# LCT

## ENLIGHT ROOFTOP UNITS

**High Efficiency | Lennox® CORE Controller | Environ™ Coil | R-454B | 60Hz**

**COMMERCIAL**
**PRODUCT SPECIFICATIONS (EHB)**

**25 to 30 Tons**
**Net Cooling Capacity – 300,000 to 350,000 Btuh**
**Optional Electric Heat - 30 to 90 kW**

ENLIGHT

LENNOX CORE CONTROL SYSTEM


Environ™ Coil System

MSAV™ MULTI-STAGE AIR VOLUME

Humiditrol

SmartWire™ System

ASHRAE Standard 90.1

## MODEL NUMBER IDENTIFICATION

**L C T 302 H 5 V N 1 Y**

**Brand**
L = Lennox®

**Unit Type**
C = Packaged Electric Cooling with optional Electric Heat

**Family**
T = Enlight Series

**Nominal Cooling Capacity - Tons**
302 = 25 Tons
360 = 30 Tons

**Cooling Efficiency**
H = High Efficiency

**Refrigerant Type**
5 = R-454B

**Blower Type**
M = MSAV® Multi-Stage Air Volume, Belt Drive
V = Variable Air Volume, Belt Drive

**Factory Installed Electric Heat**
N = No Heat
J = 30 kW Electric Heat
K = 45 kW Electric Heat
L = 60 kW Electric Heat
P = 90 kW Electric Heat

**Minor Design Sequence**
1 = 1st Revision

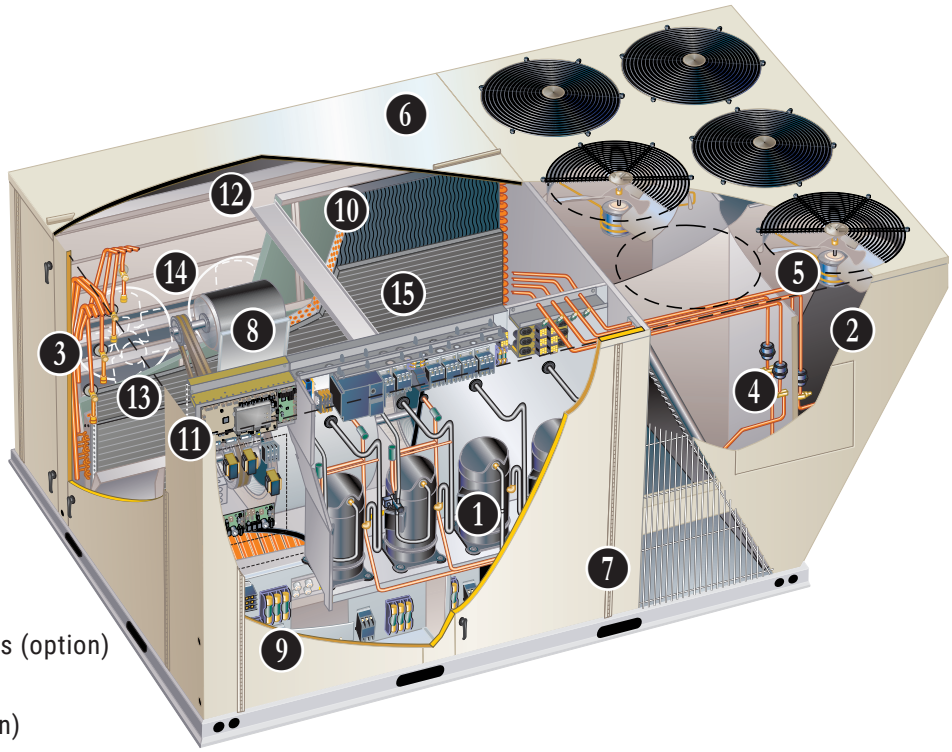
**Voltage**
Y = 208/230V-3 phase-60Hz
G = 460V-3 phase-60Hz
J = 575V-3 phase-60Hz

Form Number 211108 | July 2025
Supersedes all previous versions

## FEATURE HIGHLIGHTS

Enlight rooftop units featuring the Lennox® CORE Control System create a bright future through a highly energy-efficient and environmentally sustainable design. Comprehensive configurations meet a wide range of applications, making it the most flexible product line Lennox has to offer.

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




## CONTENTS

## APPROVALS AND WARRANTY

### APPROVALS

- Tested at conditions included in AHRI Standard 340/360-2023
- ETL and CSA listed
- Unit and components ETL, NEC and CEC bonded for grounding to meet safety standards for servicing
- All models are ASHRAE 90.1 compliant
- All models meet DOE 2023 energy efficiency standards and UL 60335-2-40 Refrigerant Detector Requirements
- MSAV® Multi-Stage Air Volume models meet California Code of Regulations, Title 24 and ASHRAE 90.1-2022 Section 6.4.3.10 requirements for staged airflow
- ISO 9001 Registered Manufacturing Quality System

### WARRANTY

- Compressors - Limited five years
- Environ™ Coil System - Limited three years
- Lennox® CORE Unit Controller - Limited three years
- Variable-Frequency Drive (VFD) - Limited five years
- High Performance Economizers (optional) - Limited five year
- All other covered components - Limited one year

## FEATURES AND BENEFITS

### 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-454B Refrigerant

- Low GWP (Global Warming Potential)
- Zero ODP (Ozone Depletion Potential)
- Low Toxicity/Lower Flammability - A2L
- Unit is factory pre-charged

1 Scroll Compressors

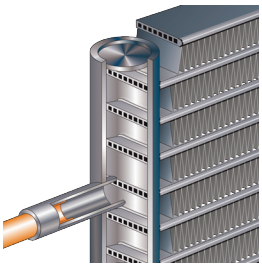
- Scroll compressors on all models for high performance, reliability and quiet operation
- Resiliently mounted on rubber grommets for quiet operation

Compressor Crankcase Heaters

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

2 Condenser Coil - Environ™ Coil System

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



Environ™ Coil System Features:

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

Evaporator Coil

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

3 Thermal Expansion Valves

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

4 Filter/Driers

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

## FEATURES AND BENEFITS

### COOLING SYSTEM (continued)

High Pressure Switches

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

Low Pressure Switches

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

Antimicrobial Condensate Drain Pan

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

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

Indoor Coil Freeze Protection

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

5 Outdoor Coil Fan Motors

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

Outdoor Coil Fans

- PVC coated fan guard furnished

#### Required Selections

Cooling Capacity

- Specify nominal cooling capacity

#### Options/Accessories

**Factory or Field Installed**

Drain Pan Overflow Switch

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

Stainless Steel Drain Pan

- Non-corrosive drain pan

**Field Installed**

Condensate Drain Trap

- Available in copper or PVC

### LOW GWP REFRIGERANT DETECTION SYSTEM (RDS)

- Complies with UL 60335-2-40 approved standard
- Required for all systems using R-454B refrigerant
- Factory installed on all units
- Consists of a refrigerant detection sensor(s) and a mitigation control
- Ensures safe operation for systems equipped with R-454B refrigerant
- Sensor(s) monitors indoor coil area for R-454B refrigerant
- If R-454B refrigerant is detected the refrigerant detection system will prevent compressor and heating operation until R-454B refrigerant is no longer detected
- Refrigeration detection system energizes blower if any R-454B refrigerant is detected to mitigate any concentrations of refrigerant from the unit and the system

### CABINET

6 Construction

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

Airflow Choice

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

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

Power Entry

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

Exterior Panels

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

Insulation

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

7 Hinged Access Panels

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

## FEATURES AND BENEFITS

### CABINET (continued)

Options/Accessories

**Factory Installed**

Corrosion Protection
- Completely flexible immersed coating
- 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 outdoor base

**Factory or Field Installed**

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

**Field Installed**

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

Burglar Bars
- Heavy gauge galvanized frame
- Fully welded
- 3/4 in. bar meets ASTM specification
- Frame meets ASTM A446, A525, A526 and A527 specification
- Burglar bars designed to fit ductwork

### BLOWER

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

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

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

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

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

Supply Static Pressure Transducer (VAV Models Only)
- Sends information to the Lennox® CORE unit controller to control VFD blower speed
- Shipped with the unit for remote field installation in the supply duct

## BLOWER (continued)

### Required Selections

Select VAV Variable Air Volume or MSAV® Multi-Stage Air Volume

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

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

Ordering Information

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

### Options/Accessories

**Factory Installed**

Supply VFD Blower Bypass Control

- Allows unit to operate as a constant air volume (CAV) unit in case of variable frequency drive (VFD) failure

**NOTE** - Supply VFD Blower Bypass Control is not available with High Static Power Exhaust.

**Field Installed**

Supply Static Limit Switch

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

## ELECTRICAL

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

SmartWire™ System

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

Electrical Plugs

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

Phase/Voltage Detection

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

### Required Selections

Voltage Choice

- Specify when ordering base unit

## ELECTRICAL (continued)

### Options/Accessories

**Factory Installed**

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

Short-Circuit Current Rating (SCCR)
- Higher short-circuit protection up to 100kA

**NOTE** - Disconnect Switch not available with higher SCCR option. SCCR option only available with factory installed electric heat.

**Factory or Field Installed**

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

9 Electric Heat
- Helix wound nichrome elements
- Individual element limit controls
- Wiring harness
- Unit fuse block
- See Options/Accessories tables for ordering information

GFI Service Outlets (2)
- 115V ground fault circuit interrupter (GFCI) type options:
  - Factory installed and wired, unit powered
  - Factory installed, non-powered, field wired
  - Field installed, non-powered, field wired

**Field Installed**

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

## FEATURES AND BENEFITS

### INDOOR AIR QUALITY

10 Air Filters
- Disposable 2 inch MERV 4 filters furnished as standard

Options/Accessories

**Factory or Field Installed**

Healthy Climate® High Efficiency Air Filters
- Disposable MERV 8 or MERV 13 (Minimum Efficiency Reporting Value based on ASHRAE 52.2) efficiency 2-inch pleated filters

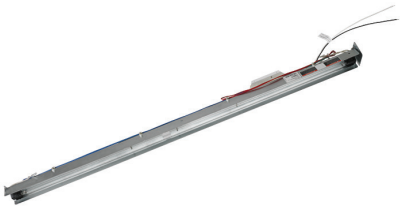
- Replacement Filter Media Kit With Frame
- Replaces existing pleated filter media
- Includes washable metal mesh screen and metal frame with clip for holding replaceable non-pleated filter

**Field Installed**

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

Indoor Air Quality ($CO_2$) Sensors
- Monitors $CO_2$ levels
- Reports to the Lennox® CORE Control, which adjusts economizer dampers as needed

Healthy Climate® UVC Germicidal Light Kit



- Germicidal lamps emit ultra-violet (UV-C) energy, which has been proven to be effective in reducing microbes such as viruses, bacteria, yeasts, and molds
- 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)
- Destroys the organism or controls its ability to reproduce
- Field installed in the blower/evaporator coil section
- Magnetic safety interlock terminates power when access panels are removed
- All necessary hardware for installation is included
- Lamps operate on 110/230V-1ph power supply

**NOTE** - Step-down transformer may be ordered separately for 460V and 575V units.

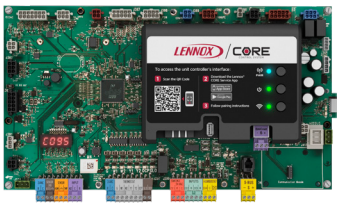
- Approved by ETL

Indoor Air Quality ($CO_2$) Sensors
- Monitors $CO_2$ levels
- Reports to the Lennox® CORE Control, which adjusts economizer dampers as needed

Needlepoint Bipolar Ionization (NPBI) Kit
- NPBI technology integrates with system controls for effective air treatment
- Ionization has been shown to effectively reduce harmful pathogens, pollutants and odors
- Brush-type ionizer introduces a high concentration of both positive and negative ions into the airstream
- The bipolar ions are then dispersed into the occupied space through the duct system proactively reducing the airborne contaminants
- Ions travel within the building air stream and attach to particles, pathogens, and gas molecules, making them larger and easier to capture in the filtration system
- UL 2998 certified for zero ozone emission

## CONTROL SYSTEM

### LENNOX® CORE CONTROL SYSTEM




11 The Lennox® CORE Control System is designed to accelerate equipment install and service. Standard with all Enlight rooftop units, control system integrates key technologies that lower installation costs, drive system efficiency, and protect your investments.

The Lennox® CORE Unit Controller is a microprocessor-based controller that provides flexible control of all unit functions.

CORE Mobile Service App

- Guided Setup with progress indicators, detailed help, and exportable summaries to manage simple, trouble-free setup, reducing commissioning times
- Enhanced Test Functionality provides real-time sensor readings, trending, and reports that enable easy troubleshooting
- Ability to set and configure parameters of the CORE Control System to manage sequence of operation
- Economizer test function ensures economizer is operating correctly

Download on the App Store | ANDROID APP ON Google play

Additional Features:

- Built-In 7-Segment Display shows Unit Status and active alarms for easy troubleshooting
- Buttons for test and clearing delays
- SmartWire™ System with keyed and removable screw terminals ensure correct field wiring
- Built-in BACnet MS/TP and IP allow open integration to building management systems.
- Two-port Ethernet Switch enables daisy chaining for BACnet IP and automatic firmware updates

**NOTE** - Unit Internet Connection required.

- Profile setup copies key settings between units with the same configuration to reduce setup time
- USB port allows a technician to download and transfer unit information to help verify service was performed
- USB software updates on the Lennox® CORE Unit Controller enhance functionality without the need to change components
- Unit Controller Software

Configurable Built-In Functions

- Discharge Air Cooling Control
- Up to three distinct Cooling Airflows in Thermostat Mode
- Programmable independent heating, ventilation and cooling blower speeds
- Discharge Air Heating Control
- Economizer Control Options (See Economizer / Exhaust Air / Outdoor Air sections)
- Exhaust Fan Control Modes for fresh air damper position
- Configurable Morning Warm-up
- Night Setback Mode
- Fresh Air Tempering for Improved Ventilation
- Demand Control Ventilation
- Low Ambient Controls for operation down to 0°F
- Humiditrol™ Operation
- Enhanced Dehumidification (Latent Demand Control without hot gas reheat)

Component Protection / Unit Safeguards:

- Compressor Time-Off Delay
- Adjustable Blower On/Off Delay
- Return Air Temperature Limit Control
- Safety Switch Input allows Controller to respond to a external safety switch trip
- Service Relay Output
- Thermostat Bounce Delay
- Smoke Alarm Mode has four choices (unit off, positive pressure, negative pressure, purge)
- “Strike Three” Protection
- Gas Valve Time Delay Between First and Second Stage
- Minimum Compressor Run Time

Control Methods / Interfaces:

- DDC and 24V Thermostat
- BACnet MS/TP and IP
- LONTalk (Factory and Field Option)
- Lennox S-BUS
- Zone Temperature Sensor Input
- Dehumidistat and Humidity Sensor Inputs
- Indoor Air Quality Inputs (2)
- Built-in Control Parameter Defaults
- Permanent Diagnostic Code Storage
- Field Adjustable Control Parameters (Over 200 settings)
- Multiple Configurable Digital Inputs
- LED Indicators
- PC Interface connects the Lennox® CORE Unit Controller to a PC with the Lennox Unit Controller Software

**NOTE** - Lennox® CORE Control System features vary with the type of rooftop unit in which the control is installed.

## CONTROL SYSTEM

### LENNOX® CORE CONTROL SYSTEM (continued)

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

**NOTE** - Sensor is shipped with the VAV unit for remote field installation in the supply duct.

### Controls Options

**Factory or Field Installed**

Dirty Filter Switch
- Senses static pressure increase and issues alarm if necessary

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

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

**Commercial Control Systems**

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

**Field Installed**

Thermostats and Room Sensors
- Control system and thermostat options, see page 16

## OPTIONS / ACCESSORIES

### ECONOMIZER

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

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

**Factory or Field Installed**

12 High Performance Economizer
- Approved for California Title 24 building standards
- Low leakage dampers are Air Movement and Control Association International (AMCA) Class 1A Certified - Maximum 3 CFM per sq. ft. leakage at 1 in. w.g.
- ASHRAE 90.1 and IECC compliant
- Outdoor Air Hood with mist elimination is included when economizer is factory installed and is furnished with economizer when ordered for field installation

**NOTE** - Downflow or horizontal economizer applications require optional Downflow or Horizontal Barometric Relief Dampers with Exhaust Hood.

- Linked damper action
- High torque 24-volt fully-modulating spring return damper motor
- Return air and outdoor air dampers
- Plug-in connections to unit

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

**NOTE** - The Free Cooling setpoint for Title 24 applications must be set based on the Climate Zone where the system is installed. See Section 140.4 “Prescriptive Requirements for Space Conditioning Systems” of the California Energy Commission’s 2022 Building Energy Efficiency Standards.

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

## ECONOMIZER (continued)

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

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

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

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

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

### Factory or Field Installed

Single Enthalpy Temperature Control (Not for Title 24)
- Outdoor air enthalpy sensor enables Economizer if the outdoor enthalpy is less than the setpoint of the control

Differential Enthalpy Control (Not for Title 24)
- Order two Single Enthalpy Controls
- One is field installed in the return air section
- One is installed in the outdoor air section
- Allows the economizer control to select between outdoor air or return air, whichever has lower enthalpy

### Field Installed

Outdoor Air CFM Control
- Maintains constant outdoor air volume levels on the supply air fan and varying unit airflows
- Velocity sensor located in the rooftop unit outdoor air section, the Lennox® CORE unit controller changes the Economizer position to help minimize the effect of supply fan speed changes on outdoor air volume levels
- Setpoint for outdoor air volume is established by field testing

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

Building Pressure Control
- Maintains constant building pressure level
- Includes a static pressure transducer and outdoor static pressure assembly

Using differential pressure information between the outdoor air and the building air, the Lennox® CORE unit controller changes the Economizer position to help maintain a constant building pressure

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

## EXHAUST

### Factory or Field Installed

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

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

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

## OPTIONS / ACCESSORIES

### EXHAUST (continued)

**Factory or Field Installed**

14 Standard Static Power Exhaust

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

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

**Field Installed**

High Static Power Exhaust

- Centrifugal-type power exhaust blowers
- Overload and sub-fuse protected
- Ball bearings
- Forward curved blades
- Blower wheel is statically and dynamically balanced
- Adjustable pulleys for speed adjustments

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

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

#### Control Choices

Damper Position Control

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

**Field Installed**

Differential Pressure Transducer Control

- For Standard Static Power Exhaust or High Static Power Exhaust with VFD
- Lennox® CORE unit controller controls the power exhaust system based on a 0-10VDC signal from a differential pressure transducer, which compares atmospheric pressure to conditioned space static pressure

### OUTDOOR AIR

**Factory or Field Installed**

Motorized Outdoor Air Dampers

- Linked mechanical dampers
- Fully modulating spring return damper motor with plug-in connection
- 0 to 25% (fixed) outdoor air adjustable
- Installs in unit
- Outdoor air hood with bird screen included

**NOTE** - Outdoor Air Hood is shipped separately in the unit with factory installed dampers for field installation.

**Field Installed**

Manual Outdoor Air Damper

- Adjustable slide damper
- Installed in unit
- Outdoor air hood with bird screen included

## OPTIONS / ACCESSORIES

### ROOF CURBS

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

#### Downflow

Hybrid Roof Curbs

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

#### Horizontal

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

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

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

### CEILING DIFFUSERS

#### Field Installed

Ceiling Diffusers
(Flush or Step-Down)

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

Transitions (Supply and Return)

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

## HUMIDITROL® DEHUMIDIFICATION SYSTEM OPTION

### 15 OVERVIEW

**NOTE** - Available for 302H and 360H models with MSAV® Multi-Stage Air Volume 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

