



PACKAGED ELECTRIC / ELECTRIC

KCA/KCB

K-Series Rooftop Units

Standard/High Efficiency - 60 Hz

**COMMERCIAL
PRODUCT SPECIFICATIONS**

Bulletin No. 310821

May 2022

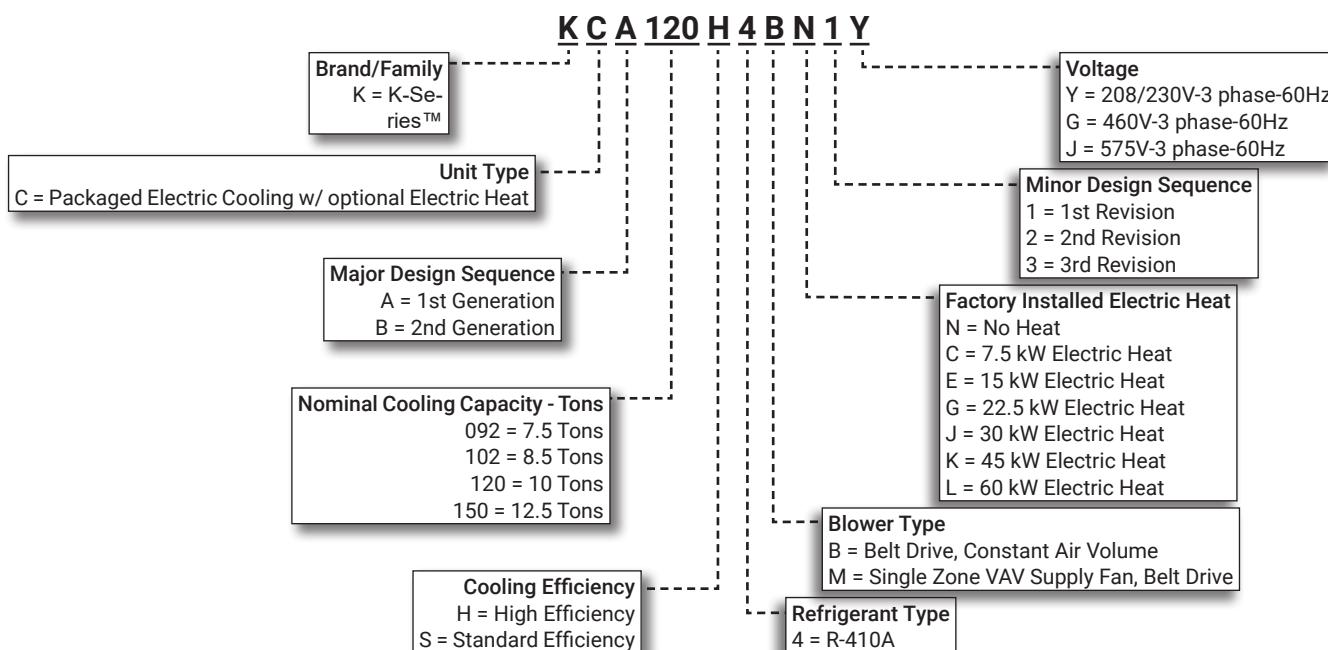
Supersedes February 2022



**ASHRAE 90.1
COMPLIANT**

**7.5 to 12.5 Tons
Net Cooling Capacity - 86,000 to 138,000 Btuh
Optional Electric Heat - 7.5 to 60 kW**

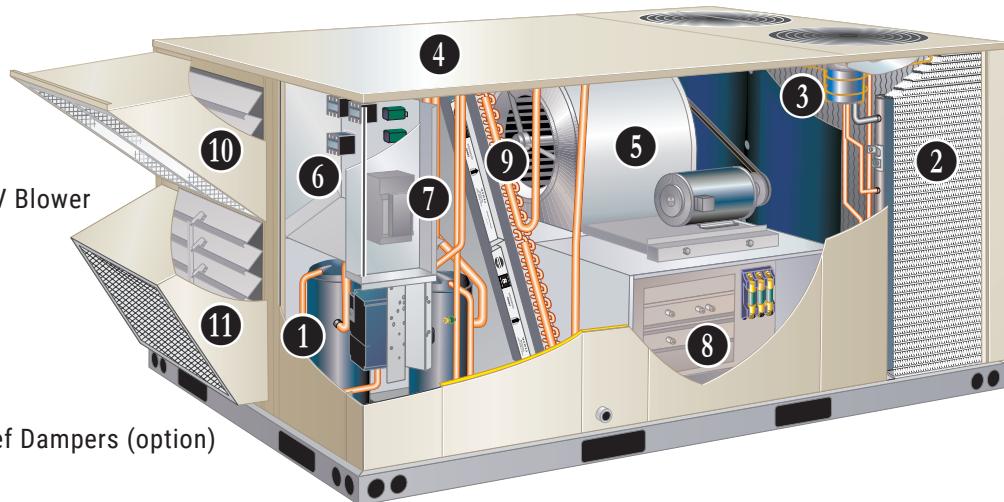
MODEL NUMBER IDENTIFICATION



FEATURE HIGHLIGHTS

K-Series rooftop units from Allied are the new standard for reliable, efficient rooftop units built for long-lasting performance that can significantly improve indoor environments.

1. Scroll Compressors
2. Eco-Last™ Coil System
3. Outdoor Coil Fan Motors
4. Heavy Gauge Steel Cabinet
5. Constant or Single Zone VAV Blower
6. Unit Control
7. Disconnect Switch (option)
8. Electric Heat (option)
9. Air Filters
10. Economizer (option)
11. Downflow Barometric Relief Dampers (option)



CONTENTS

Approvals And Warranty	3
Blower Data	31
Dimensions - Accessories	46
Dimensions - Unit	45
Electrical/Electric Heat Data	36
Electric Heat Capacities	43
Features And Benefits	3
Dehumidification System Option	12
Dehumidification System Ratings	28
Model Number Identification.	1
Optional Conventional Temperature Control Systems	13
Options / Accessories	14
Outdoor Sound Data	30
Ratings	21
Specifications	17
Unit Clearances	43
Weight Data	44

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 90.1-2010 energy efficiency compliant and meet or exceed requirements of Section 6.8
- All models meet DOE 2018 energy efficiency standards
- Single Zone VAV models meet California Code of Regulations, Title 24 and ASHRAE 90.1-2010 Section 6.4.3.10 requirements for staged airflow
- ISO 9001 Registered Manufacturing Quality System

WARRANTY

- Compressors - Limited five years
- Eco-Last™ Coil System - Limited three years
- Variable-Frequency Drive (VFD) (optional) - Limited five years
- High Performance Economizers (optional) - Limited five years
- All other covered components - Limited one year

FEATURES AND BENEFITS

COOLING SYSTEM

- Designed to maximize sensible and latent cooling performance at design conditions
- System can operate from 45°F to 125°F without any additional controls

R-410A Refrigerant

- Non-chlorine based
- Ozone friendly

1 Scroll Compressors

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

Compressor Crankcase Heaters

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

Thermal Expansion Valves

(All High Efficiency Models, 092S/150S Models and all Standard Efficiency Models with Dehumidification)

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

Refrigerant Metering Orifice

(102S/120S Standard Efficiency Models without)

- Accurately meters refrigerant in system
- Refrigerant control is accomplished by exact sizing of refrigerant metering orifice

Filter/Driers

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

High Pressure Switches

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

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

2 Condenser Coil - Eco-Last™ Coil System (092 through 120 models only)

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



Eco-Last™ Coil System Features:

- Improved heat transfer performance due to high primary surface area (flat tubes) versus secondary surface (fins)
- Smaller internal volume (reduced refrigerant charge)
- High durability
- All aluminum construction
- Fewer brazed joints
- Compact design
- Reduced unit weight
- Easy maintenance/cleaning
- Mounting brackets with rubber inserts secure coil to unit providing vibration dampening and corrosion protection

FEATURES AND BENEFITS

COOLING SYSTEM (continued)

Conventional Fin/Tube Condenser Coils
(150 models only, optional 092-120 models)

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

Evaporator Coil

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

Condensate Drain Pan

- Plastic pan, sloped to meet drainage requirements per ASHRAE 62.1
- Side or bottom drain connections
- Reversible to allow connection at back of unit

3 Outdoor Coil Fan Motors

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

Outdoor Coil Fans

- PVC coated fan guard furnished

Required Selections

Cooling Capacity

- Specify nominal cooling capacity

Cooling Efficiency

- Specify either standard or high efficiency

Options/Accessories

Factory Installed

Conventional Fin/Tube Condenser Coil (replaces Eco-Last™ Coil System - 092 through 120 models only)

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

NOTE - Required if Dehumidification System is ordered.

Field Installed

Condensate Drain Trap

- Available in copper or PVC

Drain Pan Overflow Switch

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

Low Ambient Controls

- Units operate satisfactorily down to 45°F outdoor air temperature without any additional controls
- Two low ambient control options are available for field installation:

1. **Low Ambient Control Kit (30°F)** - Allows unit operation down to 30°F
2. **Low Ambient Control Kit (0°F)** - Allows unit operation down to 0°F without evaporator coil icing. Head pressure speed control reduces outdoor fan operation during low ambient conditions until head pressure rises to the setpoint. Pressure transducers are mounted on the liquid lines. High pressure switches are furnished to replace existing. Wiring harnesses are furnished for simple plug-in wiring to fans and controller.

FEATURES AND BENEFITS

CABINET

4 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 Entry

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

Exterior Panels

- Constructed of heavy-gauge, galvanized steel
- Two-layer enamel paint finish

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

Access Panels

- Filter section
- Blower/heating section
- Compressor/controls section

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 - 3000 hours
- VA Master Construction Specification Division 23 for High Humidity Installations
- CID AA-52474A (GSA) Indoor Corrosion Protection:
 - Coated coil
 - Coated reheat coil (Dehumidification)
 - Painted blower housing
 - Painted base
- Outdoor Corrosion Protection:
 - Coated coil
 - Painted outdoor base

Options/Accessories

Factory Installed

Hinged Access Panels

- Tool-less access
- Filter section
- Blower/heating section
- Compressor/controls section
- Panels seal and slotted, 3/4 in. hex bolt quarter-turn latches provide a tight air and water seal

Field Installed

Combination Coil/Hail Guards

- Heavy gauge steel frame
- Painted to match cabinet
- Expanded metal mesh protects outdoor coil

Horizontal Discharge Kit

- Consists of duct covers to block off downflow supply and return air openings for horizontal applications
- Also includes return air duct flanges for end return air when economizer is used in horizontal applications

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

Return Air Adaptor Plate

- For same size LC/LG/LH and TC/TG/TH unit replacement
- Installs on return air opening in unit to match return air opening on existing roof curbs
- Also see Accessory Air Resistance table

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
- Belt drive motors are offered on all models and are available in several different sizes to maximize air performance

5 Supply Air Blower

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

Required Selections

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

- Order blower motor horsepower and drive kit number required when base unit is ordered
- See Drive Kit Specifications Table

CAV Operation

- Supply air blower will provide a constant volume of air

Single Zone VAV Supply Fan Operation

- Units utilize a Variable Frequency Drive (VFD) to stage the supply air blower airflow
- The VFD alters the frequency and voltage of the power supply to the blower to control blower speed
- The supply air blower has two speeds:
 - Low speed for part-load cooling operation. Note - Low speed is 66% of high speed
 - High speed for full load cooling and all heat modes
- Full speed blower operation is set by adjusting the motor pulley to deliver the desired air volume
- The ventilation speed is selectable between high and low speed

NOTE - Part load airflow in cooling mode on Single Zone VAV Supply Fan units should not be set below 220 cfm/nominal full load ton to reduce the risk of evaporator coil freeze-up.

- The VFD has an operational range of -40 to 125° F outdoor air ambient temperature
- Lower operating costs are obtained when the blower is operated on lower speeds

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.

