PACKAGED ELECTRIC / ELECTRIC

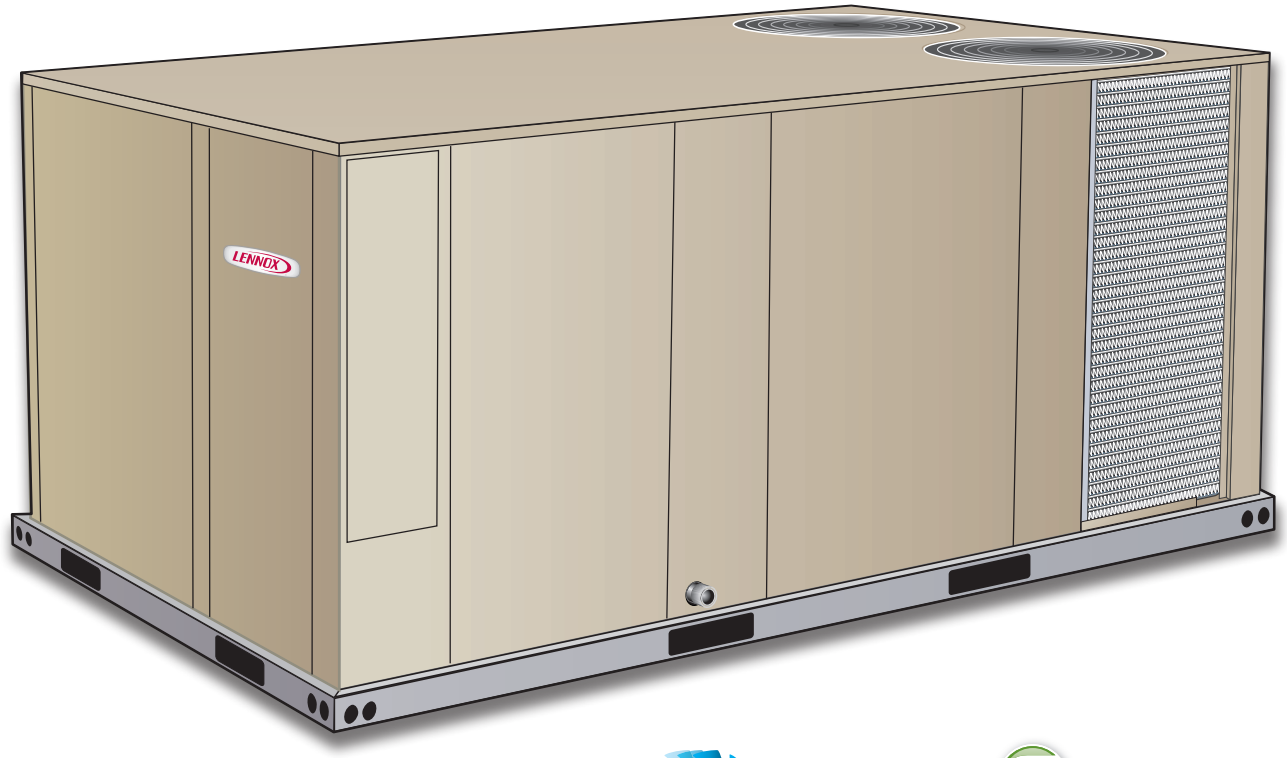
# KC

## Landmark® Rooftop Units

## 50 HZ

PRODUCT SPECIFICATIONS

Bulletin No. 490172
July 2019
Supersedes February 2019




MSAV™ MULTI-STAGE AIR VOLUME

Environ™ Coil System

**26 to 44 kW (7.5 to 12.5 Ton)**
**Net Cooling Capacity – 22.4 to 36.7 kW (74 500 to 123 300 Btuh)**
**Optional Electric Heat - 5.7 to 45.9 kW**

## MODEL NUMBER IDENTIFICATION

**K C A 120 S 4 B N 2 M**

**Brand/Family**
K = Landmark®

**Unit Type**
C = Packaged Electric Cooling w/ optional Electric Heat

**Major Design Sequence**
A = 1st Generation
B = 2nd Generation

**Nominal Cooling Capacity - Tons**
092 = 26 kW
102 = 30 kW
120 = 35 kW
150 = 44 kW

**Cooling Efficiency**
H = High Efficiency
S = Standard Efficiency

**Refrigerant Type**
4 = R-410A

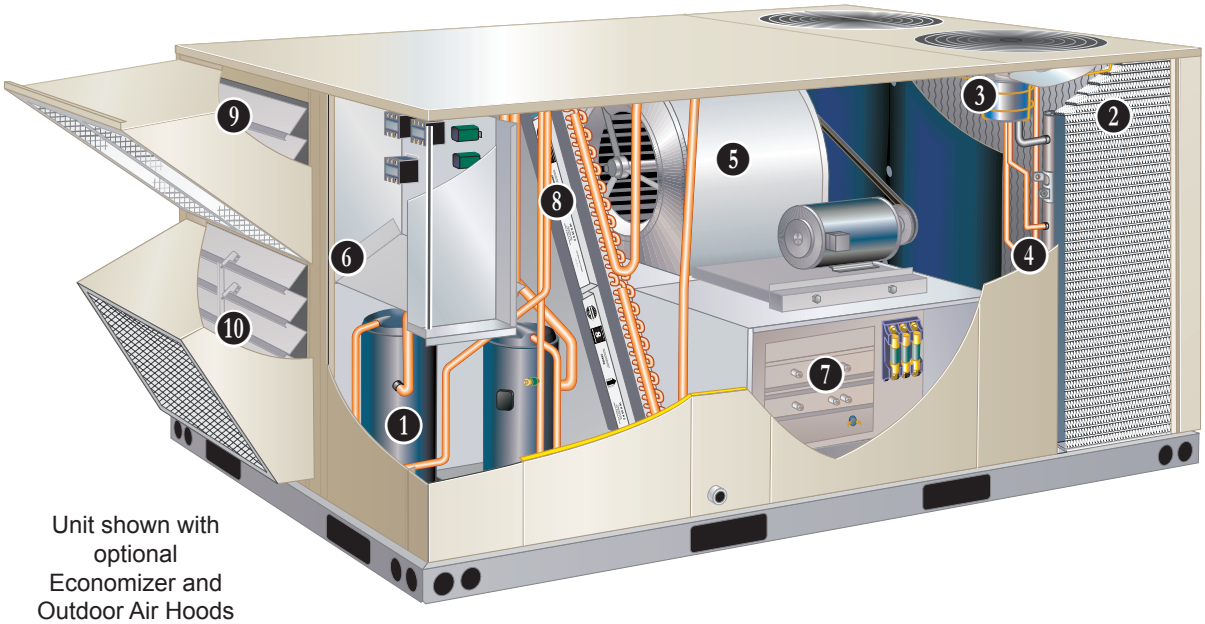
**Blower Type**
B = Belt Drive, Constant Air Volume (CAV)
M = MSAV® (Multi-Stage Air Volume), Belt Drive

**Factory Installed Electric Heat**
N = No Heat
C = 5.7 kW Electric Heat
E = 11.5 kW Electric Heat
G = 17.2 kW Electric Heat
J = 23 kW Electric Heat
K = 34.5 kW Electric Heat
L = 45.9 kW Electric Heat

**Minor Design Sequence**
1 = 1st Revision
2 = 2nd Revision
3 = 3rd Revision

**Voltage**
M = 380/420V-3 phase-50hz

## FEATURES AND BENEFITS




Unit shown with optional Economizer and Outdoor Air Hoods

Landmark® rooftop units from Lennox are the new standard for reliable, efficient rooftop units built for long-lasting performance that can significantly improve indoor environments. Landmark rooftop units feature:

- **R-410A Refrigerant -** Environmentally friendly.
- **Scroll Compressors -** Single speed scroll compressors are furnished on all models.
- **Lennox' Environ™ Coil System (092-120 Models Only) -** Smaller, lighter condenser coil.
- **High Pressure Switches -** Protect compressor.
- **Isolated Compressor Compartment -** Allows performance check during normal compressor operation without disrupting airflow.
- **Independent Outdoor Fan Motor Mounts -** Allows for easy and efficient service access without removing the top panel.
- **Constant Air Volume (CAV) or MSAV® (Multi-Stage Air Volume) Supply Air Blower Option -** Allows constant or multi-staged air delivery.
- **Downflow or Horizontal Airflow -** Easy field conversion.
- **Two Fork Lift Slots on Three Sides -** Easy to pick up and transport units from almost any angle.
- **Corrosion-Resistant Removable, Reversible Drain Pan -** Provides application flexibility, durability and improved serviceability.
- **Thermostatic Expansion Valves (High Efficiency and 150S Models) -** Provide peak cooling performance across the entire application range.
- **MERV 8 or MERV 13 Filters -** Available as field installed option, provide an enhanced level of indoor air quality, and can help the building qualify for additional Leadership in Energy and Environmental Design (LEED) credits.
- **Common Components -** Many maintenance items are standard throughout the entire product line, reducing the need to carry different parts to the job or maintain in inventory.

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## PERFORMANCE / QUALITY

Components bonded for grounding to meet safety standards for servicing required by Underwriters Laboratories (UL) and the International Electrotechnical Commission (IEC).

Cooling performance is rated at test conditions included in Air-Conditioning, Heating and Refrigeration Institute (AHRI) Standard 340/360 while operating at rated voltage and air volumes.

International Organization for Standardization (ISO) 9001 Registered Manufacturing Quality System.

## COOLING SYSTEM

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

System can operate from 4°C to 52°C without any additional controls.

**R-410A Refrigerant**

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

Unit pre-charged with refrigerant. See Specification table.

**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.

**Thermal Expansion Valves (All High Efficiency Models, 150S Model)**

Assures optimal performance throughout the application range.

Removable element head.

**Refrigerant Metering Orifice (092 through 120 Standard Efficiency Models)**

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.

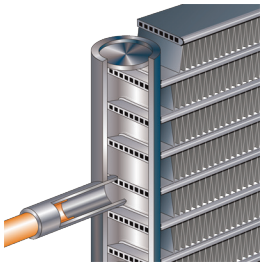
**High Pressure Switches**

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

**Freezestats**

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

**2 Lennox' Environ™ Coil System (092 through 120 models only)**



Condenser coil features lightweight, all aluminum brazed fin construction.

Constructed of three components: a flat extrusion tube, fins in-between the flat extrusion tube and two refrigerant manifolds.

Environ™ Coil System Features:

- Improved heat transfer performance due to high primary surface area (flat tubes) versus secondary surface (fins).
- Smaller internal volume (reduced refrigerant charge).
- High durability (all aluminum construction).
- Fewer brazed joints.
- Compact design (reduces unit weight).
- Easy maintenance/cleaning.

Face-split design.

Mounting brackets with rubber inserts secure coil to unit providing vibration dampening and corrosion protection.

**Conventional Fin/Tube Condenser Coils (furnished on 150 models, optional for 092-120)**

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

**Evaporator Coil**

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

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

## COOLING SYSTEM (continued)

**Condensate Drain Pan**
Plastic pan, sloped to meet drainage requirements of American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 62.1.

Side or bottom drain connections.

Reversible to allow connection at back of unit.

**Outdoor Coil Fan Motors**
Thermal overload protected, totally enclosed, permanently lubricated ball bearings, shaft up, wire basket mount.

❸ **Outdoor Coil Fans**
Polyvinyl Chloride (PVC) coated fan guard furnished.

### Required Selections

**Cooling Capacity**
Specify nominal cooling capacity of the unit.

**Cooling Efficiency**
Specify either standard or high efficiency.

### Options/Accessories

**Factory Installed**

**Conventional Fin/Tube Condenser Coil (replaces Environ™ Coil System - 092 through 120 models only)**
Copper tube construction, enhanced rippled-edge aluminum fins, flared shoulder tubing connections, silver soldered construction.

**Field Installed**

**Condensate Drain Trap**
Available in copper or polyvinyl chloride (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.

## CABINET

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

Base rails have rigging holes.

Three sides of the base rail have forklift slots.

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

**Airflow Choice**
Units are shipped in downflow (vertical) configuration, can be field converted to horizontal airflow with optional Horizontal Discharge Kit.

**Duct Flanges**
Provided for horizontal duct attachment.

**Power Entry**
Electrical lines can be brought through the unit base or through horizontal access knock-outs.

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

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

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

**Access Panels**
Access panels are provided for the filter section, heating/blower section, and the compressor/ controls section.

### Options / Accessories

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

Indoor Corrosion Protection:
- Coated coil
- Painted blower housing
- Painted base

Outdoor Corrosion Protection:
- Coated coil
- Painted base

**Hinged Access Panels**
Large access panels are hinged and have quarter-turn latches for quick and easy access to maintenance areas (filter, compressor / controls, heating / blower).

## CABINET (continued)

### Options / Accessories (continued)

**Field Installed**

**Combination Coil/Hail Guards**
Heavy gauge steel frame painted to match cabinet with expanded metal mesh to protect the outdoor coil from damage.

**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.

## 5 BLOWER

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

**Motor**
Overload protected, equipped with ball bearings. Belt drive motors are offered on all models and are available in several different sizes to maximize air performance.

**Supply Air Blower**
Forward curved blades, double inlet, blower wheel is statically and dynamically balanced. Equipped with ball bearings and adjustable pulley (allows speed change).

Blower assembly slides out of unit for servicing.

### Required Selections

**Select Constant Air Volume (CAV) or MSAV® (Multi-Stage Air Volume) Supply Air Blower Option**
Order blower motor horsepower and drive kit number required when base unit is ordered, see Drive Kit Specifications Table.