### BENEFITS

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

### OPERATION

No Dehumidification Demand

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

Dehumidification Demand Only

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

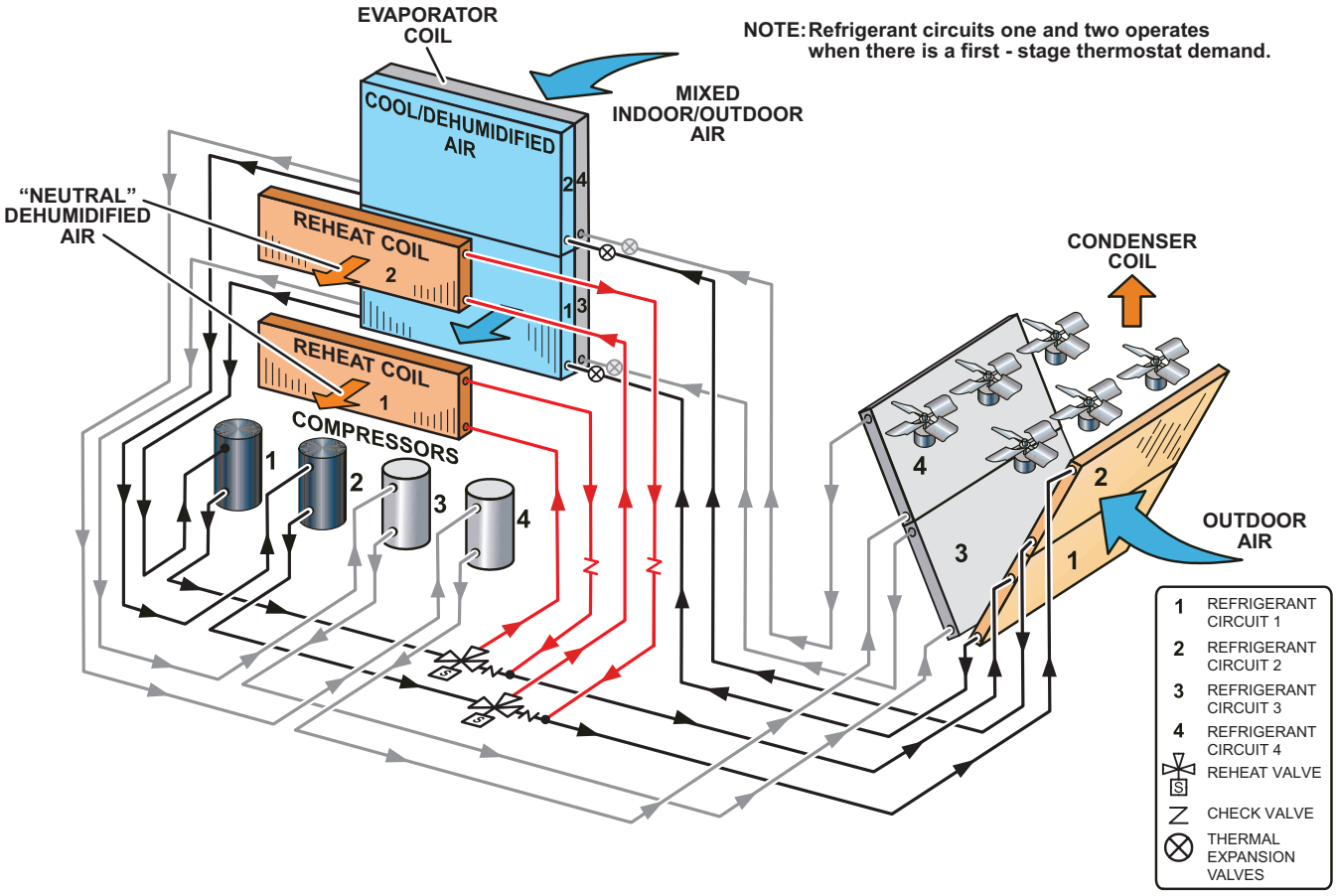
**NOTE** - See Sequence of Operation for additional information.

Dehumidification and Cooling Demand (Thermostat/ Room Sensor Application)

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

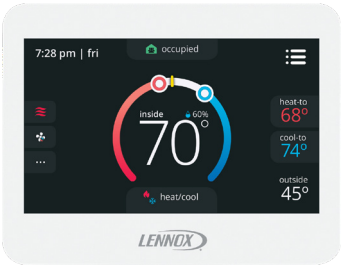
## HUMIDITROL® DEHUMIDIFICATION SYSTEM OPTION

### REFRIGERANT SCHEMATIC



## OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

### CS8500 Commercial 7-Day Programmable Thermostat

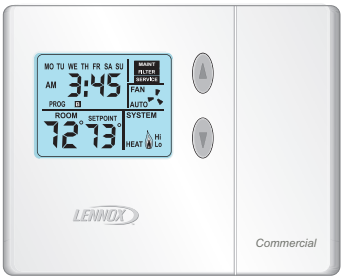



- Fully Communicating Sensor
- Full Color Touchscreen Interface
- Variable Speed System Control (On Compatible Units)
- Up To 4 Heat / 4 Cool
- Built-In Sensors For Temperature, Humidity And Optional $CO_2$
- Remote Sensor Options For Occupancy, Temperature
- BACnet Capable Options
- 5-2 or 7-Day Scheduling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

### CS7500 Commercial 7-Day Programmable Thermostat


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

### CS3000 Commercial 5-2 Day Programmable Thermostat




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

### Wired Temperature/Humidity Room Sensor (Non-Communicating)


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

## OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

| Description | | Order Number |
|---|---|---|
| **CS8500 Commercial 7 Day Programmable Thermostat** | | |
| CS8500 7-Day Thermostat | No $CO_2$ Sensing | **24K55** |
| | With $CO_2$ Sensing | **24K53** |
| Sensors/Accessories | [1] Remote non-adjustable wall-mount 10k | **47W37** |
| | [1] Remote non-adjustable wall-mount 11k | **94L61** |
| **Sysbus Network Cable (Yellow) for CS8500 and LCS-5030 Wired Room Sensor** | | |
| Twisted pair 100% shielded communication cable, Red and Black 22 AWG, yellow jacket, rated at 75°C, 300V, Plenum rated Insulation - Low smoke PVC, NEC, CMP | 500 ft. box | **27M19** |
| | 1000 ft. box | **94L63** |
| | 2500 ft. roll | **68M25** |
| **CS7500 Commercial 7-Day Programmable Thermostat** | | |
| CS7500 7-Day Thermostat | | **24K41** |
| Sensors/Accessories | [2] Remote non-adjustable wall-mount 20k | **47W36** |
| | [2] Remote non-adjustable wall-mount 10k | **47W37** |
| | Remote non-adjustable discharge air (duct mount) | **19L22** |
| | Outdoor temperature sensor | **X2658** |
| **CS3000 Commercial 5-2 Day Programmable Thermostat** | | |
| CS3000 5-2 Day Thermostat | | **11Y05** |
| Sensors/Accessories | Remote non-adjustable wall mount 10k averaging | **47W37** |
| | Thermostat wall mounting plate | **X2659** |
| **Universal Thermostat Guard with Lock (clear)** | | |
| | Inside Dimensions (H x W x D) 5-7/8 x 8-3/8 x 3 in. | **39P21** |
| **Temperature/Humidity Room Sensor** | | |
| A335MT13AE1 Wired Temperature/Humidity Room Sensor (Non-Communicating) | | **21W06** |

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

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

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

### SUPPLY AIR BLOWER SPEED

Unit has the following supply air blower speed settings:

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

### COOLING (2 Cool)

**[1] Unit Features An Economizer And Outdoor Air Is Suitable**

**Y1 Demand:**

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

**Y2 Demand:**

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

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

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

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

**Y1 Demand:**

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

**Y2 Demand:**

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

### Dehumidification Mode

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

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

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

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

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

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

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

### HEATING (2 Heat)

**W1 Demand:**

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

**W2 Demand:**

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

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

### SUPPLY AIR BLOWER SPEED

Unit has the following supply air blower speed settings:

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

### COOLING (4 Cool)

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

**[1] Unit Features An Economizer And Outdoor Air Is Suitable**

**Cooling Stage 1:**

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

**Cooling Stage 2:**

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

**Cooling Stage 3:**

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

**Cooling Stage 4:**

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

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

**Cooling Stage 1:**

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

**Cooling Stage 2:**

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

**Cooling Stage 3:**

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

**Cooling Stage 4:**

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

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

**Dehumidification Mode**

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

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

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

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

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

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

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

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

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

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

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

**HEATING (4 Heat)**

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

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

### SUPPLY AIR BLOWER SPEED

Unit has the following supply air blower speed settings:

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

### COOLING (4 Cool)

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

**[1] Unit Features An Economizer And Outdoor Air Is Suitable**

**Cooling Stage 1:**

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

**Cooling Stage 2:**

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

**Cooling Stage 3:**

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

**Cooling Stage 4:**

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

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

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

**Cooling Stage 1:**

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

**Cooling Stage 2:**

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

**Cooling Stage 3:**

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

**Cooling Stage 4:**

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

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

**HEATING (4 Heat)**

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

## ACCESSORIES

**Modulating Outdoor Air Damper**

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

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

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

## OPTIONS / ACCESSORIES

| Item Description | | Order Number | Size 302 | Size 360 |
|---|---|---|---|---|
| **COOLING SYSTEM** | | | | |
| Condensate Drain Trap | PVC | **22H54** | X | X |
| | Copper | **76W27** | X | X |
| Drain Pan Overflow Switch | | **21Z07** | OX | OX |
| Stainless Steel Condensate Drain Pan | | **83W42** | OX | OX |
| **BLOWER - SUPPLY AIR** | | | | |
| Blower Type | MSAV® Multi-Stage Air Volume | Factory | O | O |
| | VAV Variable Air Volume | Factory | O | O |
| Motors | Belt Drive (standard efficiency) - 5 HP | Factory | O | O |
| | Belt Drive (standard efficiency) - 7.5 HP | Factory | O | O |
| | Belt Drive (standard efficiency) - 10 HP | Factory | O | O |
| | Automatic VFD Bypass Option (MSAV® Models Only) | Factory | O | O |
| Drive Kits<br>See Blower Data Tables for usage and selection | Kit #1 740-895 rpm | Factory | O | O |
| | Kit #2 870-1045 rpm | Factory | O | O |
| | Kit #3 715-880 rpm | Factory | O | O |
| | Kit #4 770-965 rpm | Factory | O | O |
| | Kit #5 660-810 rpm | Factory | O | O |
| | Kit #6 770-965 rpm | Factory | O | O |
| | Kit #7 570-720 rpm | Factory | O | O |
| | Kit #8 480-630 rpm | Factory | O | O |
| | Kit #9 410-535 rpm | Factory | O | O |
| **CABINET** | | | | |
| Burglar Bars | | **Y1036** | X | X |
| Combination Coil/Hail Guards | | **13T16** | OX | OX |
| Corrosion Protection | | Factory | O | O |
| Horizontal Return Air Panel Kit | | **38K48** | X | X |
| **CONTROLS** | | | | |
| Commercial Controls | LonTalk® Module | **54W27** | OX | OX |
| | Novar® LSE | Factory | O | O |
| Dirty Filter Switch | | **53W68** | OX | OX |
| Fresh Air Tempering | | **21Z08** | OX | OX |
| Smoke Detector - Supply or Return (Power board and one sensor) | | **37G73** | OX | OX |
| Smoke Detector - Supply and Return (Power board and two sensors) | | **37G74** | OX | OX |

NOTE - Order 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 | | Order Number | Size 302 | Size 360 |
|---|---|---|---|---|
| **INDOOR AIR QUALITY** | | | | |
| **Air Filters** | | | | |
| Healthy Climate® High Efficiency Air Filters 20 x 20 x 2 - order 12 per unit | MERV 8 | **54W21** | OX | OX |
| | MERV 13 | **52W39** | OX | OX |
| | MERV 16 | **21U40** | X | X |
| Replaceable Media Filter with Metal Mesh Frame (includes Non-Pleated Filter Media) 20 x 20 x 2- order 12 per unit | | **44N60** | X | X |
| **Indoor Air Quality ($CO_2$) Sensors** | | | | |
| Sensor - Wall-mount, off-white plastic cover with LCD display | | **77N39** | X | X |
| Sensor - Wall-mount, off-white plastic cover, no display | | **23V86** | X | X |
| Sensor - Black plastic case, LCD display, rated for plenum mounting | | **87N52** | X | X |
| Sensor - Black plastic case, no display, rated for plenum mounting | | **23V87** | X | X |
| $CO_2$ Sensor Duct Mounting Kit - for downflow applications | | **23Y47** | X | X |
| Aspiration Box - for duct mounting non-plenum rated $CO_2$ sensors (**77N39**) | | **90N43** | X | X |
| **Needlepoint Bipolar Ionization (NPBI)** | | | | |
| Needlepoint Bipolar Ionization (NPBI) Kit | | **TBD** | X | X |
| **UVC Germicidal Light Kit** | | | | |
| [1] Healthy Climate® UVC Light Kit (110/230v-1ph) | | **TBD** | X | X |
| Step-Down Transformers | 460V primary, 230V secondary | **10H20** | X | X |
| | 575V primary, 230V secondary | **10H21** | X | X |
| **ELECTRICAL** | | | | |
| Voltage 60 Hz | 208/230V - 3 phase | Factory | O | O |
| | 460V - 3 phase | Factory | O | O |
| | 575V - 3 phase | Factory | O | O |
| HACR Circuit Breakers | | Factory | O | O |
| [2] Short-Circuit Current Rating (SCCR) of 100kA (includes Phase/Voltage Detection) | | | O | O |
| [3] Disconnect Switch (See Electrical Accessories Table for usage, page 42) | 80 amp | **54W85** | OX | OX |
| | 150 amp | **54W86** | OX | OX |
| | 250 amp | **54W87** | OX | OX |
| GFI Service Outlets | 15 amp non-powered, field-wired (208/230V, 460V only) | **74M70** | OX | OX |
| | [4], [5] 15 amp factory-wired and powered (208/230V, 460V) | Factory | O | O |
| | [6] 20 amp non-powered, field-wired (208/230V, 460V, 575V) | **67E01** | X | X |
| | [6] 20 amp non-powered, field-wired (575V) | Factory | O | O |
| Weatherproof Cover for GFI | | **10C89** | X | X |
| Phase/Voltage Detection | | Factory | O | O |
| **ELECTRIC HEAT** | | | | |
| 30 kW | 208/230V-3ph | **30U68** | OX | OX |
| | 460V-3ph | **30U69** | OX | OX |
| | 575V-3ph | **30U70** | OX | OX |
| 45 kW | 208/230V-3ph | **30U74** | OX | OX |
| | 460V-3ph | **30U75** | OX | OX |
| | 575V-3ph | **30U76** | OX | OX |
| 60 kW | 208/230V-3ph | **30U80** | OX | OX |
| | 460V-3ph | **30U81** | OX | OX |
| | 575V-3ph | **30U82** | OX | OX |
| 90 kW | 208/230V-3ph | **30U83** | OX | OX |
| | 460V-3ph | **30U84** | OX | OX |
| | 575V-3ph | **30U85** | 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).

[2] SCCR option is only available with factory installed electric heat or no electric heat.
SCCR option is not available if the MOCP of the configured unit is greater than 200A.

[3] Disconnect Switch is not available with the SCCR option.

[4] If a factory installed disconnect switch is ordered with a factory installed GFI, the default disconnect size is 150 amps.

[5] Unit powered GFI Service Outlets are not available with SCCR option.
Disconnect Switch or Circuit Breaker is required with unit powered GFI Service Outlets.

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

NOTE - Order 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 | | Order Number | Size 302 | Size 360 |
|---|---|---|---|---|
| **[7] HUMIDITROL® CONDENSER REHEAT OPTION** | | | | |
| Humiditrol® Dehumidification Option | | Factory | O | O |
| **ECONOMIZER** | | | | |
| **High Performance Economizer (Approved for California Title 24 Building Standards / AMCA Class 1A Certified)** | | | | |
| High Performance Economizer (Downflow or Horizontal)<br>Includes Economizer Dampers with Outdoor Air Hood<br>Downflow Applications - Use furnished Outdoor Air Hood - Order Downflow Barometric Relief Dampers with Exhaust Hood separately<br>Horizontal Applications - Use furnished Outdoor Air Hood - Order Horizontal Barometric Relief Dampers with Exhaust Hood separately | | **18X87** | OX | OX |
| **Economizer Controls** | | | | |
| Differential Enthalpy (Not for Title 24) | Order 2 | **21Z09** | OX | OX |
| Sensible Control | Sensor is Furnished | Factory | O | O |
| Single Enthalpy (Not for Title 24) | | **21Z09** | OX | OX |
| Global, Enthalpy | Sensor Field Provided | Factory | O | O |
| Building Pressure Control | | **13J77** | X | X |
| Differential Sensible | Sensor is Furnished | Factory | O | O |
| Outdoor Air CFM Control | | **13J76** | X | X |
| **Barometric Relief Dampers With Exhaust Hood** | | | | |
| Downflow Barometric Relief Dampers | | **76W17** | OX | OX |
| Horizontal Barometric Relief Dampers | | **33K78** | OX | OX |
| **OUTDOOR AIR** | | | | |
| **Outdoor Air Dampers With Outdoor Air Hood** | | | | |
| Motorized | | **18X89** | OX | OX |
| Manual | | **18X88** | X | X |
| **POWER EXHAUST** | | | | |
| Standard Static, SCCR Rated | 208/230V | **74W21** | OX | OX |
| | 460V | **74W22** | OX | OX |
| | 575V | **74W23** | OX | OX |
| High Static with VFD<br>2 HP (731-932 rpm) | 208/230V | **83M89** | X | X |
| | 460V | **83M90** | X | X |
| | 575V | **83M91** | X | X |
| **Power Exhaust Control** | | | | |
| Pressure Transducer Control | | **13J77** | X | X |

[7] Available for 302H and 360H models only with MSAV® Multi-Stage Air Volume option.

