

ASHRAE 90.1  
COMPLIANT

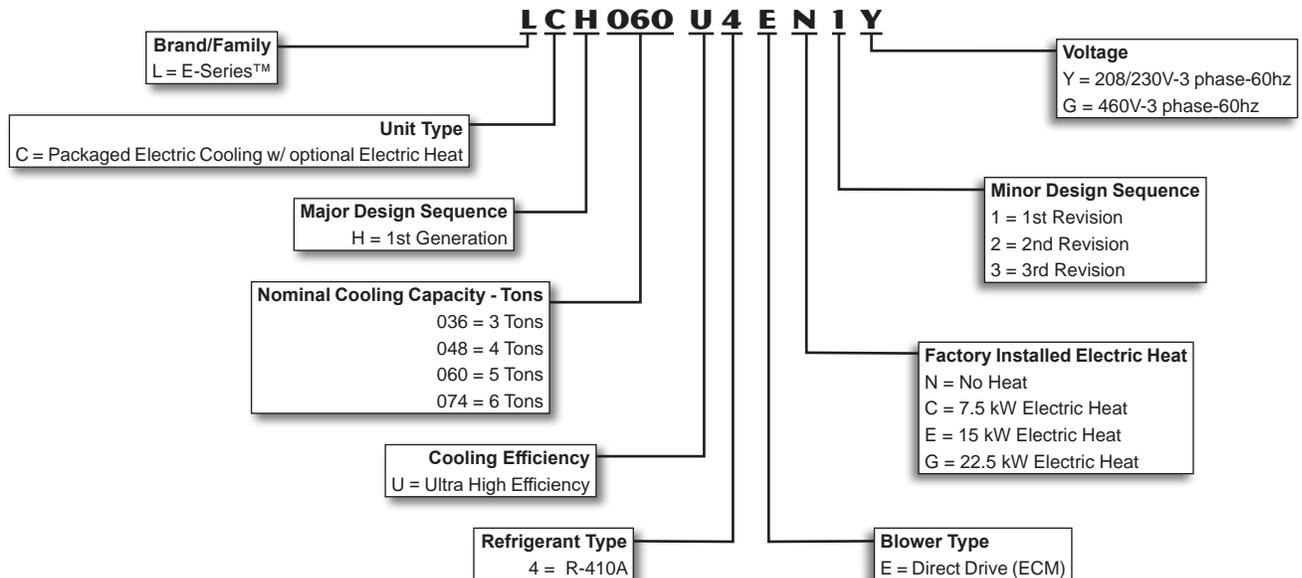
ENERGY STAR

3 to 6 Tons

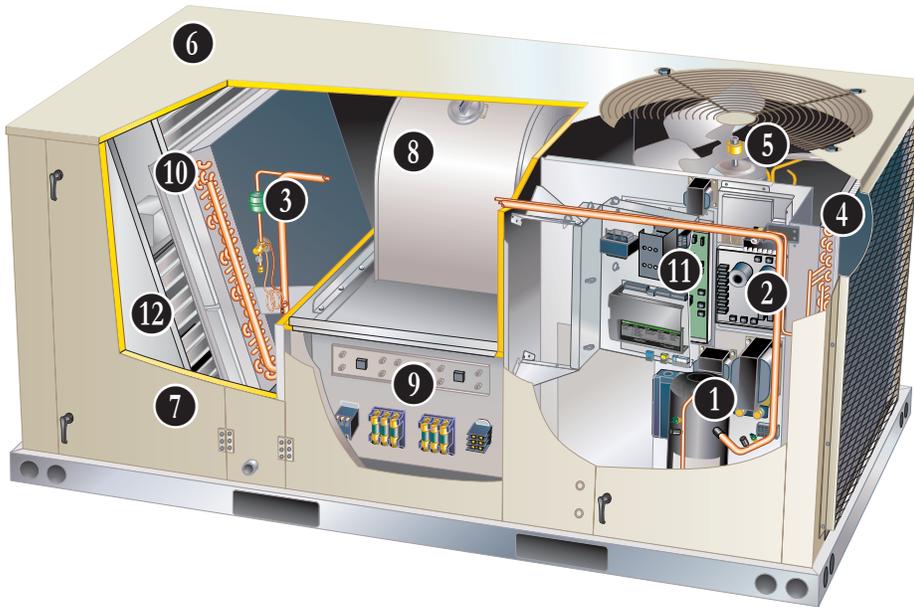
Net Cooling Capacity - 34,500 to 70,000 Btuh

Optional Electric Heat - 7.5 to 22.5 kW

## MODEL NUMBER IDENTIFICATION



## FEATURES AND BENEFITS



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

- **ECM Blower And Condenser Fan Motors** - Direct drive units feature ECM blower and condenser fan motors to allow energy efficient Single Zone VAV Supply Fan operation during all operating conditions. Blower setpoints can be easily set in the field through the Intelli-Guide™ unit controller reducing setup time.
- **Ultra-High Efficiency Cooling System With Variable Capacity Compressor and DC Inverter Control** - An integrated system that operates together to reduce overall energy usage when compared to conventional rooftop units.
- **Hinged Access Panels** - Provide quick access to components and protect panels and roof from damage during servicing.
- **Isolated Compressor Compartment** - Allows performance check during normal compressor operation without disrupting airflow.
- **Corrosion-Resistant Removable, Reversible Drain Pan** - Provides application flexibility, durability and improved serviceability.
- **Thermostatic Expansion Valves** - Provide peak cooling performance across the entire application range.
- **MERV 13 Filters** - Available as factory or field option, provide an enhanced level of indoor air quality, and can help the building qualify for additional LEED credits.
- **Foil-Faced Insulation** - Insulation on all internal surfaces that have contact with airflow helps minimize airborne fibers and improve IAQ.
- **Common Components** - Many maintenance items are standard throughout the entire product line, reducing the need to carry different parts to the job or maintain in inventory.

### Intelli-Guide™ Control System

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



### WireRight™ System

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

## FEATURES AND BENEFITS

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### APPROVALS

AHRI Certified to AHRI Standard 210/240 (3 thru 5 ton models) and AHRI Standard 340/360 (6 ton models).

ETL listed.

Efficiency rating certified by CSA.

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

All models are ASHRAE 90.1 compliant.

ISO 9001 Registered

Manufacturing Quality System.

### WARRANTY

Limited five years on compressors.

Limited three years on Intelli-Guide™ unit controller.

Limited five years Optional High Performance Economizers.

Limited one year all other covered components.

### COOLING SYSTEM

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

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

### R-410A Refrigerant

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

## 1 Variable Capacity Scroll Compressor

Operates on a variable frequency determined by the DC Inverter Control to vary capacity based on the cooling load required.

Features high efficiency with uniform suction flow, constant discharge flow, high volumetric efficiency and quiet operation.

Consists of two involute spiral scrolls matched together to generate a series of crescent shaped gas pockets between them.

During compression, one scroll remains stationary while the other scroll orbits around it.

Gas is drawn into the outer pocket, the pocket is sealed as the scroll rotates.

As the spiral movement continues, gas pockets are pushed to the center of the scrolls. Volume between the pockets is simultaneously reduced. When the pocket reaches the center, gas is now at high pressure and is forced out of a port located in the center of the fixed scrolls.

During compression, several pockets are compressed simultaneously resulting in a smooth continuous compression cycle. Continuous flank contact, maintained by centrifugal force, minimizes gas leakage and maximizes efficiency.

Compressor is tolerant to the effects of slugging and contaminants. If this occurs, scrolls separate, allowing liquid or contaminants to be worked toward the center and discharged.

### Top Cap Thermal Sensor Switch

Located on top of the compressor casing.

Discontinues compressor operation in case of abnormal operating conditions.

### Crankcase Heater

Crankcase heater prevents migration of liquid refrigerant into compressor and ensures proper compressor lubrication.

## FEATURES AND BENEFITS

### COOLING SYSTEM

(continued)

#### 2 DC Inverter Control

Converts AC line voltage into filtered variable DC voltage.

Provides continuous compressor operation, while adjusting the capacity according to indoor temperature.

Adjusts compressor output in increments as small as 1%.

The accurate sensing of cooling load prevents frequent changes in capacity and ensures efficient, economical operation.

Power Factor Correction (PFC) circuit monitors the DC bus for high, low and abnormal voltage conditions to protect the compressor.

Two LEDs (red and green) indicate inverter operating status and aid in troubleshooting.

Noise filter reduces unwanted electromagnetic interference (EMI).

The inverter reactor adds inductance to the line between the inverter and the compressor to limit current rise and protect the compressor.

#### 3 Filter/Drier

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

#### High Pressure Switch

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

#### Low Pressure Switch

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

#### Freezestat

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

#### 4 Condenser Coil

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

#### Evaporator Coil

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

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

#### Condensate Drain Pan

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

Side or bottom drain connections.

Reversible to allow connection at back of unit.

#### 5 Variable-Speed ECM Outdoor Coil Fan Motors

Fan speed is directly controlled by the Intelli-Guide™ unit controller.

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

#### Outdoor Coil Fans

PVC coated fan guard furnished.

### Required Selections

#### Cooling Capacity

Specify nominal cooling capacity of the unit

### Options/Accessories

#### Factory Installed

#### Service Valves

Fully serviceable brass valves installed in discharge & liquid lines.

#### Factory or Field Installed

#### Condensate Drain Trap

Available in copper or PVC.

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

#### Drain Pan Overflow Switch

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

### CABINET

#### 6 Construction

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

Base rails have rigging holes.

Three sides of the base rail have forklift slots.

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

#### Airflow Choice

Units are shipped in downflow (vertical) configuration, can be field converted to horizontal airflow configuration without any optional kits.

#### Duct Flanges

Provided for horizontal duct attachment.

#### Power Entry

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

#### Exterior Panels

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

#### Insulation

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

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

#### 7 Access Panels

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

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

*NOTE - Optional Economizers, Power Exhaust, Outdoor Air Dampers and Barometric Relief Dampers for all models include a filler panel for proper cabinet fit.*

## FEATURES AND BENEFITS

### CABINET (continued)

#### Required Selections

##### **Airflow Configuration**

Specify horizontal or downflow.

#### Options/Accessories

##### **Factory Installed**

##### **Corrosion Protection**

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

Indoor Corrosion Protection:

- Coated coil
- Painted blower housing
- Painted base

Outdoor Corrosion Protection:

- Coated coil
- Painted base

##### **Field Installed**

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

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

### BLOWER

##### **Direct Drive ECM Motor**

High-efficiency, variable-speed ECM (electronically commutated) motor.

Maintains the ability to ramp the blower up or down to meet comfort needs.

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

##### **Airflow Management**

Allows the installer to directly enter the design-specified supply air (blower) parameters without the need to manually take measurements and adjust settings. Also monitors supply air volume as well as customizable diagnostics.

##### **8 Supply Air Blower**

Forward curved blades, blower wheel is statically and dynamically balanced.

##### **Ordering Information**

Specify motor output when base unit is ordered.

### ELECTRICAL

##### **WireRight™ System**

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

##### **Electrical Plugs**

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

#### Required Selections

##### **Voltage Choice**

Specify when ordering base unit.

#### Options/Accessories

##### **Factory Installed**

##### **Circuit Breakers**

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

## FEATURES AND BENEFITS

### ELECTRICAL (continued)

#### **SCR (Silicon Controlled Rectifier) Electric Heat Control**

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

Almost instantaneous operation with no moving parts.

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

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

Available for all voltages and electric heat sizes.

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

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

#### **Short-Circuit Current Rating (SCCR)**

Higher short circuit protection up to 100kA.

### Factory or Field Installed

#### **Disconnect Switch**

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

#### **9 Electric Heat**

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

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

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

### Field Installed

#### **GFI Weatherproof Cover**

Single-gang cover.

Heavy-duty UV-resistant polycarbonate case construction.

Hinged base cover with gasket.

### INDOOR AIR QUALITY

#### **10 Air Filters**

Disposable 2 inch filters furnished as standard.

### Options/Accessories

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

#### **High Efficiency Air Filters**

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

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

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

### Field Installed

#### **UVC Germicidal Lamps**



Helps eliminate mold and bacterial growth on the evaporator and drain pans. Improves indoor air quality and maintains efficiency of system by reducing fouling of evaporator coil.

## INTELLI-GUIDE™ CONTROL SYSTEM

### 11 INTELLI-GUIDE UNIT CONTROLLER



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

#### **Features:**

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

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

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

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

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

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

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

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



#### **Unit Controller Software**

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

#### **Time Clock with Run-time Information**

#### **Built-In Functions Include:**

**Adjustable Blower On/Off Delay**

**Built-in Control Parameter Defaults**

**Compressor Time-Off Delay**

**DDC Compatible**

**Dirty Filter Switch Input**

**Discharge Air Temperature Control**

**Display/Sensor Readout**

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

**Fresh Air Tempering**

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

**Exhaust Fan Control Modes** - Fresh air damper position.

**Permanent Diagnostic Code Storage**

**Field Adjustable Control Parameters** - Over 200 different control settings.

**Indoor Air Quality Input** - Demand Control Ventilation ready

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

**Gas Valve Time Delay Between First and Second Stage**

**Minimum Compressor Run Time**

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

**Night Setback Mode**

**Return Air Temperature Limit Control**

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

**Service Relay Output**

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

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

**“Strike Three” Protection**

**Gas Reheat Control** - Simultaneous heating and cooling operation for controlling humidity for process air applications such as supermarkets.