**CAV Operation**
On units ordered with the Constant Air volume (CAV) option, the supply air blower will provide a constant volume of air.

**MSAV Operation**
Units ordered with the MSAV option 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* MSAV *units should not be set below 30 L/s per kW to reduce the risk of evaporator coil freeze-up.*

The VFD has an operational range of –40 to 52°C outdoor air ambient temperature.

Lower operating costs are obtained when the blower is operated on lower speeds.

**MSAV 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.

## 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. Aftermarket unit controller options. See page 36.

## 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 MSAV® Supply Air Blower Option)**
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 Installed

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

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

## INDOOR AIR QUALITY

**8 Air Filters**
Disposable 51 mm filters furnished as standard.

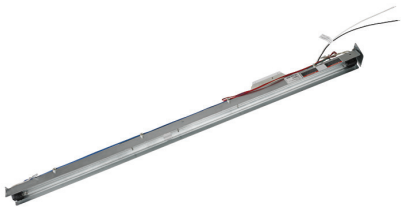
### Options / Accessories

#### Field Installed

**Healthy Climate® High Efficiency Air Filters**
Disposable MERV 8 or MERV 13 (Minimum Efficiency Reporting Value based on ASHRAE 52.2) efficiency 51 mm 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.

**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. 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.

All necessary hardware for installation is included.

Lamps operate on 220V single-phase power supply. Step-down transformer may be ordered separately for 380/420V primary to 220V secondary units. Alternately, 220V power supply may be used to directly power the UVC ballast(s).

Magnetic safety interlock terminates power when access panels are removed.

**Indoor Air Quality ($CO_2$) Sensors**
Monitors $CO_2$ levels, reports to the Unit Controller which adjusts economizer dampers as needed.

## ECONOMIZER OPTIONS

### Factory or Field Installed

❾ **Economizer (Standard and High Performance Common Features)**
Downflow or Horizontal with Outdoor Air Hood and Barometric Relief Dampers with Exhaust Hood.

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

*NOTE - Optional Horizontal Low Profile Barometric Relief Dampers with Exhaust Hood are available for field installation in a reduced space.*

Occupied/Unoccupied mode with field furnished setback thermostat.

Demand Control Ventilation (DCV) ready using optional $CO_2$ sensors.

Mixed Air Sensor is furnished for field installation in the rooftop unit. Sensor is factory installed when Economizers are factory installed.

Single sensible sensor is furnished with Economizer and enables economizer operation if the outdoor temperature is less than the setpoint of the control.

**Standard Economizer Features**
Parallel, gear-driven action, return air and outdoor air dampers, plug-in connections to unit, nylon bearings, neoprene seals, 24-volt, fully-modulating spring return motor.

**Standard Economizer Control Module**
The Standard Economizer Control Module can be adjusted to operate 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 13°C when $CO_2$ is higher than the $CO_2$ 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 13°C.*

**High Performance Economizer Features**
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 neoprene blade edge seals and flexible stainless steel jamb seals to minimize air leakage.

**High Performance Economizer Control Module**
Module provides inputs and outputs to control economizer based on parameter settings.

Module automatically detects sensors by polling to determine which sensors are installed in system.

Module displays any alarm messages (fault detection and diagnostics) as an aid in troubleshooting.

Non-volatile memory retains parameter settings in case of power failure.

Keypad with four navigation buttons and LCD screen is furnished for setting economizer parameters.

- Menu Up/Exit ⓘ button returns to the main menu.
- Arrow Up ▲ button moves to the previous or next parameter within the selected menu.
- Arrow Down ▼ button moves to the next parameter within the selected menu.
- Select (enter) ↵ button confirms parameter selection.

**Main Menu Structure:**

- STATUS (economizer and system operation status)
- SETPOINTS (settings for various setpoint parameters)
- SYSTEM SETUP (settings/ information about the system)
- ADVANCED SETUP (freeze protection, $CO_2$ settings, stage 3 delay and additional calibration settings)
- CHECKOUT (damper positions)
- ALARMS (output signal that can be configured for remote alarm monitoring)

Refer to Installation Instructions for complete setup information and menu parameters available.

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

## OPTIONS / ACCESSORIES

### EXHAUST OPTIONS

**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.

Requires Horizontal Discharge Kit.

**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. Requires Economizer with Outdoor Air Hood and Barometric Relief Dampers. Fan is 508 mm diameter with 5 blades (K1PWRE10B) with 0.25 kW motor.

### OUTDOOR AIR OPTIONS

**Factory or Field Installed**

**Outdoor Air Damper - Downflow or Horizontal With Air Hood**
Linked mechanical dampers, 0 to 25% (fixed) outdoor air adjustable, installs in unit. Includes outdoor air hood.

Automatic model features fully modulating spring return damper motor with plug-in connection.

Manual model features a slide damper.

Maximum mixed air temperature in cooling mode: 38°C.

### ROOF CURBS

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

**Hybrid Roof Curbs, Downflow**
Roof curb can be assembled using interlocking tabs to fasten corners together. No tools required.

Curb can also be fastened together with furnished hardware.

Available in 203, 356, 457, and 610 mm heights.

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

Maximum slope is 19 mm per 300 mm in any direction.

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

Hardware is furnished to connect upper curb with lower curb.

Available in 356 mm height.

**Adaptor Curbs (not shown)**
Curbs are regionally sourced. Dimensions will vary based upon the source. Contact your local sales representative for a detailed cut sheet with applicable dimensions.

### CEILING DIFFUSERS

**Ceiling Diffusers (Flush or Step-Down)**
Aluminum grilles, large center grille, insulated diffuser box with flanges, hanging rings furnished, interior transition (even air flow), internally sealed (prevents recirculation), adapts to T-bar ceiling grids or plaster ceilings.

**Transitions (Supply and Return)**
Used with diffusers, installs in roof curb, galvanized steel construction, flanges furnished for duct connection to diffusers, fully insulated.

## OPTIONS / ACCESSORIES

| Item Description | | Model Number | Catalog Number | Unit Model No. 092 | 102 | 120 | 150 |
|---|---|---|---|---|---|---|---|
| **COOLING SYSTEM** | | | | | | | |
| Condensate Drain Trap | | Polyvinyl Chloride (PVC) - C1TRAP20AD2 | **76W26** | X | X | X | X |
| | | Copper - C1TRAP10AD2 | **76W27** | X | X | X | X |
| Conventional Fin/Tube Condenser Coil (Replaces Environ™ Coil System) | | | Factory | O | O | O | |
| Corrosion Protection | | | Factory | O | O | O | O |
| Drain Pan Overflow Switch | | K1SNSR71AB1- | **74W42** | X | X | X | X |
| Efficiency | | | Standard | O | O | O | O |
| Low Ambient Kits | | 30°F - K1SNSR33B-1 | **54W16** | X | X | X | X |
| | | 0°F - K1LOAM62B-1 | **18B87** | X | X | X | |
| | | 0°F - K1LOAM62BS1 | **18B94** | | | | X |
| Refrigerant Type | | | R-410A | O | O | O | O |
| **BLOWER - SUPPLY AIR** | | | | | | | |
| Blower Option | | CAV (Constant Air Volume) | Factory | O | O | O | O |
| | | MSAVMSAV® (Multi-Stage Air Volume) | Factory | O | O | O | O |
| Blower Motors | | Belt Drive - 1.5 kW (2 hp) | Factory | O | O | O | O |
| | | Belt Drive - 2.2 kW (3 hp) | Factory | O | O | O | O |
| | | Belt Drive - 3.7 kW (5 hp) | Factory | O | O | O | O |
| Drive Kits | **CAV (rev/min)** | **MSAV (rev/min)** | | | | | |
| See Blower Data Tables for selection | Kit #1 490-740 | Kit #1 590-890 | Factory | O | O | O | O |
| | Kit #2 665-920 | Kit #2 800-1105 | Factory | O | O | O | O |
| | Kit #3 660-995 | Kit #3 795-1195 | Factory | O | O | O | O |
| | Kit #7 610-810 | Kit #7 730-970 | Factory | O | O | O | O |
| | Kit #8 780-1000 | Kit #8 940-1200 | Factory | O | O | O | O |
| | Kit #9 845-1085 | Kit #9 1015-1300 | Factory | O | O | O | O |
| | Kit #10 750-945 | Kit #10 900-1135 | Factory | O | O | O | O |
| | Kit #11 865-1095 | Kit #11 1040-1315 | Factory | O | O | O | O |
| | Kit #12 940-1190 | Kit #12 1125-1425 | Factory | O | O | O | O |
| **CABINET** | | | | | | | |
| Combination Coil/Hail Guards | | C1GARD52B-1 | **13T05** | X | X | X | X |
| Hinged Access Panels | | | Factory | O | O | O | O |
| Horizontal Discharge Kit | | K1HECK00B-1 | **51W25** | X | X | X | X |
| Return Air Adaptor Plate (for LC/LG/LH and TC/TG/TH replacement) | | C1CONV10B-1 | **54W96** | X | X | X | X |
| **CONTROLS** | | | | | | | |
| **NOTE - Also see Conventional Thermostat Control Systems page page 29 for Additonal Options.** | | | | | | | |
| Smoke Detector - Supply or Return (Power board and one sensor) | | C1SNSR44B-2 | **11K76** | X | X | X | X |
| Smoke Detector - Supply and Return (Power board and two sensors) | | C1SNSR43B-2 | **11K80** | X | X | X | X |

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

## OPTIONS / ACCESSORIES

| Item Description | Model Number | Catalog Number | Unit Model No. 092 | 102 | 120 | 150 |
|---|---|---|---|---|---|---|
| **INDOOR AIR QUALITY** | | | | | | |
| **Air Filters** | | | | | | |
| Healthy Climate® High Efficiency Air Filters | MERV 8 - C1FLTR15B-1 | **50W61** | X | X | X | X |
| 208 x 635 x 51 mm (Order 4 per unit) | MERV 13 - C1FLTR40B-1 | **52W41** | X | X | X | X |
| Replacement Media Filter With Metal Mesh Frame (includes non-pleated filter media) | C1FLTR30B-1- | **Y3063** | X | X | X | X |
| **Indoor Air Quality ($CO_2$) Sensors** | | | | | | |
| Sensor - Wall-mount, off-white plastic cover with LCD display | C0SNSR50AE1L | **77N39** | X | X | X | X |
| Sensor - Wall-mount, off-white plastic cover, no display | C0SNSR52AE1L | **87N53** | X | X | X | X |
| Sensor - Black plastic case with LCD display, rated for plenum mounting | C0SNSR51AE1L | **87N52** | X | X | X | X |
| Sensor - Wall-mount, black plastic case, no display, rated for plenum mounting | C0MISC19AE1 | **87N54** | X | X | X | X |
| $CO_2$ Sensor Duct Mounting Kit - for downflow applications | C0MISC19AE1- | **85L43** | X | X | X | X |
| Aspiration Box - for duct mounting non-plenum rated $CO_2$ sensors (**87N53** or **77N39**) | C0MISC16AE1- | **90N43** | X | X | X | X |
| **UVC Germicidal Lamps** | | | | | | |
| [1] Healthy Climate® UVC Light Kit (220V-1ph) | C1UVCL10B-1 | **54W62** | X | X | X | X |
| **ELECTRICAL** | | | | | | |
| Voltage 50 hz with neutral | 380/420V - 3 phase | Factory | O | O | O | O |
| **[2, 3] ELECTRIC HEAT** | | | | | | |
| 5.7 kW | 380/420V-3ph - C1EH0057B-1M | **68W04** | OX | OX | | |
| 11.5 kW | 380/420V-3ph - C1EH0115B-1M | **68W05** | OX | OX | OX | OX |
| 17.2 kW | 380/420V-3ph - C1EH0172B-1M | **68W06** | OX | OX | OX | OX |
| 23 kW | 380/420V-3ph - C1EH0230B-1M | **68W07** | OX | OX | OX | OX |
| 34.5 kW | 380/420V-3ph - C1EH0345B-1M | **68W08** | OX | OX | OX | OX |
| 45.9 kW | 380/420V-3ph - C1EH0459B-1M | **68W09** | | | OX | OX |

[1] Lamps operate on 220V single-phase power supply. Step-down transformer may be ordered separately for 380/420V primary to 220V secondary units. Alternately, 220V power supply may be used to directly power the UVC ballast(s).

[2] Nominal kW at 420V-3ph-50hz.

