



COMMERCIAL
PRODUCT SPECIFICATIONS

LGT
Enlight™ Ultra-Low NOx Rooftop Units
High Efficiency - 60 Hz

Bulletin No. 210978
November 2024
Supersedes all previous versions



ENLIGHT



SMARTWIRE™ SYSTEM

ASHRAE 90.1
COMPLIANT



3 to 5 Tons

Net Cooling Capacity - 36,000 to 60,000 Btuh

Gas Input Heat Capacity - 60,000 and 100,000 Btuh

MODEL NUMBER IDENTIFICATION

LGT060H4EA1Y

Brand/Family
L = Enlight™

Unit Type
G = Packaged Gas Heat w/ Electric Cooling

Major Design Sequence
T = 1st Generation

Nominal Cooling Capacity - Tons
036 = 3 Tons
048 = 4 Tons
060 = 5 Tons

Cooling Efficiency
H = High Efficiency

Refrigerant Type
4 = R-410A

Voltage
P = 208/230V-1 phase-60Hz
Y = 208/230V-3 phase-60hz
G = 460V-3 phase-60hz

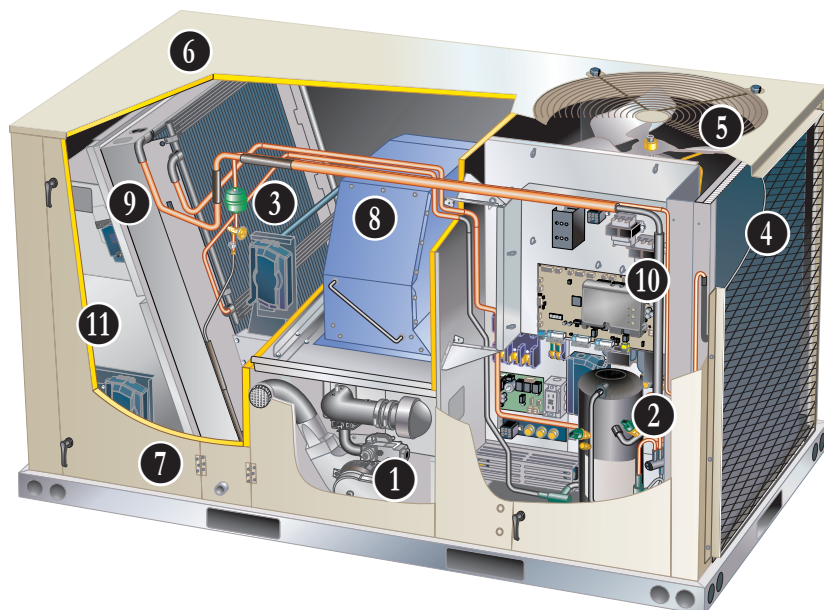
Minor Design Sequence
1 = 1st Revision

Heating Type
A = Standard Gas Heat, 2 Stage, Ultra Low NOx (14ng/J)
F = Medium Gas Heat, 2 Stage, Ultra Low NOx (14ng/J)

Blower Type
E = Direct Drive (ECM)

FEATURE HIGHLIGHTS

Lennox' 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. Heat Exchanger Assembly
2. Two-Stage Compressor
3. Filter/Drier
4. Environ™ Coil System
5. Variable Speed (ECM) Fan Motor
6. Heavy Gauge Steel Cabinet
7. Hinged Access Panels
8. Supply Air Direct Drive (ECM) Blower
9. Air Filters
10. Lennox® CORE Control System
11. Economizer (option)

NOTE - ULTRA-LOW NOX MODEL ARE NATURAL GAS ONLY!
NOTE - NOT AVAILABLE IN ALL AREAS!
CONTACT YOUR NEAREST LENNOX SALES OFFICE FOR DETAILS.

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APPROVALS AND WARRANTY

APPROVALS

- AHRI Certified to AHRI Standard 210/240
- ETL and CSA listed
- Efficiency rating certified by CSA
- Approved by the California Energy Commission and meets California Nitrogen Oxides Standard (NOx) limits of 14 ng/J
- Unit and components are ETL, NEC and CEC bonded for grounding to meet safety standards for servicing
- All models are ASHRAE 90.1 compliant
- All models meet DOE 2023 energy efficiency standards
- All models are ENERGY STAR® certified to use less energy, help save money on utility bills, and help protect the environment
- ISO 9001 Registered Manufacturing Quality System

WARRANTY

- Heat exchanger - Limited ten years
- Compressors - Limited five years
- Environ™ Coil System - Limited three years
- Lennox® CORE Unit Controller - Limited three years
- High Performance Economizers (optional) - Limited five years
- All other covered components - Limited one year

FEATURES AND BENEFITS

HEATING SYSTEM

- 1 Heat Exchanger Assembly**
 - Heavy gauge stainless steel heat exchanger with single premix stainless steel burner
 - Tubular type design
 - Designed for normal expansion and contraction with maximum efficiency and minimum resistance to air flow
 - Laboratory life cycle tested in excess of industry standards
 - Compact size permits low overall design of furnace cabinet

Direct Spark Ignition

- Provides positive and safe main burner ignition
- Spark is intermittent and occurs only when required

Limit Controls

- Redundant limit controls
- Fixed temperature setting
- Protects heat exchanger and other components from overheating

Modulating Gas Control Valve

- 24 volt redundant combination modulating gas control valve combines manual shut off switch (On-Off), automatic electric valve (dual) and gas pressure regulation into a compact combination control

Variable-Speed Combustion Air Inducer

- Heavy duty blower prepurges heat exchanger and safely vents flue products
- ECM variable speed motor
- Proves blower operation before allowing gas valve to open
- Operates only during heating cycle

Safety Switches

- Flame roll-out switch, flame sensor and combustion air inducer proving switch protect system operation
- All safety switches are monitored by the Lennox® CORE Unit Controller and diagnostic information is reported and recorded

Required Selections

Gas Input Choice - Order one:

- Standard Gas Heat (2 Stage)
45,000 / 60,000 Btuh
- Medium Gas Heat (2 Stage)
75,000 / 100,000 Btuh

FEATURES AND BENEFITS

COOLING SYSTEM

- Designed to maximize sensible and latent cooling performance at design conditions
- System operation from 0°F to 125°F without additional controls

R-410A Refrigerant

- Non-chlorine based
- Ozone friendly

2 Two-Stage Scroll Compressor

- Two-stage scroll compressors on all models for high performance, reliability, quiet operation, and increased part-load efficiency
- Resiliently mounted on rubber grommets for quiet operation

Compressor Crankcase Heater

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

Thermal Expansion Valve

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

3 Filter/Drier

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

High Pressure Switch

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

Low Pressure Switch

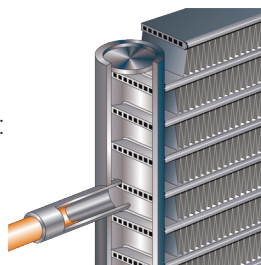
- Protects the compressor from low pressure conditions such as low refrigerant charge or low/no airflow

Indoor Coil Freeze Protection

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

4 Environ™ Coil System

- Condenser and evaporator coil
- Coils feature lightweight, all aluminum brazed fin construction
- Constructed of three components:
 - A flat extrusion tube
 - Fins in-between the flat extrusion tube
 - Two refrigerant manifolds



Environ™ Coil System Features:

- Improved heat transfer performance due to high primary surface area (flat tubes) versus secondary surface (fins)
- High durability
- All aluminum construction
- Fewer brazed joints
- Compact design

- Reduced unit weight
- Easy maintenance/cleaning
- Face-split design
- Condenser coil has mounting brackets with rubber inserts which secure coil to unit providing vibration dampening and corrosion protection
- Hydrophilic fin surfaces on evaporator coil repel water and direct condensation down the surface into drain pan

Antimicrobial Condensate Drain Pan

- Composite pan, sloped to meet drainage requirements of ASHRAE 62.1
- Antimicrobial additive resists growth of mold and mildew on drain pan, which improves indoor air quality and reduces drain line blockage
- Side or bottom drain connections
- Reversible to allow connection at back of unit

5 Variable Speed Outdoor Coil Fan Motor

- Variable speed (ECM) fan motor for energy efficient MSAV® (Multi-Stage Air Volume) performance and quiet operation
- Thermal overload protected
- Totally enclosed
- Permanently lubricated ball bearings
- Shaft up
- Wire basket mount

Outdoor Coil Fan

- PVC coated fan guard furnished

Required Selections

Cooling Capacity

- Specify nominal cooling capacity

Options/Accessories

Factory or Field Installed

Drain Pan Overflow Switch

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

Field Installed

Condensate Drain Trap

- Constructed of PVC or copper

FEATURES AND BENEFITS

CABINET

6 Construction

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

Airflow Choice

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

NOTE - Units can be field converted to horizontal airflow with optional Horizontal Discharge Kit.

Duct Flanges

- Provided for horizontal duct attachment

Power/Gas Entry

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

Exterior Panels

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

Insulation

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

7 Hinged Access Panels

- Tool-less access
- Economizer/Filter sections
- Compressor/Controls sections
- Panel seals and quarter-turn latching handles provide a tight air and water seal

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

Required Selections

Airflow Configuration

- Specify horizontal or downflow

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
 - Coated reheat 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

BLOWER

Motor

- Variable-speed ECM direct drive motor
- Overload protected, equipped with ball bearings

8 Supply Air Blower

- Forward curved blades
- Double inlet
- Blower wheel statically and dynamically balanced
- Ball bearings
- Blower assembly slides out of unit for servicing

ELECTRICAL

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 are used to connect common accessories or maintenance parts for easy removal or installation

Required Selections

Voltage Choice

- Specify when ordering base unit

Options/Accessories

Factory Installed

Circuit Breakers

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

FEATURES AND BENEFITS

ELECTRICAL (continued)

Short-Circuit Current Rating (SCCR)

- Higher short circuit protection up to 100kA

NOTE - Disconnect Switch is furnished and factory installed with High SCCR option.

Factory or Field Installed

Disconnect Switch

- Accessible outside of unit
- Spring loaded weatherproof cover furnished

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

INDOOR AIR QUALITY

9 Air Filters

- Disposable 2 inch MERV 4 filters furnished as standard

Options/Accessories

Factory or Field Installed

Healthy Climate® High Efficiency Air Filters

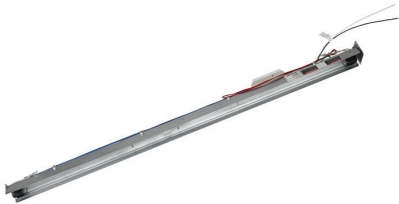
- Disposable MERV 8 or MERV 13 (Minimum Efficiency Reporting Value based on ASHRAE 52.2) efficiency 2-inch pleated filters

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 Lamps



- Germicidal lamps emit ultra-violet (UV-C) energy, which has been proven to be effective in reducing microbes such as viruses, bacteria, yeasts, and molds
- 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
- These 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

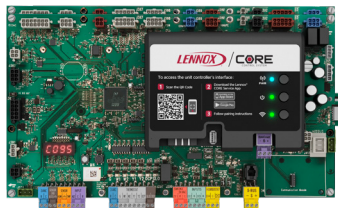
- Monitors CO₂ levels
- Reports to the Lennox® CORE Unit Controller, which adjusts economizer dampers as needed

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



- 10** 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
- Humiditrol™ Operation
- Enhanced Dehumidification (Latent Demand Control without reheat)

Component Protection / Unit Safeguards:

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

Control Methods / Interfaces:

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

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 12

Commercial Control Systems

Field Installed

Thermostats

- Control system and thermostat options, see page 12

OPTIONS / ACCESSORIES

ECONOMIZER

- 11 • Economizer operation is set and controlled by the ennox® 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

High Performance Economizer

- Approved for California Title 24 building standards
- Low leakage dampers are Air Movement and Control Association International (AMCA) Class 1A Certified - Maximum 3 CFM per sq. ft. leakage at 1 in. w.g.
- ASHRAE 90.1 compliant
- Combination Outdoor Air Hood is furnished
- Factory installed Economizer can be ordered with three exhaust options:
 - Barometric Relief Dampers
 - Power Exhaust Fan

NOTE - See Power Exhaust Fan section for additional requirements.

- No Exhaust
- Field installed Economizer includes Barometric Relief Dampers with Combination Hood
- Barometric Relief Dampers allow relief of excess air
- Dampers prevent blow back and outdoor air infiltration during off cycle
- Bird screen furnished

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

- Demand Control Ventilation (DCV) ready using optional CO₂ sensors
- Horizontal Barometric Dampers are required for horizontal Economizer applications and must be ordered separately
- Linked damper action
- High torque 24-volt fully-modulating spring return damper motor
- Return air and outdoor air dampers
- Plug-in connections to unit

OPTIONS / ACCESSORIES

ECONOMIZER (continued)

Factory or Field Installed (continued)

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

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

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 and return air setpoints and activates the economizer when the outdoor air temperature is below the configured setpoint and cooler than return air

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

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

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

Global Control

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

NOTE - Sensor must be field provided.

