



**COMMERCIAL
PRODUCT SPECIFICATIONS**

Bulletin No. 210986
April 2024
Supersedes All previous versions



ENLIGHT

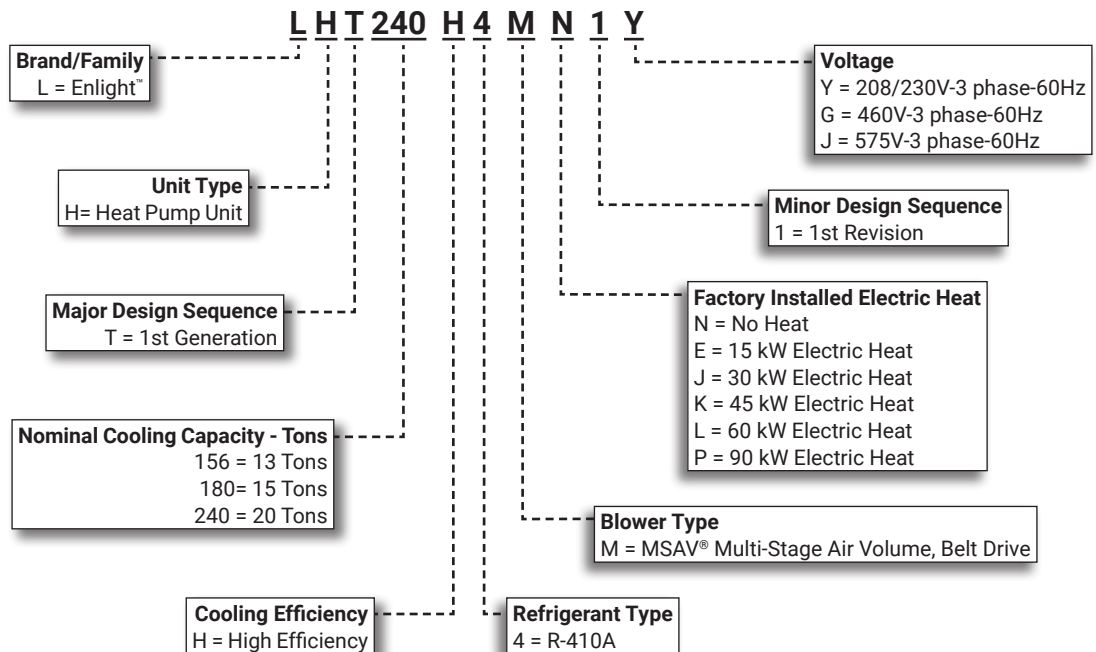


SMART WIRE™ SYSTEM

**ASHRAE 90.1
COMPLIANT**

13 to 20 Tons
Net Cooling Capacity - 150,000 to 224,000 Btuh
Net Heating Capacity - 144,000 to 224,000 Btuh
Optional Electric Heat - 15 to 90 kW

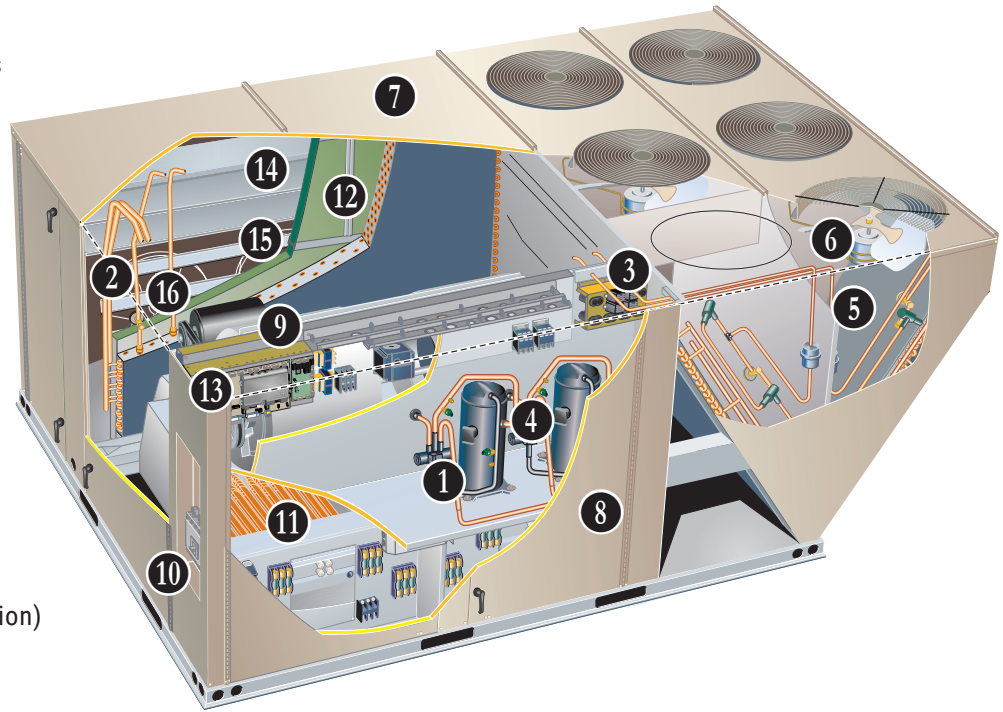
MODEL NUMBER IDENTIFICATION



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. Check/Thermal Expansion Valves
3. Filter/Driers
4. Reversing Valves
5. Copper Tube Outdoor Coil
6. Outdoor Coil Fan Motors
7. Heavy Gauge Steel Cabinet
8. Hinged Access Panels
9. MSAV® Multi-Stage Air Volume Blower
10. Disconnect Switch (option)
11. Electric Heat (option)
12. Air Filters
13. Lennox CORE® Control System
14. Economizer (option)
15. Barometric Relief Dampers (option)
16. Power Exhaust (option)



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APPROVALS AND WARRANTY

APPROVALS

- AHRI Standard 340/360 certified
- ETL and CSA listed
- CSA certified energy ratings
- Unit and components ETL, NEC and CEC bonded for grounding to meet safety standards for servicing
- All models are ASHRAE 90.1 energy efficiency compliant and meet or exceed requirements of Section 6.8
- All models meet DOE 2023 energy efficiency standards
- All models meet California Code of Regulations, Title 24 and ASHRAE 90.1 Section 6.4.3.10 requirements for staged airflow
- All units are ENERGY STAR® certified
- ISO 9001 Registered Manufacturing Quality System

WARRANTY

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

FEATURES AND BENEFITS

COOLING/HEATING SYSTEM

- Designed to maximize sensible and latent cooling performance at design conditions
- Mechanical cooling operates from 0°F to 125°F
- Mechanical heating operates at ambient temperatures above -15°F

NOTE - Optional Electric Heat operates at ambient temperatures below -4°F and operates in conjunction with mechanical heating down to -15°F.

R-410A Refrigerant

- Non-chlorine based
- Ozone friendly

1 Compressor System

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

Compressor Crankcase Heaters

- Protects against refrigerant migration that can occur during low ambient operation

2 Check/Thermal Expansion Valves

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

3 Filter/Driers

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

4 Reversing Valve

- 4-way interchange reversing valve rapidly changes the direction of refrigerant flow resulting in quick changeover from cooling to heating and vice versa

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

Indoor Coil Freeze Protection

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

5 Coil Construction

- Copper tube construction
- Enhanced rippled-edge aluminum fins
- Flared shoulder tubing connections
- Silver soldered construction
- Factory leak tested

Indoor Coil

- Cross-row circuiting
- Rifled copper tubing

Outdoor Coil

- Two independent slanted coils for easy cleaning

Antimicrobial Condensate Drain Pan

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

FEATURES AND BENEFITS

COOLING / HEATING SYSTEM (continued)

- 6 Outdoor Coil Fan Motors**
- All models have PSC motors
 - Thermal overload protected
 - Totally enclosed
 - Permanently lubricated ball bearings
 - Shaft up
 - Wire basket mount

Outdoor Coil Fan

- PVC coated fan guards furnished

Required Selections

Cooling Capacity

- Specify nominal cooling capacity

Options/Accessories

Field Installed

Condensate Drain Trap

- Available in copper or PVC

Factory or Field Installed

Drain Pan Overflow Switch

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

CABINET

- 7 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 fork 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) 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

8 Hinged Access Panels

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

Required Selections

Airflow Configuration

- Specify downflow or horizontal

Options/Accessories

Factory Installed

Corrosion Protection

- Completely flexible immersed coating
- Electrodeposited dry film process (AST ElectroFin E-Coat)
- ASTM B117 / DIN 53167 Salt Spray - 15,000+ hours
- ASTM G85 Annex A3 SWAAT Modified Salt Spray - 3,000 hours
- VA Master Construction Specification Division 23 for High Humidity Installations
- CID AA-52474A (GSA)
- Indoor Corrosion Protection:
 - Coated coil
 - 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

FEATURES AND BENEFITS

BLOWER

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

Motor

- Overload protected
- Ball bearings

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

9 Supply Air Blower

- Forward curved blades
- Double inlet
- Blower wheel is statically and dynamically balanced
- Ball bearings
- Adjustable pulley (allows speed change)
- Blower assembly slides out of unit for servicing
- Grease fittings furnished
- MSAV® Multi-Stage Air Volume stages the amount of airflow according to compressor stages, heating demand, ventilation demand or smoke alarm
- MSAV® Multi-Stage Air Volume utilizes a Variable Frequency Drive (VFD) to stage the supply 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 airflow
- LHT180H models with MSAV® Multi-Stage Air Volume can be ordered with or without an Electronic Bypass Control
- If equipped with the bypass control the MSAV® Multi-Stage Air Volume features manual (default) or automatic electronic bypass control of the VFD
- In case of a VFD malfunction, a VFD alarm is generated by the Lennox® CORE Unit controller
- VFD can be manually bypassed to continue unit operation at full blower speed or the unit controller can be set to automatically switch to full blower speed if a VFD alarm is generated
- VFD has an operational range of -40 to 125°F outdoor air ambient temperature
- Lower operating costs are obtained when the blower is operated on lower speeds

Required Selections

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

Field Installed

Blower Belt Auto-Tensioner

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

ELECTRICAL

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 ensure correct phase at unit start-up
 - If phase is incorrect, the unit will not start and an alarm code reports to the unit controller
- Prevents unit start-up if the unit is the incorrect phase; unit start-ups in the wrong phase could lead to issues such as compressors functioning in reverse
- Monitors power supply voltage to ensure proper voltage
 - If voltage is not correct (over/under voltage conditions) the unit will not start and an alarm code reports to the unit controller

FEATURES AND BENEFITS

ELECTRICAL(continued)

Required Selections

Voltage Choice

- Specify when ordering base unit

Options/Accessories

Factory Installed

Circuit Breakers

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

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

10 Disconnect Switch

- Accessible outside of unit
- Spring loaded weatherproof cover furnished

11 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, powered and wired
 - 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

INDOOR AIR QUALITY

12 Air Filters

- Disposable 2 inch MERV 4 filters furnished as standard

Options/Accessories

Factory or Field Installed

Healthy Climate® High Efficiency Air Filters

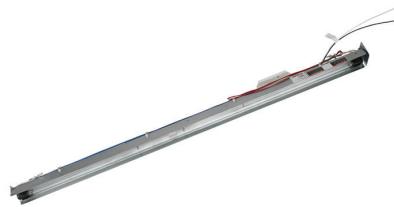
- Disposable MERV 8 or MERV 13 (Minimum Efficiency Reporting Value based on ASHRAE 52.2) efficiency 2-inch pleated filters

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

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

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

NOTE - Please visit www.sciencedirect.com for additional information.

- 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

Indoor Air Quality (CO₂) Sensors

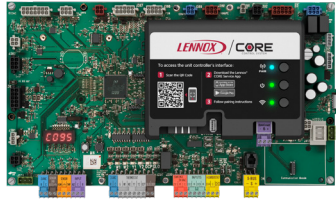
- Monitors CO₂ levels, reports to the Lennox CORE® Unit Controller which adjusts economizer dampers as needed

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

CONTROL SYSTEM

LENNOX® CORE CONTROL SYSTEM



- 13 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



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
- Two Defrost Control Methods (demand and timed - heat pumps only)

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
- Minimum Compressor Run Time

Control Methods / Interfaces:

- DDC and 24V Thermostat
- BACnet MS/TP and IP
- LONTalk (Factory and Field Option)
- Lennox S-BUS
- Compatibility with Lennox Wireless Room Sensors
- 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)

Controls Options

Factory or Field Installed

Blower Proving Switch

- Monitors blower operation, shuts down unit if blower fails

Dirty Filter Switch

- Senses static pressure increase 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

Interoperability via BACnet® or LonTalk® Protocols

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

Commercial Control Systems

Field Installed

Thermostats

- Control system and thermostat options, see page 11

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

14 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
- Downflow or Horizontal with Outdoor Air Hood
- 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 2019 Building Energy Efficiency Standards.

NOTE - Refer to Installation Instructions for complete setup information.

Differential Sensible Control

- Factory setting
- Uses outdoor air and return air sensors that are furnished with the unit
- The 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

OPTIONS / ACCESSORIES

ECONOMIZER (continued)

Factory or Field Installed

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

- 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

Single Enthalpy 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 (CO₂ Sensor) or Building Pressure Control.

Building Pressure Control

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

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

EXHAUST

Factory or Field Installed

15 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

16 Power Exhaust Fans

- Install internal to unit for downflow applications only with Economizer option
- Provides exhaust air pressure relief
- Interlocked to run when supply air blower is operating
- Fans run when outdoor air dampers are 50% open (adjustable)
- Motor is overload protected
- Dual propeller type fans are 20 in. diameter
- Five blades
- Two 1/3 hp motors
- SCCR rated

NOTE - Requires Economizer with furnished Outdoor Air Hood and Downflow Barometric Relief Dampers.

NOTE - All models are equipped with 2-stage power exhaust fans. Power exhaust operates in 1st stage (one fan) up to 70% of supply air blower speed. Both exhaust fans operate in 2nd stage when supply air blower speed is above 70% (adjustable) of full speed.

Field Installed

Horizontal Barometric Relief Dampers

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

OPTIONS / ACCESSORIES

OUTDOOR AIR OPTIONS

Factory or Field Installed

Outdoor Air Damper

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

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

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

ROOF CURBS

Field Installed

- 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 8, 14, 18, and 24 inch heights

Adjustable Pitch Curb

- Fully adjustable pitch curbs (3/4 in. per foot in any direction) provide a level platform for rooftop units allowing flexible installations on roofs with uneven or sloped angles
- Interlocking tabs fasten corners together
- No tools required for assembly
- Hardware is furnished to connect upper curb with lower curb
- Available in 14 inch height

Horizontal

- Meet National Roofing Code requirements
- Converts unit from downflow to horizontal (side) air flow
- Return air is on unit
- Supply air is on curb
- See dimension drawings
- Available in 26, 30, 37, and 41 inch heights

NOTE - Requires Horizontal Return Air Panel Kit.

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

Adaptor Curbs (not shown)

- Curbs are regionally sourced
- Dimensions vary based upon the source

NOTE - Contact your local sales representative for a detailed cut sheet with applicable dimensions.

CEILING DIFFUSERS

Field Installed

Ceiling Diffusers

(Flush or Step-Down)

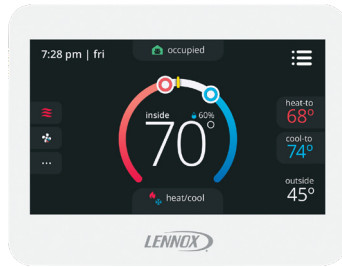
- White powder coat finish on diffuser face and grilles
- Insulated UL listed duct liner
- Diffuser box has collars for duct connection
- Step-down diffusers have double deflection blades
- Flush diffusers have fixed blades
- Provisions for suspending
- Internally sealed to prevent recirculation
- Removable 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

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 CO₂
- 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

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



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

Wireless Repeater for LCS-5030



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

NOTE - Wireless only.

OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

Wired Temperature/Humidity Room Sensor (Non-Communicating)



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

OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

| Description | Catalog No. |
|--|--|
| CS8500 Commercial 7 Day Programmable Thermostat | |
| CS8500 7-Day Thermostat | No CO ₂ Sensing 24K55 |
| | With CO ₂ Sensing 24K53 |
| Sensors/Accessories | ¹ Remote non-adjustable wall-mount 10k 47W37 |
| | ¹ Remote non-adjustable wall-mount 11k 94L61 |
| Sysbus Network Cable (Yellow) for CS8500 and LCS-5030 Wired Room Sensor | |
| Twisted pair 100% shielded communication cable, Red and Black | 500 ft. box 27M19 |
| 22 AWG, yellow jacket, rated at 75°C, 300V, Plenum rated | 1000 ft. box 94L63 |
| Insulation - Low smoke PVC, NEC, CMP | 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 Sensors | |
| LCS-5030 Wireless/Wired Temperature/Humidity Room Sensor | 21L07 |
| Wireless Repeater for LCS-5030 | 21L09 |
| A335MT13AE1 Wired Temperature/Humidity Room Sensor (Non-Communicating) | 21W06 |

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

² Remote wall-mount sensors can be applied in any of the following combinations:

One Sensor - (1) 47W36, Two Sensors - (2) 47W37, Three Sensors - (2) 47W36 and (1) 47W37

Four Sensors - (4) 47W36, Five Sensors - (3) 47W36 and (2) 47W37

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

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

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

Supply Air Blower Speed

Unit has following supply air blower speed setting:

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

¹ Unit Features An Economizer And Outdoor Air Is Suitable

Cooling - Thermostat Mode (Y1, Y2)

Y1 Demand:

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

Y2 Demand:

All compressors are off, supply air blower is on high cooling speed providing higher cooling capacity, and economizer modulates to maintain 55°F supply air temperature. If economizer stays at maximum open for 3 minutes, compressor 1 is energized while supply air blower stays on high cooling speed providing maximum cooling capacity.