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

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

## OPTIONS / ACCESSORIES

| Item Description | Model Number | Catalog Number | Unit Model No. 092 | 102 | 120 | 150 |
|---|---|---|---|---|---|---|
| **ECONOMIZER** | | | | | | |
| **Standard Economizer** | | | | | | |
| Standard Economizer with Single Temperature Control Downflow or Horizontal Applications - Includes Barometric Relief Dampers and Air Hoods | K1ECON20B-2 | **13U45** | OX | OX | OX | OX |
| **Standard Economizer Controls** | | | | | | |
| Single Enthalpy Control | C1SNSR64FF1 | **53W64** | OX | OX | OX | OX |
| Differential Enthalpy Control (order 2) | C1SNSR64FF1 | **53W64** | X | X | X | X |
| **High Performance Economizer** | | | | | | |
| High Performance Economizer with Single Temperature Control Downflow or Horizontal Applications - Includes Barometric Relief Dampers and Air Hoods | K1ECON22B-3 | **17U09** | OX | OX | OX | OX |
| **High Performance Economizer Controls** | | | | | | |
| Single Enthalpy Control | C1SNSR60FF1 | **10Z75** | OX | OX | OX | OX |
| Differential Enthalpy Control (order 2) | C1SNSR60FF1 | **10Z75** | X | X | X | X |
| **Horizontal Low Profile Barometric Relief Dampers With Exhaust Hood** | | | | | | |
| Horizontal Low Profile Barometric Relief Dampers With Exhaust Hood | LAGEDH03/15 | **53K04** | X | X | X | X |
| **OUTDOOR AIR** | | | | | | |
| **Outdoor Air Dampers With Outdoor Air Hood** | | | | | | |
| Motorized | C1DAMP20B-1 | **14G28** | OX | OX | OX | OX |
| Manual | C1DAMP10B-1 | **14G29** | OX | OX | OX | OX |
| **POWER EXHAUST** | | | | | | |
| Standard Static | 380/420V-3ph - K1PWRE10B-1G | **53W45** | X | X | X | X |
| **ROOF CURBS** | | | | | | |
| **Hybrid Roof Curbs, Downflow** | | | | | | |
| 203 mm height | C1CURB70B-1 | **11F54** | X | X | X | X |
| 356 mm height | C1CURB71B-1 | **11F55** | X | X | X | X |
| 457 mm height | C1CURB72B-1 | **11F56** | X | X | X | X |
| 610 mm height | C1CURB73B-1 | **11F57** | X | X | X | X |
| **Adjustable Pitch Curb** | | | | | | |
| 356 mm height | C1CURB55B-1 | **54W50** | X | X | X | X |
| **CEILING DIFFUSERS** | | | | | | |
| Step-Down - Order one | RTD11-95S | **13K61** | X | | | |
| | RTD11-135S | **13K62** | | X | X | |
| | RTD11-185S | **13K63** | | | | X |
| Flush - Order one | FD11-95S | **13K56** | X | | | |
| | FD11-135S | **13K57** | | X | X | |
| | FD11-185S | **13K58** | | | | X |
| Transitions (Supply and Return) - Order one | C1DIFF30B-1 | **12X65** | X | | | |
| | C1DIFF31B-1 | **12X66** | | X | X | |
| | C1DIFF32B-1 | **12X67** | | | | X |

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

## SPECIFICATIONS

| General Data | | Nominal kW (Tons) | 26 (7.5) | 26 (7.5) | 26 (7.5) |
|---|---|---|---|---|---|
| | | Model Number | KCB092S4B | KCB092S4M | KCA092H4B |
| | | Efficiency Type | Standard | Standard | High |
| | | Blower Type | CAV (Constant Air Volume) | MSAV® (Multi-Stage Air Volume) | CAV (Constant Air Volume) |
| Cooling Performance | | Gross Cooling Capacity - kW (Btuh) | 22.5 (76 700) | 22.5 (76 700) | 23.6 (80 500) |
| | | [1] Net Cooling Capacity - kW (Btuh) | 21.8 (74 500) | 21.8 (74 500) | 22.7 (77 500) |
| | | AHRI Rated Air Flow - L/s (cfm) | 1133 (2400) | 1133 (2400) | 1416 (3000) |
| | | Total Unit Power - kW | 6.5 | 6.5 | 6.3 |
| | | [1] EER (Btuh/Watt) at 35°C (95°F) | 11.5 | 11.5 | 12.9 |
| | | [2] EER (Btuh/Watt) at 46°C (115°F) | 8.7 | 8.7 | 8.8 |
| | | [1] IEER (Btuh/Watt) | 12.9 | 13.6 | 12.9 |
| Refrigerant Type | | | R-410A | R-410A | R-410A |
| Refrigerant Charge | Environ™ Coil System | Circuit 1 | 1.9 kg (4 lbs. 0 oz.) | 1.9 kg (4 lbs. 0 oz.) | 3.1 kg (6 lbs. 13 oz.) |
| | | Circuit 2 | 1.5 kg (3 lbs. 6 oz.) | 1.5 kg (3 lbs. 6 oz.) | 3.2 kg (7 lbs. 2 oz.) |
| | Conventional Fin/Tube Coil Option | Circuit 1 | 4.1 kg (9 lbs. 0 oz.) | 4.1 kg (9 lbs. 0 oz.) | - - - |
| | | Circuit 2 | 3.1 kg (6 lbs. 13 oz.) | 3.1 kg (6 lbs. 13 oz.) | - - - |
| Electric Heat Available - See page 10 | | | 5.7, 11.5, 17.2, 23, 34.5 KW | | |
| Compressor Type (number) | | | Scroll (2) | Scroll (2) | Scroll (2) |
| Outdoor Coils Environ (Fin/Tube) | | Net face area (total) - $m^2$ (sq. ft.) | 1.9 (20.5) | 1.9 (20.5) | 2.6 (28.0) |
| | | Number of rows | 1 (2) | 1 (2) | 1 |
| | | Fins per m (inch) | 906 (23) / 787 (20) | 906 (23) / 787 (20) | 787 (20) |
| Outdoor Coil Fans | | Motor - (No.) W (HP) | (2) 249 (1/3) | (2) 249 (1/3) | (2) 249 (1/3) |
| | | Motor rev/min | 896 | 896 | 896 |
| | | Total Motor watts | 565 | 565 | 611 |
| | | Diameter - (No.) mm (in.) | (2) 610 (24) | (2) 610 (24) | (2) 610 (24) |
| | | Number of blades | 3 | 3 | 3 |
| | | Total Air volume - L/s (cfm) | 3460 (7335) | 3460 (7335) | 3460 (7335) |
| Indoor Coils | | Net face area (total) - $m^2$ (sq. ft.) | 1.19 (12.8) | 1.19 (12.8) | 1.19 (12.8) |
| | | Tube diameter - mm (in.) | 9.5 (3/8) | 9.5 (3/8) | 9.5 (3/8) |
| | | Number of rows | 2 | 2 | 4 |
| | | Fins per m (inch) | 551 (14) | 551 (14) | 551 (14) |
| | | Drain connection - Number and size | (1) 1 in. NPT coupling | | |
| | | Expansion device type | Refrigerant Metering Orifice (RFC) | Refrigerant Metering Orifice (RFC) | Balance port TXV, removable head |
| [3] Indoor Blower and Drive Selection | | Nominal motor kW (HP) | 1.5 (2) | 1.5 (2) | 1.5 (2) |
| | | Maximum usable motor kW (HP) | 1.7 (2.3) | 1.7 (2.3) | 1.7 (2.3) |
| | | Kit # and rev/min range | #1 (490-740)<br>#2 (665-920)<br>#3 (660-995) | #1 (590-890)<br>#2 (800-1105)<br>#3 (795-1195) | #1 (490-740)<br>#2 (665-920)<br>#3 (660-995) |
| | | Nominal motor kW (HP) | 2.2 (3) | 2.2 (3) | 2.2 (3) |
| | | Maximum usable motor kW (HP) | 2.6 (3.45) | 2.6 (3.45) | 2.6 (3.45) |
| | | Kit # and rev/min range | #7 (610-810)<br>#8 (780-1000)<br>#9 (845-1085) | #7 (730-970)<br>#8 (940-1200)<br>#9 (1015-1300) | #7 (610-810)<br>#8 (780-1000)<br>#9 (845-1085) |
| | | Nominal motor kW (HP) | 3.7 (5) | 3.7 (5) | 3.7 (5) |
| | | Maximum usable motor kW (HP) | 4.3 (5.75) | 4.3 (5.75) | 4.3 (5.75) |
| | | Kit # and rev/min range | #10 (750-945)<br>#11 (865-1095)<br>#12 (940-1190) | #10 (900-1135)<br>#11 (1040-1315)<br>#12 (1125-1425) | #10 (750-945)<br>#11 (865-1095)<br>#12 (940-1190) |
| | | Blower wheel nominal diameter x width - mm (in.) | (1) 381 x 381 (15 X 15) | (1) 381 x 381 (15 X 15) | (1) 381 x 381 (15 X 15) |
| Filters | | Type of filter | Disposable | | |
| | | Number and size - mm (in.) | (4) 508 x 508 x 51 (20 x 25 x 2) | | |
| Electrical characteristics | | | 380/420V - 50 hertz - 3 phase with neutral | | |

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

[1] Tested at conditions included in AHRI Standard 340/360; 35°C (95°F) outdoor air temperature and 27°C (80°F) dry bulb /19°C (67°F) wet bulb entering evaporator air; minimum external duct static pressure while operating at rated voltage and air volumes.

[2] Rated at 46°C (115°F) outdoor air temperature and 27°C (80°F) db/19°C (67°F) wb entering evaporator air (T3 Conditions).

[3] Using total air volume and system static pressure requirements determine from blower performance tables rev/min and motor output required. Maximum usable output of motors furnished are shown. 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 MSAV® (Multi-Stage Air Volume) option are limited to a motor service factor of 1.0.

## SPECIFICATIONS

| | | | | | |
|---|---|---|---|---|---|
| **General Data** | | **Nominal kW (Tons)** | **30 (8.5)** | **30 (8.5)** | **30 (8.5)** |
| | | **Model Number** | **KCB102S4B** | **KCB102S4M** | **KCA102H4B** |
| | | **Efficiency Type** | **Standard** | **Standard** | **High** |
| | | **Blower Type** | CAV (Constant Air Volume) | MSAV® (Multi-Stage Air Volume) | CAV (Constant Air Volume) |
| **Cooling Performance** | Gross Cooling Capacity - kW (Btuh) | | 25.5 (86 900) | 25.5 (86 900) | 26.8 (91 500) |
| | [1] Net Cooling Capacity - kW (Btuh) | | 24.7 (84 300) | 24.7 (84 300) | 25.6 (87 500) |
| | AHRI Rated Air Flow - L/s (cfm) | | 1320 (2800) | 1320 (2800) | 1605 (3400) |
| | Total Unit Power - kW | | 7.5 | 7.5 | 7.2 |
| | [1] EER (Btuh/Watt) at 35°C (95°F) | | 11.4 | 11.4 | 12.6 |
| | [2] EER (Btuh/Watt) at 46°C (115°F) | | 7.5 | 7.5 | 8.5 |
| | [1] IEER (Btuh/Watt) | | 12.9 | 13.8 | 12.9 |
| **Refrigerant Type** | | | R-410A | R-410A | R-410A |
| **Refrigerant Charge** | Environ™ Coil System | Circuit 1 | 2.0 kg (4 lbs. 5 oz.) | 2.0 kg (4 lbs. 5 oz.) | 2.9 kg (6 lbs. 8 oz.) |
| | | Circuit 2 | 1.9 kg (4 lbs. 3 oz.) | 1.9 kg (4 lbs. 3 oz.) | 3.1 kg (6 lbs. 15 oz.) |
| | Conventional Fin/Tube Coil Option | Circuit 1 | 4.2 kg (9 lbs. 3 oz.) | 4.2 kg (9 lbs. 3 oz.) | - - - |
| | | Circuit 2 | 3.6 kg (7 lbs. 14 oz.) | 3.6 kg (7 lbs. 14 oz.) | - - - |
| **Electric Heat Available - See page 10** | | | 5.7, 11.5, 17.2, 23, 34.5 KW | | |
| **Compressor Type (number)** | | | Scroll (2) | Scroll (2) | Scroll (2) |
| **Outdoor Coils Environ (Fin/Tube)** | Net face area (total) - $m^2$ (sq. ft.) | | 1.9 (20.5) | 1.9 (20.5) | 2.6 (28.0) |
| | Number of rows | | 1 (2) | 1 (2) | 1 |
| | Fins per m (inch) | | 906 (23) / 787 (20) | 906 (23) / 787 (20) | 787 (20) |
| **Outdoor Coil Fans** | Motor - (No.) W (HP) | | (2) 249 (1/3) | (2) 249 (1/3) | (2) 249 (1/3) |
| | Motor rev/min | | 896 | 896 | 896 |
| | Total Motor watts | | 564 | 564 | 611 |
| | Diameter - (No.) mm (in.) | | (2) 610 (24) | (2) 610 (24) | (2) 610 (24) |
| | Number of blades | | 3 | 3 | 3 |
| | Total Air volume - L/s (cfm) | | 3460 (7335) | 3460 (7335) | 3460 (7335) |
| **Indoor Coils** | Net face area (total) - $m^2$ (sq. ft.) | | 1.19 (12.8) | 1.19 (12.8) | 1.19 (12.8) |
| | Tube diameter - mm (in.) | | 9.5 (3/8) | 9.5 (3/8) | 9.5 (3/8) |
| | Number of rows | | 3 | 3 | 4 |
| | Fins per m (inch) | | 551 (14) | 551 (14) | 551 (14) |
| | Drain connection - Number and size | | (1) 1 in. NPT coupling | | |
| | Expansion device type | | Refrigerant Metering Orifice (RFC) | Refrigerant Metering Orifice (RFC) | Balance port TXV, removable head |
| [3] **Indoor Blower and Drive Selection** | Nominal motor kW (HP) | | 1.5 (2) | 1.5 (2) | 1.5 (2) |
| | Maximum usable motor kW (HP) | | 1.7 (2.3) | 1.7 (2.3) | 1.7 (2.3) |
| | Kit # and rev/min range | | #1 (490-740)<br>#2 (665-920)<br>#3 (660-995) | #1 (590-890)<br>#2 (800-1105)<br>#3 (795-1195) | #1 (490-740)<br>#2 (665-920)<br>#3 (660-995) |
| | Nominal motor kW (HP) | | 2.2 (3) | 2.2 (3) | 2.2 (3) |
| | Maximum usable motor kW (HP) | | 2.6 (3.45) | 2.6 (3.45) | 2.6 (3.45) |
| | Kit # and rev/min range | | #7 (610-810)<br>#8 (780-1000)<br>#9 (845-1085) | #7 (730-970)<br>#8 (940-1200)<br>#9 (1015-1300) | #7 (610-810)<br>#8 (780-1000)<br>#9 (845-1085) |
| | Nominal motor kW (HP) | | 3.7 (5) | 3.7 (5) | 3.7 (5) |
| | Maximum usable motor kW (HP) | | 4.3 (5.75) | 4.3 (5.75) | 4.3 (5.75) |
| | Kit # and rev/min range | | #10 (750-945)<br>#11 (865-1095)<br>#12 (940-1190) | #10 (900-1135)<br>#11 (1040-1315)<br>#12 (1125-1425) | #10 (750-945)<br>#11 (865-1095)<br>#12 (940-1190) |
| | Blower wheel nominal diameter x width - mm (in.) | | (1) 381 x 381<br>(15 X 15) | (1) 381 x 381<br>(15 X 15) | (1) 381 x 381<br>(15 X 15) |
| **Filters** | Type of filter | | Disposable | | |
| | Number and size - mm (in.) | | (4) 508 x 508 x 51 (20 x 25 x 2) | | |
| **Electrical characteristics** | | | 380/420V - 50 hertz - 3 phase with neutral | | |

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

[1] Tested at conditions included in AHRI Standard 340/360; 35°C (95°F) outdoor air temperature and 27°C (80°F) dry bulb /19°C (67°F) wet bulb entering evaporator air; minimum external duct static pressure while operating at rated voltage and air volumes.