NOTE - Order 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 | | Order Number | Size 302 | Size 360 |
|---|---|---|---|---|
| **ROOF CURBS** | | | | |
| **Hybrid Roof Curbs, Downflow** | | | | |
| 14 in. height | | **11F62** | X | X |
| 18 in. height | | **11F63** | X | X |
| 24 in. height | | **11F64** | X | X |
| **Standard Roof Curbs, Horizontal - Requires Horizontal Return Air Panel Kit** | | | | |
| 30 in. height - slab applications | | **11T90** | X | X |
| 41 in. height - rooftop applications | | **11T97** | X | X |
| **Horizontal Return Air Panel Kit** | | | | |
| Required for Horizontal Applications with Roof Curb | | **38K48** | X | X |
| **Insulation Kit For Standard Horizontal Curbs** | | | | |
| For 30 in. Curb | | **73K33** | X | X |
| For 41 in. Curb | | **73K35** | X | X |
| **CEILING DIFFUSERS** | | | | |
| Step-Down - Order one | LARTD30/36S | **45K74** | X | X |
| Flush - Order one | LAFD30/36S | **45K75** | X | X |
| Transitions (Supply and Return) - Order one | LASRT30/36 | **33K80** | X | X |

NOTE - Order 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 — 25 TON

| | | | LCT302H5V | LCT302H5M |
|---|---|---|---|---|
| **Model** | | | **LCT302H5V** | **LCT302H5M** |
| **Nominal Tonnage** | | | 25 Ton | 25 Ton |
| **Efficiency Type** | | | High | High |
| **Blower Type** | | | VAV<br>Variable Air Volume | MSAV®<br>Multi-Stage Air Volume |
| **Cooling Performance** | | Gross Cooling Capacity - Btuh | 309,000 | 309,000 |
| | | [1] Net Cooling Capacity (Btuh) | 300,000 | 300,000 |
| | | [1] AHRI Rated Air Flow (cfm) | 8200 | 8200 |
| | | Total Unit Power - kW | 26.2 | 26.2 |
| | | [1] IEER (Btuh/Watt) | 14.3 | 15.8 |
| | | [1] EER (Btuh/Watt) | 11.4 | 11.4 |
| **Sound Rating Number** | | dBA | 95 | 95 |
| **Refrigerant Charge** | | Refrigerant Type | R-454B | R-454B |
| | Without Reheat | Circuit 1 | 6 lbs. 12 oz. | 6 lbs. 12 oz. |
| | | Circuit 2 | 6 lbs. 8 oz. | 6 lbs. 8 oz. |
| | | Circuit 3 | 6 lbs. 11 oz. | 6 lbs. 11 oz. |
| | | Circuit 4 | 6 lbs. 13 oz. | 6 lbs. 13 oz. |
| | With Reheat | Circuit 1 | - - - | 6 lbs. 12 oz. |
| | | Circuit 2 | - - - | 6 lbs. 8 oz. |
| | | Circuit 3 | - - - | 6 lbs. 11 oz. |
| | | Circuit 4 | - - - | 6 lbs. 13 oz. |
| **Electric Heat Available** | | | See page 41 | |
| **Compressor Type (number)** | | | Scroll (4) | Scroll (4) |
| **Outdoor Coils** | | Net face area - ft.² (total) | 68.3 | 68.3 |
| | | Number of rows | 1 | 1 |
| | | Fins - in. | 23 | 23 |
| **Outdoor Coil Fans** | | Motor HP (number and type) | 1/3 (6 PSC) | 1/3 (6 PSC) |
| | | Rpm | 1075 | 1075 |
| | | Watts (total) | 2500 | 2500 |
| | | Diameter (Number) - in. | (6) 24 | (6) 24 |
| | | Blades | 3 | 3 |
| | | Total Air volume - cfm | 21,500 | 21,500 |
| **Indoor Coils** | | Net face area - ft.² (total) | 31.40 | 31.40 |
| | | Tube diameter - in. | 3/8 | 3/8 |
| | | Rows | 4 | 4 |
| | | Fins - in. | 14 | 14 |
| | | Condensate drain size (NPT) - in. | (1) 1 in. | (1) 1 in. |
| | | Expansion device type | Balanced Port Thermostatic Expansion Valve,removable power head | |
| [3] **Indoor Blower and Kit Selection** | | Nominal motor HP | 5, 7.5, 10 | |
| | | Maximum usable motor output (US Only) | 5.75, 8.63, 11.5 | |
| | | Motor - Drive kit number | 5 HP<br>Kit 5 660-810 rpm<br>Kit 6 770-965 rpm<br>Kit 7 570-720 rpm<br>Kit 8 480-630 rpm<br>Kit 9 410-535 rpm<br>7.5 HP<br>Kit 3 715-880 rpm<br>Kit 4 770-965 rpm<br>10 HP<br>Kit 1 740-895 rpm<br>Kit 2 870-1045 rpm | |
| | | Wheel (Number) diameter x width - in. | (2) 18 x 15 | |
| **Filters** | | Type of filter | Fiberglass, disposable | |
| | | Number and size - in. | (12) 20 x 20 x 2 | |
| **Line voltage data (Volts-Phase-Hz)** | | | 208/230-3-60,<br>460-3-60,<br>575-3-60 | |

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

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

## SPECIFICATIONS — 30 TON

| | | | LCT360H5V | LCT360H5M |
|---|---|---|---|---|
| **Model** | | | **LCT360H5V** | **LCT360H5M** |
| **Nominal Tonnage** | | | 30 Ton | 30 Ton |
| **Efficiency Type** | | | High | High |
| **Blower Type** | | | VAV<br>Variable Air Volume | MSAV®<br>Multi-Stage Air Volume |
| **Cooling Performance** | | Gross Cooling Capacity - Btuh | 360,000 | 360,000 |
| | | [1] Net Cooling Capacity (Btuh) | 350,000 | 350,000 |
| | | [1] AHRI Rated Air Flow (cfm) | 8750 | 8750 |
| | | Total Unit Power - kW | 32.5 | 32.5 |
| | | [1] IEER (Btuh/Watt) | 13.5 | 14.2 |
| | | [1] EER (Btuh/Watt) | 10.8 | 10.8 |
| **Sound Rating Number** | | dBA | 95 | 95 |
| **Refrigerant Charge** | | Refrigerant Type | R-454B | R-454B |
| | Without Reheat Option | Circuit 1 | 6 lbs. 6 oz. | 6 lbs. 6 oz. |
| | | Circuit 2 | 6 lbs. 13 oz. | 6 lbs. 13 oz. |
| | | Circuit 3 | 6 lbs. 10 oz. | 6 lbs. 10 oz. |
| | | Circuit 4 | 6 lbs. 6 oz. | 6 lbs. 6 oz. |
| | With Reheat Option | Circuit 1 | - - - | 7 lbs. 12 oz. |
| | | Circuit 2 | - - - | 7 lbs. 8 oz. |
| | | Circuit 3 | - - - | 6 lbs. 14 oz. |
| | | Circuit 4 | - - - | 6 lbs. 12 oz. |
| **Electric Heat Available** | | | See page 41 | |
| **Compressor Type (number)** | | | Scroll (4) | Scroll (4) |
| **Outdoor Coils** | | Net face area - ft.² (total) | 68.3 | 68.3 |
| | | Number of rows | 1 | 1 |
| | | Fins - in. | 23 | 23 |
| **Outdoor Coil Fans** | | Motor HP (number and type) | 1/3 (6 PSC) | 1/3 (6 PSC) |
| | | Rpm | 1075 | 1075 |
| | | Watts (total) | 2500 | 2500 |
| | | Diameter (Number) - in. | (6) 24 | (6) 24 |
| | | Blades | 3 | 3 |
| | | Total Air volume - cfm | 21,500 | 21,500 |
| **Indoor Coils** | | Net face area - ft.² (total) | 31.40 | 31.40 |
| | | Tube diameter - in. | 3/8 | 3/8 |
| | | Rows | 4 | 4 |
| | | Fins - in. | 14 | 14 |
| | | Condensate drain size (NPT) - in. | (1) 1 in. | (1) 1 in. |
| | | Expansion device type | Balanced Port Thermostatic Expansion Valve,removable power head | |
| [3] **Indoor Blower and Kit Selection** | | Nominal motor HP | 5, 7.5, 10 | |
| | | Maximum usable motor output (US Only) | 5.75, 8.63, 11.5 | |
| | | Motor - Drive kit number | 5 HP<br>Kit 5 660-810 rpm<br>Kit 6 770-965 rpm<br>Kit 7 570-720 rpm<br>Kit 8 480-630 rpm<br>Kit 9 410-535 rpm<br>7.5 HP<br>Kit 3 715-880 rpm<br>Kit 4 770-965 rpm<br>10 HP<br>Kit 1 740-895 rpm<br>Kit 2 870-1045 rpm | |
| | | Wheel (Number) diameter x width - in. | (2) 18 x 15 | |
| **Filters** | | Type of filter | Fiberglass, disposable | |
| | | Number and size - in. | (12) 20 x 20 x 2 | |
| **Line voltage data (Volts-Phase-Hz)** | | | 208/230-3-60,<br>460-3-60,<br>575-3-60 | |

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

[1] Tested at conditions included in with 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] 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.

## RATINGS

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

### 25 TON HIGH EFFICIENCY LCT302H5M (2 COMPRESSORS - PART LOAD) - MSAV® (MULTI-STAGE AIR VOLUME)

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 65°F | | | | | 75°F | | | | | 85°F | | | | | 95°F | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F |
| 63°F | 4000 | 161.9 | 6.75 | 0.69 | 0.81 | 0.92 | 156.9 | 7.79 | 0.7 | 0.82 | 0.94 | 151.4 | 8.89 | 0.7 | 0.83 | 0.96 | 145.7 | 10.1 | 0.72 | 0.85 | 0.98 |
| | 5000 | 171 | 6.76 | 0.72 | 0.86 | 0.99 | 165.6 | 7.82 | 0.73 | 0.88 | 1 | 159.6 | 8.94 | 0.74 | 0.89 | 1 | 153.3 | 10.16 | 0.76 | 0.92 | 1 |
| | 6000 | 178 | 6.76 | 0.76 | 0.92 | 1 | 171.9 | 7.83 | 0.77 | 0.94 | 1 | 165.5 | 8.98 | 0.79 | 0.96 | 1 | 158.8 | 10.21 | 0.81 | 0.98 | 1 |
| 67°F | 4000 | 170 | 6.76 | 0.55 | 0.67 | 0.77 | 164.7 | 7.82 | 0.56 | 0.67 | 0.78 | 158.8 | 8.94 | 0.57 | 0.68 | 0.8 | 153 | 10.16 | 0.58 | 0.69 | 0.81 |
| | 5000 | 179.8 | 6.76 | 0.58 | 0.7 | 0.83 | 173.7 | 7.84 | 0.58 | 0.71 | 0.85 | 167.6 | 8.99 | 0.59 | 0.72 | 0.86 | 161 | 10.23 | 0.6 | 0.74 | 0.89 |
| | 6000 | 186.8 | 6.75 | 0.59 | 0.74 | 0.89 | 180.3 | 7.86 | 0.6 | 0.75 | 0.9 | 173.6 | 9.02 | 0.61 | 0.77 | 0.93 | 166 | 10.27 | 0.63 | 0.79 | 0.95 |
| 71°F | 4000 | 177.6 | 6.76 | 0.44 | 0.54 | 0.65 | 171.8 | 7.83 | 0.44 | 0.55 | 0.65 | 166 | 8.98 | 0.44 | 0.56 | 0.66 | 159.4 | 10.21 | 0.45 | 0.56 | 0.67 |
| | 5000 | 187.7 | 6.75 | 0.45 | 0.57 | 0.68 | 182.2 | 7.86 | 0.45 | 0.57 | 0.69 | 175.2 | 9.03 | 0.45 | 0.58 | 0.71 | 168.3 | 10.29 | 0.45 | 0.59 | 0.72 |
| | 6000 | 195.9 | 6.75 | 0.45 | 0.58 | 0.72 | 189 | 7.87 | 0.45 | 0.59 | 0.73 | 181.4 | 9.06 | 0.45 | 0.6 | 0.75 | 173.5 | 10.33 | 0.46 | 0.62 | 0.77 |

### 25 TON HIGH EFFICIENCY LCT302H5M (4 COMPRESSORS - FULL LOAD) - MSAV® (MULTI-STAGE AIR VOLUME)

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85°F | | | | | 95°F | | | | | 105°F | | | | | 115°F | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F |
| 63°F | 8000 | 311.7 | 17.95 | 0.72 | 0.83 | 0.93 | 299.5 | 20.37 | 0.73 | 0.85 | 0.95 | 287.3 | 23.02 | 0.74 | 0.86 | 0.96 | 274.4 | 26.02 | 0.75 | 0.88 | 0.98 |
| | 10000 | 327.7 | 18.04 | 0.77 | 0.89 | 0.99 | 314.6 | 20.51 | 0.78 | 0.91 | 1 | 301.5 | 23.19 | 0.8 | 0.92 | 1 | 288 | 26.18 | 0.82 | 0.94 | 1 |
| | 12000 | 339 | 18.1 | 0.81 | 0.94 | 1 | 325.6 | 20.6 | 0.84 | 0.96 | 1 | 312.1 | 23.32 | 0.85 | 0.98 | 1 | 297.8 | 26.31 | 0.86 | 1 | 1 |
| 67°F | 8000 | 326.9 | 18.02 | 0.57 | 0.69 | 0.81 | 312.7 | 20.47 | 0.57 | 0.71 | 0.82 | 299.4 | 23.19 | 0.59 | 0.72 | 0.84 | 284.5 | 26.12 | 0.6 | 0.73 | 0.86 |
| | 10000 | 337.9 | 18.1 | 0.61 | 0.74 | 0.87 | 324.3 | 20.59 | 0.61 | 0.76 | 0.89 | 309.7 | 23.29 | 0.63 | 0.78 | 0.9 | 294.1 | 26.23 | 0.64 | 0.81 | 0.92 |
| | 12000 | 347.6 | 18.16 | 0.64 | 0.8 | 0.92 | 332.6 | 20.65 | 0.65 | 0.81 | 0.94 | 318.1 | 23.37 | 0.65 | 0.84 | 0.96 | 303.2 | 26.35 | 0.66 | 0.86 | 0.98 |
| 71°F | 8000 | 344.2 | 18.14 | 0.43 | 0.56 | 0.66 | 330.6 | 20.64 | 0.44 | 0.56 | 0.68 | 315.3 | 23.35 | 0.44 | 0.57 | 0.69 | 299.6 | 26.31 | 0.44 | 0.58 | 0.71 |
| | 10000 | 355.9 | 18.2 | 0.45 | 0.6 | 0.72 | 340.9 | 20.72 | 0.46 | 0.59 | 0.74 | 325.2 | 23.45 | 0.45 | 0.61 | 0.75 | 309.1 | 26.43 | 0.47 | 0.62 | 0.77 |
| | 12000 | 364.5 | 18.24 | 0.45 | 0.62 | 0.77 | 348.9 | 20.79 | 0.46 | 0.63 | 0.8 | 332.5 | 23.52 | 0.46 | 0.65 | 0.81 | 316.2 | 26.52 | 0.47 | 0.66 | 0.83 |

### 25 TON HIGH EFFICIENCY LCT302H5V (1 COMPRESSOR - PART LOAD) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 65°F | | | | | 75°F | | | | | 85°F | | | | | 95°F | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F |
| 63°F | 2000 | 63.6 | 3.43 | 0.63 | 0.71 | 0.79 | 61.9 | 3.9 | 0.63 | 0.71 | 0.79 | 60 | 4.43 | 0.63 | 0.71 | 0.8 | 58.5 | 5 | 0.63 | 0.72 | 0.81 |
| | 2500 | 69 | 3.44 | 0.63 | 0.73 | 0.81 | 67.2 | 3.93 | 0.64 | 0.73 | 0.82 | 65.2 | 4.46 | 0.64 | 0.74 | 0.83 | 63.2 | 5.05 | 0.65 | 0.75 | 0.85 |
| | 3000 | 73.6 | 3.47 | 0.65 | 0.75 | 0.85 | 71.9 | 3.96 | 0.66 | 0.76 | 0.86 | 69.3 | 4.49 | 0.66 | 0.77 | 0.87 | 66.9 | 5.09 | 0.67 | 0.78 | 0.88 |
| 67°F | 2000 | 66 | 3.44 | 0.53 | 0.59 | 0.67 | 64.3 | 3.91 | 0.53 | 0.6 | 0.67 | 62.5 | 4.44 | 0.53 | 0.6 | 0.68 | 61.3 | 5.03 | 0.53 | 0.6 | 0.68 |
| | 2500 | 72.1 | 3.45 | 0.53 | 0.61 | 0.69 | 70.3 | 3.96 | 0.53 | 0.61 | 0.7 | 68.2 | 4.49 | 0.53 | 0.62 | 0.71 | 66 | 5.08 | 0.54 | 0.62 | 0.72 |
| | 3000 | 77.5 | 3.48 | 0.53 | 0.62 | 0.72 | 74.9 | 3.98 | 0.54 | 0.63 | 0.73 | 72.6 | 4.53 | 0.54 | 0.64 | 0.74 | 70.3 | 5.13 | 0.54 | 0.64 | 0.75 |
| 71°F | 2000 | 69 | 3.44 | 0.43 | 0.5 | 0.57 | 67.7 | 3.94 | 0.42 | 0.5 | 0.57 | 66.1 | 4.48 | 0.42 | 0.5 | 0.58 | 63.4 | 5.06 | 0.42 | 0.51 | 0.58 |
| | 2500 | 76.2 | 3.47 | 0.42 | 0.51 | 0.58 | 74 | 3.98 | 0.42 | 0.51 | 0.58 | 71.7 | 4.51 | 0.42 | 0.51 | 0.59 | 69.1 | 5.11 | 0.42 | 0.52 | 0.6 |
| | 3000 | 80.6 | 3.47 | 0.42 | 0.52 | 0.6 | 78.6 | 3.99 | 0.42 | 0.52 | 0.61 | 75.7 | 4.55 | 0.42 | 0.53 | 0.61 | 73.3 | 5.16 | 0.42 | 0.53 | 0.62 |

### 25 TON HIGH EFFICIENCY LCT302H5V (2 COMPRESSORS - PART LOAD) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85°F | | | | | 95°F | | | | | 105°F | | | | | 115°F | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F |
| 63°F | 4000 | 161.9 | 6.75 | 0.69 | 0.81 | 0.92 | 156.9 | 7.79 | 0.7 | 0.82 | 0.94 | 151.4 | 8.89 | 0.7 | 0.83 | 0.96 | 145.7 | 10.1 | 0.72 | 0.85 | 0.98 |
| | 5000 | 171 | 6.76 | 0.72 | 0.86 | 0.99 | 165.6 | 7.82 | 0.73 | 0.88 | 1 | 159.6 | 8.94 | 0.74 | 0.89 | 1 | 153.3 | 10.16 | 0.76 | 0.92 | 1 |
| | 6000 | 178 | 6.76 | 0.76 | 0.92 | 1 | 171.9 | 7.83 | 0.77 | 0.94 | 1 | 165.5 | 8.98 | 0.79 | 0.96 | 1 | 158.8 | 10.21 | 0.81 | 0.98 | 1 |
| 67°F | 4000 | 170 | 6.76 | 0.55 | 0.67 | 0.77 | 164.7 | 7.82 | 0.56 | 0.67 | 0.78 | 158.8 | 8.94 | 0.57 | 0.68 | 0.8 | 153 | 10.16 | 0.58 | 0.69 | 0.81 |
| | 5000 | 179.8 | 6.76 | 0.58 | 0.7 | 0.83 | 173.7 | 7.84 | 0.58 | 0.71 | 0.85 | 167.6 | 8.99 | 0.59 | 0.72 | 0.86 | 161 | 10.23 | 0.6 | 0.74 | 0.89 |
| | 6000 | 186.8 | 6.75 | 0.59 | 0.74 | 0.89 | 180.3 | 7.86 | 0.6 | 0.75 | 0.9 | 173.6 | 9.02 | 0.61 | 0.77 | 0.93 | 166 | 10.27 | 0.63 | 0.79 | 0.95 |
| 71°F | 4000 | 177.6 | 6.76 | 0.44 | 0.54 | 0.65 | 171.8 | 7.83 | 0.44 | 0.55 | 0.65 | 166 | 8.98 | 0.44 | 0.56 | 0.66 | 159.4 | 10.21 | 0.45 | 0.56 | 0.67 |
| | 5000 | 187.7 | 6.75 | 0.45 | 0.57 | 0.68 | 182.2 | 7.86 | 0.45 | 0.57 | 0.69 | 175.2 | 9.03 | 0.45 | 0.58 | 0.71 | 168.3 | 10.29 | 0.45 | 0.59 | 0.72 |
| | 6000 | 195.9 | 6.75 | 0.45 | 0.58 | 0.72 | 189 | 7.87 | 0.45 | 0.59 | 0.73 | 181.4 | 9.06 | 0.45 | 0.6 | 0.75 | 173.5 | 10.33 | 0.46 | 0.62 | 0.77 |