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

**On Demand Dehumidification** - Monitors and controls condenser hot gas reheat operation with dehumidification option.

**Thermostat Bounce Delay**

**Warm Up Mode Delay**

**LED Indicators**

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

**Room Sensor Operation** - Controls temperature.

#### **Options/Accessories**

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

##### **Dirty Filter Switch**

Senses static pressure increase indicating dirty filter condition.

#### **Control Options**

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

##### **Fresh Air Tempering**

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

##### **Smoke Detector**

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

##### **Interoperability via BACnet® or LonTalk® Protocols**

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

## OPTIONS / ACCESSORIES

### INTELLI-GUIDE UNIT CONTROLLER (continued)

#### Control Options (continued)

##### Commercial Control Systems

###### **Aftermarket DDC**

Novar® ETM modules and options.

###### **Thermostats**

Control system and thermostat options. Aftermarket unit controller options.

##### Field Installed

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

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

###### **Humidity Sensor Kit**

Humidity sensor required when Increased Dehumidification is enabled.

### **12** ECONOMIZER

Economizer operation is set and controlled by the Intelli-Guide™ Unit Controller.

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

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

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

##### Factory or Field Installed

###### **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 compliant.

Combination Outdoor Air Hood is furnished.

Factory installed Economizer can be ordered with three exhaust options:

- Barometric Relief Dampers
- Power Exhaust Fan  
*NOTE - See Power Exhaust Fan section for additional requirements.*
- No Exhaust.

Field installed Economizer includes Barometric Relief Dampers with Combination Hood.

Barometric Relief Dampers allow relief of excess air, dampers prevent blow back and outdoor air infiltration during off cycle, bird screen furnished.

*NOTE - Barometric Relief Dampers are required when Economizer is factory installed with factory installed Power Exhaust Fan option. See Power Exhaust Fan section and Options/Accessories table.*

Demand Control Ventilation (DCV) ready using optional CO<sub>2</sub> sensors.

Horizontal Economizer Conversion kit is available for field installation.

Horizontal Barometric Dampers are required for horizontal Economizer applications and must be ordered separately.

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

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

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

Refer to Installation Instructions for complete setup information.

## OPTIONS / ACCESSORIES

### ECONOMIZER (continued)

#### **Differential Sensible Control**

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

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

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

#### **Global Control**

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

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

### Factory or Field Installed

#### **Single Enthalpy Temperature Control (Not for Title 24)**

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

#### **Differential Enthalpy Control (Not for Title 24)**

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

### Field Installed

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

Maintains constant outdoor air volume levels on the supply air fan and varying unit airflows. Using information from a velocity sensor located in the rooftop unit outdoor air section, the Intelli-Guide™ 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<sub>2</sub> Sensor) or Building Pressure Control.*

#### **Building Pressure Control**

Maintains constant building pressure level. Using information from a differential pressure between the outdoor air and the building air, the Intelli-Guide™ unit controller changes the economizer position to help maintain a constant building pressure.

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

#### **Horizontal Economizer Conversion Kit**

Insulated panel covers the bottom return air opening on the unit base to convert downflow economizer to horizontal air flow.

### EXHAUST

### Factory or Field Installed

#### **Power Exhaust Fan**

Installs internal to unit for downflow applications with economizer option. Provides exhaust air pressure relief. Interlocked to run when supply air blower is operating, fan runs when outdoor air dampers are 50% open (adjustable), motor is overload protected.

Fan is 16 in. diameter with 4 fan blades and a 1/3 hp motor.

*NOTE - If Power Exhaust is field installed with a factory installed Economizer, the Economizer must be ordered with No Exhaust option. Barometric Relief Dampers must also be ordered separately for field installation.*

*NOTE - If Power Exhaust is factory installed with a factory installed Economizer, Barometric Relief Dampers must also be ordered separately for field installation.*

### OUTDOOR AIR

### Factory or Field Installed

#### **Outdoor Air Dampers - Downflow or Horizontal**

Single blade damper, 0 to 25% (fixed) outdoor air adjustable, installs in unit.

Automatic model features fully modulating spring return damper motor with plug-in connection. Manual model features a slide damper. Maximum mixed air temperature in cooling mode: 100°F.

Outdoor Air Hood is furnished.

## OPTIONS / ACCESSORIES

### ROOF CURBS

#### **Field Installed**

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

#### **Hybrid Roof Curbs, Downflow**

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

Curb can also be fastened together with furnished hardware.

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

See Options/Accessories table.

#### **Adjustable Pitch Curb**

Fully adjustable pitch curb provides a level platform for rooftop units allowing flexible installations on roofs with uneven or sloped angles.

Maximum slope is 3/4 in. per foot in any direction.

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

Hardware is furnished to connect upper curb with lower curb.

Available in 14 inch height.

#### **Adaptor Curbs (not shown)**

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

### CEILING DIFFUSERS

#### **Field Installed**

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

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

##### **Transitions (Supply and Return)**

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

## OPTIONS / ACCESSORIES

Item	Model Number	Catalog Number	Unit			
			036	048	060	074
<b>COOLING SYSTEM</b>						
Condensate Drain Trap	PVC - C1TRAP20AD2	<b>76W26</b>	OX	OX	OX	OX
	Copper - C1TRAP10AD2	<b>76W27</b>	OX	OX	OX	OX
Drain Pan Overflow Switch	E1SNSR71AD1	<b>68W88</b>	OX	OX	OX	OX
Service Valves	Factory		O	O	O	O
<b>BLOWER - SUPPLY AIR</b>						
Motors	Direct Drive - 0.50 hp	Factory	O			
	Direct Drive - 0.75 hp	Factory		O		
	Direct Drive - 1 hp	Factory			O	O
<b>CABINET</b>						
Combination Coil/Hail Guards	C1GARD51AT1	<b>13T03</b>	X	X	X	X
Corrosion Protection (indoor coil / outdoor coil)	Factory		O	O	O	O
<b>CONTROLS</b>						
Commercial Controls	CPC Einstein Integration	Factory	O	O	O	O
	Intelli-Guide™ Control System - BACnet® Module - C0CTRL60AE1L	<b>59W51</b>	OX	OX	OX	OX
	Intelli-Guide™ Control System - LonTalk® Module - C0CTRL65FF1	<b>54W27</b>	OX	OX	OX	OX
	Novar® LSE	Factory	O	O	O	O
	L Connection® Building Automation System	---	X	X	X	X
Dirty Filter Switch	E1SNSR55AP1	<b>53W66</b>	OX	OX	OX	OX
General Purpose Control Kit	E1GPBK30C1	<b>13J78</b>	X	X	X	X
Fresh Air Tempering	C1SNSR75AD1	<b>58W63</b>	OX	OX	OX	OX
Smoke Detector - Supply or Return (Power board and one sensor)	C1SNSR44AP1	<b>53W78</b>	OX	OX	OX	OX
Smoke Detector - Supply and Return (Power board and two sensors)	C1SNSR43AP1	<b>53W79</b>	OX	OX	OX	OX
<b>ELECTRICAL</b>						
Voltage 60 hz	208/230V - 3 phase	Factory	O	O	O	O
	460V - 3 phase	Factory	O	O	O	O
HACR Circuit Breakers	Factory		O	O	O	O
<sup>1</sup> Short-Circuit Current Rating (SCCR) of 100kA (includes Phase/Voltage Detection)	Factory		O	O	O	O
Disconnect Switch (See Electrical / Electric Heat Tables for selection)	80 amp - T2DISC080NH1	<b>20W24</b>	OX	OX	OX	OX
	150 amp - T2DISC150NH1	<b>20W25</b>		OX	OX	OX
GFI Service Outlets	15 amp non-powered, field-wired LTAGFIK10/15	<b>74M70</b>	OX	OX	OX	OX
Weatherproof Cover for GFI	C1GFCI99FF1	<b>10C89</b>	X	X	X	X
<sup>1</sup> Disconnect Switch not available with higher SCCR option.						
<b>ELECTRIC HEAT</b>						
7.5 kW	208/230V-3ph - E1EH0075AN1Y	<b>46W31</b>	OX	OX	OX	OX
	460V-3ph - E1EH0075AN1G	<b>46W35</b>	OX	OX	OX	OX
15 kW	208/230V-3ph - E1EH0150AN1Y	<b>46W32</b>	OX	OX	OX	OX
	460V-3ph - E1EH0150AN1G	<b>46W36</b>	OX	OX	OX	OX
22.5 kW	208/230V-3ph - E1EH0225N1Y	<b>46W33</b>			OX	OX
	460V-3ph - E1EH0225N1G	<b>46W37</b>			OX	OX
SCR (Silicon Controlled Rectifier) Electric Heat Control	Factory		O	O	O	O
Thermostat (required)		<b>Y9682</b>	X	X	X	X
Duct Sensor (required)		<b>Y9683</b>	X	X	X	X

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

## OPTIONS / ACCESSORIES

Item	Model Number	Catalog Number	Unit			
			036	048	060	074
<b>ECONOMIZER</b>						
<b>High Performance Economizer With Outdoor Air Hood (Sensible Control)</b> (Approved for California Title 24 Building Standards / AMCA Class 1A Certified)						
High Performance Economizer - Includes Barometric Relief Dampers and Exhaust Hood	E1ECON17A-1	10U54	OX	OX	OX	OX
<b>Economizer Accessories</b>						
Horizontal Economizer Conversion Kit	T1HECK00AN1	17W45	X	X	X	X
<b>Economizer Controls</b>						
Differential Enthalpy (Not for Title 24)	Order 2 - C1SNSR64FF1	53W64	OX	OX	OX	OX
Sensible Control	Sensor is Furnished	Factory	O	O	O	O
Single Enthalpy (Not for Title 24)	C1SNSR64FF1	53W64	OX	OX	OX	OX
Global Control	Sensor Field Provided	Factory	O	O	O	O
Building Pressure Control	E1GPBK10C1	13J77	X	X	X	X
Outdoor Air CFM Control	E1GPBK20C1	13J76	X	X	X	X
<b>POWER EXHAUST FAN (DOWNFLOW ONLY)</b>						
Standard Static	208/230V-3ph - C1PWRE10A-1P	79W87	OX	OX	OX	OX
<i>NOTE - Factory or Field installed Power Exhaust Fan requires "Barometric Relief Dampers for Power Exhaust Kit" for field installation. See below.</i>						
	460V-3ph - C1PWRE10A-1G	79W88	OX	OX	OX	OX
<b>BAROMETRIC RELIEF</b>						
<sup>1</sup> Barometric Relief Dampers for Power Exhaust Kit	C1DAMP50A-3-	19D42	X	X	X	X
<sup>2</sup> Horizontal Barometric Relief Dampers With Exhaust Hood	LAGEDH03/15-2	19F01	X	X	X	X
<b>OUTDOOR AIR</b>						
<b>Outdoor Air Dampers With Outdoor Air Hood</b>						
Motorized	C1DAMP21A-1	15D17	OX	OX	OX	OX
Manual	C1DAMP11A-2	15D18	OX	OX	OX	OX
<b>INDOOR AIR QUALITY</b>						
<b>Air Filters</b>						
High Efficiency Air Filters	MERV 8 (20 x 20 x 2 in.) - C1FLTR15D-1-	54W21	OX	OX	OX	OX
Order 4 per unit	MERV 13 (20 x 20 x 2 in.) - C1FLTR40D-1-	52W39	OX	OX	OX	OX
Replaceable Media Filter With Metal Mesh Frame (includes non-pleated filter media)	20 x 20 x 2 in. (Order 4) - K1FLTR30A-2	44N60	OX	OX	OX	OX
<b>Indoor Air Quality (CO<sub>2</sub>) Sensors</b>						
Sensor - Wall-mount, off-white plastic cover with LCD display	C0SNSR50AE1L	77N39	X	X	X	X
Sensor - Wall-mount, off-white plastic cover, no display	C0SNSR52AE1L	87N53	X	X	X	X
Sensor - Black plastic case with LCD display, rated for plenum mounting	C0SNSR51AE1L	87N52	X	X	X	X
Sensor - Wall-mount, black plastic case, no display, rated for plenum mounting	C0MISC19AE1	87N54	X	X	X	X
CO <sub>2</sub> Sensor Duct Mounting Kit - for downflow applications	C0MISC19AE1-	85L43	X	X	X	X
<b>UVC Germicidal Lamps</b>						
<sup>3</sup> UVC Light Kit (208/230V-1ph)	C1UVCL10AN1-	50W90	X	X	X	X

<sup>1</sup> Required when Economizer is factory installed with factory installed Power Exhaust Fan option.

<sup>2</sup> Required when Economizer is configured for horizontal airflow.