[2] Rated at 46°C (115°F) outdoor air temperature and 27°C (80°F) db/19°C (67°F) wb entering evaporator air (T3 Conditions).

[3] Using total air volume and system static pressure requirements determine from blower performance tables rev/min and motor output required. Maximum usable output of motors furnished are shown. 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 MSAV® (Multi-Stage Air Volume) option are limited to a motor service factor of 1.0.

## SPECIFICATIONS

| General Data | | | Nominal kW (Tons) | 35 (10) | 35 (10) | 35 (10) |
|---|---|---|---|---|---|---|
| | | | Model Number | KCB120S4B | KCB120S4M | KCA120H4B |
| | | | Efficiency Type | Standard | Standard | High |
| | | | Blower Type | CAV (Constant Air Volume) | MSAV® (Multi-Stage Air Volume) | CAV (Constant Air Volume) |
| Cooling Performance | Gross Cooling Capacity - kW (Btuh) | | | 30.3 (103 500) | 30.3 (103 500) | 32.1 (109 700) |
| | [1] Net Cooling Capacity - kW (Btuh) | | | 29.3 (100 000) | 29.3 (100 000) | 30.9 (105 600) |
| | AHRI Rated Air Flow - L/s (cfm) | | | 1416 (3000) | 1416 (3000) | 1700 (3600) |
| | Total Unit Power - kW | | | 8.9 | 8.9 | 8.7 |
| | [1] EER (Btuh/Watt) at 35°C (95°F) | | | 11.3 | 11.3 | 12.4 |
| | [2] EER (Btuh/Watt) at 46°C (115°F) | | | 8.2 | 8.2 | 8.6 |
| | [1] IEER (Btuh/Watt) | | | 12.9 | 13.6 | 12.7 |
| Refrigerant Type | | | | R-410A | R-410A | R-410A |
| Refrigerant Charge | Environ™ Coil System | | Circuit 1 | 2.5 kg (5 lbs. 7 oz.) | 2.5 kg (5 lbs. 7 oz.) | 3.3 kg (7 lbs. 4 oz.) |
| | | | Circuit 2 | 2.6 kg (5 lbs. 12 oz.) | 2.6 kg (5 lbs. 12 oz.) | 3.4 kg (7 lbs. 8 oz.) |
| | Conventional Fin/Tube Coil Option | | Circuit 1 | 4.5 kg (9 lbs. 15 oz.) | 4.5 kg (9 lbs. 15 oz.) | - - - |
| | | | Circuit 2 | 4.1 kg (9 lbs. 1 oz.) | 4.1 kg (9 lbs. 1 oz.) | - - - |
| Electric Heat Available - See page 10 | | | | 11.5, 17.2, 23, 34.5, 45.9 KW | | |
| Compressor Type (number) | | | | Scroll (2) | Scroll (2) | Scroll (2) |
| Outdoor Coils Environ (Fin/Tube) | Net face area (total) - $m^2$ (sq. ft.) | | | 2.6 (28.0) | 2.6 (28.0) | 2.6 (28.0) |
| | Number of rows | | | 1 (2) | 1 (2) | 1 |
| | Fins per m (inch) | | | 906 (23) / 787 (20) | 906 (23) / 787 (20) | 787 (20) |
| Outdoor Coil Fans | Motor - (No.) W (HP) | | | (2) 249 (1/3) | (2) 249 (1/3) | (2) 249 (1/3) |
| | Motor rev/min | | | 896 | 896 | 896 |
| | Total Motor watts | | | 527 | 527 | 611 |
| | Diameter - (No.) mm (in.) | | | (2) 610 (24) | (2) 610 (24) | (2) 610 (24) |
| | Number of blades | | | 3 | 3 | 3 |
| | Total Air volume - L/s (cfm) | | | 3660 (7750) | 3660 (7750) | 3460 (7335) |
| Indoor Coils | Net face area (total) - $m^2$ (sq. ft.) | | | 1.19 (12.8) | 1.19 (12.8) | 1.26 (13.5) |
| | Tube diameter - mm (in.) | | | 9.5 (3/8) | 9.5 (3/8) | 9.5 (3/8) |
| | Number of rows | | | 4 | 4 | 4 |
| | Fins per m (inch) | | | 551 (14) | 551 (14) | 551 (14) |
| | Drain connection - Number and size | | | (1) 1 in. NPT coupling | | |
| | Expansion device type | | | Refrigerant Metering Orifice (RFC) | Refrigerant Metering Orifice (RFC) | Balance port TXV, removable head |
| [3] Indoor Blower and Drive Selection | Nominal motor kW (HP) | | | 1.5 (2) | 1.5 (2) | 1.5 (2) |
| | Maximum usable motor kW (HP) | | | 1.7 (2.3) | 1.7 (2.3) | 1.7 (2.3) |
| | Kit # and rev/min range | | | #1 (490-740)<br>#2 (665-920)<br>#3 (660-995) | #1 (590-890)<br>#2 (800-1105)<br>#3 (795-1195) | #1 (490-740)<br>#2 (665-920)<br>#3 (660-995) |
| | Nominal motor kW (HP) | | | 2.2 (3) | 2.2 (3) | 2.2 (3) |
| | Maximum usable motor kW (HP) | | | 2.6 (3.45) | 2.6 (3.45) | 2.6 (3.45) |
| | Kit # and rev/min range | | | #7 (610-810)<br>#8 (780-1000)<br>#9 (845-1085) | #7 (730-970)<br>#8 (940-1200)<br>#9 (1015-1300) | #7 (610-810)<br>#8 (780-1000)<br>#9 (845-1085) |
| | Nominal motor kW (HP) | | | 3.7 (5) | 3.7 (5) | 3.7 (5) |
| | Maximum usable motor kW (HP) | | | 4.3 (5.75) | 4.3 (5.75) | 4.3 (5.75) |
| | Kit # and rev/min range | | | #10 (750-945)<br>#11 (865-1095)<br>#12 (940-1190) | #10 (900-1135)<br>#11 (1040-1315)<br>#12 (1125-1425) | #10 (750-945)<br>#11 (865-1095)<br>#12 (940-1190) |
| | Blower wheel nominal diameter x width - mm (in.) | | | (1) 381 x 381<br>(15 X 15) | (1) 381 x 381<br>(15 X 15) | (1) 381 x 381<br>(15 X 15) |
| Filters | Type of filter | | | Disposable | | |
| | Number and size - mm (in.) | | | (4) 508 x 508 x 51 (20 x 25 x 2) | | |
| Electrical characteristics | | | | 380/420V - 50 hertz - 3 phase with neutral | | |

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

[1] Tested at conditions included in AHRI Standard 340/360; 35°C (95°F) outdoor air temperature and 27°C (80°F) dry bulb /19°C (67°F) wet bulb entering evaporator air; minimum external duct static pressure while operating at rated voltage and air volumes

[2] Rated at 46°C (115°F) outdoor air temperature and 27°C (80°F) db/19°C (67°F) wb entering evaporator air (T3 Conditions)..

[3] Using total air volume and system static pressure requirements determine from blower performance tables rev/min and motor output required. Maximum usable output of motors furnished are shown. 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 MSAV® (Multi-Stage Air Volume) option are limited to a motor service factor of 1.0.

## SPECIFICATIONS

| General Data | | | | |
|---|---|---|---|---|
| | | **Nominal kW (Tons)** | **44 (12.5)** | **44 (12.5)** |
| | | **Model Number** | **KCB150S4B** | **KCB150S4M** |
| | | **Efficiency Type** | **Standard** | **Standard** |
| | | **Blower Type** | CAV (Constant Air Volume) | MSAV® (Multi-Stage Air Volume) |
| **Cooling Performance** | Gross Cooling Capacity - kW (Btuh) | | 38.7 (130 000) | 38.7 (130 000) |
| | [1] Net Cooling Capacity - kW (Btuh) | | 36.1 (123 300) | 36.1 (123 300) |
| | AHRI Rated Air Flow - L/s (cfm) | | 1864 (3950) | 1864 (3950) |
| | Total Unit Power - kW | | 11.0 | 11.0 |
| | [1] EER (Btuh/Watt) at 35°C (95°F) | | 11.2 | 11.2 |
| | [2] EER (Btuh/Watt) at 46°C (115°F) | | 7.7 | 7.7 |
| | [1] IEER (Btuh/Watt) | | 12.4 | 13.5 |
| | Refrigerant Type | | R-410A | R-410A |
| **Refrigerant Charge** | Conventional Fin/Tube Coil Option | Circuit 1 | 5.7 kg (12 lbs. 8 oz.) | 5.7 kg (12 lbs. 8 oz.) |
| | | Circuit 2 | 4.9 kg (10 lbs. 12 oz.) | 4.9 kg (10 lbs. 12 oz.) |
| **Electric Heat Available - See page 10** | | | 11.5, 17.2, 23, 34.5, 45.9 KW | |
| **Compressor Type (number)** | | | Scroll (2) | Scroll (2) |
| **Outdoor Coils (Fin/Tube)** | Net face area (total) - $m^2$ (sq. ft.) | | 2.4 (25.9) | 2.4 (25.9) |
| | Number of rows | | 3 | 3 |
| | Fins per m (inch) | | 787 (20) | 787 (20) |
| **Outdoor Coil Fans** | Motor - (No.) W (HP) | | (2) 373 (1/2) | (2) 373 (1/2) |
| | Motor rev/min | | 896 | 896 |
| | Total Motor watts | | 802 | 802 |
| | Diameter - (No.) mm (in.) | | (2) 610 (24) | (2) 610 (24) |
| | Number of blades | | 3 | 3 |
| | Total Air volume - L/s (cfm) | | 3815 (8085) | 3815 (8085) |
| **Indoor Coils** | Net face area (total) - $m^2$ (sq. ft.) | | 1.26 (13.5) | 1.26 (13.5) |
| | Tube diameter - mm (in.) | | 9.5 (3/8) | 9.5 (3/8) |
| | Number of rows | | 4 | 4 |
| | Fins per m (inch) | | 551 (14) | 551 (14) |
| | Drain connection - Number and size | | (1) 1 in. NPT coupling | |
| | Expansion device type | | Balance port TXV, removable head | |
| [3] **Indoor Blower and Drive Selection** | Nominal motor kW (HP) | | 1.5 (2) | 1.5 (2) |
| | Maximum usable motor kW (HP) | | 1.7 (2.3) | 1.7 (2.3) |
| | Kit # and rev/min range | | #1 (490-740)<br>#2 (665-920)<br>#3 (660-995) | #1 (590-890)<br>#2 (800-1105)<br>#3 (795-1195) |
| | Nominal motor kW (HP) | | 2.2 (3) | 2.2 (3) |
| | Maximum usable motor kW (HP) | | 2.6 (3.45) | 2.6 (3.45) |
| | Kit # and rev/min range | | #7 (610-810)<br>#8 (780-1000)<br>#9 (845-1085) | #7 (730-970)<br>#8 (940-1200)<br>#9 (1015-1300) |
| | Nominal motor kW (HP) | | 3.7 (5) | 3.7 (5) |
| | Maximum usable motor kW (HP) | | 4.3 (5.75) | 4.3 (5.75) |
| | Kit # and rev/min range | | #10 (750-945)<br>#11 (865-1095)<br>#12 (940-1190) | #10 (900-1135)<br>#11 (1040-1315)<br>#12 (1125-1425) |
| | Blower wheel nominal diameter x width - mm (in.) | | (1) 381 x 381<br>(15 X 15) | (1) 381 x 381<br>(15 X 15) |
| **Filters** | Type of filter | | Disposable | |
| | Number and size - mm (in.) | | (4) 508 x 508 x 51 (20 x 25 x 2) | |
| **Electrical characteristics** | | | 380/420V - 50 hertz - 3 phase with neutral | |

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

[1] Tested at conditions included in AHRI Standard 340/360; 35°C (95°F) outdoor air temperature and 27°C (80°F) dry bulb /19°C (67°F) wet bulb entering evaporator air; minimum external duct static pressure while operating at rated voltage and air volumes

[2] Rated at 46°C (115°F) outdoor air temperature and 27°C (80°F) db/19°C (67°F) wb entering evaporator air (T3 Conditions)..

[3] Using total air volume and system static pressure requirements determine from blower performance tables rev/min and motor output required. Maximum usable output of motors furnished are shown. 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 MSAV® (Multi-Stage Air Volume) option are limited to a motor service factor of 1.0.