Single Zone VAV Supply Fan Sequence of Operation

- Ventilation speed is determined by the VENT SPEED switch setting on VFD control board (LO or HI)
- Blower operates in low speed for mechanical cooling (Y1)
- Blower operates in high speed for any other mode (free cooling, mechanical cooling Y1+Y2, and heating)
- Economizer damper minimum position is fully closed in unoccupied mode
- In occupied mode, the economizer damper minimum position is determined by the setting of the two potentiometers on VFD control board:
 - LO SPD MIN POS potentiometer sets the minimum position when blower is operating at low speed
 - HI SPD MIN POS potentiometer sets the minimum position when blower is operating at high speed

Options/Accessories

Field Installed

VFD Manual Bypass Kit

- Bypass Kit can be used to operate the unit in single speed (CAV) blower mode if the inverter needs to be serviced or replaced
- The VFD Manual Bypass Control is a manual bypass and is enabled by re-configuring the wiring on the unit

FEATURES AND BENEFITS

CONTROLS

6 Unit Control

- All control voltage is provided via a 24V (secondary) transformer with built-in circuit breaker protection
- **Heat/Cool Staging** - Capable of up to 2 heat / 2 cool staging with a third party DDC control system or thermostat
- **Low Voltage Terminal Block** - Provides screw terminal connections for thermostat or controller wiring
- **Night Setback Mode** - Saves energy by closing outdoor air dampers and operating supply fan on thermostat demand only

Options/Accessories

Field Installed

Smoke Detector

- Photoelectric type
- Installed in supply air section, return air section or both sections
- Available with power board and single sensor (supply or return) or power board and two sensors (supply and return)

Commercial Control Systems

Thermostats

- Control system and thermostat options, see page 13

ELECTRICAL

Marked & Color-Coded Wiring

- All electrical wiring is color-coded and marked to identify which components it is connecting

Electrical Plugs

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

Phase Monitor

(Factory Installed on Units Equipped with the Single Zone VAV Supply Fan)

- Phase monitor located in the control compartment detects the phasing of incoming power
- If the incoming power is out of phase or if any of the three phases are lost, an indicator LED on the phase monitor will turn red and the unit will not start
- In normal operation with correct incoming power phasing, the LED will be green

Required Selections

Voltage Choice

- Specify when ordering base unit

Options/Accessories

Factory or Field Installed

7 Disconnect Switch

- Accessible from outside of unit
- Spring loaded weatherproof cover
- See Electrical/Electric Heat tables for ordering information, page 36

8 Electric Heat

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

NOTE - Factory installed electric heat is only available with high efficiency models.

GFI Service Outlets (2)

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

Field Installed

GFI Weatherproof Cover

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

FEATURES AND BENEFITS

INDOOR AIR QUALITY

9 Air Filters

- Disposable 2 inch filters furnished as standard

Options/Accessories

Field Installed

High Efficiency Air Filters

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

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

Options/Accessories

Field InstalledUVC Germicidal Lamps



- Germicidal lamps emit ultra-violet (UV-C) energy, which has been proven to be effective in reducing microbes such as viruses, bacteria, yeasts, and molds. This process either destroys the organism or controls its ability to reproduce.
- UV-C energy greatly reduces the growth and proliferation of mold and other bioaerosols (bacteria and viruses) on illuminated surfaces (particularly coil and drain pan)
- Lamps are field installed in the blower/evaporator coil section
- Magnetic safety interlock terminates power when access panels are removed
- All necessary hardware for installation is included
- Lamps operate on 110/230V-1ph power supply

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

- Approved by ETL

Indoor Air Quality (CO₂) Sensors

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

Needlepoint Bipolar Ionization (NPBI) Kit

- NPBI technology 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 air stream
- 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

OPTIONS / ACCESSORIES

ECONOMIZER

Factory or Field Installed

10 Economizer

(Standard and High Performance Common Features)

- Outdoor Air Hood with mist elimination filter furnished
- Mixed Air Sensor furnished for field installation in the rooftop unit

NOTE - Sensor is factory installed when Economizer is factory installed.

Standard Economizer Features (Not for Title 24)

- Gear-driven action
- 24-volt, fully-modulating spring return motor
- Return air and outdoor air dampers
- Plug-in connections to unit
- Nylon bearings
- Neoprene seals

Standard Economizer Control Module (Not for Title 24)

- Standard Economizer Control Module operation is based on outdoor air temperatures

Economizer Controls:

- **Damper Minimum Position** - Can be set lower than traditional minimum air requirements resulting in cost savings
- **IAQ Sensor** - Signals dampers to modulate and maintain 55°F when CO₂ is higher than the CO₂ setpoint
- **Demand Control Ventilation (DCV) LED** - A steady green Demand Control Ventilation LED indicates the IAQ reading is higher than setpoint and requires more fresh air
- **Free Cool LED** - A steady green LED indicates outdoor air is suitable for free cooling
 - Free Cooling runs when outdoor air temperature is lower than the set temperature on the economizer control



NOTE: The Free Cooling default setting for outdoor air temperature sensor is 55°F.

High Performance Economizer Features

- Approved for California Title 24 building standards
- 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 90.1-2010 compliant
- Gear-driven action
- High torque 24-volt fully-modulating spring return damper motor
- Return air and outdoor air dampers
- Plug-in connections to unit
- Stainless steel bearings

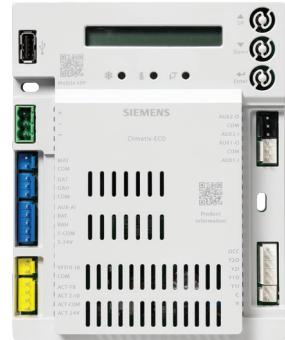
- Enhanced thermoplastic vulcanizate (TPV) seals

- Flexible stainless steel jamb seals

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

High Performance Economizer Control Module

- Provides inputs and outputs to control economizer based on parameter settings
- Free cooling based on single dry bulb temperature, or combination temperature + humidity sensors
- Automatic switchover for different control modes
- Parameter settings based on climate zone, using GPS functionality in the Climatix Mobile application
- LED indication for free cooling operation, sensor operation and damper operation
- Quick installation and easy commissioning with the Climatix Mobile App on a mobile device



NOTE - WLAN Stick is required for App connection to module(s).

- Module displays any alarm messages (fault detection and diagnostics) as an aid in troubleshooting
- RS485 port for BACnet MSTP or Modbus RTU communication
- USB port for firmware updates and WLAN connection for setup and commissioning
- QR codes on module for quick access to download Climatix Mobile App and user documentation
- User Interface for normal operation, parameter setup, and alarm notifications with an LCD display and three operation buttons:

1. **Up Button** - Move to the previous value, step or category
2. **Down Button** - Move to the next value, step or category
3. **Enter Button** -
 - Press to edit the current value or option
 - Press to confirm a newly selected value or option
 - Press Enter + Up to jump up one category
 - Press Enter + Down to jump down one category

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 and menu parameters available.

OPTIONS / ACCESSORIES

ECONOMIZER (continued)

Factory or Field Installed

Single Enthalpy Temperature Control

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

Field Installed

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 board to select between outdoor air or return air, whichever has lower enthalpy

WLAN Stick

- Required for Climatix Mobile App usage
- Plugs into USB port on Module to provide a temporary WLAN connection for setup, commissioning, and servicing

NOTE - Only one WLAN Stick is required and can be used on multiple modules.

EXHAUST

Field Installed

Horizontal Low Profile Barometric Relief Dampers

- Replaces barometric relief dampers furnished with Economizer
- For use when unit is configured for horizontal applications in a reduced space 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
- Exhaust hood with bird screen furnished

NOTE - Requires Horizontal Discharge Kit

⑪ 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 20 in. diameter
- Five blades
- One 1/3 hp motor

NOTE - Requires Economizer and Downflow Barometric Relief Dampers.

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

OPTIONS / ACCESSORIES

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

DEHUMIDIFICATION SYSTEM OPTION

OVERVIEW

NOTE - Not available with Eco-Last™ Coil System.

Conventional Fin/Tube condenser coil must be ordered as a factory option.

- Factory installed option designed to control humidity
- Provides dehumidification on demand using ASHRAE 90.1 recommended method for comfort conditioning humidity control
- Unit comes equipped with one row reheat coil, solenoid valve and humidity controller
- 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

NOTE - Controls are not furnished and must be ordered separately.

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

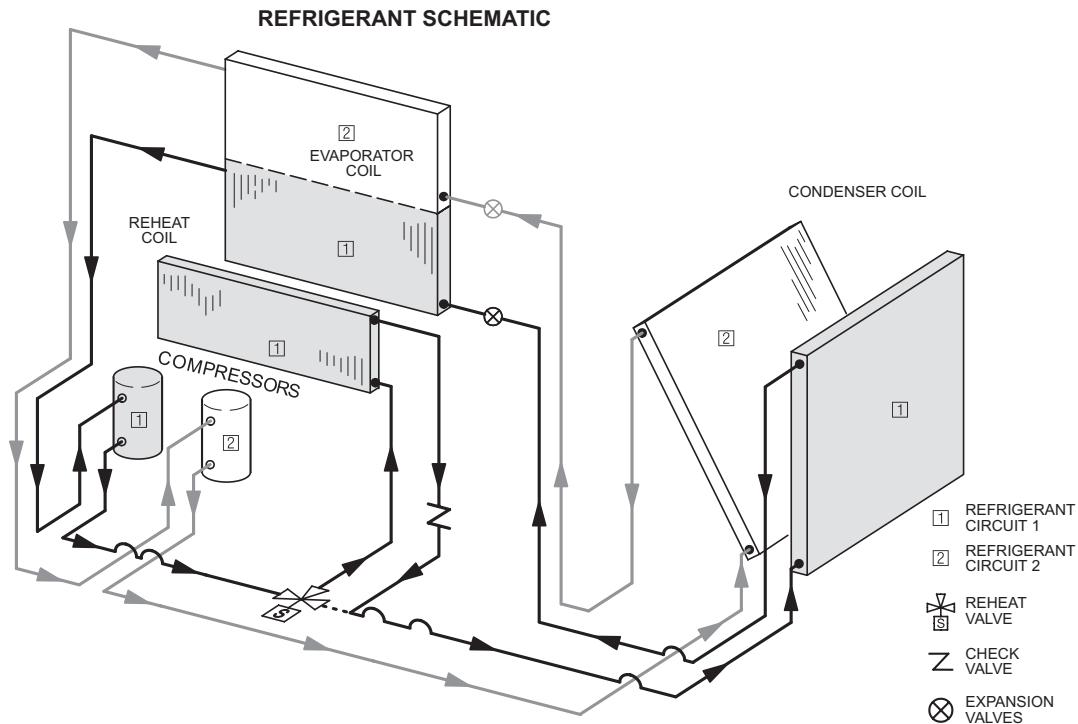
Dehumidification Demand Only

- Dehumidification is initiated by an output from a dehumidistat (furnished), an optional thermostat with a dehumidification output or an optional DDC controller with an isolated output to control humidity
- Reheat operation will initiate on a dehumidification demand and does not require a cooling demand
- The unit will operate in the dehumidification mode until the relative humidity of the conditioned space is below the setpoint
- This operation reduces sensible cooling capacity and extends compressor run time to control humidity when the cooling load is low
- A solenoid valve diverts hot gas from the compressor to the reheat coil
- The cooled and dehumidified air from the evaporator is reheated as it passes through the reheat coil
- The de-superheated and partially condensed refrigerant continues to the outdoor condenser coil where condensing is completed
- Unit will continue to operate in this mode until the dehumidification demand is satisfied

Dehumidistat Furnished

- Furnished for field installation
- Remote mounted dehumidistat for factory installed Dehumidificationoption
- Adjustable 20-80%

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



OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

Bacnet Compatible Thermostat With Reheat Function



- 7-Day Programmable
- For units with or without Dehumidification option
- BTL listed MS/TP ensures compatibility with any BACnet system
- Built-in control programs for conventional and heat pump applications
- Conventional systems up to 3-stage heat and 3-stage cool
- Heat pumps with 1 or 2 compressors and up to 2-stage auxiliary heat
- On-board temperature and humidity sensor
- Multiple configurable inputs and outputs enable advanced control strategies
- Set-up Wizard enables rapid system configuration
- No special tools required for installation or commissioning
- Seven-day (2, 4 or 6 event) occupancy scheduling per day
- Backlit 5-inch LCD touchscreen

Description	Model No.	Catalog No.
BACnet Controls	¹ 7-Day BACnet Thermostat ² BACnet Module (factory or field)	- - - K0CTRL31B-2
³ BACnet Room Sensors	With Display Without Display	K0SNSR01FF1 K0SNSR00FF1
		Y8241 16X71 97W23 97W24

¹ BACnet Thermostat (Y8241) will control units with and without Dehumidification option. If there is a mix of units equipped with and without Dehumidification on the same site, this thermostat can be used for all units if suitable.