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

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

Y1 Demand:

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

Y2 Demand:

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

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

Unit has following supply air blower speed setting:

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

¹ Unit Features An Economizer And Outdoor Air Is Suitable

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

Y1 Demand:

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

Y2 Demand:

All compressors are off, supply air blower is on high cooling speed providing higher cooling capacity, and economizer modulates to maintain 55°F supply air temperature. If economizer stays at maximum open for 3 minutes, compressor 1 is energized while supply air blower stays on high cooling speed providing maximum cooling capacity. After compressors are energized the economizer stays at maximum open.

Y3 Demand:

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

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

Unit Does Not Feature An Economizer or Outdoor Air Is Not Suitable**Y1 Demand:**

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

Y2 Demand:

Compressor 1 operates at part load with compressor 2 ON, and supply air blower operates at medium cooling speed.

Y3 Demand:

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

Defrost Mode

Coil Sensors (RT48 - Circuit 1 and RT49 - Circuit 2) and Ambient Sensor (RT17) provides input to the Lennox® CORE Unit Controller to initiate a defrost cycle if needed.

Coil sensors are located on a return bend for each circuit on the front of the outdoor coil.

Ambient sensor is located on the inside of the corner mullion on the back of the outdoor coil section.

If a coil sensor measures a temperature below 35°F during mechanical heating mode, defrost logic is enabled. The system will constantly monitor coil and ambient temperatures and will initiate a defrost cycle if the controller determines that the target temperature difference between the coil and ambient temperature has been satisfied, or when the accumulated run time with coil temperature below 35°F reaches 6 hours.

Defrost will not be activated on more than one circuit at the time.

If the ambient sensor fails, or the circuit is in uncalibrated state, the controller will switch to time/temperature defrost operation.

Electric heat is energized during a defrost cycle to maintain discharge air temperature.

Heating Mode: Thermostat or Zone Sensor**W1/H1 Demand:**

A first-stage heating demand (W1/H1) will energize compressors 1 and 2 and the outdoor fans.

NOTE – L1 & L2 reversing valves are de-energized in the heating mode.

Units With Optional Electric Heat:

An increased heating demand (W2/H2) will energize electric heat.

NOTE – Compressors 1 and 2 stay energized.

Units With Optional Two-Stage Electric Heat and Zone Sensor mode:

An increased heating demand (H2) will energize 1st stage of electric heat.

An increased heating demand (H3) will energize 2nd stage of electric heat.

NOTE – Compressors 1 and 2 stay energized.

All Electric heat modules are energized during the defrost cycle (W1) to temper discharge air temperature.

Modulating Outdoor Air Damper

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

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

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

Power Exhaust Operation

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

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

OPTIONS / ACCESSORIES

| Item Description | Catalog Number | Unit Model No | | | | |
|--|--|---------------|--------------|-----|----|----|
| | | 156 | 180 | 240 | | |
| COOLING SYSTEM | | | | | | |
| Condensate Drain Trap | PVC | 22H54 | X | X | X | |
| | Copper | 76W27 | X | X | X | |
| Drain Pan Overflow Switch | | 21Z07 | OX | OX | OX | |
| BLOWER - SUPPLY AIR | | | | | | |
| Blower Option | MSAV® Multi-Stage Air Volume option (With VFD Bypass Control) | | Factory | O | O | |
| | MSAV® Multi-Stage Air Volume option (Without VFD Bypass Control) | | Factory | O | O | |
| Motors | Belt Drive - 3 hp | | Factory | O | O | |
| | Belt Drive - 5 hp | | Factory | O | O | O |
| | Belt Drive - 7.5 hp | | Factory | | O | O |
| | Belt Drive - 10 hp | | Factory | | | O |
| Drive Kits | Kit #1 535-725 rpm | | Factory | O | O | |
| See Blower Data Tables for usage and selection | Kit #2 710-965 rpm | | Factory | O | O | |
| | Kit #3 685-856 rpm | | Factory | O | O | O |
| | Kit #4 850-1045 rpm | | Factory | O | O | O |
| | Kit #5 945-1185 rpm | | Factory | O | O | O |
| | Kit #6 850-1045 rpm | | Factory | | O | O |
| | Kit #7 945-1185 rpm | | Factory | | O | O |
| | Kit #8 1045-1285 rpm | | Factory | | O | O |
| | Kit #10 1045-1285 rpm | | Factory | | | O |
| | Kit #11 1135-1365 rpm | | Factory | | | O |
| | Blower Belt Auto-Tensioner | | 24B80 | X | X | X |
| CABINET | | | | | | |
| Combination Coil/Hail Guards | | 23U71 | OX | OX | OX | |
| Corrosion Protection | | Factory | O | O | O | |
| CONTROLS | | | | | | |
| Blower Proving Switch | | 21Z10 | OX | OX | OX | |
| Commercial Controls | CPC Einstein Integration | | Factory | O | O | O |
| | LonTalk® Module | | 54W27 | OX | OX | OX |
| | Novar® LSE | | Factory | O | O | O |
| Dirty Filter Switch | | 53W68 | OX | OX | OX | |
| Fresh Air Tempering | | 21Z08 | OX | OX | OX | |
| Smoke Detector - Supply or Return (Power board and one sensor) | | 22H56 | OX | OX | OX | |
| Smoke Detector - Supply and Return (Power board and two sensors) | | 22H57 | OX | OX | OX | |

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

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

O = Configure To Order (Factory Installed).

X = Field Installed.

OPTIONS / ACCESSORIES

| Item Description | Catalog Number | Unit Model No | | | |
|--|---|---------------|-----|-----|----|
| | | 156 | 180 | 240 | |
| INDOOR AIR QUALITY | | | | | |
| Air Filters | | | | | |
| Healthy Climate® High Efficiency Air Filters 24 x 24 x 2 (Order 6 per unit) | MERV 8 | 54W67 | OX | OX | OX |
| | MERV 13 | 52W40 | OX | OX | OX |
| | MERV 16 | 21U42 | X | X | X |
| Replacement Media Filter With Metal Mesh Frame (includes non-pleated filter media) | | 44N61 | X | X | X |
| Indoor Air Quality (CO₂) Sensors | | | | | |
| Sensor - Wall-mount, off-white plastic cover with LCD display | | 77N39 | X | X | X |
| Sensor - Wall-mount, off-white plastic cover, no display | | 23V86 | X | X | X |
| Sensor - Black plastic case with LCD display, rated for plenum mounting | | 87N52 | X | X | X |
| Sensor - Wall-mount, black plastic case, no display, rated for plenum mounting | | 87N54 | X | X | X |
| CO ₂ Sensor Duct Mounting Kit - for downflow applications | | 85L43 | X | X | X |
| Aspiration Box - for duct mounting non-plenum rated CO ₂ sensors (77N39) | | 90N43 | X | X | X |
| Needlepoint Bipolar Ionization (NPBI) | | | | | |
| Needlepoint Bipolar Ionization (NPBI) Kit | | 21U37 | X | X | |
| | | 21U38 | | | X |
| UVC Germicidal Light Kit | | | | | |
| ¹ Healthy Climate® UVC Light Kit (110/230v-1ph) | | 21A94 | X | X | X |
| Step-Down Transformers | 460V primary, 230V secondary | 10H20 | X | X | X |
| | 575V primary, 230V secondary | 10H21 | X | X | X |
| ELECTRICAL | | | | | |
| Voltage 60 Hz | 208/230V - 3 phase | Factory | O | O | O |
| | 460V - 3 phase | Factory | O | O | O |
| | 575V - 3 phase | Factory | O | O | O |
| Disconnect Switch (see Electric Heat Tables for usage, | 80 amp | 54W85 | OX | OX | OX |
| | 150 amp | 54W86 | OX | OX | OX |
| | 250 amp | 54W87 | OX | OX | OX |
| HACR Circuit Breakers | | Factory | O | O | O |
| ² Short-Circuit Current Rating (SCCR) of 100kA (includes Phase/Voltage Detection) | | Factory | O | O | O |
| GFI Service Outlets | 15 amp non-powered, field-wired (208/230V, 460V, 575V) | 74M70 | OX | OX | OX |
| | 15 amp factory-wired and powered (208/230V, 460V) | Factory | O | O | O |
| | ³ 20 amp non-powered, field-wired (208/230V, 460V, 575V) | 67E01 | X | X | X |
| | ³ 20 amp non-powered, field-wired (575V) | Factory | O | O | O |
| Weatherproof Cover for GFI | | 10C89 | X | X | X |

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 Disconnect Switch not available with SCCR option.

SCCR option is only available with factory installed electric heat or no electric.

SCCR option is not available if the MOCP of the configured unit is greater than 200A.

³ Canada requires a minimum 20 amp circuit. Select 20 amp, non-powered, field wired GFI.

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

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

O = Configure To Order (Factory Installed).

X = Field Installed.

OPTIONS / ACCESSORIES

| Item Description | Catalog Number | Unit Model No | | | |
|----------------------|----------------|---------------|-----|-----|----|
| | | 156 | 180 | 240 | |
| ELECTRIC HEAT | | | | | |
| 15 kW | 208/230V-3ph | 22H66 | OX | OX | OX |
| | 460V-3ph | 22H67 | OX | OX | OX |
| | 575V-3ph | 22V35 | OX | OX | OX |
| 30 kW | 208/230V-3ph | 22H70 | OX | OX | OX |
| | 460V-3ph | 22H71 | OX | OX | OX |
| | 575V-3ph | 22V37 | OX | OX | OX |
| 45 kW | 208/230V-3ph | 22H74 | OX | OX | OX |
| | 460V-3ph | 22H75 | OX | OX | OX |
| | 575V-3ph | 22V39 | OX | OX | OX |
| 60 kW | 208/230V-3ph | 22H78 | OX | OX | OX |
| | 460V-3ph | 22H79 | OX | OX | OX |
| | 575V-3ph | 22V41 | OX | OX | OX |
| 90 kW | 208/230V-3ph | 22H80 | | | OX |
| | 460V-3ph | 22H81 | | | OX |
| | 575V-3ph | 22V42 | | | OX |

ECONOMIZER

High Performance Economizer (Approved for California Title 24 Building Standards / AMCA Class 1A Certified)

| | | | | |
|--|--------------|----|----|----|
| High Performance Economizer (Downflow or Horizontal) | 22J18 | OX | OX | OX |
| Includes Economizer Dampers with Outdoor Air Hood | | | | |
| Downflow Applications - Use furnished Outdoor Air Hood - Order Downflow Barometric Relief Dampers with Exhaust Hood separately | | | | |
| Horizontal Applications - Use furnished Outdoor Air Hood - Order Horizontal Barometric Relief Dampers with Exhaust Hood separately | | | | |

Economizer Controls

| | | | | | |
|--|-----------------------|--------------|----|----|----|
| Differential Enthalpy (Not for Title 24) | Order 2 | 21Z09 | OX | OX | OX |
| Sensible Control | Sensor is Furnished | Factory | O | O | O |
| Single Enthalpy (Not for Title 24) | | 21Z09 | OX | OX | OX |
| Global Control | Sensor Field Provided | Factory | O | O | O |
| Building Pressure Control | | 13J77 | X | X | X |
| Outdoor Air CFM Control | | 13J76 | X | X | X |

Barometric Relief Dampers With Exhaust Hood

| | | | | |
|--------------------------------------|--------------|----|----|----|
| Downflow Barometric Relief Dampers | 54W78 | OX | OX | OX |
| Horizontal Barometric Relief Dampers | 16K99 | X | X | X |

OUTDOOR AIR

Outdoor Air Dampers With Outdoor Air Hood

| | | | | |
|-----------|--------------|----|----|----|
| Motorized | 22J27 | OX | OX | OX |
| Manual | 13U05 | X | X | X |

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

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

O = Configure To Order (Factory Installed).

X = Field Installed.

OPTIONS / ACCESSORIES

| Item Description | Catalog Number | Unit Model No | | | |
|---|----------------|---------------|-----|-----|----|
| | | 156 | 180 | 240 | |
| 1 POWER EXHAUST (DOWNFLOW APPLICATIONS ONLY) | | | | | |
| Standard Static, SCCR Rated | 208/230V | 22H90 | OX | OX | OX |
| | 460V | 22H91 | OX | OX | OX |
| | 575V | 22V34 | OX | OX | OX |
| ROOF CURBS | | | | | |
| Hybrid Roof Curbs, Downflow | | | | | |
| 8 in. height | | 11F58 | X | X | X |
| 14 in. height | | 11F59 | X | X | X |
| 18 in. height | | 11F60 | X | X | X |
| 24 in. height | | 11F61 | X | X | X |
| Adjustable Pitch Curb | | | | | |
| 14 in. height | | 43W26 | X | X | X |
| Standard Roof Curbs, Horizontal - Requires Horizontal Return Air Panel Kit | | | | | |
| 26 in. height - slab applications | | 11T89 | X | X | X |
| 37 in. height - rooftop applications | | 11T96 | X | X | X |
| Insulation Kit For Standard Horizontal Roof Curbs | | | | | |
| For 26 in. Curb | | 73K32 | X | X | X |
| For 37 in. Curb | | 73K34 | X | X | X |
| Horizontal Return Air Panel Kit | | | | | |
| Required for Horizontal Applications with Roof Curb | | 87M00 | X | X | X |
| CEILING DIFFUSERS | | | | | |
| Step-Down - Order one | RTD11-185S | 13K63 | X | X | |
| | RTD11-275S | 13K64 | | | X |
| Flush - Order one | FD11-185S | 13K58 | X | X | |
| | FD11-275S | 13K59 | | | X |
| Transitions (Supply and Return) - Order one | C1DIFF33C-1 | 12X68 | X | X | |
| | C1DIFF34C-1 | 12X70 | | | X |

¹ Field installed Power Exhaust requires Economizer with Outdoor Air Hood and Downflow Barometric Relief Dampers with Exhaust Hood. Must be ordered separately.

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

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

O = Configure To Order (Factory Installed).

X = Field Installed.