## RATINGS - STANDARD EFFICIENCY

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

### 26 KW STANDARD EFFICIENCY - KCB092S4 (1ST STAGE) - CONSTANT AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 18.3°C | | | | | 23.9°C | | | | | 29.4°C | | | | | 35°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1135 | 16.6 | 2.27 | 0.68 | 0.81 | 0.95 | 15.9 | 2.53 | 0.69 | 0.83 | 0.97 | 15.1 | 2.83 | 0.70 | 0.84 | 0.99 | 14.2 | 3.19 | 0.71 | 0.87 | 1.00 |
| | 1415 | 17.5 | 2.29 | 0.72 | 0.87 | 1.00 | 16.7 | 2.55 | 0.73 | 0.89 | 1.00 | 15.9 | 2.85 | 0.74 | 0.91 | 1.00 | 14.9 | 3.21 | 0.76 | 0.94 | 1.00 |
| | 1700 | 18.2 | 2.30 | 0.76 | 0.93 | 1.00 | 17.4 | 2.56 | 0.77 | 0.95 | 1.00 | 16.5 | 2.86 | 0.78 | 0.98 | 1.00 | 15.5 | 3.22 | 0.80 | 1.00 | 1.00 |
| 19.4°C | 1135 | 17.4 | 2.28 | 0.55 | 0.66 | 0.78 | 16.6 | 2.55 | 0.55 | 0.67 | 0.79 | 15.8 | 2.85 | 0.55 | 0.68 | 0.81 | 14.9 | 3.20 | 0.56 | 0.69 | 0.83 |
| | 1415 | 18.4 | 2.30 | 0.57 | 0.70 | 0.84 | 17.5 | 2.56 | 0.57 | 0.71 | 0.86 | 16.6 | 2.87 | 0.58 | 0.72 | 0.88 | 15.6 | 3.22 | 0.58 | 0.73 | 0.90 |
| | 1700 | 19.0 | 2.32 | 0.59 | 0.74 | 0.90 | 18.1 | 2.58 | 0.59 | 0.75 | 0.92 | 17.1 | 2.88 | 0.60 | 0.76 | 0.94 | 16.1 | 3.23 | 0.61 | 0.78 | 0.97 |
| 21.7°C | 1135 | 18.2 | 2.30 | 0.42 | 0.53 | 0.64 | 17.4 | 2.56 | 0.42 | 0.54 | 0.65 | 16.5 | 2.86 | 0.42 | 0.54 | 0.66 | 15.6 | 3.22 | 0.42 | 0.55 | 0.67 |
| | 1415 | 19.2 | 2.32 | 0.43 | 0.56 | 0.68 | 18.3 | 2.58 | 0.43 | 0.56 | 0.69 | 17.3 | 2.88 | 0.42 | 0.57 | 0.70 | 16.3 | 3.23 | 0.42 | 0.57 | 0.72 |
| | 1700 | 19.9 | 2.34 | 0.45 | 0.58 | 0.71 | 19.0 | 2.59 | 0.44 | 0.59 | 0.73 | 17.9 | 2.89 | 0.45 | 0.59 | 0.74 | 16.8 | 3.25 | 0.45 | 0.60 | 0.76 |

### 26 KW STANDARD EFFICIENCY - KCB092S4 (2ND STAGE) - CONSTANT AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 26.7°C | | | | | 35°C | | | | | 43.3°C | | | | | 46°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1135 | 23.0 | 4.47 | 0.71 | 0.86 | 0.99 | 20.8 | 5.36 | 0.73 | 0.90 | 1.00 | 18.4 | 6.46 | 0.76 | 0.95 | 1.00 | 17.7 | 6.87 | .80 | .98 | 1.00 |
| | 1415 | 24.2 | 4.50 | 0.76 | 0.94 | 1.00 | 21.9 | 5.39 | 0.79 | 0.98 | 1.00 | 19.5 | 6.50 | 0.83 | 1.00 | 1.00 | 18.8 | 6.91 | .88 | 1.00 | 1.00 |
| | 1700 | 25.1 | 4.51 | 0.81 | 0.99 | 1.00 | 22.8 | 5.41 | 0.85 | 1.00 | 1.00 | 20.5 | 6.53 | 0.91 | 1.00 | 1.00 | 19.8 | 6.94 | .95 | 1.00 | 1.00 |
| 19.4°C | 1135 | 24.3 | 4.50 | 0.56 | 0.69 | 0.82 | 22.0 | 5.39 | 0.57 | 0.71 | 0.86 | 19.6 | 6.50 | 0.57 | 0.74 | 0.91 | 18.8 | 6.91 | .60 | .80 | .92 |
| | 1415 | 25.6 | 4.52 | 0.59 | 0.74 | 0.90 | 23.2 | 5.42 | 0.60 | 0.76 | 0.95 | 20.5 | 6.53 | 0.62 | 0.81 | 0.99 | 19.6 | 6.94 | .65 | .87 | .99 |
| | 1700 | 26.5 | 4.54 | 0.62 | 0.79 | 0.97 | 24.0 | 5.44 | 0.63 | 0.82 | 1.00 | 21.1 | 6.55 | 0.65 | 0.88 | 1.00 | 20.2 | 6.96 | .70 | .95 | 1.00 |
| 21.7°C | 1135 | 25.5 | 4.52 | 0.42 | 0.55 | 0.67 | 23.2 | 5.42 | 0.41 | 0.56 | 0.69 | 20.7 | 6.54 | 0.40 | 0.57 | 0.71 | 19.9 | 6.95 | .42 | .60 | .72 |
| | 1415 | 26.8 | 4.54 | 0.43 | 0.58 | 0.72 | 24.4 | 5.45 | 0.43 | 0.59 | 0.74 | 21.7 | 6.57 | 0.43 | 0.61 | 0.78 | 20.8 | 6.98 | .44 | .65 | .79 |
| | 1700 | 27.8 | 4.56 | 0.44 | 0.61 | 0.76 | 25.3 | 5.47 | 0.44 | 0.63 | 0.80 | 22.4 | 6.60 | 0.45 | 0.65 | 0.86 | 21.5 | 7.01 | .47 | .70 | .85 |

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 48°C | | | | | 50°C | | | | | 51.7°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1135 | 17.0 | 7.19 | 0.78 | 0.98 | 1.00 | 16.4 | 7.53 | 0.80 | 0.99 | 1.00 | 15.9 | 7.84 | 0.81 | 1.00 | 1.00 |
| | 1415 | 18.1 | 7.23 | 0.87 | 1.00 | 1.00 | 17.5 | 7.58 | 0.88 | 1.00 | 1.00 | 17.0 | 7.88 | 0.90 | 1.00 | 1.00 |
| | 1700 | 19.0 | 7.27 | 0.94 | 1.00 | 1.00 | 18.3 | 7.61 | 0.96 | 1.00 | 1.00 | 17.8 | 7.92 | 0.97 | 1.00 | 1.00 |
| 19.4°C | 1135 | 18.1 | 7.23 | 0.58 | 0.76 | 0.95 | 17.4 | 7.58 | 0.59 | 0.77 | 0.97 | 16.8 | 7.88 | 0.59 | 0.78 | 0.98 |
| | 1415 | 18.9 | 7.26 | 0.63 | 0.84 | 1.00 | 18.1 | 7.60 | 0.64 | 0.86 | 1.00 | 17.5 | 7.91 | 0.64 | 0.88 | 1.00 |
| | 1700 | 19.4 | 7.29 | 0.67 | 0.92 | 1.00 | 18.7 | 7.63 | 0.68 | 0.94 | 1.00 | 18.0 | 7.94 | 0.69 | 0.96 | 1.00 |
| 21.7°C | 1135 | 19.1 | 7.27 | 0.40 | 0.58 | 0.74 | 18.4 | 7.61 | 0.40 | 0.58 | 0.75 | 17.8 | 7.92 | 0.40 | 0.59 | 0.76 |
| | 1415 | 20.0 | 7.31 | 0.43 | 0.62 | 0.82 | 19.3 | 7.65 | 0.43 | 0.63 | 0.83 | 18.6 | 7.96 | 0.43 | 0.64 | 0.85 |
| | 1700 | 20.6 | 7.33 | 0.45 | 0.67 | 0.90 | 19.8 | 7.68 | 0.45 | 0.68 | 0.92 | 19.2 | 7.99 | 0.46 | 0.69 | 0.94 |

## RATINGS - STANDARD EFFICIENCY

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

### 30 KW STANDARD EFFICIENCY - KCB102S4 (1ST STAGE) - CONSTANT AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 18.3°C | | | | | 23.9°C | | | | | 29.4°C | | | | | 35°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1285 | 14.9 | 2.05 | 0.66 | 0.81 | 0.98 | 14.0 | 2.28 | 0.66 | 0.82 | 1.00 | 12.9 | 2.55 | 0.66 | 0.85 | 1.00 | 11.8 | 2.86 | 0.67 | 0.88 | 1.00 |
| | 1605 | 15.9 | 2.05 | 0.70 | 0.90 | 1.00 | 14.8 | 2.29 | 0.71 | 0.92 | 1.00 | 13.7 | 2.56 | 0.72 | 0.95 | 1.00 | 12.5 | 2.87 | 0.73 | 0.98 | 1.00 |
| | 1925 | 16.5 | 2.06 | 0.75 | 0.97 | 1.00 | 15.4 | 2.29 | 0.77 | 1.00 | 1.00 | 14.3 | 2.57 | 0.79 | 1.00 | 1.00 | 13.2 | 2.88 | 0.81 | 1.00 | 1.00 |
| 19.4°C | 1285 | 15.9 | 2.05 | 0.52 | 0.64 | 0.77 | 14.9 | 2.29 | 0.51 | 0.64 | 0.78 | 13.8 | 2.56 | 0.51 | 0.64 | 0.80 | 12.7 | 2.87 | 0.50 | 0.65 | 0.83 |
| | 1605 | 16.9 | 2.05 | 0.55 | 0.68 | 0.85 | 15.8 | 2.29 | 0.55 | 0.69 | 0.87 | 14.6 | 2.56 | 0.54 | 0.70 | 0.91 | 13.4 | 2.88 | 0.54 | 0.71 | 0.94 |
| | 1925 | 17.6 | 2.06 | 0.57 | 0.73 | 0.94 | 16.4 | 2.30 | 0.57 | 0.74 | 0.96 | 15.2 | 2.57 | 0.58 | 0.76 | 0.99 | 14.0 | 2.89 | 0.58 | 0.79 | 1.00 |
| 21.7°C | 1285 | 16.8 | 2.06 | 0.40 | 0.51 | 0.62 | 15.8 | 2.29 | 0.39 | 0.51 | 0.62 | 14.7 | 2.57 | 0.37 | 0.50 | 0.63 | 13.5 | 2.88 | 0.36 | 0.50 | 0.63 |
| | 1605 | 17.8 | 2.06 | 0.41 | 0.54 | 0.66 | 16.7 | 2.30 | 0.40 | 0.54 | 0.67 | 15.5 | 2.57 | 0.39 | 0.54 | 0.68 | 14.3 | 2.89 | 0.38 | 0.54 | 0.69 |
| | 1925 | 18.6 | 2.07 | 0.43 | 0.57 | 0.71 | 17.4 | 2.31 | 0.42 | 0.57 | 0.72 | 16.1 | 2.58 | 0.41 | 0.57 | 0.74 | 14.8 | 2.90 | 0.40 | 0.58 | 0.76 |

### 30 KW STANDARD EFFICIENCY - KCB102S4 (2ND STAGE) - CONSTANT AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 26.7°C | | | | | 35°C | | | | | 43.3°C | | | | | 46°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1285 | 25.6 | 5.07 | 0.70 | 0.86 | 1.00 | 22.4 | 6.02 | 0.71 | 0.89 | 1.00 | 19.0 | 7.26 | 0.73 | 0.95 | 1.00 | 17.9 | 7.72 | .76 | .99 | 1.00 |
| | 1605 | 27.1 | 5.08 | 0.76 | 0.94 | 1.00 | 23.7 | 6.04 | 0.77 | 0.98 | 1.00 | 20.3 | 7.26 | 0.81 | 1.00 | 1.00 | 19.5 | 7.72 | .85 | 1.00 | 1.00 |
| | 1925 | 28.3 | 5.09 | 0.81 | 1.00 | 1.00 | 25.0 | 6.04 | 0.84 | 1.00 | 1.00 | 21.7 | 7.27 | 0.89 | 1.00 | 1.00 | 20.7 | 7.73 | .93 | 1.00 | 1.00 |
| 19.4°C | 1285 | 27.3 | 5.08 | 0.54 | 0.68 | 0.83 | 24.1 | 6.03 | 0.53 | 0.69 | 0.85 | 20.6 | 7.26 | 0.52 | 0.71 | 0.90 | 19.4 | 7.73 | .54 | .76 | .90 |
| | 1605 | 28.9 | 5.08 | 0.58 | 0.74 | 0.91 | 25.5 | 6.05 | 0.58 | 0.75 | 0.95 | 21.8 | 7.28 | 0.57 | 0.78 | 0.99 | 20.5 | 7.73 | .60 | .85 | .99 |
| | 1925 | 30.1 | 5.10 | 0.61 | 0.79 | 0.98 | 26.5 | 6.06 | 0.61 | 0.82 | 1.00 | 22.6 | 7.28 | 0.62 | 0.86 | 1.00 | 21.3 | 7.73 | .65 | .93 | 1.00 |
| 21.7°C | 1285 | 29.0 | 5.09 | 0.40 | 0.54 | 0.67 | 25.6 | 6.05 | 0.37 | 0.53 | 0.67 | 22.0 | 7.26 | 0.34 | 0.52 | 0.69 | 21.0 | 7.73 | .34 | .55 | .68 |
| | 1605 | 30.6 | 5.11 | 0.42 | 0.57 | 0.72 | 27.1 | 6.07 | 0.40 | 0.57 | 0.74 | 23.3 | 7.29 | 0.37 | 0.57 | 0.76 | 22.2 | 7.74 | .37 | .61 | .76 |
| | 1925 | 31.8 | 5.11 | 0.43 | 0.61 | 0.77 | 28.1 | 6.08 | 0.42 | 0.61 | 0.80 | 24.2 | 7.30 | 0.39 | 0.62 | 0.84 | 23.0 | 7.74 | .40 | .66 | .83 |