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

Single Enthalpy Temperature Control (Not for Title 24)

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

Differential Enthalpy Control (Not for Title 24)

- Order two Single Enthalpy Controls:
 - One is field installed in the return air section
 - One 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
- References a velocity sensor located in the rooftop unit outdoor air section
- 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
- 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).

Horizontal Barometric Relief Dampers

- For use when unit is configured for horizontal applications with an economizer
- Allows relief of excess air
- Blade type dampers prevent blow back and outdoor air infiltration during off cycle
- Field installed in return air duct
- Exhaust hood with bird screen furnished
- Requires Horizontal Economizer Conversion Kit

Horizontal Economizer Conversion Kit

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

OPTIONS / ACCESSORIES

EXHAUST

Factory or Field Installed

Power Exhaust Fan

- Installs internal to unit for downflow applications only with economizer option
- Provides exhaust air pressure relief
- Interlocked to run when supply air blower is operating
- Fan runs when outdoor air dampers are 50% open (adjustable)
- Motor is overload protected
- Fan is 16 in. diameter
- Four blades
- One 1/3 hp motor

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

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

OUTDOOR AIR

Factory or Field Installed

Outdoor Air 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.

ROOF CURBS

Field Installed

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

Hybrid Roof Curbs, Downflow

- 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

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

HUMIDITROL® DEHUMIDIFICATION SYSTEM OPTION

OVERVIEW

- Factory installed option designed to control humidity
- Provides dehumidification on demand using ASHRAE 90.1 recommended method for comfort conditioning humidity control
- Unit comes equipped with one row reheat coil, solenoid valve and humidity controller
- A thermostat with a dehumidification output, a dehumidistat, or a DDC controller with an isolated output is required to control humidity and must be located in the occupied space

BENEFITS

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

OPERATION

No Dehumidification Demand

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

Dehumidification Demand Only

- Unit Controller is factory set at 60% relative humidity setpoint and can be adjusted at the Unit Controller or with optional Unit Controller Software
- Reheat operation will initiate on a dehumidification demand and does not require a cooling demand
- Unit will operate in the dehumidification mode until the relative humidity of the conditioned space is below the setpoint
- Reheat coil is sized to provide 68°F to 75°F supply air during reheat operation
- This reduces sensible cooling capacity and extends compressor run time to control humidity when the cooling load is low
- A solenoid valve diverts hot gas from the compressor to the reheat coil
- Cooled and dehumidified air from the evaporator is reheated as it passes through the reheat coil
- De-superheated and partially condensed refrigerant continues to the outdoor condenser coil where condensing is completed
- Unit will continue to operate in this mode until the dehumidification demand is satisfied

NOTE - See Sequence of Operation for additional information.

Dehumidification and Cooling Demand (Thermostat/Room Sensor Application)

- If both a dehumidification and a 1st stage cooling demand occur, the system will operate in the full cooling mode at first stage indoor air flow
- If a 2nd stage cooling demand occurs along with a dehumidification demand, the system operates in full cooling mode at full cooling airflow until the 2nd stage cooling demand is satisfied
- Then the system will revert to the dehumidification mode if a dehumidification mode demand is present

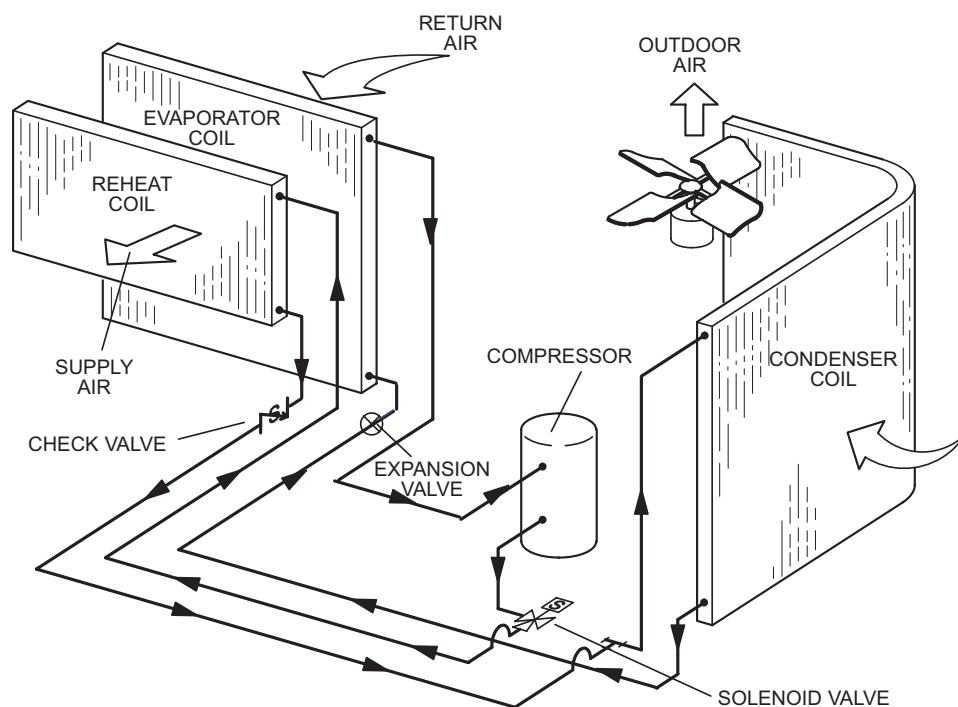
Options/Accessories

Humidity Sensor Kit

- Remote mounted dehumidistat for factory installed Humiditrol® option or Supermarket reheat field selectable option

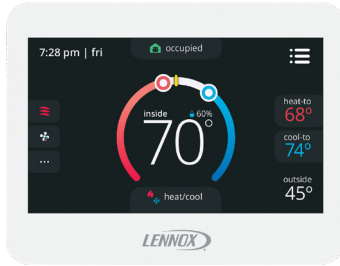
NOTE - A thermostat with a dehumidification output or a DDC controller with an isolated output can be used instead.

TYPICAL DEHUMIDIFICATION SCHEMATIC



OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

CS8500 Commercial 7-Day Programmable Thermostat



- Fully Communicating Sensor
- Full Color Touchscreen Interface
- Variable Speed System Control (On Compatible Units)
- Up To 4 Heat / 4 Cool
- Built-In Sensors For Temperature, Humidity And Optional 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

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	17G75
	With CO ₂ Sensing	17G76
Sensors/Accessories	¹ Remote non-adjustable wall-mount 10k	47W37
	¹ Remote non-adjustable wall-mount 11k	94L61
Sysbus Network Cable (Yellow) for CS8500 and LCS-5030 Wired Room Sensor		
Twisted pair 100% shielded communication cable, Red and Black 22 AWG, yellow jacket, rated at 75°C, 300V, Plenum rated Insulation - Low smoke PVC, NEC, CMP	500 ft. box	27M19
	1000 ft. box	94L63
	2500 ft. roll	68M25
CS7500 Commercial 7-Day Programmable Thermostat		
CS7500 7-Day Thermostat		17G74
Sensors/Accessories	² Remote non-adjustable wall-mount 20k	47W36
	² Remote non-adjustable wall-mount 10k	47W37
	Remote non-adjustable discharge air (duct mount)	19L22
	Outdoor temperature sensor	X2658
CS3000 Commercial 5-2 Day Programmable Thermostat		
CS3000 5-2 Day Thermostat		11Y05
Sensors/Accessories	Remote non-adjustable wall mount 10k averaging	47W37
	Thermostat wall mounting plate	X2659
Universal Thermostat Guard with Lock (clear)		
	Inside Dimensions (H x W x D) 5-7/8 x 8-3/8 x 3 in.	39P21
Temperature/Humidity Room Sensor		
A335MT13AE1 Wired Temperature/Humidity Room Sensor (Non-Communicating)		21W06

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

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

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

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

SEQUENCE OF OPERATION

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

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

DIRECT DRIVE OPERATION:

NOTE: Direct drive units feature ECM condenser fans that are staged to match the compressor's capacity. When the compressor is operating at first stage, the condenser fan is operating at low speed. The condenser fan switches to high speed when the compressor switches to second stage to match operation.

Modulating Outdoor Air Damper:

Damper minimum positions #1 and 2 are adjusted during unit setup to provide minimum fresh air requirements at the indicated supply fan speeds per ASHRAE 62.1.

- Supply fan is off and the outdoor air damper is closed
- Supply fan is on low speed and the outdoor air damper is at minimum position 1
- Supply fan is on high speed and the outdoor air damper is at minimum position 2

¹ Unit Features an Economizer and Outdoor Air is Suitable

Cooling - Thermostat or Zone Sensor Mode (Up to 3 stages Y1, Y2, Y3)

Y1 Demand:

Compressor is off, supply fan is on low speed, economizer modulates (minimum to maximum open position) to maintain 55°F supply air temperature (default unit controller setting)

After 5 minutes (default unit controller setting), supply fan switches to high speed. Economizer continues modulating with supply fan on high speed to maintain 55°F supply air temperature

Y2 Demand:

Compressor is off, supply fan is on high speed, and economizer modulates to maintain 55°F supply air temperature

Economizer opens to maximum. If economizer stays at maximum open for 3 minutes (default unit controller setting) compressor is energized and operates at first stage while supply fan stays on high speed

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

Y3 Demand:

Economizer is at maximum open and compressor operates at first stage. If economizer stays at maximum open for 3 minutes (default unit controller setting) compressor switches to second stage operation while supply fan stays on high speed

Unit Does Not Feature an Economizer (or Outdoor Air Is Not Suitable)

Cooling - Thermostat or Zone Sensor (Up to 2 stages Y1, Y2)

Y1 Demand:

Compressor operates at first stage and supply fan operates at low speed

Y2 Demand:

Compressor operates at second stage and supply fan operates at high speed

(Continued on Next Page)

SEQUENCE OF OPERATION

DIRECT DRIVE OPERATION

(Continued):

Dehumidification Mode (economizer free cooling is locked out):

Unit features the Humiditrol® Dehumidification option

No Y1, Y2 Demand but a call for dehumidification:

Compressor operates at second stage, supply fan operates at low speed, and the reheat valve is energized

Y1 Demand:

Compressor operates at second stage, supply fan operates at low speed and the reheat valve is de-energized

Y2 Demand:

Compressor operates at second stage, supply fan operates at high speed, and the reheat valve is de-energized

Heating Mode: Thermostat or Zone Sensor (Up to 2 stages W1, W2)

W1 Demand:

Gas valve is open (stage 1 on units with 2 stage gas valve) and the supply fan operates at high speed

W2 Demand:

Gas valve is open (stage 2 on units with 2 stage gas valve) and the supply fan operates at high speed

OPTIONS / ACCESSORIES

Item	Catalog Number	Unit Model Number			
		036	048	060	
COOLING SYSTEM					
Condensate Drain Trap	PVC	22H54	X	X	X
	Copper	76W27	X	X	X
Drain Pan Overflow Switch		21Z07	OX	OX	OX
HEATING SYSTEM					
Gas Heat Input	Standard Two-Stage - 45/60 kBtuh Input	Factory	O	O	O
	Medium Two-Stage - 75/100 kBtuh Input	Factory	O	O	O
BLOWER - SUPPLY AIR					
Motors - Standard Static (All voltages)	Direct Drive ECM Blower - 0.50 hp	Factory	O		
	1 hp	Factory		O	O
CABINET					
Combination Coil/Hail Guards		13T03	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		53W66	OX	OX	OX
General Purpose Control Kit		13J78	X	X	X
Fresh Air Tempering		58W63	OX	OX	OX
Smoke Detector - Supply or Return (Power board and one sensor)		21Z11	OX	OX	OX
Smoke Detector - Supply and Return (Power board and two sensors)		21Z12	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	Catalog Number	Unit Model Number			
		036	048	060	
ELECTRICAL					
Voltage (60 Hz)	208/230V - 1 phase	Factory	O	O	O
	208/230V - 3 phase	Factory	O	O	O
	460V - 3 phase	Factory	O	O	O
HACR Circuit Breakers		Factory	O	O	O
¹ Short-Circuit Current Rating (SCCR) of 100kA (includes Voltage Detection)		Factory	O	O	O
Disconnect Switch	80 amp	22A25	OX	OX	OX
GFI Service Outlets	15 amp non-powered, field-wired (208/230V, 460V only)	74M70	OX	OX	OX
	15 amp factory-wired and powered (208/230V, 460V)	Factory	O	O	O
	² 20 amp non-powered, field-wired (208/230V, 460V)	67E01	X	X	X
	² 20 amp non-powered, field-wired (208/230V, 575V)	Factory	O	O	O
Weatherproof Cover for GFI		10C89	X	X	X
ECONOMIZER					
High Performance Economizer With Outdoor Air Hood (Sensible Control) (Approved for California Title 24 Building Standards / AMCA Class 1A Certified)					
High Performance Economizer - Includes Barometric Relief Dampers and Combination Hood		20H48	OX	OX	OX
High Performance Economizer - No Exhaust Option		Factory	O	O	O
Economizer Accessories					
Horizontal Economizer Conversion Kit		17W45	X	X	X
Economizer Controls (Not for Title 24)					
Differential Enthalpy	Order 2	21Z09	OX	OX	OX
Sensible Control	Sensor is Furnished	Factory	O	O	O
Outdoor Air CFM Control		13J76	X	X	X
Single Enthalpy		21Z09	OX	OX	OX
Global Control	Sensor Field Provided	Factory	O	O	O
Building Pressure Control		13J77	X	X	X
POWER EXHAUST FAN					
Standard Static	208/230V-1 or 3ph	21Z13	OX	OX	OX
NOTE - Factory or Field installed Power Exhaust Fan requires "Barometric Relief Dampers for Power Exhaust Kit" for field installation. See below.		460V-3ph	21Z14	OX	OX
BAROMETRIC RELIEF					
³ Barometric Relief Dampers for Power Exhaust Kit		21Z21	X	X	X
⁴ Horizontal Barometric Relief Dampers With Exhaust Hood		19F01	X	X	X
OUTDOOR AIR					
Outdoor Air Dampers With Outdoor Air Hood					
Motorized		15D17	OX	OX	OX
Manual		15D18	X	X	X
¹ Disconnect Switch is furnished and factory installed with High SCCR option. ² Canada requires a minimum 20 amp circuit. Select 20 amp, non-powered, field wired GFI. ³ Required when Economizer is factory installed with factory installed Power Exhaust Fan option. ⁴ Required when Economizer is configured for horizontal airflow.					
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	Catalog Number	Unit Model Number		
		036	048	060
HUMIDITROL® CONDENSER REHEAT OPTION				
Humiditrol Dehumidification Option	Factory	O	O	O
Humidity Sensor Kit, Remote mounted (required)	17M50	X	X	X