SPECIFICATIONS

| General Data | | Nominal Tonnage | 13 Ton | 15 Ton | 20 Ton | |
|---|--|-----------------------|---|---|---|--|
| | | Model Number | LHT156H4M | LHT180H4M | LHT240H4M | |
| | | Efficiency Type | High | High | High | |
| | | Blower Type | MSAV® Multi-Stage Air Volume | MSAV® Multi-Stage Air Volume | MSAV® Multi-Stage Air Volume | |
| Cooling Performance | Gross Cooling Capacity - Btuh | | 154,000 | 181,000 | 232,000 | |
| | ¹ Net Cooling Capacity - Btuh | | 150,000 | 176,000 | 224,000 | |
| | ¹ AHRI Rated Air Flow - cfm | | 4500 | 5500 | 7000 | |
| | Total Unit Power - kW | | 12.3 | 15.8 | 20.1 | |
| | ¹ IEER (Btuh/Watt) | | 15.7 | 15.5 | 15.5 | |
| | ¹ EER (Btuh/Watt) | | 12.1 | 11.1 | 11.1 | |
| Refrigerant Charge | Refrigerant Type | | R-410A | R-410A | R-410A | |
| | Circuit 1 | | 21 lbs. 0 oz. | 22 lbs. 12 oz. | 22 lbs. 8 oz. | |
| | Circuit 2 | | 21 lbs. 0 oz. | 21 lbs. 12 oz. | 21 lbs. 8 oz. | |
| Heating Performance | ¹ Total High Heat Capacity - Btuh | | 144,000 | 174,000 | 224,000 | |
| | Total Unit Power - kW | | 12.4 | 15.0 | 19.3 | |
| | ¹ C.O.P. | | 3.40 | 3.40 | 3.40 | |
| | ¹ Total Low Heat Capacity - Btuh | | 80,000 | 96,000 | 128,000 | |
| | Total Unit Power (kW) | | 11.1 | 13.4 | 17.9 | |
| | ¹ C.O.P. | | 2.10 | 2.10 | 2.10 | |
| Electric Heat (kW) Available - See page 18 | | | 15, 30, 45, 60 kW | 15, 30, 45, 60 kW | 15, 30, 45, 60, 90 kW | |
| Compressor Type (number) | | | Scroll (2) | Scroll (2) | Scroll (2) | |
| Outdoor Coils | Net face area (total) - sq. ft. | | 55.1 | 55.1 | 55.1 | |
| | Number of rows | | 2 | 2 | 2 | |
| | Fins per inch | | 20 | 20 | 20 | |
| Outdoor Coil Fans | Motor - (No.) horsepower | | (6) 1/3 | (6) 1/3 | (6) 1/3 | |
| | Motor rpm | | 1075 | 1075 | 1075 | |
| | Total Motor watts | | 2150 | 2150 | 2150 | |
| | Diameter - (No.) in. | | (6) 24 | (6) 24 | (6) 24 | |
| | Number of blades | | 3 | 3 | 3 | |
| | Total Air volume - cfm | | 16,300 | 16,300 | 16,300 | |
| Indoor Coils | Net face area (total) - sq. ft. | | 21.4 | 21.4 | 21.4 | |
| | Tube diameter - in. | | 3/8 | 3/8 | 3/8 | |
| | Number of rows | | 4 | 4 | 4 | |
| | Fins per inch | | 14 | 14 | 14 | |
| | Drain connection - No. and size | | (1) 1in. FPT | (1) 1in. FPT | (1) 1in. FPT | |
| | Expansion device type | | Balance Port Thermostatic Expansion Valve (removable element head) | | | |
| ² Indoor Blower and Drive Selection | Nominal motor output | | 3 hp, 5 hp | 3 hp, 5 hp, 7.5 hp | 5 hp, 7.5 hp, 10 hp | |
| | Max. usable motor output (US) | | 3.45 hp, 5.75 hp | 3.45 hp, 5.75 hp, 8.62 hp | 5.75 hp, 8.62 hp, 11.5 hp | |
| | Motor - Drive kit number | | 3 hp Kit 1 535-725 rpm Kit 2 710-965 rpm | 3 hp Kit 1 535-725 rpm Kit 2 710-965 rpm | 5 hp Kit 3 685-856 rpm Kit 4 850-1045 rpm Kit 5 945-1185 rpm | |
| | | | 5 hp Kit 3 - 685-856 rpm Kit 4 850-1045 rpm Kit 5 945-1185 rpm | 5 hp Kit 3 - 685-856 rpm Kit 4 850-1045 rpm Kit 5 945-1185 rpm | 7.5 hp Kit 6 850-1045 rpm Kit 7 945-1185 rpm Kit 8 1045-1285 rpm | |
| | | | | 7.5 hp Kit 6 850-1045 rpm Kit 7 945-1185 rpm Kit 8 1045-1285 rpm | 10 hp Kit 7 945-1185 rpm Kit 10 1045-1285 rpm Kit 11 1135-1365 rpm | |
| | Blower wheel nominal D x W - in. | | (2) 15 x 15 in. | (2) 15 x 15 in. | (2) 15 x 15 | |
| | Filters | Type of filter | | MERV 4, Disposable | | |
| | | Number and size - in. | | (6) 24 x 24 x 2 | | |
| | Electrical characteristics | | | 208/230V, 460V or 575V - 60 hertz - 3 phase | | |

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

¹ AHRI Certified to AHRI Standard 340/360:

Cooling Ratings - 95°F outdoor air temperature and 80°F db/67°F wb entering indoor coil air.

High Temperature Heating Ratings - 47°F db/43°F wb outdoor air temperature and 70°F entering indoor coil air.

Low Temperature Heating Ratings - 17°F db/15°F wb outdoor air temperature and 70°F entering indoor coil air.

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.

NOTE - Motor service factor limit - 1.0.

COOLING/HEATING RATINGS

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

13 TON - COOLING LHT156H4M (1 COMPRESSOR - 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 | | |
| | | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F |
| 63°F | 1800 | 58.6 | 1.96 | .77 | .94 | 1.00 | 55.8 | 2.26 | .79 | .96 | 1.00 | 52.6 | 2.62 | .81 | .99 | 1.00 | 49.1 | 3.03 | .83 | 1.00 | 1.00 |
| | 2250 | 61.8 | 1.93 | .84 | 1.00 | 1.00 | 58.8 | 2.23 | .86 | 1.00 | 1.00 | 55.8 | 2.59 | .89 | 1.00 | 1.00 | 52.8 | 3.00 | .92 | 1.00 | 1.00 |
| | 2700 | 65.2 | 1.89 | .91 | 1.00 | 1.00 | 62.2 | 2.20 | .94 | 1.00 | 1.00 | 58.9 | 2.57 | .97 | 1.00 | 1.00 | 55.7 | 2.98 | 1.00 | 1.00 | 1.00 |
| 67°F | 1800 | 62.8 | 1.92 | .59 | .74 | .90 | 59.5 | 2.22 | .59 | .76 | .92 | 56.0 | 2.59 | .60 | .78 | .95 | 52.6 | 3.01 | .61 | .80 | .98 |
| | 2250 | 65.5 | 1.89 | .63 | .81 | .99 | 62.2 | 2.20 | .64 | .83 | 1.00 | 58.6 | 2.57 | .65 | .86 | 1.00 | 54.9 | 2.98 | .67 | .89 | 1.00 |
| | 2700 | 67.5 | 1.87 | .67 | .88 | 1.00 | 64.1 | 2.18 | .68 | .91 | 1.00 | 60.2 | 2.55 | .70 | .94 | 1.00 | 56.6 | 2.97 | .72 | .98 | 1.00 |
| 71°F | 1800 | 67.2 | 1.87 | .41 | .57 | .72 | 64.0 | 2.18 | .41 | .58 | .73 | 60.4 | 2.55 | .41 | .58 | .74 | 56.7 | 2.97 | .41 | .59 | .77 |
| | 2250 | 70.6 | 2.14 | .42 | .61 | .79 | 66.6 | 2.16 | .42 | .62 | .81 | 62.7 | 2.53 | .43 | .63 | .83 | 59.0 | 2.95 | .44 | .65 | .86 |
| | 2700 | 71.8 | 1.82 | .44 | .65 | .86 | 68.1 | 2.15 | .45 | .67 | .88 | 64.5 | 2.51 | .46 | .68 | .91 | 60.6 | 2.93 | .46 | .71 | .95 |

13 TON - COOLING LHT156H4M (2 COMPRESSORS - PART LOAD / FULL LOAD)

| 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 | | |
| | | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F |
| 63°F | 3000 | 124.4 | 7.04 | .69 | .82 | .94 | 117.1 | 7.96 | .70 | .84 | .95 | 109.5 | 9.37 | .71 | .86 | .97 | 98.7 | 10.72 | .73 | .90 | .99 |
| | 3750 | 132.1 | 7.07 | .74 | .89 | .99 | 124.3 | 7.99 | .76 | .91 | 1.00 | 116.4 | 9.39 | .78 | .93 | 1.00 | 107.9 | 11.97 | .80 | .95 | 1.00 |
| | 4500 | 138.5 | 7.09 | .79 | .94 | 1.00 | 131.3 | 8.02 | .81 | .95 | 1.00 | 120.8 | 9.41 | .83 | .98 | 1.00 | 114.2 | 11.96 | .86 | 1.00 | 1.00 |
| 67°F | 3000 | 133.4 | 7.07 | .54 | .67 | .79 | 125.8 | 7.99 | .54 | .68 | .81 | 118.0 | 9.39 | .55 | .69 | .82 | 109.3 | 11.97 | .55 | .70 | .85 |
| | 3750 | 141.0 | 7.11 | .58 | .72 | .86 | 133.0 | 8.03 | .58 | .73 | .88 | 122.3 | 9.43 | .59 | .76 | .90 | 115.8 | 11.97 | .59 | .77 | .92 |
| | 4500 | 147.2 | 7.14 | .60 | .77 | .92 | 138.3 | 8.05 | .61 | .79 | .93 | 129.9 | 9.10 | .62 | .81 | .95 | 116.9 | 11.19 | .63 | .85 | .97 |
| 71°F | 3000 | 142.5 | 7.10 | .41 | .53 | .64 | 135.1 | 8.03 | .41 | .53 | .65 | 126.1 | 9.06 | .40 | .53 | .66 | 117.4 | 11.95 | .40 | .54 | .68 |
| | 3750 | 150.6 | 7.13 | .42 | .56 | .69 | 142.3 | 8.05 | .42 | .56 | .71 | 131.0 | 9.54 | .42 | .58 | .73 | 125.0 | 11.17 | .42 | .58 | .74 |
| | 4500 | 154.2 | 7.54 | .43 | .59 | .75 | 148.1 | 8.08 | .43 | .60 | .76 | 140.0 | 9.54 | .44 | .61 | .78 | 130.3 | 11.19 | .43 | .62 | .81 |

13 TON - COOLING LHT156H4M (2 COMPRESSORS - FULL LOAD)

| 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 | | |
| | | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F |
| 63°F | 4160 | 150.1 | 8.13 | .73 | .88 | 1.00 | 141.2 | 9.14 | .75 | .90 | 1.00 | 132.0 | 10.28 | .76 | .93 | 1.00 | 122.7 | 11.57 | .79 | .96 | 1.00 |
| | 5200 | 157.4 | 8.20 | .79 | .96 | 1.00 | 148.8 | 9.20 | .81 | .99 | 1.00 | 140.0 | 10.34 | .84 | 1.00 | 1.00 | 131.3 | 13.31 | .86 | 1.00 | 1.00 |
| | 6240 | 164.7 | 8.26 | .85 | 1.00 | 1.00 | 157.0 | 9.73 | .88 | 1.00 | 1.00 | 147.8 | 10.41 | .90 | 1.00 | 1.00 | 137.0 | 13.98 | .94 | 1.00 | 1.00 |
| 67°F | 4160 | 160.1 | 8.22 | .57 | .71 | .85 | 151.2 | 9.23 | .57 | .72 | .87 | 141.5 | 10.36 | .58 | .74 | .89 | 131.8 | 13.31 | .59 | .76 | .93 |
| | 5200 | 167.2 | 8.28 | .61 | .77 | .93 | 156.2 | 10.15 | .61 | .79 | .95 | 147.8 | 10.41 | .62 | .81 | .98 | 135.0 | 13.99 | .64 | .84 | 1.00 |
| | 6240 | 172.7 | 8.34 | .65 | .83 | .99 | 166.1 | 10.18 | .65 | .85 | 1.00 | 149.7 | 10.89 | .68 | .89 | 1.00 | 143.3 | 13.99 | .69 | .91 | 1.00 |
| 71°F | 4160 | 169.9 | 8.31 | .42 | .55 | .68 | 160.4 | 10.17 | .42 | .56 | .70 | 148.9 | 10.88 | .42 | .57 | .72 | 142.3 | 13.99 | .42 | .58 | .73 |
| | 5200 | 177.9 | 8.38 | .43 | .59 | .75 | 171.6 | 9.84 | .44 | .60 | .77 | 159.6 | 10.92 | .44 | .61 | .78 | 148.8 | 14.01 | .44 | .63 | .82 |
| | 6240 | 186.0 | 8.86 | .45 | .63 | .81 | 175.0 | 9.50 | .45 | .64 | .82 | 164.4 | 10.96 | .46 | .66 | .85 | 149.7 | 12.76 | .46 | .69 | .90 |

13 TON - HEATING LHT156H4M

| Indoor Coil Air Volume 70°F Dry Bulb cfm | Air Temperature Entering Outdoor Coil | | | | | | | | | |
|--|---------------------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|
| | 65°F | | 45°F | | 25°F | | 5°F | | -15°F | |
| | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input |
| | | | | | | | | | | |
| 4160 | 190.6 | 10.10 | 136.1 | 8.83 | 94.7 | 7.92 | 61.7 | 7.09 | 37.5 | 6.62 |
| 5200 | 196.3 | 9.32 | 139.6 | 8.27 | 96.6 | 7.53 | 63.1 | 6.86 | 38.6 | 6.56 |
| 6240 | 200.3 | 8.82 | 142.3 | 7.92 | 98.4 | 7.30 | 64.5 | 6.73 | 39.7 | 6.55 |

COOLING/HEATING RATINGS

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

15 TON - COOLING LHT180H4M (1 COMPRESSOR - 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 | | |
| | | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F |
| cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | |
| 63°F | 2000 | 64.3 | 2.43 | 0.76 | 0.94 | 1 | 60.6 | 2.67 | 0.77 | 0.98 | 1 | 56.8 | 2.96 | 0.79 | 1 | 1 | 52.9 | 3.32 | 0.81 | 1 | 1 |
| | 2400 | 67.1 | 2.46 | 0.82 | 1 | 1 | 63.6 | 2.69 | 0.83 | 1 | 1 | 60.1 | 2.98 | 0.86 | 1 | 1 | 56 | 3.33 | 0.89 | 1 | 1 |
| | 2800 | 70.3 | 2.49 | 0.88 | 1 | 1 | 66.8 | 2.71 | 0.91 | 1 | 1 | 63.2 | 2.99 | 0.95 | 1 | 1 | 58.7 | 3.34 | 0.99 | 1 | 1 |
| 67°F | 2000 | 68.9 | 2.47 | 0.57 | 0.73 | 0.9 | 65 | 2.7 | 0.57 | 0.74 | 0.93 | 60.9 | 2.98 | 0.58 | 0.76 | 0.96 | 56.3 | 3.33 | 0.58 | 0.78 | 1 |
| | 2400 | 71.2 | 2.49 | 0.61 | 0.79 | 1 | 67.3 | 2.71 | 0.61 | 0.81 | 1 | 63.1 | 2.99 | 0.62 | 0.83 | 1 | 58.4 | 3.34 | 0.63 | 0.86 | 1 |
| | 2800 | 73.1 | 2.51 | 0.64 | 0.85 | 1 | 69.2 | 2.72 | 0.65 | 0.88 | 1 | 65 | 3 | 0.67 | 0.91 | 1 | 59.9 | 3.34 | 0.68 | 0.96 | 1 |
| 71°F | 2000 | 73.8 | 2.52 | 0.4 | 0.56 | 0.71 | 69.9 | 2.73 | 0.39 | 0.56 | 0.72 | 65.7 | 3 | 0.39 | 0.56 | 0.73 | 60.8 | 3.34 | 0.38 | 0.57 | 0.75 |
| | 2400 | 76.1 | 2.54 | 0.41 | 0.59 | 0.77 | 72.2 | 2.75 | 0.41 | 0.6 | 0.78 | 67.9 | 3.02 | 0.41 | 0.61 | 0.81 | 62.7 | 3.35 | 0.41 | 0.62 | 0.84 |
| | 2800 | 77.9 | 2.56 | 0.43 | 0.63 | 0.83 | 73.8 | 2.76 | 0.43 | 0.64 | 0.85 | 69 | 3.02 | 0.43 | 0.66 | 0.88 | 64.1 | 3.36 | 0.43 | 0.68 | 0.93 |

15 TON - COOLING LHT180H4M (2 COMPRESSORS - PART LOAD / FULL LOAD)

| 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 | | |
| | | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F |
| cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | |
| 63°F | 3300 | 138 | 8.46 | 0.67 | 0.81 | 0.92 | 129.3 | 9.47 | 0.68 | 0.82 | 0.94 | 119.4 | 10.93 | 0.69 | 0.84 | 0.95 | 109.6 | 11.93 | 0.7 | 0.86 | 0.97 |
| | 4000 | 146.3 | 8.54 | 0.72 | 0.87 | 0.97 | 136.9 | 9.52 | 0.73 | 0.89 | 0.99 | 126.8 | 10.99 | 0.74 | 0.9 | 1 | 116.6 | 11.97 | 0.76 | 0.92 | 1 |
| | 4800 | 154.2 | 8.62 | 0.77 | 0.92 | 1 | 143.9 | 9.58 | 0.79 | 0.94 | 1 | 133.6 | 11.05 | 0.81 | 0.96 | 1 | 123 | 12.39 | 0.83 | 0.97 | 1 |
| 67°F | 3300 | 149 | 8.56 | 0.52 | 0.65 | 0.77 | 139.5 | 9.54 | 0.52 | 0.66 | 0.79 | 127.3 | 10.66 | 0.52 | 0.67 | 0.81 | 117.8 | 11.98 | 0.52 | 0.68 | 0.83 |
| | 4000 | 157.2 | 8.64 | 0.55 | 0.69 | 0.84 | 146.8 | 9.61 | 0.55 | 0.71 | 0.85 | 136 | 10.73 | 0.55 | 0.72 | 0.87 | 124.5 | 12.03 | 0.56 | 0.74 | 0.89 |
| | 4800 | 164.1 | 8.72 | 0.58 | 0.75 | 0.9 | 152.9 | 9.67 | 0.59 | 0.76 | 0.91 | 141.8 | 10.78 | 0.59 | 0.78 | 0.93 | 129.6 | 12.45 | 0.6 | 0.81 | 0.95 |
| 71°F | 3300 | 160.1 | 8.66 | 0.39 | 0.51 | 0.63 | 149.6 | 9.63 | 0.38 | 0.51 | 0.63 | 139.4 | 10.75 | 0.37 | 0.51 | 0.64 | 127.6 | 12.43 | 0.36 | 0.51 | 0.66 |
| | 4000 | 167.5 | 8.74 | 0.4 | 0.54 | 0.67 | 157.3 | 9.7 | 0.4 | 0.54 | 0.68 | 146.4 | 10.81 | 0.39 | 0.54 | 0.7 | 132.1 | 12.49 | 0.38 | 0.55 | 0.72 |
| | 4800 | 174.8 | 8.82 | 0.42 | 0.57 | 0.72 | 164.2 | 9.77 | 0.41 | 0.58 | 0.74 | 152.6 | 10.87 | 0.41 | 0.58 | 0.76 | 140.6 | 12.15 | 0.4 | 0.59 | 0.79 |