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 48°C | | | | | 50°C | | | | | 51.7°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1285 | 17.0 | 8.09 | 0.74 | 0.98 | 1.00 | 16.1 | 8.50 | 0.75 | 0.99 | 1.00 | 15.3 | 8.86 | 0.75 | 1.00 | 1.00 |
| | 1605 | 18.4 | 8.10 | 0.83 | 1.00 | 1.00 | 17.6 | 8.51 | 0.85 | 1.00 | 1.00 | 16.9 | 8.89 | 0.87 | 1.00 | 1.00 |
| | 1925 | 19.7 | 8.12 | 0.93 | 1.00 | 1.00 | 18.8 | 8.52 | 0.95 | 1.00 | 1.00 | 18.0 | 8.88 | 0.96 | 1.00 | 1.00 |
| 19.4°C | 1285 | 18.5 | 8.10 | 0.52 | 0.72 | 0.94 | 17.6 | 8.51 | 0.51 | 0.73 | 0.96 | 16.7 | 8.88 | 0.51 | 0.74 | 0.97 |
| | 1605 | 19.5 | 8.10 | 0.57 | 0.81 | 1.00 | 18.6 | 8.51 | 0.57 | 0.83 | 1.00 | 17.7 | 8.87 | 0.57 | 0.84 | 1.00 |
| | 1925 | 20.3 | 8.10 | 0.62 | 0.90 | 1.00 | 19.3 | 8.52 | 0.63 | 0.92 | 1.00 | 18.4 | 8.88 | 0.63 | 0.94 | 1.00 |
| 21.7°C | 1285 | 19.9 | 8.11 | 0.32 | 0.52 | 0.70 | 19.0 | 8.52 | 0.30 | 0.52 | 0.71 | 18.1 | 8.89 | 0.30 | 0.52 | 0.72 |
| | 1605 | 21.0 | 8.12 | 0.35 | 0.58 | 0.79 | 20.0 | 8.53 | 0.34 | 0.58 | 0.80 | 19.2 | 8.89 | 0.34 | 0.58 | 0.82 |
| | 1925 | 21.9 | 8.13 | 0.38 | 0.63 | 0.88 | 20.8 | 8.52 | 0.38 | 0.63 | 0.90 | 19.9 | 8.89 | 0.37 | 0.64 | 0.91 |

## RATINGS - STANDARD EFFICIENCY

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

### 35 KW STANDARD EFFICIENCY - KCB120S4 (1ST STAGE) - CONSTANT AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 18.3°C | | | | | 23.9°C | | | | | 29.4°C | | | | | 35°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1510 | 16.1 | 2.32 | 0.69 | 0.85 | 1.00 | 15.0 | 2.63 | 0.69 | 0.86 | 1.00 | 13.7 | 2.98 | 0.70 | 0.88 | 1.00 | 12.4 | 3.37 | 0.71 | 0.91 | 1.00 |
| | 1890 | 17.1 | 2.32 | 0.75 | 0.93 | 1.00 | 15.9 | 2.64 | 0.75 | 0.96 | 1.00 | 14.6 | 3.00 | 0.76 | 0.98 | 1.00 | 13.3 | 3.39 | 0.78 | 1.00 | 1.00 |
| | 2265 | 17.9 | 2.33 | 0.80 | 1.00 | 1.00 | 16.7 | 2.65 | 0.81 | 1.00 | 1.00 | 15.4 | 3.01 | 0.83 | 1.00 | 1.00 | 14.2 | 3.41 | 0.86 | 1.00 | 1.00 |
| 19.4°C | 1510 | 17.3 | 2.32 | 0.55 | 0.67 | 0.81 | 16.1 | 2.64 | 0.54 | 0.67 | 0.82 | 14.8 | 3.00 | 0.53 | 0.68 | 0.84 | 13.5 | 3.40 | 0.52 | 0.69 | 0.87 |
| | 1890 | 18.3 | 2.34 | 0.57 | 0.72 | 0.90 | 17.0 | 2.65 | 0.57 | 0.74 | 0.92 | 15.6 | 3.02 | 0.57 | 0.74 | 0.94 | 14.3 | 3.41 | 0.57 | 0.76 | 0.98 |
| | 2265 | 19.0 | 2.34 | 0.61 | 0.78 | 0.97 | 17.6 | 2.66 | 0.61 | 0.79 | 0.99 | 16.3 | 3.03 | 0.60 | 0.81 | 1.00 | 14.8 | 3.43 | 0.61 | 0.83 | 1.00 |
| 21.7°C | 1510 | 18.6 | 2.34 | 0.41 | 0.54 | 0.65 | 17.3 | 2.66 | 0.40 | 0.53 | 0.66 | 15.9 | 3.02 | 0.38 | 0.52 | 0.66 | 14.6 | 3.42 | 0.36 | 0.52 | 0.67 |
| | 1890 | 19.5 | 2.35 | 0.42 | 0.57 | 0.70 | 18.1 | 2.67 | 0.42 | 0.57 | 0.72 | 16.8 | 3.04 | 0.40 | 0.57 | 0.73 | 15.3 | 3.44 | 0.39 | 0.57 | 0.74 |
| | 2265 | 20.2 | 2.35 | 0.45 | 0.61 | 0.76 | 18.8 | 2.68 | 0.44 | 0.61 | 0.77 | 17.3 | 3.05 | 0.42 | 0.60 | 0.79 | 15.8 | 3.45 | 0.40 | 0.61 | 0.81 |

### 35 KW STANDARD EFFICIENCY - KCB120S4 (2ND STAGE) - CONSTANT AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 26.7°C | | | | | 35°C | | | | | 43.3°C | | | | | 46°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1510 | 30.4 | 5.70 | 0.71 | 0.88 | 1.00 | 26.4 | 6.86 | 0.72 | 0.92 | 1.00 | 22.2 | 8.23 | 0.74 | 0.98 | 1.00 | 21.0 | 8.73 | .78 | 1.00 | 1.00 |
| | 1890 | 32.3 | 5.72 | 0.78 | 0.98 | 1.00 | 28.3 | 6.90 | 0.80 | 1.00 | 1.00 | 24.2 | 8.29 | 0.84 | 1.00 | 1.00 | 23.2 | 8.79 | .88 | 1.00 | 1.00 |
| | 2265 | 34.1 | 5.75 | 0.84 | 1.00 | 1.00 | 30.1 | 6.94 | 0.88 | 1.00 | 1.00 | 25.9 | 8.34 | 0.93 | 1.00 | 1.00 | 24.8 | 8.85 | .97 | 1.00 | 1.00 |
| 19.4°C | 1510 | 32.9 | 5.73 | 0.54 | 0.69 | 0.84 | 28.8 | 6.91 | 0.53 | 0.70 | 0.88 | 24.3 | 8.30 | 0.52 | 0.72 | 0.93 | 22.8 | 8.78 | .54 | .78 | .93 |
| | 1890 | 34.7 | 5.76 | 0.59 | 0.76 | 0.94 | 30.3 | 6.95 | 0.58 | 0.78 | 0.98 | 25.6 | 8.33 | 0.58 | 0.81 | 1.00 | 24.1 | 8.83 | .60 | .88 | 1.00 |
| | 2265 | 36.0 | 5.78 | 0.62 | 0.82 | 1.00 | 31.4 | 6.97 | 0.63 | 0.85 | 1.00 | 26.7 | 8.37 | 0.63 | 0.91 | 1.00 | 25.1 | 8.86 | .67 | .97 | 1.00 |
| 21.7°C | 1510 | 35.3 | 5.76 | 0.40 | 0.54 | 0.67 | 31.1 | 6.96 | 0.37 | 0.53 | 0.68 | 26.5 | 8.36 | 0.33 | 0.52 | 0.70 | 25.1 | 8.85 | .33 | .55 | .69 |
| | 1890 | 37.2 | 5.80 | 0.42 | 0.58 | 0.74 | 32.7 | 7.00 | 0.40 | 0.58 | 0.76 | 27.9 | 8.40 | 0.37 | 0.58 | 0.79 | 26.4 | 8.90 | .36 | .62 | .78 |
| | 2265 | 38.5 | 5.82 | 0.44 | 0.62 | 0.80 | 33.8 | 7.03 | 0.42 | 0.62 | 0.83 | 28.9 | 8.44 | 0.40 | 0.64 | 0.88 | 27.4 | 8.94 | .40 | .68 | .87 |

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 48°C | | | | | 50°C | | | | | 51.7°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1510 | 19.8 | 9.12 | 0.76 | 1.00 | 1.00 | 18.8 | 9.53 | 0.76 | 1.00 | 1.00 | 17.9 | 9.90 | 0.78 | 1.00 | 1.00 |
| | 1890 | 21.8 | 9.19 | 0.87 | 1.00 | 1.00 | 20.8 | 9.60 | 0.89 | 1.00 | 1.00 | 19.9 | 9.97 | 0.91 | 1.00 | 1.00 |
| | 2265 | 23.4 | 9.24 | 0.97 | 1.00 | 1.00 | 22.3 | 9.66 | 0.99 | 1.00 | 1.00 | 21.3 | 10.03 | 1.00 | 1.00 | 1.00 |
| 19.4°C | 1510 | 21.7 | 9.18 | 0.51 | 0.74 | 0.97 | 20.5 | 9.59 | 0.51 | 0.75 | 0.99 | 19.5 | 9.96 | 0.50 | 0.75 | 1.00 |
| | 1890 | 22.9 | 9.23 | 0.58 | 0.84 | 1.00 | 21.7 | 9.64 | 0.58 | 0.86 | 1.00 | 20.6 | 10.00 | 0.58 | 0.88 | 1.00 |
| | 2265 | 23.9 | 9.26 | 0.64 | 0.95 | 1.00 | 22.6 | 9.67 | 0.64 | 0.97 | 1.00 | 21.6 | 10.04 | 0.65 | 0.98 | 1.00 |
| 21.7°C | 1510 | 23.8 | 9.25 | 0.31 | 0.52 | 0.72 | 22.6 | 9.67 | 0.29 | 0.52 | 0.73 | 21.5 | 10.04 | 0.28 | 0.51 | 0.73 |
| | 1890 | 25.1 | 9.30 | 0.34 | 0.58 | 0.82 | 23.8 | 9.71 | 0.33 | 0.59 | 0.83 | 22.7 | 10.08 | 0.33 | 0.59 | 0.85 |
| | 2265 | 25.9 | 9.30 | 0.38 | 0.65 | 0.92 | 24.6 | 9.74 | 0.37 | 0.65 | 0.94 | 23.5 | 10.12 | 0.36 | 0.66 | 0.96 |

## RATINGS - STANDARD EFFICIENCY

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

### 44 KW STANDARD EFFICIENCY - KCB150S4 (1ST STAGE) - CONSTANT AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 18.3°C | | | | | 23.9°C | | | | | 29.4°C | | | | | 35°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1795 | 19.8 | 2.85 | .71 | .86 | 1.00 | 18.5 | 3.16 | .71 | .88 | 1.00 | 17.2 | 3.49 | .72 | .91 | 1.00 | 15.7 | 3.87 | .72 | .93 | 1.00 |
| | 2075 | 20.5 | 2.86 | .74 | .93 | 1.00 | 19.3 | 3.17 | .75 | .94 | 1.00 | 17.9 | 3.50 | .76 | .97 | 1.00 | 16.5 | 3.88 | .78 | 1.00 | 1.00 |
| | 2360 | 21.2 | 2.87 | .78 | .98 | 1.00 | 19.9 | 3.17 | .79 | 1.00 | 1.00 | 18.5 | 3.51 | .81 | 1.00 | 1.00 | 17.2 | 3.88 | .83 | 1.00 | 1.00 |
| 19.4°C | 1795 | 21.3 | 2.87 | .55 | .68 | .83 | 20.0 | 3.17 | .54 | .69 | .84 | 18.6 | 3.51 | .54 | .70 | .86 | 17.1 | 3.88 | .53 | .70 | .88 |
| | 2075 | 22.0 | 2.88 | .57 | .72 | .89 | 20.7 | 3.18 | .57 | .73 | .91 | 19.3 | 3.52 | .57 | .74 | .93 | 17.7 | 3.88 | .57 | .75 | .96 |
| | 2360 | 22.7 | 2.89 | .60 | .76 | .94 | 21.3 | 3.19 | .60 | .77 | .97 | 19.8 | 3.52 | .60 | .79 | .99 | 18.3 | 3.89 | .60 | .80 | 1.00 |
| 21.7°C | 1795 | 22.7 | 2.89 | .42 | .55 | .67 | 21.4 | 3.19 | .40 | .54 | .67 | 20.0 | 3.52 | .39 | .53 | .67 | 18.5 | 3.89 | .38 | .53 | .68 |
| | 2075 | 23.6 | 2.90 | .42 | .57 | .70 | 22.2 | 3.20 | .42 | .57 | .71 | 20.7 | 3.53 | .40 | .56 | .71 | 19.1 | 3.90 | .39 | .56 | .73 |
| | 2360 | 24.1 | 2.91 | .44 | .59 | .73 | 22.8 | 3.21 | .43 | .59 | .75 | 21.2 | 3.54 | .42 | .59 | .76 | 19.7 | 3.91 | .41 | .60 | .78 |