² Not compatible with units equipped with Dehumidification option.

³ Only compatible with BACnet Module (16X71).

OPTIONS / ACCESSORIES

Item Description	Catalog Number	Unit Model No			
		092	102	120	150
COOLING SYSTEM					
Condensate Drain Trap	PVC Copper	22H54 76W27	X X	X X	X X
Conventional Fin/Tube Condenser Coil (Replaces Eco-Last™ Coil System) (Required for Dehumidification option)	Factory	O	O	O	
Corrosion Protection	Factory	O	O	O	O
Drain Pan Overflow Switch	74W42	X	X	X	X
Efficiency	High	O	O	O	O
	Standard	O	O	O	O
Low Ambient Kits	30°F	54W16	X	X	X
	0°F	18B87	X	X	X
		18B94			X
Refrigerant Type	R-410A	O	O	O	O
BLOWER - SUPPLY AIR					
Blower Option	CAV (Constant Air Volume)	Factory	¹ O	O	O
	Single Zone VAV Supply Fan	Factory	O	O	O
Blower Motors	Belt Drive - 2 hp	Factory	O	O	O
	Belt Drive - 3 hp	Factory	O	O	O
	Belt Drive - 5 hp	Factory	O	O	O
VFD Manual Bypass Kit (for Single Zone VAV Supply Fan equipped units only)	90W53	X	X	X	X
Drive Kits See Blower Data Tables for selection	Kit #1 590-890 rpm	Factory	O	O	O
	Kit #2 800-1105 rpm	Factory	O	O	O
	Kit #3 795-1195 rpm	Factory	O	O	O
	Kit #4 730-970 rpm	Factory	O	O	O
	Kit #5 940-1200 rpm	Factory	O	O	O
	Kit #6 1015-1300 rpm	Factory	O	O	O
	Kit #10 900-1135 rpm	Factory	O	O	O
	Kit #11 1040-1315 rpm	Factory	O	O	O
	Kit #12 1125-1425 rpm	Factory	O	O	O
CABINET					
Combination Coil/Hail Guards	22J65	X	X		
	13T05			X	X
Hinged Access Panels	Factory	O	O	O	O
Horizontal Discharge Kit	51W25	X	X	X	X
Return Air Adaptor Plate (for LC/LG/LH and TC/TG/TH unit replacement)	54W96	X	X	X	X
CONTROLS					
NOTE - Also see Conventional Thermostat Control Systems page 13 for Additional Options.					
Smoke Detector - Supply or Return (Power board and one sensor)	11K76	X	X	X	X
Smoke Detector - Supply and Return (Power board and two sensors)	11K80	X	X	X	X

^¹ High efficiency models only.

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	
		092 102 120 150	
INDOOR AIR QUALITY			
Air Filters			
High Efficiency Air Filters	MERV 8	50W61	X X X X
20 x 25 x 2 (Order 4 per unit)	MERV 13	52W41	X X X X
Replacement Media Filter With Metal Mesh Frame (includes non-pleated filter media)		Y3063	X X X X
Indoor Air Quality (CO₂) Sensors			
Sensor - Wall-mount, off-white plastic cover with LCD display		77N39	X X X X
Sensor - Wall-mount, off-white plastic cover, no display		87N53	X X X X
Sensor - Black plastic case with LCD display, rated for plenum mounting		87N52	X X X X
Sensor - Wall-mount, black plastic case, no display, rated for plenum mounting		87N54	X X X X
CO ₂ Sensor Duct Mounting Kit - for downflow applications		85L43	X X X X
Aspiration Box - for duct mounting non-plenum rated CO ₂ sensors (87N53 or 77N39)		90N43	X X X X
UVC Germicidal Lamps			
¹ UVC Light Kit (110/230V-1ph)		21A93	X X X X
Step-Down Transformers	460V primary, 230V secondary	10H20	X X X X
	575V primary, 230V secondary	10H21	X X X X
Needlepoint Bipolar Ionization (NPBI)			
Needlepoint Bipolar Ionization (NPBI) Kit		22U15	X X X X
DEHUMIDIFICATION CONDENSER REHEAT OPTION			
Dehumidification Option		Factory	O O O O
² Dehumidistat, Remote Mounted		99N41	X X X X
ELECTRICAL			
Voltage 60 Hz	208/230V - 3 phase	Factory	O O O O
	460V - 3 phase	Factory	O O O O
	575V - 3 phase	Factory	O O O O
Disconnect Switch - See Electrical/Electric Heat tables for selection	80 amp	54W56	OX OX OX OX
	150 amp	54W57	OX OX OX OX
GFI Service	15 amp non-powered, field-wired (208/230V, 460V only)	74M70	OX OX OX OX
Outlets	20 amp non-powered, field-wired (575V only)	67E01	X X X X
Weatherproof Cover for GFI		10C89	X X X X
³ ELECTRIC HEAT			
7.5 kW	208/230V-3ph	56W38	OX OX
	460V-3ph	56W39	OX OX
	575V-3ph	56W40	OX OX
15 kW	208/230V-3ph	56W41	OX OX OX OX
	460V-3ph	56W42	OX OX OX OX
	575V-3ph	56W43	OX OX OX OX
22.5 kW	208/230V-3ph	56W44	OX OX OX OX
	460V-3ph	56W45	OX OX OX OX
	575V-3ph	56W46	OX OX OX OX
30 kW	208/230V-3ph	56W47	OX OX OX OX
	460V-3ph	56W48	OX OX OX OX
	575V-3ph	56W49	OX OX OX OX
45 kW	208/230V-3ph	56W50	OX OX OX OX
	460V-3ph	56W51	OX OX OX OX
	575V-3ph	56W52	OX OX OX OX
60 kW	208/230V-3ph	55W02	OX OX
	460V-3ph	55W03	OX OX
	575V-3ph	55W04	OX OX

¹ Lamps operate on 110-230V single-phase power supply. Step-down transformer may be ordered separately for 460V and 575V units. Alternately, 110V power supply may be used to directly power the UVC ballast(s).

² A thermostat with a dehumidification output or a DDC controller with an isolated output can be used instead.

³ NOTE - Factory installed electric heat is only available with high efficiency models.

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	
		092 102 120 150	
ECONOMIZER			
Standard Economizer (Not for Title 24)			
Standard Economizer with Single Temperature Control Downflow or Horizontal Applications - Includes Barometric Relief Dampers and Air Hoods	13U45	OX OX OX OX	
Standard Economizer Controls (Not for Title 24)			
Single Enthalpy Control	21Z09	OX OX OX OX	
Differential Enthalpy Control (order 2)	21Z09	X X X X	
High Performance Economizer (Approved for California Title 24 Building Standards / AMCA Class 1A Certified)			
High Performance Economizer with Single Temperature Control Downflow or Horizontal Applications - Includes Barometric Relief Dampers and Air Hoods	23G23	OX OX OX OX	
High Performance Economizer Controls (Not for Title 24)			
Single Enthalpy Control	23G26	OX OX OX OX	
Differential Enthalpy Control (order 2)	23G26	X X X X	
Horizontal Low Profile Barometric Relief Dampers With Exhaust Hood			
Horizontal Low Profile Barometric Relief Dampers With Exhaust Hood	53K04	X X X X	
Economizer Accessories			
WLAN Stick (For High Performance Economizer only)	23K58	X X X X	
OUTDOOR AIR			
Outdoor Air Dampers With Outdoor Air Hood			
Motorized	14G28	OX OX OX OX	
Manual	14G29	OX OX OX OX	
POWER EXHAUST			
Standard Static	208/230V-3ph 460V-3ph 575V-3ph	53W44 53W45 53W46	X X X X X X X X X X X X
ROOF CURBS			
Hybrid Roof Curbs, Downflow			
8 in. height	11F54	X X X X	
14 in. height	11F55	X X X X	
18 in. height	11F56	X X X X	
24 in. height	11F57	X X X X	
Adjustable Pitch Curb			
14 in. height	54W50	X X X X	
CEILING DIFFUSERS			
Step-Down - Order one	RTD11-95S RTD11-135S RTD11-185S	13K61 13K62 13K63	X X X X
Flush - Order one	FD11-95S FD11-135S FD11-185S	13K56 13K57 13K58	X X X X
Transitions (Supply and Return) - Order one	C1DIFF30B-1 C1DIFF31B-1 C1DIFF32B-1	12X65 12X66 12X67	X 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

SPECIFICATIONS
7.5 TON

General Data		Nominal Tonnage	7.5 Ton	7.5 Ton	7.5 Ton
		Model Number	KCB092S4M	KCA092H4B	KCA092H4M
		Efficiency Type	Standard	High	High
		Blower Type	Single Zone VAV Supply Fan	CAV (Constant Air Volume)	Single Zone VAV Supply Fan
Cooling Performance	Gross Cooling Capacity - Btuh	87,800	93,000	93,000	
	¹ Net Cooling Capacity - Btuh	86,000	90,000	90,000	
	AHRI Rated Air Flow - cfm	2400	3000	2800	
	Total Unit Power - kW	7.7	7.1	7.1	
	¹ EER (Btuh/Watt)	11.2	12.7	12.7	
	¹ IEER (Btuh/Watt)	13.6	13.0	14.0	
Refrigerant Charge	Refrigerant Type	R-410A	R-410A	R-410A	
	Eco-Last™ Coil System	Circuit 1	5 lbs. 4 oz.	6 lbs. 6 oz.	6 lbs. 6 oz.
		Circuit 2	4 lbs. 10 oz.	6 lbs. 7 oz.	6 lbs. 7 oz.
	Conventional Fin/Tube	Circuit 1	9 lbs. 4 oz.	---	---
	Coil Option No Reheat	Circuit 2	6 lbs. 12 oz.	---	---
	Conventional Fin/Tube	Circuit 1	10 lbs. 8 oz.	---	---
	with Reheat	Circuit 2	7 lbs. 0 oz.	---	---
Electric Heat Available - See page 15		7.5,15,22.5,30 & 45 KW			
Compressor Type (number)		Scroll (2)	Scroll (2)	Scroll (2)	
Outdoor Coils Eco-Last™ (Fin/Tube)	Net face area (total) - sq. ft.	20.5	28.0	28.0	
	Number of rows	1 (2)	1	1	
	Fins per inch	23 (20)	20	20	
Outdoor Coil Fans	Motor - (No.) hp	(2) 1/3	(2) 1/3	(2) 1/3	
	Motor rpm	1075	1075	1075	
	Total Motor watts	740	800	800	
	Diameter - (No.) in.	(2) 24	(2) 24	(2) 24	
	Number of blades	3	3	3	
	Total Air volume - cfm	8800	8800	8800	
Indoor Coils	Net face area (total) - sq. ft.	12.78	12.78	12.78	
	Tube diameter - in.	3/8	3/8	3/8	
	Number of rows	3	4	4	
	Fins per inch	14	14	14	
	Drain connection - Number and size	(1) 1 in. NPT coupling			
	Expansion device type	Balance port TXV, removable head			
² Indoor Blower and Drive Selection	Nominal motor output	2 hp, 3 hp, 5 hp			
	Maximum usable motor output (US Only)	2.3 hp, 3.45 hp, 5.75 hp			
	Motor - Drive kit number	2 hp Kit 1 590-890 rpm Kit 2 800-1105 rpm Kit 3 795-1195 rpm			
		3 hp Kit 4 730-970 rpm Kit 5 940-1200 rpm Kit 6 1015-1300 rpm			
		5 hp Kit 10 900-1135 rpm Kit 11 1040-1315 rpm Kit 12 1125-1425 rpm			
	Blower wheel nominal diameter x width - in.	(1) 15 X 15			
	Filters	Type of filter	Disposable		
		Number and size - in.	(4) 20 x 25 x 2		
	Electrical characteristics		208/230V, 460V or 575V - 60 hertz - 3 phase		

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

¹ AHRI Certified to AHRI Standard 340/360; 95°F outdoor air temperature and 80°F db/67°F wb entering evaporator air; minimum external duct static pressure.

² Using total air volume and system static pressure requirements determine from blower performance tables rpm and motor output required. Maximum usable output of motors furnished are shown. In Canada, nominal motor output is also maximum usable motor output. If motors of comparable output are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

NOTE – Units equipped with Single Zone VAV Supply Fan option are limited to a motor service factor of 1.0.