15 TON - COOLING LHT180H4M (2 COMPRESSORS - FULL LOAD)

| 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 | | |
| | | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F |
| cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | |
| 63°F | 4800 | 176.1 | 10.46 | 0.72 | 0.87 | 1 | 165 | 11.67 | 0.73 | 0.89 | 1 | 153 | 13.07 | 0.74 | 0.91 | 1 | 140.1 | 15.42 | 0.77 | 0.94 | 1 |
| | 6000 | 185.8 | 10.55 | 0.78 | 0.95 | 1 | 174 | 11.75 | 0.79 | 0.97 | 1 | 161.8 | 13.16 | 0.82 | 0.99 | 1 | 150.7 | 15.45 | 0.84 | 1 | 1 |
| | 7200 | 193.4 | 10.62 | 0.84 | 1 | 1 | 182.4 | 11.83 | 0.86 | 1 | 1 | 170.9 | 13.22 | 0.88 | 1 | 1 | 156.5 | 15.46 | 0.91 | 1 | 1 |
| 67°F | 4800 | 188.5 | 10.58 | 0.56 | 0.7 | 0.83 | 177.3 | 11.78 | 0.56 | 0.71 | 0.85 | 164.5 | 13.17 | 0.56 | 0.72 | 0.88 | 152.9 | 15.45 | 0.57 | 0.74 | 0.91 |
| | 6000 | 197.8 | 10.66 | 0.59 | 0.76 | 0.91 | 185.7 | 11.87 | 0.6 | 0.77 | 0.94 | 172.5 | 13.24 | 0.61 | 0.79 | 0.97 | 155.8 | 15.46 | 0.62 | 0.83 | 1 |
| | 7200 | 204.2 | 10.74 | 0.63 | 0.82 | 0.98 | 192.1 | 11.92 | 0.64 | 0.84 | 1 | 175 | 13.84 | 0.65 | 0.87 | 1 | 165.4 | 15.48 | 0.66 | 0.89 | 1 |
| 71°F | 4800 | 201.2 | 10.71 | 0.41 | 0.54 | 0.67 | 189.3 | 11.89 | 0.41 | 0.55 | 0.68 | 176.3 | 13.27 | 0.4 | 0.55 | 0.7 | 164.4 | 15.47 | 0.4 | 0.56 | 0.71 |
| | 6000 | 210.5 | 10.8 | 0.43 | 0.58 | 0.73 | 198.4 | 12 | 0.43 | 0.59 | 0.75 | 183.5 | 13.87 | 0.42 | 0.6 | 0.78 | 172.9 | 15.53 | 0.42 | 0.61 | 0.79 |
| | 7200 | 217.1 | 10.97 | 0.44 | 0.62 | 0.79 | 204.7 | 12.07 | 0.44 | 0.63 | 0.82 | 193.3 | 13.93 | 0.44 | 0.64 | 0.83 | 177.6 | 15.58 | 0.44 | 0.66 | 0.87 |

15 TON - HEATING LHT180H4M

| Indoor Coil Air Volume 70°F Dry Bulb cfm | Air Temperature Entering Outdoor Coil | | | | | | | | | |
|--|---------------------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|
| | 65°F | | 45°F | | 25°F | | 5°F | | -15°F | |
| | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input |
| | kBtuh | kW | kBtuh | kW | kBtuh | kW | kBtuh | kW | kBtuh | kW |
| 4800 | 232.5 | 12.63 | 165.3 | 11.38 | 112.0 | 10.27 | 74.7 | 9.51 | 45.8 | 8.73 |
| 6000 | 240.4 | 11.67 | 170.7 | 10.68 | 115.5 | 9.76 | 77.1 | 9.17 | 47.7 | 8.58 |
| 7200 | 247.5 | 11.08 | 175.1 | 10.22 | 118.8 | 9.45 | 79.9 | 8.95 | 49.9 | 8.51 |

COOLING/HEATING RATINGS

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

20 TON - COOLING LHT240H4M (1 COMPRESSOR - 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 | | |
| | | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F |
| cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | |
| 63°F | 3200 | 92.2 | 3.35 | 0.82 | 1 | 1 | 86.6 | 3.91 | 0.84 | 1 | 1 | 80.4 | 4.54 | 0.86 | 1 | 1 | 73.9 | 5.26 | 0.89 | 1 | 1 |
| | 4000 | 98 | 3.33 | 0.9 | 1 | 1 | 92.4 | 3.88 | 0.93 | 1 | 1 | 86 | 4.52 | 0.96 | 1 | 1 | 79.4 | 5.23 | 0.99 | 1 | 1 |
| | 4800 | 102.7 | 3.32 | 0.98 | 1 | 1 | 96.6 | 3.87 | 1 | 1 | 1 | 90.2 | 4.5 | 1 | 1 | 1 | 83.7 | 5.21 | 1 | 1 | 1 |
| 67°F | 3200 | 98.3 | 3.33 | 0.61 | 0.8 | 0.98 | 92.3 | 3.88 | 0.61 | 0.81 | 0.99 | 85.1 | 4.53 | 0.62 | 0.84 | 1 | 77.8 | 5.24 | 0.62 | 0.86 | 1 |
| | 4000 | 102.1 | 3.32 | 0.66 | 0.88 | 1 | 95.5 | 3.87 | 0.66 | 0.9 | 1 | 88.9 | 4.51 | 0.68 | 0.93 | 1 | 81.4 | 5.22 | 0.7 | 0.97 | 1 |
| | 4800 | 105 | 3.32 | 0.71 | 0.96 | 1 | 98.6 | 3.87 | 0.73 | 0.98 | 1 | 91.4 | 4.5 | 0.75 | 1 | 1 | 84.2 | 5.21 | 0.77 | 1 | 1 |
| 71°F | 3200 | 105.1 | 3.32 | 0.41 | 0.6 | 0.77 | 98.7 | 3.87 | 0.41 | 0.6 | 0.78 | 91.5 | 4.5 | 0.4 | 0.61 | 0.81 | 84.3 | 5.21 | 0.39 | 0.62 | 0.84 |
| | 4000 | 108.7 | 3.31 | 0.44 | 0.66 | 0.86 | 102.1 | 3.86 | 0.43 | 0.66 | 0.88 | 94.8 | 4.48 | 0.43 | 0.68 | 0.91 | 87.3 | 5.2 | 0.42 | 0.69 | 0.95 |
| | 4800 | 111.5 | 3.31 | 0.46 | 0.71 | 0.94 | 104.6 | 3.85 | 0.46 | 0.73 | 0.97 | 97.1 | 4.47 | 0.46 | 0.75 | 0.99 | 89.6 | 5.19 | 0.46 | 0.77 | 1 |

20 TON - COOLING LHT240H4M (2 COMPRESSORS - PART LOAD / FULL LOAD)

| 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 | | |
| | | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F |
| cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | |
| 63°F | 4800 | 182.4 | 11.6 | 0.7 | 0.85 | 0.96 | 165.7 | 13.2 | 0.7 | 0.87 | 0.97 | 151.9 | 14.91 | 0.72 | 0.89 | 0.99 | 135.8 | 16.9 | 0.73 | 0.91 | 1 |
| | 6000 | 194.3 | 11.61 | 0.76 | 0.92 | 1 | 182.6 | 13.23 | 0.77 | 0.93 | 1 | 162.7 | 14.94 | 0.79 | 0.95 | 1 | 146.7 | 16.92 | 0.82 | 0.97 | 1 |
| | 7200 | 202.9 | 11.63 | 0.81 | 0.97 | 1 | 188.4 | 13.26 | 0.84 | 0.98 | 1 | 172.8 | 14.97 | 0.86 | 1 | 1 | 156 | 16.94 | 0.89 | 1 | 1 |
| 67°F | 4800 | 197.2 | 11.62 | 0.54 | 0.67 | 0.81 | 181.3 | 13.21 | 0.53 | 0.68 | 0.83 | 164.8 | 14.95 | 0.53 | 0.69 | 0.85 | 148.3 | 16.94 | 0.52 | 0.71 | 0.88 |
| | 6000 | 208.2 | 11.63 | 0.57 | 0.74 | 0.89 | 192.1 | 13.24 | 0.57 | 0.75 | 0.91 | 174.6 | 14.99 | 0.58 | 0.77 | 0.93 | 157.1 | 16.98 | 0.58 | 0.79 | 0.95 |
| | 7200 | 217.1 | 11.65 | 0.61 | 0.79 | 0.95 | 200.2 | 13.26 | 0.62 | 0.81 | 0.96 | 182.2 | 15.01 | 0.62 | 0.84 | 0.98 | 162.9 | 16.99 | 0.63 | 0.87 | 1 |
| 71°F | 4800 | 212.2 | 11.63 | 0.39 | 0.52 | 0.65 | 195.7 | 13.24 | 0.38 | 0.52 | 0.66 | 179.8 | 14.99 | 0.37 | 0.52 | 0.67 | 162.3 | 16.97 | 0.35 | 0.52 | 0.69 |
| | 6000 | 223.8 | 11.66 | 0.41 | 0.56 | 0.71 | 207.2 | 13.26 | 0.4 | 0.57 | 0.73 | 189.6 | 15.03 | 0.39 | 0.57 | 0.75 | 170.4 | 17 | 0.38 | 0.58 | 0.77 |
| | 7200 | 232 | 11.67 | 0.43 | 0.6 | 0.77 | 214.7 | 13.28 | 0.42 | 0.61 | 0.79 | 196.7 | 15.05 | 0.41 | 0.62 | 0.82 | 176.7 | 17.02 | 0.4 | 0.63 | 0.85 |

20 TON - COOLING LHT240H4M (2 COMPRESSORS - FULL LOAD)

| 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 | | |
| | | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F | | | 75°F | 80°F | 85°F |
| cfm | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | kBtuh | kW | 75°F | 80°F | 85°F | |
| 63°F | 6400 | 229.1 | 14.17 | 0.73 | 0.88 | 1 | 212.2 | 15.82 | 0.73 | 0.9 | 1 | 195.8 | 17.66 | 0.75 | 0.93 | 1 | 178.9 | 19.73 | 0.77 | 0.96 | 1 |
| | 8000 | 241.1 | 14.3 | 0.79 | 0.96 | 1 | 223.9 | 15.94 | 0.81 | 0.99 | 1 | 207.6 | 17.78 | 0.83 | 1 | 1 | 190.5 | 19.86 | 0.85 | 1 | 1 |
| | 9600 | 253 | 14.41 | 0.85 | 1 | 1 | 236.1 | 16.07 | 0.87 | 1 | 1 | 220.6 | 17.93 | 0.9 | 1 | 1 | 202.9 | 20 | 0.93 | 1 | 1 |
| 67°F | 6400 | 245.8 | 14.34 | 0.56 | 0.7 | 0.85 | 228.6 | 15.99 | 0.55 | 0.71 | 0.87 | 210.9 | 17.83 | 0.55 | 0.73 | 0.89 | 192.7 | 19.89 | 0.56 | 0.74 | 0.92 |
| | 8000 | 259 | 14.47 | 0.59 | 0.77 | 0.93 | 240 | 16.11 | 0.6 | 0.78 | 0.96 | 221.3 | 17.94 | 0.6 | 0.81 | 0.98 | 201.9 | 19.99 | 0.61 | 0.83 | 1 |
| | 9600 | 266.6 | 14.55 | 0.63 | 0.83 | 0.99 | 249 | 16.2 | 0.64 | 0.85 | 1 | 229.2 | 18.03 | 0.65 | 0.88 | 1 | 208.7 | 20.07 | 0.66 | 0.91 | 1 |
| 71°F | 6400 | 262.7 | 14.51 | 0.41 | 0.54 | 0.68 | 245.3 | 16.16 | 0.4 | 0.55 | 0.69 | 227.2 | 18 | 0.39 | 0.55 | 0.7 | 208.2 | 20.06 | 0.38 | 0.55 | 0.72 |
| | 8000 | 276.4 | 14.64 | 0.42 | 0.59 | 0.74 | 257.4 | 16.29 | 0.42 | 0.59 | 0.76 | 237.7 | 18.11 | 0.41 | 0.6 | 0.78 | 217.1 | 20.16 | 0.4 | 0.61 | 0.81 |
| | 9600 | 284.9 | 14.72 | 0.44 | 0.63 | 0.81 | 264.8 | 16.36 | 0.44 | 0.64 | 0.83 | 245.5 | 18.19 | 0.43 | 0.65 | 0.86 | 224.5 | 20.24 | 0.43 | 0.66 | 0.89 |

20 TON - HEATING LHT240H4M

| Indoor Coil Air Volume 70°F Dry Bulb cfm | Air Temperature Entering Outdoor Coil | | | | | | | | | |
|--|---------------------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|
| | 65°F | | 45°F | | 25°F | | 5°F | | -15°F | |
| | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input | Total Heating Capacity | Comp. Motor Input |
| | | | | | | | | | | |
| 6400 | 290.0 | 16.08 | 210.2 | 14.43 | 146.5 | 12.97 | 99.7 | 11.98 | 64.5 | 11.46 |
| 8000 | 297.6 | 14.90 | 214.6 | 13.58 | 149.5 | 12.39 | 102.0 | 11.62 | 66.3 | 11.36 |
| 9600 | 308.2 | 14.16 | 223.5 | 13.09 | 156.1 | 12.02 | 107.7 | 11.42 | 71.5 | 11.32 |

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 25 for wet coil, option/accessory air resistance data, and factory installed drive kit specifications.

See page 26 for minimum air volume required for use with optional electric heat.