¹ Required when Economizer is factory installed with factory installed Power Exhaust Fan option.

² Required when Economizer is configured for horizontal airflow.

INDOOR AIR QUALITY

Air Filters

Healthy Climate® High Efficiency Air Filters 20 x 20 x 2 in. (Order 4 per unit)	MERV 8	54W21	OX	OX	OX
	MERV 13	52W39	OX	OX	OX
	MERV 16	21U40	X	X	X
Replaceable Media Filter With Metal Mesh Frame (includes non-pleated filter media) (order 4 per unit)	20 x 20 x 2 in.	44N60	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	23Y47	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	22U14	X	X	X
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UVC Germicidal Lamps

¹ Healthy Climate® UVC Light Kit (110/230v-1ph)	21A92	X	X	X
Step-Down Transformer 460V primary, 230V secondary	10H20	X	X	X

ROOF CURBS

Hybrid Roof Curbs, Downflow

8 in. height	11F50	X	X	X
14 in. height	11F51	X	X	X
18 in. height	11F52	X	X	X
24 in. height	11F53	X	X	X

Adjustable Pitched Curb

14 in. height	43W27	X	X	X
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Transition Curb

Matches Enlight™ 036-072 Units to existing L Series® Curbs	31B05	X	X	X
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CEILING DIFFUSERS

Step-Down - Order one	RTD9-65S	13K60	X	X	X
Flush - Order one	FD9-65S	13K55	X	X	X
Transitions (Supply and Return) - Order one	T1TRAN10AN1	17W53	X	X	X

¹ Lamps operate on 110-230V single-phase power supply. Step-down transformer may be ordered separately for 460V units. Alternately, 110V power supply may be used to directly power the UVC ballast(s).

NOTE - Catalog 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				UNIT
General Data	Nominal Tonnage	3 Ton	4 Ton	5 Ton
	Model Number	LGT036H4E	LGT048H4E	LGT060H4E
	Efficiency Type	High	High	High
	Blower Type	MSAV® ECM Direct Drive	MSAV® ECM Direct Drive	MSAV® ECM Direct Drive
Cooling Performance	Gross Cooling Capacity - Btuh	36,600	50,100	61,600
	¹ Net Cooling Capacity (Btuh) 3ph	36,000	49,000	60,000
	¹ AHRI Rated Air Flow (cfm-high/low) 3ph	1200/800	1800/1200	1800/1350
	¹ SEER (Btuh/Watt) - 208/230V-3ph	17.8	17.6	17.1
	¹ SEER (Btuh/Watt) - 460V, 575V-3ph	17.0	17.0	17.0
	¹ EER (Btuh/Watt) - 3ph	13.3	12.8	12.7
	Total Unit Power (kW) 3ph	2.7	3.8	4.6
	¹ Net Cooling Capacity (Btuh) 1,3ph	36,000	49,000	59,500
	¹ AHRI Rated Air Flow (cfm-high/low) 1,3ph	1200/800	1800/1200	1800/1350
	¹ SEER2 (Btuh/Watt) 1,3ph	16.8	17.3	16.3
	¹ EER2 (Btuh/Watt) 1,3ph	13.0	12.1	12.0
	Total Unit Power (kW) 1,3ph	2.8	4.1	5.0
	² Sound Rating Number (SRN) (dBA)	75	75	82
	Refrigerant Type	R-410A	R-410A	R-410A
Refrigerant Charge	Without Reheat Option	5 lbs. 11 oz.	5 lbs. 4 oz.	4 lbs. 13 oz.
	With Reheat Option	5 lbs. 13 oz.	5 lbs. 10 oz.	5 lbs. 2 oz.
Gas Heating Options Available - See page 20		Standard (2 stage), Medium (2 stage)	Standard (2 stage), Medium (2 stage)	Standard (2 stage), Medium (2 stage)
Compressor Type (one per unit)		Two-Stage Scroll	Two-Stage Scroll	Two-Stage Scroll
Outdoor Coil	Net face area (total) - sq. ft.	17.80	17.80	17.80
	Number of rows	1	1	1
	Fins per inch	20	20	20
Outdoor Coil Fans	Motor - (No.) horsepower	(1) 1/3 (ECM)	(1) 1/3 (ECM)	(1) 1/3 (ECM)
	Motor rpm	550-830	765-1010	830-1030
	Total Motor watts	65-175	130-300	170-350
	Diameter - (No.) in.	(1) 24	(1) 24	(1) 24
	Number of blades	3	3	3
	Total air volume - cfm	2400 - 3795	2700 - 4100	3200 - 4700
Indoor Coil	Net face area (total) - sq. ft.	8.65	8.65	8.65
	Number of rows	1	1	1
	Fins per inch	20	20	20
	Drain connection (Number) and size - in.	(1) 1 NPT	(1) 1 NPT	(1) 1 NPT
	Expansion device type	Balanced Port Thermostatic Expansion Valve,removable element head		
Indoor Blower	Blower Type	Direct Drive ECM		
	Blade type	Forward Curved		
	Nominal motor HP	0.50	1	1
	Blower wheel D x W - in.	(1) 10 X 10	(1) 11 X 10	(1) 11 X 10
Filters	Type of Filter	MERV 4, Disposable		
	Number and size	(4) 20 x 20 x 2		
Electrical characteristics		208/230V - 60 Hz - 1 phase 208/230V or 460V - 60 Hz - 3 phase		

NOTE - Shaded area indicates AHRI 2023 M1 Ratings. Does not include 575V-3ph models.

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 210/240 (3-5 ton) or 340/360 (6 ton): 95°F outdoor air temperature and 80°F db/67°F wb entering evaporator air; minimum external duct static pressure.

² Sound Rating Number rated in accordance with test conditions included in AHRI Standard 270

SPECIFICATIONS

GAS HEAT

	Heat Input Type	Standard (2 Stage)	Medium (2 Stage)
Input Btuh	1st Stage	45,000	75,000
	2nd Stage	60,000	100,000
Output Btuh	1st Stage	37,000	62,000
	2nd Stage	48,000	80,000
Temperature Rise Range - °F	1st Stage	15 - 45	25 - 55
	2nd Stage	20 - 50	30 - 60
Minimum air volume - cfm		900	1250
¹ AFUE (Single Phase)		81%	81%
² Thermal Efficiency (Three Phase)		80%	80%
Gas Supply Connections		1/2 in. NPT	
Recommended Gas Supply Pressure - Nat.		7 in. w.g. / 11 in. w.g.	
Gas Supply Pressure Range	Min./Max.	4.5 - 10.5 in. w.g.	

¹ Annual Fuel Utilization Efficiency based on U.S. DOE test procedures and FTC labeling regulations.

² Thermal Efficiency at full input.

HIGH ALTITUDE DERATE

NOTE - Units may be installed at altitudes up to 4500 ft. above sea level without any modification. No modifications are required.

At altitudes above 2000 ft. the furnace will naturally derate approximately 10%. See table below.

Heat Input Type	Altitude Feet	Input Rate (Btuh)
Standard (2 stage)	0 - 4500	41,000 / 54,000
Medium (2 stage)	0 - 4500	68,000 / 90,000

RATINGS

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

3 TON - LGT036H4 (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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F
63°F	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
	640	25.8	1.11	0.63	0.75	0.91	24.8	1.28	0.64	0.77	0.93	23.6	1.47	0.65	0.79	0.97	22.4	1.68	0.66	0.82	1
	800	27.4	1.1	0.67	0.84	1	26.3	1.27	0.68	0.87	1	25.1	1.46	0.7	0.9	1	23.8	1.66	0.72	0.93	1
67°F	960	28.6	1.09	0.72	0.94	1	27.5	1.26	0.74	0.97	1	26.3	1.45	0.77	1	1	25	1.65	0.8	1	1
	640	27.6	1.09	0.5	0.6	0.71	26.5	1.27	0.5	0.61	0.73	25.4	1.45	0.51	0.62	0.75	24.1	1.66	0.52	0.63	0.77
	800	29.2	1.08	0.52	0.64	0.79	28	1.25	0.53	0.66	0.82	26.8	1.44	0.54	0.67	0.85	25.4	1.65	0.55	0.69	0.88
71°F	960	30.4	1.07	0.55	0.69	0.89	29.1	1.25	0.56	0.71	0.92	27.8	1.43	0.57	0.73	0.95	26.3	1.64	0.58	0.76	0.99
	640	29.5	1.08	0.39	0.48	0.58	28.4	1.25	0.39	0.49	0.58	27.2	1.44	0.39	0.49	0.59	25.8	1.64	0.39	0.5	0.61
	800	31.3	1.07	0.4	0.51	0.62	30	1.24	0.4	0.51	0.63	28.7	1.43	0.4	0.52	0.64	27.2	1.63	0.4	0.53	0.66
	960	32.4	1.06	0.41	0.54	0.67	31.1	1.23	0.41	0.54	0.68	29.7	1.42	0.41	0.56	0.7	28.2	1.63	0.42	0.57	0.73

3 TON - LGT036H4 (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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F
63°F	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
	960	34.6	2.1	0.68	0.82	0.98	33	2.37	0.69	0.84	1	31.3	2.66	0.7	0.87	1	29.4	3.02	0.72	0.91	1
	1200	36.6	2.11	0.73	0.92	1	34.8	2.38	0.75	0.95	1	33.1	2.67	0.77	0.99	1	31.2	3.02	0.8	1	1
67°F	1440	38.3	2.13	0.8	1	1	36.7	2.39	0.82	1	1	35	2.69	0.85	1	1	33.2	3.04	0.9	1	1
	960	37	2.12	0.53	0.65	0.78	35.3	2.38	0.54	0.66	0.8	33.4	2.68	0.55	0.68	0.83	31.5	3.02	0.56	0.7	0.86
	1200	38.9	2.13	0.56	0.7	0.87	37	2.39	0.57	0.72	0.91	35	2.69	0.58	0.74	0.94	32.9	3.04	0.6	0.77	0.98
71°F	1440	40.2	2.14	0.6	0.77	0.97	38.4	2.41	0.61	0.79	1	36.2	2.7	0.62	0.83	1	34	3.04	0.64	0.86	1
	960	39.6	2.14	0.41	0.52	0.62	37.8	2.4	0.41	0.52	0.64	35.8	2.7	0.41	0.53	0.65	33.7	3.04	0.42	0.54	0.67
	1200	41.6	2.16	0.42	0.55	0.68	39.6	2.42	0.42	0.56	0.7	37.5	2.71	0.43	0.57	0.72	35.2	3.06	0.43	0.59	0.74
	1440	43	2.17	0.43	0.58	0.74	40.9	2.43	0.44	0.6	0.76	38.6	2.73	0.44	0.61	0.8	36.2	3.07	0.45	0.63	0.84