SPECIFICATIONS

8.5 TON

General Data		Nominal Tonnage Model Number Efficiency Type Blower Type	8.5 Ton	8.5 Ton	8.5 Ton	8.5 Ton
			KCB102S4B	KCB102S4M	KCA102H4B	KCA102H4M
			Standard	Standard	High	High
			CAV (Constant Air Volume)	Single Zone VAV Supply Fan	CAV (Constant Air Volume)	Single Zone VAV Supply Fan
Cooling Performance	Gross Cooling Capacity - Btuh	99,600	99,600	103,800	103,800	
	¹ Net Cooling Capacity - Btuh	97,000	97,000	100,000	100,000	
	AHRI Rated Air Flow - cfm	2800	2800	3400	3400	
	Total Unit Power - kW	8.7	8.7	8.1	8.1	
	¹ EER (Btuh/Watt)	11.2	11.2	12.4	12.4	
	¹ IEER (Btuh/Watt)	12.9	13.8	12.9	14.0	
Refrigerant Charge	Refrigerant Type	R-410A	R-410A	R-410A	R-410A	
	Eco-Last™ Coil System	Circuit 1	4 lbs. 5 oz.	4 lbs. 5 oz.	6 lbs. 8 oz.	6 lbs. 8 oz.
		Circuit 2	4 lbs. 3 oz.	4 lbs. 3 oz.	6 lbs. 12 oz.	6 lbs. 12 oz.
	Conventional Fin/Tube	Circuit 1	9 lbs. 3 oz.	9 lbs. 3 oz.	---	---
	Coil Option No Reheat	Circuit 2	7 lbs. 14 oz.	7 lbs. 14 oz.	---	---
	Conventional Fin/Tube	Circuit 1	9 lbs. 8 oz.	9 lbs. 8 oz.	---	---
		with Reheat Circuit 2	9 lbs. 4 oz.	9 lbs. 4 oz.	---	---
	Electric Heat Available - See page 15			7.5, 15, 22.5, 30 & 45 KW		
Compressor Type (number)		Scroll (2)	Scroll (2)	Scroll (2)	Scroll (2)	
Outdoor Coils	Net face area (total) - sq. ft.	20.5	20.5	28.0	28.0	
	Number of rows	1 (2)	1 (2)	1	1	
	Fins per inch	23 (20)	23 (20)	20	20	
Eco-Last™ (Fin/Tube)	Motor - (No.) hp	(2) 1/3	(2) 1/3	(2) 1/3	(2) 1/3	
	Motor rpm	1075	1075	1075	1075	
	Total Motor watts	740	740	800	800	
	Diameter - (No.) in.	(2) 24	(2) 24	(2) 24	(2) 24	
	Number of blades	3	3	3	3	
	Total Air volume - cfm	8800	8800	8800	8800	
Outdoor Coil Fans	Net face area (total) - sq. ft.	12.78	12.78	12.78	12.78	
	Tube diameter - in.	3/8	3/8	3/8	3/8	
	Number of rows	3	3	4	4	
	Fins per inch	14	14	14	14	
	Drain connection - Number and size	(1) 1 in. NPT coupling				
	Expansion device type	Refrigerant Metering Orifice (RFC) - No Reheat		Balance port TXV, removable head		
		Balanced port TXV, removable head - With Reheat				
² Indoor Blower and Drive Selection	Nominal motor output	2 hp, 3 hp, 5 hp				
	Maximum usable motor output (US Only)	2.3 hp, 3.45 hp, 5.75 hp				
	Motor - Drive kit number	2 hp Kit 1 590-890 rpm Kit 2 800-1105 rpm Kit 3 795-1195 rpm				
		3 hp Kit 4 730-970 rpm Kit 5 940-1200 rpm Kit 6 1015-1300 rpm				
		5 hp Kit 10 900-1135 rpm Kit 11 1040-1315 rpm Kit 12 1125-1425 rpm				
	Blower wheel nominal diameter x width - in.	(1) 15 X 15	(1) 15 X 15	(1) 15 X 15	(1) 15 X 15	
	Filters	Type of filter	Disposable			
		Number and size - in.	(4) 20 x 25 x 2			
	Electrical characteristics	208/230V, 460V or 575V - 60 hertz - 3 phase				

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

1 AHRI Certified to AHRI Standard 340/360; 95°F outdoor air temperature and 80°F db/67°F wb entering evaporator air; minimum external duct static pressure.

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

NOTE – Units equipped with Single Zone VAV Supply Fan option are limited to a motor service factor of 1.0.

SPECIFICATIONS

10 TON			
General Data	Nominal Tonnage Model Number Efficiency Type Blower Type	10 Ton	10 Ton
		KCB120S4B	KCB120S4M
		Standard	Standard
		CAV (Constant Air Volume)	Single Zone VAV Supply Fan
Cooling Performance	Gross Cooling Capacity - Btuh	118,000	118,000
	¹ Net Cooling Capacity - Btuh	115,000	111,000
	AHRI Rated Air Flow - cfm	3000	3300
	Total Unit Power - kW	10.3	9.7
	¹ EER (Btuh/Watt)	11.2	11.1
	¹ IEER (Btuh/Watt)	12.9	14.0
Refrigerant Charge	Refrigerant Type	R-410A	R-410A
	Eco-Last Coil System	Circuit 1 Circuit 2	6 lbs. 8 oz. 6 lbs. 8 oz.
	Conventional Fin/Tube	Circuit 1	12 lbs. 0 oz.
	Coil Option No Reheat	Circuit 2	11 lbs. 0 oz.
	Conventional Fin/Tube	Circuit 1	12 lbs. 6 oz.
	with Reheat	Circuit 2	11 lbs. 0 oz.
Electric Heat Available - See page 15		15, 22.5, 30, 45 & 60 KW	
Compressor Type (number)		Scroll (2)	Scroll (2)
Outdoor Coils	Net face area (total) - sq. ft.	28.0	28.0
	Number of rows	1(2)	1 (2)
	Fins per inch	23 (20)	23 (20)
Outdoor Coil Fans	Motor - (No.) hp	(2) 1/3	(2) 1/3
	Motor rpm	1075	1075
	Total Motor watts	690	690
	Diameter - (No.) in.	(2) 24	(2) 24
	Number of blades	3	3
	Total Air volume - cfm	9300	9300
Indoor Coils	Net face area (total) - sq. ft.	12.78	12.78
	Tube diameter - in.	3/8	3/8
	Number of rows	4	4
	Fins per inch	14	14
	Drain connection - Number and size	(1) 1 in. NPT coupling	
	Expansion device type	Refrigerant Metering Orifice (RFC) - No Reheat Balanced port TXV, removable head - With Reheat	Balance port TXV, removable head
² Indoor Blower and Drive Selection	Nominal motor output	2 hp, 3 hp, 5 hp	
	Maximum usable motor output (US Only)	2.3 hp, 3.45 hp, 5.75 hp	
	Motor - Drive kit number	2 hp Kit 1 590-890 rpm Kit 2 800-1105 rpm Kit 3 795-1195 rpm 3 hp Kit 4 730-970 rpm Kit 5 940-1200 rpm Kit 6 1015-1300 rpm 5 hp Kit 10 900-1135 rpm Kit 11 1040-1315 rpm Kit 12 1125-1425 rpm	
	Blower wheel nominal diameter x width - in.	(1) 15 X 15	(1) 15 X 15
	Type of filter	Disposable	
	Number and size - in.	(4) 20 x 25 x 2	
Electrical characteristics		208/230V, 460V or 575V - 60 hertz - 3 phase	

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

¹ AHRI Certified to AHRI Standard 340/360; 95°F outdoor air temperature and 80°F db/67°F wb entering evaporator air; minimum external duct static pressure.

² Using total air volume and system static pressure requirements determine from blower performance tables rpm and motor output required. Maximum usable output of motors furnished are shown. In Canada, nominal motor output is also maximum usable motor output. If motors of comparable output are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

NOTE – Units equipped with Single Zone VAV Supply Fan option are limited to a motor service factor of 1.0.

SPECIFICATIONS
12.5 TON

General Data	Nominal Tonnage	12.5 Ton	12.5 Ton	
	Model Number	KCB150S4B	KCB150S4M	
	Efficiency Type	Standard	Standard	
	Blower Type	CAV (Constant Air Volume)	Single Zone VAV Supply Fan	
Cooling Performance	Gross Cooling Capacity - Btuh	143,000	143,000	
	¹ Net Cooling Capacity - Btuh	138,000	138,000	
	AHRI Rated Air Flow - cfm	3950	3950	
	Total Unit Power - kW	12.6	12.6	
	¹ EER (Btuh/Watt)	11.0	11.0	
	¹ IEER (Btuh/Watt)	12.4	13.5	
Refrigerant Charge	Refrigerant Type	R-410A	R-410A	
	Fin/Tube Coil	Circuit 1	14 lbs. 0 oz.	
		Circuit 2	13 lbs. 8 oz.	
	Fin/Tube Coil with Reheat	Circuit 1	14 lbs. 6 oz.	
		Circuit 2	13 lbs. 8 oz.	
Electric Heat Available - See page 15		15, 22.5, 30, 45 & 60 KW		
Compressor Type (number)		Scroll (2)	Scroll (2)	
Outdoor Coils	Net face area (total) - sq. ft.	28.0	28.0	
	Number of rows	3	3	
	Fins per inch	20	20	
Outdoor Coil Fans	Motor - (No.) hp	(2) 1/2	(2) 1/2	
	Motor rpm	1075	1075	
	Total Motor watts	1050	1050	
	Diameter - (No.) in.	(2) 24	(2) 24	
	Number of blades	3	3	
	Total Air volume - cfm	9700	9700	
Indoor Coils	Net face area (total) - sq. ft.	13.54	13.54	
	Tube diameter - in.	3/8	3/8	
	Number of rows	4	4	
	Fins per inch	14	14	
	Drain connection - Number and size	(1) 1 in. NPT coupling		
² Indoor Blower and Drive Selection	Expansion device type	Balance port TXV, removable head		
	Nominal motor output	2 hp, 3 hp, 5 hp		
	Maximum usable motor output (US Only)	2.3 hp, 3.45 hp, 5.75 hp		
	Motor - Drive kit number	2 hp Kit 1 590-890 rpm Kit 2 800-1105 rpm Kit 3 795-1195 rpm		
		3 hp Kit 4 730-970 rpm Kit 5 940-1200 rpm Kit 6 1015-1300 rpm		
		5 hp Kit 10 900-1135 rpm Kit 11 1040-1315 rpm Kit 12 1125-1425 rpm		
	Blower wheel nominal diameter x width - in.	(1) 15 X 15	(1) 15 X 15	
	Type of filter	Disposable		
	Number and size - in.	(4) 20 x 25 x 2		
Electrical characteristics		208/230V, 460V or 575V - 60 hertz - 3 phase		

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

¹ AHRI Certified to AHRI Standard 340/360; 95°F outdoor air temperature and 80°F db/67°F wb entering evaporator air; minimum external duct static pressure.

² Using total air volume and system static pressure requirements determine from blower performance tables rpm and motor output required. Maximum usable output of motors furnished are shown. In Canada, nominal motor output is also maximum usable motor output. If motors of comparable output are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

NOTE – Units equipped with Single Zone VAV Supply Fan option are limited to a motor service factor of 1.0.