<sup>3</sup> Lamps operate on 110-230V single-phase power supply. Step-down transformer may be ordered separately for 460V units. Alternately, 110V power supply may be used to directly power the UVC ballast(s)

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

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

O = Configure To Order (Factory Installed)

X = Field Installed

## OPTIONS / ACCESSORIES

Item	Model Number	Catalog Number	Unit			
			036	048	060	074
<b>ROOF CURBS</b>						
<b>Hybrid Roof Curbs, Downflow</b>						
8 in. height	C1CURB70A-1	11F50	X	X	X	X
14 in. height	C1CURB71A-1	11F51	X	X	X	X
18 in. height	C1CURB72A-1	11F52	X	X	X	X
24 in. height	C1CURB73A-1	11F53	X	X	X	X
<b>Adjustable Pitched Curb</b>						
14 in. height	C1CURB55AT1	43W27	X	X	X	X
<b>CEILING DIFFUSERS</b>						
Step-Down - Order one	RTD11-95S	13K61	X	X	X	X
Flush - Order one	FD11-95S	13K56	X	X	X	X
Transitions (Supply and Return) - Order one	T1TRAN20N-1	17W54	X	X	X	X

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

## SPECIFICATIONS

General Data		Nominal Tonnage	3 Ton	4 Ton	5 Ton	6 Ton
		Model Number	LCH036U4E	LCH048U4E	LCH060U4E	LCH074U4E
		Efficiency Type	Ultra	Ultra	Ultra	Ultra
		Blower Type	Single Zone VAV Supply Fan Direct Drive			
Cooling Performance	Gross Cooling Capacity - Btuh		35,300	48,500	59,500	72,000
	<sup>1</sup> Net Cooling Capacity - Btuh		34,500	47,000	58,000	70,000
	AHRI Rated Air Flow - cfm		1200	1550	1800	2050
	Total Unit Power - kW		2.3	3.4	4.5	5.8
	SEER (Btuh/Watt) - 208/230V-3ph		<sup>1</sup> 23.5	<sup>1</sup> 21.0	<sup>1</sup> 20.0	---
	SEER (Btuh/Watt) - 460V-3ph		<sup>1</sup> 22.5	<sup>1</sup> 20.2	<sup>1</sup> 19.5	---
	EER (Btuh/Watt) - 208/230V-3ph		<sup>1</sup> 15.0	<sup>1</sup> 14.0	<sup>1</sup> 13.0	<sup>2</sup> 12.0
	EER (Btuh/Watt) - 460V-3ph		<sup>1</sup> 14.5	<sup>1</sup> 13.7	<sup>1</sup> 12.5	<sup>2</sup> 12.0
	IEER (Btuh/Watt) - 208/230V-3ph		---	---	---	<sup>2</sup> 22.0
	IEER (Btuh/Watt) - 460V-3ph		---	---	---	<sup>2</sup> 22.0
Refrigerant Charge	Refrigerant Type		R-410A	R-410A	R-410A	R-410A
			17 lbs. 0 oz.	17 lbs. 0 oz.	16 lbs. 11 oz.	16 lbs. 11 oz.
Electric Heat Available - Page 23			7.5 and 15 kW	7.5 and 15 kW	7.5, 15 and 22.5 kW	7.5, 15 and 22.5 kW
Compressor Type (number)			Variable Capacity Scroll (1)			
Outdoor Coil	Net face area (total) - sq. ft.		19.3	19.3	19.3	19.3
	Tube diameter - in.		3/8	3/8	3/8	3/8
	Number of rows		2	2	2	2
	Fins per inch		20	20	20	20
Outdoor Coil Fan	Motor - (No.) horsepower		(1) 1/3 (ECM)	(1) 1/3 (ECM)	(1) 1/3 (ECM)	(1) 1/3 (ECM)
	Motor rpm		550 - 850	600 - 900	700 - 950	700 - 1050
	Total Motor Input - watts		50 - 200	80 - 236	120 - 272	120 - 360
	Diameter - (No.) in.		(1) 24	(1) 24	(1) 24	(1) 24
	Number of blades		3	3	3	3
	Total air volume - cfm		2500 - 3850	2750 - 4100	3200 - 4300	3200 - 4700
Indoor Coil	Net face area (total) - sq. ft.		9.72	9.72	9.72	9.72
	Tube diameter - in.		3/8	3/8	3/8	3/8
	Number of rows		3	3	4	4
	Fins per inch		14	14	14	14
	Drain connection (Number) and size - in.		1 in. NPT coupling			
	Expansion device type	Balance port TXV, removable head				
<sup>3</sup> Indoor Blower	Nominal motor HP		0.50 (ECM)	0.75 (ECM)	1 (ECM)	1 (ECM)
	Blower wheel nominal diameter x width - in.		(1) 10 x 10	(1) 10 x 10	(1) 11 x 10	(1) 11 x 10
Filters	Type of filter	Disposable				
	Number and size - in.		(4) 20 x 20 x 2			
Electrical characteristics		208/230V or 460V - 60 hz -3 phase				

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

<sup>1,2</sup> AHRI Certified to AHRI Standard <sup>1</sup> 210/240 or <sup>2</sup> 340/360: 95°F outdoor air temperature and 80°F db/67°F wb entering evaporator air; minimum external duct static pressure.

<sup>2</sup> 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.

## 3 TON - LCH036U4

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																	
		65°F						75°F						85°F					
		Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)			Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)			Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)		
					Dry Bulb						Dry Bulb						Dry Bulb		
cfm	kBtuh	kW	°F	75°F	80°F	85°F	kBtuh	kW	°F	75°F	80°F	85°F	kBtuh	kW	°F	75°F	80°F	85°F	
63°F	550	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	700	33.5	1.26	45.1	0.68	0.79	0.89	32.4	1.52	45.7	0.69	0.80	0.91	31.1	1.79	46.5	0.70	0.81	0.93
	850	35.5	1.22	47.9	0.71	0.83	0.95	34.3	1.48	48.4	0.72	0.85	0.97	32.8	1.76	49.3	0.73	0.86	0.99
	1000	37.1	1.19	50.0	0.74	0.88	1.00	35.7	1.46	50.9	0.75	0.89	1.00	34.2	1.74	51.7	0.77	0.91	1.00
	1200	38.7	1.16	52.9	0.78	0.94	1.00	37.2	1.44	53.6	0.80	0.96	1.00	35.7	1.71	54.4	0.81	0.98	1.00
	1400	40.0	1.14	55.2	0.82	0.99	1.00	38.5	1.41	55.9	0.84	1.00	1.00	37.1	1.69	56.6	0.86	1.00	1.00
67°F	550	32.7	1.27	45.5	0.54	0.63	0.71	31.7	1.53	46.4	0.54	0.63	0.72	30.5	1.80	47.3	0.54	0.64	0.73
	700	35.5	1.22	49.3	0.55	0.65	0.76	34.3	1.49	49.9	0.56	0.66	0.77	33.0	1.76	50.8	0.56	0.67	0.78
	850	37.7	1.19	51.9	0.57	0.68	0.80	36.3	1.46	52.7	0.57	0.69	0.81	34.7	1.73	53.3	0.58	0.71	0.83
	1000	39.2	1.15	54.0	0.59	0.72	0.84	37.7	1.43	54.6	0.59	0.73	0.86	36.2	1.71	55.2	0.60	0.74	0.88
	1200	40.8	1.13	56.2	0.61	0.76	0.90	39.2	1.40	56.7	0.62	0.77	0.92	37.7	1.68	57.1	0.63	0.79	0.94
	1400	42.2	1.09	57.7	0.64	0.80	0.96	40.5	1.37	58.1	0.65	0.82	0.98	38.7	1.66	58.7	0.66	0.84	1.00
71°F	550	34.7	1.24	50.0	0.43	0.51	0.60	33.5	1.50	50.9	0.43	0.52	0.60	32.3	1.77	51.7	0.43	0.52	0.61
	700	37.6	1.19	53.6	0.43	0.53	0.63	36.2	1.45	54.3	0.43	0.54	0.64	34.9	1.73	55.2	0.43	0.54	0.64
	850	39.8	1.14	56.2	0.44	0.55	0.66	38.3	1.42	56.8	0.44	0.56	0.67	36.7	1.69	57.6	0.44	0.56	0.68
	1000	41.4	1.11	58.3	0.44	0.57	0.69	39.9	1.39	58.7	0.45	0.58	0.70	38.2	1.67	59.2	0.45	0.59	0.72
	1200	43.2	1.08	60.0	0.46	0.60	0.74	41.5	1.35	60.6	0.46	0.61	0.75	39.8	1.64	61.1	0.46	0.62	0.77
	1400	44.5	1.05	61.6	0.47	0.63	0.78	42.8	1.33	62.0	0.47	0.64	0.80	40.9	1.62	62.4	0.48	0.65	0.82
Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																	
		95°F						105°F						115°F					
		Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)			Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)			Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)		
					Dry Bulb						Dry Bulb						Dry Bulb		
cfm	kBtuh	kW	°F	75°F	80°F	85°F	kBtuh	kW	°F	75°F	80°F	85°F	kBtuh	kW	°F	75°F	80°F	85°F	
63°F	550	---	---	---	---	---	---	---	---	---	---	---	---	25.1	2.75	45.9	0.69	0.81	0.92
	700	29.8	2.08	47.3	0.71	0.83	0.95	28.4	2.38	48.2	0.72	0.85	0.97	27.0	2.71	49.2	0.73	0.87	0.99
	850	31.4	2.05	50.1	0.74	0.88	1.00	29.9	2.36	51.1	0.76	0.90	1.00	28.3	2.70	52.2	0.78	0.93	1.00
	1000	32.6	2.03	52.6	0.78	0.94	1.00	31.1	2.35	53.5	0.80	0.96	1.00	29.4	2.67	54.5	0.82	0.99	1.00
	1200	34.0	2.00	55.3	0.83	1.00	1.00	32.6	2.31	56.0	0.86	1.00	1.00	31.0	2.65	57.0	0.88	1.00	1.00
	1400	35.6	1.98	57.4	0.88	1.00	1.00	34.1	2.29	58.1	0.91	1.00	1.00	32.4	2.62	59.0	0.94	1.00	1.00
67°F	550	29.3	2.08	48.1	0.55	0.65	0.74	28.0	2.39	49.2	0.55	0.65	0.76	26.7	2.71	50.2	0.56	0.66	0.77
	700	31.6	2.05	51.4	0.57	0.68	0.80	30.2	2.36	52.4	0.57	0.69	0.81	28.6	2.69	53.3	0.58	0.71	0.83
	850	33.3	2.02	53.9	0.59	0.72	0.85	31.7	2.34	54.7	0.60	0.73	0.87	30.0	2.67	55.5	0.61	0.75	0.89
	1000	34.6	2.00	55.8	0.61	0.76	0.90	32.8	2.31	56.4	0.62	0.78	0.93	31.2	2.65	57.1	0.63	0.80	0.95
	1200	35.8	1.97	57.7	0.64	0.81	0.97	34.1	2.28	58.2	0.66	0.83	0.99	32.3	2.62	59.0	0.67	0.86	1.00
	1400	36.9	1.95	59.4	0.67	0.86	1.00	35.0	2.27	60.1	0.69	0.89	1.00	33.1	2.60	60.9	0.71	0.91	1.00
71°F	550	31.0	2.06	52.5	0.43	0.53	0.62	29.6	2.36	53.6	0.43	0.53	0.63	28.2	2.69	54.5	0.43	0.54	0.64
	700	33.4	2.02	55.7	0.44	0.55	0.66	31.9	2.32	56.7	0.44	0.55	0.67	30.3	2.66	57.6	0.44	0.56	0.68
	850	35.1	1.99	58.3	0.44	0.57	0.69	33.5	2.30	58.8	0.45	0.58	0.71	31.8	2.63	59.6	0.45	0.59	0.73
	1000	36.5	1.97	59.9	0.45	0.60	0.73	34.8	2.27	60.5	0.46	0.61	0.75	33.0	2.61	61.1	0.47	0.62	0.77
	1200	38.0	1.94	61.5	0.47	0.63	0.79	36.1	2.26	62.2	0.47	0.64	0.81	34.2	2.59	62.7	0.48	0.66	0.83
	1400	38.9	1.91	63.1	0.47	0.66	0.84	37.0	2.23	63.4	0.49	0.68	0.86	35.0	2.57	64.0	0.49	0.70	0.89