## RATINGS

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

### 25 TON HIGH EFFICIENCY LCT302H5V (3 COMPRESSORS - PART LOAD) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 65°F | | | | | 75°F | | | | | 85°F | | | | | 95°F | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F |
| 63°F | 6000 | 244.8 | 10.08 | 0.71 | 0.82 | 0.91 | 236.8 | 11.63 | 0.71 | 0.83 | 0.91 | 228.5 | 13.25 | 0.72 | 0.84 | 0.92 | 219.5 | 15.15 | 0.73 | 0.86 | 0.93 |
| | 7500 | 257 | 10.05 | 0.74 | 0.87 | 0.94 | 248.7 | 11.66 | 0.75 | 0.89 | 0.94 | 240.8 | 13.35 | 0.76 | 0.89 | 0.95 | 230.5 | 15.14 | 0.78 | 0.9 | 0.96 |
| | 9000 | 268.4 | 10.05 | 0.79 | 0.9 | 0.96 | 260 | 11.69 | 0.8 | 0.91 | 0.97 | 251.1 | 13.39 | 0.81 | 0.92 | 0.98 | 240.1 | 15.21 | 0.83 | 0.93 | 0.99 |
| 67°F | 6000 | 258.3 | 10.05 | 0.57 | 0.68 | 0.79 | 249.8 | 11.63 | 0.57 | 0.69 | 0.8 | 240 | 13.32 | 0.58 | 0.7 | 0.82 | 230.7 | 15.14 | 0.58 | 0.71 | 0.83 |
| | 7500 | 271.4 | 10.07 | 0.59 | 0.72 | 0.85 | 261.4 | 11.68 | 0.59 | 0.73 | 0.86 | 251.7 | 13.38 | 0.61 | 0.74 | 0.87 | 240.8 | 15.23 | 0.61 | 0.75 | 0.88 |
| | 9000 | 280.3 | 10.06 | 0.61 | 0.76 | 0.89 | 269.8 | 11.69 | 0.63 | 0.77 | 0.9 | 258.5 | 13.43 | 0.64 | 0.79 | 0.91 | 248.2 | 15.28 | 0.64 | 0.8 | 0.92 |
| 71°F | 6000 | 272.2 | 10.05 | 0.44 | 0.56 | 0.66 | 263.6 | 11.69 | 0.44 | 0.56 | 0.67 | 254 | 13.42 | 0.43 | 0.56 | 0.68 | 243.5 | 15.24 | 0.44 | 0.57 | 0.69 |
| | 7500 | 286.3 | 10.06 | 0.44 | 0.57 | 0.69 | 276 | 11.72 | 0.45 | 0.58 | 0.7 | 265.3 | 13.46 | 0.45 | 0.59 | 0.72 | 254 | 15.34 | 0.46 | 0.6 | 0.73 |
| | 9000 | 295.5 | 10.03 | 0.46 | 0.6 | 0.74 | 283.8 | 11.71 | 0.45 | 0.61 | 0.75 | 272.4 | 13.48 | 0.46 | 0.63 | 0.77 | 261.1 | 15.37 | 0.46 | 0.63 | 0.79 |

### 25 TON HIGH EFFICIENCY LCT302H5V (4 COMPRESSORS - FULL LOAD) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 65°F | | | | | 75°F | | | | | 85°F | | | | | 95°F | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F |
| 63°F | 8000 | 311.7 | 17.95 | 0.72 | 0.83 | 0.93 | 299.5 | 20.37 | 0.73 | 0.85 | 0.95 | 287.3 | 23.02 | 0.74 | 0.86 | 0.96 | 274.4 | 26.02 | 0.75 | 0.88 | 0.98 |
| | 10000 | 327.7 | 18.04 | 0.77 | 0.89 | 0.99 | 314.6 | 20.51 | 0.78 | 0.91 | 1 | 301.5 | 23.19 | 0.8 | 0.92 | 1 | 288 | 26.18 | 0.82 | 0.94 | 1 |
| | 12000 | 339 | 18.1 | 0.81 | 0.94 | 1 | 325.6 | 20.6 | 0.84 | 0.96 | 1 | 312.1 | 23.32 | 0.85 | 0.98 | 1 | 297.8 | 26.31 | 0.86 | 1 | 1 |
| 67°F | 8000 | 326.9 | 18.02 | 0.57 | 0.69 | 0.81 | 312.7 | 20.47 | 0.57 | 0.71 | 0.82 | 299.4 | 23.19 | 0.59 | 0.72 | 0.84 | 284.5 | 26.12 | 0.6 | 0.73 | 0.86 |
| | 10000 | 337.9 | 18.1 | 0.61 | 0.74 | 0.87 | 324.3 | 20.59 | 0.61 | 0.76 | 0.89 | 309.7 | 23.29 | 0.63 | 0.78 | 0.9 | 294.1 | 26.23 | 0.64 | 0.81 | 0.92 |
| | 12000 | 347.6 | 18.16 | 0.64 | 0.8 | 0.92 | 332.6 | 20.65 | 0.65 | 0.81 | 0.94 | 318.1 | 23.37 | 0.65 | 0.84 | 0.96 | 303.2 | 26.35 | 0.66 | 0.86 | 0.98 |
| 71°F | 8000 | 344.2 | 18.14 | 0.43 | 0.56 | 0.66 | 330.6 | 20.64 | 0.44 | 0.56 | 0.68 | 315.3 | 23.35 | 0.44 | 0.57 | 0.69 | 299.6 | 26.31 | 0.44 | 0.58 | 0.71 |
| | 10000 | 355.9 | 18.2 | 0.45 | 0.6 | 0.72 | 340.9 | 20.72 | 0.46 | 0.59 | 0.74 | 325.2 | 23.45 | 0.45 | 0.61 | 0.75 | 309.1 | 26.43 | 0.47 | 0.62 | 0.77 |
| | 12000 | 364.5 | 18.24 | 0.45 | 0.62 | 0.77 | 348.9 | 20.79 | 0.46 | 0.63 | 0.8 | 332.5 | 23.52 | 0.46 | 0.65 | 0.81 | 316.2 | 26.52 | 0.47 | 0.66 | 0.83 |

### 30 TON HIGH EFFICIENCY LCT360H5M (2 COMPRESSORS OPERATING) - MSAV® MULTI-STAGE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 65°F | | | | | 75°F | | | | | 85°F | | | | | 95°F | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F |
| 63°F | 4800 | 196.2 | 9.17 | 0.71 | 0.82 | 0.93 | 187.1 | 10.38 | 0.71 | 0.83 | 0.94 | 178.5 | 11.7 | 0.72 | 0.84 | 0.96 | 169.2 | 13.14 | 0.73 | 0.86 | 0.98 |
| | 6000 | 207.1 | 9.26 | 0.74 | 0.87 | 0.99 | 197.9 | 10.48 | 0.75 | 0.89 | 1 | 188.6 | 11.82 | 0.76 | 0.9 | 1 | 178.8 | 13.27 | 0.77 | 0.92 | 1 |
| | 7200 | 215.7 | 9.32 | 0.78 | 0.93 | 1 | 206.1 | 10.56 | 0.79 | 0.94 | 1 | 196 | 11.91 | 0.8 | 0.96 | 1 | 185.4 | 13.37 | 0.82 | 0.98 | 1 |
| 67°F | 4800 | 206 | 9.25 | 0.57 | 0.68 | 0.79 | 197.4 | 10.48 | 0.57 | 0.69 | 0.8 | 188.4 | 11.81 | 0.57 | 0.7 | 0.81 | 178.9 | 13.28 | 0.58 | 0.7 | 0.83 |
| | 6000 | 218.6 | 9.35 | 0.59 | 0.72 | 0.85 | 208.5 | 10.58 | 0.6 | 0.73 | 0.86 | 198 | 11.93 | 0.6 | 0.74 | 0.87 | 188.6 | 13.41 | 0.61 | 0.75 | 0.89 |
| | 7200 | 227.4 | 9.41 | 0.62 | 0.76 | 0.9 | 216.7 | 10.67 | 0.63 | 0.77 | 0.91 | 205.4 | 12.02 | 0.62 | 0.79 | 0.93 | 195.6 | 13.51 | 0.62 | 0.8 | 0.96 |
| 71°F | 4800 | 216.4 | 9.33 | 0.45 | 0.56 | 0.66 | 207.4 | 10.57 | 0.44 | 0.56 | 0.67 | 197.6 | 11.93 | 0.44 | 0.56 | 0.68 | 187.7 | 13.39 | 0.42 | 0.56 | 0.68 |
| | 6000 | 229.4 | 9.43 | 0.44 | 0.58 | 0.7 | 218.5 | 10.69 | 0.46 | 0.59 | 0.71 | 208.4 | 12.05 | 0.43 | 0.59 | 0.72 | 198 | 13.55 | 0.46 | 0.6 | 0.74 |
| | 7200 | 238.1 | 9.49 | 0.47 | 0.61 | 0.74 | 227.6 | 10.77 | 0.47 | 0.61 | 0.75 | 215.8 | 12.14 | 0.45 | 0.62 | 0.77 | 205.1 | 13.64 | 0.47 | 0.62 | 0.79 |

### 30 TON HIGH EFFICIENCY LCT360H5M (ALL COMPRESSORS OPERATING) - MSAV® MULTI-STAGE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85°F | | | | | 95°F | | | | | 105°F | | | | | 115°F | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F |
| 63°F | 9600 | 383.1 | 24.11 | 0.74 | 0.86 | 0.95 | 363.6 | 27.05 | 0.74 | 0.88 | 0.96 | 344.7 | 30.4 | 0.75 | 0.89 | 0.98 | 323.2 | 33.91 | 0.77 | 0.9 | 0.99 |
| | 12000 | 404.7 | 24.34 | 0.8 | 0.91 | 1 | 384.7 | 27.35 | 0.81 | 0.93 | 1 | 362.5 | 30.6 | 0.82 | 0.94 | 1 | 340.6 | 34.21 | 0.84 | 0.96 | 1 |
| | 14400 | 420.8 | 24.53 | 0.84 | 0.96 | 1 | 400 | 27.56 | 0.86 | 0.97 | 1 | 377.5 | 30.85 | 0.87 | 0.99 | 1 | 353.8 | 34.43 | 0.89 | 1 | 1 |
| 67°F | 9600 | 403.9 | 24.34 | 0.58 | 0.72 | 0.84 | 383.4 | 27.33 | 0.57 | 0.73 | 0.85 | 361.2 | 30.59 | 0.59 | 0.74 | 0.87 | 337.4 | 34.14 | 0.59 | 0.75 | 0.88 |
| | 12000 | 422 | 24.55 | 0.61 | 0.77 | 0.9 | 399.9 | 27.55 | 0.62 | 0.78 | 0.91 | 376.2 | 30.83 | 0.63 | 0.8 | 0.92 | 351 | 34.38 | 0.64 | 0.83 | 0.94 |
| | 14400 | 435 | 24.71 | 0.65 | 0.83 | 0.94 | 411.1 | 27.71 | 0.68 | 0.84 | 0.96 | 386.8 | 30.99 | 0.68 | 0.86 | 0.97 | 361.6 | 34.56 | 0.7 | 0.88 | 0.99 |
| 71°F | 9600 | 429.1 | 24.63 | 0.43 | 0.56 | 0.69 | 407.3 | 27.65 | 0.43 | 0.56 | 0.7 | 383.8 | 30.94 | 0.42 | 0.57 | 0.71 | 358 | 34.49 | 0.44 | 0.58 | 0.73 |
| | 12000 | 446.7 | 24.84 | 0.45 | 0.6 | 0.75 | 422.5 | 27.87 | 0.44 | 0.61 | 0.77 | 396.8 | 31.15 | 0.45 | 0.62 | 0.79 | 370.8 | 34.71 | 0.45 | 0.64 | 0.81 |
| | 14400 | 458.2 | 24.98 | 0.47 | 0.65 | 0.81 | 432.7 | 28.02 | 0.48 | 0.66 | 0.83 | 406.2 | 31.29 | 0.48 | 0.67 | 0.85 | 379.8 | 34.86 | 0.49 | 0.7 | 0.86 |

## RATINGS

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

### 30 TON HIGH EFFICIENCY LCT360H5V (1 COMPRESSOR - PART LOAD) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 65°F | | | | | 75°F | | | | | 85°F | | | | | 95°F | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F |
| 63°F | 2400 | 75.5 | 4.46 | 0.63 | 0.71 | 0.79 | 72 | 5.03 | 0.64 | 0.72 | 0.8 | 69 | 5.67 | 0.63 | 0.71 | 0.8 | 65.7 | 6.38 | 0.63 | 0.72 | 0.81 |
| | 3000 | 82.2 | 4.53 | 0.65 | 0.74 | 0.83 | 79.1 | 5.12 | 0.65 | 0.74 | 0.83 | 75.7 | 5.77 | 0.65 | 0.75 | 0.84 | 71.6 | 6.48 | 0.65 | 0.75 | 0.85 |
| | 3600 | 87.8 | 4.59 | 0.66 | 0.77 | 0.86 | 84.6 | 5.19 | 0.67 | 0.77 | 0.87 | 80.3 | 5.83 | 0.67 | 0.78 | 0.88 | 76.2 | 6.55 | 0.67 | 0.79 | 0.9 |
| 67°F | 2400 | 78.6 | 4.49 | 0.54 | 0.6 | 0.68 | 76 | 5.08 | 0.52 | 0.61 | 0.68 | 72.7 | 5.72 | 0.52 | 0.61 | 0.68 | 68.9 | 6.43 | 0.52 | 0.6 | 0.68 |
| | 3000 | 86.5 | 4.57 | 0.54 | 0.62 | 0.71 | 83.4 | 5.17 | 0.54 | 0.62 | 0.71 | 79.8 | 5.83 | 0.53 | 0.63 | 0.72 | 75.4 | 6.54 | 0.53 | 0.63 | 0.72 |
| | 3600 | 92.4 | 4.63 | 0.55 | 0.64 | 0.74 | 89.1 | 5.24 | 0.55 | 0.64 | 0.74 | 84.2 | 5.88 | 0.55 | 0.65 | 0.75 | 80.6 | 6.62 | 0.55 | 0.65 | 0.76 |
| 71°F | 2400 | 82.7 | 4.53 | 0.43 | 0.51 | 0.58 | 79.4 | 5.12 | 0.42 | 0.51 | 0.58 | 75.6 | 5.76 | 0.41 | 0.5 | 0.58 | 72.7 | 6.49 | 0.41 | 0.5 | 0.58 |
| | 3000 | 90.3 | 4.61 | 0.42 | 0.53 | 0.6 | 86.7 | 5.21 | 0.42 | 0.52 | 0.6 | 83.1 | 5.86 | 0.42 | 0.52 | 0.61 | 79.2 | 6.59 | 0.42 | 0.52 | 0.61 |
| | 3600 | 96.6 | 4.67 | 0.44 | 0.54 | 0.62 | 93.1 | 5.28 | 0.42 | 0.53 | 0.62 | 88.8 | 5.95 | 0.41 | 0.53 | 0.63 | 84.7 | 6.68 | 0.41 | 0.53 | 0.63 |

### 30 TON HIGH EFFICIENCY LCT360H5V (2 COMPRESSORS - PART LOAD) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 65°F | | | | | 75°F | | | | | 85°F | | | | | 95°F | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F |
| 63°F | 4800 | 196.2 | 9.17 | 0.71 | 0.82 | 0.93 | 187.1 | 10.38 | 0.71 | 0.83 | 0.94 | 178.5 | 11.7 | 0.72 | 0.84 | 0.96 | 169.2 | 13.14 | 0.73 | 0.86 | 0.98 |
| | 6000 | 207.1 | 9.26 | 0.74 | 0.87 | 0.99 | 197.9 | 10.48 | 0.75 | 0.89 | 1 | 188.6 | 11.82 | 0.76 | 0.9 | 1 | 178.8 | 13.27 | 0.77 | 0.92 | 1 |
| | 7200 | 215.7 | 9.32 | 0.78 | 0.93 | 1 | 206.1 | 10.56 | 0.79 | 0.94 | 1 | 196 | 11.91 | 0.8 | 0.96 | 1 | 185.4 | 13.37 | 0.82 | 0.98 | 1 |
| 67°F | 4800 | 206 | 9.25 | 0.57 | 0.68 | 0.79 | 197.4 | 10.48 | 0.57 | 0.69 | 0.8 | 188.4 | 11.81 | 0.57 | 0.7 | 0.81 | 178.9 | 13.28 | 0.58 | 0.7 | 0.83 |
| | 6000 | 218.6 | 9.35 | 0.59 | 0.72 | 0.85 | 208.5 | 10.58 | 0.6 | 0.73 | 0.86 | 198 | 11.93 | 0.6 | 0.74 | 0.87 | 188.6 | 13.41 | 0.61 | 0.75 | 0.89 |
| | 7200 | 227.4 | 9.41 | 0.62 | 0.76 | 0.9 | 216.7 | 10.67 | 0.63 | 0.77 | 0.91 | 205.4 | 12.02 | 0.62 | 0.79 | 0.93 | 195.6 | 13.51 | 0.62 | 0.8 | 0.96 |
| 71°F | 4800 | 216.4 | 9.33 | 0.45 | 0.56 | 0.66 | 207.4 | 10.57 | 0.44 | 0.56 | 0.67 | 197.6 | 11.93 | 0.44 | 0.56 | 0.68 | 187.7 | 13.39 | 0.42 | 0.56 | 0.68 |
| | 6000 | 229.4 | 9.43 | 0.44 | 0.58 | 0.7 | 218.5 | 10.69 | 0.46 | 0.59 | 0.71 | 208.4 | 12.05 | 0.43 | 0.59 | 0.72 | 198 | 13.55 | 0.46 | 0.6 | 0.74 |
| | 7200 | 238.1 | 9.49 | 0.47 | 0.61 | 0.74 | 227.6 | 10.77 | 0.47 | 0.61 | 0.75 | 215.8 | 12.14 | 0.45 | 0.62 | 0.77 | 205.1 | 13.64 | 0.47 | 0.62 | 0.79 |

### 30 TON HIGH EFFICIENCY LCT360H5V (4 COMPRESSORS - PART LOAD) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 65°F | | | | | 75°F | | | | | 85°F | | | | | 95°F | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F |
| 63°F | 7200 | 309.2 | 14.07 | 0.74 | 0.85 | 0.93 | 296.4 | 15.94 | 0.75 | 0.86 | 0.93 | 282.9 | 17.98 | 0.75 | 0.87 | 0.94 | 267 | 20.16 | 0.76 | 0.88 | 0.94 |
| | 9000 | 325.7 | 14.22 | 0.78 | 0.89 | 0.95 | 311.6 | 16.1 | 0.79 | 0.9 | 0.96 | 296.8 | 18.17 | 0.79 | 0.92 | 0.96 | 282.1 | 20.38 | 0.8 | 0.92 | 0.97 |
| | 10800 | 338.8 | 14.33 | 0.81 | 0.93 | 0.98 | 324.3 | 16.23 | 0.82 | 0.93 | 0.98 | 309.7 | 18.32 | 0.83 | 0.94 | 0.99 | 294.4 | 20.57 | 0.84 | 0.95 | 1 |
| 67°F | 7200 | 327.3 | 14.23 | 0.6 | 0.72 | 0.82 | 313.7 | 16.12 | 0.6 | 0.72 | 0.83 | 298.8 | 18.19 | 0.59 | 0.73 | 0.84 | 283.7 | 20.41 | 0.59 | 0.74 | 0.85 |
| | 9000 | 343.8 | 14.37 | 0.63 | 0.75 | 0.87 | 327.9 | 16.27 | 0.62 | 0.77 | 0.88 | 312.3 | 18.35 | 0.62 | 0.78 | 0.89 | 296.1 | 20.6 | 0.63 | 0.79 | 0.9 |
| | 10800 | 354.9 | 14.47 | 0.64 | 0.8 | 0.91 | 339 | 16.4 | 0.64 | 0.81 | 0.92 | 322.9 | 18.5 | 0.65 | 0.82 | 0.93 | 305.6 | 20.74 | 0.66 | 0.83 | 0.94 |
| 71°F | 7200 | 345.2 | 14.39 | 0.47 | 0.58 | 0.69 | 330.5 | 16.29 | 0.46 | 0.57 | 0.7 | 315.5 | 18.4 | 0.44 | 0.57 | 0.71 | 299.6 | 20.65 | 0.43 | 0.58 | 0.71 |
| | 9000 | 363 | 14.54 | 0.46 | 0.6 | 0.73 | 346.9 | 16.49 | 0.45 | 0.61 | 0.75 | 330.6 | 18.59 | 0.45 | 0.6 | 0.76 | 313.2 | 20.85 | 0.44 | 0.61 | 0.77 |
| | 10800 | 374.7 | 14.63 | 0.47 | 0.62 | 0.78 | 357.9 | 16.6 | 0.46 | 0.63 | 0.79 | 340.7 | 18.72 | 0.46 | 0.64 | 0.8 | 322.7 | 21 | 0.46 | 0.65 | 0.81 |