| Air Volume cfm | TOTAL STATIC PRESSURE - Inches Water Gauge (Pa) | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|---|------|------|------|------|------|------|------|------|------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|
| | 0.20 | | 0.40 | | 0.60 | | 0.80 | | 1.00 | | 1.20 | | 1.40 | | 1.60 | | 1.80 | | 2.00 | | 2.20 | | 2.40 | | 2.60 | |
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 2750 | 385 | 0.30 | 505 | 0.50 | 600 | 0.70 | 680 | 0.90 | 755 | 1.10 | 820 | 1.30 | 885 | 1.70 | 950 | 2.10 | 1005 | 2.55 | 1060 | 3.00 | 1110 | 3.30 | 1160 | 3.85 | 1205 | 4.15 |
| 3000 | 395 | 0.35 | 515 | 0.55 | 610 | 0.75 | 685 | 1.00 | 760 | 1.20 | 825 | 1.45 | 885 | 1.70 | 950 | 2.10 | 1005 | 2.55 | 1060 | 3.00 | 1110 | 3.30 | 1160 | 3.85 | 1205 | 4.15 |
| 3250 | 405 | 0.40 | 520 | 0.60 | 615 | 0.85 | 695 | 1.10 | 765 | 1.30 | 830 | 1.60 | 890 | 1.85 | 955 | 2.25 | 1010 | 2.70 | 1070 | 3.20 | 1120 | 3.55 | 1180 | 4.05 | 1215 | 4.70 |
| 3500 | 415 | 0.45 | 530 | 0.70 | 620 | 0.95 | 700 | 1.20 | 775 | 1.45 | 840 | 1.70 | 900 | 2.00 | 965 | 2.45 | 1025 | 2.90 | 1085 | 3.40 | 1135 | 3.75 | 1195 | 4.35 | 1225 | 5.00 |
| 3750 | 425 | 0.50 | 540 | 0.75 | 630 | 1.05 | 710 | 1.30 | 785 | 1.60 | 845 | 1.85 | 905 | 2.15 | 970 | 2.55 | 1030 | 3.00 | 1090 | 3.50 | 1140 | 3.85 | 1200 | 4.50 | 1230 | 5.30 |
| 4000 | 435 | 0.55 | 545 | 0.85 | 635 | 1.10 | 715 | 1.40 | 785 | 1.70 | 850 | 2.00 | 910 | 2.30 | 975 | 2.70 | 1035 | 3.15 | 1095 | 3.65 | 1145 | 4.00 | 1205 | 4.80 | 1235 | 5.60 |
| 4250 | 445 | 0.60 | 555 | 0.90 | 645 | 1.25 | 725 | 1.55 | 795 | 1.85 | 855 | 2.15 | 915 | 2.45 | 975 | 2.80 | 1035 | 3.30 | 1095 | 3.90 | 1145 | 4.25 | 1205 | 5.10 | 1240 | 5.90 |
| 4500 | 455 | 0.70 | 565 | 1.00 | 655 | 1.35 | 730 | 1.65 | 800 | 2.00 | 865 | 2.35 | 925 | 2.65 | 985 | 3.00 | 1045 | 3.45 | 1105 | 4.00 | 1155 | 4.35 | 1215 | 5.20 | 1250 | 6.25 |
| 4750 | 470 | 0.75 | 575 | 1.10 | 660 | 1.45 | 740 | 1.80 | 810 | 2.15 | 870 | 2.50 | 930 | 2.85 | 995 | 3.20 | 1055 | 3.60 | 1115 | 4.25 | 1170 | 4.55 | 1230 | 5.50 | 1270 | 6.50 |
| 5000 | 480 | 0.85 | 585 | 1.25 | 670 | 1.60 | 750 | 1.95 | 815 | 2.30 | 880 | 2.70 | 940 | 3.05 | 1005 | 3.40 | 1065 | 3.85 | 1125 | 4.45 | 1185 | 4.80 | 1245 | 5.80 | 1285 | 8.00 |
| 5250 | 495 | 0.95 | 595 | 1.35 | 680 | 1.70 | 755 | 2.10 | 825 | 2.50 | 890 | 2.90 | 945 | 3.25 | 1005 | 3.65 | 1065 | 4.10 | 1125 | 4.60 | 1185 | 5.00 | 1245 | 6.10 | 1285 | 8.35 |
| 5500 | 505 | 1.05 | 605 | 1.45 | 690 | 1.85 | 765 | 2.25 | 835 | 2.65 | 895 | 3.05 | 955 | 3.45 | 1015 | 3.85 | 1075 | 4.25 | 1135 | 4.60 | 1195 | 5.00 | 1255 | 6.45 | 1295 | 8.75 |
| 5750 | 520 | 1.15 | 615 | 1.60 | 700 | 2.00 | 775 | 2.45 | 840 | 2.85 | 905 | 3.25 | 960 | 3.65 | 1020 | 4.05 | 1080 | 4.45 | 1140 | 4.85 | 1200 | 5.25 | 1260 | 6.75 | 1300 | 9.15 |
| 6000 | 530 | 1.30 | 630 | 1.75 | 710 | 2.15 | 785 | 2.60 | 850 | 3.05 | 910 | 3.45 | 970 | 3.90 | 1030 | 4.30 | 1090 | 4.70 | 1150 | 5.10 | 1210 | 5.50 | 1270 | 7.10 | 1310 | 9.60 |
| 6250 | 545 | 1.40 | 640 | 1.90 | 720 | 2.30 | 795 | 2.80 | 860 | 3.25 | 920 | 3.70 | 980 | 4.15 | 1040 | 4.55 | 1100 | 4.95 | 1160 | 5.35 | 1220 | 5.75 | 1280 | 7.45 | 1320 | 10.05 |
| 6500 | 560 | 1.55 | 650 | 2.05 | 730 | 2.50 | 805 | 3.00 | 870 | 3.45 | 930 | 3.95 | 985 | 4.40 | 1045 | 4.85 | 1105 | 5.25 | 1165 | 5.65 | 1225 | 6.05 | 1285 | 7.85 | 1325 | 10.45 |
| 6750 | 570 | 1.70 | 665 | 2.20 | 745 | 2.70 | 815 | 3.20 | 880 | 3.70 | 940 | 4.20 | 995 | 4.65 | 1055 | 5.10 | 1115 | 5.50 | 1175 | 5.90 | 1235 | 6.30 | 1295 | 8.25 | 1335 | 10.90 |
| 7000 | 585 | 1.85 | 675 | 2.35 | 755 | 2.90 | 825 | 3.40 | 890 | 3.95 | 950 | 4.45 | 1005 | 4.95 | 1065 | 5.40 | 1125 | 5.80 | 1185 | 6.20 | 1245 | 6.60 | 1305 | 8.60 | 1345 | 11.40 |
| 7250 | 600 | 2.00 | 690 | 2.60 | 765 | 3.10 | 835 | 3.65 | 900 | 4.15 | 955 | 4.65 | 1015 | 5.25 | 1075 | 5.65 | 1135 | 6.05 | 1195 | 6.45 | 1255 | 6.95 | 1315 | 9.00 | 1355 | 11.80 |
| 7500 | 615 | 2.20 | 700 | 2.75 | 775 | 3.30 | 845 | 3.85 | 910 | 4.45 | 965 | 4.95 | 1020 | 5.50 | 1080 | 5.95 | 1140 | 6.35 | 1200 | 6.75 | 1260 | 7.25 | 1320 | 9.40 | 1360 | 12.20 |
| 7750 | 630 | 2.40 | 715 | 3.00 | 790 | 3.55 | 855 | 4.10 | 920 | 4.70 | 975 | 5.25 | 1030 | 5.80 | 1090 | 6.35 | 1150 | 6.75 | 1210 | 7.15 | 1270 | 7.65 | 1330 | 9.85 | 1370 | 12.60 |
| 8000 | 640 | 2.55 | 725 | 3.20 | 800 | 3.80 | 865 | 4.35 | 930 | 4.95 | 985 | 5.50 | 1040 | 6.10 | 1100 | 6.70 | 1160 | 7.15 | 1220 | 7.55 | 1280 | 8.05 | 1340 | 10.20 | 1380 | 13.00 |
| 8250 | 655 | 2.80 | 740 | 3.40 | 810 | 4.00 | 880 | 4.65 | 940 | 5.25 | 995 | 5.85 | 1050 | 6.45 | 1110 | 7.05 | 1170 | 7.45 | 1230 | 7.85 | 1290 | 8.40 | 1350 | 10.60 | 1390 | 13.40 |
| 8500 | 670 | 3.00 | 750 | 3.65 | 825 | 4.30 | 890 | 4.90 | 950 | 5.55 | 1005 | 6.15 | 1060 | 6.80 | 1120 | 7.45 | 1180 | 7.85 | 1240 | 8.25 | 1300 | 8.80 | 1360 | 11.00 | 1400 | 13.80 |
| 8750 | 685 | 3.25 | 765 | 3.90 | 835 | 4.55 | 900 | 5.20 | 960 | 5.85 | 1015 | 6.45 | 1070 | 7.15 | 1130 | 7.85 | 1190 | 8.25 | 1250 | 8.65 | 1310 | 9.20 | 1370 | 11.40 | 1410 | 14.20 |
| 9000 | 700 | 3.50 | 780 | 4.20 | 850 | 4.85 | 910 | 5.50 | 970 | 6.15 | 1025 | 6.75 | 1080 | 7.50 | 1140 | 8.15 | 1200 | 8.55 | 1260 | 8.95 | 1320 | 9.60 | 1380 | 11.80 | 1420 | 14.60 |
| 9250 | 715 | 3.75 | 790 | 4.45 | 860 | 5.15 | 925 | 5.85 | 985 | 6.55 | 1040 | 7.20 | 1095 | 7.85 | 1150 | 8.55 | 1210 | 8.95 | 1270 | 9.25 | 1330 | 10.05 | 1390 | 12.20 | 1430 | 15.00 |
| 9500 | 730 | 4.00 | 805 | 4.75 | 875 | 5.45 | 935 | 6.15 | 995 | 6.90 | 1050 | 7.60 | 1100 | 8.25 | 1150 | 8.95 | 1210 | 9.35 | 1270 | 9.65 | 1330 | 10.40 | 1390 | 12.60 | 1440 | 15.40 |
| 9750 | 745 | 4.30 | 820 | 5.05 | 885 | 5.75 | 950 | 6.55 | 1005 | 7.20 | 1060 | 7.95 | 1110 | 8.65 | 1160 | 9.25 | 1220 | 9.65 | 1280 | 10.00 | 1340 | 10.75 | 1400 | 13.00 | 1450 | 15.80 |
| 10,000 | 760 | 4.60 | 835 | 5.40 | 900 | 6.15 | 960 | 6.85 | 1015 | 7.60 | 1070 | 8.35 | 1120 | 9.05 | 1170 | 9.80 | 1230 | 10.25 | 1290 | 10.55 | 1350 | 11.10 | 1410 | 13.40 | 1460 | 16.20 |
| 10,250 | 775 | 4.90 | 845 | 5.65 | 910 | 6.45 | 970 | 7.20 | 1030 | 8.00 | 1080 | 8.75 | 1135 | 9.55 | 1180 | 10.25 | 1240 | 10.65 | 1300 | 10.90 | 1360 | 11.45 | 1420 | 13.80 | 1470 | 16.60 |
| 10,500 | 790 | 5.20 | 860 | 6.00 | 925 | 6.85 | 985 | 7.65 | 1040 | 8.40 | 1095 | 9.20 | 1145 | 10.00 | 1190 | 10.70 | 1250 | 11.05 | 1310 | 11.25 | 1370 | 11.80 | 1430 | 14.20 | 1480 | 17.00 |
| 10,750 | 805 | 5.55 | 875 | 6.40 | 940 | 7.25 | 1000 | 8.05 | 1055 | 8.85 | 1105 | 9.65 | 1155 | 10.45 | 1200 | 11.20 | 1260 | 11.45 | 1320 | 11.65 | 1380 | 12.20 | 1440 | 14.60 | 1490 | 17.40 |
| 11,000 | 820 | 5.90 | 890 | 6.80 | 950 | 7.60 | 1010 | 8.45 | 1065 | 9.30 | 1115 | 10.05 | 1165 | 10.90 | 1210 | 11.60 | 1270 | 11.85 | 1330 | 12.05 | 1390 | 12.60 | 1450 | 15.00 | 1500 | 17.80 |

BLOWER DATA

FACTORY INSTALLED BELT DRIVE KIT SPECIFICATIONS

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

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

NOTE - Motor service factor limit - 1.0.

FACTORY INSTALLED OPTIONS/FIELD INSTALLED ACCESSORY AIR RESISTANCE

| Air Volume cfm | Wet Indoor Coil | Electric Heat | Economizer | Filters | | | Horizontal Roof Curb |
|-------------------|--------------------|------------------|------------|---------|---------|---------|-------------------------|
| | in. w.g. | in. w.g. | in. w.g. | MERV 8 | MERV 13 | MERV 16 | in. w.g. |
| 3250 | .03 | --- | --- | .01 | .04 | 0.07 | .04 |
| 3500 | .03 | --- | --- | .01 | .04 | 0.08 | .05 |
| 3750 | .03 | --- | --- | .01 | .04 | 0.08 | .05 |
| 4000 | .04 | --- | --- | .01 | .04 | 0.09 | .06 |
| 4250 | .04 | --- | --- | .01 | .05 | 0.10 | .07 |
| 4500 | .05 | --- | --- | .01 | .05 | 0.10 | .07 |
| 4750 | .05 | --- | --- | .02 | .05 | 0.11 | .08 |
| 5000 | .05 | --- | --- | .02 | .06 | 0.12 | .08 |
| 5250 | .06 | --- | --- | .02 | .06 | 0.12 | .09 |
| 5500 | .07 | --- | --- | .02 | .06 | 0.13 | .10 |
| 5750 | .07 | --- | --- | .02 | .07 | 0.14 | .11 |
| 6000 | .08 | .01 | --- | .03 | .07 | 0.14 | .11 |
| 6250 | .08 | .01 | .01 | .03 | .07 | 0.15 | .12 |
| 6500 | .09 | .01 | .02 | .03 | .08 | 0.16 | .13 |
| 6750 | .10 | .01 | .03 | .03 | .08 | 0.17 | .14 |
| 7000 | .10 | .01 | .04 | .04 | .08 | 0.17 | .15 |
| 7250 | .11 | .01 | .05 | .04 | .09 | 0.18 | .16 |
| 7500 | .12 | .01 | .06 | .04 | .09 | 0.19 | .17 |
| 8000 | .13 | .02 | .09 | .05 | .10 | 0.21 | .19 |
| 8500 | .15 | .02 | .11 | .05 | .10 | 0.22 | .21 |
| 9000 | .16 | .04 | .14 | .06 | .11 | 0.24 | .24 |
| 9500 | .18 | .05 | .16 | .07 | .12 | 0.25 | .26 |
| 10,000 | .20 | .06 | .19 | .07 | .12 | 0.27 | .29 |
| 10,500 | .22 | .09 | .22 | .08 | .13 | 0.29 | .31 |
| 11,000 | .24 | .11 | .25 | .09 | .14 | 0.30 | .34 |

BLOWER DATA

MINIMUM AIR VOLUME REQUIRED FOR USE WITH OPTIONAL ELECTRIC HEAT

| Electric Heat kW | Minimum cfm |
|------------------|-------------|
| 15 | 6000 |
| 30 | 6000 |
| 45 | 6000 |
| 60 | 6000 |
| 90 | 6000 |

POWER EXHAUST FAN PERFORMANCE

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

CEILING DIFFUSER AIR RESISTANCE - in. w.g.

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

CEILING DIFFUSER AIR THROW DATA - ft.

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

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

ELECTRICAL/ELECTRIC HEAT DATA

13 TON

| Model No. | | LHT156H4 | | | | | |
|--|-----------------------------------|-----------------|------|-------------|-----|-------------|-----|
| ¹ Voltage - 60Hz | | 208/230V - 3 Ph | | 460V - 3 Ph | | 575V - 3 Ph | |
| Compressor 1 (Non-Inverter) | Rated Load Amps | 17.6 | | 8.5 | | 6.3 | |
| | Locked Rotor Amps | 136 | | 66.1 | | 55.3 | |
| Compressor 2 (Non-Inverter) | Rated Load Amps | 22.4 | | 10.6 | | 7.7 | |
| | Locked Rotor Amps | 149 | | 75 | | 54 | |
| Outdoor Fan Motors | Full Load Amps (6 Non-ECM) | 2.4 | | 1.3 | | 1 | |
| | Total | 14.4 | | 7.8 | | 6 | |
| Power Exhaust (2) 0.33 HP | Full Load Amps | 2.4 | | 1.3 | | 1 | |
| | Total | 4.8 | | 2.6 | | 2 | |
| Service Outlet 115V GFI (amps) | | 15 | | 15 | | 20 | |
| Indoor Blower Motor | Horsepower | 3 | 5 | 3 | 5 | 3 | 5 |
| | Full Load Amps | 10.6 | 16.7 | 4.8 | 7.6 | 3.9 | 6.1 |
| ² Maximum Overcurrent Protection (MOCP) | Unit Only | 90 | 90 | 40 | 45 | 30 | 35 |
| | With (2) 0.33 HP Power Exhaust | 90 | 100 | 45 | 50 | 35 | 35 |
| ³ Minimum Circuit Ampacity (MCA) | Unit Only | 71 | 77 | 35 | 38 | 26 | 29 |
| | With (2) 0.33 HP Power Exhaust | 76 | 82 | 37 | 40 | 28 | 31 |

ELECTRIC HEAT DATA

| Electric Heat Voltage | | 208V | 240V | 208V | 240V | 480V | 480V | 600V | 600V | |
|--|--|-------|------------------|------|------------------|------|------|------|------|----|
| ² Maximum Overcurrent Protection (MOCP) | Unit+ Electric Heat | 15 kW | ⁴ 110 | 125 | 125 | 125 | 60 | 60 | 45 | 50 |
| | | 30 kW | ⁴ 150 | 175 | 175 | 175 | 80 | 90 | 70 | 70 |
| | | 45 kW | ⁴ 200 | 225 | ⁴ 200 | 225 | 110 | 110 | 80 | 90 |
| | | 60 kW | ⁴ 200 | 225 | 225 | 225 | 110 | 110 | 90 | 90 |
| ³ Minimum Circuit Ampacity (MCA) | Unit+ Electric Heat | 15 kW | 110 | 116 | 116 | 122 | 57 | 60 | 44 | 47 |
| | | 30 kW | 149 | 161 | 155 | 167 | 80 | 83 | 62 | 65 |
| | | 45 kW | 188 | 206 | 194 | 213 | 103 | 105 | 80 | 83 |
| | | 60 kW | 196 | 215 | 202 | 222 | 107 | 110 | 84 | 86 |
| ² Maximum Overcurrent Protection (MOCP) | Unit+ Electric Heat and (2) 0.33 HP Power Exhaust | 15 kW | 125 | 125 | ⁴ 125 | 150 | 60 | 70 | 50 | 50 |
| | | 30 kW | 175 | 175 | 175 | 175 | 90 | 90 | 70 | 70 |
| | | 45 kW | ⁴ 200 | 225 | ⁴ 200 | 225 | 110 | 110 | 90 | 90 |
| | | 60 kW | 225 | 225 | ⁴ 225 | 250 | 110 | 125 | 90 | 90 |
| ³ Minimum Circuit Ampacity (MCA) | Unit+ Electric Heat and (2) 0.33 HP Power Exhaust | 15 kW | 115 | 121 | 121 | 127 | 60 | 63 | 46 | 49 |
| | | 30 kW | 154 | 166 | 160 | 172 | 83 | 85 | 64 | 67 |
| | | 45 kW | 193 | 211 | 199 | 217 | 105 | 108 | 82 | 85 |
| | | 60 kW | 201 | 220 | 207 | 226 | 110 | 112 | 86 | 88 |

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

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

² HACR type breaker or fuse.

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

⁴ Factory installed circuit breaker not available.