### 44 KW STANDARD EFFICIENCY - KCB150S4 (2ND STAGE) - CONSTANT AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 29.4°C | | | | | 35°C | | | | | 43.3°C | | | | | 46°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1795 | 37.7 | 7.59 | .73 | .90 | 1.00 | 34.6 | 8.42 | .74 | .92 | 1.00 | 29.9 | 9.86 | .78 | .99 | 1.00 | 28.4 | 10.39 | .79 | 1.00 | 1.00 |
| | 2075 | 39.2 | 7.61 | .78 | .96 | 1.00 | 36.1 | 8.45 | .79 | .99 | 1.00 | 31.7 | 9.89 | .83 | 1.00 | 1.00 | 30.3 | 10.43 | .85 | 1.00 | 1.00 |
| | 2360 | 40.5 | 7.64 | .82 | 1.00 | 1.00 | 37.6 | 8.47 | .84 | 1.00 | 1.00 | 33.4 | 9.92 | .89 | 1.00 | 1.00 | 31.9 | 10.44 | .91 | 1.00 | 1.00 |
| 19.4°C | 1795 | 40.6 | 7.63 | .55 | .71 | .86 | 37.5 | 8.46 | .55 | .72 | .88 | 32.6 | 9.91 | .56 | .77 | .91 | 30.9 | 10.43 | .56 | .78 | .93 |
| | 2075 | 42.1 | 7.66 | .58 | .75 | .92 | 38.8 | 8.49 | .58 | .77 | .95 | 33.8 | 9.93 | .60 | .83 | .98 | 32.0 | 10.45 | .60 | .84 | .99 |
| | 2360 | 43.3 | 7.69 | .61 | .80 | .98 | 40.0 | 8.51 | .61 | .81 | 1.00 | 34.8 | 9.94 | .63 | .89 | 1.00 | 32.9 | 10.47 | .64 | .90 | 1.00 |
| 21.7°C | 1795 | 43.6 | 7.68 | .40 | .55 | .69 | 40.4 | 8.51 | .39 | .54 | .70 | 35.5 | 9.96 | .37 | .56 | .69 | 33.7 | 10.48 | .36 | .56 | .70 |
| | 2075 | 45.0 | 7.71 | .42 | .58 | .73 | 41.7 | 8.54 | .40 | .58 | .75 | 36.7 | 9.98 | .39 | .61 | .75 | 34.9 | 10.50 | .38 | .61 | .75 |
| | 2360 | 46.2 | 7.73 | .43 | .61 | .77 | 42.9 | 8.56 | .42 | .61 | .79 | 37.7 | 10.00 | .41 | .64 | .79 | 35.9 | 10.53 | .40 | .65 | .81 |

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 48°C | | | | | 50°C | | | | | 51.7°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1795 | 27.0 | 10.80 | .78 | 1.00 | 1.00 | 25.8 | 11.23 | .79 | 1.00 | 1.00 | 25.2 | 11.60 | .81 | 1.00 | 1.00 |
| | 2075 | 28.8 | 10.84 | .84 | 1.00 | 1.00 | 27.6 | 11.26 | .86 | 1.00 | 1.00 | 27.0 | 11.63 | .88 | 1.00 | 1.00 |
| | 2360 | 30.3 | 10.86 | .90 | 1.00 | 1.00 | 29.2 | 11.29 | .92 | 1.00 | 1.00 | 28.5 | 11.66 | .96 | 1.00 | 1.00 |
| 19.4°C | 1795 | 29.6 | 10.84 | .54 | .75 | .96 | 28.3 | 11.27 | .54 | .76 | .98 | 27.1 | 11.62 | .56 | .81 | .97 |
| | 2075 | 30.7 | 10.86 | .58 | .82 | 1.00 | 29.4 | 11.29 | .58 | .83 | 1.00 | 28.2 | 11.66 | .60 | .88 | 1.00 |
| | 2360 | 31.5 | 10.88 | .62 | .88 | 1.00 | 30.2 | 11.30 | .62 | .89 | 1.00 | 29.0 | 11.67 | .64 | .95 | 1.00 |
| 21.7°C | 1795 | 32.2 | 10.90 | .34 | .54 | .73 | 30.9 | 11.32 | .34 | .54 | .74 | 29.9 | 11.68 | .34 | .57 | .72 |
| | 2075 | 33.4 | 10.91 | .37 | .58 | .79 | 32.0 | 11.33 | .36 | .58 | .80 | 30.9 | 11.70 | .36 | .61 | .78 |
| | 2360 | 34.3 | 10.93 | .39 | .62 | .85 | 32.8 | 11.34 | .38 | .62 | .87 | 31.7 | 11.72 | .38 | .66 | .84 |

## RATINGS - STANDARD EFFICIENCY

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

### 26 KW STANDARD EFFICIENCY - KCB092S4M (1ST STAGE) - MSAV® (MULTI-STAGE AIR VOLUME) SUPPLY AIR BLOWER

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 18.3°C | | | | | 23.9°C | | | | | 29.4°C | | | | | 35°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 795 | 14.5 | 2.11 | 0.68 | 0.78 | 0.88 | 13.8 | 2.43 | 0.68 | 0.79 | 0.90 | 13 | 2.78 | 0.69 | 0.8 | 0.91 | 12.3 | 3.17 | 0.69 | 0.81 | 0.93 |
| | 990 | 15.5 | 2.14 | 0.71 | 0.83 | 0.94 | 14.8 | 2.46 | 0.72 | 0.84 | 0.96 | 14 | 2.81 | 0.72 | 0.85 | 0.97 | 13.1 | 3.19 | 0.73 | 0.87 | 0.99 |
| | 1190 | 16.3 | 2.15 | 0.74 | 0.87 | 0.99 | 15.5 | 2.47 | 0.75 | 0.89 | 1.00 | 14.6 | 2.82 | 0.76 | 0.90 | 1.00 | 13.7 | 3.21 | 0.77 | 0.92 | 1.00 |
| 19.4°C | 795 | 15.2 | 2.13 | 0.55 | 0.66 | 0.75 | 14.5 | 2.45 | 0.55 | 0.66 | 0.76 | 13.8 | 2.8 | 0.55 | 0.66 | 0.77 | 13.0 | 3.19 | 0.55 | 0.67 | 0.78 |
| | 990 | 16.4 | 2.15 | 0.57 | 0.69 | 0.8 | 15.6 | 2.47 | 0.57 | 0.69 | 0.81 | 14.7 | 2.83 | 0.57 | 0.7 | 0.82 | 13.9 | 3.22 | 0.57 | 0.71 | 0.84 |
| | 1190 | 17.2 | 2.17 | 0.59 | 0.72 | 0.84 | 16.4 | 2.49 | 0.59 | 0.73 | 0.85 | 15.5 | 2.84 | 0.6 | 0.74 | 0.87 | 14.6 | 3.23 | 0.60 | 0.75 | 0.89 |
| 21.7°C | 795 | 15.9 | 2.14 | 0.43 | 0.54 | 0.63 | 15.2 | 2.46 | 0.43 | 0.54 | 0.64 | 14.4 | 2.82 | 0.42 | 0.54 | 0.64 | 13.7 | 3.21 | 0.42 | 0.53 | 0.65 |
| | 990 | 17.1 | 2.17 | 0.44 | 0.56 | 0.66 | 16.3 | 2.49 | 0.43 | 0.56 | 0.67 | 15.5 | 2.84 | 0.44 | 0.56 | 0.68 | 14.6 | 3.23 | 0.43 | 0.56 | 0.69 |
| | 1190 | 18.0 | 2.18 | 0.45 | 0.58 | 0.7 | 17.1 | 2.51 | 0.44 | 0.58 | 0.71 | 16.3 | 2.86 | 0.43 | 0.58 | 0.72 | 15.3 | 3.25 | 0.42 | 0.59 | 0.73 |

### 26 KW STANDARD EFFICIENCY - KCB092S4M (2ND STAGE) - MSAV® (MULTI-STAGE AIR VOLUME) SUPPLY AIR BLOWER

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 26.7°C | | | | | 35°C | | | | | 43.3°C | | | | | 46°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1135 | 23.9 | 4.32 | 0.75 | 0.89 | 1.00 | 21.5 | 5.27 | 0.76 | 0.92 | 1.00 | 19.0 | 6.37 | 0.79 | 0.95 | 1.00 | 18.2 | 6.75 | .79 | .97 | 1.00 |
| | 1415 | 25.2 | 4.34 | 0.8 | 0.95 | 1.00 | 22.7 | 5.30 | 0.82 | 0.98 | 1.00 | 20.3 | 6.4 | 0.85 | 1.00 | 1.00 | 19.4 | 6.78 | .86 | 1.00 | 1.00 |
| | 1700 | 26.2 | 4.36 | 0.84 | 0.99 | 1.00 | 23.8 | 5.32 | 0.87 | 1.00 | 1.00 | 21.3 | 6.43 | 0.91 | 1.00 | 1.00 | 20.5 | 6.81 | .92 | 1.00 | 1.00 |
| 19.4°C | 1135 | 25.3 | 4.34 | 0.58 | 0.73 | 0.86 | 22.9 | 5.30 | 0.58 | 0.74 | 0.88 | 20.3 | 6.4 | 0.59 | 0.76 | 0.92 | 19.5 | 6.78 | .59 | .76 | .93 |
| | 1415 | 26.7 | 4.36 | 0.62 | 0.78 | 0.92 | 24.1 | 5.32 | 0.62 | 0.80 | 0.95 | 21.4 | 6.43 | 0.63 | 0.83 | 0.98 | 20.4 | 6.80 | .63 | .83 | .99 |
| | 1700 | 27.6 | 4.38 | 0.65 | 0.82 | 0.98 | 25 | 5.34 | 0.66 | 0.85 | 0.99 | 22.1 | 6.44 | 0.67 | 0.89 | 1.00 | 21.2 | 6.82 | .68 | .90 | 1.00 |
| 21.7°C | 1135 | 26.7 | 4.36 | 0.42 | 0.57 | 0.70 | 24.3 | 5.32 | 0.42 | 0.57 | 0.72 | 21.6 | 6.43 | 0.41 | 0.58 | 0.74 | 20.7 | 6.81 | .41 | .58 | .74 |
| | 1415 | 28.1 | 4.38 | 0.45 | 0.61 | 0.76 | 25.5 | 5.35 | 0.44 | 0.62 | 0.78 | 22.7 | 6.46 | 0.44 | 0.63 | 0.81 | 21.7 | 6.83 | .43 | .63 | .81 |
| | 1700 | 29.2 | 4.39 | 0.46 | 0.64 | 0.80 | 26.5 | 5.36 | 0.46 | 0.65 | 0.83 | 23.5 | 6.47 | 0.46 | 0.67 | 0.87 | 22.5 | 6.85 | .46 | .67 | .88 |

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 48°C | | | | | 50°C | | | | | 51.7°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1135 | 17.6 | 7.04 | .80 | .97 | 1.00 | 16.9 | 7.34 | .81 | .98 | 1.00 | 16.4 | 7.61 | 0.82 | 0.99 | 1.00 |
| | 1415 | 18.8 | 7.07 | .87 | 1.00 | 1.00 | 18.1 | 7.38 | .88 | 1.00 | 1.00 | 17.6 | 7.65 | 0.9 | 1.00 | 1.00 |
| | 1700 | 19.8 | 7.10 | .93 | 1.00 | 1.00 | 19.2 | 7.40 | .95 | 1.00 | 1.00 | 18.6 | 7.68 | 0.96 | 1.00 | 1.00 |
| 19.4°C | 1135 | 18.8 | 7.08 | .59 | .77 | .94 | 18.1 | 7.37 | .59 | .78 | .96 | 17.4 | 7.64 | 0.6 | 0.8 | 0.97 |
| | 1415 | 19.7 | 7.10 | .64 | .85 | 1.00 | 19.0 | 7.40 | .64 | .86 | 1.00 | 18.3 | 7.66 | 0.65 | 0.88 | 1.00 |
| | 1700 | 20.4 | 7.11 | .68 | .91 | 1.00 | 19.6 | 7.42 | .69 | .93 | 1.00 | 19 | 7.68 | 0.7 | 0.94 | 1.00 |
| 21.7°C | 1135 | 20.0 | 7.11 | .40 | .58 | .75 | 19.3 | 7.41 | .40 | .59 | .76 | 18.6 | 7.68 | 0.4 | 0.6 | 0.78 |
| | 1415 | 21.0 | 7.13 | .43 | .63 | .82 | 20.2 | 7.43 | .43 | .64 | .84 | 19.6 | 7.7 | 0.43 | 0.65 | 0.85 |
| | 1700 | 21.7 | 7.14 | .46 | .68 | .89 | 20.9 | 7.45 | .46 | .68 | .90 | 20.3 | 7.72 | 0.46 | 0.7 | 0.92 |