RATINGS

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

12.5 TON STANDARD EFFICIENCY KCB150S4B (PART LOAD) - CONSTANT AIR VOLUME

Entering Wet Bulb Tem- pera- ture	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F						75°F						85°F						95°F	
		Total Cool Cap. cfm	Comp. Motor Input kW	Sensible To Total Ratio (S/T)			Total Cool Cap. kBtuh	Comp. Motor Input kW	Sensible To Total Ratio (S/T)			Total Cool Cap. kBtuh	Comp. Motor Input kW	Sensible To Total Ratio (S/T)			Total Cool Cap. kBtuh	Comp. Motor Input kW	Sensible To Total Ratio (S/T)		
				Dry Bulb	Dry Bulb	Dry Bulb			Dry Bulb	Dry Bulb	Dry Bulb			Dry Bulb	Dry Bulb	Dry Bulb			Dry Bulb		
63°F	3800	76.4	3.46	0.67	0.81	0.96	72	3.83	0.67	0.82	0.98	67	4.24	0.68	0.84	0.99	61.7	4.69	0.68	0.86	1
	4400	79.6	3.47	0.71	0.86	1	74.9	3.84	0.71	0.88	1	69.9	4.25	0.71	0.9	1	64.4	4.7	0.73	0.92	1
	5000	82.3	3.49	0.74	0.91	1	77.5	3.85	0.74	0.93	1	72.2	4.26	0.76	0.95	1	66.6	4.71	0.77	0.98	1
67°F	3800	81.9	3.48	0.53	0.65	0.78	77.2	3.85	0.53	0.65	0.79	72.3	4.26	0.52	0.66	0.8	66.8	4.71	0.52	0.66	0.82
	4400	85.2	3.5	0.55	0.68	0.82	80.4	3.86	0.55	0.69	0.84	75.1	4.27	0.54	0.69	0.85	69.6	4.72	0.54	0.7	0.88
	5000	87.8	3.51	0.57	0.71	0.87	82.8	3.88	0.57	0.72	0.89	77.6	4.28	0.57	0.73	0.91	71.8	4.73	0.56	0.74	0.94
71°F	3800	87.7	3.51	0.41	0.52	0.63	83	3.87	0.4	0.52	0.63	77.8	4.28	0.38	0.52	0.64	72.3	4.73	0.37	0.51	0.64
	4400	90.7	3.52	0.42	0.54	0.66	85.8	3.89	0.41	0.54	0.66	80.6	4.29	0.4	0.54	0.67	74.8	4.74	0.38	0.53	0.68
	5000	93.6	3.54	0.43	0.56	0.69	88.3	3.9	0.41	0.56	0.7	82.9	4.3	0.41	0.56	0.71	77	4.75	0.4	0.56	0.72

12.5 TON STANDARD EFFICIENCY KCB150S4B (FULL LOAD) - CONSTANT AIR VOLUME

Entering Wet Bulb Tem- pera- ture	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F						95°F						105°F						115°F	
		Total Cool Cap. cfm	Comp. Motor Input kW	Sensible To Total Ratio (S/T)			Total Cool Cap. kBtuh	Comp. Motor Input kW	Sensible To Total Ratio (S/T)			Total Cool Cap. kBtuh	Comp. Motor Input kW	Sensible To Total Ratio (S/T)			Total Cool Cap. kBtuh	Comp. Motor Input kW	Sensible To Total Ratio (S/T)		
				Dry Bulb	Dry Bulb	Dry Bulb			Dry Bulb	Dry Bulb	Dry Bulb			Dry Bulb	Dry Bulb	Dry Bulb			Dry Bulb		
63°F	3800	146.9	9.2	0.69	0.84	0.98	135.7	10.21	0.7	0.86	1	124.2	11.34	0.7	0.88	1	111.9	12.62	0.72	0.91	1
	4400	153	9.23	0.73	0.89	1	141.3	10.23	0.74	0.91	1	129.5	11.37	0.75	0.94	1	117	12.65	0.77	0.98	1
	5000	158	9.26	0.76	0.94	1	146.2	10.27	0.77	0.97	1	134.2	11.4	0.8	0.99	1	121.8	12.67	0.82	1	1
67°F	3800	157.9	9.26	0.54	0.67	0.81	146.4	10.26	0.53	0.68	0.82	134.6	11.39	0.52	0.68	0.84	122.2	12.68	0.51	0.69	0.87
	4400	164.1	9.29	0.56	0.71	0.86	152.4	10.3	0.56	0.72	0.88	139.9	11.43	0.55	0.73	0.9	127.1	12.7	0.55	0.75	0.94
	5000	169.2	9.32	0.58	0.74	0.91	157.1	10.33	0.58	0.75	0.93	144.6	11.47	0.58	0.77	0.96	131.1	12.73	0.59	0.79	0.99
71°F	3800	169.9	9.32	0.39	0.53	0.65	158	10.34	0.38	0.52	0.65	145.8	11.47	0.37	0.52	0.66	132.7	12.74	0.35	0.51	0.67
	4400	176	9.36	0.41	0.55	0.69	163.6	10.36	0.4	0.55	0.7	151.1	11.51	0.38	0.54	0.71	137.4	12.77	0.37	0.54	0.72
	5000	180.9	9.39	0.42	0.57	0.72	168.2	10.39	0.41	0.57	0.73	155.3	11.52	0.4	0.57	0.75	141.4	12.79	0.39	0.58	0.77

RATINGS

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

12.5 TON STANDARD EFFICIENCY KCB150S4M (PART LOAD) - SINGLE ZONE VAV SUPPLY FAN SUPPLY AIR BLOWER

Entering Wet Bulb Tem- pera- ture	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)		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)					
				Dry Bulb	Dry Bulb			Dry Bulb	Dry Bulb			Dry Bulb	Dry Bulb			Dry Bulb	Dry Bulb			Dry Bulb	Dry Bulb				
63°F	2560	68.8	3.41	0.64	0.74	0.84	64.5	3.8	0.63	0.74	0.85	60	4.21	0.62	0.74	0.86	55.3	4.66	0.62	0.75	0.88				
	3200	74.6	3.44	0.67	0.79	0.91	70.1	3.82	0.67	0.8	0.92	65.2	4.22	0.67	0.8	0.94	60.3	4.68	0.67	0.82	0.96				
	3480	76.6	3.45	0.69	0.81	0.93	72	3.82	0.69	0.82	0.95	67.2	4.23	0.69	0.83	0.97	61.9	4.68	0.69	0.84	0.99				
67°F	2560	74.2	3.44	0.51	0.62	0.71	69.9	3.82	0.5	0.61	0.71	65.4	4.23	0.49	0.6	0.71	60.6	4.69	0.48	0.6	0.72				
	3200	80	3.46	0.54	0.65	0.76	75.3	3.84	0.53	0.64	0.76	70.6	4.25	0.52	0.65	0.77	65.3	4.7	0.51	0.65	0.78				
	3480	82.1	3.47	0.55	0.67	0.78	77.5	3.84	0.54	0.66	0.78	72.5	4.25	0.53	0.66	0.8	67.1	4.7	0.52	0.67	0.81				
71°F	2560	79.9	3.46	0.41	0.5	0.59	75.6	3.84	0.39	0.49	0.58	70.8	4.24	0.37	0.48	0.58	65.9	4.7	0.35	0.47	0.58				
	3200	86	3.49	0.42	0.52	0.63	81.4	3.86	0.4	0.52	0.62	76.5	4.27	0.39	0.51	0.63	71.1	4.72	0.37	0.5	0.62				
	3480	88.2	3.5	0.42	0.53	0.64	83.4	3.87	0.41	0.53	0.64	78.3	4.27	0.4	0.52	0.64	72.9	4.73	0.38	0.52	0.64				

12.5 TON STANDARD EFFICIENCY KCB150S4M (FULL LOAD) - SINGLE ZONE VAV SUPPLY FAN SUPPLY AIR BLOWER

Entering Wet Bulb Tem- pera- ture	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)		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)					
				Dry Bulb	Dry Bulb			Dry Bulb	Dry Bulb			Dry Bulb	Dry Bulb			Dry Bulb	Dry Bulb			Dry Bulb	Dry Bulb				
63°F	3800	146.9	9.2	0.69	0.84	0.98	135.7	10.21	0.7	0.86	1	124.2	11.34	0.7	0.88	1	111.9	12.62	0.72	0.91	1				
	4400	153	9.23	0.73	0.89	1	141.3	10.23	0.74	0.91	1	129.5	11.37	0.75	0.94	1	117	12.65	0.77	0.98	1				
	5000	158	9.26	0.76	0.94	1	146.2	10.27	0.77	0.97	1	134.2	11.4	0.8	0.99	1	121.8	12.67	0.82	1	1				
67°F	3800	157.9	9.26	0.54	0.67	0.81	146.4	10.26	0.53	0.68	0.82	134.6	11.39	0.52	0.68	0.84	122.2	12.68	0.51	0.69	0.87				
	4400	164.1	9.29	0.56	0.71	0.86	152.4	10.3	0.56	0.72	0.88	139.9	11.43	0.55	0.73	0.9	127.1	12.7	0.55	0.75	0.94				
	5000	169.2	9.32	0.58	0.74	0.91	157.1	10.33	0.58	0.75	0.93	144.6	11.47	0.58	0.77	0.96	131.1	12.73	0.59	0.79	0.99				
71°F	3800	169.9	9.32	0.39	0.53	0.65	158	10.34	0.38	0.52	0.65	145.8	11.47	0.37	0.52	0.66	132.7	12.74	0.35	0.51	0.67				
	4400	176	9.36	0.41	0.55	0.69	163.6	10.36	0.4	0.55	0.7	151.1	11.51	0.38	0.54	0.71	137.4	12.77	0.37	0.54	0.72				
	5000	180.9	9.39	0.42	0.57	0.72	168.2	10.39	0.41	0.57	0.73	155.3	11.52	0.4	0.57	0.75	141.4	12.79	0.39	0.58	0.77				

BLOWER DATA

092S STANDARD EFFICIENCY BELT DRIVE BLOWER – BASE UNIT

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

1 – Wet indoor coil air resistance of selected unit.

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

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

Then determine from blower table blower motor output required.

See page 34 for blower motors and drives.

See page 34 for wet coil and option/accessory air resistance data.

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

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

Total Air Volume cfm	Total Static Pressure – in. w.g.																									
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2		2.2		2.4		2.6	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1750	608	0.05	651	0.03	696	0.06	744	0.22	794	0.60	845	0.95	894	1.24	934	1.38	978	1.47	1047	1.66	1120	1.89	1179	2.15	1230	2.40
2000	615	0.07	657	0.05	702	0.10	748	0.36	797	0.72	846	1.05	892	1.30	933	1.45	977	1.55	1049	1.75	1124	2.00	1181	2.23	1234	2.47
2250	624	0.09	664	0.07	707	0.14	753	0.50	800	0.84	847	1.15	892	1.38	934	1.53	979	1.65	1051	1.86	1126	2.12	1183	2.36	1238	2.62
2500	632	0.11	672	0.09	714	0.29	758	0.64	803	0.97	849	1.26	893	1.48	936	1.63	983	1.75	1052	1.96	1124	2.22	1184	2.49	1241	2.77
2750	641	0.13	680	0.11	721	0.45	763	0.78	807	1.09	852	1.37	896	1.58	940	1.74	989	1.88	1053	2.08	1121	2.34	1185	2.63	1244	2.93
3000	651	0.15	689	0.29	728	0.61	770	0.93	812	1.23	856	1.49	901	1.70	947	1.87	996	2.02	1055	2.21	1120	2.47	1186	2.78	1248	3.10
3250	661	0.17	698	0.46	737	0.78	777	1.09	819	1.38	862	1.63	908	1.84	955	2.01	1004	2.17	1059	2.36	1122	2.62	1189	2.94	1252	3.28
3500	672	0.36	708	0.65	746	0.95	786	1.25	827	1.53	870	1.78	916	1.99	965	2.17	1013	2.33	1065	2.52	1126	2.79	1193	3.12	1257	3.47
3750	684	0.56	719	0.85	756	1.14	795	1.43	836	1.70	880	1.95	927	2.16	976	2.34	1023	2.51	1073	2.71	1133	2.98	1198	3.32	1263	3.67
4000	697	0.78	731	1.05	768	1.34	807	1.62	848	1.89	892	2.13	940	2.34	988	2.53	1034	2.71	1083	2.91	1141	3.19	1205	3.53	1270	3.89
4250	710	1.00	745	1.27	781	1.55	819	1.83	861	2.09	906	2.33	954	2.55	1001	2.74	1046	2.93	1094	3.14	1151	3.42	1214	3.76	1278	4.12

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	
092, 102 and 120	76	79	84	83	79	73	66	88
150	75	81	87	85	80	73	67	90

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

¹ Sound Rating Number according to AHRI Standard 270-95 or 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).

BLOWER DATA

092H AND 102H HIGH EFFICIENCY BELT DRIVE BLOWER – BASE UNIT

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

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

Then determine from blower table blower motor output required.

See page 34 for blower motors and drives.

See page 34 for wet coil and option/accessory air resistance data.