ELECTRICAL/ELECTRIC HEAT DATA

15 TON

| Model No. | | LHT180H4 | | | | | | | | |
|--|-------------------------------------|-----------------|------|------|-------------|-----|-----|-------------|-----|-----|
| ¹ Voltage - 60Hz | | 208/230V - 3 Ph | | | 460V - 3 Ph | | | 575V - 3 Ph | | |
| Compressor 1 (Non-Inverter) | Rated Load Amps | 25.3 | | | 9.6 | | | 8.4 | | |
| | Locked Rotor Amps | 184 | | | 84 | | | 60 | | |
| Compressor 2 (Non-Inverter) | Rated Load Amps | 25 | | | 12.2 | | | 9 | | |
| | Locked Rotor Amps | 164 | | | 100 | | | 78 | | |
| Outdoor Fan Motors | Full Load Amps (6 Non-ECM) Total | 2.4 | | | 1.3 | | | 1 | | |
| | | 14.4 | | | 7.8 | | | 6 | | |
| Power Exhaust (2) 0.33 HP | Full Load Amps | 2.4 | | | 1.3 | | | 1 | | |
| | Total | 4.8 | | | 2.6 | | | 2 | | |
| Service Outlet 115V GFI (amps) | | 15 | | | 15 | | | 20 | | |
| Indoor Blower Motor | Horsepower | 3 | 5 | 7.5 | 3 | 5 | 7.5 | 3 | 5 | 7.5 |
| | Full Load Amps | 10.6 | 16.7 | 24.2 | 4.8 | 7.6 | 11 | 3.9 | 6.1 | 9 |
| ² Maximum Overcurrent Protection (MOCP) | Unit Only | 100 | 110 | 110 | 45 | 50 | 50 | 35 | 40 | 40 |
| | With (2) 0.33 HP Power Exhaust | 110 | 110 | 125 | 50 | 50 | 50 | 40 | 40 | 45 |
| ³ Minimum Circuit Ampacity (MCA) | Unit Only | 82 | 88 | 96 | 38 | 41 | 44 | 30 | 32 | 35 |
| | With (2) 0.33 HP Power Exhaust | 87 | 93 | 101 | 41 | 43 | 47 | 32 | 34 | 37 |

ELECTRIC HEAT DATA

| | | Electric Heat Voltage | | | 208V | 240V | 208V | 240V | 208V | 240V | 480V | 480V | 480 | 600V | 600V | 600V |
|--|--|-----------------------|------------------|-----|------------------|------|------------------|------|------|------|------|------|-----|------|------|------|
| ² Maximum Overcurrent Protection (MOCP) | Unit+ Electric Heat | 15 kW | ⁴ 125 | 150 | 150 | 150 | 150 | 150 | 150 | 70 | 70 | 70 | 50 | 50 | 60 | |
| | | 30 kW | 175 | 175 | ⁴ 175 | 200 | ⁴ 175 | 200 | 90 | 90 | 90 | 90 | 70 | 70 | 80 | |
| | | 45 kW | ⁴ 200 | 225 | 225 | 225 | ⁴ 225 | 250 | 110 | 110 | 125 | 125 | 90 | 90 | 90 | |
| | | 60 kW | ⁴ 225 | 250 | ⁴ 225 | 250 | ⁴ 225 | 250 | 110 | 125 | 125 | 125 | 90 | 90 | 100 | |
| ³ Minimum Circuit Ampacity (MCA) | Unit+ Electric Heat | 15 kW | 121 | 127 | 127 | 133 | 135 | 141 | 61 | 63 | 67 | 48 | 50 | 53 | | |
| | | 30 kW | 160 | 172 | 166 | 178 | 174 | 186 | 83 | 86 | 89 | 66 | 68 | 71 | | |
| | | 45 kW | 199 | 217 | 205 | 224 | 213 | 231 | 106 | 108 | 112 | 84 | 86 | 89 | | |
| | | 60 kW | 207 | 226 | 213 | 233 | 221 | 240 | 110 | 113 | 116 | 88 | 90 | 93 | | |
| ² Maximum Overcurrent Protection (MOCP) | Unit+ Electric Heat and (2) 0.33 HP Power Exhaust | 15 kW | 150 | 150 | 150 | 150 | 150 | 150 | 70 | 70 | 70 | 50 | 60 | 60 | | |
| | | 30 kW | ⁴ 175 | 200 | ⁴ 175 | 200 | 200 | 200 | 90 | 90 | 100 | 70 | 70 | 80 | | |
| | | 45 kW | 225 | 225 | ⁴ 225 | 250 | ⁴ 225 | 250 | 110 | 125 | 125 | 90 | 90 | 100 | | |
| | | 60 kW | ⁴ 225 | 250 | ⁴ 225 | 250 | 250 | 250 | 125 | 125 | 125 | 90 | 100 | 100 | | |
| ³ Minimum Circuit Ampacity (MCA) | Unit+ Electric Heat and (2) 0.33 HP Power Exhaust | 15 kW | 126 | 132 | 132 | 138 | 140 | 146 | 63 | 66 | 69 | 50 | 52 | 55 | | |
| | | 30 kW | 165 | 177 | 171 | 183 | 179 | 191 | 86 | 88 | 92 | 68 | 70 | 73 | | |
| | | 45 kW | 204 | 222 | 210 | 228 | 218 | 236 | 108 | 111 | 114 | 86 | 88 | 91 | | |
| | | 60 kW | 212 | 231 | 218 | 237 | 226 | 245 | 113 | 116 | 119 | 90 | 92 | 95 | | |

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

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

² HACR type breaker or fuse.

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

⁴ Factory installed circuit breaker not available.

ELECTRICAL/ELECTRIC HEAT DATA

20 TON

| Model No. | | LHT240H4 | | | | | | | | |
|--|-----------------------------------|-----------------|------|------|-------------|-----|----|-------------|-----|----|
| ¹ Voltage - 60Hz | | 208/230V - 3 Ph | | | 460V - 3 Ph | | | 575V - 3 Ph | | |
| Compressor 1 (Non-Inverter) | Rated Load Amps | 32.6 | | | 14.8 | | | 11.1 | | |
| | Locked Rotor Amps | 240 | | | 130 | | | 93.7 | | |
| Compressor 2 (Non-Inverter) | Rated Load Amps | 31.1 | | | 13 | | | 11 | | |
| | Locked Rotor Amps | 255 | | | 123 | | | 93.7 | | |
| Outdoor Fan Motors | Full Load Amps (6 Non-ECM) | 2.4 | | | 1.3 | | | 1 | | |
| | Total | 14.4 | | | 7.8 | | | 6 | | |
| Power Exhaust (2) 0.33 HP | Full Load Amps | 2.4 | | | 1.3 | | | 1 | | |
| | Total | 4.8 | | | 2.6 | | | 2 | | |
| Service Outlet 115V GFI (amps) | | 15 | | | 15 | | | 20 | | |
| Indoor Blower Motor | Horsepower | 5 | 7.5 | 10 | 5 | 7.5 | 10 | 5 | 7.5 | 10 |
| | Full Load Amps | 16.7 | 24.2 | 30.8 | 7.6 | 11 | 14 | 6.1 | 9 | 11 |
| ² Maximum Overcurrent Protection (MOCP) | Unit Only | 125 | 125 | 125 | 60 | 60 | 60 | 45 | 50 | 50 |
| | With (2) 0.33 HP Power Exhaust | 125 | 125 | 150 | 60 | 60 | 70 | 50 | 50 | 50 |
| ³ Minimum Circuit Ampacity (MCA) | Unit Only | 103 | 111 | 118 | 47 | 51 | 54 | 37 | 40 | 42 |
| | With (2) 0.33 HP Power Exhaust | 108 | 116 | 122 | 50 | 53 | 56 | 39 | 42 | 44 |

ELECTRIC HEAT DATA

| | | Electric Heat Voltage | 208V | 240V | 208V | 240V | 208V | 240V | 480V | 480V | 480V | 600V | 600V | 600V |
|--|---|-----------------------|------------------|------------------|------------------|------------------|------------------|------------------|------|------|------|------|------|------|
| ² Maximum Overcurrent Protection (MOCP) | Unit+ | 15 kW | 150 | 150 | ⁴ 150 | 175 | 175 | 175 | 70 | 80 | 80 | 60 | 60 | 60 |
| | Electric Heat | 30 kW | 200 | 200 | ⁴ 200 | 225 | ⁴ 200 | 225 | 100 | 100 | 100 | 80 | 80 | 80 |
| | | 45 kW | ⁴ 225 | 250 | 250 | 250 | ⁴ 250 | ⁴ 300 | 125 | 125 | 125 | 100 | 100 | 100 |
| | | 60 kW | 250 | 250 | ⁴ 250 | ⁴ 300 | ⁴ 250 | ⁴ 300 | 125 | 125 | 150 | 100 | 100 | 110 |
| | | 90 kW | ⁴ 300 | ⁴ 350 | ⁴ 300 | ⁴ 350 | 350 | ⁴ 350 | 175 | 175 | 175 | 125 | 150 | 150 |
| ³ Minimum Circuit Ampacity (MCA) | Unit+ | 15 kW | 143 | 149 | 150 | 156 | 157 | 163 | 70 | 73 | 76 | 56 | 58 | 60 |
| | Electric Heat | 30 kW | 182 | 194 | 189 | 201 | 196 | 208 | 93 | 96 | 99 | 74 | 76 | 78 |
| | | 45 kW | 221 | 239 | 228 | 246 | 235 | 253 | 115 | 118 | 121 | 92 | 95 | 97 |
| | | 60 kW | 229 | 248 | 236 | 255 | 243 | 262 | 120 | 123 | 126 | 95 | 98 | 100 |
| | | 90 kW | 291 | 320 | 299 | 327 | 305 | 334 | 156 | 159 | 162 | 124 | 127 | 129 |
| ² Maximum Overcurrent Protection (MOCP) | Unit+ | 15 kW | ⁴ 150 | 175 | 175 | 175 | 175 | 175 | 80 | 80 | 80 | 60 | 60 | 70 |
| | Electric Heat and (2) 0.33 HP Power Exhaust | 30 kW | 200 | 200 | ⁴ 200 | 225 | 225 | 225 | 100 | 100 | 110 | 80 | 80 | 80 |
| | | 45 kW | 250 | 250 | ⁴ 250 | ⁴ 300 | ⁴ 250 | ⁴ 300 | 125 | 125 | 125 | 100 | 100 | 100 |
| | | 60 kW | ⁴ 250 | ⁴ 300 | ⁴ 250 | ⁴ 300 | ⁴ 250 | ⁴ 300 | 125 | 150 | 150 | 100 | 110 | 110 |
| | | 90 kW | ⁴ 300 | ⁴ 350 | 350 | ⁴ 350 | 350 | ⁴ 350 | 175 | 175 | 175 | 150 | 150 | 150 |
| ³ Minimum Circuit Ampacity (MCA) | Unit+ | 15 kW | 147 | 153 | 155 | 161 | 161 | 167 | 73 | 76 | 79 | 58 | 60 | 62 |
| | Electric Heat and (2) 0.33 HP Power Exhaust | 30 kW | 186 | 198 | 194 | 206 | 201 | 213 | 95 | 99 | 102 | 76 | 78 | 80 |
| | | 45 kW | 226 | 244 | 233 | 251 | 240 | 258 | 118 | 121 | 124 | 94 | 97 | 99 |
| | | 60 kW | 233 | 253 | 241 | 260 | 247 | 267 | 122 | 126 | 129 | 97 | 100 | 102 |
| | | 90 kW | 296 | 325 | 303 | 332 | 310 | 339 | 158 | 162 | 165 | 126 | 129 | 131 |

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

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

² HACR type breaker or fuse.

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

⁴ Factory installed circuit breaker not available.

ELECTRICAL ACCESSORIES - DISCONNECTS

13 TON | LHT156H4

| Motor Horsepower | 3 | | 5 | | 3 | 5 | 3 | 5 |
|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 208V | 240V | 208V | 240V | | | | |
| Unit Only | 54W85 | 54W85 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Power Exhaust | 54W86 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Electric Heat 15 kW | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Electric Heat 30 kW | 54W86 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Electric Heat 45 kW | 54W87 | 54W86 | 54W87 | 54W86 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Electric Heat 60 kW | 54W87 | 54W87 | 54W87 | 54W87 | 54W86 | 54W86 | 54W85 | 54W85 |
| + Power Exhaust + Elec. Heat 15 kW | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Power Exhaust + Elec. Heat 30 kW | 54W86 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Power Exhaust + Elec. Heat 45 kW | 54W87 | 54W86 | 54W87 | 54W86 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Power Exhaust + Elec. Heat 60 kW | 54W87 | 54W87 | 54W87 | 54W87 | 54W86 | 54W86 | 54W85 | 54W85 |

15 TON | LHT180H4

| Motor Horsepower | 3 | | 5 | | 7.5 | | 3 | 5 | 7.5 | 3 | 5 | 7.5 |
|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 208V | 240V | 208V | 240V | 208V | 240V | | | | | | |
| Unit Only | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Power Exhaust | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Electric Heat 15 kW | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Electric Heat 30 kW | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Electric Heat 45 kW | 54W87 | 54W86 | 54W87 | 54W86 | 54W87 | 54W87 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Electric Heat 60 kW | 54W87 | 54W87 | 54W87 | 54W87 | 54W87 | 54W87 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 |
| + Power Exhaust + Elec. Heat 15 kW | 54W85 | 54W85 | 54W85 | 54W85 | 54W86 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Power Exhaust + Elec. Heat 30 kW | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Power Exhaust + Elec. Heat 45 kW | 54W87 | 54W86 | 54W87 | 54W86 | 54W87 | 54W87 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Power Exhaust + Elec. Heat 60 kW | 54W87 | 54W87 | 54W87 | 54W87 | 54W87 | 54W87 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 |

20 TON | LHT240H4

| Motor Horsepower | 5 | | 7.5 | | 10 | | 5 | 7.5 | 10 | 5 | 7.5 | 10 |
|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------|-------|-------|-------|-------|-------|
| | 208V | 240V | 208V | 240V | 208V | 240V | | | | | | |
| Unit Only | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Power Exhaust | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Electric Heat 15 kW | 54W85 | 54W85 | 54W85 | 54W85 | 54W86 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Electric Heat 30 kW | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Electric Heat 45 kW | 54W87 | 54W86 | 54W87 | 54W87 | 54W87 | 54W87 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Electric Heat 60 kW | 54W87 | 54W87 | 54W87 | 54W87 | 54W87 | 54W87 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 |
| + Electric Heat 90 kW | ¹ NA | ¹ NA | ¹ NA | ¹ NA | ¹ NA | ¹ NA | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 |
| + Power Exhaust + Elec. Heat 15 kW | 54W85 | 54W85 | 54W86 | 54W85 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Power Exhaust + Elec. Heat 30 kW | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 | 54W85 |
| + Power Exhaust + Elec. Heat 45 kW | 54W87 | 54W86 | 54W87 | 54W87 | 54W87 | 54W87 | 54W85 | 54W85 | 54W86 | 54W85 | 54W85 | 54W85 |
| + Power Exhaust + Elec. Heat 60 kW | 54W87 | 54W87 | 54W87 | 54W87 | 54W87 | 54W87 | 54W86 | 54W86 | 54W86 | 54W85 | 54W85 | 54W86 |
| + Power Exhaust + Elec. Heat 90 kW | ¹ NA | ¹ NA | ¹ NA | ¹ NA | ¹ NA | ¹ NA | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 | 54W86 |

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

¹ Disconnect must be field furnished.

ELECTRIC HEAT CAPACITIES

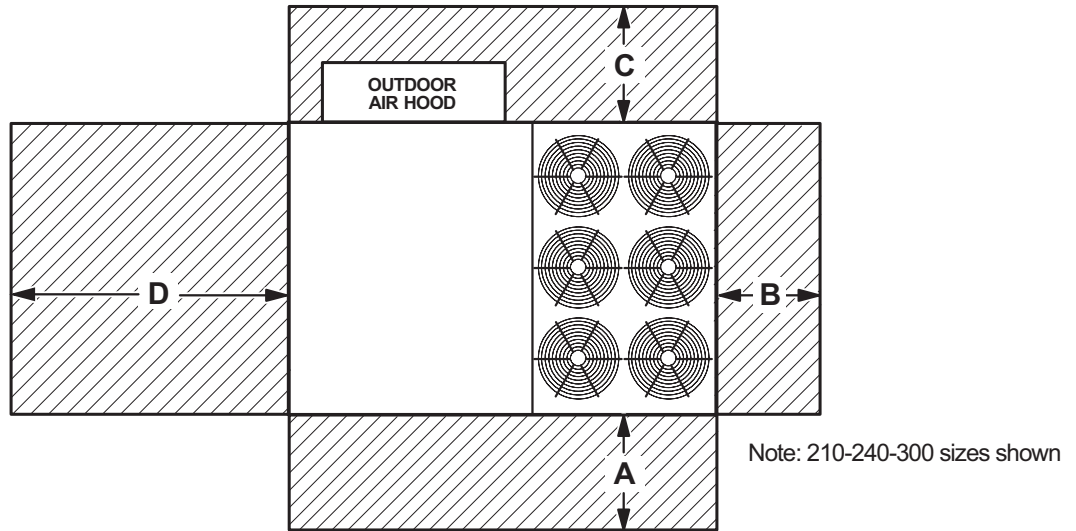
| Volts Input | 15 kW | | | 30 kW | | | 45 kW | | | 60 kW | | | 90 kW | | |
|-------------|----------|-------------|---------------|----------|-------------|---------------|----------|-------------|---------------|----------|-------------|---------------|----------|-------------|---------------|
| |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

FIELD WIRING NOTES

- For use with copper wiring only
- Field wiring not furnished
- All wiring must conform to NEC or CEC and local electrical codes
- For specific wiring information, please refer to the installation instructions

UNIT CLEARANCES

Unit With Economizer



| ¹ Unit Clearance | A | | B | | C | | D | | Top Clearance |
|------------------------------------|-----|------|-----|-----|-----|-----|-----|------|---------------|
| | in. | mm | in. | mm | in. | mm | in. | mm | |
| Service Clearance | 60 | 1524 | 36 | 914 | 36 | 934 | 66 | 1676 | Unobstructed |
| Minimum Operation Clearance | 45 | 1143 | 36 | 914 | 36 | 914 | 41 | 1041 | |

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

¹ **Service Clearance** - Required for removal of serviceable parts.