### 30 TON HIGH EFFICIENCY LCT360H5V (4 COMPRESSORS - FULL LOAD) - VARIABLE AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 85°F | | | | | 95°F | | | | | 105°F | | | | | 115°F | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F |
| 63°F | 9600 | 383.1 | 24.11 | 0.74 | 0.86 | 0.95 | 363.6 | 27.05 | 0.74 | 0.88 | 0.96 | 344.7 | 30.4 | 0.75 | 0.89 | 0.98 | 323.2 | 33.91 | 0.77 | 0.9 | 0.99 |
| | 12000 | 404.7 | 24.34 | 0.8 | 0.91 | 1 | 384.7 | 27.35 | 0.81 | 0.93 | 1 | 362.5 | 30.6 | 0.82 | 0.94 | 1 | 340.6 | 34.21 | 0.84 | 0.96 | 1 |
| | 14400 | 420.8 | 24.53 | 0.84 | 0.96 | 1 | 400 | 27.56 | 0.86 | 0.97 | 1 | 377.5 | 30.85 | 0.87 | 0.99 | 1 | 353.8 | 34.43 | 0.89 | 1 | 1 |
| 67°F | 9600 | 403.9 | 24.34 | 0.58 | 0.72 | 0.84 | 383.4 | 27.33 | 0.57 | 0.73 | 0.85 | 361.2 | 30.59 | 0.59 | 0.74 | 0.87 | 337.4 | 34.14 | 0.59 | 0.75 | 0.88 |
| | 12000 | 422 | 24.55 | 0.61 | 0.77 | 0.9 | 399.9 | 27.55 | 0.62 | 0.78 | 0.91 | 376.2 | 30.83 | 0.63 | 0.8 | 0.92 | 351 | 34.38 | 0.64 | 0.83 | 0.94 |
| | 14400 | 435 | 24.71 | 0.65 | 0.83 | 0.94 | 411.1 | 27.71 | 0.68 | 0.84 | 0.96 | 386.8 | 30.99 | 0.68 | 0.86 | 0.97 | 361.6 | 34.56 | 0.7 | 0.88 | 0.99 |
| 71°F | 9600 | 429.1 | 24.63 | 0.43 | 0.56 | 0.69 | 407.3 | 27.65 | 0.43 | 0.56 | 0.7 | 383.8 | 30.94 | 0.42 | 0.57 | 0.71 | 358 | 34.49 | 0.44 | 0.58 | 0.73 |
| | 12000 | 446.7 | 24.84 | 0.45 | 0.6 | 0.75 | 422.5 | 27.87 | 0.44 | 0.61 | 0.77 | 396.8 | 31.15 | 0.45 | 0.62 | 0.79 | 370.8 | 34.71 | 0.45 | 0.64 | 0.81 |
| | 14400 | 458.2 | 24.98 | 0.47 | 0.65 | 0.81 | 432.7 | 28.02 | 0.48 | 0.66 | 0.83 | 406.2 | 31.29 | 0.48 | 0.67 | 0.85 | 379.8 | 34.86 | 0.49 | 0.7 | 0.86 |

## 25 TON HIGH EFFICIENCY LCT302H5M WITH HUMIDITROL® OPERATING (PART LOAD)

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 65°F | | | | | 75°F | | | | | 85°F | | | | | 95°F | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F |
| 63°F | 4000 | 78.6 | 8.24 | 0.48 | 0.72 | 0.94 | 57.1 | 8.89 | 0.37 | 0.71 | 1.00 | 35.4 | 9.59 | 0.12 | 0.69 | 1.00 | 13.6 | 10.40 | -1.15 | 0.62 | 1.00 |
| | 5000 | 90.9 | 8.28 | 0.57 | 0.82 | 1.00 | 67.7 | 8.95 | 0.51 | 0.85 | 1.00 | 44.3 | 9.69 | 0.38 | 0.91 | 1.00 | 20.8 | 10.50 | -0.12 | 1.00 | 1.00 |
| | 6000 | 100.5 | 8.31 | 0.65 | 0.91 | 1.00 | 75.7 | 9.00 | 0.62 | 0.97 | 1.00 | 50.8 | 9.75 | 0.56 | 1.00 | 1.00 | 25.9 | 10.58 | 0.33 | 1.00 | 1.00 |
| 67°F | 4000 | 92.6 | 8.31 | 0.25 | 0.48 | 0.68 | 71.1 | 8.98 | 0.10 | 0.41 | 0.67 | 49.3 | 9.71 | -0.17 | 0.27 | 0.64 | 27.4 | 10.53 | -0.97 | -0.10 | 0.59 |
| | 5000 | 105.8 | 8.33 | 0.32 | 0.57 | 0.78 | 82.5 | 9.02 | 0.21 | 0.53 | 0.79 | 59.0 | 9.78 | 0.00 | 0.44 | 0.81 | 35.1 | 10.62 | -0.54 | 0.25 | 0.87 |
| | 6000 | 115.8 | 8.33 | 0.39 | 0.65 | 0.86 | 90.9 | 9.06 | 0.29 | 0.62 | 0.89 | 65.6 | 9.83 | 0.12 | 0.58 | 0.95 | 40.1 | 10.69 | -0.30 | 0.48 | 1.00 |
| 71°F | 4000 | 106.6 | 8.37 | 0.10 | 0.30 | 0.48 | 84.7 | 9.06 | -0.07 | 0.20 | 0.43 | 63.0 | 9.82 | -0.35 | 0.02 | 0.33 | 42.4 | 10.66 | -0.95 | -0.35 | 0.15 |
| | 5000 | 121.8 | 8.38 | 0.17 | 0.36 | 0.57 | 98.4 | 9.10 | 0.02 | 0.27 | 0.53 | 74.5 | 9.88 | -0.23 | 0.14 | 0.48 | 50.1 | 10.73 | -0.73 | -0.13 | 0.37 |
| | 6000 | 131.7 | 8.37 | 0.19 | 0.42 | 0.63 | 106.9 | 9.11 | 0.06 | 0.35 | 0.62 | 81.4 | 9.91 | -0.16 | 0.23 | 0.58 | 55.5 | 10.79 | -0.61 | 0.02 | 0.53 |

## 25 TON HIGH EFFICIENCY LCT302H5M WITH HUMIDITROL® OPERATING (FULL LOAD)

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 65°F | | | | | 75°F | | | | | 85°F | | | | | 95°F | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F |
| 63°F | 8000 | 235.5 | 14.49 | 0.58 | 0.75 | 0.89 | 203.2 | 16.18 | 0.56 | 0.76 | 0.91 | 168.4 | 18.08 | 0.53 | 0.77 | 0.95 | 135.0 | 20.16 | 0.49 | 0.79 | 1.00 |
| | 10,000 | 259.7 | 14.51 | 0.66 | 0.83 | 0.96 | 224.1 | 16.29 | 0.66 | 0.85 | 0.99 | 187.5 | 18.22 | 0.65 | 0.87 | 1.00 | 149.9 | 20.33 | 0.65 | 0.91 | 1.00 |
| | 12,000 | 276.6 | 14.57 | 0.73 | 0.89 | 1.00 | 240.3 | 16.37 | 0.73 | 0.91 | 1.00 | 201.8 | 18.32 | 0.73 | 0.95 | 1.00 | 163.7 | 20.42 | 0.75 | 1.00 | 1.00 |
| 67°F | 8000 | 263.6 | 14.54 | 0.40 | 0.57 | 0.72 | 229.4 | 16.32 | 0.36 | 0.54 | 0.72 | 192.5 | 18.27 | 0.32 | 0.52 | 0.73 | 157.2 | 20.34 | 0.22 | 0.51 | 0.75 |
| | 10,000 | 282.2 | 14.59 | 0.46 | 0.64 | 0.80 | 244.1 | 16.40 | 0.43 | 0.63 | 0.82 | 206.7 | 18.35 | 0.39 | 0.63 | 0.83 | 167.2 | 20.51 | 0.33 | 0.62 | 0.86 |
| | 12,000 | 295.3 | 14.63 | 0.50 | 0.70 | 0.86 | 256.8 | 16.47 | 0.47 | 0.72 | 0.88 | 217.1 | 18.43 | 0.43 | 0.72 | 0.91 | 176.4 | 20.57 | 0.38 | 0.74 | 0.95 |
| 71°F | 8000 | 293.3 | 14.63 | 0.25 | 0.41 | 0.55 | 258.3 | 16.44 | 0.20 | 0.36 | 0.54 | 221.3 | 18.40 | 0.13 | 0.32 | 0.51 | 183.5 | 20.54 | 0.03 | 0.27 | 0.49 |
| | 10,000 | 310.9 | 14.65 | 0.29 | 0.46 | 0.62 | 272.6 | 16.52 | 0.24 | 0.44 | 0.62 | 233.5 | 18.51 | 0.18 | 0.40 | 0.61 | 194.4 | 20.66 | 0.08 | 0.36 | 0.62 |
| | 12,000 | 323.4 | 14.67 | 0.33 | 0.51 | 0.69 | 283.6 | 16.59 | 0.27 | 0.48 | 0.69 | 242.5 | 18.59 | 0.21 | 0.46 | 0.70 | 202.5 | 20.77 | 0.09 | 0.43 | 0.70 |

## 30 TON HIGH EFFICIENCY LCT360H5M WITH HUMIDITROL® OPERATING (PART LOAD)

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 65°F | | | | | 75°F | | | | | 85°F | | | | | 95°F | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F |
| 63°F | 4800 | 88.3 | 11.38 | 0.42 | 0.68 | 0.92 | 64.3 | 12.09 | 0.29 | 0.64 | 0.97 | 41.7 | 12.87 | 0.01 | 0.58 | 1.00 | 19.3 | 13.80 | -1.06 | 0.37 | 1.00 |
| | 6000 | 99.7 | 11.61 | 0.53 | 0.80 | 1.00 | 74.4 | 12.31 | 0.44 | 0.82 | 1.00 | 49.0 | 13.15 | 0.27 | 0.84 | 1.00 | 25.2 | 14.08 | -0.27 | 0.93 | 1.00 |
| | 7200 | 108.1 | 11.78 | 0.62 | 0.91 | 1.00 | 81.8 | 12.49 | 0.57 | 0.96 | 1.00 | 54.7 | 13.33 | 0.46 | 1.00 | 1.00 | 28.4 | 14.32 | 0.17 | 1.00 | 1.00 |
| 67°F | 4800 | 103.7 | 11.63 | 0.21 | 0.44 | 0.65 | 80.0 | 12.34 | 0.04 | 0.34 | 0.62 | 56.1 | 13.19 | -0.27 | 0.17 | 0.57 | 33.9 | 14.12 | -1.06 | -0.21 | 0.46 |
| | 6000 | 115.6 | 11.86 | 0.29 | 0.53 | 0.76 | 90.7 | 12.57 | 0.16 | 0.47 | 0.77 | 65.1 | 13.42 | -0.11 | 0.36 | 0.77 | 38.8 | 14.42 | -0.71 | 0.12 | 0.80 |
| | 7200 | 124.3 | 12.03 | 0.35 | 0.62 | 0.87 | 98.3 | 12.74 | 0.24 | 0.58 | 0.89 | 71.0 | 13.61 | 0.03 | 0.52 | 0.95 | 43.1 | 14.64 | -0.47 | 0.37 | 1.00 |
| 71°F | 4800 | 117.9 | 11.88 | 0.04 | 0.25 | 0.45 | 94.6 | 12.60 | -0.14 | 0.13 | 0.37 | 70.5 | 13.45 | -0.47 | -0.07 | 0.26 | 46.7 | 14.43 | -1.10 | -0.48 | 0.04 |
| | 6000 | 130.8 | 12.10 | 0.10 | 0.33 | 0.53 | 105.4 | 12.82 | -0.06 | 0.23 | 0.48 | 79.5 | 13.69 | -0.34 | 0.07 | 0.41 | 52.9 | 14.74 | -0.92 | -0.27 | 0.27 |
| | 7200 | 139.8 | 12.26 | 0.15 | 0.39 | 0.61 | 113.0 | 13.00 | -0.01 | 0.30 | 0.58 | 85.7 | 13.88 | -0.25 | 0.17 | 0.54 | 56.9 | 14.94 | -0.78 | -0.10 | 0.46 |

## 30 TON HIGH EFFICIENCY LCT360H5M WITH HUMIDITROL® OPERATING (FULL LOAD)

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 65°F | | | | | 75°F | | | | | 85°F | | | | | 95°F | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F |
| 63°F | 9600 | 264.2 | 20.32 | 0.58 | 0.77 | 0.91 | 218.5 | 22.08 | 0.57 | 0.80 | 0.96 | 172.7 | 24.09 | 0.56 | 0.84 | 1.00 | 127.1 | 26.40 | 0.54 | 0.90 | 1.00 |
| | 12,000 | 292.4 | 20.63 | 0.66 | 0.84 | 0.98 | 244.6 | 22.41 | 0.66 | 0.88 | 1.00 | 196.1 | 24.50 | 0.69 | 0.93 | 1.00 | 148.0 | 26.82 | 0.70 | 1.00 | 1.00 |
| | 14,400 | 314.3 | 20.86 | 0.73 | 0.91 | 1.00 | 263.8 | 22.69 | 0.74 | 0.96 | 1.00 | 213.3 | 24.80 | 0.77 | 1.00 | 1.00 | 163.1 | 27.13 | 0.84 | 1.00 | 1.00 |
| 67°F | 9600 | 298.0 | 20.66 | 0.40 | 0.56 | 0.73 | 251.2 | 22.44 | 0.35 | 0.56 | 0.75 | 203.8 | 24.52 | 0.29 | 0.54 | 0.78 | 156.4 | 26.86 | 0.20 | 0.53 | 0.83 |
| | 12,000 | 322.1 | 20.93 | 0.45 | 0.64 | 0.81 | 272.0 | 22.76 | 0.42 | 0.64 | 0.84 | 222.0 | 24.88 | 0.38 | 0.65 | 0.88 | 171.4 | 27.20 | 0.30 | 0.67 | 0.94 |
| | 14,400 | 339.4 | 21.14 | 0.49 | 0.71 | 0.87 | 287.9 | 23.00 | 0.46 | 0.72 | 0.91 | 235.8 | 25.16 | 0.44 | 0.74 | 0.97 | 184.2 | 27.48 | 0.39 | 0.78 | 1.00 |
| 71°F | 9600 | 334.8 | 21.01 | 0.24 | 0.40 | 0.55 | 287.0 | 22.87 | 0.18 | 0.36 | 0.53 | 239.4 | 25.02 | 0.10 | 0.32 | 0.53 | 190.3 | 27.35 | -0.01 | 0.26 | 0.50 |
| | 12,000 | 358.8 | 21.28 | 0.27 | 0.45 | 0.61 | 308.3 | 23.16 | 0.23 | 0.44 | 0.62 | 256.9 | 25.36 | 0.14 | 0.39 | 0.64 | 206.3 | 27.69 | 0.04 | 0.34 | 0.64 |
| | 14,400 | 376.3 | 21.47 | 0.30 | 0.49 | 0.69 | 324.8 | 23.39 | 0.25 | 0.47 | 0.70 | 270.0 | 25.57 | 0.18 | 0.46 | 0.72 | 216.5 | 27.94 | 0.08 | 0.43 | 0.73 |

## BLOWER DATA

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

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

Then determine from blower table blower motor output and drive required.
See page 34 for wet coil and option/accessory air resistance data.
See page 34 for factory installed drive kit specifications.

**MINIMUM AIR VOLUME REQUIRED FOR USE WITH OPTIONAL ELECTRIC HEAT**

All units require 10,500 cfm minimum air with electric heat.

| Air Volume cfm | TOTAL STATIC PRESSURE - In. w.g. | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.20 | | 0.40 | | 0.60 | | 0.80 | | 1.00 | | 1.20 | | 1.40 | | 1.60 | | 1.80 | | 2.00 | | 2.20 | | 2.40 | | 2.60 | |
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 4000 | 372 | 0.26 | 433 | 0.65 | 497 | 0.99 | 565 | 1.27 | 630 | 1.54 | 687 | 1.79 | 738 | 2.04 | 784 | 2.30 | 824 | 2.56 | 861 | 2.82 | 897 | 3.10 | 932 | 3.40 | - - - | - - - |
| 4500 | 382 | 0.41 | 441 | 0.79 | 506 | 1.12 | 574 | 1.41 | 638 | 1.69 | 694 | 1.95 | 744 | 2.22 | 790 | 2.50 | 831 | 2.77 | 868 | 3.05 | 903 | 3.35 | 938 | 3.66 | 974 | 4.01 |
| 5000 | 392 | 0.56 | 451 | 0.93 | 516 | 1.25 | 584 | 1.55 | 646 | 1.85 | 702 | 2.12 | 751 | 2.41 | 796 | 2.70 | 837 | 3.00 | 874 | 3.30 | 909 | 3.61 | 944 | 3.93 | 980 | 4.30 |
| 5500 | 402 | 0.73 | 462 | 1.08 | 527 | 1.40 | 594 | 1.72 | 655 | 2.02 | 710 | 2.31 | 758 | 2.61 | 802 | 2.92 | 843 | 3.24 | 880 | 3.56 | 916 | 3.88 | 951 | 4.22 | 987 | 4.60 |
| 6000 | 414 | 0.89 | 473 | 1.24 | 539 | 1.56 | 605 | 1.90 | 665 | 2.21 | 718 | 2.51 | 766 | 2.83 | 809 | 3.16 | 850 | 3.51 | 887 | 3.84 | 922 | 4.18 | 957 | 4.52 | 994 | 4.91 |
| 6500 | 426 | 1.07 | 486 | 1.41 | 551 | 1.74 | 616 | 2.10 | 675 | 2.42 | 727 | 2.73 | 774 | 3.07 | 817 | 3.43 | 857 | 3.80 | 894 | 4.15 | 929 | 4.49 | 964 | 4.85 | 1001 | 5.24 |
| 7000 | 439 | 1.26 | 499 | 1.60 | 565 | 1.93 | 628 | 2.31 | 685 | 2.64 | 737 | 2.97 | 782 | 3.34 | 825 | 3.72 | 864 | 4.11 | 901 | 4.48 | 937 | 4.83 | 971 | 5.19 | 1008 | 5.59 |
| 7500 | 453 | 1.46 | 513 | 1.79 | 579 | 2.14 | 641 | 2.55 | 696 | 2.88 | 747 | 3.24 | 792 | 3.63 | 833 | 4.04 | 872 | 4.45 | 909 | 4.83 | 945 | 5.20 | 979 | 5.56 | 1016 | 5.97 |
| 8000 | 467 | 1.66 | 528 | 2.00 | 593 | 2.38 | 653 | 2.81 | 708 | 3.15 | 757 | 3.53 | 801 | 3.95 | 843 | 4.39 | 881 | 4.82 | 918 | 5.22 | 953 | 5.59 | 988 | 5.96 | 1025 | 6.37 |
| 8500 | 483 | 1.88 | 544 | 2.22 | 608 | 2.65 | 667 | 3.10 | 720 | 3.44 | 768 | 3.85 | 812 | 4.30 | 852 | 4.78 | 890 | 5.22 | 927 | 5.63 | 962 | 6.01 | 997 | 6.39 | 1034 | 6.81 |
| 9000 | 499 | 2.11 | 561 | 2.47 | 624 | 2.95 | 681 | 3.41 | 733 | 3.76 | 780 | 4.20 | 823 | 4.69 | 862 | 5.19 | 900 | 5.65 | 936 | 6.07 | 972 | 6.46 | 1007 | 6.85 | 1044 | 7.28 |
| 9500 | 516 | 2.36 | 578 | 2.75 | 640 | 3.26 | 696 | 3.73 | 746 | 4.10 | 792 | 4.58 | 834 | 5.11 | 873 | 5.64 | 910 | 6.12 | 946 | 6.54 | 982 | 6.93 | 1018 | 7.34 | 1055 | 7.78 |
| 10,000 | 534 | 2.64 | 596 | 3.06 | 657 | 3.60 | 711 | 4.07 | 760 | 4.48 | 805 | 5.00 | 845 | 5.57 | 884 | 6.12 | 921 | 6.61 | 957 | 7.03 | 992 | 7.43 | 1028 | 7.86 | 1066 | 8.32 |
| 10,500 | 553 | 2.93 | 615 | 3.39 | 674 | 3.95 | 727 | 4.44 | 775 | 4.90 | 817 | 5.46 | 857 | 6.06 | 895 | 6.62 | 932 | 7.12 | 967 | 7.55 | 1003 | 7.96 | 1039 | 8.40 | 1077 | 8.89 |
| 11,000 | 572 | 3.24 | 634 | 3.74 | 692 | 4.31 | 744 | 4.83 | 789 | 5.35 | 830 | 5.95 | 869 | 6.58 | 907 | 7.16 | 943 | 7.65 | 978 | 8.09 | 1013 | 8.51 | 1050 | 8.98 | 1089 | 9.49 |
| 11,500 | 592 | 3.58 | 653 | 4.12 | 711 | 4.70 | 760 | 5.27 | 803 | 5.85 | 843 | 6.49 | 881 | 7.13 | 918 | 7.71 | 954 | 8.21 | 989 | 8.65 | 1025 | 9.10 | 1062 | 9.59 | 1101 | 10.12 |
| 12,000 | 613 | 3.95 | 674 | 4.53 | 729 | 5.14 | 776 | 5.75 | 818 | 6.39 | 857 | 7.06 | 894 | 7.71 | 930 | 8.30 | 965 | 8.80 | 1000 | 9.25 | 1036 | 9.71 | 1073 | 10.22 | - - - | - - - |
| 12,500 | 635 | 4.37 | 695 | 4.98 | 748 | 5.62 | 792 | 6.29 | 832 | 6.98 | 870 | 7.67 | 906 | 8.33 | 941 | 8.91 | 976 | 9.42 | 1011 | 9.87 | 1048 | 10.35 | - - - | - - - | - - - | - - - |
| 13,000 | 657 | 4.83 | 715 | 5.50 | 766 | 6.18 | 808 | 6.89 | 847 | 7.61 | 883 | 8.32 | 918 | 8.98 | 953 | 9.56 | 988 | 10.06 | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - |
| 13,500 | 680 | 5.35 | 736 | 6.06 | 784 | 6.78 | 824 | 7.53 | 861 | 8.29 | 896 | 9.00 | 930 | 9.66 | 965 | 10.24 | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - |
| 14,000 | 704 | 5.92 | 757 | 6.67 | 801 | 7.44 | 839 | 8.23 | 875 | 9.00 | 909 | 9.72 | 943 | 10.38 | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - |
| 14,500 | 727 | 6.55 | 777 | 7.34 | 818 | 8.16 | 854 | 8.97 | 889 | 9.75 | 922 | 10.48 | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - |
| 15,000 | 750 | 7.23 | 797 | 8.07 | 834 | 8.92 | 868 | 9.75 | 902 | 10.54 | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - |