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

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

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

BLOWER DATA

CEILING DIFFUSERS AIR RESISTANCE - in. w.g.

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

CEILING DIFFUSER AIR THROW DATA

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

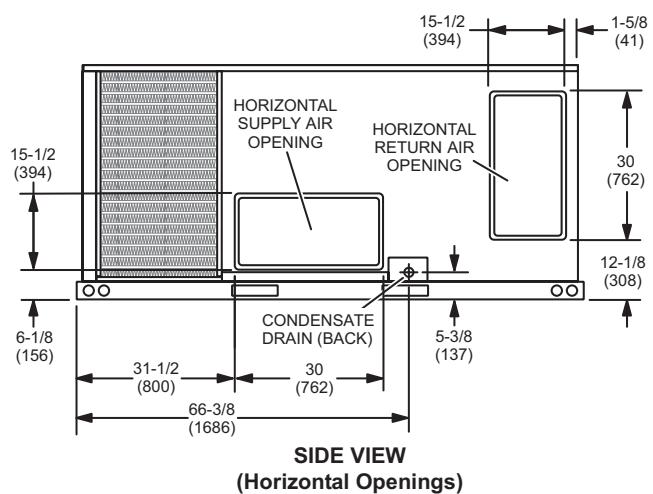
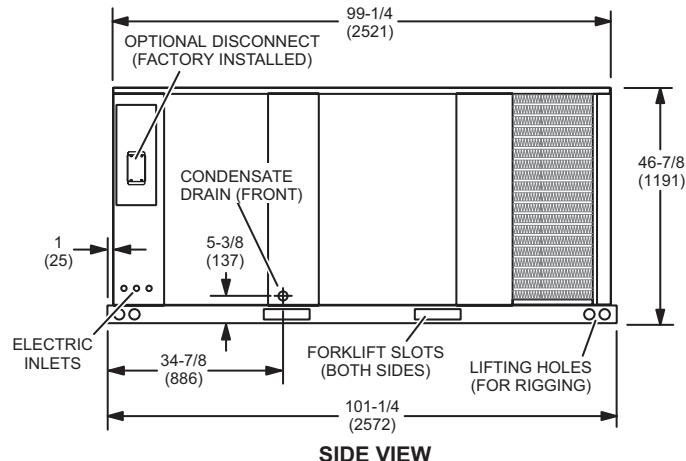
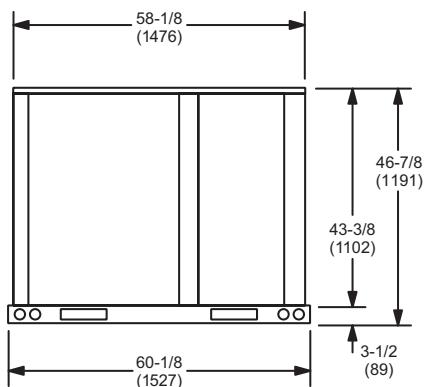
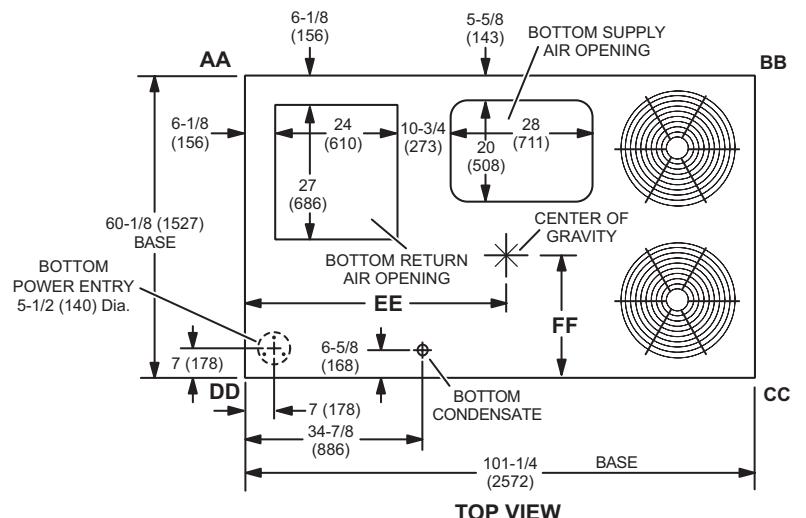
^¹ Throw is the horizontal or vertical distance an air stream travels on leaving the outlet or diffuser before the maximum velocity is reduced to 50 ft. per minute. Four sides open.

DIMENSIONS - UNIT

Model No.	CORNER WEIGHTS								CENTER OF GRAVITY							
	AA		BB		CC		DD		EE				FF			
	Base lbs. kgs.	Max. lbs. kgs.	Base lbs. kgs.	Max. lbs. kgs.	Base lbs. kgs.	Max. lbs. kgs.	Base lbs. kgs.	Max. lbs. kgs.	Base in. mm	Max. in. mm	Base in. mm	Max. in. mm	Base in. mm	Max. in. mm	Base in. mm	Max. in. mm
092S	223	101	309	141	190	86	259	118	206	94	275	124	250	113	341	154
092H	270	122	310	141	230	104	265	120	249	113	287	130	302	137	348	158
102S	228	104	316	143	195	88	262	119	211	96	280	127	254	116	347	157
102H	272	123	312	141	232	105	266	121	251	114	288	131	304	138	350	159
120S	243	110	331	150	204	93	273	124	220	100	294	133	271	123	369	167
120H	283	128	325	148	238	108	274	124	257	116	295	134	316	143	363	165
150S	263	119	305	138	222	101	257	117	242	110	280	127	298	135	346	157

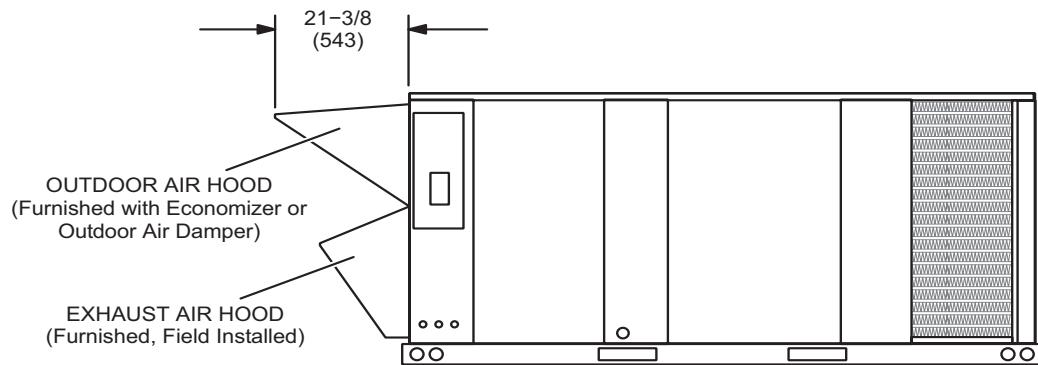
Base Unit - The unit with NO OPTIONS.

Max. Unit - The unit with ALL OPTIONS Installed. (Economizer, etc.)



DIMENSIONS - ACCESSORIES

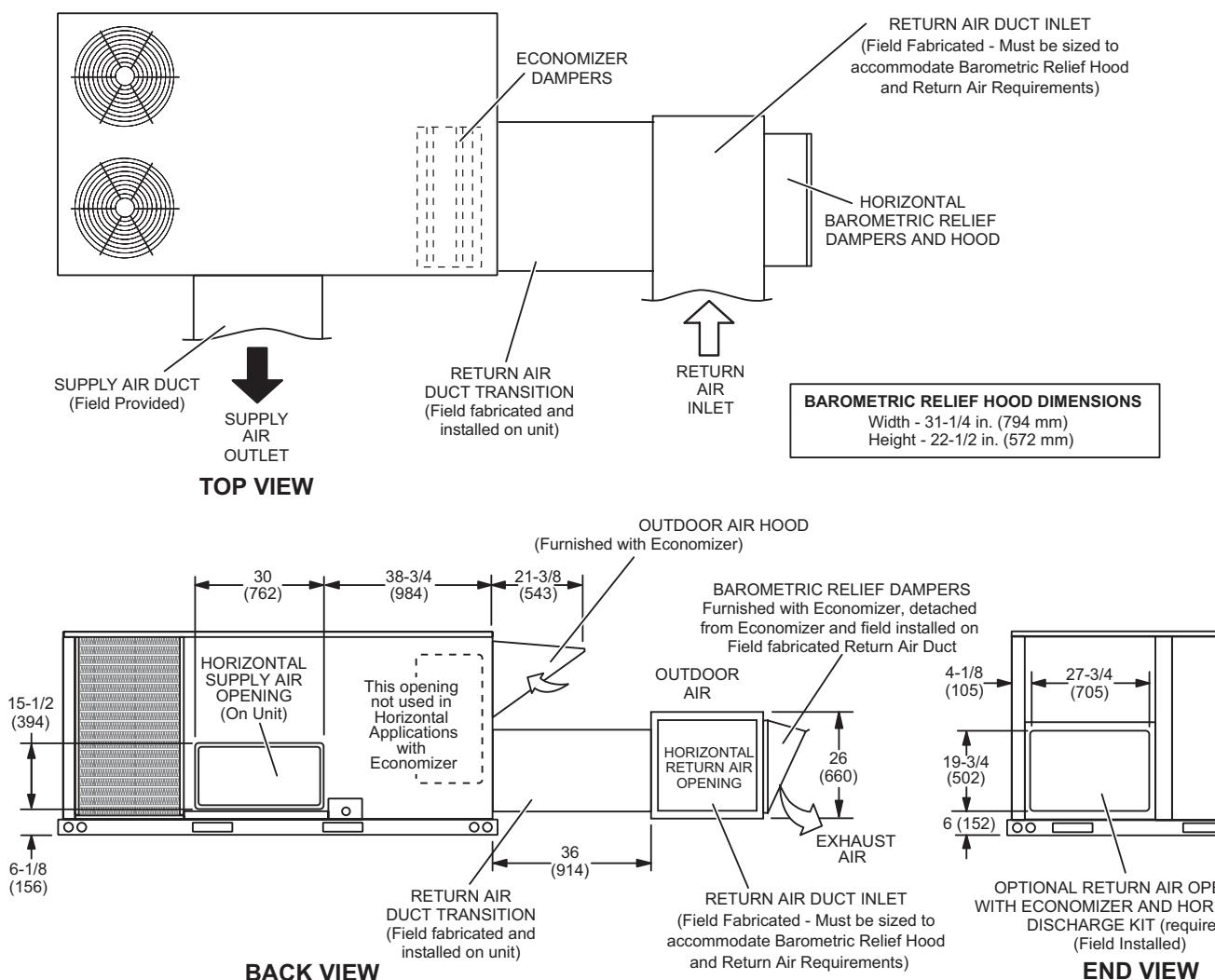
OUTDOOR AIR HOOD DETAIL



DIMENSIONS - ACCESSORIES

HORIZONTAL ECONOMIZER APPLICATION

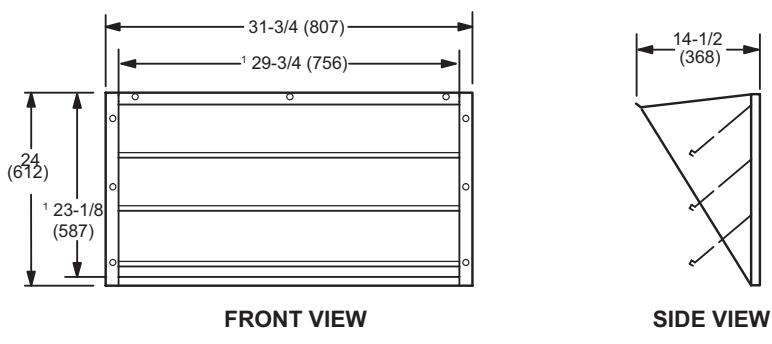
(With Furnished Barometric Relief Dampers and Optional Horizontal Discharge Kit - Required)



NOTE - Return Air Duct and Transition must be supported.