Minimum Operation Clearance - Required clearance for proper unit operation.

OUTDOOR SOUND DATA

| Unit Model Number | Octave Band Sound Power Levels dBA, re 10 ⁻¹² Watts - Center Frequency - Hz | | | | | | | ¹ Sound Rating Number (dBA) |
|-------------------|--|-----|-----|------|------|------|------|--|
| | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | |
| 156, 180, 240 | 79 | 84 | 88 | 89 | 85 | 82 | 73 | 94 |

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

¹ Sound Rating Number according to AHRI Standard 370-2001 (includes pure tone penalty).

Sound Rating Number is the overall A-Weighted Sound Power Level (LWA), dBA (100 Hz to 10,000 Hz).

| WEIGHT DATA | | | | UNIT |
|---------------|------|------|----------|------|
| Model Number | Net | | Shipping | |
| | lbs. | kg | lbs. | kg |
| 156 Base Unit | 2198 | 997 | 2398 | 1088 |
| 156 Max. Unit | 2488 | 1129 | 2688 | 1219 |
| 180 Base Unit | 2226 | 1010 | 2426 | 1100 |
| 180 Max. Unit | 2516 | 1141 | 2716 | 1232 |
| 240 Base Unit | 2268 | 1029 | 2468 | 1119 |
| 240 Max. Unit | 2558 | 1160 | 2758 | 1251 |

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

| WEIGHT DATA | | OPTIONS / ACCESSORIES | |
|---|-------------|-----------------------|-----|
| | | Shipping Weight | |
| | | lbs. | kg |
| ECONOMIZER / OUTDOOR AIR / EXHAUST | | | |
| Economizer | | | |
| Economizer Dampers (with Outdoor Air Hood) | | 167 | 76 |
| Barometric Relief Dampers (downflow) | | 30 | 14 |
| Barometric Relief Dampers (horizontal) | | 20 | 9 |
| Outdoor Air Dampers with Hood (downflow) | | | |
| Motorized | | 39 | 18 |
| Manual | | 22 | 10 |
| Power Exhaust | | 62 | 28 |
| ELECTRIC HEAT | | | |
| 15 kW | | 59 | 27 |
| 30 kW | | 59 | 27 |
| 45 kW | | 76 | 34 |
| 60 kW | | 76 | 34 |
| 90 kW | | 84 | 38 |
| COMBINATION COIL/HAIL GUARDS | | | |
| All models | | 36 | 16 |
| ROOF CURBS | | | |
| Hybrid Roof Curbs, Downflow | | | |
| 8 in. height | | 136 | 62 |
| 14 in. height | | 169 | 77 |
| 18 in. height | | 191 | 87 |
| 24 in. height | | 224 | 102 |
| Adjustable Pitch Curb, Downflow | | | |
| 14 in. height | | 224 | 102 |
| Horizontal, Standard | | | |
| 26 in. height | | | |
| 37 in. height | | | |
| CEILING DIFFUSERS | | | |
| Step-Down | RTD11-185S | 168 | 76 |
| | RTD11-275S | 238 | 108 |
| Flush | FD11-185S | 168 | 76 |
| | FD11-275S | 238 | 108 |
| Transitions | C1DIFF33C-1 | 80 | 36 |
| | C1DIFF34C-1 | 75 | 34 |

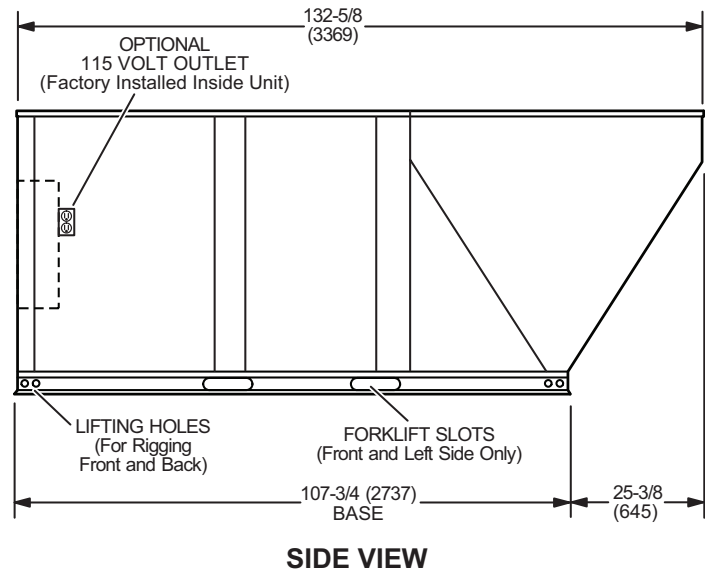
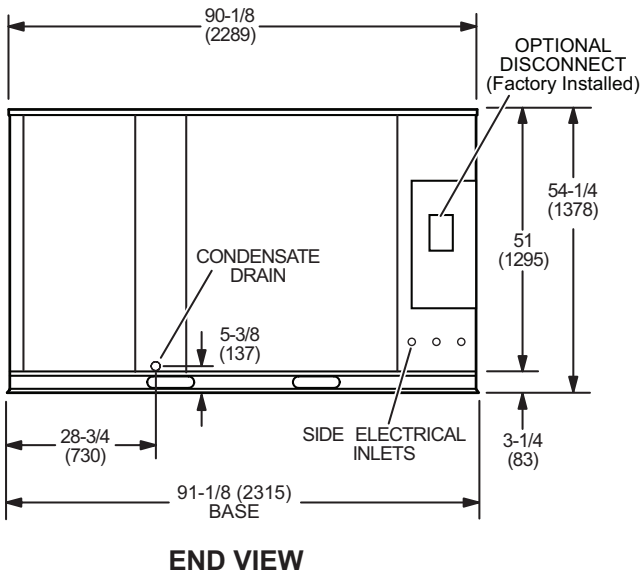
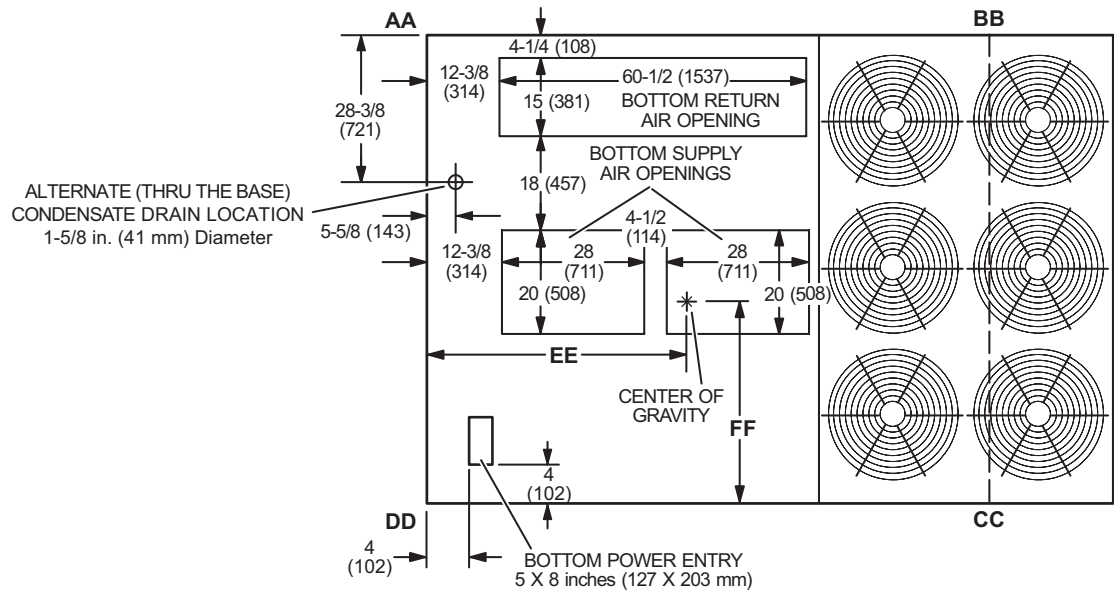
DIMENSIONS

CORNER WEIGHTS

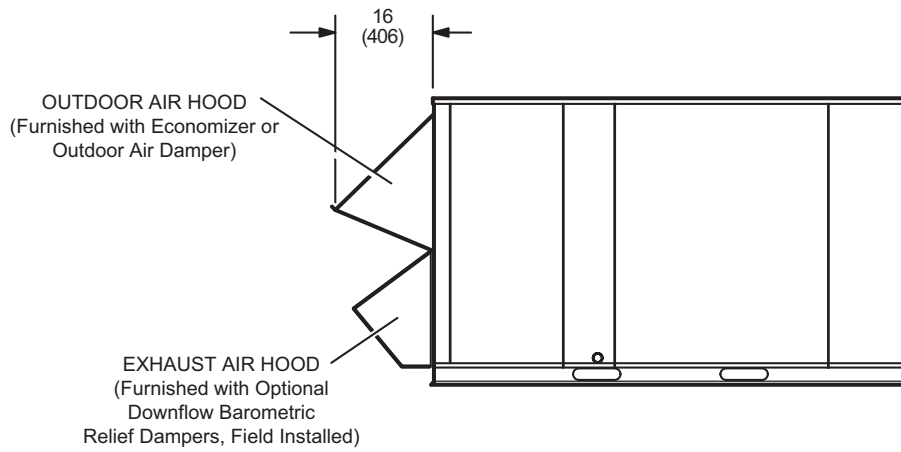
| Model No. | AA | | BB | | CC | | DD | | E CENTER OF GRAVITY | | F CENTER OF GRAVITY | |
|------------------|------|-----|------|-----|------|-----|------|-----|---------------------|------|---------------------|------|
| | lbs. | kg | lbs. | kg | lbs. | kg | lbs. | kg | in. | mm | in. | mm |
| LHT156 Base Unit | 411 | 187 | 485 | 220 | 705 | 321 | 598 | 272 | 58-3/8 | 1481 | 37-1/8 | 943 |
| LHT156 Max. Unit | 509 | 231 | 575 | 261 | 745 | 338 | 659 | 300 | 57-1/8 | 1452 | 39-3/4 | 1010 |
| LHT180 Base Unit | 412 | 187 | 486 | 221 | 719 | 327 | 610 | 277 | 58-3/8 | 1482 | 36-3/4 | 934 |
| LHT180 Max. Unit | 511 | 232 | 577 | 262 | 758 | 345 | 671 | 305 | 57-1/8 | 1452 | 39-3/8 | 1000 |
| LHT240 Base Unit | 415 | 189 | 488 | 222 | 738 | 336 | 628 | 285 | 58-1/4 | 1479 | 36-1/4 | 921 |
| LHT240 Max. Unit | 513 | 233 | 578 | 263 | 777 | 353 | 690 | 314 | 57 | 1450 | 38-7/8 | 987 |

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.

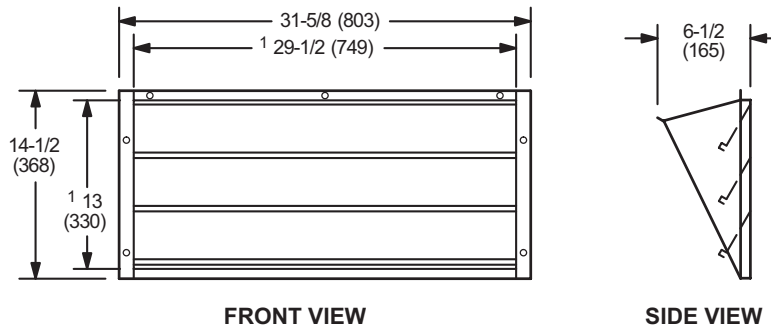


OUTDOOR AIR HOOD DETAIL



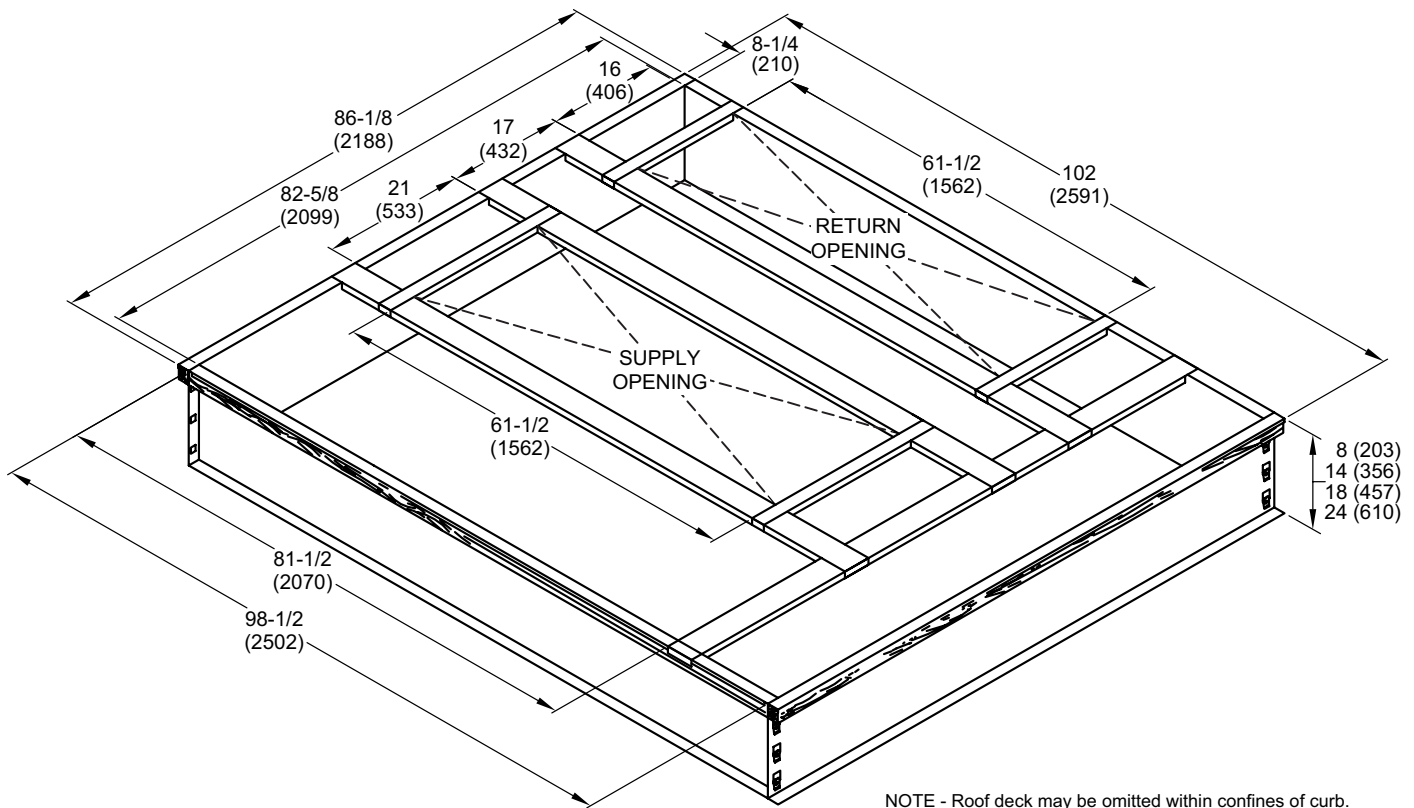
OPTIONAL HORIZONTAL BAROMETRIC RELIEF DAMPERS WITH HOOD

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



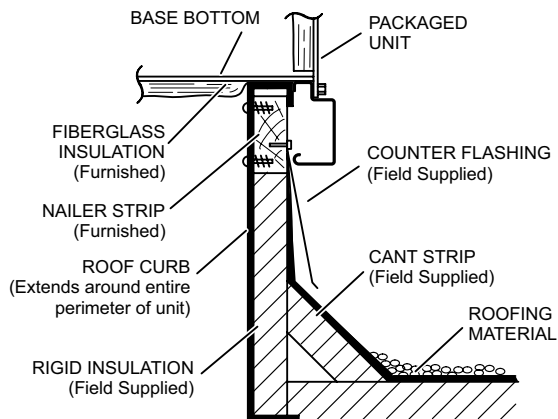
NOTE - Two furnished per order no.
¹ NOTE - Opening size required in return air duct.