4 TON - LGT048H4 (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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F
	cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F
63°F	850	35.6	1.41	0.77	0.88	0.96	34.1	1.66	0.78	0.89	0.97	32.6	1.95	0.79	0.9	0.99	30.9	2.27	0.81	0.92	1
	1065	37.8	1.39	0.82	0.93	1	36.2	1.64	0.83	0.94	1	34.6	1.93	0.85	0.95	1	32.7	2.26	0.86	0.97	1
	1280	39.5	1.38	0.86	0.97	1	37.8	1.63	0.87	0.99	1	36.2	1.92	0.89	1	1	34.5	2.24	0.9	1	1
67°F	850	38	1.39	0.61	0.74	0.85	36.5	1.64	0.62	0.75	0.86	34.9	1.93	0.62	0.76	0.88	33.2	2.25	0.63	0.77	0.89
	1065	40.2	1.37	0.64	0.79	0.9	38.6	1.62	0.65	0.8	0.92	36.9	1.91	0.66	0.82	0.93	35	2.24	0.67	0.84	0.95
	1280	41.8	1.35	0.67	0.84	0.95	40.1	1.61	0.68	0.86	0.96	38.3	1.9	0.7	0.87	0.98	36.3	2.23	0.71	0.89	1
71°F	850	40.7	1.37	0.48	0.59	0.7	39.1	1.62	0.48	0.6	0.71	37.5	1.9	0.48	0.6	0.73	35.6	2.23	0.48	0.61	0.74
	1065	43	1.34	0.49	0.62	0.76	41.3	1.59	0.49	0.63	0.77	39.5	1.89	0.49	0.64	0.79	37.5	2.22	0.49	0.65	0.81
	1280	44.6	1.32	0.5	0.66	0.82	42.9	1.58	0.5	0.67	0.84	40.9	1.87	0.51	0.68	0.85	38.9	2.2	0.51	0.7	0.87

4 TON - LGT048H4 (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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)							
				Dry Bulb					Dry Bulb					Dry Bulb							
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F					
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	
63°F	1280	46.9	2.72	0.68	0.83	0.98	44.7	3.06	0.7	0.85	1	42.4	3.45	0.71	0.88	1	39.9	3.91	0.73	0.91	1
	1600	49.4	2.74	0.74	0.92	1	47.2	3.08	0.76	0.95	1	44.7	3.47	0.78	0.99	1	42.3	3.92	0.81	1	1
	1920	51.7	2.75	0.8	1	1	49.5	3.09	0.83	1	1	47.2	3.48	0.86	1	1	44.7	3.93	0.89	1	1
67°F	1280	49.9	2.74	0.54	0.66	0.79	47.6	3.08	0.55	0.67	0.81	45.1	3.47	0.56	0.69	0.84	42.5	3.92	0.57	0.7	0.87
	1600	52.4	2.76	0.57	0.71	0.88	49.9	3.09	0.58	0.73	0.91	47.1	3.48	0.59	0.75	0.95	44.4	3.92	0.61	0.78	0.99
	1920	54.1	2.77	0.6	0.78	0.98	51.5	3.11	0.62	0.8	1	48.7	3.49	0.63	0.83	1	45.7	3.93	0.65	0.87	1
71°F	1280	53.2	2.76	0.41	0.52	0.63	50.8	3.1	0.41	0.53	0.65	48.2	3.49	0.42	0.54	0.66	45.4	3.93	0.42	0.55	0.68
	1600	55.8	2.78	0.42	0.56	0.69	53.2	3.12	0.43	0.57	0.71	50.2	3.5	0.43	0.58	0.73	47.2	3.93	0.44	0.59	0.75
	1920	57.5	2.79	0.44	0.59	0.75	54.7	3.13	0.44	0.61	0.78	51.7	3.5	0.45	0.62	0.81	48.5	3.94	0.46	0.64	0.84

RATINGS

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

5 TON - LGT060H4 (PART LOAD)

Entering Wet Bulb Tem- perature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
		cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F
63°F	1070	47	1.78	0.64	0.77	0.93	45	2.07	0.65	0.79	0.96	42.7	2.38	0.67	0.82	0.99	40.1	2.74	0.68	0.85	1
	1335	49.8	1.77	0.69	0.86	1	47.6	2.05	0.7	0.89	1	45.1	2.38	0.72	0.93	1	42.5	2.73	0.75	0.97	1
	1600	52	1.76	0.74	0.96	1	49.9	2.05	0.76	0.99	1	47.4	2.37	0.79	1	1	45	2.73	0.83	1	1
67°F	1070	50.3	1.77	0.51	0.62	0.73	48.2	2.05	0.52	0.63	0.75	45.7	2.37	0.52	0.64	0.77	43	2.73	0.53	0.66	0.8
	1335	53.1	1.75	0.54	0.66	0.81	50.8	2.04	0.55	0.68	0.84	48.1	2.37	0.55	0.69	0.88	45.1	2.73	0.57	0.71	0.92
	1600	55.1	1.74	0.57	0.71	0.91	52.7	2.03	0.58	0.73	0.94	49.8	2.36	0.59	0.76	0.98	46.8	2.72	0.6	0.8	1
71°F	1070	53.9	1.75	0.4	0.49	0.59	51.6	2.04	0.4	0.5	0.6	49	2.36	0.4	0.51	0.62	46.1	2.72	0.4	0.52	0.63
	1335	56.8	1.73	0.4	0.52	0.64	54.3	2.03	0.41	0.53	0.65	51.4	2.35	0.41	0.54	0.67	48.3	2.72	0.42	0.55	0.69
	1600	58.8	1.72	0.42	0.55	0.69	56.1	2.02	0.42	0.56	0.71	53.1	2.35	0.42	0.58	0.73	49.9	2.71	0.43	0.59	0.76

5 TON - LGT060H4 (FULL LOAD)

Entering Wet Bulb Tem- perature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F					95°F					105°F					115°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				cfm	kBtuh	kW			75°F	80°F	85°F			kBtuh	kW	75°F			80°F	85°F	kBtuh
63°F	1600	59.2	3.43	0.7	0.85	1	56.7	3.82	0.71	0.87	1	54	4.29	0.72	0.9	1	51	4.83	0.74	0.93	1
	2000	62.5	3.46	0.75	0.95	1	59.6	3.86	0.78	0.98	1	56.9	4.32	0.8	1	1	54.1	4.86	0.83	1	1
	2400	65.5	3.5	0.83	1	1	62.9	3.9	0.85	1	1	60.1	4.37	0.88	1	1	57.1	4.91	0.92	1	1
67°F	1600	63	3.47	0.55	0.67	0.81	60.2	3.87	0.56	0.69	0.83	57.3	4.33	0.57	0.7	0.86	54	4.86	0.58	0.72	0.89
	2000	66	3.51	0.58	0.73	0.91	63	3.9	0.59	0.75	0.94	59.8	4.36	0.6	0.77	0.97	56.4	4.9	0.62	0.8	1
	2400	68.1	3.54	0.62	0.8	1	65.1	3.93	0.63	0.82	1	61.7	4.39	0.65	0.85	1	58.1	4.92	0.66	0.89	1
71°F	1600	67.3	3.53	0.42	0.53	0.65	64.2	3.92	0.42	0.54	0.66	61	4.38	0.42	0.55	0.68	57.6	4.92	0.43	0.56	0.7
	2000	70.4	3.57	0.43	0.57	0.71	67	3.96	0.43	0.58	0.72	63.6	4.42	0.44	0.59	0.74	59.9	4.95	0.44	0.61	0.77
	2400	72.4	3.6	0.45	0.61	0.77	69	3.99	0.45	0.62	0.8	65.3	4.45	0.46	0.64	0.83	61.6	4.97	0.46	0.65	0.87

HUMIDITROL® DEHUMIDIFICATION SYSTEM RATINGS

3 TON - LGT036H4 WITH HUMIDITROL® OPERATING

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
		cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F
63°F	640	22.2	1.7	.44	.57	.71	17.8	1.9	.29	.48	.67	13.3	2.1	.14	.39	.64	8.9	2.3	-.01	.30	.60
	800	23.7	1.7	.45	.60	.75	18.4	1.9	.24	.49	.75	13.1	2.1	.03	.38	.74	7.8	2.3	-.19	.28	.74
	960	25.2	1.7	.46	.63	.79	19.1	1.9	.19	.50	.82	12.9	2.1	-.09	.38	.85	6.7	2.3	-.37	.26	.88
67°F	640	26.1	1.7	.33	.45	.56	21.4	1.9	.19	.35	.50	16.8	2.2	.04	.25	.45	12.1	2.4	-.10	.14	.39
	800	27.9	1.7	.33	.46	.59	22.4	1.9	.14	.34	.54	16.9	2.1	-.05	.22	.49	11.3	2.4	-.25	.10	.44
	960	29.8	1.7	.33	.48	.62	23.4	1.9	.09	.34	.58	17.0	2.1	-.15	.19	.54	10.6	2.3	-.39	.05	.49
71°F	640	30.0	1.7	.22	.32	.42	25.1	2.0	.09	.21	.34	20.2	2.2	-.05	.10	.26	15.3	2.4	-.19	-.01	.17
	800	32.1	1.8	.21	.33	.44	26.4	2.0	.04	.19	.34	20.6	2.2	-.13	.05	.24	14.9	2.4	-.31	-.08	.14
	960	34.3	1.8	.20	.33	.46	27.7	2.0	-.01	.17	.34	21.1	2.2	-.22	.00	.22	14.5	2.4	-.42	-.16	.10

4 TON - LGT048H4 WITH HUMIDITROL® OPERATING

Entering Wet Bulb Temper- ature	Total Air Vol- ume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				cfm	kBtuh	kW			75°F	80°F	85°F			kBtuh	kW	75°F			80°F	85°F	kBtuh
63°F	960	30.8	2.3	.42	.67	.92	24.1	2.5	.22	.51	.79	17.5	2.8	.03	.35	.67	10.8	3.0	-.17	.19	.54
	1200	32.2	2.3	.43	.64	.85	24.7	2.5	.18	.48	.78	17.2	2.7	-.07	.32	.71	9.7	2.9	-.32	.16	.64
	1440	33.6	2.3	.45	.62	.78	25.3	2.5	.14	.46	.77	17.0	2.7	-.17	.30	.76	8.7	2.9	-.47	.14	.75
67°F	960	35.5	2.4	.31	.48	.66	28.7	2.6	.13	.34	.55	21.8	2.8	-.05	.19	.44	15.0	3.0	-.23	.05	.33
	1200	37.1	2.4	.31	.47	.63	29.4	2.6	.08	.31	.54	21.8	2.8	-.14	.15	.45	14.1	3.0	-.37	-.01	.36
	1440	38.6	2.4	.32	.46	.61	30.2	2.6	.04	.29	.54	21.7	2.8	-.24	.11	.47	13.3	3.0	-.51	-.06	.40
71°F	960	40.2	2.4	.19	.30	.40	33.2	2.6	.03	.17	.31	26.1	2.8	-.13	.04	.21	19.1	3.0	-.30	-.09	.11
	1200	41.9	2.4	.19	.30	.42	34.1	2.6	-.01	.15	.30	26.3	2.8	-.22	-.01	.19	18.5	3.0	-.43	-.17	.08
	1440	43.6	2.4	.19	.31	.43	35.0	2.6	-.06	.12	.30	26.4	2.8	-.31	-.07	.17	17.9	3.0	-.55	-.26	.04

5 TON - LGT060H4 WITH HUMIDITROL® OPERATING

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
				cfm	kBtuh	kW			75°F	80°F	85°F			kBtuh	kW	75°F			80°F	85°F	kBtuh
63°F	1080	34.1	2.8	.40	.54	.68	26.8	3.0	.20	.42	.63	19.5	3.3	.00	.29	.58	12.1	3.6	-.19	.17	.53
	1350	35.6	2.8	.41	.57	.73	27.4	3.0	.16	.42	.68	19.2	3.3	-.10	.26	.63	11.0	3.5	-.35	.11	.57
	1620	37.0	2.8	.42	.60	.77	28.0	3.1	.11	.42	.72	19.0	3.3	-.20	.24	.67	10.0	3.5	-.51	.05	.61
67°F	1080	38.7	2.8	.29	.41	.54	31.4	3.1	.11	.28	.46	24.2	3.4	-.08	.15	.38	16.9	3.6	-.26	.02	.30
	1350	40.6	2.9	.29	.43	.56	32.5	3.1	.07	.27	.48	24.3	3.4	-.16	.12	.39	16.1	3.6	-.39	-.04	.31
	1620	42.6	2.9	.30	.45	.59	33.5	3.1	.03	.26	.50	24.4	3.4	-.25	.08	.41	15.3	3.6	-.52	-.10	.32
71°F	1080	43.3	2.9	.18	.28	.39	36.1	3.1	.01	.15	.28	28.9	3.4	-.16	.01	.18	21.7	3.7	-.33	-.13	.07
	1350	45.7	2.9	.18	.29	.40	37.5	3.2	-.03	.13	.28	29.3	3.4	-.23	-.03	.16	21.2	3.7	-.43	-.19	.04
	1620	48.2	3.0	.17	.29	.41	39.0	3.2	-.06	.11	.28	29.8	3.4	-.30	-.08	.15	20.6	3.7	-.54	-.26	.02

BLOWER DATA **0.5 HP**

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

FOR ALL UNITS ADD:		Minimum Air Volume Required For Different Gas Heat Sizes:
1 - Any factory installed options air resistance (heat section, economizer, etc.).		Standard Heat - 900 cfm; Medium Heat - 1250 cfm.
2 - Any field installed accessories air resistance (duct resistance, diffuser, etc.).		