## BLOWER DATA

### DRIVE KIT SPECIFICATIONS

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

NOTES

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

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

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

| Air Volume cfm | Wet Indoor Coil | Reheat Coil | Electric Heat | Economizer | Filters | | | Horizontal Roof Curb |
|---|---|---|---|---|---|---|---|---|
| | | | | | MERV 8 | MERV 13 | MERV 16 | |
| | in. w.g. | in. w.g. | in. w.g. | in. w.g. | in. w.g. | in. w.g. | in. w.g. | in. w.g. |
| 4000 | 0.04 | 0.04 | 0.01 | 0.00 | 0.00 | 0.00 | 0.06 | 0.04 |
| 4500 | 0.04 | 0.04 | 0.01 | 0.00 | 0.00 | 0.00 | 0.07 | 0.05 |
| 5000 | 0.05 | 0.04 | 0.01 | 0.00 | 0.00 | 0.00 | 0.08 | 0.06 |
| 5500 | 0.06 | 0.06 | 0.02 | 0.01 | 0.00 | 0.01 | 0.09 | 0.07 |
| 6000 | 0.07 | 0.06 | 0.02 | 0.01 | 0.00 | 0.02 | 0.10 | 0.08 |
| 6500 | 0.08 | 0.08 | 0.02 | 0.01 | 0.01 | 0.02 | 0.11 | 0.09 |
| 7000 | 0.09 | 0.08 | 0.03 | 0.02 | 0.01 | 0.03 | 0.12 | 0.10 |
| 7500 | 0.10 | 0.10 | 0.03 | 0.02 | 0.01 | 0.04 | 0.13 | 0.11 |
| 8000 | 0.11 | 0.10 | 0.03 | 0.02 | 0.01 | 0.04 | 0.14 | 0.13 |
| 8500 | 0.12 | 0.10 | 0.04 | 0.03 | 0.01 | 0.04 | 0.15 | 0.15 |
| 9000 | 0.13 | 0.12 | 0.04 | 0.04 | 0.01 | 0.04 | 0.16 | 0.17 |
| 9500 | 0.14 | 0.14 | 0.05 | 0.04 | 0.02 | 0.06 | 0.17 | 0.19 |
| 10,000 | 0.15 | 0.16 | 0.05 | 0.05 | 0.02 | 0.06 | 0.18 | 0.21 |
| 10,500 | 0.16 | 0.17 | 0.06 | 0.06 | 0.02 | 0.06 | 0.19 | 0.24 |
| 11,000 | 0.18 | 0.18 | 0.06 | 0.07 | 0.02 | 0.07 | 0.20 | 0.27 |
| 11,500 | 0.19 | 0.19 | 0.07 | 0.08 | 0.02 | 0.08 | 0.22 | 0.30 |
| 12,000 | 0.20 | 0.20 | 0.07 | 0.10 | 0.02 | 0.08 | 0.23 | 0.33 |
| 12,500 | 0.21 | 0.22 | 0.08 | 0.11 | 0.03 | 0.10 | 0.24 | 0.37 |
| 13,000 | 0.23 | 0.23 | 0.08 | 0.13 | 0.03 | 0.10 | 0.25 | 0.40 |
| 13,500 | 0.24 | 0.25 | 0.09 | 0.14 | 0.03 | 0.11 | 0.26 | 0.44 |
| 14,000 | 0.26 | 0.26 | 0.10 | 0.16 | 0.03 | 0.12 | 0.27 | 0.49 |
| 14,500 | 0.27 | 0.27 | 0.10 | 0.18 | 0.04 | 0.13 | 0.28 | 0.53 |
| 15,000 | 0.29 | 0.29 | 0.11 | 0.21 | 0.04 | 0.13 | 0.29 | 0.58 |

## BLOWER DATA

### POWER EXHAUST PERFORMANCE - STANDARD STATIC

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

### POWER EXHAUST - HIGH STATIC

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

## BLOWER DATA

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

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

**CEILING DIFFUSER AIR THROW DATA - ft.**

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

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

## ELECTRICAL DATA — 25 TON

| Model | | LCT302H5M, LCT302H5V | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [1] Voltage - 60Hz | | 208/230V - 3 Ph | | | 460V - 3 Ph | | | 575V - 3 Ph | | |
| Compressor 1 (Non-Inverter) | Rated Load Amps | 22.4 | | | 9.1 | | | 7.2 | | |
| | Locked Rotor Amps | 166 | | | 74.6 | | | 54 | | |
| Compressor 2 (Non-Inverter) | Rated Load Amps | 22.4 | | | 9.1 | | | 7.2 | | |
| | Locked Rotor Amps | 166 | | | 74.6 | | | 54 | | |
| Compressor 3 (Non-Inverter) | Rated Load Amps | 22.4 | | | 9.1 | | | 7.2 | | |
| | Locked Rotor Amps | 166 | | | 74.6 | | | 54 | | |
| Compressor 4 (Non-Inverter) | Rated Load Amps | 22.4 | | | 9.1 | | | 7.2 | | |
| | Locked Rotor Amps | 166 | | | 74.6 | | | 54 | | |
| Outdoor Fan Motors (6) | Full Load Amps (6 Non-ECM) | 2.4 | | | 1.3 | | | 1 | | |
| | Total | 14.4 | | | 7.8 | | | 6 | | |
| Standard Power Exhaust (3) 0.33 HP | Full Load Amps | 2.4 | | | 1.3 | | | 1 | | |
| | Total | 7.2 | | | 3.9 | | | 3 | | |
| High Static Power Exhaust (3) 2 HP | Full Load Amps | 7.5 | | | 3.4 | | | 2.7 | | |
| | Total | 22.5 | | | 10.2 | | | 8.1 | | |
| Service Outlet 115V GFI (amps) | | 15 | | | 15 | | | 20 | | |
| Indoor Blower Motor | HP | 5 | 7.5 | 10 | 5 | 7.5 | 10 | 5 | 7.5 | 10 |
| | Full Load Amps | 16.7 | 24.2 | 30.8 | 7.6 | 11 | 14 | 6.1 | 9 | 11 |
| [2] Maximum Overcurrent Protection (MOCP) | Unit Only | 150 | 150 | 150 | 60 | 60 | 70 | 45 | 50 | 50 |
| | With (3) 0.33 HP Standard Power Exhaust | 150 | 150 | 175 | 60 | 70 | 70 | 50 | 50 | 60 |
| | With High Static Power Exhaust (3) 2 HP | 150 | 175 | 175 | 70 | 70 | 80 | 60 | 60 | 60 |
| [3] Minimum Circuit Ampacity (MCA) | Unit Only | 127 | 135 | 143 | 55 | 58 | 62 | 43 | 47 | 49 |
| | With (3) 0.33 HP Standard Power Exhaust | 134 | 142 | 150 | 58 | 62 | 66 | 46 | 50 | 52 |
| | With High Static Power Exhaust (3) 2 HP | 149 | 157 | 165 | 65 | 69 | 72 | 51 | 55 | 57 |

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.

## ELECTRIC HEAT DATA — 25 TON

| Model | | | LCT302H5M, LCT302H5V | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [1] Voltage - 60Hz | | | 208/230V - 3 Ph | | | | | | 460V - 3 Ph | | | 575V - 3 Ph | | |
| Indoor Blower Motor - HP | | | 5 | | 7.5 | | 10 | | 5 | 7.5 | 10 | 5 | 7.5 | 10 |
| | Electric Heat Voltage | | 208V | 240V | 208V | 240V | 208V | 240V | 480V | 480V | 480V | 600V | 600V | 600V |
| [2] Maximum Overcurrent Protection (MOCP) | Unit+ Electric Heat | 30 kW | 150 | 150 | 150 | 150 | 150 | 150 | 60 | 70 | 60 | 45 | 50 | 50 |
| | | 45 kW | [4] 150 | 175 | [4] 150 | 175 | 175 | 175 | 90 | 90 | 80 | 70 | 70 | 70 |
| | | 60 kW | [4] 150 | 175 | 175 | 175 | [4] 175 | 200 | 90 | 90 | 90 | 70 | 70 | 80 |
| | | 90 kW | [4] 225 | 250 | [4] 225 | 250 | [4] 250 | [4] 300 | 125 | 150 | 125 | 100 | 100 | 110 |
| [3] Minimum Circuit Ampacity (MCA) | Unit+ Electric Heat | 30 kW | 127 | 127 | 135 | 135 | 143 | 143 | 59 | 63 | 55 | 44 | 48 | 50 |
| | | 45 kW | 139 | 157 | 148 | 166 | 156 | 174 | 82 | 86 | 78 | 62 | 66 | 68 |
| | | 60 kW | 146 | 166 | 156 | 175 | 164 | 183 | 86 | 90 | 82 | 66 | 69 | 72 |
| | | 90 kW | 209 | 238 | 218 | 247 | 227 | 256 | 123 | 126 | 118 | 95 | 98 | 101 |
| [2] Maximum Overcurrent Protection (MOCP) | Unit+ Electric Heat and Standard Power Exhaust (3) 0.33 HP | 30 kW | 150 | 150 | 150 | 150 | 175 | 175 | 70 | 70 | 60 | 50 | 60 | 60 |
| | | 45 kW | [4] 150 | 175 | 175 | 175 | [4] 175 | 200 | 90 | 100 | 90 | 70 | 70 | 80 |
| | | 60 kW | 175 | 175 | [4] 175 | 200 | [4] 175 | 200 | 100 | 100 | 90 | 70 | 80 | 80 |
| | | 90 kW | [4] 225 | 250 | [4] 250 | [4] 300 | [4] 250 | [4] 300 | 150 | 150 | 125 | 100 | 110 | 110 |
| [3] Minimum Circuit Ampacity (MCA) | Unit+ Electric Heat and Standard Power Exhaust (3) 0.33 HP | 30 kW | 134 | 134 | 142 | 142 | 150 | 150 | 64 | 68 | 60 | 48 | 52 | 54 |
| | | 45 kW | 148 | 166 | 157 | 175 | 165 | 183 | 87 | 91 | 83 | 66 | 70 | 72 |
| | | 60 kW | 155 | 175 | 165 | 184 | 173 | 192 | 91 | 95 | 87 | 70 | 73 | 76 |
| | | 90 kW | 218 | 247 | 227 | 256 | 236 | 265 | 127 | 131 | 123 | 98 | 102 | 105 |
| [2] Maximum Overcurrent Protection (MOCP) | Unit+ Electric Heat and High Static Power Exhaust (3) 2 HP | 30 kW | 150 | 150 | 175 | 175 | 175 | 175 | 70 | 80 | 80 | 60 | 60 | 60 |
| | | 45 kW | [4] 175 | 200 | 200 | 200 | [4] 200 | 225 | 90 | 100 | 100 | 80 | 80 | 80 |
| | | 60 kW | [4] 175 | 200 | [4] 200 | 225 | [4] 200 | 225 | 100 | 100 | 110 | 80 | 80 | 90 |
| | | 90 kW | [4] 250 | [4] 300 | [4] 250 | [4] 300 | 300 | [4] 300 | 150 | 150 | 150 | 110 | 110 | 125 |
| [3] Minimum Circuit Ampacity (MCA) | Unit+ Electric Heat and High Static Power Exhaust (3) 2 HP | 30 kW | 149 | 149 | 157 | 157 | 165 | 165 | 68 | 72 | 76 | 54 | 58 | 60 |
| | | 45 kW | 167 | 185 | 176 | 194 | 184 | 202 | 90 | 95 | 98 | 72 | 76 | 79 |
| | | 60 kW | 175 | 194 | 184 | 203 | 192 | 211 | 95 | 99 | 103 | 76 | 80 | 82 |
| | | 90 kW | 237 | 266 | 247 | 275 | 255 | 284 | 131 | 135 | 139 | 105 | 108 | 111 |

[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 DATA — 30 TON

| Model | | LCT360H5M, LCT360H5V | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [1] Voltage - 60Hz | | 208/230V - 3 Ph | | | 460V - 3 Ph | | | 575V - 3 Ph | | |
| Compressor 1 (Non-Inverter) | Rated Load Amps | 27.7 | | | 11.5 | | | 9 | | |
| | Locked Rotor Amps | 179 | | | 103 | | | 78 | | |
| Compressor 2 (Non-Inverter) | Rated Load Amps | 27.7 | | | 11.5 | | | 9 | | |
| | Locked Rotor Amps | 179 | | | 103 | | | 78 | | |
| Compressor 3 (Non-Inverter) | Rated Load Amps | 27.7 | | | 11.5 | | | 9 | | |
| | Locked Rotor Amps | 179 | | | 103 | | | 78 | | |
| Compressor 4 (Non-Inverter) | Rated Load Amps | 27.7 | | | 11.5 | | | 9 | | |
| | Locked Rotor Amps | 179 | | | 103 | | | 78 | | |
| Outdoor Fan Motors (6) | Full Load Amps (6 Non-ECM) | 14.4 (2.4) | | | 7.8 (1.3) | | | 6 (1) | | |
| | Total | 14.4 | | | 7.8 | | | 6 | | |
| Standard Power Exhaust (3) 0.33 HP | Full Load Amps | 2.4 | | | 1.3 | | | 1 | | |
| | Total | 7.2 | | | 3.9 | | | 3 | | |
| High Static Power Exhaust (3) 2 HP | Full Load Amps | 7.5 | | | 3.7 | | | 2.7 | | |
| | Total | 22.5 | | | 10.2 | | | 8.1 | | |
| Service Outlet 115V GFI (amps) | | 15 | | | 15 | | | 20 | | |
| Indoor Blower Motor | HP | 5 | 7.5 | 10 | 5 | 7.5 | 10 | 5 | 7.5 | 10 |
| | Full Load Amps | 16.7 | 24.2 | 30.8 | 7.6 | 11 | 14 | 6.1 | 9 | 11 |
| [2] Maximum Overcurrent Protection (MOCP) | Unit Only | 175 | 175 | 175 | 70 | 70 | 80 | 60 | 60 | 60 |
| | With (3) 0.33 HP Standard Power Exhaust | 175 | 175 | 200 | 70 | 80 | 80 | 60 | 60 | 60 |
| | With High Static Power Exhaust (3) 2 HP | 175 | 200 | 200 | 80 | 80 | 90 | 60 | 70 | 70 |
| [3] Minimum Circuit Ampacity (MCA) | Unit Only | 149 | 157 | 164 | 65 | 68 | 72 | 51 | 54 | 56 |
| | With (3) 0.33 HP Standard Power Exhaust | 157 | 164 | 171 | 69 | 72 | 76 | 54 | 57 | 59 |
| | With High Static Power Exhaust (3) 2 HP | 172 | 179 | 187 | 75 | 78 | 82 | 59 | 62 | 64 |

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.

## ELECTRIC HEAT DATA — 30 TON

| Model | | | LCT360H5M, LCT360H5V | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [1] Voltage - 60Hz | | | 208/230V - 3 Ph | | | | | | 460V - 3 Ph | | | 575V - 3 Ph | | |
| Indoor Blower Motor - HP | | | 5 | | 7.5 | | 10 | | 5 | 7.5 | 10 | 5 | 7.5 | 10 |
| | Electric Heat Voltage | | 208V | 240V | 208V | 240V | 208V | 240V | 480V | 480V | 480V | 600V | 600V | 600V |
| [2] Maximum Overcurrent Protection (MOCP) | Unit+ Electric Heat | 30 kW | 175 | 175 | 175 | 175 | 175 | 175 | 70 | 80 | 70 | 60 | 60 | 60 |
| | | 45 kW | 175 | 175 | 175 | 175 | 175 | 175 | 80 | 90 | 80 | 70 | 70 | 70 |
| | | 60 kW | 175 | 175 | 175 | 175 | [4] 175 | 200 | 90 | 90 | 90 | 70 | 70 | 80 |
| | | 90 kW | [4] 225 | 250 | [4] 225 | 250 | [4] 250 | [4] 300 | 125 | 150 | 125 | 100 | 100 | 110 |
| [3] Minimum Circuit Ampacity (MCA) | Unit+ Electric Heat | 30 kW | 149 | 149 | 157 | 157 | 164 | 164 | 65 | 72 | 65 | 51 | 54 | 56 |
| | | 45 kW | 149 | 157 | 157 | 166 | 164 | 174 | 78 | 86 | 78 | 62 | 66 | 68 |
| | | 60 kW | 149 | 166 | 157 | 175 | 164 | 183 | 82 | 90 | 82 | 66 | 69 | 72 |
| | | 90 kW | 209 | 238 | 218 | 247 | 227 | 256 | 118 | 126 | 118 | 95 | 98 | 101 |
| [2] Maximum Overcurrent Protection (MOCP) | Unit+ Electric Heat and Standard Power Exhaust (3) 0.33 HP | 30 kW | 175 | 175 | 175 | 175 | 200 | 200 | 70 | 80 | 70 | 60 | 60 | 60 |
| | | 45 kW | 175 | 175 | 175 | 175 | 200 | 200 | 90 | 100 | 90 | 70 | 70 | 80 |
| | | 60 kW | 175 | 175 | [4] 175 | 200 | 200 | 200 | 90 | 100 | 90 | 70 | 80 | 80 |
| | | 90 kW | [4] 225 | 250 | [4] 250 | [4] 300 | [4] 250 | [4] 300 | 125 | 150 | 125 | 100 | 110 | 110 |
| [3] Minimum Circuit Ampacity (MCA) | Unit+ Electric Heat and Standard Power Exhaust (3) 0.33 HP | 30 kW | 157 | 157 | 164 | 164 | 171 | 171 | 69 | 76 | 69 | 54 | 57 | 59 |
| | | 45 kW | 157 | 166 | 164 | 175 | 171 | 183 | 83 | 91 | 83 | 66 | 70 | 72 |
| | | 60 kW | 157 | 175 | 165 | 184 | 173 | 192 | 87 | 95 | 87 | 70 | 73 | 76 |
| | | 90 kW | 218 | 247 | 227 | 256 | 236 | 265 | 123 | 131 | 123 | 98 | 102 | 105 |
| [2] Maximum Overcurrent Protection (MOCP) | Unit+ Electric Heat and High Static Power Exhaust (3) 2 HP | 30 kW | 175 | 175 | 200 | 200 | 200 | 200 | 80 | 80 | 90 | 60 | 70 | 70 |
| | | 45 kW | [4] 175 | 200 | 200 | 200 | [4] 200 | 225 | 90 | 100 | 100 | 80 | 80 | 80 |
| | | 60 kW | [4] 175 | 200 | [4] 200 | 225 | [4] 200 | 225 | 100 | 100 | 110 | 80 | 80 | 90 |
| | | 90 kW | [4] 250 | [4] 300 | [4] 250 | [4] 300 | 300 | [4] 300 | 150 | 150 | 150 | 110 | 110 | 125 |
| [3] Minimum Circuit Ampacity (MCA) | Unit+ Electric Heat and High Static Power Exhaust (3) 2 HP | 30 kW | 172 | 172 | 179 | 179 | 187 | 187 | 75 | 78 | 82 | 59 | 62 | 64 |
| | | 45 kW | 172 | 185 | 179 | 194 | 187 | 202 | 90 | 95 | 98 | 72 | 76 | 79 |
| | | 60 kW | 175 | 194 | 184 | 203 | 192 | 211 | 95 | 99 | 103 | 76 | 80 | 82 |
| | | 90 kW | 237 | 266 | 247 | 275 | 255 | 284 | 131 | 135 | 139 | 105 | 108 | 111 |

[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.

