45	.61	.77	95.4	6.65	.45	.62	.79	89.9	7.54	.46	.64	.84				

8.5 TON HIGH EFFICIENCY LCH102H4B (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	2720	52.3	2.13	.62	.76	.96	50.4	2.41	.63	.78	.98	48.4	2.73	.64	.81	1.00	46.3	3.08	.65	.84	1.00				
	3400	54.8	2.14	.66	.87	1.00	52.7	2.42	.67	.90	1.00	50.6	2.73	.69	.93	1.00	48.4	3.09	.71	.97	1.00				
	4080	56.6	2.15	.72	.97	1.00	54.6	2.43	.74	.99	1.00	52.4	2.74	.77	1.00	1.00	50.3	3.09	.80	1.00	1.00				
67°F	2720	55.2	2.14	.49	.60	.71	53.2	2.42	.50	.61	.73	51.2	2.73	.50	.62	.76	48.7	3.09	.50	.63	.79				
	3400	57.7	2.15	.52	.64	.82	55.6	2.43	.52	.65	.84	53.3	2.74	.54	.67	.88	50.9	3.09	.55	.68	.92				
	4080	59.7	2.16	.55	.69	.93	57.4	2.44	.56	.71	.96	54.9	2.74	.56	.73	.99	52.4	3.10	.57	.76	1.00				
71°F	2720	58.0	2.16	.38	.48	.58	56.1	2.43	.38	.49	.59	53.8	2.74	.38	.49	.60	51.3	3.09	.38	.50	.61				
	3400	60.7	2.16	.39	.51	.62	58.4	2.44	.39	.51	.63	56.0	2.75	.39	.53	.65	53.6	3.10	.40	.54	.67				
	4080	62.5	2.17	.40	.53	.67	60.2	2.45	.40	.55	.68	57.8	2.75	.40	.56	.71	55.0	3.10	.41	.56	.73				

8.5 TON HIGH EFFICIENCY LCH102H4B (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	2720	98.8	5.54	.70	.85	1.00	94.4	6.27	.72	.88	1.00	89.7	7.10	.73	.91	1.00	84.7	8.09	.76	.95	1.00				
	3400	103.3	5.56	.76	.95	1.00	98.6	6.27	.78	.98	1.00	93.5	7.11	.80	1.00	1.00	88.7	8.08	.83	1.00	1.00				
	4080	106.9	5.56	.82	1.00	1.00	102.6	6.28	.84	1.00	1.00	98.2	7.12	.88	1.00	1.00	93.1	8.08	.91	1.00	1.00				
67°F	2720	104.3	5.56	.55	.68	.81	99.6	6.28	.56	.69	.84	94.7	7.11	.57	.71	.87	89.3	8.08	.59	.73	.91				
	3400	108.8	5.57	.59	.74	.91	103.8	6.29	.60	.76	.94	98.5	7.12	.61	.78	.97	92.7	8.08	.62	.81	1.00				
	4080	112.0	5.58	.62	.80	.99	106.6	6.30	.63	.82	1.00	101.2	7.12	.65	.85	1.00	95.2	8.08	.66	.89	1.00				
71°F	2720	109.6	5.57	.42	.54	.66	104.7	6.29	.43	.55	.67	99.7	7.12	.43	.56	.69	94.1	8.08	.43	.58	.71				
	3400	114.3	5.59	.43	.58	.72	109.2	6.30	.44	.59	.74	103.6	7.12	.45	.60	.76	97.4	8.08	.45	.61	.78				
	4080	117.8	5.60	.45	.61	.77	112.2	6.31	.45	.62	.80	106.4	7.13	.46	.64	.83	100.0	8.08	.47	.66	.86				

RATINGS

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

10 TON HIGH EFFICIENCY LCH120H4B (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							
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	61.5	2.61	.64	.78	.95	59.3	2.96	.65	.80	.97	56.8	3.34	.66	.82	1.00	54.3	3.77	.67	.85	1.00
	4000	64.5	2.64	.68	.86	1.00	62.2	2.99	.70	.89	1.00	59.5	3.37	.71	.93	1.00	56.8	3.80	.74	.96	1.00
	4800	66.8	2.67	.73	.95	1.00	64.3	3.02	.76	.98	1.00	61.5	3.40	.78	1.00	1.00	58.8	3.83	.81	1.00	1.00
67°F	3200	64.8	2.65	.51	.62	.73	62.5	2.99	.52	.63	.75	60.0	3.38	.52	.64	.78	57.2	3.81	.53	.65	.80
	4000	68.1	2.68	.53	.66	.82	65.5	3.03	.54	.67	.84	62.7	3.41	.55	.69	.88	59.8	3.84	.56	.70	.91
	4800	70.3	2.71	.56	.70	.91	67.7	3.06	.58	.73	.94	64.7	3.44	.58	.75	.98	61.6	3.87	.60	.78	1.00
71°F	3200	68.5	2.69	.40	.50	.60	66.0	3.04	.39	.50	.61	63.4	3.42	.40	.51	.62	60.5	3.85	.40	.52	.63
	4000	71.5	2.72	.40	.52	.64	68.9	3.07	.40	.53	.65	65.9	3.46	.41	.54	.67	62.7	3.88	.41	.55	.68
	4800	73.9	2.75	.41	.55	.68	70.9	3.10	.42	.56	.70	67.9	3.48	.43	.57	.73	64.7	3.91	.43	.58	.75

10 TON HIGH EFFICIENCY LCH120H4B (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	3200	118.3	7.09	.67	.83	1.00	113.1	8.00	.68	.86	1.00	107.4	9.04	.70	.89	1.00	101.4	10.23	.72	.93	1.00
	4000	123.7	7.16	.72	.94	1.00	118.2	8.07	.75	.97	1.00	112.2	9.11	.78	1.00	1.00	106.1	10.29	.81	1.00	1.00
	4800	127.9	7.21	.79	1.00	1.00	122.7	8.13	.82	1.00	1.00	116.9	9.17	.85	1.00	1.00	111.3	10.37	.90	1.00	1.00
67°F	3200	124.8	7.17	.53	.65	.79	119.2	8.08	.54	.66	.81	113.4	9.12	.54	.68	.84	106.8	10.30	.56	.70	.89
	4000	130.2	7.24	.56	.70	.90	124.4	8.16	.57	.72	.93	118.1	9.19	.58	.75	.97	111.1	10.36	.60	.78	1.00
	4800	134.2	7.29	.59	.77	.99	127.9	8.21	.61	.80	1.00	121.0	9.23	.62	.82	1.00	114.1	10.40	.64	.87	1.00
71°F	3200	131.6	7.26	.40	.52	.63	125.7	8.17	.41	.52	.64	119.6	9.21	.41	.53	.66	112.8	10.38	.41	.55	.68
	4000	136.6	7.33	.42	.55	.68	130.6	8.24	.42	.56	.70	123.7	9.27	.43	.58	.72	116.7	10.45	.43	.59	.75
	4800	140.5	7.38	.43	.58	.74	134.1	8.29	.44	.60	.77	127.3	9.32	.44	.62	.80	119.5	10.49	.45	.63	.84

12.5 TON STANDARD EFFICIENCY LCH150S4B (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	3800	80.2	3.25	0.63	0.78	0.94	74.7	3.64	0.63	0.79	0.96	69.1	4.08	0.64	0.81	0.99	63.1	4.58	0.64	0.83	1.00
	4400	83.6	3.27	0.66	0.83	1.00	77.8	3.66	0.67	0.85	1.00	72.0	4.11	0.67	0.87	1.00	65.9	4.60	0.69	0.91	1.00
	5000	86.3	3.29	0.69	0.88	1.00	80.5	3.69	0.71	0.91	1.00	74.3	4.12	0.71	0.94	1.00	68.1	4.62	0.74	0.98	1.00
67°F	3800	85.9	3.28	0.50	0.62	0.74	80.3	3.68	0.50	0.62	0.75	74.4	4.12	0.49	0.62	0.77	68.2	4.62	0.48	0.62	0.79
	4400	89.3	3.31	0.52	0.64	0.79	83.4	3.71	0.52	0.65	0.81	77.4	4.15	0.51	0.65	0.83	71.0	4.65	0.51	0.66	0.87
	5000	92.1	3.33	0.54	0.67	0.84	86.2	3.73	0.53	0.68	0.86	79.7	4.17	0.53	0.69	0.90	73.2	4.67	0.53	0.71	0.93
71°F	3800	91.7	3.32	0.38	0.49	0.60	85.8	3.73	0.38	0.49	0.60	79.8	4.17	0.36	0.49	0.60	73.3	4.67	0.35	0.48	0.61
	4400	95.2	3.35	0.40	0.51	0.62	89.1	3.76	0.39	0.51	0.63	82.8	4.20	0.37	0.51	0.63	76.2	4.70	0.36	0.50	0.64
	5000	97.9	3.37	0.40	0.53	0.65	91.7	3.78	0.40	0.53	0.66	85.2	4.22	0.38	0.53	0.67	78.4	4.72	0.37	0.53	0.68

12.5 TON STANDARD EFFICIENCY LCH150S4B (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	3800	139.7	8.40	0.69	0.85	1.00	127.4	9.42	0.70	0.87	1.00	114.8	10.59	0.71	0.90	1.00	101.5	11.94	0.72	0.94	1.00
	4400	145.4	8.45	0.73	0.90	1.00	132.9	9.47	0.74	0.93	1.00	119.8	10.64	0.76	0.97	1.00	106.2	11.99	0.79	1.00	1.00
	5000	150.3	8.49	0.77	0.96	1.00	137.4	9.52	0.79	0.99	1.00	124.4	10.69	0.81	1.00	1.00	111.7	12.05	0.84	1.00	1.00
67°F	3800	150.3	8.49	0.53	0.67	0.82	137.9	9.52	0.53	0.68	0.84	124.7	10.69	0.52	0.69	0.86	111.1	12.04	0.51	0.71	0.90
	4400	156.2	8.55	0.56	0.71	0.87	143.3	9.57	0.55	0.72	0.89	129.7	10.75	0.55	0.74	0.93	115.4	12.10	0.55	0.76	0.97
	5000	161.1	8.59	0.58	0.75	0.92	147.6	9.62	0.58	0.77	0.95	133.7	10.79	0.59	0.79	0.99	119.1	12.14	0.59	0.82	1.00
71°F	3800	161.9	8.60	0.39	0.53	0.66	148.7	9.63	0.38	0.52	0.66	135.1	10.80	0.36	0.52	0.67	120.8	12.15	0.34	0.51	0.68
	4400	167.4	8.65	0.41	0.55	0.69	153.9	9.68	0.39	0.55	0.70	139.8	10.85	0.38	0.54	0.72	124.9	12.20	0.36	0.55	0.74
	5000	171.9	8.70	0.42	0.57	0.73	158.0	9.73	0.41	0.58	0.75	143.5	10.90	0.39	0.58	0.77	128.5	12.24	0.37	0.59	0.80

RATINGS

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

7.5 TON HIGH EFFICIENCY LCH092H4M (1ST STAGE) - SINGLE ZONE VAV SUPPLY FAN 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
63°F	1680	43.9	1.94	0.59	0.69	0.81	42.4	2.20	0.60	0.70	0.82	40.9	2.48	0.60	0.71	0.84	39.2	2.81	0.61	0.73	0.86
	2100	46.9	1.95	0.61	0.74	0.88	45.2	2.20	0.62	0.76	0.90	43.5	2.49	0.63	0.78	0.93	41.6	2.81	0.64	0.80	0.95
	2520	49.2	1.96	0.65	0.8	0.96	47.3	2.21	0.66	0.81	0.98	45.4	2.49	0.67	0.84	1.00	43.4	2.82	0.69	0.87	1.00
67°F	1680	46.6	1.95	0.48	0.56	0.65	45.2	2.20	0.48	0.57	0.66	43.5	2.49	0.48	0.58	0.68	41.7	2.81	0.49	0.58	0.69
	2100	49.6	1.96	0.49	0.59	0.70	47.8	2.21	0.50	0.59	0.72	46.0	2.49	0.50	0.60	0.73	44.0	2.81	0.51	0.61	0.75
	2520	51.9	1.96	0.51	0.62	0.76	50.1	2.22	0.52	0.63	0.77	48.1	2.50	0.52	0.64	0.79	45.9	2.82	0.53	0.66	0.82
71°F	1680	49.4	1.96	0.38	0.46	0.54	47.8	2.21	0.38	0.47	0.55	46.1	2.50	0.39	0.47	0.55	44.2	2.82	0.38	0.47	0.56
	2100	52.5	1.97	0.38	0.48	0.57	50.7	2.22	0.39	0.48	0.57	48.8	2.50	0.39	0.49	0.58	46.7	2.82	0.39	0.49	0.59
	2520	54.6	1.97	0.39	0.49	0.59	52.7	2.23	0.39	0.50	0.60	50.6	2.51	0.40	0.50	0.62	48.4	2.82	0.40	0.51	0.63