# RATINGS

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

## 4 TON - LCH048U4

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																	
		65°F						75°F						85°F					
		Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)			Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)			Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)		
					Dry Bulb						Dry Bulb						Dry Bulb		
cfm	kBtuh	kW	°F	75°F	80°F	85°F	kBtuh	kW	°F	75°F	80°F	85°F	kBtuh	kW	°F	75°F	80°F	85°F	
63°F	850	---	---	---	---	---	---	---	---	---	---	---	---	40.9	2.45	45.0	0.68	0.79	0.89
	1000	46.5	1.84	45.7	0.69	0.80	0.90	44.5	2.13	46.8	0.69	0.81	0.92	42.8	2.45	47.5	0.70	0.82	0.94
	1150	48.4	1.83	47.8	0.71	0.83	0.94	46.4	2.12	48.6	0.72	0.84	0.96	44.5	2.44	49.3	0.73	0.86	0.98
	1300	50.0	1.82	49.5	0.73	0.86	0.98	47.8	2.12	50.3	0.74	0.88	1.00	45.9	2.43	51.2	0.75	0.89	1.00
	1600	52.5	1.81	52.8	0.77	0.92	1.00	50.1	2.10	53.6	0.79	0.94	1.00	48.0	2.43	54.3	0.81	0.97	1.00
	1900	54.4	1.81	55.3	0.82	0.98	1.00	52.0	2.10	56.0	0.84	1.00	1.00	49.9	2.42	56.8	0.86	1.00	1.00
67°F	850	46.9	1.84	47.5	0.54	0.64	0.73	45.0	2.12	48.3	0.55	0.65	0.74	43.3	2.44	49.3	0.55	0.65	0.75
	1000	49.3	1.83	50.0	0.55	0.66	0.76	47.3	2.11	50.8	0.56	0.67	0.77	45.4	2.43	51.6	0.56	0.68	0.79
	1150	51.3	1.82	51.9	0.57	0.68	0.79	49.1	2.11	52.7	0.57	0.69	0.81	47.1	2.43	53.3	0.58	0.70	0.83
	1300	53.0	1.81	53.6	0.58	0.70	0.82	50.7	2.11	54.1	0.59	0.72	0.84	48.5	2.43	54.9	0.59	0.73	0.86
	1600	55.4	1.81	56.1	0.60	0.75	0.89	52.9	2.10	56.6	0.61	0.77	0.91	50.7	2.42	57.2	0.62	0.78	0.93
	1900	57.2	1.80	57.9	0.63	0.80	0.95	54.6	2.09	58.4	0.64	0.82	0.97	52.2	2.42	58.9	0.66	0.83	1.00
71°F	850	49.5	1.82	52.0	0.43	0.52	0.61	47.5	2.11	52.7	0.43	0.53	0.62	45.7	2.44	53.6	0.43	0.53	0.63
	1000	52.0	1.82	54.5	0.43	0.53	0.63	49.9	2.11	55.1	0.44	0.54	0.64	48.0	2.43	55.7	0.44	0.55	0.65
	1150	54.1	1.81	56.2	0.44	0.55	0.65	51.8	2.10	56.9	0.44	0.55	0.67	49.7	2.43	57.6	0.44	0.56	0.68
	1300	55.9	1.81	57.7	0.44	0.56	0.68	53.4	2.10	58.4	0.44	0.57	0.69	51.2	2.42	59.0	0.45	0.58	0.70
	1600	58.5	1.80	60.0	0.45	0.59	0.73	55.8	2.09	60.6	0.46	0.60	0.74	53.5	2.42	61.1	0.46	0.61	0.76
	1900	60.6	1.80	61.8	0.46	0.62	0.77	57.7	2.09	62.2	0.47	0.63	0.80	55.1	2.41	62.6	0.48	0.65	0.81
Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																	
		95°F						105°F						115°F					
		Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)			Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)			Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)		
					Dry Bulb						Dry Bulb						Dry Bulb		
cfm	kBtuh	kW	°F	75°F	80°F	85°F	kBtuh	kW	°F	75°F	80°F	85°F	kBtuh	kW	°F	75°F	80°F	85°F	
63°F	850	39.2	2.80	45.84	0.69	0.80	0.91	37.5	3.20	46.78	0.70	0.81	0.93	35.5	3.62	47.90	0.71	0.83	0.95
	1000	41.2	2.80	48.08	0.71	0.84	0.96	39.3	3.19	48.83	0.73	0.86	0.98	37.1	3.62	50.00	0.74	0.88	1.00
	1150	42.7	2.79	49.97	0.74	0.88	1.00	40.7	3.18	51.05	0.75	0.90	1.00	38.4	3.61	52.28	0.77	0.92	1.00
	1300	43.9	2.78	52.07	0.77	0.91	1.00	41.8	3.18	53.01	0.78	0.94	1.00	39.4	3.61	54.00	0.81	0.97	1.00
	1600	46.0	2.78	55.07	0.82	0.99	1.00	43.8	3.17	56.00	0.84	1.00	1.00	41.6	3.60	56.97	0.87	1.00	1.00
	1900	48.0	2.78	57.54	0.88	1.00	1.00	45.9	3.17	58.38	0.90	1.00	1.00	43.6	3.61	59.25	0.93	1.00	1.00
67°F	850	41.7	2.80	49.87	0.56	0.66	0.77	39.8	3.17	50.95	0.56	0.67	0.78	37.7	3.62	51.80	0.57	0.69	0.80
	1000	43.6	2.79	52.28	0.57	0.69	0.80	41.7	3.18	52.97	0.58	0.70	0.82	39.2	3.60	53.99	0.59	0.72	0.84
	1150	45.2	2.79	54.16	0.58	0.71	0.84	43.1	3.18	54.78	0.59	0.73	0.86	40.6	3.60	55.59	0.60	0.75	0.89
	1300	46.5	2.78	55.49	0.60	0.74	0.88	44.3	3.17	56.13	0.61	0.76	0.90	41.6	3.61	56.89	0.63	0.78	0.93
	1600	48.4	2.78	57.59	0.64	0.80	0.96	46.0	3.17	58.26	0.65	0.82	0.98	43.4	3.60	58.99	0.66	0.85	1.00
	1900	49.9	2.78	59.57	0.67	0.85	1.00	47.4	3.17	60.29	0.68	0.88	1.00	44.5	3.60	61.13	0.70	0.91	1.00
71°F	850	44.0	2.80	54.28	0.43	0.54	0.64	42.1	3.18	55.24	0.43	0.54	0.65	39.8	3.61	56.15	0.44	0.55	0.66
	1000	46.0	2.78	56.57	0.44	0.55	0.66	43.9	3.17	57.37	0.44	0.56	0.67	41.5	3.61	58.23	0.44	0.57	0.69
	1150	47.6	2.78	58.28	0.44	0.57	0.69	45.5	3.18	58.87	0.45	0.58	0.70	42.9	3.61	59.74	0.45	0.59	0.72
	1300	49.1	2.78	59.48	0.45	0.59	0.72	46.7	3.17	60.15	0.45	0.60	0.74	44.1	3.60	60.84	0.46	0.61	0.76
	1600	51.1	2.77	61.57	0.47	0.62	0.78	48.7	3.17	62.06	0.47	0.64	0.80	45.8	3.60	62.77	0.48	0.65	0.82
	1900	52.6	2.77	63.17	0.48	0.66	0.83	50.0	3.17	63.59	0.48	0.68	0.86	47.0	3.60	64.12	0.49	0.70	0.89

# RATINGS

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

## 5 TON - LCH060U4

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																	
		65°F						75°F						85°F					
		Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)			Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)			Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)		
					Dry Bulb						Dry Bulb						Dry Bulb		
cfm	kBtuh	kW	°F	75°F	80°F	85°F	kBtuh	kW	°F	75°F	80°F	85°F	kBtuh	kW	°F	75°F	80°F	85°F	
63°F	950	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	1150	56.1	2.48	45.2	0.67	0.77	0.87	54.7	2.79	45.8	0.67	0.78	0.88	52.8	3.18	46.4	0.68	0.79	0.90
	1300	58.3	2.48	46.9	0.68	0.80	0.91	56.5	2.80	47.7	0.69	0.80	0.92	54.7	3.19	48.1	0.70	0.82	0.94
	1550	61.0	2.48	49.5	0.71	0.84	0.96	59.0	2.80	50.0	0.72	0.85	0.98	57.0	3.20	50.6	0.73	0.87	0.99
	1800	63.1	2.47	51.4	0.75	0.89	1.00	61.2	2.80	52.1	0.76	0.90	1.00	59.0	3.21	52.8	0.77	0.92	1.00
	2300	66.3	2.47	55.3	0.81	0.97	1.00	64.1	2.80	55.8	0.82	0.99	1.00	61.9	3.21	56.5	0.83	1.00	1.00
67°F	950	56.4	2.48	45.9	0.53	0.62	0.71	54.8	2.79	46.4	0.54	0.63	0.72	53.1	3.19	47.4	0.54	0.63	0.72
	1150	59.9	2.48	49.1	0.54	0.64	0.74	58.1	2.80	49.6	0.55	0.65	0.75	56.1	3.19	50.6	0.55	0.65	0.75
	1300	61.9	2.48	51.0	0.55	0.66	0.76	60.1	2.80	51.5	0.55	0.67	0.78	58.0	3.20	52.2	0.56	0.67	0.79
	1550	64.6	2.47	53.4	0.57	0.69	0.81	62.5	2.80	54.1	0.57	0.69	0.82	60.4	3.21	54.5	0.58	0.70	0.84
	1800	66.9	2.46	55.2	0.59	0.72	0.85	64.8	2.80	55.7	0.59	0.73	0.87	62.3	3.21	56.3	0.60	0.74	0.88
	2300	70.2	2.45	57.8	0.63	0.79	0.94	67.8	2.80	58.3	0.63	0.80	0.96	65.3	3.22	58.8	0.63	0.81	0.98
71°F	950	59.7	2.48	50.3	0.43	0.51	0.59	58.1	2.80	50.9	0.43	0.51	0.60	56.3	3.20	51.6	0.43	0.52	0.60
	1150	63.3	2.47	53.3	0.43	0.52	0.62	61.5	2.80	53.9	0.43	0.53	0.62	59.5	3.21	54.6	0.43	0.53	0.63
	1300	65.6	2.47	55.2	0.43	0.53	0.63	63.6	2.80	55.7	0.43	0.54	0.64	61.5	3.21	56.3	0.43	0.54	0.65
	1550	68.5	2.46	57.6	0.43	0.55	0.66	66.4	2.80	58.1	0.44	0.55	0.67	64.0	3.22	58.7	0.44	0.55	0.68
	1800	70.9	2.45	59.1	0.44	0.58	0.70	68.6	2.80	59.7	0.44	0.58	0.71	66.0	3.22	60.1	0.45	0.59	0.72
	2300	74.2	2.44	61.7	0.46	0.62	0.76	71.7	2.79	62.0	0.47	0.62	0.78	68.9	3.22	62.6	0.46	0.63	0.79
Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																	
		95°F						105°F						115°F					
		Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)			Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)			Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)		
					Dry Bulb						Dry Bulb						Dry Bulb		
cfm	kBtuh	kW	°F	75°F	80°F	85°F	kBtuh	kW	°F	75°F	80°F	85°F	kBtuh	kW	°F	75°F	80°F	85°F	
63°F	950	---	---	---	---	---	---	45.9	4.10	45.3	0.67	0.78	0.88	43.7	4.60	46.4	0.68	0.79	0.90
	1150	50.7	3.63	47.2	0.69	0.80	0.92	48.5	4.12	48.0	0.70	0.82	0.94	46.1	4.62	48.9	0.71	0.84	0.96
	1300	52.4	3.65	48.9	0.71	0.83	0.96	50.1	4.13	49.7	0.72	0.85	0.98	47.5	4.63	50.7	0.73	0.87	1.00
	1550	54.6	3.66	51.4	0.74	0.89	1.00	52.1	4.15	52.3	0.76	0.91	1.00	49.4	4.66	53.2	0.78	0.94	1.00
	1800	56.3	3.66	53.7	0.78	0.94	1.00	53.9	4.16	54.5	0.80	0.96	1.00	51.0	4.67	55.4	0.82	0.99	1.00
	2300	59.5	3.68	57.2	0.86	1.00	1.00	57.1	4.18	58.0	0.87	1.00	1.00	54.4	4.70	58.8	0.91	1.00	1.00
67°F	950	51.1	3.64	48.3	0.54	0.64	0.73	49.0	4.13	49.3	0.55	0.64	0.74	46.6	4.63	50.5	0.55	0.65	0.75
	1150	54.0	3.65	51.4	0.55	0.66	0.76	51.6	4.15	52.0	0.56	0.67	0.79	49.0	4.65	53.2	0.56	0.68	0.80
	1300	55.7	3.66	52.8	0.57	0.69	0.80	53.2	4.15	53.7	0.57	0.69	0.82	50.5	4.67	54.5	0.58	0.71	0.84
	1550	57.9	3.67	55.1	0.59	0.72	0.85	55.3	4.17	55.7	0.60	0.74	0.87	52.4	4.68	56.3	0.61	0.76	0.90
	1800	59.7	3.68	56.7	0.61	0.76	0.91	57.0	4.18	57.2	0.62	0.78	0.93	53.9	4.69	58.1	0.62	0.79	0.96
	2300	62.5	3.69	59.1	0.66	0.83	1.00	59.3	4.19	59.9	0.66	0.86	1.00	56.2	4.71	60.7	0.68	0.88	1.00
71°F	950	54.1	3.65	52.6	0.43	0.52	0.61	51.9	4.15	53.4	0.43	0.53	0.62	49.5	4.66	54.4	0.43	0.53	0.63
	1150	57.2	3.66	55.4	0.43	0.53	0.64	54.7	4.16	56.2	0.43	0.54	0.65	52.0	4.68	57.0	0.44	0.55	0.66
	1300	59.1	3.68	57.0	0.43	0.55	0.66	56.4	4.18	57.8	0.44	0.55	0.67	53.5	4.69	58.7	0.44	0.56	0.68
	1550	61.4	3.69	59.1	0.45	0.57	0.69	58.6	4.19	59.8	0.45	0.58	0.70	55.6	4.70	60.3	0.45	0.60	0.73
	1800	63.3	3.69	60.6	0.46	0.60	0.73	60.3	4.20	61.2	0.46	0.61	0.75	57.0	4.72	61.9	0.46	0.62	0.77
	2300	66.0	3.70	63.0	0.47	0.64	0.81	62.8	4.21	63.3	0.48	0.67	0.83	59.4	4.74	64.0	0.48	0.67	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.