## ELECTRIC HEAT CAPACITIES

| Volts Input | 30 kW | | | 45 kW | | | 60 kW | | | 90 kW | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | kW Input | Btuh Output | Stages | kW Input | Btuh Output | Stages | kW Input | Btuh Output | Stages | kW Input | Btuh Output | Stages |
| 208 | 22.5 | 76,800 | 1 | 33.8 | 115,300 | 2 | 45.0 | 153,600 | 2 | 67.6 | 230,700 | 2 |
| 220 | 25.2 | 86,000 | 1 | 37.8 | 129,000 | 2 | 50.4 | 172,000 | 2 | 75.6 | 258,000 | 2 |
| 230 | 27.5 | 93,900 | 1 | 41.3 | 141,000 | 2 | 55.1 | 188,000 | 2 | 82.7 | 282,200 | 2 |
| 240 | 30.0 | 102,400 | 1 | 45.0 | 153,600 | 2 | 60.0 | 204,800 | 2 | 90.0 | 307,100 | 2 |
| 440 | 25.2 | 86,000 | 1 | 37.8 | 129,000 | 2 | 50.4 | 172,000 | 2 | 75.6 | 258,000 | 2 |
| 460 | 27.5 | 93,900 | 1 | 41.3 | 141,000 | 2 | 55.1 | 188,000 | 2 | 82.7 | 282,200 | 2 |
| 480 | 30.0 | 102,400 | 1 | 45.0 | 153,600 | 2 | 60.0 | 204,800 | 2 | 90.0 | 307,100 | 2 |
| 550 | 25.2 | 86,000 | 1 | 37.8 | 129,000 | 2 | 50.4 | 172,000 | 2 | 75.6 | 258,000 | 2 |
| 575 | 27.5 | 93,900 | 1 | 41.3 | 141,000 | 2 | 55.1 | 188,000 | 2 | 82.7 | 282,200 | 2 |
| 600 | 30.0 | 102,400 | 1 | 45.0 | 153,600 | 2 | 60.0 | 204,800 | 2 | 90.0 | 307,100 | 2 |

## ELECTRICAL ACCESSORIES — 25 TON

| Model | | | LCT302H5 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Voltage - 60Hz - 3 phase | | | 208/230V | | | 460V | | | 575V | | |
| Indoor Blower Motor | | HP | 5 | 7.5 | 10 | 5 | 7.5 | 10 | 5 | 7.5 | 10 |
| Disconnect | | Unit Only | 54W86 | 54W87 | 54W87 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| | Unit+ Electric Heat and Standard Power Exhaust (3) 0.33 HP | 0 kW | 54W86 | 54W87 | 54W87 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| | | 30 kW | 54W86 | 54W87 | 54W87 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| | | 45 kW | 54W87 | 54W87 | 54W87 | 54W85 | 54W85 | 54W86 | 54W85 | 54W85 | 54W85 |
| | | 60 kW | 54W87 | 54W87 | 54W87 | 54W86 | 54W86 | 54W86 | 54W85 | 54W86 | 54W86 |
| | | 90 kW | N/A | N/A | N/A | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 |
| | Unit+ Electric Heat and High Static Power Exhaust (3) 2 HP | 0 kW | 54W87 | 54W87 | 54W87 | 54W85 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 |
| | | 30 kW | 54W87 | 54W87 | 54W87 | 54W85 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 |
| | | 45 kW | 54W87 | 54W87 | 54W87 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 |
| | | 60 kW | 54W87 | 54W87 | 54W87 | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 |
| | | 90 kW | N/A | N/A | N/A | 54W86 | 54W86 | 54W87 | 54W86 | 54W86 | 54W86 |

**Disconnects - 54W85** - 80A
**54W86** - 150A
**54W87** - 250A

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

## ELECTRICAL ACCESSORIES — 30 TON

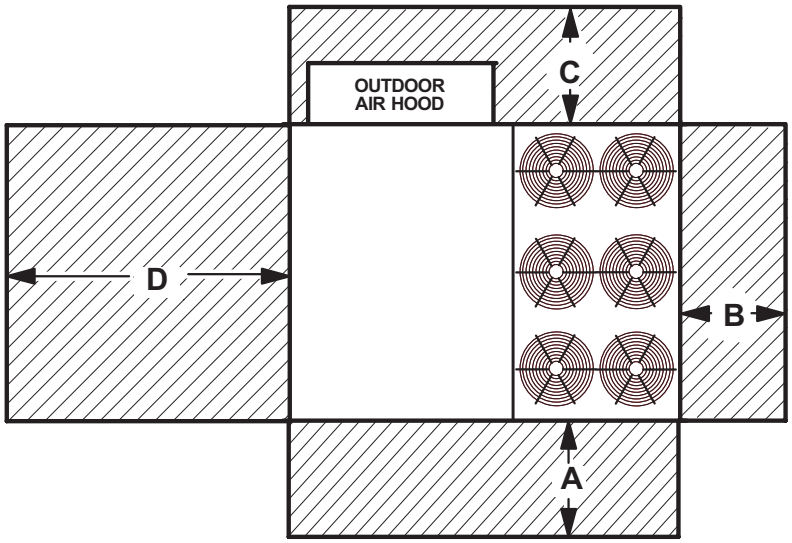
| Model | | | LCT360H5 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Voltage - 60Hz - 3 phase | | | 208/230V | | | 460V | | | 575V | | |
| Indoor Blower Motor | | HP | 5 | 7.5 | 10 | 5 | 7.5 | 10 | 5 | 7.5 | 10 |
| Disconnect | | Unit Only | 54W87 | 54W87 | 54W87 | 54W85 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 |
| | Unit+ Electric Heat and Standard Power Exhaust (3) 0.33 HP | 0 kW | 54W87 | 54W87 | 54W87 | 54W85 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 |
| | | 30 kW | 54W87 | 54W87 | 54W87 | 54W85 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 |
| | | 45 kW | 54W87 | 54W87 | 54W87 | 54W85 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 |
| | | 60 kW | 54W87 | 54W87 | 54W87 | 54W86 | 54W86 | 54W86 | 54W85 | 54W86 | 54W86 |
| | | 90 kW | N/A | N/A | N/A | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 |
| | Unit+ Electric Heat and High Static Power Exhaust (3) 2 HP | 0 kW | 54W87 | 54W87 | 54W87 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 |
| | | 30 kW | 54W87 | 54W87 | 54W87 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 |
| | | 45 kW | 54W87 | 54W87 | 54W87 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 |
| | | 60 kW | 54W87 | 54W87 | 54W87 | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 |
| | | 90 kW | N/A | N/A | N/A | 54W86 | 54W86 | 54W87 | 54W86 | 54W86 | 54W86 |

**Disconnects - 54W85** - 80A
**54W86** - 150A
**54W87** - 250A

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

## UNIT CLEARANCES

### Unit With Economizer

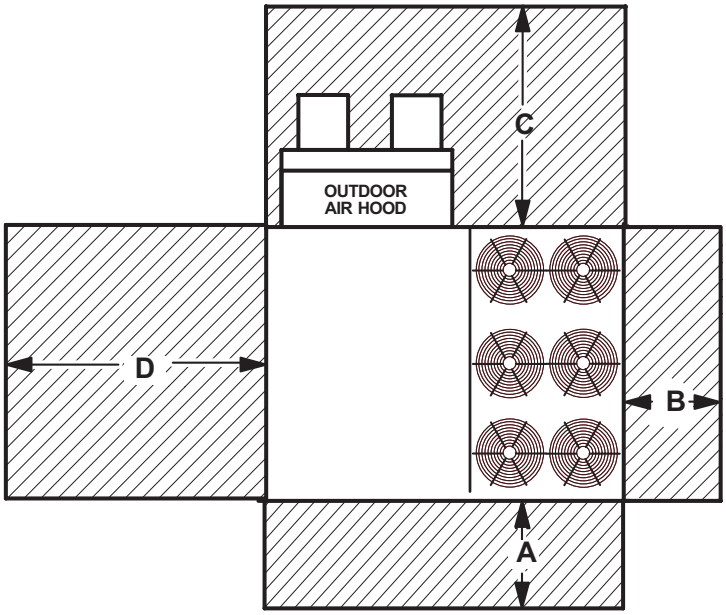



| [1] Unit Clearance | A | | B | | C | | D | | Top Clearance |
|---|---|---|---|---|---|---|---|---|---|
| | in. | mm | in. | mm | in. | mm | in. | mm | |
| **Service Clearance** | 60 | 1524 | 36 | 914 | 36 | 914 | 66 | 1676 | Unobstructed |
| **Minimum Operation Clearance** | 45 | 1143 | 36 | 914 |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

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

[1] Service Clearance - Required for removal of serviceable parts.
Minimum Operation Clearance - Required clearance for proper unit operation.

### Unit With High Static Power Exhaust Fans




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

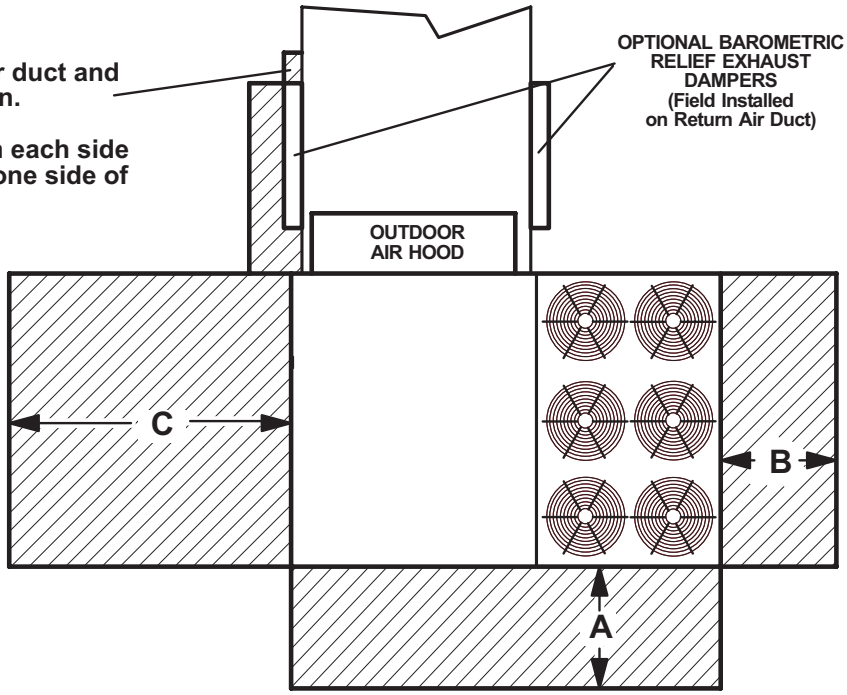
NOTE - Entire perimeter of unit base requires support when elevated above the mounting surface.

[1] Service Clearance - Required for removal of serviceable parts.
Minimum Operation Clearance - Required clearance for proper unit operation.

## Unit With Horizontal Barometric Relief Dampers

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

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




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

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

[1] Service Clearance - Required for removal of serviceable parts.
Minimum Operation Clearance - Required clearance for proper unit operation.

## OUTDOOR SOUND DATA

| Size | Octave Band Sound Power Levels dBA, re $10^{-12}$ Watts - Center Frequency - Hz | | | | | | | [1] Sound Rating Number (dBA) |
|---|---|---|---|---|---|---|---|---|
| | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | |
| 302, 360 | 84 | 85 | 90 | 90 | 85 | 80 | 72 | 95 |

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

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

## WEIGHT DATA

| Size | Net | | Shipping | |
|---|---|---|---|---|
| | lbs. | kg | lbs. | kg |
| 302 Base Unit | 2997 | 1359 | 3207 | 1455 |
| 302 Max. Unit | 3509 | 1592 | 3719 | 1687 |
| 360 Base Unit | 2997 | 1359 | 3207 | 1455 |
| 360 Max. Unit | 3509 | 1592 | 3719 | 1687 |

## FACTORY / FIELD INSTALLED OPTIONS AND ACCESSORIES - NET WEIGHTS

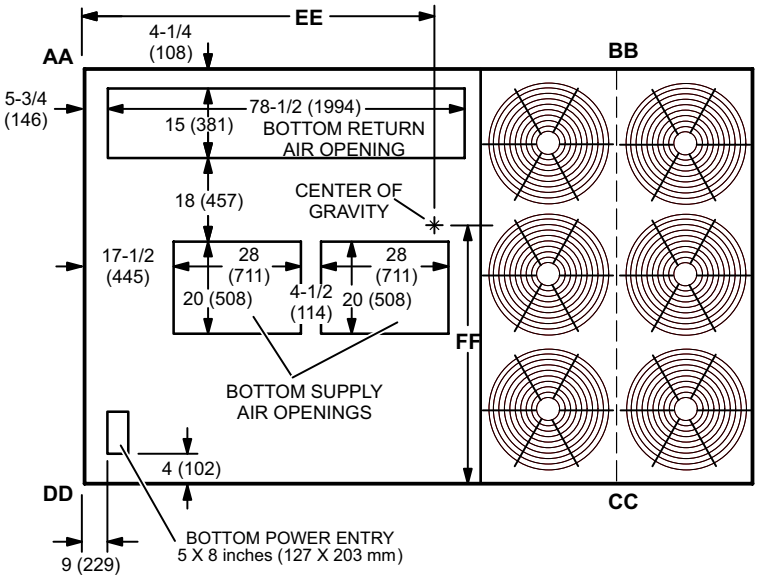
| Description | | lbs. | kg |
|---|---|---|---|
| **ECONOMIZER / OUTDOOR AIR / EXHAUST** | | | |
| **Economizer** | | 138 | 63 |
| **Barometric Relief** | | | |
| Downflow Barometric Relief Dampers | | 45 | 20 |
| Horizontal Barometric Relief Dampers | | 20 | 9 |
| **Outdoor Air Dampers** | | | |
| Damper Section (downflow) | Motorized | 72 | 33 |
| Damper Section (downflow) | Manual | 68 | 31 |
| **Outdoor Air Hood (downflow)** | | 76 | 34 |
| **Power Exhaust** | | | |
| | Standard Static | 99 | 45 |
| | High Static with or without VFD | 525 | 238 |
| **ELECTRIC HEAT** | | | |
| 30 KW | | 59 | 27 |
| 45 KW | | 76 | 34 |
| 60 KW | | 76 | 34 |
| 90 KW | | 84 | 38 |
| **COMBINATION COIL/HAIL GUARDS** | | | |
| All models | | 63 | 29 |
| **ROOF CURBS** | | | |
| **Hybrid Roof Curbs, Downflow** | | | |
| 14 in. height | | 205 | 93 |
| 18 in. height | | 235 | 107 |
| 24 in. height | | 270 | 123 |
| **Standard Curbs, Horizontal** | | | |
| 30 in. height | | 495 | 225 |
| 41 in. height | | 575 | 261 |
| **Insulation Kit for Horizontal Curbs** | | | |
| 30 in. height | | 45 | 21 |
| 41 in. height | | 55 | 25 |
| **CEILING DIFFUSERS** | | | |
| Step-Down | LARTD30/36S | 625 | 283 |
| Flush | LAFD30/36S | 625 | 283 |
| Transitions | LASRT30/36 | 85 | 39 |
| **HUMIDITROL® DEHUMIDIFICATION SYSTEM** | | | |
| Humiditrol® Dehumidification Option | | 100 | 45 |

## DIMENSIONS - UNIT

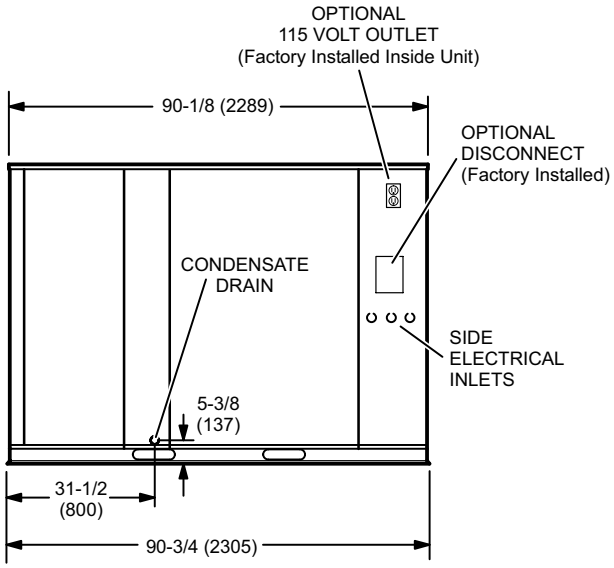
| CORNER WEIGHTS | | | | | | | | | CENTER OF GRAVITY | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model | AA | | BB | | CC | | DD | | EE | | FF | |
| | lbs. | kg | lbs. | kg | lbs. | kg | lbs. | kg | in. | mm | in. | mm |
| LCT302 Base Unit | 610 | 277 | 612 | 278 | 880 | 399 | 895 | 406 | 60 | 1524 | 37 | 940 |
| LCT302 Max. Unit | 693 | 315 | 696 | 316 | 1001 | 454 | 1018 | 462 | 60 | 1524 | 37 | 940 |
| LCT360 Base Unit | 610 | 277 | 612 | 278 | 880 | 399 | 895 | 406 | 60 | 1524 | 37 | 940 |
| LCT360 Max. Unit | 693 | 315 | 696 | 316 | 1001 | 454 | 1018 | 462 | 60 | 1524 | 37 | 940 |

Base Unit - The unit with NO INTERNAL OPTIONS.