7.5 TON HIGH EFFICIENCY LCH092H4M (2ND STAGE) - SINGLE ZONE VAV SUPPLY FAN 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	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	2400	87.9	5.19	.69	.83	.98	84.0	5.86	.70	.85	1.00	79.8	6.64	.72	.88	1.00	75.2	7.55	.74	.92	1.00
	3000	92.3	5.20	.74	.92	1.00	88.0	5.87	.76	.95	1.00	83.5	6.64	.78	.98	1.00	78.7	7.54	.81	1.00	1.00
	3600	95.6	5.21	.79	1.00	1.00	91.4	5.87	.82	1.00	1.00	87.3	6.64	.85	1.00	1.00	82.9	7.55	.88	1.00	1.00
67°F	2400	93.0	5.20	.55	.66	.79	89.0	5.87	.55	.68	.81	84.5	6.64	.56	.69	.84	79.5	7.54	.58	.71	.87
	3000	97.3	5.21	.58	.71	.88	93.0	5.88	.59	.73	.91	88.2	6.65	.60	.76	.94	82.8	7.54	.61	.78	.98
	3600	100.6	5.22	.61	.77	.97	95.7	5.88	.62	.79	.99	90.8	6.65	.63	.82	1.00	85.2	7.54	.64	.86	1.00
71°F	2400	98.2	5.21	.42	.53	.64	93.8	5.88	.42	.54	.65	89.0	6.65	.42	.54	.67	84.2	7.54	.43	.56	.69
	3000	102.5	5.23	.43	.56	.69	97.9	5.89	.43	.58	.71	92.9	6.65	.44	.59	.73	87.5	7.54	.44	.60	.76
	3600	105.9	5.24	.44	.60	.75	100.8	5.89	.45	.61	.77	95.4	6.65	.45	.62	.79	89.9	7.54	.46	.64	.84

8.5 TON HIGH EFFICIENCY LCH102H4M (1ST STAGE) - SINGLE ZONE VAV SUPPLY FAN 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	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	1920	49.5	2.12	0.61	0.72	0.84	47.8	2.4	0.63	0.73	0.86	46.1	2.71	0.63	0.75	0.87	44.2	3.07	0.63	0.76	0.9
	2400	52.6	2.13	0.64	0.78	0.92	50.8	2.41	0.65	0.79	0.94	48.8	2.72	0.66	0.81	0.96	46.6	3.08	0.68	0.83	0.98
	2880	54.8	2.14	0.68	0.83	0.99	52.9	2.42	0.69	0.85	1	50.8	2.73	0.71	0.87	1	48.4	3.08	0.72	0.9	1
67°F	1920	52.3	2.13	0.5	0.59	0.69	50.7	2.41	0.51	0.6	0.7	48.8	2.72	0.51	0.6	0.71	46.9	3.08	0.51	0.61	0.72
	2400	55.4	2.14	0.52	0.62	0.73	53.6	2.42	0.52	0.63	0.75	51.5	2.73	0.52	0.64	0.77	49.3	3.08	0.53	0.65	0.79
	2880	57.8	2.15	0.53	0.65	0.79	55.8	2.43	0.53	0.66	0.81	53.6	2.73	0.54	0.68	0.83	51.2	3.09	0.56	0.7	0.87
71°F	1920	55.5	2.14	0.4	0.48	0.57	53.7	2.42	0.4	0.49	0.57	51.7	2.73	0.39	0.49	0.58	49.5	3.09	0.4	0.49	0.59
	2400	58.6	2.15	0.4	0.5	0.6	56.5	2.43	0.4	0.51	0.6	54.4	2.74	0.41	0.51	0.61	52	3.09	0.4	0.52	0.62
	2880	60.9	2.16	0.41	0.52	0.63	58.6	2.43	0.41	0.52	0.64	56.3	2.74	0.41	0.53	0.65	53.9	3.09	0.41	0.54	0.67

8.5 TON HIGH EFFICIENCY LCH102H4M (2ND STAGE) - SINGLE ZONE VAV SUPPLY FAN 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	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	2720	98.8	5.54	.70	.85	1.00	94.4	6.27	.72	.88	1.00	89.7	7.10	.73	.91	1.00	84.7	8.09	.76	.95	1.00
	3400	103.3	5.56	.76	.95	1.00	98.6	6.27	.78	.98	1.00	93.5	7.11	.80	1.00	1.00	88.7	8.08	.83	1.00	1.00
	4080	106.9	5.56	.82	1.00	1.00	102.6	6.28	.84	1.00	1.00	98.2	7.12	.88	1.00	1.00	93.1	8.08	.91	1.00	1.00
67°F	2720	104.3	5.56	.55	.68	.81	99.6	6.28	.56	.69	.84	94.7	7.11	.57	.71	.87	89.3	8.08	.59	.73	.91
	3400	108.8	5.57	.59	.74	.91	103.8	6.29	.60	.76	.94	98.5	7.12	.61	.78	.97	92.7	8.08	.62	.81	1.00
	4080	112.0	5.58	.62	.80	.99	106.6	6.30	.63	.82	1.00	101.2	7.12	.65	.85	1.00	95.2	8.08	.66	.89	1.00
71°F	2720	109.6	5.57	.42	.54	.66	104.7	6.29	.43	.55	.67	99.7	7.12	.43	.56	.69	94.1	8.08	.43	.58	.71
	3400	114.3	5.59	.43	.58	.72	109.2	6.30	.44	.59	.74	103.6	7.12	.45	.60	.76	97.4	8.08	.45	.61	.78
	4080	117.8	5.60	.45	.61	.77	112.2	6.31	.45	.62	.80	106.4	7.13	.46	.64	.83	100.0	8.08	.47	.66	.86

RATINGS

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

10 TON HIGH EFFICIENCY LCH120H4M (1ST STAGE) - SINGLE ZONE VAV SUPPLY FAN 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	2240	59	2.61	0.68	0.77	0.87	57	2.96	0.68	0.78	0.88	54.9	3.34	0.69	0.8	0.89	52.6	3.78	0.7	0.81	0.91
	2800	62.9	2.64	0.71	0.82	0.92	60.6	2.99	0.72	0.83	0.94	58.2	3.38	0.72	0.84	0.96	55.6	3.82	0.74	0.86	0.98
	3360	65.7	2.67	0.74	0.86	0.98	63.3	3.02	0.75	0.87	0.99	60.6	3.41	0.76	0.89	1	58	3.85	0.77	0.91	1
67°F	2240	62.5	2.64	0.55	0.65	0.74	60.5	2.99	0.56	0.65	0.75	58.2	3.38	0.56	0.67	0.76	55.8	3.82	0.56	0.67	0.77
	2800	66.2	2.67	0.57	0.68	0.79	64	3.03	0.57	0.69	0.8	61.4	3.42	0.58	0.7	0.81	58.9	3.86	0.58	0.71	0.83
	3360	69.3	2.7	0.58	0.71	0.83	66.8	3.06	0.59	0.72	0.84	64	3.45	0.6	0.73	0.86	61.1	3.88	0.6	0.75	0.88
71°F	2240	66.3	2.67	0.44	0.53	0.62	64	3.03	0.44	0.54	0.63	61.6	3.42	0.44	0.54	0.64	59.1	3.86	0.44	0.55	0.65
	2800	70.2	2.71	0.44	0.55	0.65	67.8	3.07	0.44	0.56	0.67	65.1	3.46	0.45	0.56	0.67	62.2	3.9	0.45	0.57	0.68
	3360	73.1	2.74	0.45	0.57	0.69	70.3	3.1	0.45	0.58	0.7	67.6	3.49	0.45	0.59	0.71	64.5	3.93	0.45	0.59	0.72

10 TON HIGH EFFICIENCY LCH120H4M (2ND STAGE) - SINGLE ZONE VAV SUPPLY FAN 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	3200	118.3	7.09	.67	.83	1.00	113.1	8.00	.68	.86	1.00	107.4	9.04	.70	.89	1.00	101.4	10.23	.72	.93	1.00	
	4000	123.7	7.16	.72	.94	1.00	118.2	8.07	.75	.97	1.00	112.2	9.11	.78	1.00	1.00	106.1	10.29	.81	1.00	1.00	
	4800	127.9	7.21	.79	1.00	1.00	122.7	8.13	.82	1.00	1.00	116.9	9.17	.85	1.00	1.00	111.3	10.37	.90	1.00	1.00	
67°F	3200	124.8	7.17	.53	.65	.79	119.2	8.08	.54	.66	.81	113.4	9.12	.54	.68	.84	106.8	10.30	.56	.70	.89	
	4000	130.2	7.24	.56	.70	.90	124.4	8.16	.57	.72	.93	118.1	9.19	.58	.75	.97	111.1	10.36	.60	.78	1.00	
	4800	134.2	7.29	.59	.77	.99	127.9	8.21	.61	.80	1.00	121.0	9.23	.62	.82	1.00	114.1	10.40	.64	.87	1.00	
71°F	3200	131.6	7.26	.40	.52	.63	125.7	8.17	.41	.52	.64	119.6	9.21	.41	.53	.66	112.8	10.38	.41	.55	.68	
	4000	136.6	7.33	.42	.55	.68	130.6	8.24	.42	.56	.70	123.7	9.27	.43	.58	.72	116.7	10.45	.43	.59	.75	
	4800	140.5	7.38	.43	.58	.74	134.1	8.29	.44	.60	.77	127.3	9.32	.44	.62	.80	119.5	10.49	.45	.63	.84	

12.5 TON STANDARD EFFICIENCY LCH150S4M (1ST STAGE) - SINGLE ZONE VAV SUPPLY FAN 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			
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	2560	68.1	3.12	0.63	0.73	0.83	63.3	3.50	0.62	0.73	0.84	58.5	3.93	0.61	0.73	0.85			
	3200	74.0	3.15	0.66	0.78	0.90	69.0	3.54	0.66	0.79	0.91	63.6	3.97	0.66	0.79	0.93			
	3840	78.3	3.18	0.69	0.83	0.95	73.0	3.57	0.69	0.83	0.97	67.4	4.00	0.70	0.85	1.00			
67°F	2560	73.4	3.15	0.50	0.60	0.70	68.7	3.53	0.49	0.59	0.70	63.6	3.97	0.48	0.59	0.70			
	3200	79.4	3.19	0.53	0.64	0.75	74.2	3.58	0.52	0.64	0.75	68.8	4.01	0.51	0.64	0.76			
	3840	83.9	3.22	0.55	0.67	0.79	78.4	3.61	0.54	0.67	0.80	72.6	4.04	0.54	0.68	0.82			
71°F	2560	79.2	3.19	0.40	0.49	0.58	74.2	3.58	0.38	0.48	0.57	69.0	4.01	0.36	0.47	0.57			
	3200	85.1	3.22	0.41	0.52	0.62	79.8	3.62	0.39	0.51	0.62	74.2	4.06	0.38	0.50	0.62			
	3840	89.5	3.26	0.42	0.54	0.65	83.6	3.65	0.41	0.53	0.65	77.7	4.09	0.40	0.53	0.66			

12.5 TON STANDARD EFFICIENCY LCH150S4M (2ND STAGE) - SINGLE ZONE VAV SUPPLY FAN 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	3800	139.7	8.40	0.69	0.85	1.00	127.4	9.42	0.70	0.87	1.00	114.8	10.59	0.71	0.90	1.00	101.5	11.94	0.72	0.94	1.00
	4400	145.4	8.45	0.73	0.90	1.00	132.9	9.47	0.74	0.93	1.00	119.8	10.64	0.76	0.97	1.00	106.2	11.99	0.79	1.00	1.00
	5000	150.3	8.49	0.77	0.96	1.00	137.4	9.52	0.79	0.99	1.00	124.4	10.69	0.81	1.00	1.00	111.7	12.05	0.84	1.00	1.00
67°F	3800	150.3	8.49	0.53	0.67	0.82	137.9	9.52	0.53	0.68	0.84	124.7	10.69	0.52	0.69	0.86	111.1	12.04	0.51	0.71	0.90
	4400	156.2	8.55	0.56	0.71	0.87	143.3	9.57	0.55	0.72	0.89	129.7	10.75	0.55	0.74	0.93	115.4	12.10	0.55	0.76	0.97
	5000	161.1	8.59	0.58	0.75	0.92	147.6	9.62	0.58	0.77	0.95	133.7	10.79	0.59	0.79	0.99	119.1	12.14	0.59	0.82	1.00
71°F	3800	161.9	8.60	0.39	0.53	0.66	148.7	9.63	0.38	0.52	0.66	135.1	10.80	0.36	0.52	0.67	120.8	12.15	0.34	0.51	0.68
	4400	167.4	8.65	0.41	0.55	0.69	153.9	9.68	0.39	0.55	0.70	139.8	10.85	0.38	0.54	0.72	124.9	12.20	0.36	0.55	0.74
	5000	171.9	8.70	0.42	0.57	0.73	158.0	9.73	0.41	0.58	0.75	143.5	10.90	0.39	0.58	0.77	128.5	12.24	0.37	0.59	0.80