See page 26 for wet coil and options/accessory air resistance data.

DOWNFLOW																																			
External Static Press. in. w.g.				Percentage of Total Motor Torque																															
20%				30%				40%				50%				60%				70%				80%				90%				100%			
Cfm	Watts	RPM		Cfm	Watts	RPM		Cfm	Watts	RPM		Cfm	Watts	RPM		Cfm	Watts	RPM		Cfm	Watts	RPM		Cfm	Watts	RPM		Cfm	Watts	RPM					
0	811	50	415	994	82	473	1177	114	531	1319	154	579	1461	194	626	1564	236	663	1667	278	700	1804	349	753	1878	396	783								
0.1	716	47	494	906	81	547	1095	115	599	1243	158	642	1391	200	685	1500	243	718	1608	286	751	1753	361	798	1833	409	824								
0.2	631	49	570	827	85	618	1023	121	665	1176	165	704	1329	209	742	1442	254	772	1555	299	802	1708	375	843	1794	425	865								
0.3	556	54	644	758	92	687	960	130	729	1118	176	764	1275	222	799	1392	268	825	1509	314	851	1668	392	888	1759	443	907								
0.4	489	62	715	696	102	753	903	142	791	1065	189	822	1227	236	853	1347	284	877	1467	331	900	1632	410	932	1726	462	949								
0.5	---	---	---	---	---	---	851	155	851	1017	204	879	1183	253	906	1306	301	927	1429	349	948	1597	430	976	1693	481	991								
0.6	---	---	---	---	---	---	804	170	909	973	220	933	1141	269	957	1267	318	976	1392	367	994	1562	449	1019	1660	501	1032								
0.7	---	---	---	---	---	---	759	184	964	930	235	985	1101	286	1006	1228	336	1023	1355	385	1039	1527	467	1062	1624	519	1074								
0.8	---	---	---	---	---	---	716	199	1017	889	251	1036	1061	302	1054	1189	352	1069	1317	402	1083	1489	484	1103	1585	535	1115								
0.9	---	---	---	---	---	---	671	211	1067	845	264	1083	1019	316	1099	1148	366	1112	1276	416	1125	1447	499	1144	1540	549	1156								
1.0	---	---	---	---	---	---	625	222	1114	800	275	1128	974	327	1142	1102	378	1154	1230	428	1165	1400	510	1183	1489	559	1196								
1.1	---	---	---	---	---	---	576	230	1158	751	283	1170	925	336	1182	1052	387	1193	1179	437	1203	1345	518	1221	1430	566	1235								
1.2	---	---	---	---	---	---	521	234	1199	695	288	1210	869	341	1220	995	391	1230	1121	441	1240	1283	521	1258	1361	567	1273								
1.3	---	---	---	---	---	---	---	---	---	---	---	---	806	340	1255	930	390	1265	1054	440	1274	1210	519	1293	1281	562	1311								
1.4	---	---	---	---	---	---	---	---	---	---	---	---	734	335	1288	856	384	1297	977	433	1306	1126	510	1326	1188	552	1347								
HORIZONTAL																																			

HORIZONTAL

External Static Press. in. w.g.	Percentage of Total Motor Torque																										
	20%			30%			40%			50%			60%			70%			80%			90%			100%		
	Cfm	Watts	RPM	Cfm	Watts	RPM	Cfm	Watts	RPM	Cfm	Watts	RPM	Cfm	Watts	RPM	Cfm	Watts	RPM	Cfm	Watts	RPM	Cfm	Watts	RPM	Cfm	Watts	RPM
0	794	45	388	970	76	454	1146	107	519	1281	149	575	1416	191	630	1522	110	678	1627	293	726	1715	351	768	1802	408	810
0.1	709	44	460	895	78	519	1080	111	577	1223	155	627	1366	199	677	1477	251	721	1588	303	764	1681	362	804	1773	420	843
0.2	630	46	531	855	82	583	1019	117	634	1169	163	679	1318	208	723	1435	262	763	1552	315	803	1648	375	841	1743	434	878
0.3	556	51	602	759	88	646	961	125	690	1117	172	730	1273	219	769	1395	274	805	1516	328	841	1615	388	877	1714	448	912
0.4	486	58	671	696	97	709	906	135	746	1068	184	781	1230	232	815	1356	288	848	1481	343	880	1582	403	914	1683	463	948
0.5	420	66	740	637	107	771	854	147	802	1021	196	831	1188	245	860	1317	301	890	1446	357	919	1549	418	951	1652	478	983
0.6	---	---	---	---	---	---	804	159	856	946	209	881	1147	259	905	1279	316	932	1410	372	958	1514	432	989	1618	492	1019
0.7	---	---	---	---	---	---	756	172	910	932	223	930	1107	273	949	1241	330	973	1374	386	996	1478	446	1026	1582	506	1055
0.8	---	---	---	---	---	---	709	185	962	888	236	978	1066	287	993	1201	344	1014	1336	400	1034	1440	460	1063	1544	519	1091
0.9	---	---	---	---	---	---	663	197	1013	844	249	1025	1025	300	1036	1161	357	1054	1296	413	1072	1399	472	1100	1502	530	1127
1.0	---	---	---	---	---	---	---	---	---	---	---	---	982	313	1078	1118	369	1094	1254	424	1109	1355	482	1136	1456	540	1163
1.1	---	---	---	---	---	---	---	---	---	---	---	---	938	323	1119	1073	379	1133	1208	434	1146	1307	491	1172	1406	548	1198
1.2	---	---	---	---	---	---	---	---	---	---	---	---	892	332	1158	1026	387	1170	1159	441	1182	1255	497	1208	1351	553	1233
1.3	---	---	---	---	---	---	---	---	---	---	---	---	843	340	1197	975	393	1207	1106	446	1216	1198	501	1242	1290	555	1268
1.4	---	---	---	---	---	---	---	---	---	---	---	---	790	344	1234	920	396	1242	1049	448	1250	1137	501	1276	1224	553	1302

BLOWER DATA

1.0 HP

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

FOR ALL UNITS ADD:

1 - Any factory installed options air resistance (heat section, economizer, etc.).

2 - Any field installed accessories air resistance (duct resistance, diffuser, etc.).

Minimum Air Volume Required For Different Gas Heat Sizes:

Standard Heat - 900 cfm; Medium Heat - 1250 cfm.

See page 26 for wet coil and options/accessory air resistance data.

DOWNFLOW

External Static Press. in. w.g.	Percentage of Total Motor Torque																	
	20%			30%			40%			50%			60%			70%		
	Cfm	Watts	RPM	Cfm	Watts	RPM	Cfm	Watts	RPM	Cfm	Watts	RPM	Cfm	Watts	RPM	Cfm	Watts	RPM
0	1067	112	488	1325	196	573	1583	279	657	1759	381	726	1934	482	794	2046	579	845
0.1	984	97	537	1249	184	616	1513	270	695	1697	376	760	1881	481	825	2002	584	873
0.2	912	91	587	1183	180	661	1453	268	735	1644	377	796	1835	486	856	1964	593	902
0.3	851	92	636	1126	183	706	1400	273	775	1597	385	832	1794	497	889	1931	607	932
0.4	797	100	687	1075	192	751	1353	283	815	1555	397	869	1757	511	922	1901	625	962
0.5	752	114	737	1032	206	796	1312	298	855	1518	413	905	1724	528	955	1873	644	993
0.6	712	132	787	994	224	842	1275	316	896	1484	432	942	1692	548	988	1845	666	1024
0.7	678	155	836	960	246	886	1242	336	936	1452	452	979	1662	568	1021	1818	687	1055
0.8	648	180	885	929	269	931	1210	358	976	1421	474	1016	1632	589	1055	1790	709	1086
0.9	621	207	933	900	294	974	1179	381	1015	1390	495	1051	1600	609	1087	1760	728	1117
1.0	596	235	981	872	319	1017	1148	403	1053	1357	516	1086	1566	628	1119	1725	746	1147
1.1	---	---	---	---	---	---	1115	424	1090	1322	534	1120	1528	643	1150	1686	760	1176
1.2	---	---	---	---	---	---	1080	443	1126	1283	549	1153	1485	655	1180	1641	770	1204
1.3	---	---	---	---	---	---	1040	458	1161	1238	561	1185	1436	663	1209	1589	775	1231
1.4	---	---	---	---	---	---	996	469	1194	1189	567	1215	1381	665	1236	1530	773	1257

HORIZONTAL

External Static Press. in. w.g.	Percentage of Total Motor Torque																	
	20%			30%			40%			50%			60%			70%		
	Cfm	Watts	RPM	Cfm	Watts	RPM	Cfm	Watts	RPM	Cfm	Watts	RPM	Cfm	Watts	RPM	Cfm	Watts	RPM
0	1087	111	493	1304	184	579	1520	257	665	1689	368	738	1857	478	810	1972	588	864
0.1	1021	104	537	1246	180	618	1470	255	699	1646	368	768	1821	480	837	1941	592	888
0.2	961	102	582	1193	181	658	1425	259	734	1607	373	799	1789	487	864	1914	601	912
0.3	906	106	628	1145	186	699	1384	266	769	1572	382	831	1759	498	892	1889	613	938
0.4	855	113	674	1101	196	740	1347	278	806	1540	396	864	1732	513	921	1866	629	965
0.5	808	125	720	1060	209	781	1312	293	842	1509	412	896	1706	530	950	1843	646	992
0.6	764	139	766	1022	225	823	1279	310	879	1481	430	930	1682	549	980	1821	666	1019
0.7	722	155	812	985	242	864	1247	328	916	1452	449	964	1657	569	1011	1799	686	1048
0.8	682	172	858	949	260	906	1216	348	953	1424	469	997	1632	589	1041	1776	706	1076
0.9	643	191	903	914	279	946	1185	367	989	1396	489	1030	1606	610	1071	1751	727	1104
1.0	---	---	---	---	---	---	1153	386	1024	1366	508	1062	1579	629	1100	1724	745	1132
1.1	---	---	---	---	---	---	1120	404	1059	1334	525	1095	1548	646	1130	1694	761	1160
1.2	---	---	---	---	---	---	1085	420	1093	1300	541	1126	1515	661	1158	1660	775	1186
1.3	---	---	---	---	---	---	1047	433	1126	1263	553	1156	1478	672	1186	1622	785	1213
1.4	---	---	---	---	---	---	1005	442	1158	1221	561	1185	1436	680	1212	1579	792	1238

BLOWER DATA

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

Air Volume cfm	Wet Indoor Coil	Humiditrol Dehumidification Coil	Gas Heating		Economizer	Filters		
			Standard Heat	Medium Heat		MERV 8	MERV 13	MERV 16
800	0.01	0.00	0.02	0.02	0.04	0.04	0.05	0.04
1000	0.02	0.00	0.02	0.02	0.04	0.04	0.07	0.05
1200	0.04	0.01	0.02	0.02	0.04	0.04	0.07	0.05
1400	0.05	0.02	0.02	0.02	0.04	0.04	0.07	0.06
1600	0.07	0.03	0.02	0.03	0.04	0.04	0.07	0.08
1800	0.08	0.04	0.03	0.04	0.05	0.04	0.07	0.09
2000	0.10	0.04	0.03	0.04	0.05	0.05	0.08	0.10
2200	0.11	0.04	0.04	0.04	0.05	0.05	0.08	0.11
2400	0.13	0.04	0.04	0.05	0.05	0.05	0.08	0.12

POWER EXHAUST FAN PERFORMANCE

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

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

Air Volume cfm	RTD9-65S Step-Down Diffuser			FD9-65S Flush Diffuser
	2 Ends Open	1 Side & 2 Ends Open	All Ends & Sides Open	
800	0.15	0.13	0.11	0.11
1000	0.19	0.16	0.14	0.14
1200	0.25	0.20	0.17	0.17
1400	0.33	0.26	0.20	0.20
1600	0.43	0.32	0.20	0.24
1800	0.56	0.40	0.30	0.30
2000	0.73	0.50	0.36	0.36
2200	0.95	0.63	0.44	0.44

CEILING DIFFUSER AIR THROW DATA

Air Volume - cfm	¹ Effective Throw - ft.	
Model No.	RTD9-65S	FD9-65S
800	10 - 17	14 - 18
1000	10 - 17	15 - 20
1200	11 - 18	16 - 22
1400	12 - 19	17 - 24
1600	12 - 20	18 - 25
1800	13 - 21	20 - 28
2000	14 - 23	21 - 29
2200	16 - 25	22 - 30

¹ Effective throw based on terminal velocities of 75 ft. per minute.