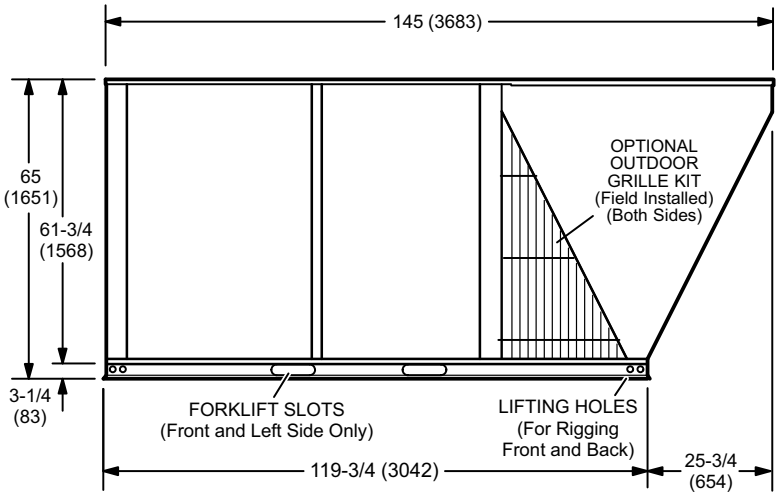
Max. Unit - The unit with ALL INTERNAL OPTIONS Installed. (Economizer, Standard Static Power Exhaust, Controls, etc.). Does not include accessories external to unit or high static power exhaust.




**TOP VIEW**

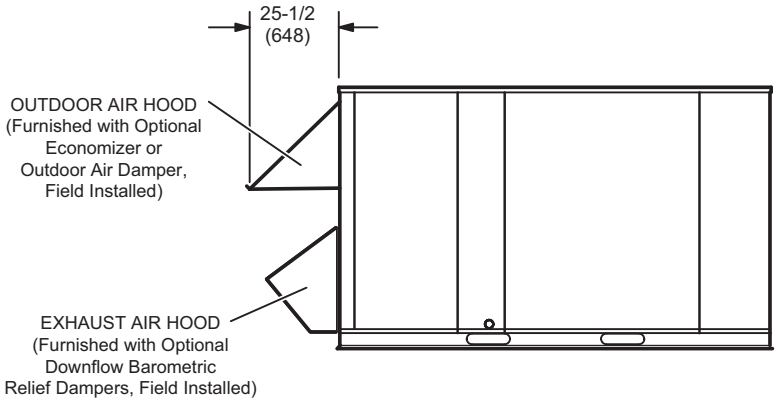



**END VIEW**

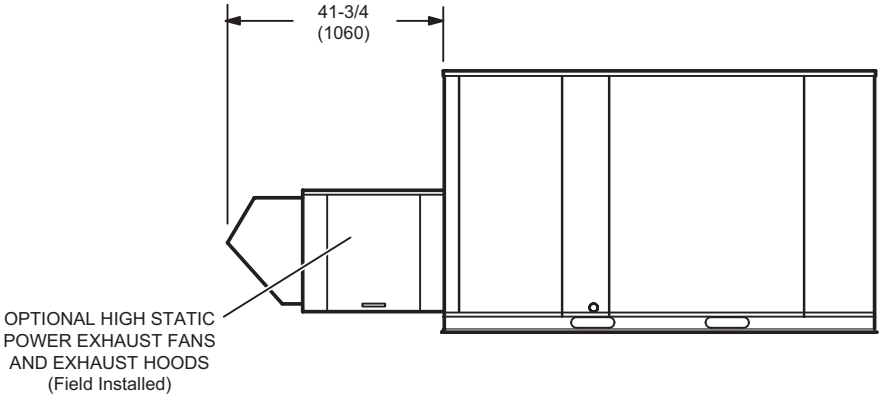



**SIDE VIEW**

## OUTDOOR AIR HOOD DETAIL

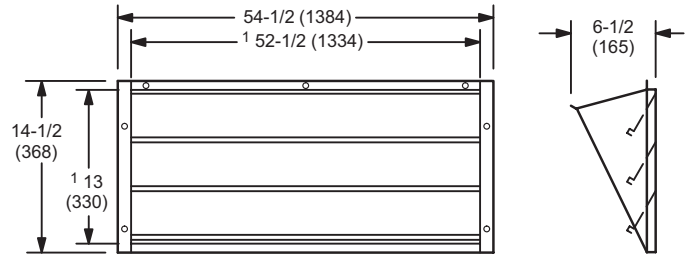



## OPTIONAL HIGH STATIC POWER EXHAUST FANS DETAIL




## OPTIONAL HORIZONTAL BAROMETRIC RELIEF DAMPERS WITH HOOD

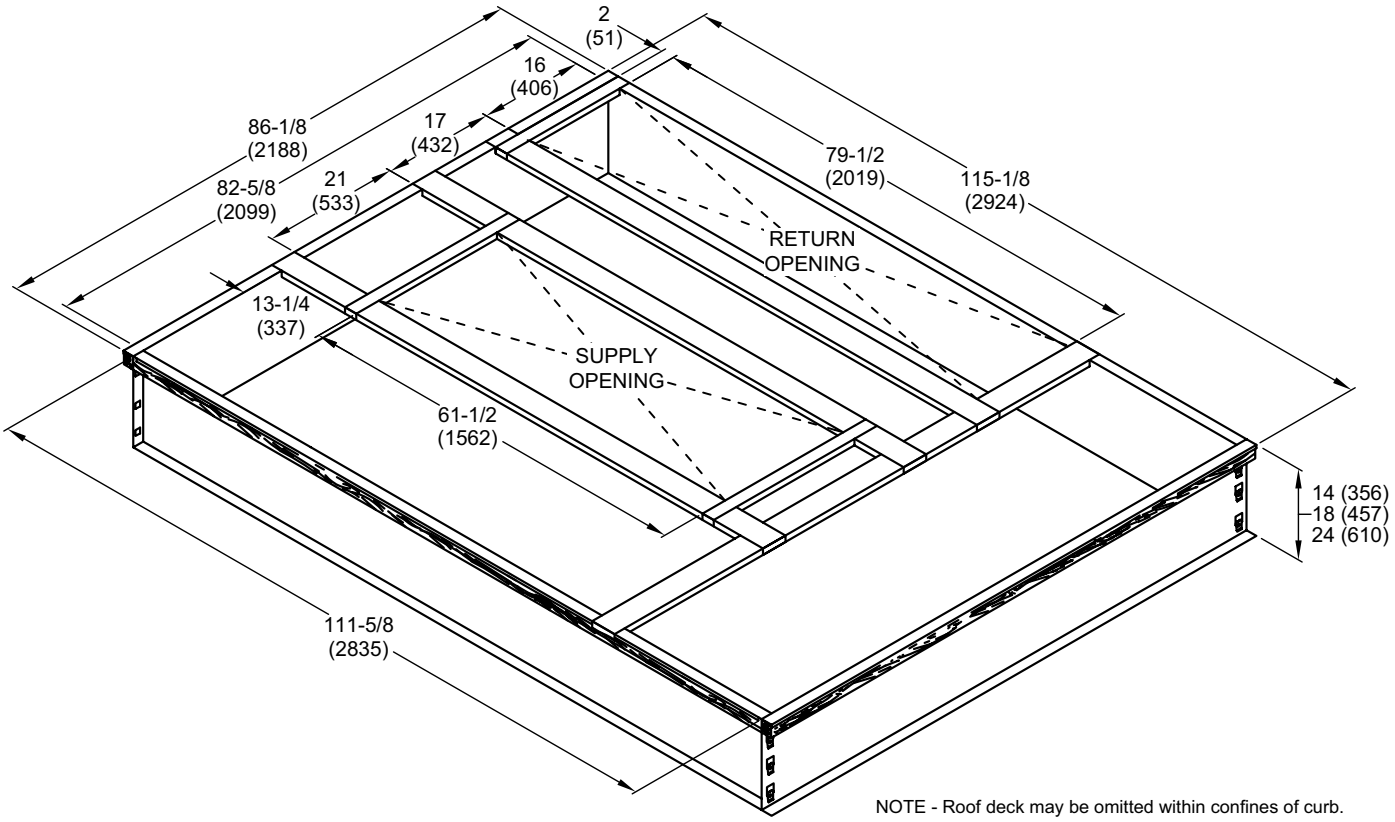
(Field installed in horizontal return air duct adjacent to unit)




NOTE - Two furnished per order no.

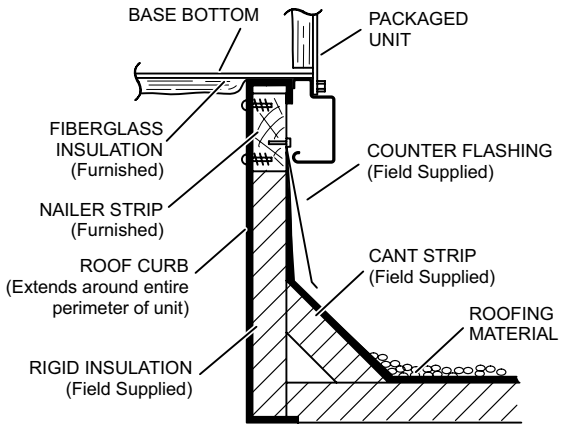
[1] NOTE - Opening size required in return air duct.

### HYBRID ROOF CURBS - DOUBLE DUCT OPENING

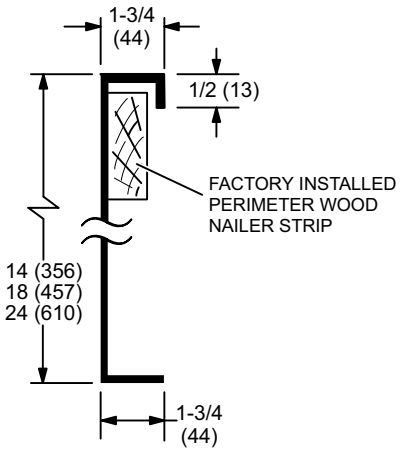



NOTE - Roof deck may be omitted within confines of curb.

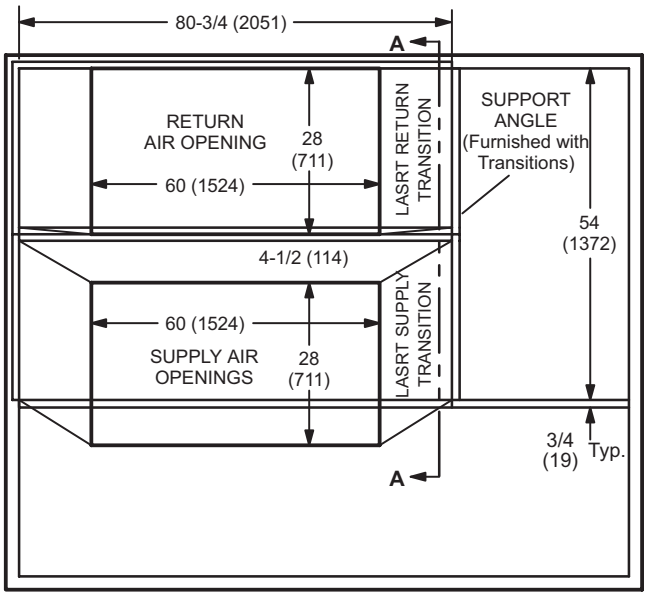
### TYPICAL FLASHING DETAIL FOR ROOF CURB




### DETAIL ROOF CURB

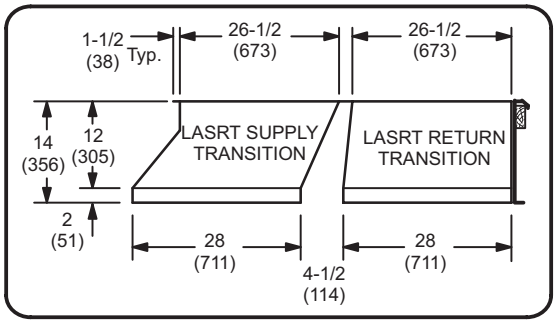


## ROOF CURBS WITH SUPPLY & RETURN AIR TRANSITIONS FOR CEILING DIFFUSERS



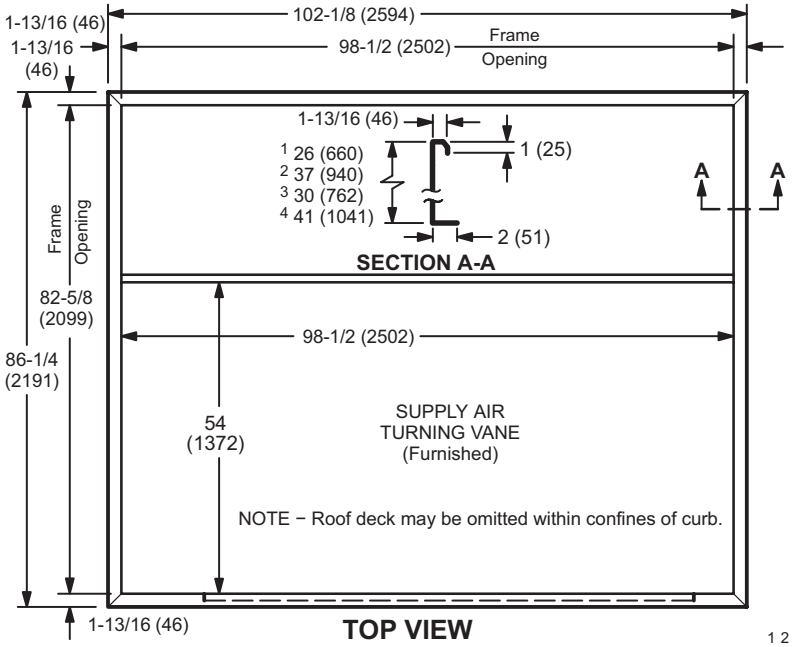

TOP VIEW

### TRANSITION DETAIL




SECTION B-B

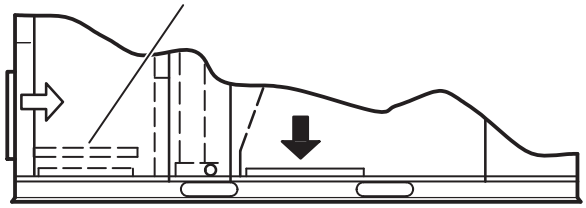
## HORIZONTAL ROOF CURBS − Requires Optional Horizontal Return Air Panel Kit



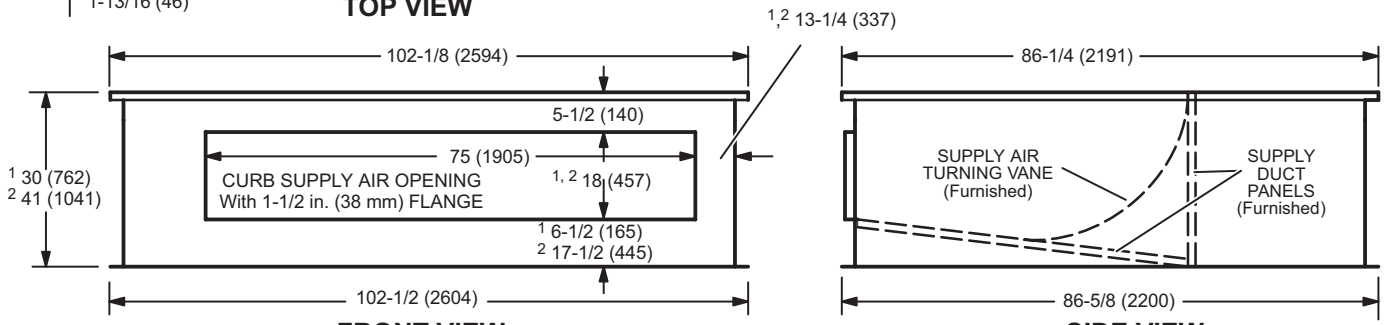

TOP VIEW

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

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



SIDE VIEW
(PACKAGED UNIT)

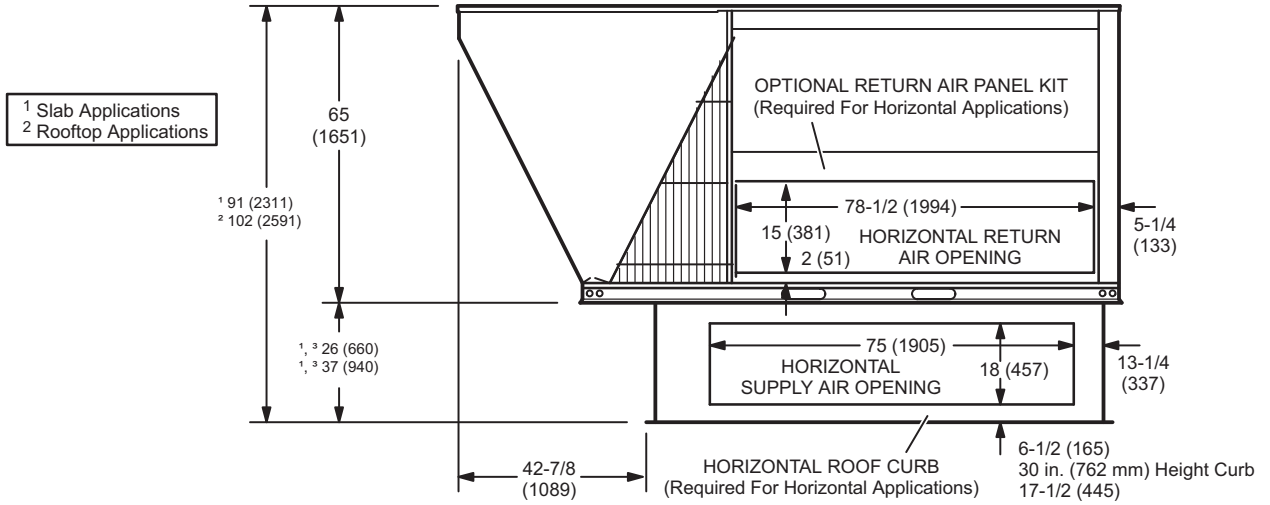



FRONT VIEW

SIDE VIEW

1 Slab Applications 2 Rooftop Applications

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

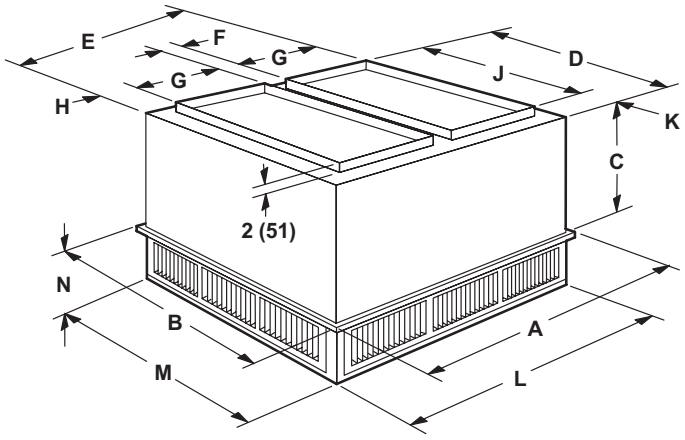



3 NOTE − Top of Curb extends 4 inch (102 mm) inside bottom of unit base. See Typical Flashing Detail.

SIDE VIEW
(Horizontal Openings)

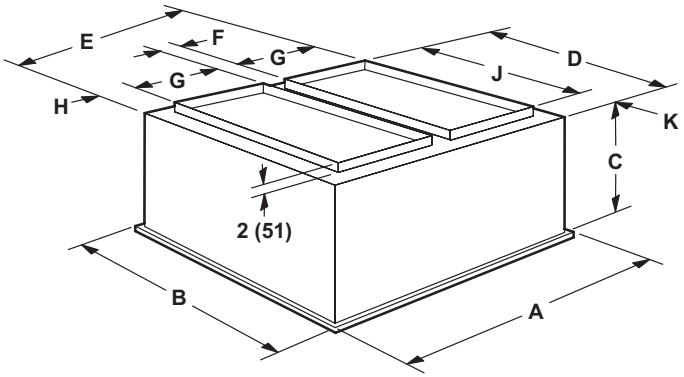
## COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

### STEP-DOWN CEILING DIFFUSER




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

### FLUSH CEILING DIFFUSER




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

## REVISIONS

| Sections | Description of Change |
|---|---|
| Electrical/Electric Heat Data | Updated. |
| Options / Accessories | Added Burglar Bars. |



**Visit us at www.Lennox.com**
**For the latest technical information, www.LennoxCommercial.com**
**Contact us at 1-800-4-LENNOX**