DEHUMIDIFICATION SYSTEM RATINGS

7.5 TON HIGH EFFICIENCY LCH092H4 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
63°F	2400	26.1	1.9	.45	.63	.81	22.1	2.2	.33	.55	.77	18.0	2.4	.21	.47	.73	14.0	2.6	.09	.39	.69
	3000	30.8	1.9	.49	.69	.89	26.0	2.2	.36	.59	.82	21.2	2.4	.22	.48	.74	16.4	2.6	.09	.37	.66
	3600	35.5	1.9	.54	.76	.98	29.9	2.2	.39	.62	.86	24.3	2.4	.24	.49	.74	18.7	2.6	.09	.36	.63
67°F	2400	33.8	2.0	.32	.48	.64	29.1	2.2	.20	.39	.58	24.3	2.4	.07	.30	.52	19.5	2.7	-.05	.21	.46
	3000	38.0	2.0	.35	.52	.70	32.8	2.2	.20	.41	.62	27.6	2.4	.06	.30	.54	22.4	2.7	-.08	.19	.47
	3600	42.1	2.0	.37	.56	.75	36.5	2.2	.21	.44	.66	30.9	2.4	.05	.31	.56	25.4	2.7	-.10	.18	.47
71°F	2400	41.6	2.0	.19	.33	.47	37.0	2.2	.07	.23	.39	30.5	2.5	-.06	.12	.31	25.0	2.7	-.19	.02	.23
	3000	45.1	2.0	.20	.35	.50	39.6	2.2	.05	.24	.42	34.1	2.5	-.10	.12	.35	28.5	2.7	-.24	.01	.27
	3600	48.7	2.0	.20	.37	.53	43.1	2.2	.03	.25	.46	41.5	2.5	-.13	.13	.39	32.0	2.7	-.30	.01	.31

7.5 TON HIGH EFFICIENCY LCH092H4 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	kBtuh	kW	75°F	80°F	85°F
63°F	2400	75.3	4.0	.63	.76	.89	68.2	4.5	.62	.78	.92	61.2	5.0	.61	.80	.96	54.1	5.5	.60	.82	1.00
	3000	78.8	4.0	.68	.81	.94	71.2	4.5	.68	.82	.96	63.5	5.0	.67	.83	.98	55.9	5.5	.67	.83	1.00
	3600	82.3	4.0	.73	.90	1.00	74.1	4.5	.73	.90	1.00	65.9	5.0	.73	.89	1.00	57.7	5.5	.74	.88	1.00
67°F	2400	84.0	4.0	.48	.61	.73	78.0	4.5	.46	.60	.75	72.0	5.0	.43	.60	.76	66.1	5.5	.41	.60	.77
	3000	88.6	4.0	.51	.65	.79	81.7	4.5	.49	.64	.79	74.8	5.1	.47	.63	.80	68.0	5.6	.45	.63	.81
	3600	93.3	4.1	.53	.71	.84	85.5	4.6	.52	.69	.84	77.6	5.1	.50	.68	.84	69.8	5.6	.49	.67	.84
71°F	2400	92.7	4.1	.33	.45	.58	87.8	4.6	.29	.43	.57	82.9	5.1	.25	.40	.55	78.0	5.6	.22	.38	.54
	3000	98.5	4.1	.34	.48	.63	92.3	4.6	.30	.46	.62	86.2	5.1	.26	.44	.62	80.0	5.6	.22	.42	.61
	3600	104.2	4.1	.34	.51	.68	96.8	4.6	.30	.49	.68	89.4	5.1	.27	.48	.68	82.0	5.6	.23	.46	.68

8.5 TON HIGH EFFICIENCY LCH102H4 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	kBtuh	kW	75°F	80°F	85°F	
63°F	2720	34.2	2.1	.47	.57	.67	28.5	2.3	.34	.51	.68	22.7	2.6	.22	.45	.68	17.0	2.9	.09	.39	.69
	3400	39.1	2.1	.49	.64	.78	32.4	2.3	.37	.58	.80	25.8	2.6	.24	.53	.82	19.1	2.8	.12	.48	.84
	4080	44.0	2.1	.51	.70	.89	36.4	2.3	.39	.66	.93	28.9	2.6	.26	.62	.96	21.3	2.8	.14	.57	1.00
67°F	2720	42.5	2.1	.33	.44	.55	37.8	2.4	.19	.36	.52	33.2	2.6	.06	.27	.48	28.5	2.9	-.07	.19	.45
	3400	47.0	2.1	.33	.48	.62	41.5	2.4	.20	.40	.60	31.8	2.6	.06	.32	.57	30.5	2.9	-.07	.24	.55
	4080	51.5	2.1	.34	.52	.70	45.1	2.4	.20	.44	.68	38.8	2.6	.06	.36	.66	32.4	2.9	-.08	.29	.65
71°F	2720	50.7	2.1	.18	.31	.44	47.2	2.4	.05	.20	.36	43.6	2.7	-.09	.10	.29	40.1	2.9	-.23	-.01	.21
	3400	54.9	2.2	.18	.32	.47	50.5	2.4	.03	.21	.40	46.2	2.7	-.12	.11	.33	41.8	2.9	-.26	.00	.25
	4080	59.0	2.2	.17	.34	.50	51.8	2.4	.02	.23	.44	48.7	2.7	-.14	.11	.37	43.5	2.9	-.29	.00	.30

8.5 TON HIGH EFFICIENCY LCH102H4 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	kBtuh	kW	75°F	80°F	85°F	
63°F	2720	85.3	4.3	.64	.81	.97	77.9	4.9	.63	.82	1.00	70.5	5.5	.62	.84	1.00	63.1	6.0	.60	.86	1.00
	3400	89.2	4.3	.69	.84	.98	81.7	4.9	.69	.84	1.00	74.2	5.5	.68	.84	1.00	66.7	6.0	.68	.84	1.00
	4080	93.1	4.4	.75	.87	.99	85.5	4.9	.75	.88	1.00	77.8	5.5	.75	.89	1.00	70.2	6.0	.76	.90	1.00
67°F	2720	100.8	4.4	.48	.63	.77	93.3	5.0	.45	.62	.77	85.9	5.5	.43	.62	.77	78.5	6.1	.40	.62	.78
	3400	104.5	4.4	.51	.66	.80	97.8	5.0	.49	.65	.80	89.2	5.5	.46	.64	.81	81.5	6.1	.44	.62	.81
	4080	108.2	4.4	.54	.69	.83	100.3	5.0	.52	.68	.84	92.4	5.5	.50	.68	.84	84.6	6.1	.48	.67	.84
71°F	2720	116.2	4.4	.32	.45	.58	112.6	5.0	.28	.42	.57	101.3	5.6	.24	.40	.56	93.8	6.2	.20	.37	.55
	3400	119.7	4.5	.33	.48	.63	115.2	5.0	.29	.45	.62	104.1	5.6	.24	.43	.62	96.4	6.2	.20	.41	.62
	4080	123.2	4.5	.34	.51	.68	118.1	5.1	.29	.49	.68	107.0	5.6	.25	.46	.68	98.9	6.2	.20	.44	.68

DEHUMIDIFICATION SYSTEM RATINGS

10 TON HIGH EFFICIENCY LCH120H4 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
63°F	3200	49.5	2.6	.48	.70	.92	42.3	2.9	.39	.66	.94	35.1	3.2	.22	.60	.98	27.9	3.5	.01	.46	1.00
	4000	59.0	2.6	.56	.82	1.00	49.1	2.9	.45	.81	1.00	39.1	3.2	.31	.80	.93	29.2	3.5	-.01	.77	.97
	4800	68.6	2.6	.62	.92	1.00	55.9	2.9	.56	.96	1.00	43.2	3.2	.41	1.00	1.00	30.5	3.5	-.02	.97	.80
67°F	3200	61.2	2.7	.30	.49	.66	52.4	3.0	.20	.41	.64	43.5	3.3	.01	.30	.59	34.7	3.6	-.06	.08	.50
	4000	68.2	2.7	.34	.55	.77	57.7	3.0	.23	.49	.75	47.1	3.3	.05	.38	.75	36.5	3.6	-.12	.15	.72
	4800	75.2	2.7	.37	.62	.87	62.9	3.0	.26	.57	.89	50.7	3.3	.06	.50	.92	38.4	3.6	-.18	.28	.98
71°F	3200	73.0	2.7	.17	.32	.48	62.5	3.0	.06	.24	.42	52.0	3.3	-.12	.11	.34	41.5	3.6	-.13	.03	.19
	4000	77.4	2.7	.17	.35	.54	66.2	3.0	.05	.28	.50	55.1	3.3	-.14	.15	.42	43.9	3.6	-.23	-.04	.28
	4800	81.9	2.8	.19	.39	.61	70.0	3.1	.06	.31	.57	58.1	3.4	-.16	.18	.51	46.3	3.7	-.34	-.09	.40

10 TON HIGH EFFICIENCY LCH120H4 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
63°F	3200	104.7	5.4	.61	.73	.86	95.0	6.1	.58	.75	.91	85.3	6.8	.56	.76	.95	75.5	7.5	.53	.77	1.00
	4000	114.8	5.5	.63	.78	.93	103.4	6.2	.62	.78	.95	91.9	6.8	.60	.79	.98	80.5	7.5	.59	.79	1.00
	4800	125.0	5.5	.65	.82	.99	111.8	6.2	.65	.82	1.00	98.6	6.9	.65	.82	1.00	85.4	7.5	.64	.82	1.00
67°F	3200	118.9	5.5	.45	.57	.69	108.5	6.2	.42	.57	.71	98.1	6.9	.39	.56	.73	87.7	7.6	.36	.56	.74
	4000	128.7	5.6	.47	.60	.74	117.3	6.3	.44	.59	.75	105.9	6.9	.42	.59	.75	94.5	7.6	.39	.58	.76
	4800	138.4	5.6	.48	.64	.79	126.1	6.3	.46	.62	.79	113.8	7.0	.44	.61	.78	101.4	7.6	.42	.60	.78
71°F	3200	133.1	5.6	.29	.41	.53	122.0	6.3	.26	.39	.51	110.9	7.0	.23	.36	.50	99.8	7.7	.20	.34	.49
	4000	142.5	5.7	.30	.43	.56	131.2	6.4	.27	.41	.55	119.9	7.1	.23	.38	.53	108.6	7.7	.19	.36	.52
	4800	151.9	5.8	.31	.45	.59	140.4	6.4	.27	.42	.58	128.9	7.1	.23	.40	.57	117.5	7.7	.19	.37	.56

12.5 TON STANDARD EFFICIENCY LCH150S4 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
63°F	3800	55.2	3.4	.48	.70	.91	45.8	3.8	.40	.67	.94	36.4	4.1	.25	.61	.97	27.0	4.5	.33	.51	.99
	4400	58.2	3.5	.53	.77	1.00	47.9	3.8	.45	.76	1.00	37.6	4.1	.31	.73	1.00	27.3	4.5	.22	.69	1.00
	5000	61.2	3.5	.57	.84	1.00	50.0	3.8	.50	.85	1.00	38.8	4.1	.33	.73	.90	27.6	4.5	.10	.89	1.00
67°F	3800	63.7	3.5	.29	.48	.66	53.8	3.9	.20	.41	.63	44.0	4.2	.04	.32	.59	34.1	4.6	.03	.12	.52
	4400	66.6	3.6	.32	.51	.73	56.1	3.9	.21	.46	.72	45.7	4.2	.05	.36	.68	35.3	4.6	-.04	.19	.65
	5000	69.4	3.6	.33	.55	.79	58.4	3.9	.24	.51	.79	47.4	4.2	.08	.42	.79	36.4	4.6	-.10	.25	.60
71°F	3800	72.2	3.6	.15	.31	.47	61.9	4.0	.05	.23	.42	51.6	4.3	-.10	.12	.35	41.3	4.6	-.28	-.07	.22
	4400	74.9	3.7	.16	.33	.51	64.4	4.0	.05	.25	.45	53.8	4.3	-.11	.14	.39	43.3	4.7	-.29	-.06	.27
	5000	77.7	3.7	.16	.35	.55	66.9	4.0	.05	.28	.51	56.1	4.4	-.12	.16	.45	45.3	4.7	-.30	-.04	.33

12.5 TON STANDARD EFFICIENCY LCH150S4 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
63°F	3800	122.7	7.3	.63	.79	.96	110.6	8.0	.62	.80	.99	98.6	8.8	.61	.81	1.00	86.5	9.6	.60	.82	1.00
	4400	127.4	7.3	.66	.82	.97	114.4	8.1	.65	.83	1.00	101.4	8.8	.65	.84	1.00	88.4	9.6	.64	.85	1.00
	5000	132.1	7.3	.69	.84	.99	118.2	8.1	.69	.86	1.00	104.2	8.9	.69	.87	1.00	90.3	9.6	.69	.88	1.00
67°F	3800	137.7	7.5	.47	.62	.76	124.7	8.2	.44	.61	.78	111.8	9.0	.42	.60	.79	98.8	9.8	.39	.60	.80
	4400	142.5	7.5	.49	.64	.79	128.7	8.3	.46	.63	.80	115.0	9.0	.44	.63	.81	101.3	9.8	.42	.62	.83
	5000	147.2	7.6	.50	.66	.81	132.7	8.3	.48	.65	.82	118.2	9.1	.46	.65	.84	103.7	9.8	.44	.65	.85
71°F	3800	152.7	7.7	.31	.44	.57	138.8	8.4	.27	.42	.56	125.0	9.2	.23	.39	.55	111.1	10.0	.19	.37	.55
	4400	157.5	7.7	.31	.46	.60	143.1	8.5	.27	.43	.60	128.6	9.2	.23	.41	.59	114.2	10.0	.19	.39	.59
	5000	162.4	7.8	.31	.47	.63	147.3	8.5	.27	.45	.63	132.2	9.3	.23	.43	.63	117.2	10.0	.19	.41	.63

BLOWER DATA

092 AND 102 BELT DRIVE BLOWER – BASE UNIT

BLOWER TABLE INCLUDES RESISTANCE FOR BASE UNIT ONLY (NO HEAT SECTION) WITH DRY INDOOR COIL AND AIR FILTERS IN PLACE.