## 6 TON - LCH074U4

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																	
		65°F						75°F						85°F					
		Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)			Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)			Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)		
					Dry Bulb						Dry Bulb						Dry Bulb		
cfm	kBtuh	kW	°F	75°F	80°F	85°F	kBtuh	kW	°F	75°F	80°F	85°F	kBtuh	kW	°F	75°F	80°F	85°F	
63°F	950	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	1200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	1500	70.9	3.24	45.3	0.68	0.80	0.90	68.6	3.66	46.0	0.69	0.80	0.92	66.6	4.17	46.4	0.70	0.82	0.93
	1750	73.7	3.25	47.8	0.70	0.83	0.95	71.5	3.67	48.0	0.72	0.85	0.97	68.8	4.19	48.7	0.73	0.86	0.99
	2050	76.3	3.25	49.9	0.74	0.88	1.00	74.0	3.68	50.7	0.74	0.89	1.00	71.3	4.21	51.3	0.76	0.91	1.00
	2300	78.3	3.25	51.7	0.77	0.92	1.00	75.8	3.69	52.4	0.78	0.93	1.00	72.9	4.22	53.2	0.79	0.95	1.00
67°F	950	65.1	3.22	41.3	0.53	0.61	0.69	63.4	3.63	42.3	0.53	0.61	0.69	61.4	4.13	43.1	0.53	0.62	0.70
	1200	70.4	3.24	45.8	0.54	0.63	0.72	68.5	3.66	46.5	0.54	0.63	0.73	66.3	4.17	47.3	0.54	0.64	0.74
	1500	75.2	3.25	49.5	0.55	0.66	0.76	72.9	3.68	50.2	0.56	0.66	0.77	70.3	4.20	50.9	0.56	0.67	0.78
	1750	78.1	3.25	51.9	0.56	0.68	0.80	75.7	3.69	52.4	0.57	0.69	0.81	72.9	4.22	52.9	0.58	0.70	0.83
	2050	80.9	3.25	53.9	0.58	0.72	0.84	78.2	3.70	54.5	0.58	0.73	0.86	75.3	4.23	54.9	0.60	0.74	0.87
	2300	82.8	3.25	55.3	0.60	0.74	0.88	80.1	3.70	55.6	0.61	0.76	0.90	77.2	4.24	56.2	0.61	0.77	0.92
71°F	950	69.1	3.23	45.9	0.43	0.51	0.58	67.3	3.65	46.8	0.43	0.51	0.58	65.1	4.17	47.6	0.43	0.51	0.59
	1200	74.8	3.25	50.2	0.43	0.52	0.60	72.6	3.68	50.9	0.43	0.52	0.61	70.2	4.20	51.7	0.43	0.52	0.62
	1500	79.6	3.25	54.0	0.43	0.53	0.63	77.2	3.70	54.4	0.43	0.54	0.64	74.5	4.23	55.2	0.43	0.54	0.65
	1750	82.7	3.25	56.1	0.44	0.55	0.65	80.2	3.70	56.7	0.44	0.55	0.66	77.3	4.24	57.1	0.44	0.56	0.68
	2050	85.5	3.25	58.1	0.44	0.57	0.69	82.9	3.71	58.7	0.44	0.57	0.70	79.9	4.26	59.1	0.45	0.58	0.71
	2300	87.7	3.25	59.3	0.45	0.59	0.72	85.0	3.71	59.7	0.45	0.60	0.73	81.6	4.27	60.4	0.45	0.60	0.74
Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																	
		95°F						105°F						115°F					
		Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)			Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)			Total Cooling Cap.	Comp. Motor Input	Dis-charge Air Temp.	Sensible To Total Ratio (S/T)		
					Dry Bulb						Dry Bulb						Dry Bulb		
cfm	kBtuh	kW	°F	75°F	80°F	85°F	kBtuh	kW	°F	75°F	80°F	85°F	kBtuh	kW	°F	75°F	80°F	85°F	
63°F	950	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	1200	---	---	---	---	---	57.2	5.34	45.1	0.68	0.79	0.90	54.5	5.96	46.1	0.69	0.81	0.92	
	1500	63.7	4.76	47.4	0.71	0.83	0.95	60.8	5.38	48.1	0.72	0.85	0.98	57.7	6.01	49.1	0.73	0.87	1.00
	1750	65.9	4.77	49.7	0.73	0.88	1.00	63.0	5.40	50.6	0.75	0.90	1.00	59.7	6.03	51.8	0.76	0.92	1.00
	2050	68.3	4.80	52.2	0.77	0.93	1.00	65.0	5.42	53.1	0.79	0.96	1.00	61.9	6.06	54.0	0.81	0.98	1.00
	2300	69.8	4.81	54.0	0.81	0.97	1.00	66.6	5.44	54.8	0.83	0.99	1.00	63.3	6.07	55.8	0.85	1.00	1.00
67°F	950	59.1	4.71	44.3	0.53	0.62	0.71	56.8	5.33	45.1	0.54	0.63	0.72	54.3	5.97	46.3	0.54	0.64	0.73
	1200	63.7	4.75	48.1	0.55	0.65	0.75	61.0	5.38	49.1	0.55	0.66	0.76	58.0	6.01	50.2	0.56	0.67	0.77
	1500	67.6	4.79	51.6	0.56	0.68	0.80	64.5	5.41	52.4	0.57	0.69	0.82	61.3	6.05	53.1	0.58	0.71	0.84
	1750	70.0	4.81	53.7	0.58	0.71	0.84	66.8	5.44	54.3	0.59	0.73	0.86	63.3	6.08	55.1	0.60	0.74	0.89
	2050	72.1	4.83	55.6	0.61	0.74	0.90	69.0	5.46	56.0	0.62	0.77	0.92	65.4	6.11	56.7	0.63	0.79	0.95
	2300	73.8	4.84	56.7	0.62	0.79	0.94	70.5	5.47	57.1	0.64	0.81	0.97	66.6	6.12	57.9	0.65	0.83	0.99
71°F	950	62.8	4.74	48.8	0.43	0.51	0.59	60.2	5.36	49.9	0.43	0.51	0.60	57.7	6.01	50.8	0.43	0.52	0.61
	1200	67.5	4.79	52.6	0.43	0.53	0.62	64.7	5.42	53.5	0.43	0.53	0.63	61.6	6.06	54.5	0.43	0.54	0.64
	1500	71.6	4.82	56.0	0.43	0.55	0.65	68.4	5.45	56.6	0.44	0.55	0.67	65.1	6.10	57.5	0.44	0.56	0.68
	1750	74.2	4.84	57.8	0.44	0.57	0.69	70.7	5.48	58.6	0.45	0.57	0.70	67.2	6.12	59.1	0.45	0.59	0.72
	2050	76.6	4.86	59.7	0.45	0.59	0.72	73.0	5.50	60.2	0.46	0.60	0.74	69.3	6.15	60.7	0.46	0.62	0.77
	2300	78.2	4.88	60.7	0.46	0.62	0.76	74.6	5.51	61.2	0.47	0.63	0.78	70.4	6.16	61.9	0.47	0.64	0.81

## BLOWER DATA - DIRECT DRIVE - 3 TON

### 036 DIRECT DRIVE BLOWER - BASE UNIT

#### BLOWER TABLE INCLUDES RESISTANCE FOR BASE UNIT ONLY WITH DRY INDOOR COIL AND AIR FILTERS IN PLACE.

FOR ALL UNITS ADD:

- 1 - Any factory installed options air resistance (heat section, economizer, etc.).
- 2 - Any field installed accessories air resistance (duct resistance, diffuser, etc.).

See Page 22 for blower motors and drives and wet coil and options/accessory air resistance data.

#### DOWNFLOW

External Static Press. in. w.g.	Percentage of Total Motor Torque																													
	10%			20%			30%			40%			50%			60%			70%			80%			90%			100%		
	Cfm	RPM	Watts	Cfm	RPM	Watts	Cfm	RPM	Watts	Cfm	RPM	Watts	Cfm	RPM	Watts	Cfm	RPM	Watts	Cfm	RPM	Watts	Cfm	RPM	Watts	Cfm	RPM	Watts	Cfm	RPM	Watts
0.1	459	29	380	698	47	414	903	76	475	1069	110	539	1224	153	598	1374	195	632	1500	248	677	1617	312	723	1729	375	763	1821	447	803
0.2	357	32	464	596	55	520	828	86	563	1023	120	597	1180	165	634	1331	210	685	1461	264	727	1590	325	757	1704	387	796	1796	460	835
0.3	255	36	554	521	61	596	772	94	607	977	130	654	1137	177	706	1302	220	720	1435	274	776	1550	344	808	1666	406	843	1772	473	866
0.4	166	39	637	445	67	669	716	102	694	916	143	728	1108	185	740	1258	235	772	1397	289	808	1523	356	841	1641	417	874	1735	492	911
0.5	...	...	...	369	72	739	661	111	759	869	153	782	1050	200	807	1214	249	822	1358	304	855	1483	372	889	1603	434	919	1710	504	940
0.6	...	...	...	...	...	...	...	...	...	823	162	834	1006	212	856	1171	262	872	1319	318	900	1456	383	920	1565	450	962	1674	521	983
0.7	...	...	...	...	...	...	...	...	...	762	175	901	963	223	903	1127	275	920	1280	331	944	1416	398	966	1540	460	991	1637	536	1024
0.8	...	...	...	...	...	...	...	...	...	716	184	950	905	237	964	1083	287	968	1241	344	986	1376	412	1011	1502	474	1032	1612	546	1050
0.9	...	...	...	...	...	...	...	...	...	670	193	997	862	247	1007	1040	299	1014	1202	356	1027	1336	425	1054	1464	488	1072	1576	560	1088
1.0	...	...	...	...	...	...	...	...	...	623	202	1043	818	257	1049	981	314	1074	1151	371	1079	1296	437	1095	1426	501	1110	1539	573	1125
1.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	938	325	1118	1112	1112	382	1117	1256	447	1135	1388	513	1147	1490	589	1171
1.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1215	457	1174	1344	526	1188	1453	600	1204

#### HORIZONTAL

External Static Press. in. w.g.	Percentage of Total Motor Torque																													
	10%			20%			30%			40%			50%			60%			70%			80%			90%			100%		
	Cfm	RPM	Watts	Cfm	RPM	Watts	Cfm	RPM	Watts	Cfm	RPM	Watts	Cfm	RPM	Watts	Cfm	RPM	Watts	Cfm	RPM	Watts	Cfm	RPM	Watts	Cfm	RPM	Watts	Cfm	RPM	Watts
0.1	432	29	395	674	49	443	882	79	511	1053	115	567	1211	156	617	1334	205	676	1463	260	725	1583	322	769	1692	391	813	1791	466	852
0.2	334	32	479	581	56	537	822	87	582	1021	122	609	1178	165	659	1308	215	712	1439	270	758	1560	333	801	1670	402	843	1771	477	877
0.3	217	36	578	517	61	603	763	96	651	953	137	696	1128	179	720	1265	230	768	1400	286	809	1522	350	850	1634	420	888	1737	494	920
0.4	149	39	636	436	68	684	703	105	719	918	145	738	1079	193	781	1237	239	805	1374	297	842	1498	361	881	1611	431	917	1714	505	947
0.5	...	...	...	372	73	749	644	114	786	867	155	799	1046	201	820	1194	254	858	1335	312	891	1460	377	927	1576	447	960	1680	521	987
0.6	...	...	...	...	...	...	...	...	...	816	166	858	997	214	879	1152	267	909	1296	326	938	1435	387	957	1552	457	987	1645	536	1026
0.7	...	...	...	...	...	...	...	...	...	765	176	915	948	227	936	1109	280	959	1257	339	983	1398	401	1000	1517	471	1026	1611	550	1063
0.8	...	...	...	...	...	...	...	...	...	714	185	970	915	235	974	1081	288	991	1231	348	1013	1360	415	1041	1482	484	1064	1588	558	1087
0.9	...	...	...	...	...	...	...	...	...	663	194	1022	866	247	1030	1024	304	1052	1179	364	1070	1322	427	1081	1434	500	1112	1542	575	1133
1.0	...	...	...	...	...	...	...	...	...	611	203	1073	816	259	1085	981	315	1096	1140	376	1112	1285	438	1118	1399	511	1146	1508	586	1165
1.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	939	325	1138	1138	1101	387	1152	1235	452	1166	1364	521	1178	1474	596	1197
1.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1198	461	1200	1323	532	1214	1439	606	1227

## BLOWER DATA - DIRECT DRIVE - 4 TON

### 048 DIRECT DRIVE BLOWER - BASE UNIT

#### BLOWER TABLE INCLUDES RESISTANCE FOR BASE UNIT ONLY WITH DRY INDOOR COIL AND AIR FILTERS IN PLACE.

FOR ALL UNITS ADD:

- 1 - Any factory installed options air resistance (heat section, economizer, etc.).
- 2 - Any field installed accessories air resistance (duct resistance, diffuser, etc.).

See Page 22 for blower motors and drives and wet coil and options/accessory air resistance data.