HYBRID ROOF CURBS - DOUBLE DUCT OPENING

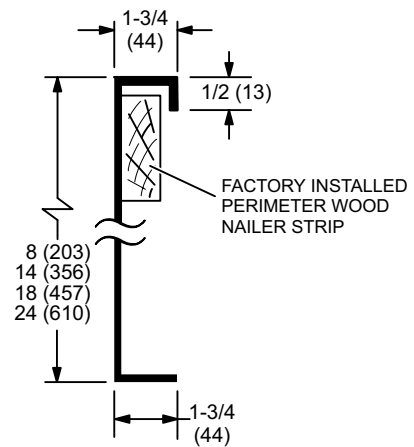


NOTE - Roof deck may be omitted within confines of curb.

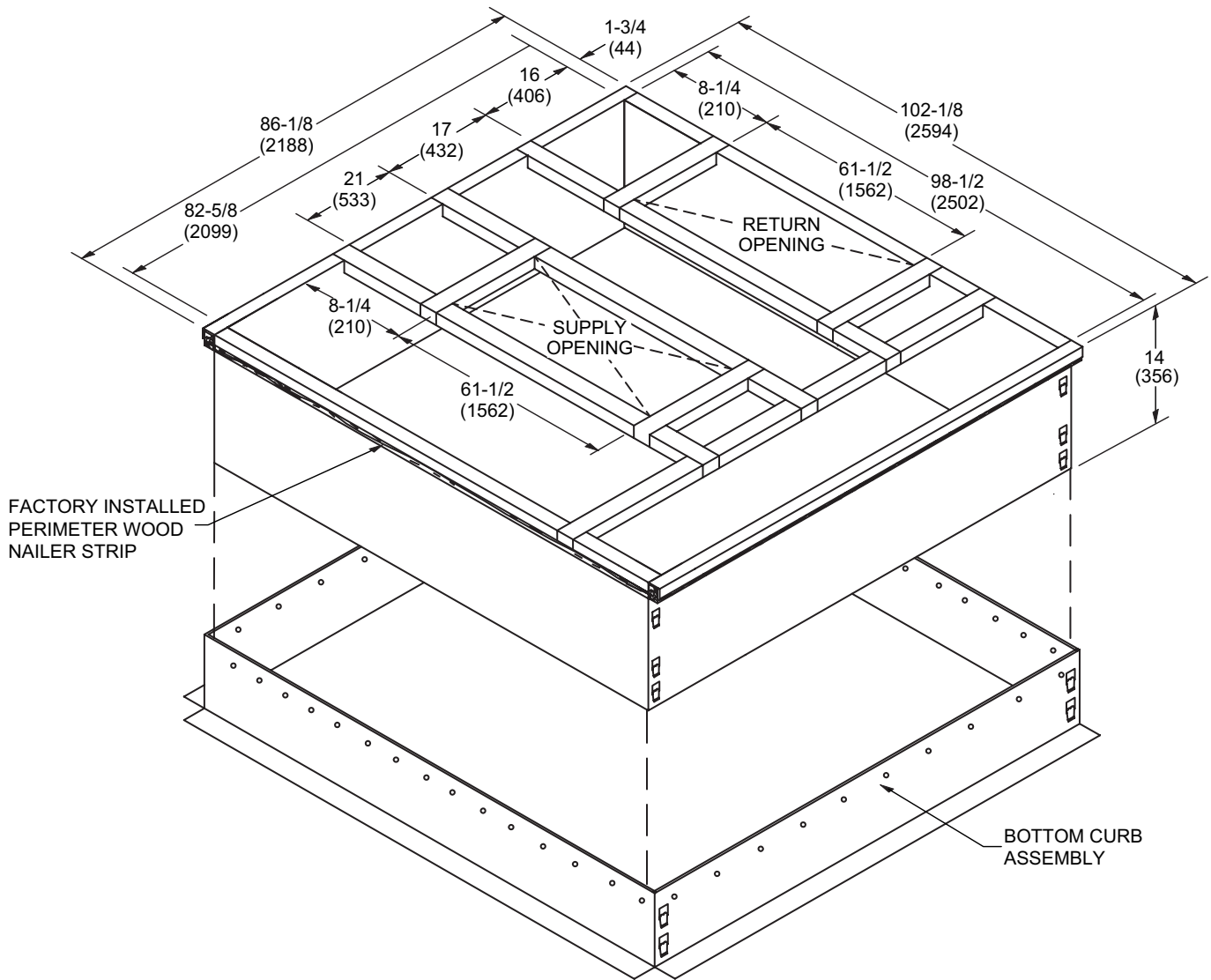
TYPICAL FLASHING DETAIL FOR ROOF CURB



DETAIL ROOF CURB

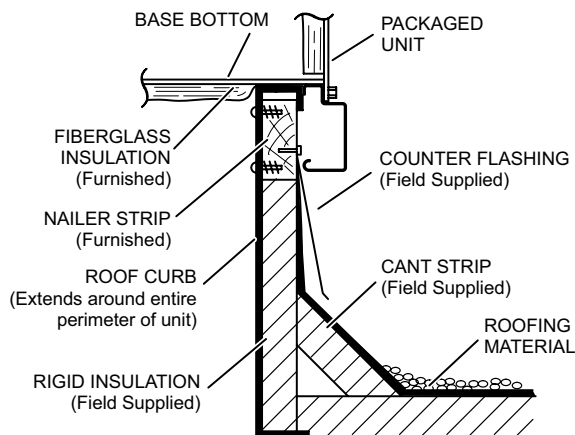


ADJUSTABLE PITCH CURB - DOUBLE DUCT OPENING

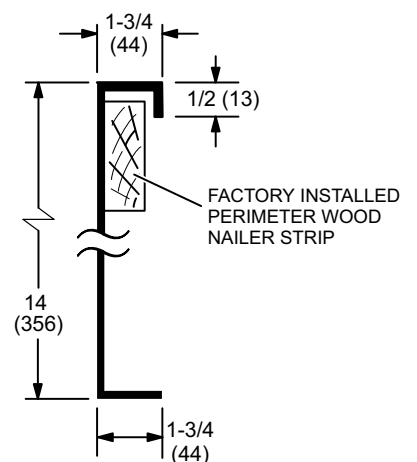


NOTE - Maximum slope pitch is 3/4 in. per 1 foot (19 mm per 305 mm) in any one direction.

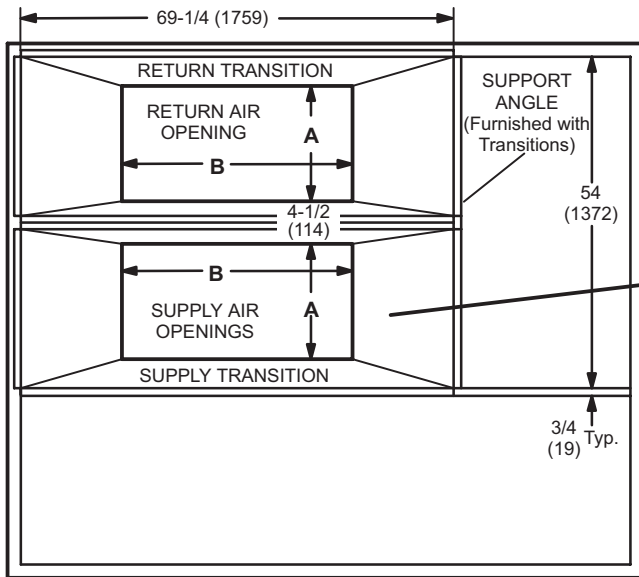
TYPICAL FLASHING DETAIL FOR ROOF CURB



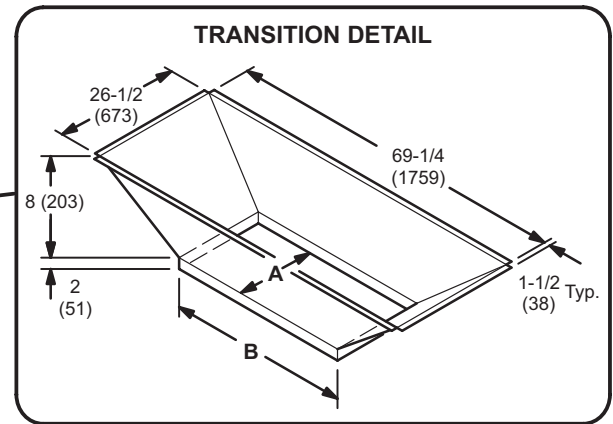
DETAIL ROOF CURB



ROOF CURBS WITH SUPPLY & RETURN AIR TRANSITIONS FOR CEILING DIFFUSERS



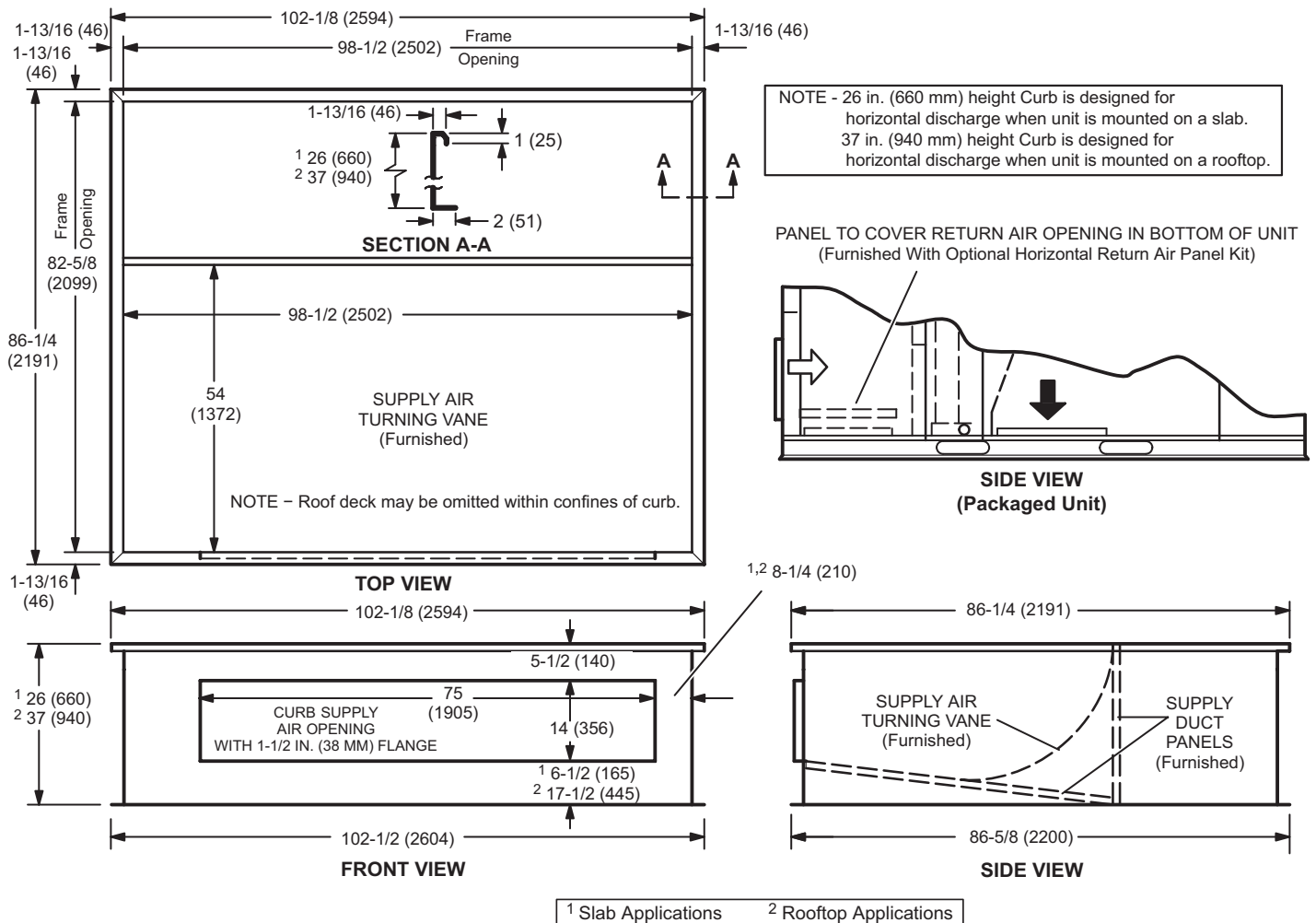
TOP VIEW



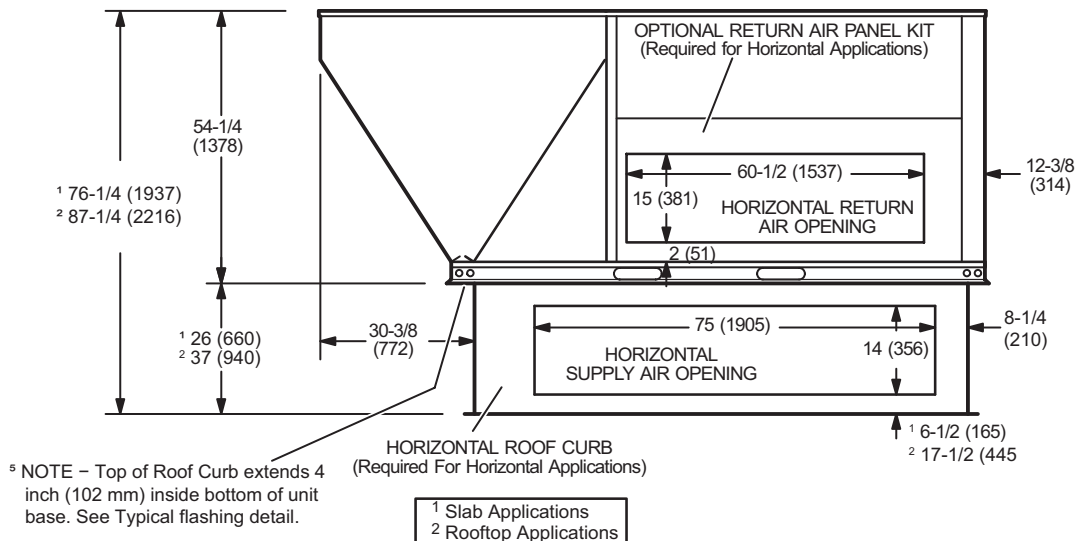
TRANSITION OPENING SIZES

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

HORIZONTAL ROOF CURBS – Requires Optional Horizontal Return Air Panel Kit

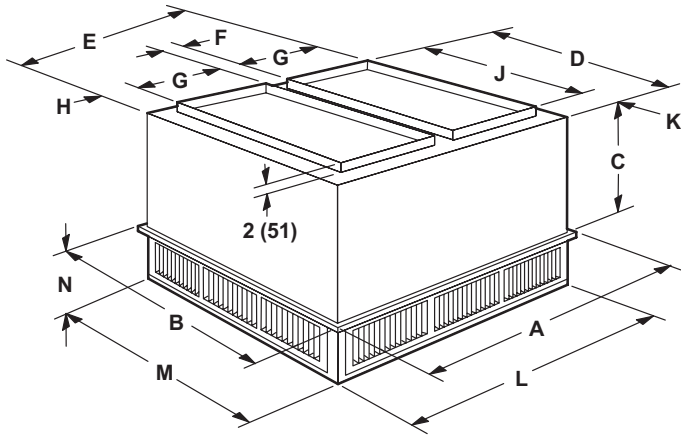


HORIZONTAL SUPPLY AND RETURN AIR OPENINGS WITH HORIZONTAL ROOF CURB

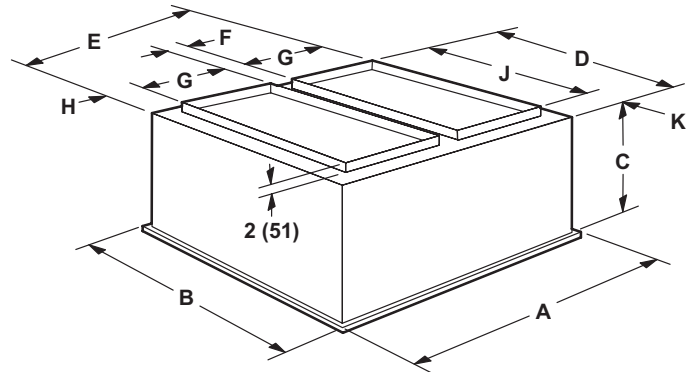


COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

STEP-DOWN CEILING DIFFUSER



FLUSH CEILING DIFFUSER



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

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

REVISIONS

| Sections | Description of Change |
|------------------------|-----------------------|
| Sewquence of Operation | Updated. |



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