FOR ALL UNITS ADD:

1 – Wet indoor coil air resistance of selected unit.

2 – Any factory installed options air resistance (heat section, economizer, etc.)

3 – Any field installed accessories air resistance (duct resistance, diffuser, etc.)

Then determine from blower table blower motor output required.

See page 28 for blower motors and drives. See page 28 for wet coil and option/accessory air resistance data.

MINIMUM AIR VOLUME REQUIRED FOR USE WITH OPTIONAL ELECTRIC HEAT (Maximum Static Pressure - 2.0 in. w.g.)

7.5 kW, 15 kW, 22.5 kW, 30 kW and 45 kW – 2800 cfm

Total Air Volume cfm	Total Static Pressure – in. w.g.																											
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0		2.2		2.4		2.6			
	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		
1750	481	0.21	549	0.4	618	0.57	688	0.7	758	0.82	824	0.93	885	1.08	941	1.23	991	1.39	1038	1.54	1082	1.68	1124	1.82	1166	1.95		
2000	493	0.29	561	0.47	629	0.64	700	0.77	768	0.9	832	1.02	892	1.17	946	1.33	995	1.49	1041	1.66	1085	1.81	1126	1.97	1167	2.12		
2250	507	0.37	574	0.56	643	0.72	712	0.86	779	0.99	842	1.13	900	1.28	953	1.44	1001	1.61	1045	1.78	1088	1.95	1128	2.12	1168	2.3		
2500	521	0.46	588	0.64	657	0.81	727	0.95	792	1.09	853	1.24	909	1.4	960	1.57	1007	1.74	1050	1.93	1091	2.11	1130	2.29	1170	2.48		
2750	537	0.56	604	0.74	674	0.91	743	1.06	806	1.21	865	1.36	920	1.53	969	1.71	1014	1.89	1055	2.08	1095	2.27	1133	2.47	1172	2.66		
3000	554	0.67	622	0.86	692	1.02	760	1.18	822	1.34	878	1.5	931	1.68	979	1.86	1021	2.06	1061	2.26	1099	2.46	1136	2.65	1174	2.85		
3250	572	0.78	641	0.98	712	1.15	778	1.32	838	1.49	892	1.66	943	1.84	989	2.03	1030	2.24	1068	2.45	1105	2.65	1141	2.85	1178	3.06		
3500	592	0.9	663	1.12	733	1.3	798	1.47	855	1.65	907	1.83	956	2.02	1000	2.22	1039	2.44	1076	2.65	1111	2.86	1146	3.07	1183	3.27		
3750	614	1.04	687	1.28	756	1.47	818	1.65	872	1.83	923	2.02	970	2.22	1011	2.43	1049	2.65	1084	2.87	1118	3.09	1152	3.29	1189	3.51		
4000	639	1.22	713	1.48	780	1.66	838	1.83	890	2.02	939	2.22	984	2.44	1023	2.66	1059	2.89	1093	3.11	1126	3.33	1160	3.54	1197	3.77		
4250	667	1.43	741	1.69	805	1.86	859	2.02	909	2.22	956	2.45	998	2.68	1036	2.92	1070	3.15	1103	3.37	1135	3.59	1169	3.81	1207	4.05		

BLOWER DATA

120 AND 150 BELT DRIVE BLOWER – BASE UNIT

BLOWER TABLE INCLUDES RESISTANCE FOR BASE UNIT ONLY (NO HEAT SECTION) WITH DRY INDOOR COIL AND AIR FILTERS IN PLACE.

FOR ALL UNITS ADD:

1 – Wet indoor coil air resistance of selected unit.

2 – Any factory installed options air resistance (heat section, economizer, etc.)

3 – Any field installed accessories air resistance (duct resistance, diffuser, etc.)

Then determine from blower table blower motor output required.

See page 28 for blower motors and drives. See page 28 for wet coil and option/accessory air resistance data.

MINIMUM AIR VOLUME REQUIRED FOR USE WITH OPTIONAL ELECTRIC HEAT (Maximum Static Pressure - 2.0 in. w.g.)

15 kW, 22.5 kW, 30 kW and 45 kW - 2800 cfm

60 kW - 4000 cfm

Total Air Volume cfm	Total Static Pressure – in. w.g.																									
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0		2.2		2.4		2.6	
	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
2000	497	0.25	558	0.44	624	0.6	694	0.74	764	0.85	830	0.99	889	1.16	943	1.34	994	1.52	1045	1.71	1096	1.89	1146	2.08	1197	2.27
2250	511	0.34	573	0.52	638	0.68	708	0.82	776	0.94	839	1.09	896	1.26	948	1.45	998	1.64	1048	1.83	1098	2.01	1149	2.2	1200	2.4
2500	527	0.44	589	0.62	654	0.78	723	0.91	789	1.05	850	1.21	904	1.39	955	1.58	1003	1.77	1052	1.96	1101	2.14	1152	2.33	1203	2.53
2750	545	0.55	606	0.72	672	0.88	740	1.03	804	1.17	861	1.34	914	1.53	962	1.72	1010	1.92	1057	2.10	1105	2.29	1154	2.47	1206	2.68
3000	564	0.66	626	0.84	692	1.01	759	1.16	819	1.32	874	1.49	924	1.68	971	1.88	1017	2.08	1063	2.26	1110	2.44	1158	2.63	1208	2.83
3250	585	0.79	648	0.98	714	1.14	778	1.31	836	1.48	887	1.66	935	1.86	981	2.06	1026	2.26	1071	2.45	1117	2.63	1163	2.80	1213	3.00
3500	607	0.93	672	1.13	737	1.31	798	1.48	852	1.66	901	1.85	948	2.05	993	2.26	1037	2.46	1081	2.65	1125	2.83	1171	3.01	1221	3.21
3750	632	1.10	698	1.31	762	1.50	819	1.67	869	1.86	915	2.05	961	2.25	1005	2.47	1049	2.68	1092	2.88	1136	3.05	1181	3.24	1231	3.45
4000	660	1.30	726	1.52	787	1.70	838	1.87	885	2.06	930	2.26	974	2.48	1018	2.71	1062	2.93	1105	3.12	1149	3.30	1194	3.49	1245	3.72
4250	691	1.53	755	1.75	810	1.91	857	2.07	901	2.27	945	2.50	990	2.74	1034	2.98	1077	3.20	1120	3.39	1163	3.58	1210	3.79	1262	4.03
4500	724	1.78	783	1.98	831	2.12	874	2.28	917	2.50	962	2.75	1006	3.02	1051	3.27	1094	3.49	1137	3.70	1181	3.89	1228	4.11	1281	4.38
4750	757	2.05	809	2.20	851	2.33	891	2.51	935	2.76	980	3.05	1025	3.33	1070	3.59	1113	3.82	1156	4.03	1201	4.24	1249	4.47	1303	4.75
5000	787	2.31	831	2.43	870	2.57	910	2.78	954	3.06	1000	3.38	1046	3.68	1091	3.95	1135	4.19	1178	4.40	1224	4.62	1272	4.86	1325	5.13
5250	814	2.55	852	2.66	889	2.83	930	3.09	975	3.41	1023	3.76	1070	4.08	1115	4.35	1159	4.59	1203	4.81	1248	5.03	1297	5.27	1350	5.53
5500	835	2.78	871	2.91	909	3.13	952	3.44	999	3.81	1049	4.18	1096	4.51	1142	4.79	1186	5.03	1229	5.24	1275	5.46	1324	5.69	---	---
5750	854	3.01	890	3.19	930	3.48	977	3.86	1027	4.27	1078	4.66	1126	4.99	1171	5.26	1214	5.49	1258	5.70	---	---	---	---	---	---
6000	871	3.26	910	3.53	955	3.90	1006	4.34	1060	4.80	1111	5.19	1158	5.51	---	---	---	---	---	---	---	---	---	---	---	---
6250	890	3.57	934	3.94	985	4.41	1041	4.91	1096	5.38	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

BLOWER DATA

FACTORY INSTALLED BELT DRIVE KIT SPECIFICATIONS

Motor Efficiency	Nominal hp	Maximum hp	Drive Kit Number	RPM Range
Standard & High	2	2.3	1	590 - 890
Standard & High	2	2.3	2	800 - 1105
Standard & High	2	2.3	3	795 - 1195
Standard	3	3.45	4	730 - 970
Standard	3	3.45	5	940 - 1200
Standard	3	3.45	6	1015 - 1300
High	3	3.45	7	730 - 970
High	3	3.45	8	940 - 1200
High	3	3.45	9	1015 - 1300
Standard	5	5.75	10	900 - 1135
Standard	5	5.75	11	1040 - 1315
Standard	5	5.75	12	1125 - 1425

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 Supply Fan option are limited to a motor service factor of 1.0.

POWER EXHAUST FAN PERFORMANCE

Return Air System Static Pressure	Air Volume Exhausted
in. w.g.	cfm
0	3175
0.05	2955
0.10	2685
0.15	2410
0.20	2165
0.25	1920
0.30	1420
0.35	1200

FACTORY INSTALLED OPTIONS/FIELD INSTALLED ACCESSORY AIR RESISTANCE - in. w.g.

Air Volume cfm	Wet Indoor Coil		Electric Heat	Economizer	Humiditrol Condenser Reheat Coil	Filters		Return Air Adaptor Plate
	092, 102	120, 150				MERV 8	MERV 13	
1750	0.04	0.04	0.03	0.05	0.02	0.01	0.03	0.00
2000	0.05	0.05	0.03	0.06	0.02	0.01	0.03	0.00
2250	0.06	0.06	0.04	0.08	0.02	0.01	0.04	0.00
2500	0.07	0.07	0.04	0.11	0.03	0.01	0.05	0.00
2750	0.08	0.08	0.05	0.12	0.03	0.02	0.05	0.00
3000	0.10	0.09	0.06	0.13	0.03	0.02	0.06	0.02
3250	0.11	0.10	0.06	0.15	0.04	0.02	0.06	0.02
3500	0.12	0.11	0.09	0.15	0.04	0.03	0.07	0.04
3750	0.14	0.13	0.09	0.15	0.05	0.03	0.08	0.07
4000	0.15	0.14	0.09	0.19	0.05	0.04	0.08	0.09
4250	0.17	0.15	0.13	0.19	0.06	0.04	0.09	0.11
4500	0.19	0.17	0.14	0.22	0.07	0.04	0.09	0.12
4750	0.20	0.18	0.17	0.25	0.07	0.05	0.10	0.16
5000	0.22	0.20	0.20	0.29	0.08	0.06	0.10	0.18
5250	0.24	0.22	0.22	0.32	0.08	0.06	0.11	0.19
5500	0.25	0.23	0.25	0.34	0.09	0.07	0.12	0.22
5750	0.27	0.25	0.31	0.45	0.10	0.07	0.12	0.25
6000	0.29	0.27	0.33	0.52	0.10	0.08	0.13	0.27

BLOWER DATA

CEILING DIFFUSERS AIR RESISTANCE - in. w.g.