ELECTRICAL DATA

3 TON

Model No.		LGT036H4		
¹ Voltage - 60Hz		208/230V - 1 Ph	208/230V - 3 Ph	460V - 3 Ph
Compressor	Rated Load Amps	14.2	8.8	4
	Locked Rotor Amps	78.1	70	31
Outdoor Fan Motor	Full Load Amps (1 ECM)	2.8	2.8	1.4
Power Exhaust (1) 0.33 HP	Full Load Amps	2.4	2.4	1.3
Service Outlet 115V GFI (amps)		15	15	15
Indoor Blower Motor	Horsepower	0.5	0.5	0.5
	Full Load Amps	4.3	4.3	2.2
² Maximum Overcurrent Protection (MOCP)	Unit Only	35	25	15
	With (1) 0.33 HP Power Exhaust	40	25	15
³ Minimum Circuit Ampacity (MCA)	Unit Only	25	19	9
	With (1) 0.33 HP Power Exhaust	28	21	10

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.

ELECTRICAL DATA

4 TON

Model No.		LGT048H4		
¹ Voltage - 60Hz		208/230V - 1 Ph	208/230V - 3 Ph	460V - 3 Ph
Compressor	Rated Load Amps	17.1	11.7	5.7
	Locked Rotor Amps	109	123	60
Outdoor Fan Motor	Full Load Amps (1 ECM)	2.8	2.8	1.4
Power Exhaust (1) 0.33 HP	Full Load Amps	2.4	2.4	1.3
Service Outlet 115V GFI (amps)		15	15	15
Indoor Blower Motor	Horsepower	1	1	1
	Full Load Amps	7.4	7.4	3.7
² Maximum Overcurrent Protection (MOCP)	Unit Only	45	35	15
	With (1) 0.33 HP Power Exhaust	50	35	15
³ Minimum Circuit Ampacity (MCA)	Unit Only	32	25	13
	With (1) 0.33 HP Power Exhaust	34	28	14

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.

ELECTRICAL DATA**5 TON**

Model No.		LGT060H4		
¹ Voltage - 60Hz		208/230V - 1 Ph	208/230V - 3 Ph	460V - 3 Ph
Compressor	Rated Load Amps	23.5	14	6.5
	Locked Rotor Amps	118	93	60
Outdoor Fan Motor	Full Load Amps (1 ECM)	2.8	2.8	1.4
Power Exhaust (1) 0.33 HP	Full Load Amps	2.4	2.4	1.3
Service Outlet 115V GFI (amps)		15	15	15
Indoor Blower Motor	Horsepower	1	1	1
	Full Load Amps	7.4	7.4	3.7
² Maximum Overcurrent Protection (MOCP)	Unit Only	60	40	15
	With (1) 0.33 HP Power Exhaust	60	40	20
³ Minimum Circuit Ampacity (MCA)	Unit Only	40	28	14
	With (1) 0.33 HP Power Exhaust	42	31	15

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.

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

OUTDOOR SOUND DATA

¹ Unit Model No.	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	
036, 048	63	66	70	71	68	62	53	75
060	67	72	77	76	73	68	61	82

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

¹ Sound Rating Number according to AHRI Standard 270-95 (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

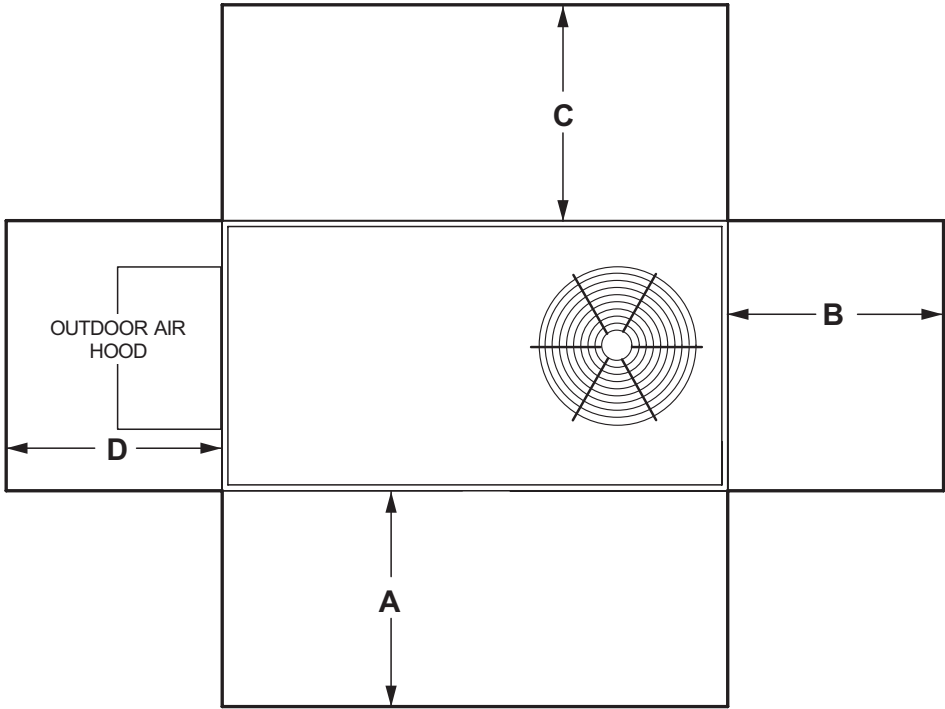
UNIT

Model Number	Net		Shipping	
	lbs.	kg	lbs.	kg
036 Base Unit	630	286	691	313
036 Max. Unit	827	375	888	403
048 Base Unit	629	285	690	313
048 Max. Unit	826	375	890	404
060 Base Unit	630	286	691	313
060 Max. Unit	830	376	891	404

OPTIONS / ACCESSORIES

		Shipping Weight	
		lbs.	kg
ECONOMIZER / OUTDOOR AIR / EXHAUST			
Economizer			
Economizer, Includes Combination Outdoor Air Hood and Barometric Relief Dampers		131	59
Outdoor Air Dampers			
Motorized		40	18
Manual		30	14
Power Exhaust		35	17
GAS HEAT			
Medium Heat (adder over low heat)		8	4
COMBINATION COIL/HAIL GUARDS			
All models		31	14
ROOF CURBS			
Hybrid Roof Curbs, Downflow			
8 in. height		86	39
14 in. height		108	49
18 in. height		125	57
24 in. height		147	67
Adjustable Pitch Curb, Downflow			
14 in. height		147	67
CEILING DIFFUSERS			
Step-Down	RTD9-65S	80	36
Flush	FD9-65S	80	36
Transitions	T1TRAN10AN1	22	10
HUMIDITROL® DEHUMIDIFICATION SYSTEM			
Humiditrol Dehumidification Option (Net Weight)		27	12

UNIT CLEARANCES



¹ Unit Clearance	A		B		C		D		Top Clearance
	in.	mm	in.	mm	in.	mm	in.	mm	
Service Clearance	48	1219	36	914	36	934	36	914	Unobstructed
Clearance to Combustibles	36	914	1	25	1	25	1	25	
Minimum Operation Clearance	36	914	36	914	36	914	36	914	

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

¹ **Service Clearance** - Required for removal of serviceable parts.
Clearance to Combustibles - Required clearance to combustible material.
Minimum Operation Clearance - Required clearance for proper unit operation.

DIMENSIONS

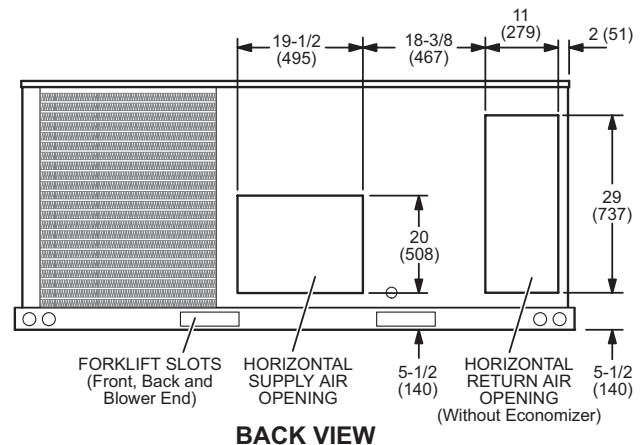
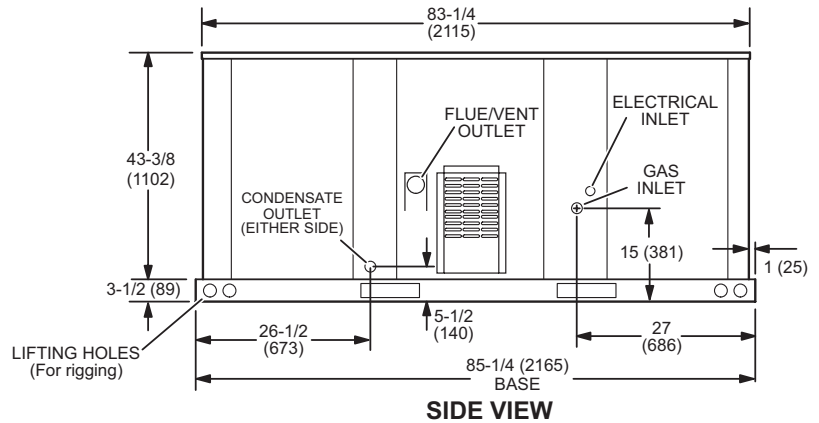
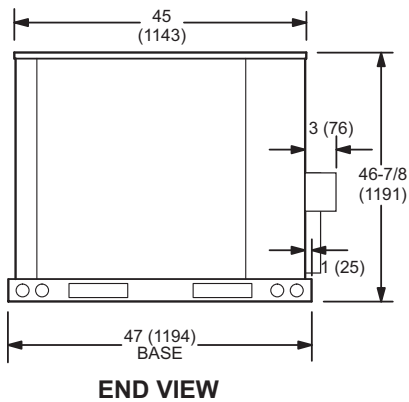
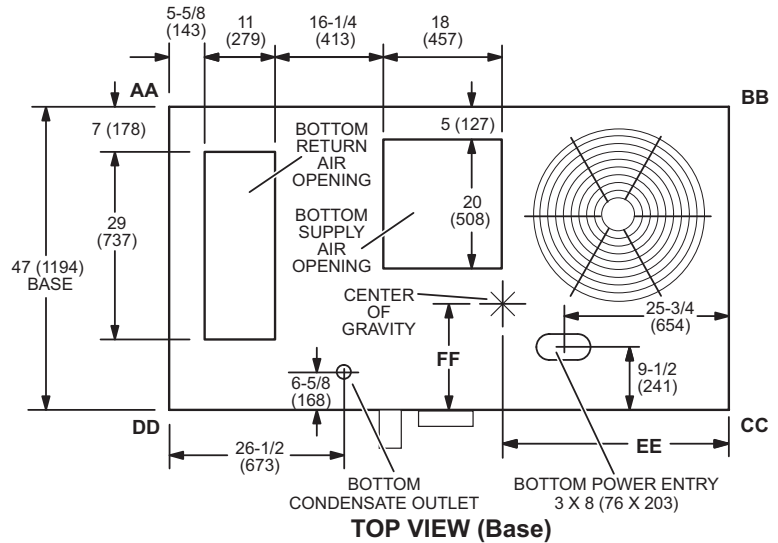
UNIT

CORNER WEIGHTS

Model No.	AA		BB		CC		DD		CENTER OF GRAVITY		FF	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm
LGT036 Base Unit	131	59	161	73	220	100	179	81	38-1/4	972	19-7/8	505
LGT036 Max. Unit	168	76	207	94	283	128	230	104	39-3/4	1010	19-7/8	505
LGT048 Base Unit	131	59	161	73	220	100	179	81	38-1/4	972	19-7/8	505
LGT048 Max. Unit	169	77	207	94	283	128	230	104	39-3/4	1010	19-7/8	505
LGT060 Base Unit	131	59	161	73	220	100	179	81	38-1/4	972	19-7/8	505
LGT060 Max. Unit	169	77	208	94	284	129	231	105	39-3/4	1010	19-7/8	505

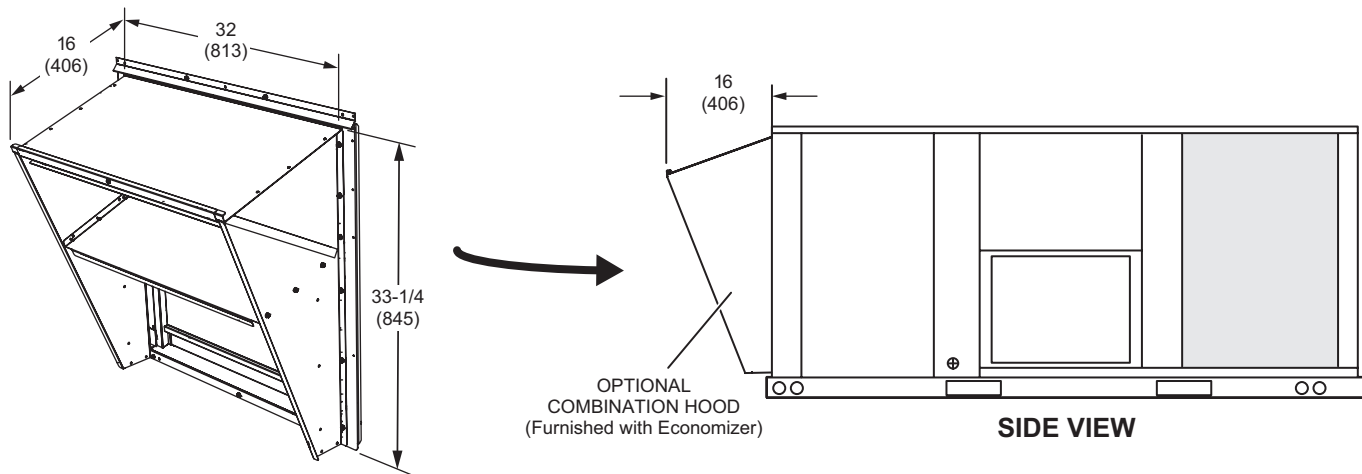
Base Unit - The unit with NO INTERNAL OPTIONS.