BAROMETRIC RELIEF DAMPERS (Furnished with Economizer)

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

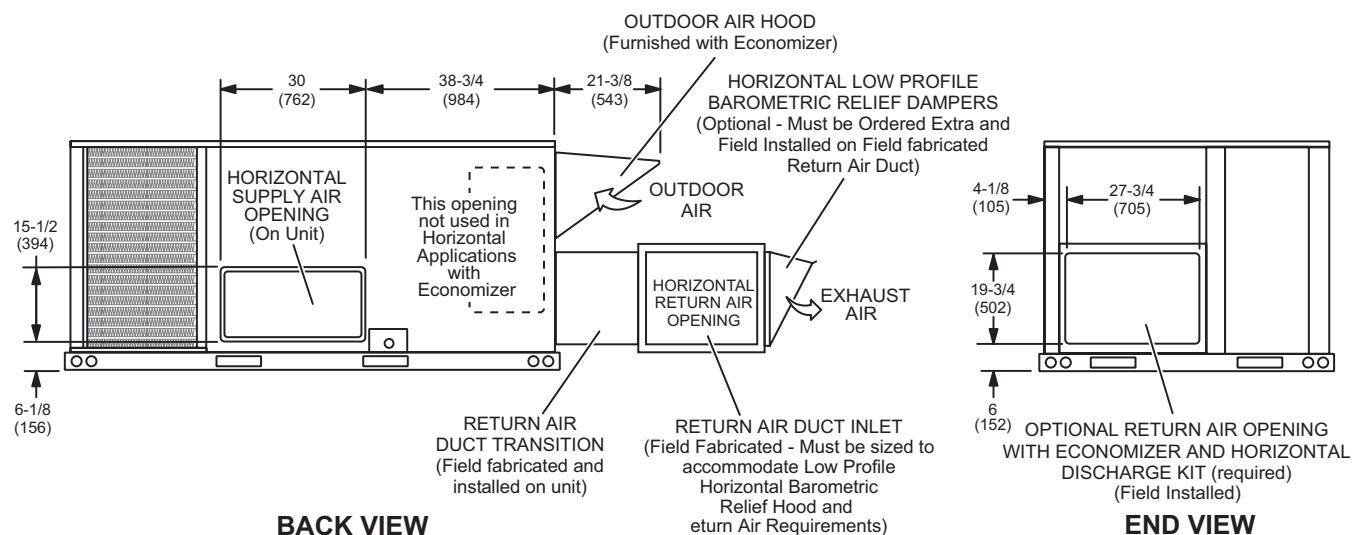
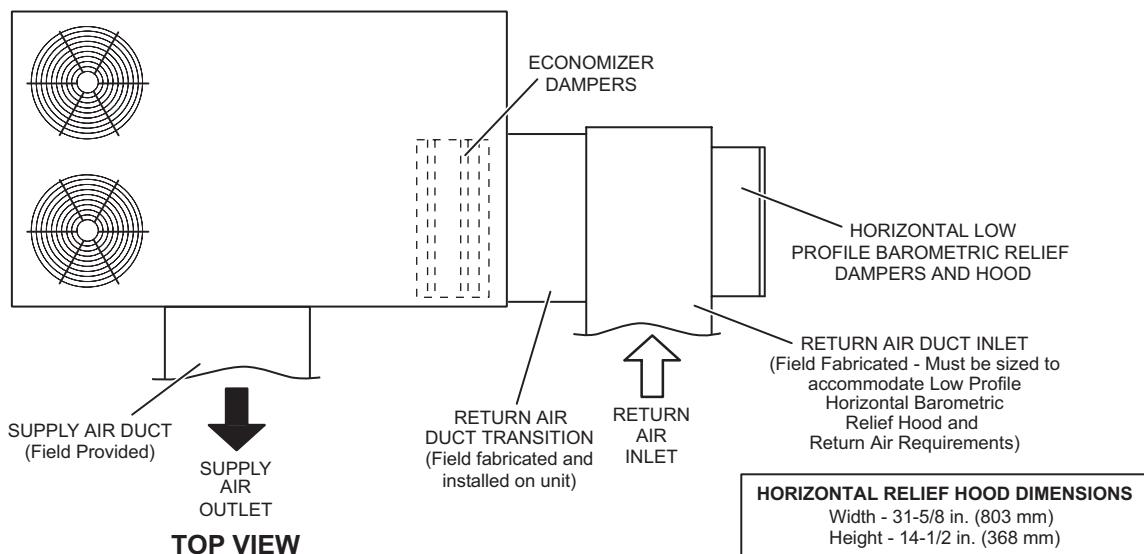


¹ NOTE - Opening size required in return air duct.

DIMENSIONS - ACCESSORIES

HORIZONTAL ECONOMIZER APPLICATION

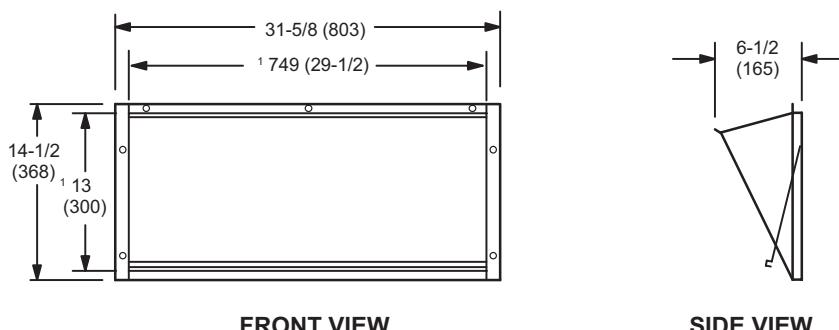
(with Optional Low Profile Horizontal Barometric Relief Dampers and Horizontal Discharge Kit - Required)



NOTE - Return Air Duct and Transition must be supported.

HORIZONTAL LOW PROFILE BAROMETRIC RELIEF DAMPERS

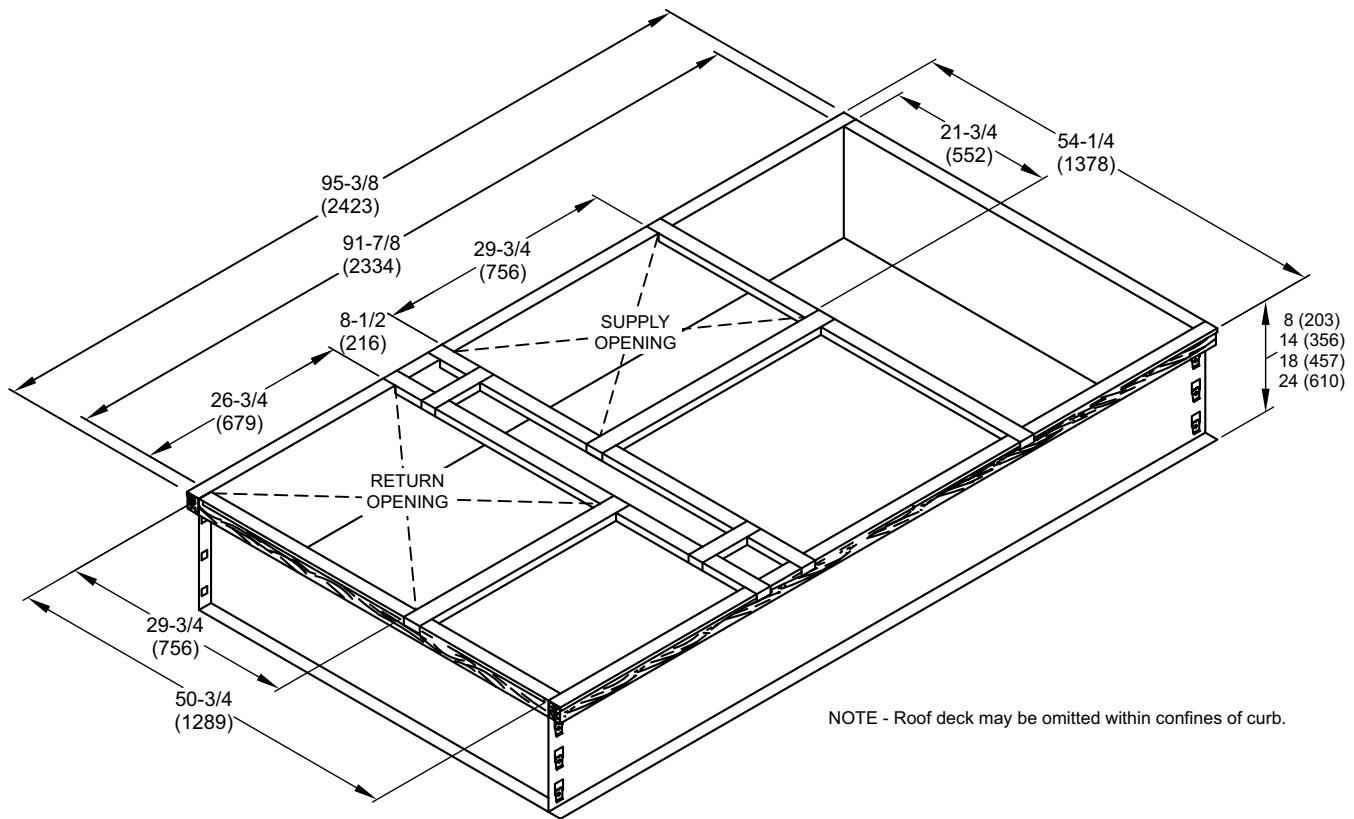
(Field installed in horizontal return air duct adjacent to unit)



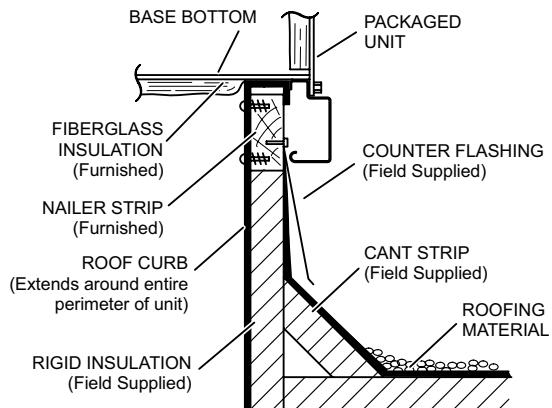
¹ NOTE - Opening size required in return air duct.