Unit Size	RTD11 Step-Down Diffuser				FD11 Flush Diffuser
	Air Volume cfm	2 Ends Open	1 Side, 2 Ends Open	All Ends & Sides Open	
092 Models	2400	0.21	0.18	0.15	0.14
	2600	0.24	0.21	0.18	0.17
	2800	0.27	0.24	0.21	0.20
	3000	0.32	0.29	0.25	0.25
	3200	0.41	0.37	0.32	0.31
	3400	0.50	0.45	0.39	0.37
	3600	0.61	0.54	0.48	0.44
	3800	0.73	0.63	0.57	0.51
102 & 120 Models	3600	0.36	0.28	0.23	0.15
	3800	0.40	0.32	0.26	0.18
	4000	0.44	0.36	0.29	0.21
	4200	0.49	0.40	0.33	0.24
	4400	0.54	0.44	0.37	0.27
	4600	0.60	0.49	0.42	0.31
	4800	0.65	0.53	0.46	0.35
	5000	0.69	0.58	0.50	0.39
150 Models	5200	0.75	0.62	0.54	0.43
	4200	0.22	0.19	0.16	0.10
	4400	0.28	0.24	0.20	0.12
	4600	0.34	0.29	0.24	0.15
	4800	0.40	0.34	0.29	0.19
	5000	0.46	0.39	0.34	0.23
	5200	0.52	0.44	0.39	0.27
	5400	0.58	0.49	0.43	0.31
	5600	0.64	0.54	0.47	0.35
	5800	0.70	0.59	0.51	0.39

CEILING DIFFUSER AIR THROW DATA

Model No.	Air Volume cfm	¹ Effective Throw Range	
		RTD11 Step-Down	FD11 Flush
		ft.	ft.
092 Models	2600	24 - 29	19 - 24
	2800	25 - 30	20 - 28
	3000	27 - 33	21 - 29
	3200	28 - 35	22 - 29
	3400	30 - 37	22 - 30
102, 120 Models	3600	25 - 33	22 - 29
	3800	27 - 35	22 - 30
	4000	29 - 37	24 - 33
	4200	32 - 40	26 - 35
	4400	34 - 42	28 - 37
150 Models	5600	39 - 49	28 - 37
	5800	42 - 51	29 - 38
	6000	44 - 54	40 - 50
	6200	45 - 55	42 - 51
	6400	46 - 55	43 - 52
	6600	47 - 56	45 - 56

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

ELECTRICAL/ELECTRIC HEAT DATA

7.5 TON

7.5 TON HIGH EFFICIENCY (R-410A)

LCH092H4

¹ Voltage - 60hz		208/230V - 3 Ph			460V - 3 Ph			575V - 3 Ph		
Compressor 1	Rated Load Amps	11.6			5.5			4.7		
	Locked Rotor Amps	86			37			34		
Compressor 2	Rated Load Amps	11.6			5.5			4.7		
	Locked Rotor Amps	86			37			34		
Outdoor Fan Motors (2)	Full Load Amps (total)	2.4 (4.8)			1.3 (2.6)			1 (2)		
Power Exhaust (1) 0.33 HP	Full Load Amps	2.4			1.3			1		
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	Unit Only	45	50	60	20	25	30	20	20	25
Overcurrent Protection	With (1) 0.33 HP	50	50	60	25	25	30	20	20	25
	Power Exhaust									
³ Minimum	Unit Only	39	42	49	19	20	24	16	17	20
Circuit Ampacity	With (1) 0.33 HP	41	44	52	20	22	25	17	18	21
	Power Exhaust									

ELECTRIC HEAT DATA

Electric Heat Voltage			208V	240V	208V	240V	208V	240V	480V	480V	480V	600V	600V	600V
² Maximum	Unit+ Electric Heat	7.5 kW	45	45	50	50	60	60	20	25	30	20	20	25
		15 kW	⁴ 50	60	60	60	⁴ 60	70	30	30	35	25	25	30
		22.5 kW	⁴ 70	80	⁴ 80	90	⁴ 80	90	40	40	45	35	35	35
		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
³ Minimum	Unit+ Electric Heat	7.5 kW	39	39	42	42	49	49	19	20	24	16	17	20
		15 kW	49	55	53	59	60	66	27	29	33	22	23	26
		22.5 kW	69	78	72	81	80	89	39	40	44	31	32	35
		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
² Maximum	Unit+ Electric Heat and (1) 0.33 HP	7.5 kW	50	50	50	50	60	60	25	25	30	20	20	25
		15 kW	60	60	⁴ 60	70	70	70	30	35	35	25	25	30
		22.5 kW	⁴ 80	90	⁴ 80	90	⁴ 90	100	40	45	45	35	35	40
		30 kW	⁴ 100	110	⁴ 100	110	⁴ 110	125	60	60	60	45	45	45
		Power Exhaust 45 kW	150	150	⁴ 150	175	⁴ 150	175	80	80	80	60	70	70
³ Minimum	Unit+ Electric Heat and (1) 0.33 HP	7.5 kW	41	41	44	44	52	52	20	22	25	17	18	21
		15 kW	52	58	56	62	63	69	29	31	34	23	25	27
		22.5 kW	72	81	75	84	83	92	40	42	45	32	34	36
		30 kW	91	103	95	107	103	115	51	53	57	41	43	45
		Power Exhaust 45 kW	130	148	134	152	142	160	74	76	79	59	61	64

ELECTRICAL ACCESSORIES

Disconnect	7.5 kW	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56
	15 kW	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56
	22.5 kW	54W56	54W56	54W56	54W56	54W57	54W57	54W56	54W56	54W56	54W56	54W56	54W56	54W56
	30 kW	54W57	54W57	54W57	54W57	54W57	54W57	54W56	54W56	54W56	54W56	54W56	54W56	54W56
	45 kW	54W57	54W57	54W57	54W57	54W57	54W57	54W56	54W56	54W56	54W56	54W56	54W56	54W56

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**8.5 TON****8.5 TON HIGH EFFICIENCY (R-410A)****LCH102H4**

¹ Voltage - 60hz		208/230V - 3 Ph			460V - 3 Ph			575V - 3 Ph		
Compressor 1	Rated Load Amps	11			5.5			4.7		
	Locked Rotor Amps	86			37			34		
Compressor 2	Rated Load Amps	11			5.5			4.7		
	Locked Rotor Amps	86			37			34		
Outdoor Fan	Full Load Amps	2.4			1.3			1		
Motors (2)	(total)	(4.8)			(2.6)			(2)		
Power Exhaust	Full Load Amps	2.4			1.3			1		
(1) 0.33 HP										
Service Outlet 115V GFI (amps)		15			15			20		
Indoor Blower	Horsepower	2	3	5	2	3	5	2	3	5
Motor	Full Load Amps	7.5	10.6	16.7	3.4	4.8	7.6	2.7	3.9	6.1
² Maximum	Unit Only	45	50	60	20	25	30	20	20	25
Overcurrent	With (1) 0.33 HP	50	50	60	25	25	30	20	20	25
Protection	Power Exhaust									
³ Minimum	Unit Only	38	41	48	19	20	24	16	17	20
Circuit	With (1) 0.33 HP	40	43	51	20	22	25	17	18	21
Ampacity	Power Exhaust									

ELECTRIC HEAT DATA

Electric Heat Voltage		208V	240V	208V	240V	208V	240V	480V	480V	480V	600V	600V	600V
² Maximum	Unit+ 7.5 kW	45	45	50	50	60	60	20	25	30	20	20	25
Overcurrent	Electric Heat 15 kW	⁴ 50	60	60	60	⁴ 60	70	30	30	35	25	25	30
Protection	22.5 kW	⁴ 70	80	⁴ 80	90	⁴ 80	90	40	40	45	35	35	35
	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
³ Minimum	Unit+ 7.5 kW	38	38	41	41	48	48	19	20	24	16	17	20
Circuit	Electric Heat 15 kW	49	55	53	59	60	66	27	29	33	22	23	26
Ampacity	22.5 kW	69	78	72	81	80	89	39	40	44	31	32	35
	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
² Maximum	Unit+ 7.5 kW	50	50	50	50	60	60	25	25	30	20	20	25
Overcurrent	Electric Heat 15 kW	60	60	⁴ 60	70	70	70	30	35	35	25	25	30
Protection	and (1) 0.33 HP 22.5 kW	⁴ 80	90	⁴ 80	90	⁴ 90	100	40	45	45	35	35	40
	30 kW	⁴ 100	110	⁴ 100	110	⁴ 110	125	60	60	60	45	45	45
	Power Exhaust 45 kW	150	150	⁴ 150	175	⁴ 150	175	80	80	80	60	70	70
³ Minimum	Unit+ 7.5 kW	40	40	43	43	51	51	20	22	25	17	18	21
Circuit	Electric Heat 15 kW	52	58	56	62	63	69	29	31	34	23	25	27
Ampacity	and (1) 0.33 HP 22.5 kW	72	81	75	84	83	92	40	42	45	32	34	36
	30 kW	91	103	95	107	103	115	51	53	57	41	43	45
	Power Exhaust 45 kW	130	148	134	152	142	160	74	76	79	59	61	64

ELECTRICAL ACCESSORIES

Disconnect	7.5 kW	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56
	15 kW	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56
	22.5 kW	54W56	54W56	54W56	54W56	54W57	54W57	54W56	54W56	54W56	54W56	54W56	54W56
	30 kW	54W57	54W57	54W57	54W57	54W57	54W57	54W56	54W56	54W56	54W56	54W56	54W56
	45 kW	54W57	54W57	54W57	54W57	54W57	54W57	54W56	54W56	54W56	54W56	54W56	54W56

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

10 TON

10 TON HIGH EFFICIENCY (R-410A)

LCH120H4

¹ Voltage - 60hz		208/230V - 3 Ph			460V - 3 Ph			575V - 3 Ph		
Compressor 1	Rated Load Amps	13.5			8			5		
	Locked Rotor Amps	109			59			40		
Compressor 2	Rated Load Amps	13.5			8			5		
	Locked Rotor Amps	109			59			40		
Outdoor Fan Motors (2)	Full Load Amps	2.4			1.3			1		
	(total)	(4.8)			(2.6)			(2)		
Power Exhaust (1) 0.33 HP	Full Load Amps	2.4			1.3			1		
Service Outlet 115V GFI (amps)		15			15			20		
Indoor Blower	Horsepower	2	3	5	2	3	5	2	3	5
Motor	Full Load Amps	7.5	10.6	16.7	3.4	4.8	7.6	2.7	3.9	6.1
² Maximum	Unit Only	50	50	60	30	30	35	20	20	25
Overcurrent Protection	With (1) 0.33 HP Power Exhaust	50	60	70	30	30	35	20	20	25
³ Minimum	Unit Only	43	46	53	24	26	29	16	18	20
Circuit Ampacity	With (1) 0.33 HP Power Exhaust	46	49	56	26	27	30	17	19	21

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 and (1) 0.33 HP Power Exhaust	15 kW	⁴ 50	60	60	60	⁴ 60	70	30	30	35	25	25	30
		22.5 kW	⁴ 70	80	⁴ 80	90	⁴ 80	90	40	40	45	35	35	35
		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+ Electric Heat and (1) 0.33 HP Power Exhaust	15 kW	49	55	53	59	60	66	27	29	33	22	23	26
		22.5 kW	69	78	72	81	80	89	39	40	44	31	32	35
		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+ Electric Heat and (1) 0.33 HP Power Exhaust	15 kW	60	60	⁴ 60	70	70	70	30	35	35	25	25	30
		22.5 kW	⁴ 80	90	⁴ 80	90	⁴ 90	100	40	45	45	35	35	40
		30 kW	⁴ 100	110	⁴ 100	110	⁴ 110	125	60	60	60	45	45	45
		45 kW	150	150	⁴ 150	175	⁴ 150	175	80	80	80	60	70	70
		60 kW	⁴ 150	175	⁴ 150	175	⁴ 150	175	80	80	90	70	70	70
³ Minimum Circuit Ampacity	Unit+ Electric Heat and (1) 0.33 HP Power Exhaust	15 kW	52	58	56	62	63	69	29	31	34	23	25	27
		22.5 kW	72	81	75	84	83	92	40	42	45	32	34	36
		30 kW	91	103	95	107	103	115	51	53	57	41	43	45
		45 kW	130	148	134	152	142	160	74	76	79	59	61	64
		60 kW	138	157	142	161	149	169	79	80	84	63	64	67

ELECTRICAL ACCESSORIES

Disconnect	15 kW	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56
	22.5 kW	54W56	54W56	54W56	54W56	54W57	54W57	54W56	54W56	54W56	54W56	54W56	54W56	54W56
	30 kW	54W57	54W57	54W57	54W57	54W57	54W57	54W56	54W56	54W56	54W56	54W56	54W56	54W56
	45 kW	54W57	54W57	54W57	54W57	54W57	54W57	54W56	54W56	54W56	54W56	54W56	54W56	54W56
	60 kW	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	54W56	54W56	⁵ N/A	54W56	54W56	54W56	54W56

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											12.5 TON		
12.5 TON STANDARD EFFICIENCY (R-410A)											LCH150S4		
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					
Outdoor Fan	Full Load Amps	3			1.5			1.2					
Motors (2)	(total)	(6)			(3)			(2.4)					
Power Exhaust (1) 0.33 HP	Full Load Amps	2.4			1.3			1					
Service Outlet 115V GFI (amps)		15			15			20					
Indoor Blower	Horsepower	2	3	5	2	3	5	2	3	5			
Motor	Full Load Amps	7.5	10.6	16.7	3.4	4.8	7.6	2.7	3.9	6.1			
² Maximum	Unit Only	70	80	80	30	30	35	25	25	25			
Overcurrent Protection	With (1) 0.33 HP Power Exhaust	70	80	80	30	35	35	25	25	30			
³ Minimum	Unit Only	58	61	67	25	27	30	20	22	24			
Circuit Ampacity	With (1) 0.33 HP Power Exhaust	60	64	70	27	28	31	21	23	25			
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	70	70	80	80	80	80	30	30	35	25	25	30
	Electric Heat 22.5 kW	⁴ 70	80	⁴ 80	90	⁴ 80	90	40	40	45	35	35	35
	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	58	58	61	61	67	67	27	29	33	22	23	26
	Electric Heat 22.5 kW	69	78	72	81	80	89	39	40	44	31	32	35
	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	80	80	80	80	30	35	35	25	25	30
	Electric Heat 22.5 kW	⁴ 80	90	⁴ 80	90	⁴ 90	100	40	45	45	35	35	40
	and (1) 0.33 HP 30 kW	⁴ 100	110	⁴ 100	110	⁴ 110	125	60	60	60	45	45	45
	45 kW	150	150	⁴ 150	175	⁴ 150	175	80	80	80	60	70	70
	Power Exhaust 60 kW	⁴ 150	175	⁴ 150	175	⁴ 150	175	80	80	90	70	70	70
³ Minimum Circuit Ampacity	Unit+ 15 kW	60	60	64	64	70	70	29	31	34	23	25	27
	Electric Heat 22.5 kW	72	81	75	84	83	92	40	42	45	32	34	36
	and (1) 0.33 HP 30 kW	91	103	95	107	103	115	51	53	57	41	43	45
	45 kW	130	148	134	152	142	160	74	76	79	59	61	64
	Power Exhaust 60 kW	138	157	142	161	149	169	79	80	84	63	64	67
ELECTRICAL ACCESSORIES													
Disconnect	15 kW	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56	54W56
	22.5 kW	54W56	54W56	54W56	54W56	54W57	54W57	54W56	54W56	54W56	54W56	54W56	54W56
	30 kW	54W57	54W57	54W57	54W57	54W57	54W57	54W56	54W56	54W56	54W56	54W56	54W56
	45 kW	54W57	54W57	54W57	54W57	54W57	54W57	54W56	54W56	54W56	54W56	54W56	54W56
	60 kW	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	⁵ N/A	54W56	54W56	54W57	54W56	54W56	54W56

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.