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

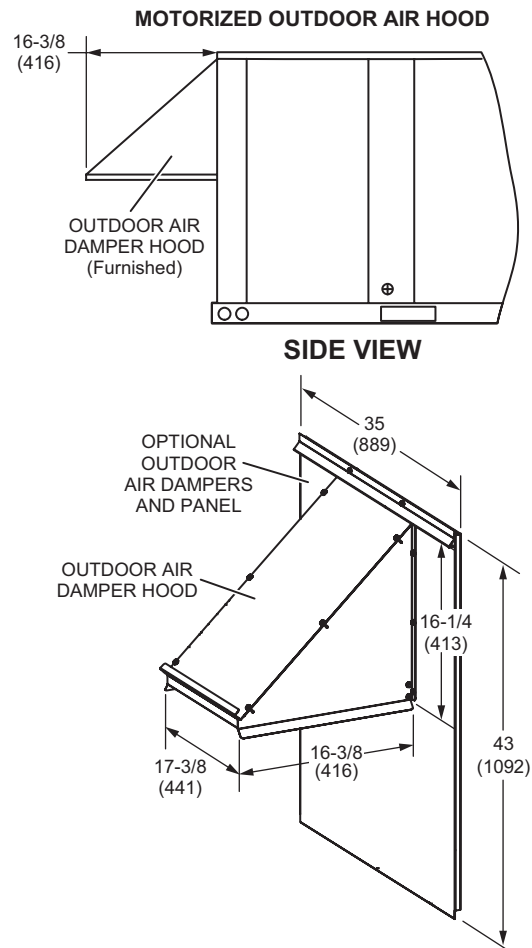
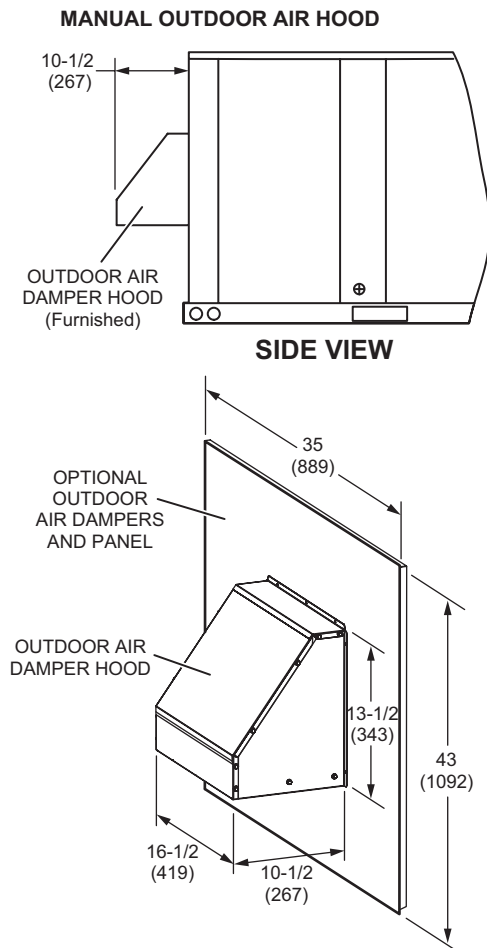


DIMENSIONS - ACCESSORIES

COMBINATION OUTDOOR AIR HOOD DETAIL FOR OPTIONAL ECONOMIZER AND BAROMETRIC RELIEF DAMPERS (Furnished With Economizer for Downflow Applications)

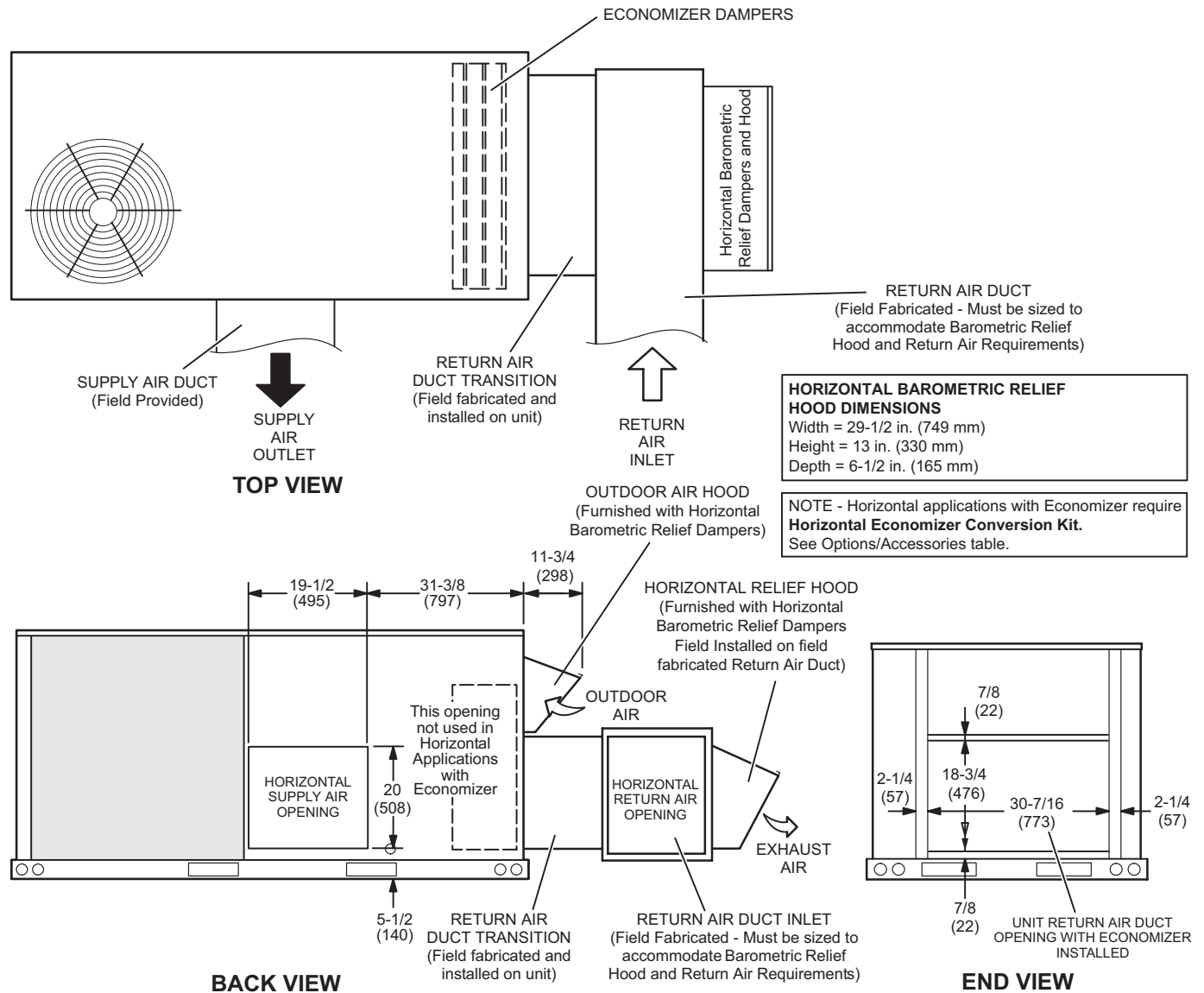


OUTDOOR AIR DAMPER HOOD DETAIL (Downflow or Horizontal Applications)



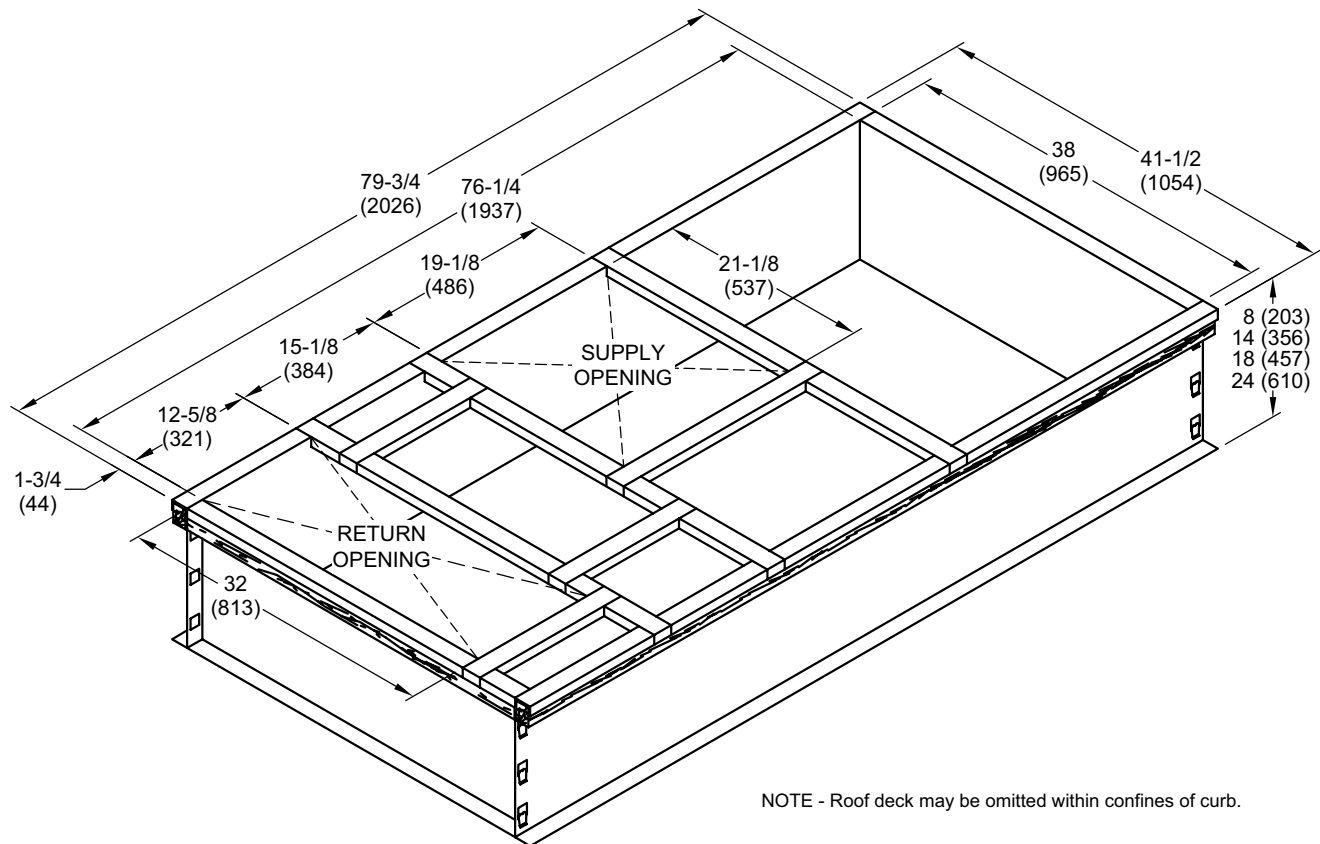
DIMENSIONS - ACCESSORIES

HORIZONTAL ECONOMIZER APPLICATIONS - OUTDOOR AIR HOOD DETAIL WITH OPTIONAL ECONOMIZER DAMPERS AND OPTIONAL HORIZONTAL BAROMETRIC RELIEF DAMPERS AND HOOD

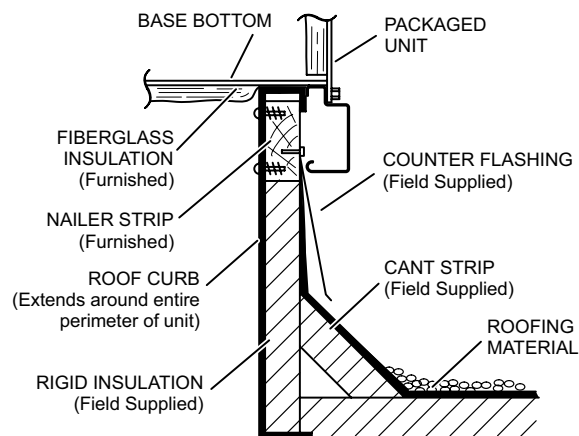


NOTE - Return Air Duct and Transition must be supported.