#### DOWNFLOW

External Static Press. in. w.g.	Percentage of Total Motor Torque																							
	10%		20%		30%		40%		50%		60%		70%		80%		90%		100%					
	Cfm	RPM	Cfm	Watts	RPM	Watts	Cfm	Watts	RPM	Watts	Cfm	Watts	RPM	Watts	Cfm	Watts	RPM	Watts	Cfm	Watts	RPM	Watts		
0.1	682	46	420	894	79	499	1148	131	579	1366	192	651	1551	268	348	781	840	2031	550	893	2165	669	950	
0.2	583	52	510	836	87	562	1105	142	635	1329	204	697	1530	279	368	827	883	2006	567	925	2149	683	972	
0.3	484	59	601	778	96	629	1062	152	688	1292	217	744	1500	294	380	856	910	1981	585	958	2125	704	1005	
0.4	410	64	666	720	105	697	1019	162	739	1255	231	792	1469	309	397	898	950	1956	603	992	2100	723	1036	
0.5	---	---	---	662	114	764	961	176	805	1218	244	840	1428	327	414	937	987	1931	622	1025	2076	741	1066	
0.6	---	---	---	---	---	---	---	---	---	1182	257	887	1398	341	429	974	1022	1906	641	1058	2052	758	1095	
0.7	---	---	---	---	---	---	---	---	---	1145	270	933	1367	354	443	1009	1056	1874	663	1098	2028	774	1122	
0.8	---	---	---	---	---	---	---	---	---	1096	287	992	1326	372	462	1056	1090	1850	679	1129	1996	792	1157	
0.9	---	---	---	---	---	---	---	---	---	1047	302	1047	1296	385	476	1090	1123	1824	693	1157	1963	807	1188	
1.0	---	---	---	---	---	---	---	---	---	1010	312	1085	1255	403	491	1125	1155	1787	710	1195	1931	818	1216	
1.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1425	505	1160	1606	1762	717	1216	828	1250	
1.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1687	715	1254	1834	827	1275	

#### HORIZONTAL

External Static Press. in. w.g.	Percentage of Total Motor Torque																							
	10%		20%		30%		40%		50%		60%		70%		80%		90%		100%					
	Cfm	RPM	Cfm	Watts	RPM	Watts	Cfm	Watts	RPM	Watts	Cfm	Watts	RPM	Watts	Cfm	Watts	RPM	Watts	Cfm	Watts	RPM	Watts		
0.1	641	46	443	875	82	522	1127	137	614	1334	202	691	1524	280	367	827	881	1997	581	955	2119	699	1010	
0.2	568	50	505	831	90	582	1097	144	650	1310	211	723	1504	290	379	859	921	1977	600	986	2106	715	1032	
0.3	483	56	584	778	98	647	1050	155	706	1269	225	777	1470	308	396	900	957	1953	621	1022	2079	743	1072	
0.4	398	62	661	724	106	707	1004	167	764	1228	240	831	1436	325	413	941	985	1930	640	1055	2062	758	1096	
0.5	---	---	---	671	113	763	957	179	822	1201	250	867	1413	335	427	973	1025	1906	657	1087	2036	777	1129	
0.6	---	---	---	---	---	---	---	---	---	1161	265	919	1378	350	447	1019	1064	1874	676	1124	2000	796	1166	
0.7	---	---	---	---	---	---	---	---	---	1120	279	970	1344	365	459	1049	1093	1850	688	1150	1974	805	1189	
0.8	---	---	---	---	---	---	---	---	---	1093	288	1003	1310	379	477	1091	1131	1818	700	1180	1930	812	1220	
0.9	---	---	---	---	---	---	---	---	---	1052	302	1051	1275	393	488	1118	1158	1779	711	1213	1896	812	1239	
1.0	---	---	---	---	---	---	---	---	---	1012	314	1096	1241	407	502	1155	1191	1747	715	1235	1843	802	1259	
1.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1386	516	1201	1571	1684	713	1266	1738	760	1277
1.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1620	697	1282	1633	707	1283	



## BLOWER DATA

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

Air Volume cfm	Wet Indoor Coil		Electric Heat	Economizer	Filters	
	036, 048	060, 074			MERV 8	MERV 13
800	0.01	- - -	0.01	0.04	0.04	0.05
1000	0.02	0.02	0.03	0.04	0.04	0.07
1200	0.03	0.04	0.06	0.04	0.04	0.07
1400	0.04	0.05	0.09	0.04	0.04	0.07
1600	0.05	0.07	0.12	0.04	0.04	0.07
1800	0.06	0.08	0.15	0.05	0.04	0.07
2000	0.08	0.10	0.18	0.05	0.05	0.08
2200	- - -	0.11	0.18	0.05	0.05	0.08
2400	- - -	0.13	0.20	0.05	0.05	0.08

### POWER EXHAUST FAN PERFORMANCE

Return Air System Static Pressure in. w.g.	Air Volume Exhausted cfm
0.00	2000
0.05	1990
0.10	1924
0.15	1810
0.20	1664
0.25	1507
0.30	1350
0.35	1210

### CEILING DIFFUSERS AIR RESISTANCE (in. w.g.)

Air Volume - cfm	RTD11-95S Step-Down Diffuser			FD11-95S Flush Diffuser
	2 Ends Open	1 Side & 2 Ends Open	All Ends & Sides Open	
1800	0.13	0.11	0.09	0.09
2000	0.15	0.13	0.11	0.10
2200	0.18	0.15	0.12	0.12
2400	0.21	0.18	0.15	0.14
2600	0.24	0.21	0.18	0.17
2800	0.27	0.24	0.21	0.20
3000	0.32	0.29	0.25	0.25

### CEILING DIFFUSER AIR THROW DATA

Air Volume - cfm	<sup>1</sup> Effective Throw - ft.	
	RTD11-95S	FD11-95S
2600	24 - 29	19 - 24
2800	25 - 30	20 - 28
3000	27 - 33	21 - 29

<sup>1</sup> Effective throw based on terminal velocities of 75 ft. per minute.

**ELECTRICAL / ELECTRIC HEAT DATA****3 TON****3 TON ULTRA EFFICIENCY (R-410A)****LCH036U4E**

<sup>1</sup> Voltage - 60hz		208/230V - 3 Ph	460V - 3 Ph
Compressor	Rated Load Amps	9.1	5.1
Outdoor Fan Motor	Full Load Amps	4.1	2.1
Power Exhaust (1) 0.33 HP	Full Load Amps	2.4	1.3
Service Outlet 115V GFI (amps)		15	15
Indoor Blower Motor	Horsepower	0.5	0.5
	Full Load Amps	4.3	2.2
<sup>2</sup> Maximum Overcurrent Protection	Unit Only	25	15
	With (1) 0.33 HP Power Exhaust	30	15
<sup>3</sup> Minimum Circuit Ampacity	Unit Only	20	11
	With (1) 0.33 HP Power Exhaust	23	12

**ELECTRIC HEAT DATA**

Electric Heat Voltage			208V	240V	480V
<sup>2</sup> Maximum Overcurrent Protection	Unit+ 7.5 kW		30	30	15
	Electric Heat 15 kW		<sup>4</sup> 45	60	30
<sup>3</sup> Minimum Circuit Ampacity	Unit+ 7.5 kW		25	28	15
	Electric Heat 15 kW		45	51	26
<sup>2</sup> Maximum Overcurrent Protection	Unit+ 7.5 kW		35	35	20
	Electric Heat and (1) 0.33 HP Power Exhaust 15 kW		<sup>4</sup> 50	60	30
<sup>3</sup> Minimum Circuit Ampacity	Unit+ 7.5 kW		28	31	16
	Electric Heat and (1) 0.33 HP Power Exhaust 15 kW		48	54	27

**ELECTRICAL ACCESSORIES**

Disconnect	7.5 kW	20W24	20W24	20W24
	15 kW	20W24	20W24	20W24

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

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

**ELECTRICAL / ELECTRIC HEAT DATA**
**4 TON**
**4 TON ULTRA EFFICIENCY (R-410A)**
**LCH048U4E**

<sup>1</sup> Voltage - 60hz		208/230V - 3 Ph	460V - 3 Ph
Compressor	Rated Load Amps	13.8	6.5
Outdoor Fan Motor	Full Load Amps	4.1	2.1
Power Exhaust (1) 0.33 HP	Full Load Amps	2.4	1.3
Service Outlet 115V GFI (amps)		15	15
Indoor Blower Motor	Horsepower	0.75	0.75
	Full Load Amps	6.1	3.1
<sup>2</sup> Maximum Overcurrent Protection	Unit Only	40	15
	With (1) 0.33 HP Power Exhaust	40	20
<sup>3</sup> Minimum Circuit Ampacity	Unit Only	28	14
	With (1) 0.33 HP Power Exhaust	30	15

**ELECTRIC HEAT DATA**

Electric Heat Voltage			208V	240V	480V
<sup>2</sup> Maximum Overcurrent Protection	Unit+ 7.5 kW		40	40	20
	Electric Heat 15 kW		<sup>4</sup> 50	60	30
<sup>3</sup> Minimum Circuit Ampacity	Unit+ 7.5 kW		28	31	16
	Electric Heat 15 kW		47	53	27
<sup>2</sup> Maximum Overcurrent Protection	Unit+ 7.5 kW		40	40	20
	Electric Heat and (1) 0.33 HP Power Exhaust 15 kW		<sup>4</sup> 50	60	30
<sup>3</sup> Minimum Circuit Ampacity	Unit+ 7.5 kW		31	34	17
	Electric Heat and (1) 0.33 HP Power Exhaust 15 kW		50	56	29

**ELECTRICAL ACCESSORIES**

Disconnect	7.5 kW	20W24	20W24	20W24
	15 kW	20W24	20W24	20W24

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

<sup>1</sup> Extremes of operating range are plus and minus 10% of line voltage.

<sup>2</sup> HACR type breaker or fuse.

<sup>3</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

<sup>4</sup> Factory installed circuit breaker not available.

**ELECTRICAL / ELECTRIC HEAT DATA**

**5 TON**

**5 TON ULTRA EFFICIENCY (R-410A)**

**LCH060U4E**

<sup>1</sup> Voltage - 60hz		208/230V - 3 Ph	460V - 3 Ph
Compressor	Rated Load Amps	14.6	7
Outdoor Fan Motor	Full Load Amps	4.1	2.1
Power Exhaust (1) 0.33 HP	Full Load Amps	2.4	1.3
Service Outlet 115V GFI (amps)		15	15
Indoor Blower Motor	Horsepower	1	1
	Full Load Amps	7.4	3.7
<sup>2</sup> Maximum Overcurrent Protection	Unit Only	40	20
	With (1) 0.33 HP Power Exhaust	45	20
<sup>3</sup> Minimum Circuit Ampacity	Unit Only	30	15
	With (1) 0.33 HP Power Exhaust	33	16

**ELECTRIC HEAT DATA**

Electric Heat Voltage			208V	240V	480V
<sup>2</sup> Maximum Overcurrent Protection	Unit+	7.5 kW	45	45	20
	Electric Heat	15 kW	<sup>4</sup> 50	60	30
		22.5 kW	<sup>4</sup> 70	80	40
<sup>3</sup> Minimum Circuit Ampacity	Unit+	7.5 kW	33	33	16
	Electric Heat	15 kW	49	55	28
		22.5 kW	68	77	39
<sup>2</sup> Maximum Overcurrent Protection	Unit+	7.5 kW	50	50	20
	Electric Heat and (1) 0.33 HP Power Exhaust	15 kW	60	60	30
		22.5 kW	80	80	45
<sup>3</sup> Minimum Circuit Ampacity	Unit+	7.5 kW	35	35	18
	Electric Heat and (1) 0.33 HP Power Exhaust	15 kW	52	58	29
		22.5 kW	71	80	41

**ELECTRICAL ACCESSORIES**

Disconnect	7.5 kW	20W24	20W24	20W24
	15 kW	20W24	20W24	20W24
	22.5 kW	20W25	20W25	20W24

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

<sup>1</sup> Extremes of operating range are plus and minus 10% of line voltage.

<sup>2</sup> HACR type breaker or fuse.

<sup>3</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

<sup>4</sup> Factory installed circuit breaker not available.