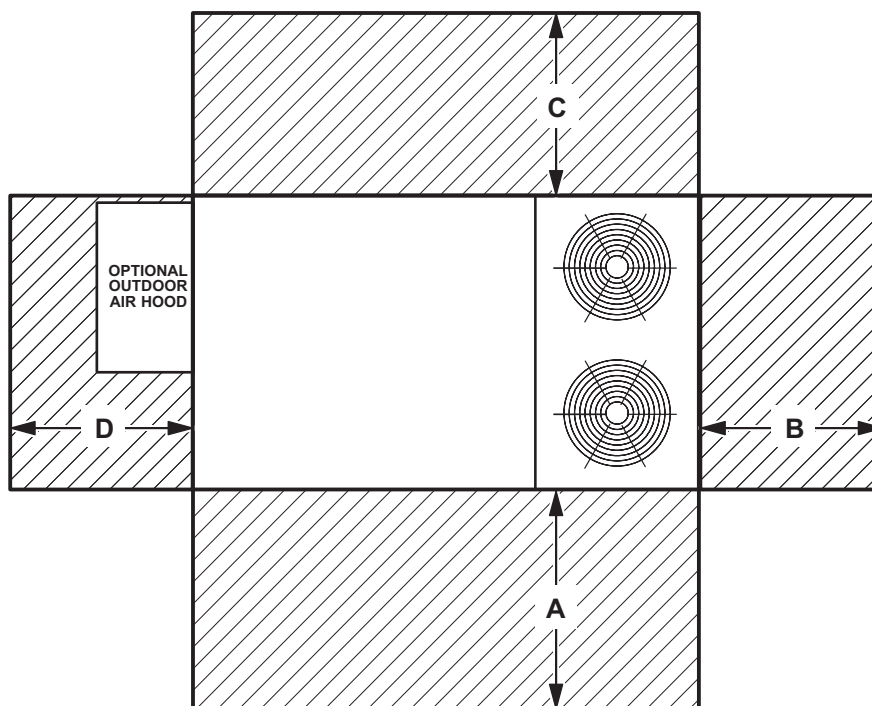
⁴ Factory installed circuit breaker not available.

⁵ Disconnect must be field furnished.

ELECTRIC HEAT CAPACITIES

Volts Input	7.5 kW			15 kW			22.5 kW			30 kW			45 kW			60 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	kW Input	Btuh Output	No. of Stages
208	5.6	19,100	1	11.3	38,600	1	16.9	57,700	2	22.5	76,800	2	33.8	115,300	2	45.0	153,600	2
220	6.3	21,500	1	12.6	43,000	1	18.9	64,500	2	25.2	86,000	2	37.8	129,000	2	50.4	172,000	2
230	6.9	23,600	1	13.8	47,100	1	20.7	70,700	2	27.5	93,900	2	41.3	141,000	2	55.1	188,000	2
240	7.5	25,600	1	15.0	51,200	1	22.5	76,800	2	30.0	102,400	2	45.0	153,600	2	60.0	204,800	2
440	6.9	21,500	1	12.6	43,000	1	18.9	64,500	2	25.2	86,000	2	37.8	129,000	2	50.4	172,000	2
460	6.9	23,600	1	13.8	47,100	1	20.7	70,700	2	27.5	93,900	2	41.3	141,000	2	55.1	188,000	2
480	7.5	25,600	1	15.0	51,200	1	22.5	76,800	2	30.0	102,400	2	45.0	153,600	2	60.0	204,800	2
550	6.3	21,500	1	12.6	43,000	1	18.9	64,500	2	25.2	86,000	2	37.8	129,000	2	50.4	172,000	2
575	6.9	23,600	1	13.8	47,100	1	20.7	70,700	2	27.5	93,900	2	41.3	141,000	2	55.1	188,000	2
600	7.5	25,600	1	15.0	51,200	1	22.5	76,800	2	30.0	102,400	2	45.0	153,600	2	60.0	204,800	2

UNIT CLEARANCES - INCHES (MM)



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	60	1524	Unobstructed
Minimum Operation Clearance	36	914	36	914	36	914	36	914	

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.

OUTDOOR SOUND DATA

Unit Model Number	Octave Band Linear Sound Power Levels dB, re 10 ⁻¹² Watts - Center Frequency - Hz							¹ Sound Rating Number (SRN) (dBA)
	125	250	500	1000	2000	4000	8000	
092, 102 and 120	76	79	84	83	79	73	66	88
150	77	80	85	84	79	74	66	88

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

¹ Sound Rating Number according to ARI Standard 270-95 or ARI Standard 370-2001 (includes pure tone penalty). "SRN" is the overall A-Weighted Sound Power Level, (LWA), dB (100 Hz to 10,000 Hz).

WEIGHT DATA

Model Number	Outdoor Coil	Net		Shipping		Outdoor Coil	Net		Shipping	
		lbs.	kg	lbs.	kg		lbs.	kg	lbs.	kg
092 Base Unit	Eco-last	1040	472	1125	510	Fin/Tube	1120	508	1205	547
092 Max. Unit	Eco-last	1197	543	1282	582	Fin/Tube	1277	579	1362	618
102 Base Unit	Eco-last	1047	475	1132	513	Fin/Tube	1127	511	1212	550
102 Max. Unit	Eco-last	1204	546	1289	585	Fin/Tube	1284	582	1369	621
120 Base Unit	Eco-last	1082	491	1167	529	Fin/Tube	1162	527	1247	566
120 Max. Unit	Eco-last	1246	565	1331	604	Fin/Tube	1326	601	1411	640
150 Base Unit	Eco-last	1122	509	1207	547	Fin/Tube	1202	545	1287	584
150 Max. Unit	Eco-last	1286	583	1371	622	Fin/Tube	1366	620	1451	658

OPTIONS / ACCESSORIES

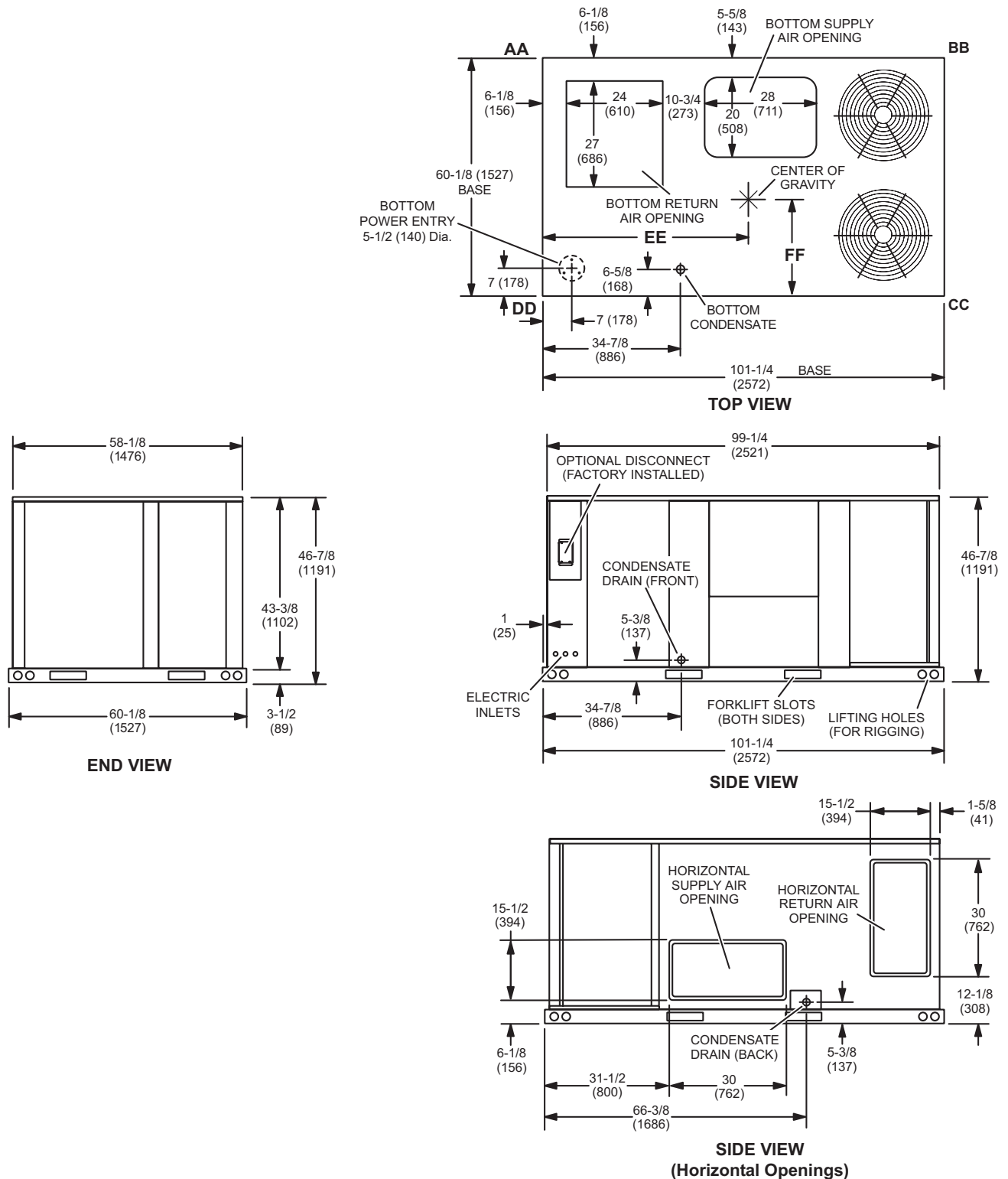
Description	Shipping Weight	
	lbs.	kg
CONVENTIONAL FIN/TUBE CONDENSER COIL		
Fin/Tube Condenser Coil	80	36
ECONOMIZER / OUTDOOR AIR / EXHAUST		
Economizer		
Economizer Dampers	60	27
Outdoor Air Hood (downflow)	23	10
Barometric Relief Dampers (downflow)	8	4
Barometric Relief Dampers (low profile horizontal)	20	9
Outdoor Air Dampers		
Outdoor Air Damper Section - Automatic	51	23
Outdoor Air Damper Section - Manual	39	18
Power Exhaust	31	14
ELECTRIC HEAT		
7.5 kW	50	23
15 kW	50	23
22.5 kW	57	26
30 kW	57	26
45 kW	59	27
60 kW	68	31
DEHUMIDIFICATION SYSTEM		
Humiditrol Dehumification Option	20	9
SINGLE ZONE VAV SUPPLY FAN SUPPLY AIR BLOWER OPTION		
Variable Frequency Drive (VFD) and associated components	10	5
ROOF CURBS		
Hybrid Roof Curbs, Downflow		
8 in. height	60	27
14 in. height	85	39
18 in. height	100	45
24 in. height	125	57
Adjustable Pitch Curb, Downflow		
14 in. height	191	82
CEILING DIFFUSERS		
Step-Down		
RTD11-95S	118	54
RTD11-135S	135	61
RTD11-185S	168	76
Flush		
FD11-95S	118	54
FD11-135S	135	61
FD11-185S	168	76
Transitions		
LASRT08/10	30	14
LASRT10/12	32	15
LASRT15	36	16
PACKAGING		
LTL Packaging (less than truck load)	105	48

DIMENSIONS - UNIT - INCHES (MM)

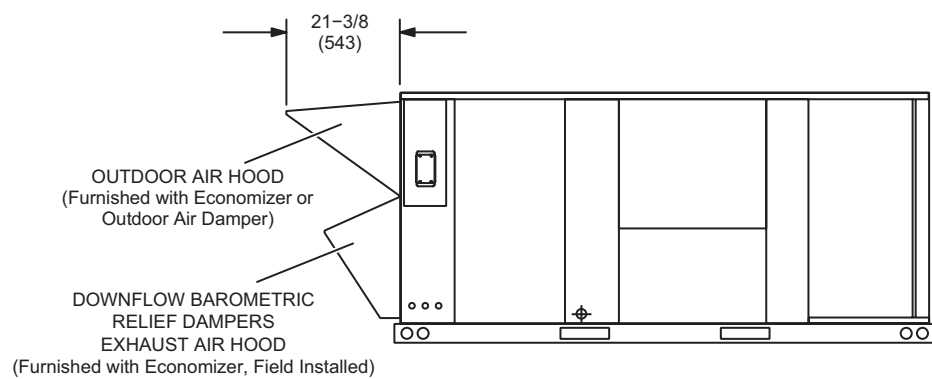
Model No.	CORNER WEIGHTS																CENTER OF GRAVITY							
	AA				BB				CC				DD				EE				FF			
	Base		Max.		Base		Max.		Base		Max.		Base		Max.		Base		Max.		Base		Max.	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm	in.	mm	in.	mm
092	281	127	327	148	252	114	286	130	275	125	306	139	312	142	358	162	46.5	1181	45.5	1156	24.5	622	25.5	648
102	282	128	329	149	254	115	287	130	276	125	308	139	314	143	360	163	46.5	1181	45.5	1156	24.5	622	25.5	648
120	294	133	340	154	264	120	297	135	283	128	318	144	321	146	372	169	46.5	1181	45.5	1156	24.5	622	25.5	648
150	304	138	350	159	273	124	306	139	293	133	327	148	332	151	383	174	46.5	1181	45.5	1156	24.5	622	25.5	648

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 or high static power exhaust.