DIMENSIONS - ACCESSORIES

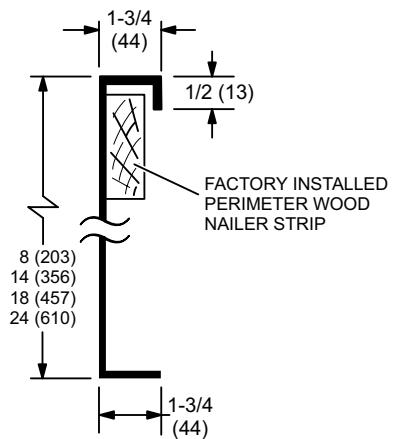
HYBRID ROOF CURBS - DOUBLE DUCT OPENING



TYPICAL FLASHING DETAIL FOR ROOF CURB

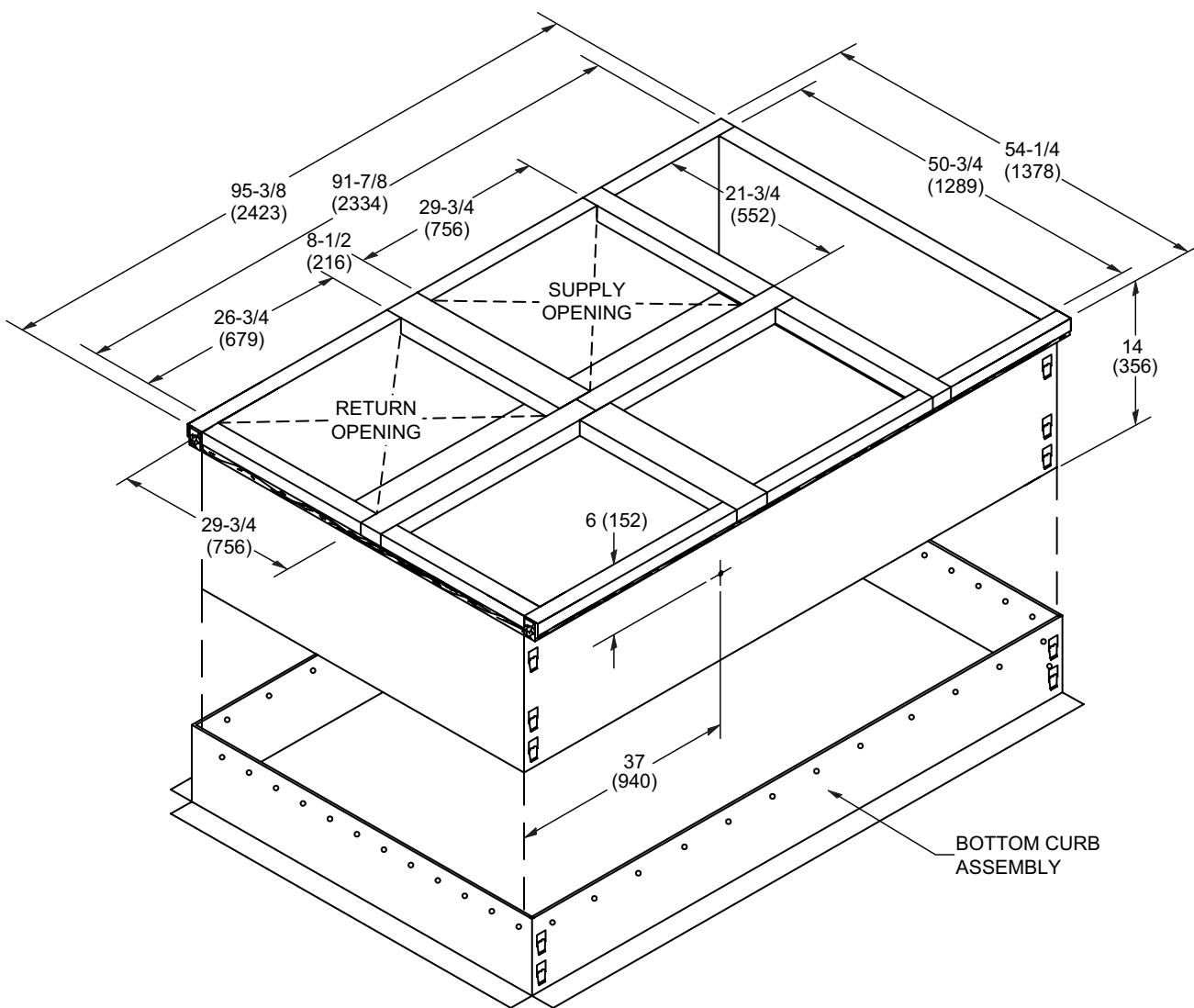


DETAIL ROOF CURB



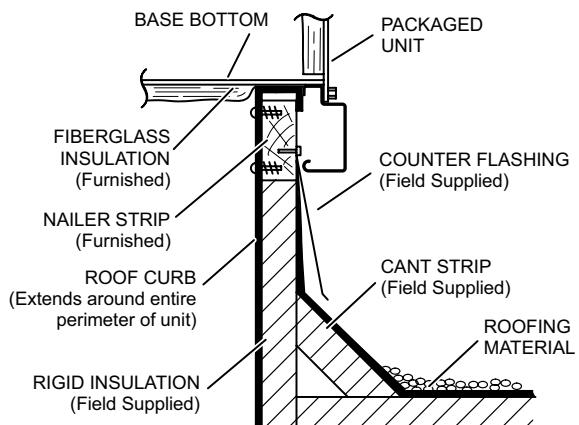
DIMENSIONS - ACCESSORIES

ADJUSTABLE PITCH CURBS - DOUBLE DUCT OPENING

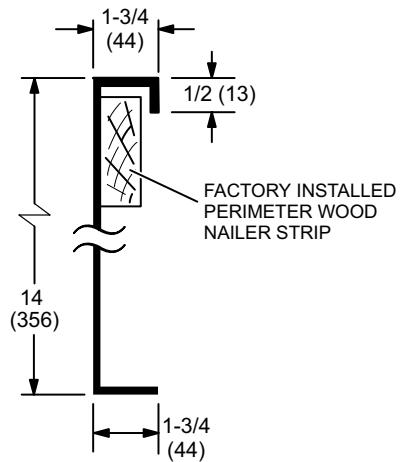


NOTE - Maximum slope pitch is 3/4 in. per 1 foot (19 mm per 305 mm) in any one direction.

TYPICAL FLASHING DETAIL FOR ROOF CURB

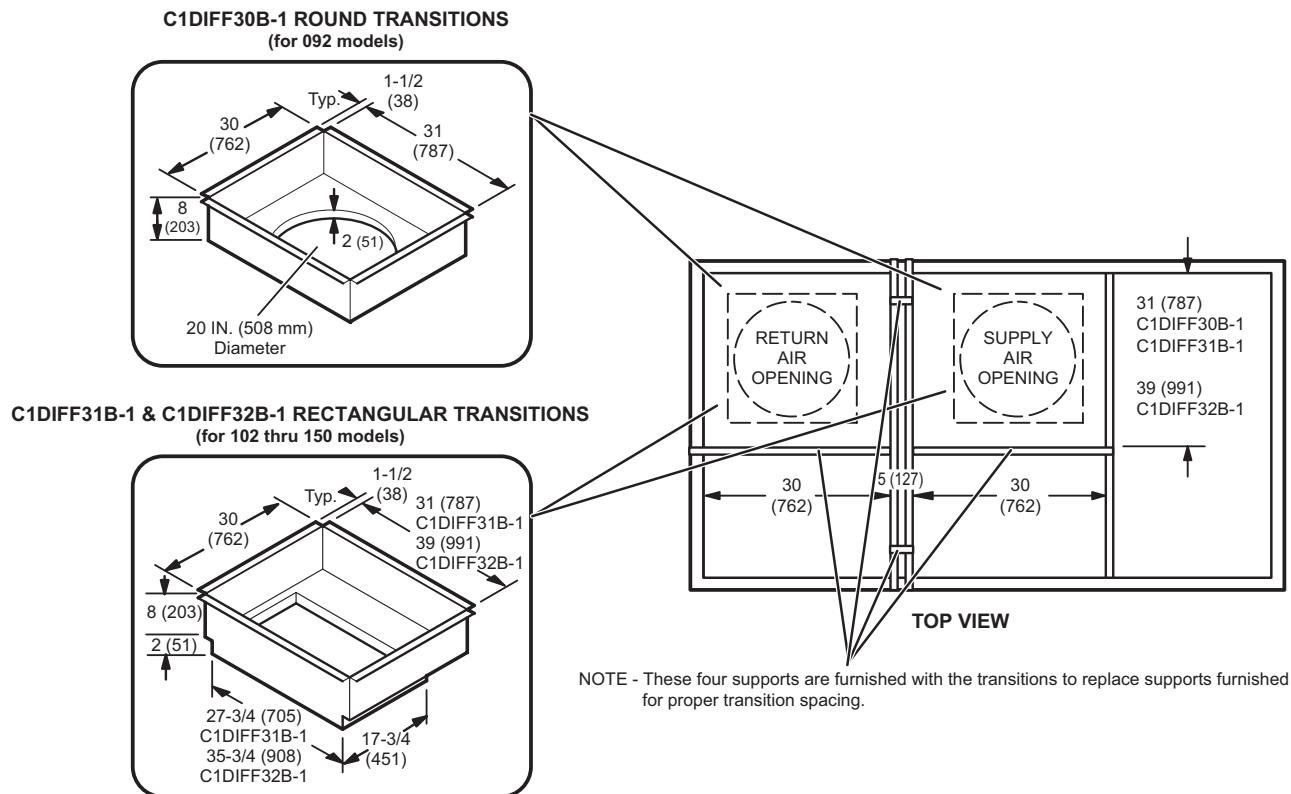


DETAIL ROOF CURB



DIMENSIONS - ACCESSORIES

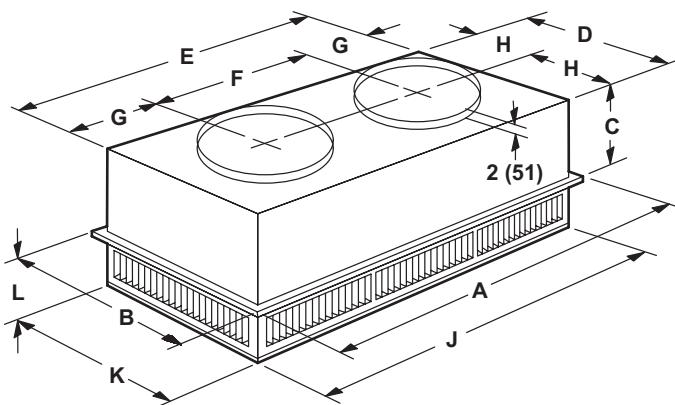
ROOF CURBS WITH SUPPLY & RETURN AIR TRANSITIONS FOR CEILING DIFFUSERS



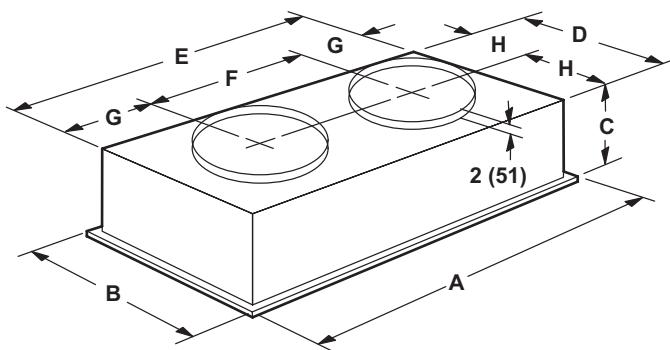
DIMENSIONS - ACCESSORIES

COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

STEP-DOWN CEILING DIFFUSER



FLUSH CEILING DIFFUSER



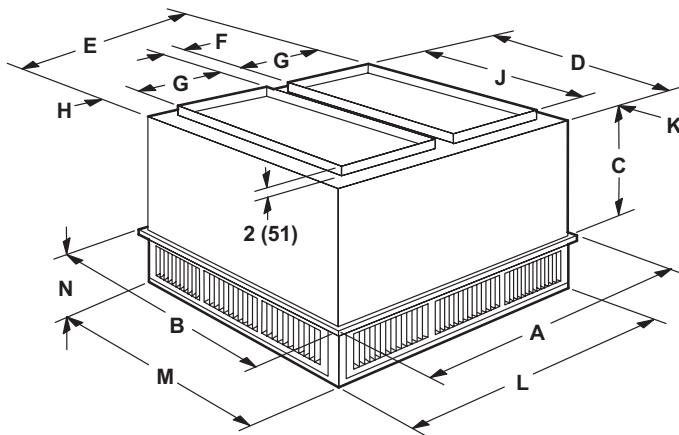
Model Number		RTD11-95S	
A	in.	47-5/8	
	mm	1159	
B	in.	29-5/8	
	mm	752	
C	in.	14-3/8	
	mm	365	
D	in.	27-1/2	
	mm	699	
E	in.	45-1/2	
	mm	1158	
F	in.	22-1/2	
	mm	572	
G	in.	11-1/2	
	mm	292	
H	in.	13-3/4	
	mm	349	
J	in.	45-1/2	
	mm	1156	
K	in.	27-1/2	
	mm	699	
L	in.	8-1/8	
	mm	206	
Duct Size	in.	20 round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

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

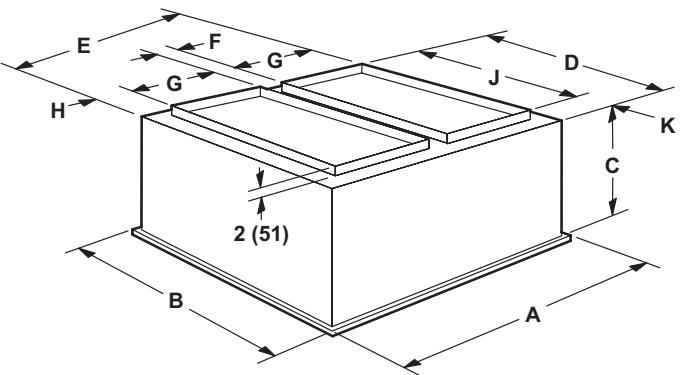
DIMENSIONS - ACCESSORIES

COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

STEP-DOWN CEILING DIFFUSER



FLUSH CEILING DIFFUSER



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

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

REVISIONS

Sections	Description of Change
Options/Accessories	High Performance Economizer information updated.



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NOTE - Due to Allied Commercial ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice and without incurring liability.
Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury.
Installation and service must be performed by a qualified installer and servicing agency.

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