**ELECTRICAL / ELECTRIC HEAT DATA****6 TON****6 TON HIGH EFFICIENCY (R-410A)****LCH074U4E**

<sup>1</sup> Voltage - 60hz		208/230V - 3 Ph	460V - 3 Ph
Compressor	Rated Load Amps	16.9	8.3
	Locked Rotor Amps	---	---
Outdoor Fan Motor	Full Load Amps	4.1	2.1
Power Exhaust (1) 0.33 HP	Full Load Amps	2.4	1.3
Service Outlet 115V GFI (amps)		15	16
Indoor Blower Motor	Horsepower	1	1
	Full Load Amps	7.4	3.7
<sup>2</sup> Maximum Overcurrent Protection	Unit Only	45	20
	With (1) 0.33 HP Power Exhaust		25
			50
<sup>3</sup> Minimum Circuit Ampacity	Unit Only	33	17
	With (1) 0.33 HP Power Exhaust		18
			36

**ELECTRIC HEAT DATA**

Electric Heat Voltage			208V	240V	480V
<sup>2</sup> Maximum Overcurrent Protection	Unit+ Electric Heat	7.5 kW	45	45	20
		15 kW	<sup>4</sup> 50	60	30
		22.5 kW	<sup>4</sup> 70	80	40
<sup>3</sup> Minimum Circuit Ampacity	Unit+ Electric Heat	7.5 kW	33	33	16
		15 kW	49	55	28
		22.5 kW	68	77	39
<sup>2</sup> Maximum Overcurrent Protection	Unit+ Electric Heat and (1) 0.33 HP Power Exhaust	7.5 kW	50	50	20
		15 kW	60	60	30
		22.5 kW	80	80	45
<sup>3</sup> Minimum Circuit Ampacity	Unit+ Electric Heat and (1) 0.33 HP Power Exhaust	7.5 kW	35	35	18
		15 kW	52	58	29
		22.5 kW	71	80	41

**ELECTRICAL ACCESSORIES**

Disconnect	7.5 kW	20W24	20W24	20W24
	15 kW	20W24	20W24	20W24
	22.5 kW	20W25	20W25	20W24

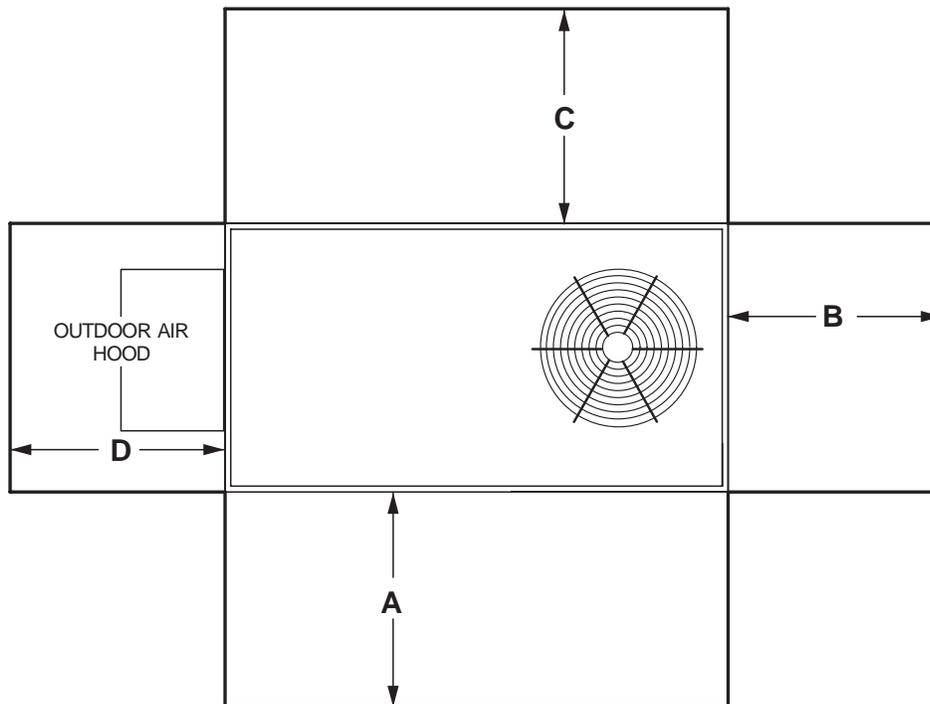
NOTE - All units have a minimum Short Circuit Current Rating (SCCR) of 5000 amps.

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

## ELECTRIC HEAT CAPACITIES

Input Voltage	7.5 kW			15 kW			22.5 kW		
	No of Stages	kW input	Btuh Output	No of Stages	kW input	Btuh Output	No of Stages	kW input	Btuh Output
208	1	5.6	19,200	1	11.2	38,200	1	16.9	57,700
220	1	6.3	21,500	1	12.6	43,000	1	18.9	64,500
230	1	6.9	23,500	1	13.8	47,000	1	20.7	70,700
240	1	7.5	25,600	1	15	51,200	1	22.5	76,800
440	1	6.3	21,500	1	12.6	43,000	1	18.9	64,500
460	1	6.9	23,500	1	13.8	47,000	1	20.7	70,700
480	1	7.5	25,600	1	15	51,200	1	22.5	76,800

## UNIT CLEARANCES - INCHES (MM)



<sup>1</sup> Unit Clearance	A		B		C		D		Top Clearance
	in.	mm	in.	mm	in.	mm	in.	mm	
<b>Service Clearance</b>	36	914	36	914	36	934	36	914	Unobstructed
<b>Minimum Operation Clearance</b>	36	914	36	914	36	914	36	914	

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

<sup>1</sup> Service Clearance - Required for removal of serviceable parts.

Minimum Operation Clearance - Required clearance for proper unit operation.

## OUTDOOR SOUND DATA

Unit Model No.	Octave Band Linear Sound Power Levels dBA, re 10 <sup>-12</sup> Watts Center Frequency - Hz							<sup>1,2</sup> Sound Rating Number (SRN) dBA
	125	250	500	1000	2000	4000	8000	
036	60	65	69	68	63	58	51	73
048	64	67	73	71	66	59	52	76
060	66	69	74	74	68	62	55	78
074	67	72	76	76	70	64	58	80

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

<sup>1</sup> Sound Rating Number according to ANSI/AHRI Standard 270-2008. "SRN" is the overall A-Weighted Sound Power Level, (LWA), dB (100 Hz to 10,000 Hz).

<sup>2</sup> Sound Rating Number according to ANSI/AHRI Standard 370-2011. "SRN" is the overall A-Weighted Sound Power Level, (LWA), dB (100 Hz to 10,000 Hz).

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## WEIGHT DATA

Model Number	Net		Shipping	
	lbs.	kg	lbs.	kg
036 Base Unit	674	306	716	325
036 Max. Unit	893	405	953	432
048 Base Unit	699	317	740	336
048 Max. Unit	918	416	978	443
060 Base Unit	723	328	765	347
060 Max. Unit	942	427	1002	454
074 Base Unit	723	328	765	347
074 Max. Unit	942	427	1002	454

## OPTIONS / ACCESSORIES

	Shipping Weight		
	lbs.	kg.	
<b>ECONOMIZER / OUTDOOR AIR / EXHAUST</b>			
<b>Economizer</b>			
Economizer, Includes Outdoor Air Hood and Barometric Relief Dampers with Hood	131	59	
<b>Outdoor Air Dampers</b>			
Motorized	40	18	
Manual	30	14	
<b>Power Exhaust</b>			
Standard Static	35	17	
<b>ELECTRIC HEAT</b>			
	7.5 kW	31	14
	15 kW	31	14
	22.5 kW	35	16
<b>PACKAGING</b>			
LTL Packaging (less than truck load)	60	27	
<b>ROOF CURBS</b>			
<b>Hybrid Roof Curbs, Downflow</b>			
8 in. height	C1CURB70A-1	50	23
14 in. height	C1CURB71A-1	70	32
18 in. height	C1CURB72A-1	80	36
24 in. height	C1CURB73A-1	100	45
<b>Adjustable Pitch Curb, Downflow</b>			
14 in. height		113	51
<b>CEILING DIFFUSERS</b>			
Step-Down	RTD11-95S	118	54
Flush	FD11-95S	118	54
Transitions	T1TRAN20N-1	21	10

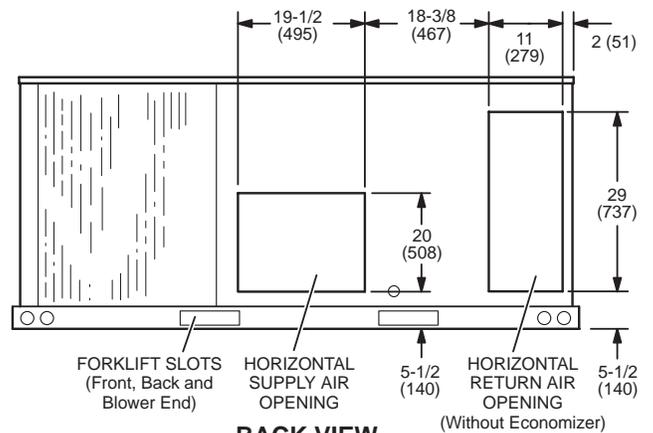
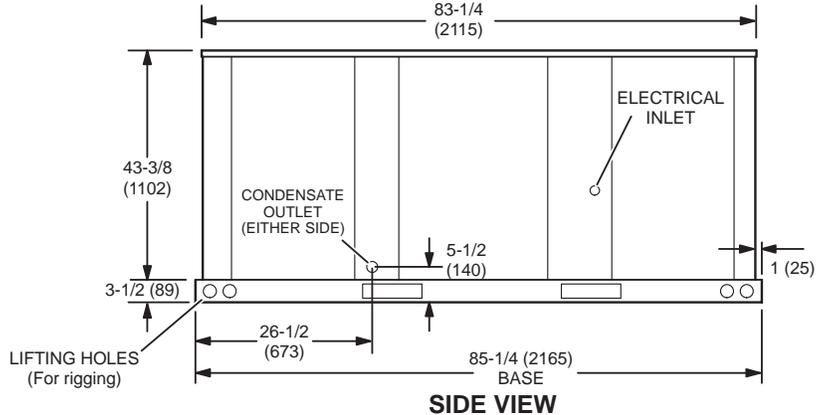
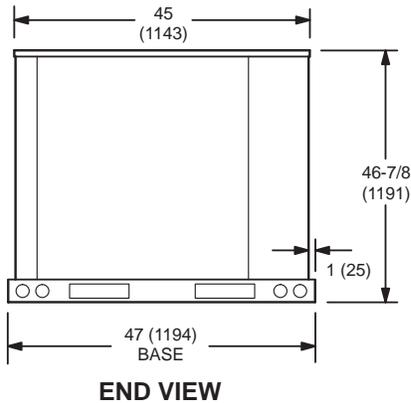
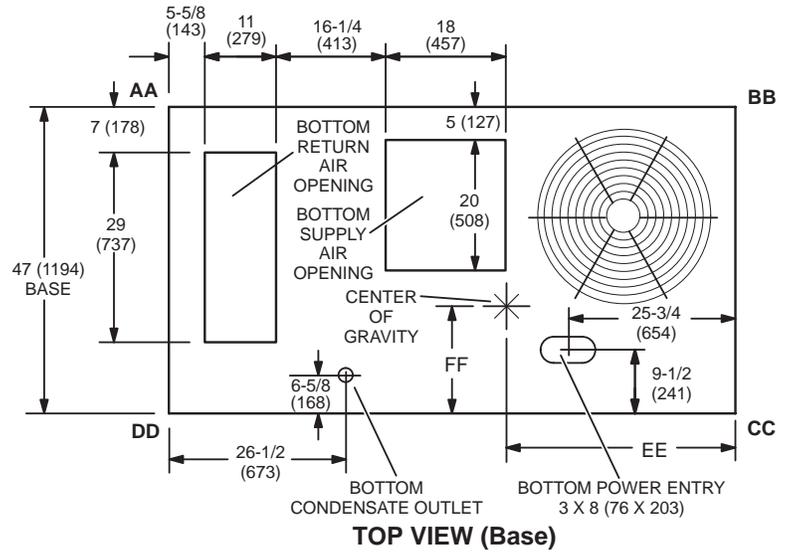
# DIMENSIONS - UNIT

## CORNER WEIGHTS

Model No.	AA		BB		CC		DD		CENTER OF GRAVITY		EE		FF	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm	in.	mm
LCH036U Base Unit	127	58	162	73	210	95	165	75	38	953	21	521		
LCH036U Max. Unit	178	81	212	96	273	124	231	105	39	991	21	521		
LCH048U Base Unit	127	58	170	77	220	100	165	75	37	927	21	521		
LCH048U Max. Unit	178	81	221	100	286	130	230	104	38	965	21	521		
LCH060U Base Unit	131	59	174	79	225	102	169	77	37	927	21	521		
LCH060U Max. Unit	182	83	226	103	293	133	235	107	38	965	21	521		
LCH074U Base Unit	131	59	174	79	225	102	169	77	37	927	21	521		
LCH074U Max. Unit	182	83	226	103	293	133	235	107	38	965	21	521		

Base Unit - The unit with NO INTERNAL OPTIONS.