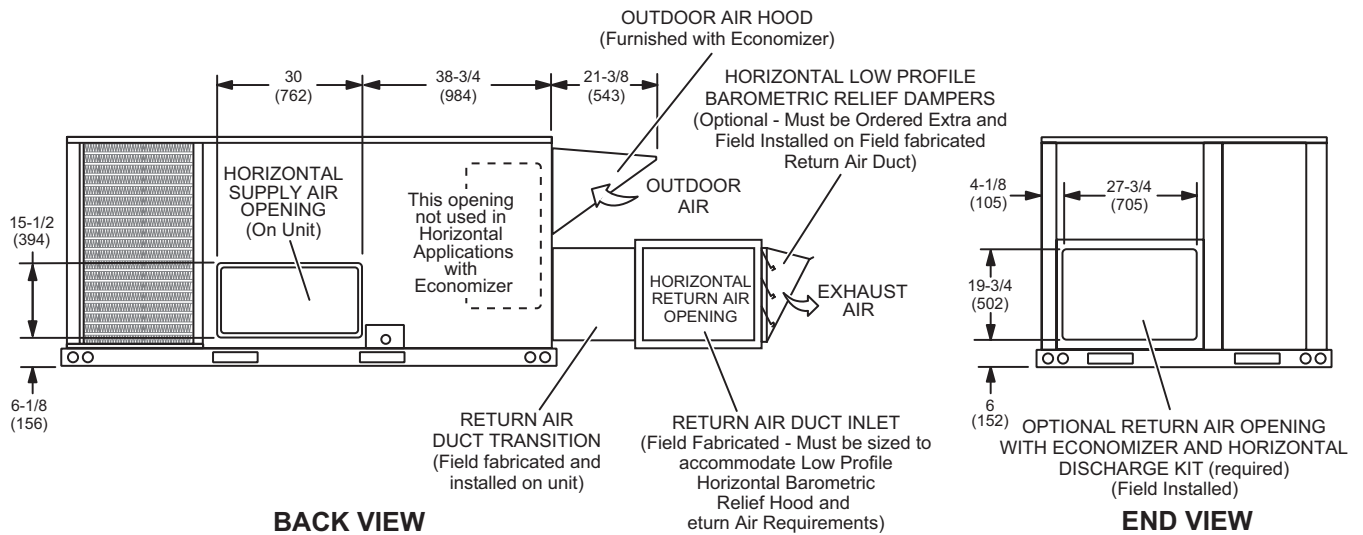
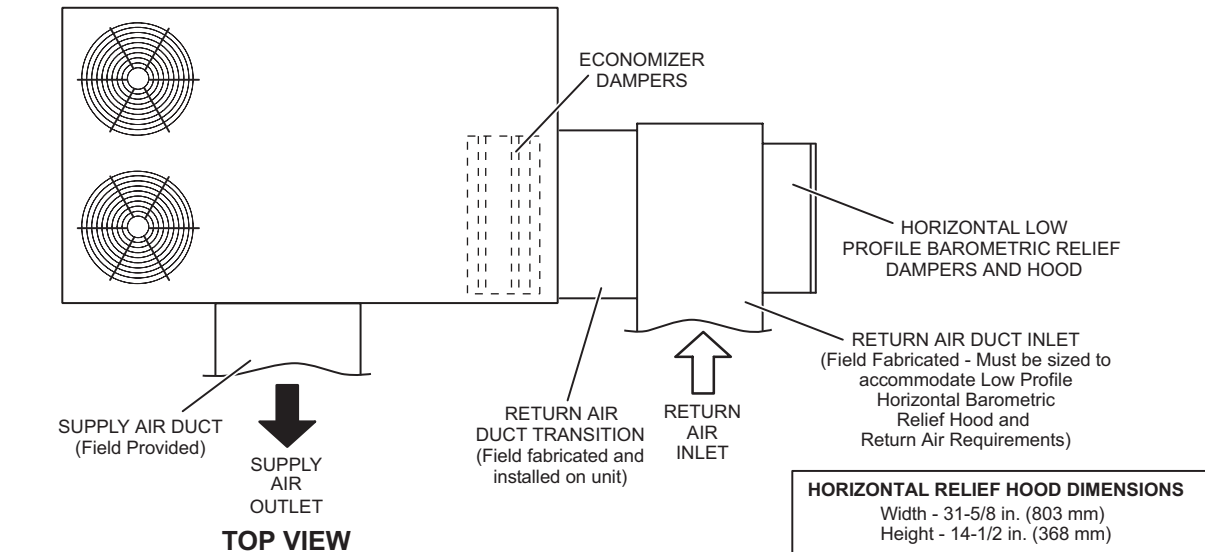
OUTDOOR AIR HOOD DETAIL



DIMENSIONS - ACCESSORIES - INCHES (MM)

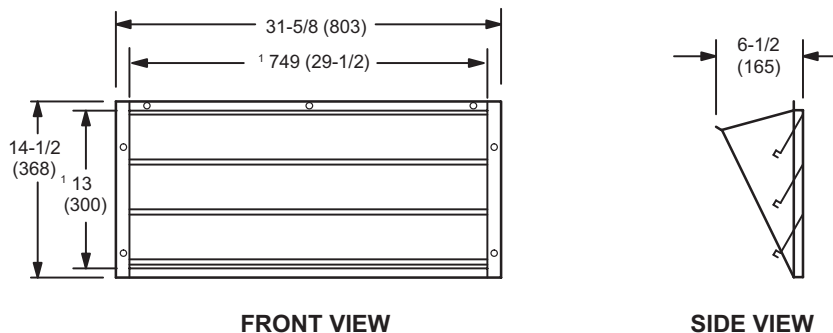
HORIZONTAL ECONOMIZER APPLICATION

(with Optional Low Profile Horizontal Barometric Relief Dampers and Horizontal Discharge Kit - Required)



NOTE - Return Air Duct and Transition must be supported.

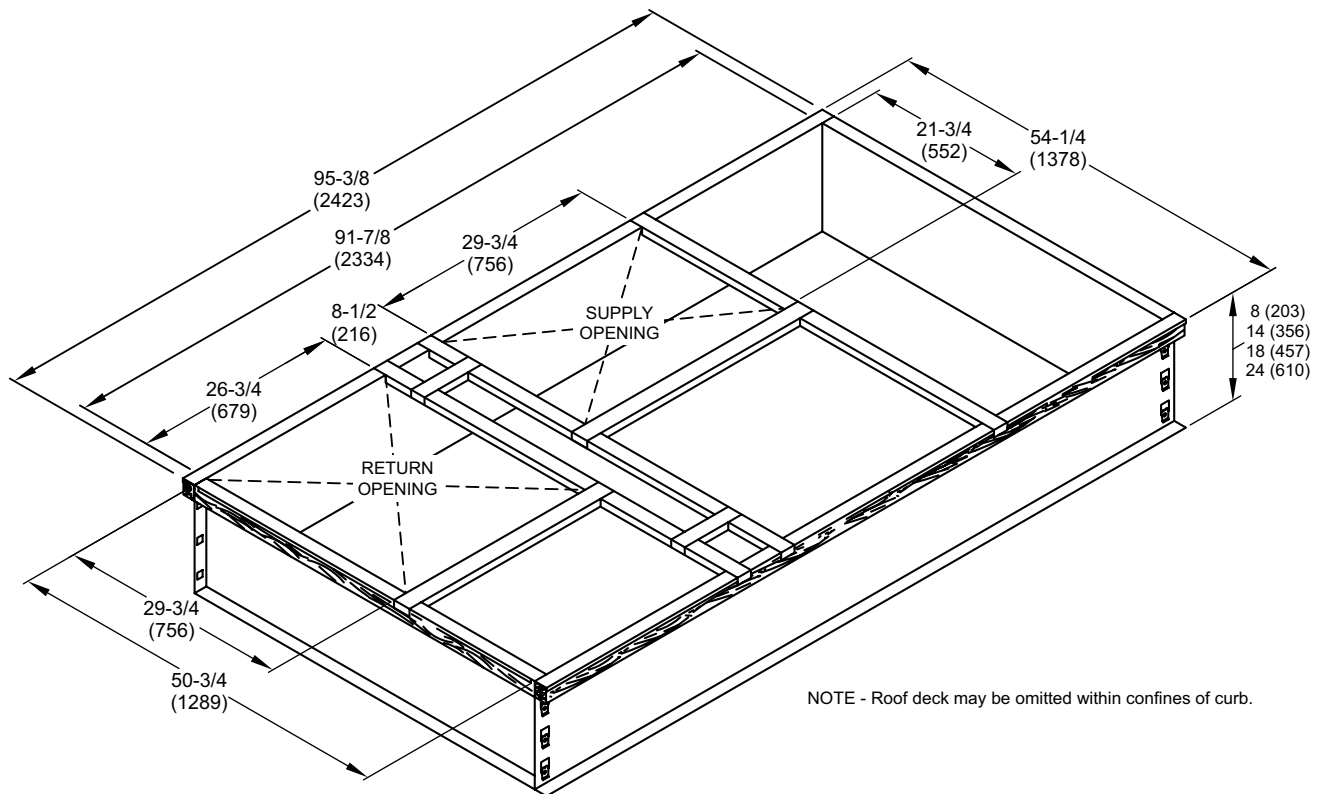
HORIZONTAL LOW PROFILE BAROMETRIC RELIEF DAMPERS (Field installed in horizontal return air duct adjacent to unit)



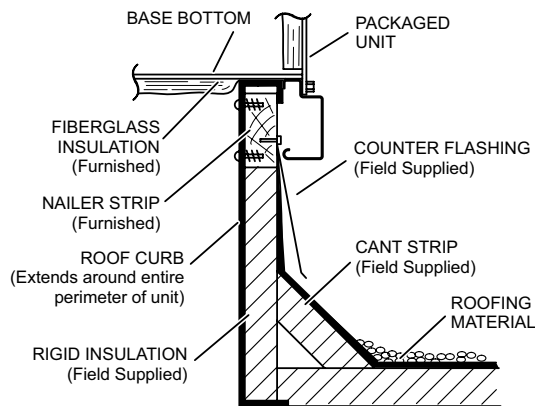
¹ NOTE - Opening size required in return air duct.