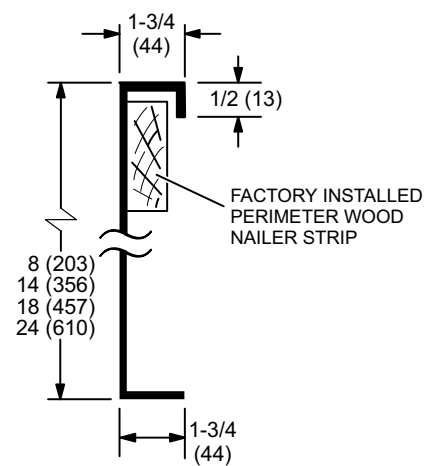
HYBRID ROOF CURBS - DOUBLE DUCT OPENING



TYPICAL FLASHING DETAIL FOR ROOF CURB

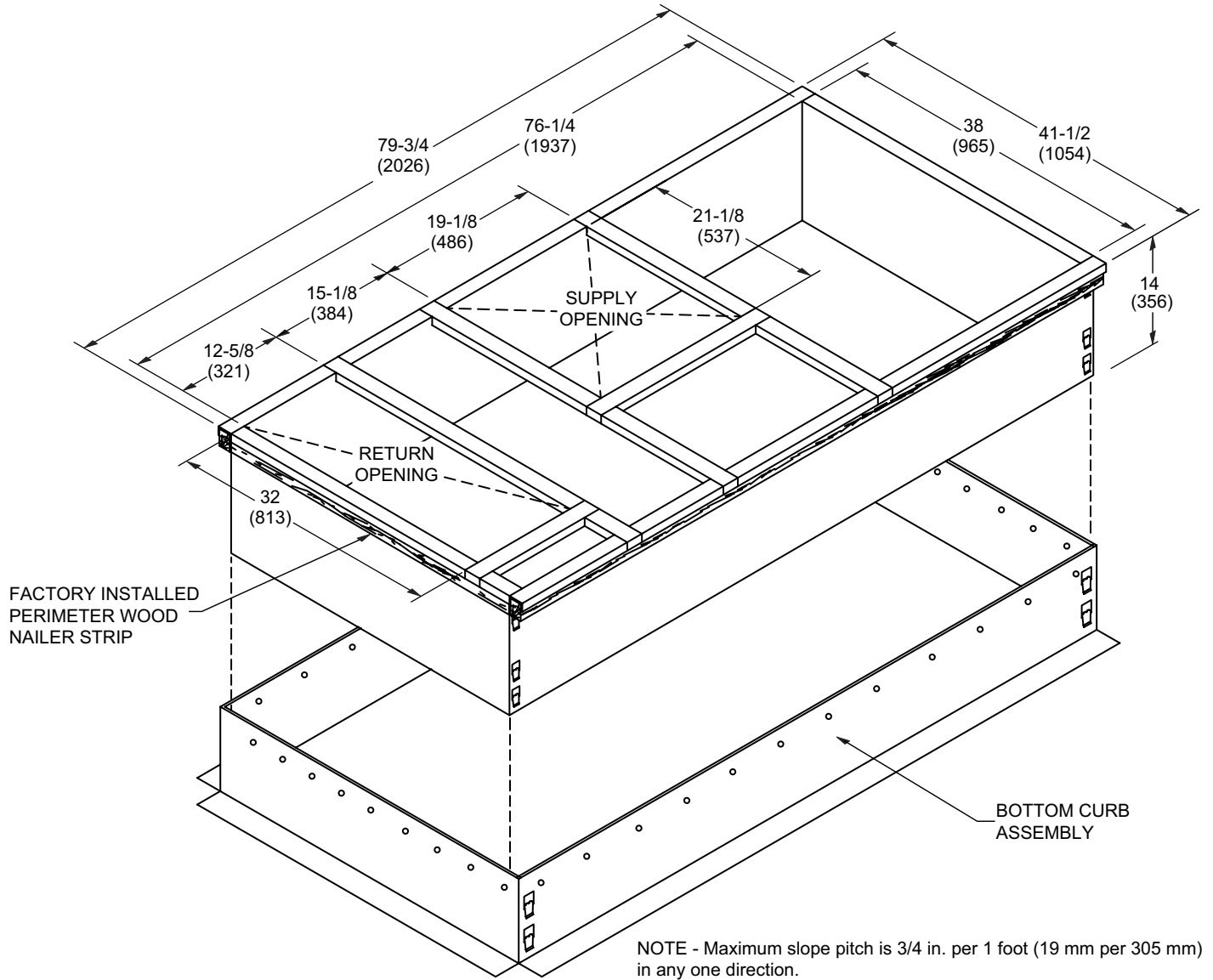


DETAIL ROOF CURB

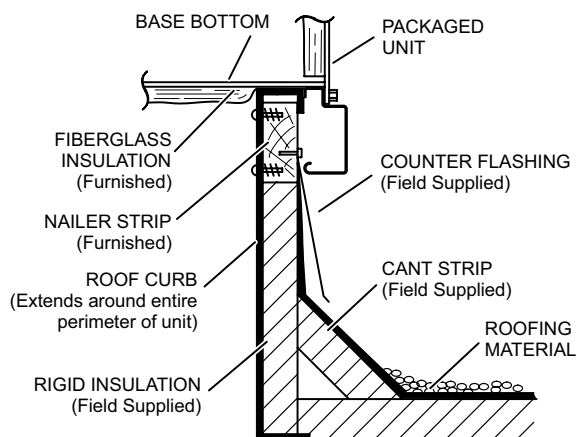


DIMENSIONS - ACCESSORIES

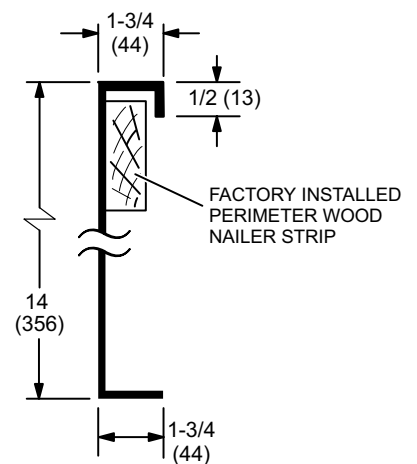
ADJUSTABLE PITCH CURBS - DOUBLE DUCT OPENING



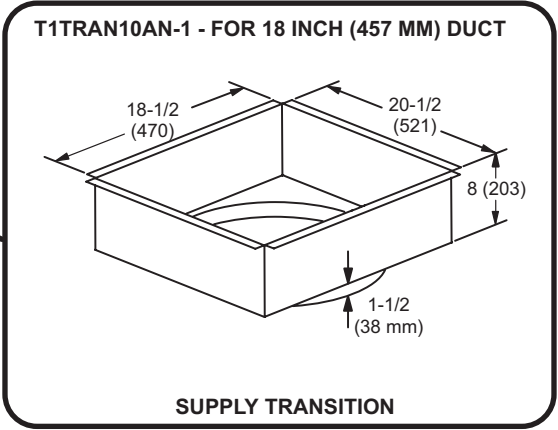
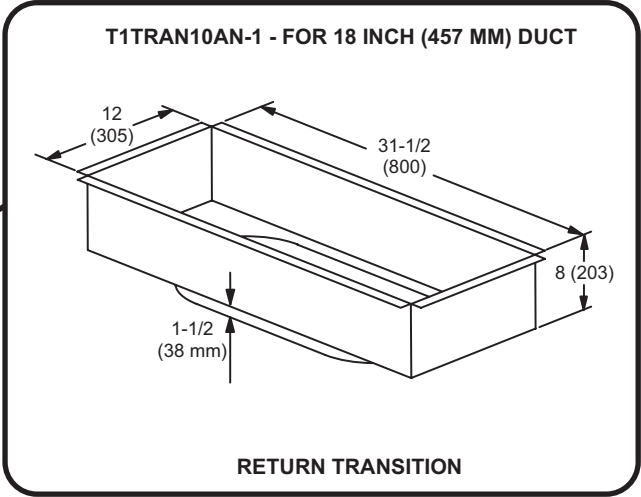
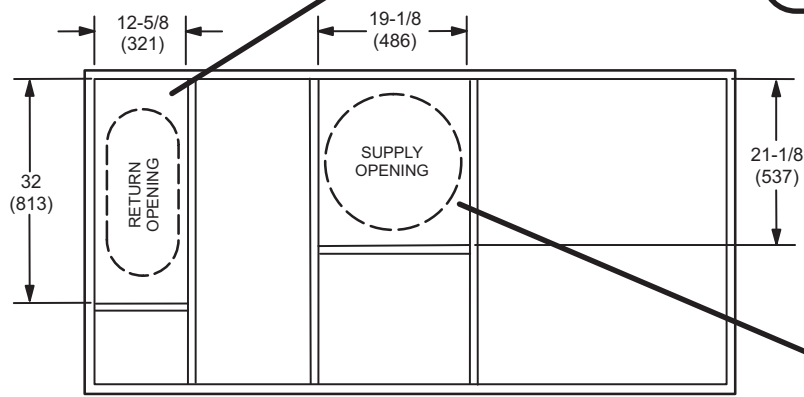
TYPICAL FLASHING DETAIL FOR ROOF CURB



DETAIL ROOF CURB



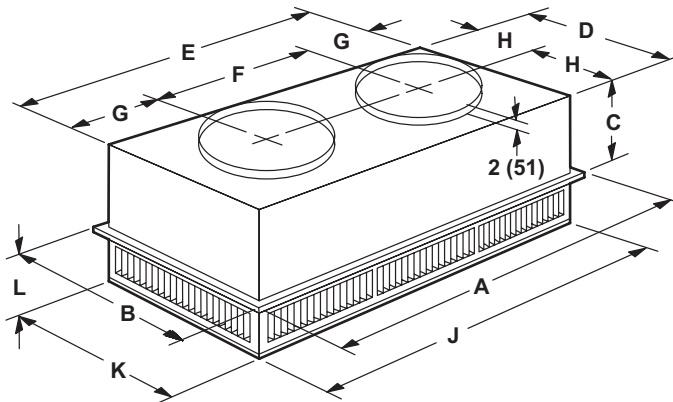
TRANSITIONS



DIMENSIONS - ACCESSORIES

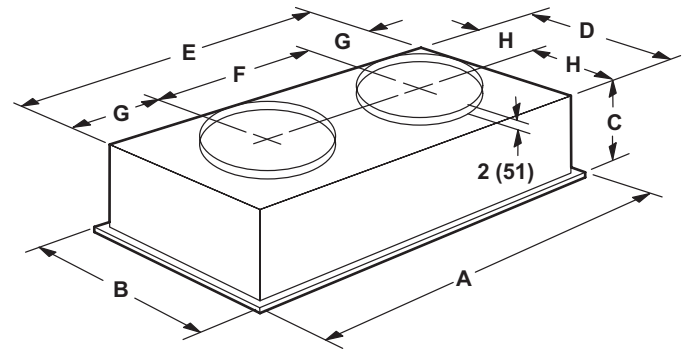
COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

STEP-DOWN CEILING DIFFUSER



Model Number		RTD9-65S
A	in.	47-5/8
	mm	1159
B	in.	23-5/8
	mm	600
C	in.	11-3/8
	mm	289
D	in.	21-1/2
	mm	546
E	in.	45-1/2
	mm	1156
F	in.	22-1/2
	mm	572
G	in.	11-1/2
	mm	292
H	in.	10-3/4
	mm	273
J	in.	45-1/2
	mm	1156
K	in.	21-1/2
	mm	546
L	in.	7-1/8
	mm	181
Duct Size	in.	18 round
	mm	457 round

FLUSH CEILING DIFFUSER



Model Number		FD9-65S
A	in.	47-5/8
	mm	1159
B	in.	23-5/8
	mm	600
C	in.	13-1/2
	mm	343
D	in.	21
	mm	533
E	in.	45
	mm	1143
F	in.	22-1/2
	mm	572
G	in.	11-1/4
	mm	286
H	in.	10-1/2
	mm	267
Duct Size	in.	18 round
	mm	457 round

REVISIONS

Sections	Description of Change
Optional Conventional Temperature Control Systems	Removed discontinued Wireless Sensors and Repeater.



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