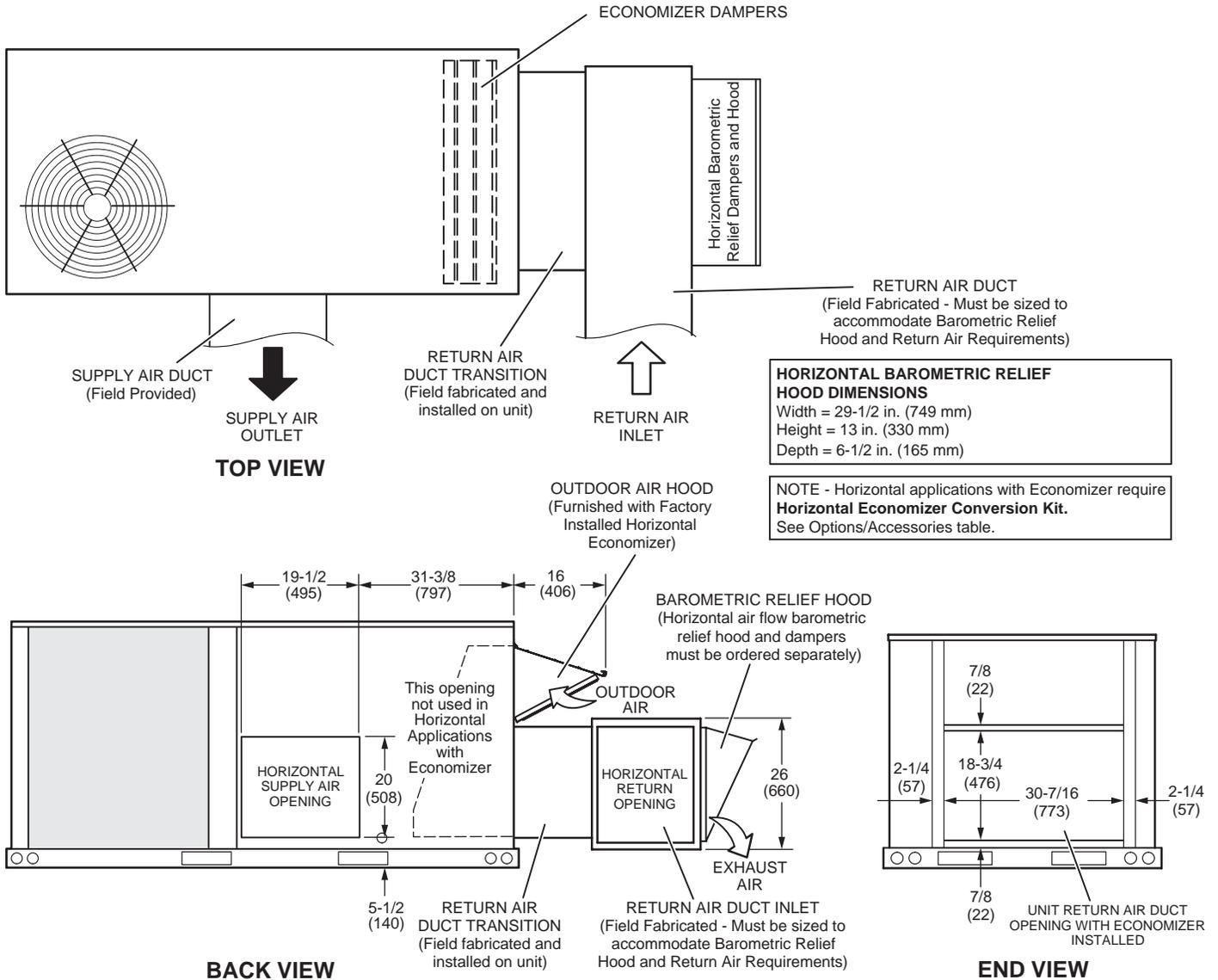
Max. Unit - The unit with ALL INTERNAL OPTIONS Installed. (Economizer, Standard Static Power Exhaust Fans, Controls, etc.). Does not include accessories external to unit or high static power exhaust.





## DIMENSIONS - ACCESSORIES

### OUTDOOR AIR HOOD DETAIL WITH OPTIONAL ECONOMIZER AND OPTIONAL BAROMETRIC RELIEF DAMPERS WITH HOOD (Horizontal Application)

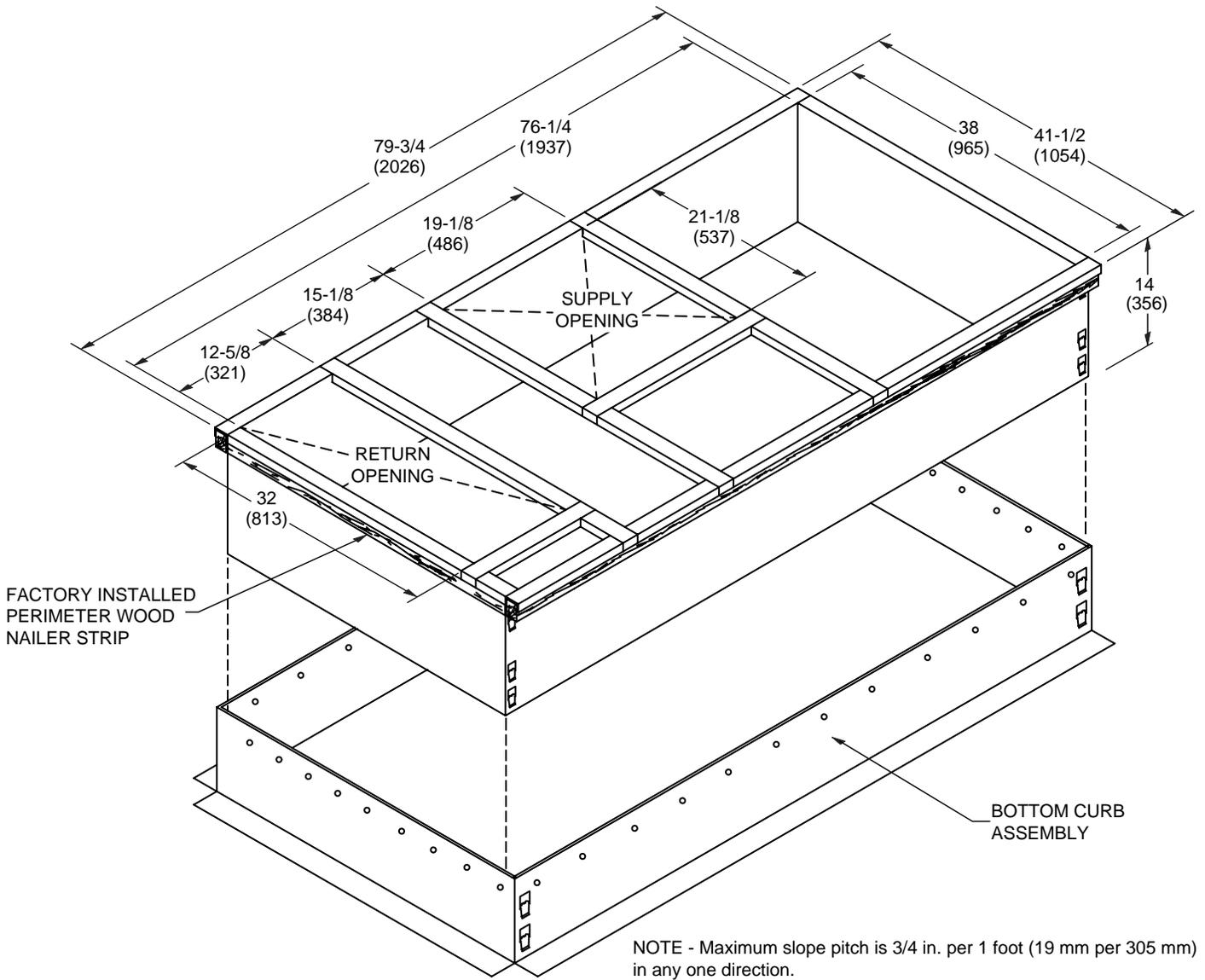


**NOTE - Return Air Duct and Transition must be supported**

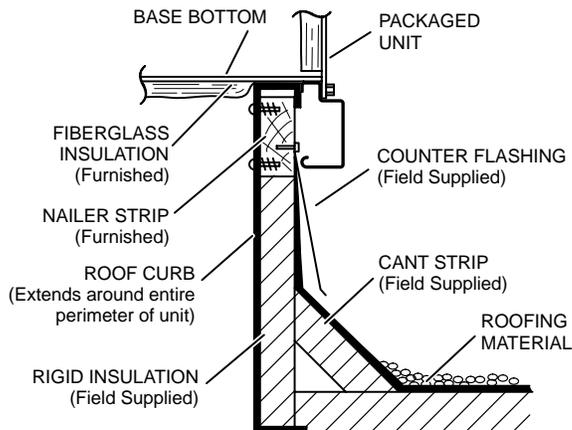


# DIMENSIONS - ACCESSORIES

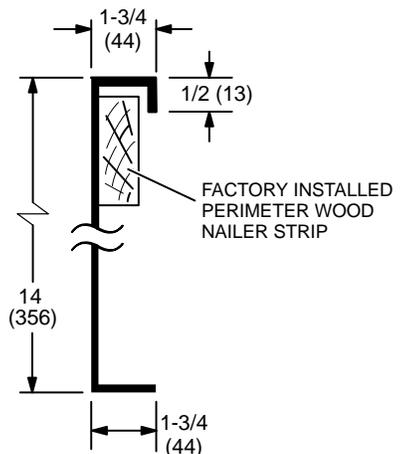
## ADJUSTABLE PITCH CURBS - DOUBLE DUCT OPENING



**TYPICAL FLASHING DETAIL FOR ROOF CURB**

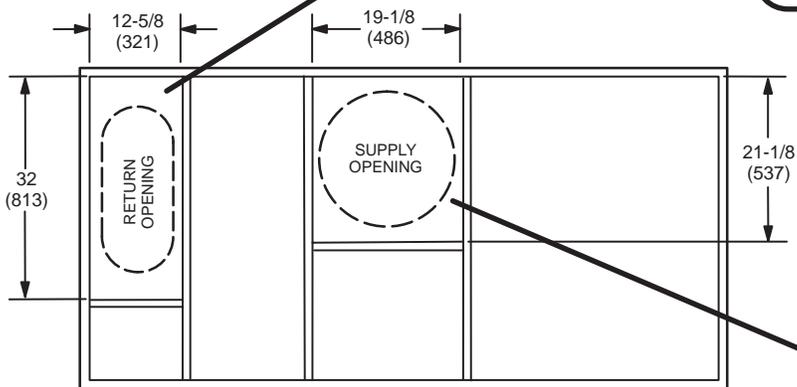
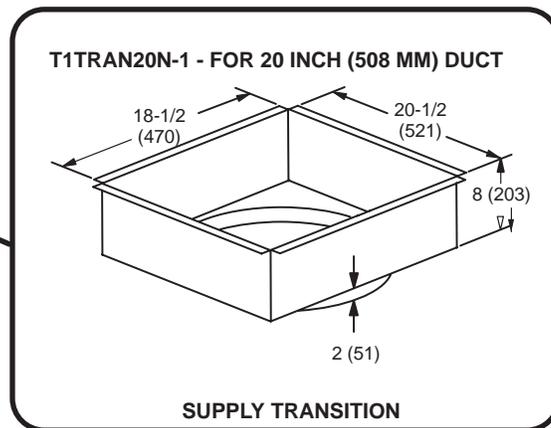
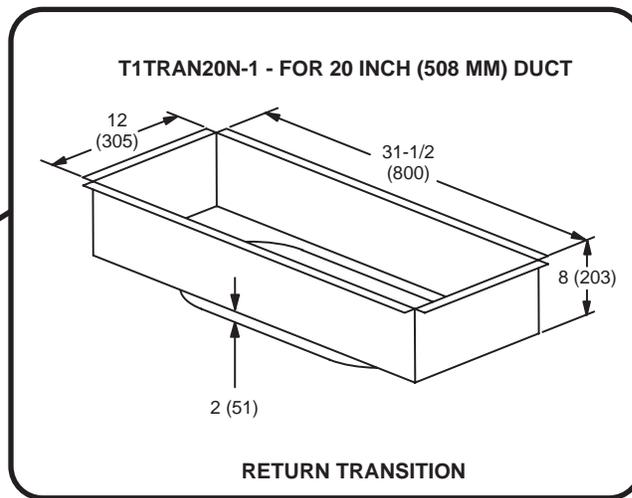


**DETAIL ROOF CURB**



# DIMENSIONS - ACCESSORIES

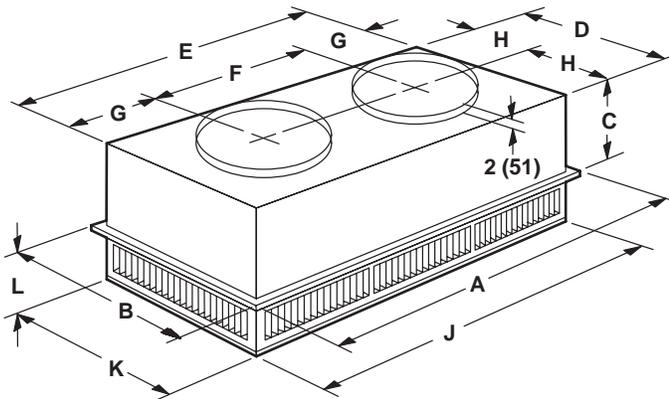
## TRANSITIONS



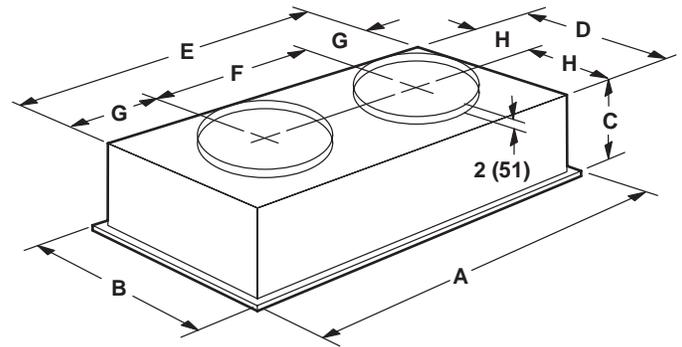
## DIMENSIONS - ACCESSORIES

### COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

#### STEP-DOWN CEILING DIFFUSER



#### FLUSH CEILING DIFFUSER



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

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





## REVISIONS

Section	Description
Dimensions - Accessories	Updated drawings to show new Economizer Combination Outdoor Air Hood. Updated drawings to show horizontal applications with Economizer and Low Profile Barometric Relief Dampers.
Optional Accessories	Removed Barometric Relief Dampers with Exhaust Hood option (74W38). Added Barometric Relief Dampers for Power Exhaust Kit. Added Horizontal Low Profile Barometric Relief Dampers with Exhaust Hood. Removed Standard Efficiency Economizer option. Added SCCR factory option.



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