DIMENSIONS - ACCESSORIES - INCHES (MM)

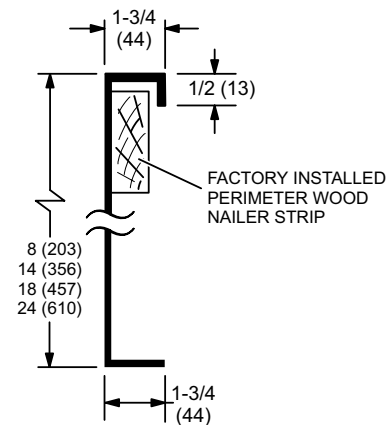
HYBRID ROOF CURBS - DOUBLE DUCT OPENING



TYPICAL FLASHING DETAIL FOR ROOF CURB

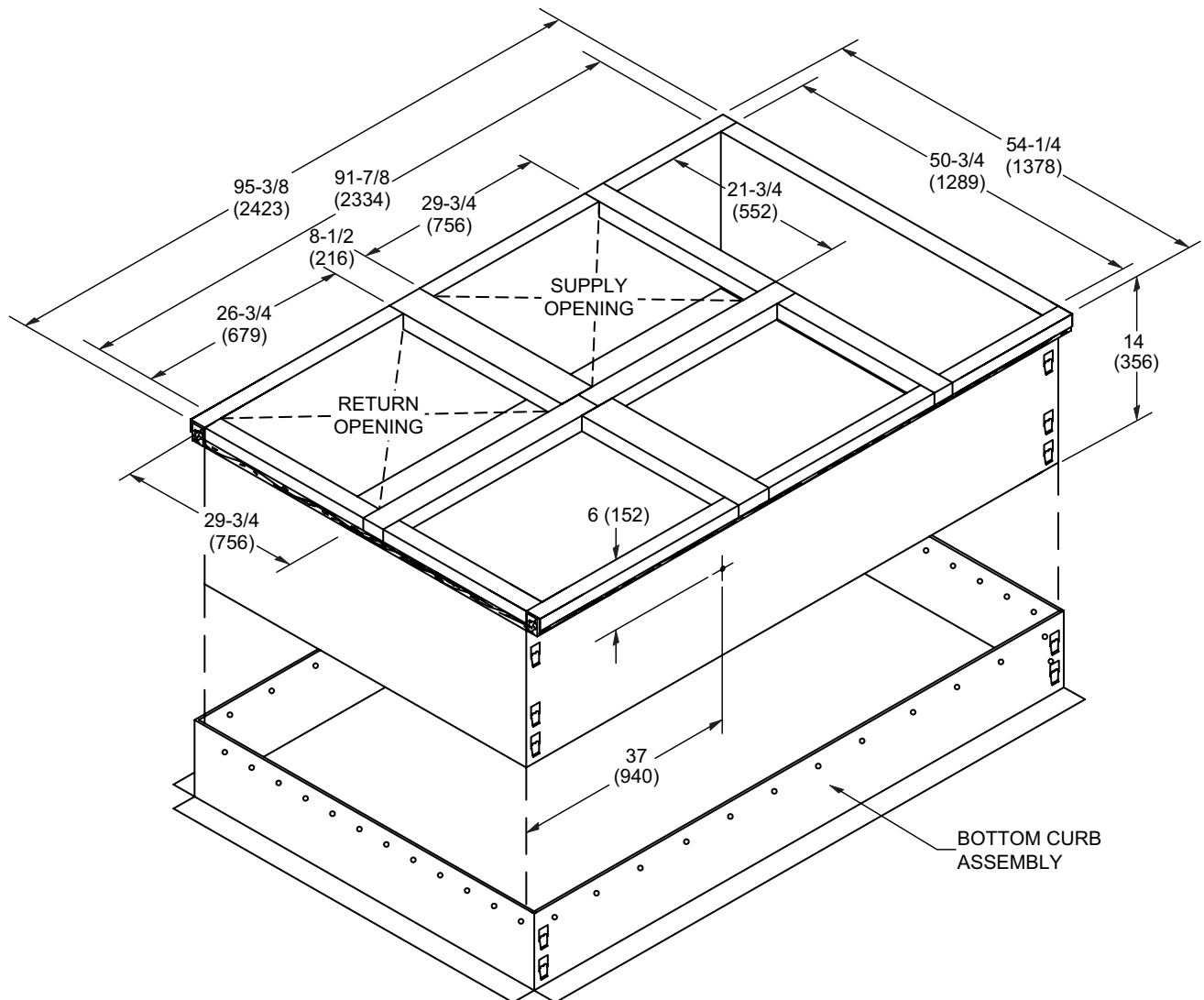


DETAIL ROOF CURB



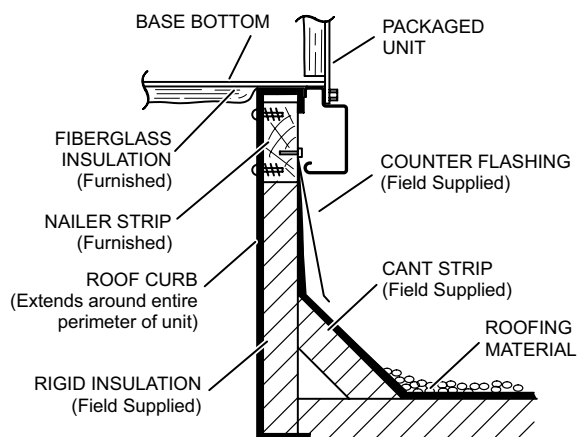
DIMENSIONS - ACCESSORIES - INCHES (MM)

ADJUSTABLE PITCH CURBS - DOUBLE DUCT OPENING

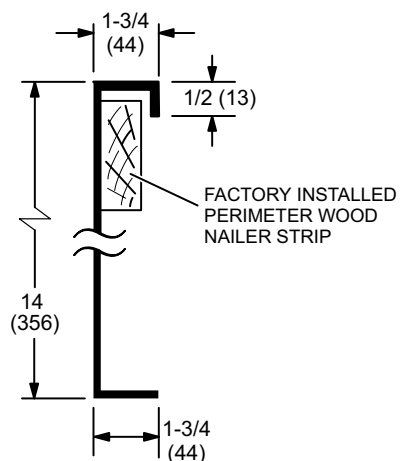


NOTE - Maximum slope pitch is 3/4 in. per 1 foot (19 mm per 305 mm) in any one direction.

TYPICAL FLASHING DETAIL FOR ROOF CURB



DETAIL ROOF CURB

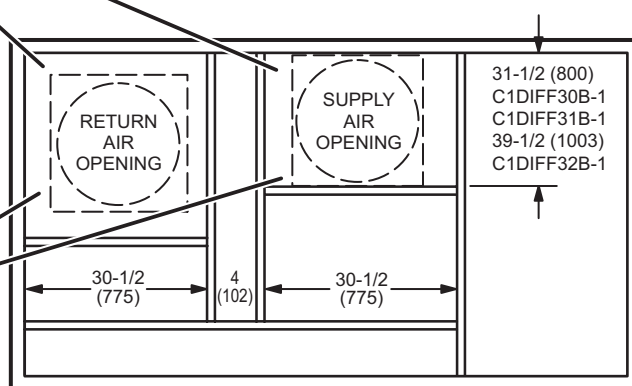


DIMENSIONS - ACCESSORIES - INCHES (MM)

ROOF CURBS WITH SUPPLY & RETURN AIR TRANSITIONS FOR CEILING DIFFUSERS

Isometric view of the diffusers showing dimensions:

- Top surface: 30 (762) x 30 (762)
- Top surface thickness: 1-1/2 (38)
- Top surface material: C1DIFF31B-1 (31 (787)) and C1DIFF32B-1 (39 (991))
- Side surface thickness: 8 (203)
- Side surface material: C1DIFF31B-1 (27-3/4 (705)) and C1DIFF32B-1 (35-3/4 (908))
- Bottom surface material: C1DIFF32B-1 (17-3/4 (451))

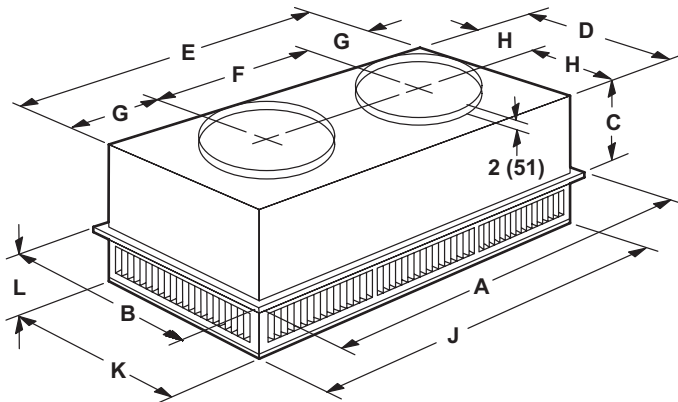


TOP VIEW

DIMENSIONS - ACCESSORIES - INCHES (MM)

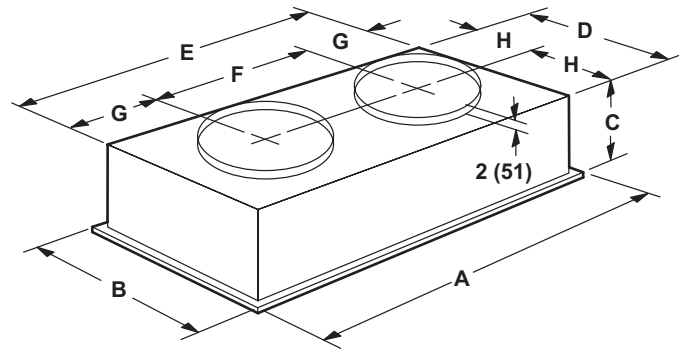
COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

STEP-DOWN CEILING DIFFUSER



Model Number		RTD11-95S
A	in.	47-5/8
	mm	1159
B	in.	29-5/8
	mm	752
C	in.	14-3/8
	mm	365
D	in.	27-1/2
	mm	699
E	in.	45-1/2
	mm	1158
F	in.	22-1/2
	mm	572
G	in.	11-1/2
	mm	292
H	in.	13-3/4
	mm	349
J	in.	45-1/2
	mm	1156
K	in.	27-1/2
	mm	699
L	in.	8-1/8
	mm	206
Duct Size	in.	20 round
	mm	508 round

FLUSH CEILING DIFFUSER

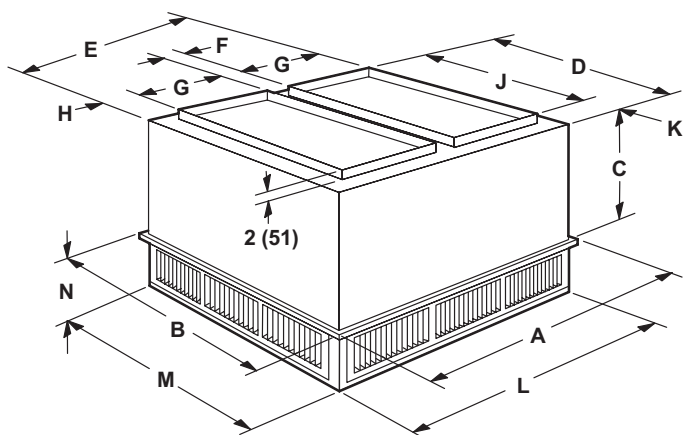


Model Number		FD11-95S
A	in.	47-5/8
	mm	1159
B	in.	29-5/8
	mm	752
C	in.	16-5/8
	mm	422
D	in.	27
	mm	686
E	in.	45
	mm	1143
F	in.	22-1/2
	mm	572
G	in.	11-1/4
	mm	286
H	in.	13-1/2
	mm	343
Duct Size	in.	20 round
	mm	508 round

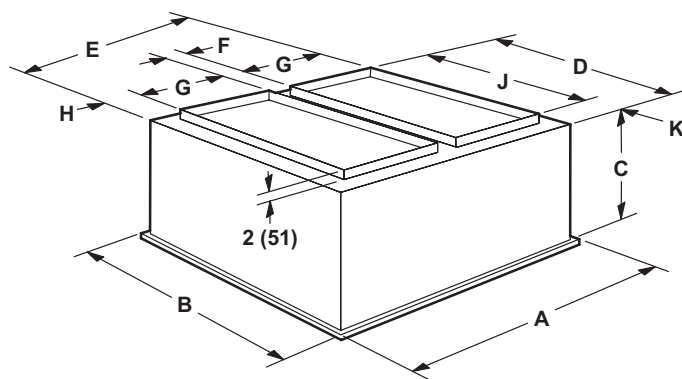
ACCESSORY DIMENSIONS - INCHES (MM)

COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

STEP-DOWN CEILING DIFFUSER



FLUSH CEILING DIFFUSER

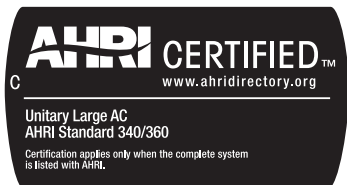


Model Number		RTD11-135S	RTD11-185S
A	in.	47-5/8	47-5/8
	mm	1210	1210
B	in.	35-5/8	47-5/8
	mm	905	1210
C	in.	20-5/8	24-5/8
	mm	524	625
D	in.	33-1/2	45-1/2
	mm	851	1156
E	in.	45-1/2	45-1/2
	mm	1156	1156
F	in.	4-1/2	4-1/2
	mm	114	114
G	in.	18	18
	mm	457	457
H	in.	2-1/2	2-1/2
	mm	64	64
J	in.	28	36
	mm	711	914
K	in.	2-3/4	4-3/4
	mm	70	121
L	in.	45-1/2	45-1/2
	mm	1156	1156
M	in.	33-1/2	45-1/2
	mm	851	1156
N	in.	9-1/8	10-1/8
	mm	232	257
Duct Size	in.	18 x 28	18 x 36
	mm	457 x 711	457 x 914

Model Number		FD11-135S	FD11-185S
A	in.	47-5/8	47-5/8
	mm	1210	1210
B	in.	35-5/8	47-5/8
	mm	905	1210
C	in.	23-1/4	29-1/4
	mm	591	743
D	in.	33	45
	mm	838	1143
E	in.	45	45
	mm	1143	1143
F	in.	4-1/2	4-1/2
	mm	114	114
G	in.	18	18
	mm	457	457
H	in.	2-1/4	2-1/4
	mm	57	57
J	in.	28	36
	mm	711	914
K	in.	2-1/2	4-1/2
	mm	64	114
Duct Size	in.	18 x 28	18 x 36
	mm	457 x 711	457 x 914

REVISIONS

Section	Description
Electrical Data	Updated for 092H4 and 102H4 models.
Options / Accessories	New Diffuser model and catalog numbers.
Specifications	Refrigerant charge updated for 092H4 and 102H4 models.
Weight Data	New diffuser weights.



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