## RATINGS - STANDARD EFFICIENCY

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

### 30 KW STANDARD EFFICIENCY - KCB102S4M (1ST STAGE) - MSAV® (MULTI-STAGE AIR VOLUME) SUPPLY AIR BLOWER

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 18.3°C | | | | | 23.9°C | | | | | 29.4°C | | | | | 35°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 905 | 13.5 | 2 | 0.69 | 0.8 | 0.91 | 12.8 | 2.23 | 0.69 | 0.81 | 0.93 | 12.1 | 2.51 | 0.7 | 0.83 | 0.94 | 11.4 | 2.84 | 0.7 | 0.84 | 0.97 |
| | 1135 | 14.4 | 2 | 0.73 | 0.86 | 0.98 | 13.6 | 2.24 | 0.74 | 0.87 | 0.99 | 12.8 | 2.53 | 0.75 | 0.89 | 1.00 | 12 | 2.86 | 0.76 | 0.91 | 1.00 |
| | 1360 | 15 | 2 | 0.77 | 0.91 | 1.00 | 14.2 | 2.24 | 0.78 | 0.93 | 1.00 | 13.4 | 2.54 | 0.79 | 0.95 | 1.00 | 12.6 | 2.88 | 0.81 | 0.97 | 1.00 |
| 19.4°C | 905 | 14.4 | 2 | 0.55 | 0.67 | 0.77 | 13.7 | 2.24 | 0.55 | 0.67 | 0.78 | 12.9 | 2.52 | 0.55 | 0.67 | 0.79 | 12.1 | 2.86 | 0.55 | 0.68 | 0.81 |
| | 1135 | 15.3 | 2 | 0.58 | 0.71 | 0.83 | 14.5 | 2.25 | 0.58 | 0.71 | 0.84 | 13.7 | 2.54 | 0.58 | 0.72 | 0.86 | 12.9 | 2.88 | 0.59 | 0.74 | 0.88 |
| | 1360 | 15.9 | 1.99 | 0.60 | 0.75 | 0.88 | 15.1 | 2.25 | 0.61 | 0.76 | 0.90 | 14.3 | 2.55 | 0.61 | 0.77 | 0.92 | 13.4 | 2.9 | 0.62 | 0.79 | 0.94 |
| 21.7°C | 905 | 15.2 | 2 | 0.43 | 0.54 | 0.64 | 14.5 | 2.25 | 0.42 | 0.54 | 0.64 | 13.7 | 2.54 | 0.42 | 0.54 | 0.65 | 13.0 | 2.89 | 0.41 | 0.54 | 0.66 |
| | 1135 | 16.1 | 1.99 | 0.44 | 0.56 | 0.68 | 15.4 | 2.25 | 0.44 | 0.57 | 0.69 | 14.5 | 2.56 | 0.43 | 0.57 | 0.70 | 13.7 | 2.91 | 0.42 | 0.57 | 0.72 |
| | 1360 | 16.9 | 1.99 | 0.45 | 0.59 | 0.72 | 16.0 | 2.25 | 0.45 | 0.60 | 0.74 | 15.1 | 2.57 | 0.44 | 0.6 | 0.75 | 14.2 | 2.92 | 0.44 | 0.61 | 0.77 |

### 30 KW STANDARD EFFICIENCY - KCB102S4M (2ND STAGE) - MSAV® (MULTI-STAGE AIR VOLUME) SUPPLY AIR BLOWER

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 26.7°C | | | | | 35°C | | | | | 43.3°C | | | | | 46°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1285 | 27.3 | 4.82 | 0.77 | 0.92 | 1.00 | 24.7 | 5.82 | 0.79 | 0.95 | 1.00 | 22 | 7.01 | 0.82 | 0.99 | 1.00 | 21.1 | 7.42 | .82 | 1.00 | 1.00 |
| | 1605 | 28.7 | 4.84 | 0.83 | 0.99 | 1.00 | 26.1 | 5.86 | 0.86 | 1.00 | 1.00 | 23.5 | 7.07 | 0.89 | 1.00 | 1.00 | 22.7 | 7.50 | .90 | 1.00 | 1.00 |
| | 1925 | 30 | 4.86 | 0.89 | 1.00 | 1.00 | 27.5 | 5.9 | 0.92 | 1.00 | 1.00 | 24.6 | 7.12 | 0.96 | 1.00 | 1.00 | 23.8 | 7.55 | .98 | 1.00 | 1.00 |
| 19.4°C | 1285 | 29.1 | 4.85 | 0.6 | 0.75 | 0.89 | 26.4 | 5.87 | 0.6 | 0.77 | 0.92 | 23.5 | 7.08 | 0.61 | 0.80 | 0.96 | 22.5 | 7.49 | .61 | .80 | .97 |
| | 1605 | 30.4 | 4.87 | 0.64 | 0.81 | 0.97 | 27.5 | 5.9 | 0.64 | 0.84 | 1.00 | 24.4 | 7.11 | 0.66 | 0.87 | 1.00 | 23.4 | 7.53 | .66 | .88 | 1.00 |
| | 1925 | 31.3 | 4.87 | 0.67 | 0.87 | 1.00 | 28.3 | 5.92 | 0.69 | 0.9 | 1.00 | 25.1 | 7.15 | 0.71 | 0.95 | 1.00 | 24.1 | 7.57 | .71 | .96 | 1.00 |
| 21.7°C | 1285 | 30.8 | 4.87 | 0.44 | 0.58 | 0.72 | 28 | 5.91 | 0.43 | 0.59 | 0.75 | 25 | 7.14 | 0.43 | 0.6 | 0.77 | 24.0 | 7.56 | .42 | .60 | .78 |
| | 1605 | 32.2 | 4.89 | 0.46 | 0.63 | 0.79 | 29.2 | 5.94 | 0.45 | 0.64 | 0.82 | 26 | 7.18 | 0.45 | 0.66 | 0.85 | 24.9 | 7.60 | .45 | .66 | .86 |
| | 1925 | 33.1 | 4.90 | 0.48 | 0.67 | 0.85 | 30.1 | 5.97 | 0.47 | 0.69 | 0.88 | 26.7 | 7.21 | 0.48 | 0.71 | 0.93 | 25.5 | 7.62 | .47 | .71 | .94 |

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 48°C | | | | | 50°C | | | | | 51.7°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1285 | 20.4 | 7.74 | .83 | 1.00 | 1.00 | 19.8 | 8.09 | .84 | 1.00 | 1.00 | 19.2 | 8.38 | 0.86 | 1.00 | 1.00 |
| | 1605 | 22.0 | 7.83 | .92 | 1.00 | 1.00 | 21.2 | 8.16 | .93 | 1.00 | 1.00 | 20.6 | 8.46 | 0.95 | 1.00 | 1.00 |
| | 1925 | 23.1 | 7.88 | .99 | 1.00 | 1.00 | 22.3 | 8.22 | 1.00 | 1.00 | 1.00 | 21.6 | 8.51 | 1.00 | 1.00 | 1.00 |
| 19.4°C | 1285 | 21.7 | 7.81 | .61 | .81 | .99 | 20.9 | 8.14 | .61 | .82 | 1.00 | 20.3 | 8.43 | 0.62 | 0.84 | 1.00 |
| | 1605 | 22.6 | 7.85 | .67 | .90 | 1.00 | 21.7 | 8.18 | .67 | .91 | 1.00 | 21.0 | 8.48 | 0.69 | 0.93 | 1.00 |
| | 1925 | 23.3 | 7.89 | .72 | .97 | 1.00 | 22.5 | 8.22 | .73 | .99 | 1.00 | 21.7 | 8.52 | 0.75 | 1.00 | 1.00 |
| 21.7°C | 1285 | 23.2 | 7.88 | .42 | .61 | .79 | 22.4 | 8.22 | .42 | .61 | .80 | 21.6 | 8.5 | 0.42 | 0.62 | 0.82 |
| | 1605 | 24.1 | 7.93 | .44 | .67 | .88 | 23.2 | 8.26 | .44 | .67 | .89 | 22.5 | 8.56 | 0.45 | 0.69 | 0.91 |
| | 1925 | 24.7 | 7.96 | .47 | .72 | .96 | 23.9 | 8.30 | .47 | .73 | .97 | 23.1 | 8.59 | 0.48 | 0.75 | 0.99 |

## RATINGS - STANDARD EFFICIENCY

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

### 44 KW STANDARD EFFICIENCY - KCB150S4M (1ST STAGE) - MSAV® (MULTI-STAGE AIR VOLUME) SUPPLY AIR BLOWER

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 18.3°C | | | | | 23.9°C | | | | | 29.4°C | | | | | 35°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1208 | 18.8 | 2.96 | 0.69 | 0.8 | 0.9 | 18.0 | 3.29 | 0.69 | 0.8 | 0.92 | 17.1 | 3.64 | 0.69 | 0.82 | 0.93 | 16.1 | 4.03 | 0.70 | 0.83 | 0.96 |
| | 1510 | 20.0 | 2.98 | 0.72 | 0.85 | 0.97 | 19.1 | 3.30 | 0.73 | 0.87 | 0.99 | 18.2 | 3.66 | 0.74 | 0.88 | 1.00 | 17.1 | 4.05 | 0.75 | 0.90 | 1.00 |
| | 1642 | 20.5 | 2.99 | 0.74 | 0.88 | 1.00 | 19.6 | 3.31 | 0.75 | 0.89 | 1.00 | 18.6 | 3.66 | 0.76 | 0.91 | 1.00 | 17.5 | 4.05 | 0.77 | 0.93 | 1.00 |
| 19.4°C | 1208 | 20.1 | 2.98 | 0.55 | 0.66 | 0.77 | 19.3 | 3.30 | 0.55 | 0.66 | 0.77 | 18.3 | 3.66 | 0.55 | 0.67 | 0.78 | 17.4 | 4.05 | 0.55 | 0.68 | 0.80 |
| | 1510 | 21.3 | 3.00 | 0.57 | 0.7 | 0.82 | 20.5 | 3.32 | 0.58 | 0.71 | 0.83 | 19.5 | 3.67 | 0.58 | 0.72 | 0.85 | 18.3 | 4.06 | 0.58 | 0.73 | 0.86 |
| | 1642 | 21.8 | 3.01 | 0.58 | 0.72 | 0.84 | 20.8 | 3.33 | 0.59 | 0.73 | 0.86 | 19.8 | 3.68 | 0.59 | 0.74 | 0.87 | 18.7 | 4.07 | 0.60 | 0.75 | 0.89 |
| 21.7°C | 1208 | 21.5 | 3.00 | 0.44 | 0.54 | 0.64 | 20.5 | 3.32 | 0.43 | 0.53 | 0.64 | 19.6 | 3.67 | 0.42 | 0.54 | 0.64 | 18.5 | 4.06 | 0.42 | 0.53 | 0.65 |
| | 1510 | 22.7 | 3.03 | 0.44 | 0.56 | 0.67 | 21.8 | 3.34 | 0.44 | 0.56 | 0.68 | 20.8 | 3.69 | 0.43 | 0.57 | 0.69 | 19.7 | 4.08 | 0.43 | 0.57 | 0.70 |
| | 1642 | 23.2 | 3.03 | 0.44 | 0.57 | 0.69 | 22.2 | 3.35 | 0.44 | 0.57 | 0.70 | 21.1 | 3.70 | 0.44 | 0.58 | 0.71 | 20.0 | 4.09 | 0.44 | 0.58 | 0.72 |

### 44 KW STANDARD EFFICIENCY - KCB150S4M (2ND STAGE) - MSAV® (MULTI-STAGE AIR VOLUME) SUPPLY AIR BLOWER

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 29.4°C | | | | | 35°C | | | | | 43.3°C | | | | | 46°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1795 | 40.1 | 7.33 | 0.76 | 0.91 | 1.00 | 36.8 | 8.56 | 0.78 | 0.94 | 1.00 | 33.2 | 10.04 | 0.81 | 0.98 | 1.00 | 31.9 | 10.57 | .81 | .99 | 1.00 |
| | 2075 | 41.4 | 7.38 | 0.8 | 0.96 | 1.00 | 38.0 | 8.60 | 0.82 | 0.99 | 1.00 | 34.4 | 10.09 | 0.85 | 1.00 | 1.00 | 33.3 | 10.63 | .86 | 1.00 | 1.00 |
| | 2360 | 42.6 | 7.41 | 0.84 | 0.99 | 1.00 | 39.2 | 8.65 | 0.86 | 1.00 | 1.00 | 35.9 | 10.14 | 0.9 | 1.00 | 1.00 | 34.7 | 10.69 | .91 | 1.00 | 1.00 |
| 19.4°C | 1795 | 42.7 | 7.42 | 0.59 | 0.74 | 0.87 | 39.2 | 8.65 | 0.6 | 0.76 | 0.90 | 35.5 | 10.13 | 0.61 | 0.79 | 0.95 | 34.2 | 10.67 | .61 | .79 | .96 |
| | 2075 | 44 | 7.46 | 0.62 | 0.78 | 0.92 | 40.4 | 8.69 | 0.63 | 0.8 | 0.96 | 36.5 | 10.18 | 0.64 | 0.83 | 0.99 | 35.1 | 10.70 | .64 | .84 | 1.00 |
| | 2360 | 45.1 | 7.50 | 0.64 | 0.81 | 0.97 | 41.4 | 8.72 | 0.65 | 0.84 | 1.00 | 37.3 | 10.2 | 0.67 | 0.87 | 1.00 | 35.9 | 10.73 | .67 | .88 | 1.00 |
| 21.7°C | 1795 | 45.2 | 7.50 | 0.44 | 0.58 | 0.72 | 41.7 | 8.73 | 0.44 | 0.59 | 0.73 | 37.7 | 10.23 | 0.44 | 0.6 | 0.76 | 36.5 | 10.76 | .43 | .60 | .76 |
| | 2075 | 46.6 | 7.55 | 0.46 | 0.61 | 0.75 | 42.9 | 8.78 | 0.45 | 0.62 | 0.78 | 38.8 | 10.27 | 0.45 | 0.63 | 0.81 | 37.4 | 10.80 | .45 | .63 | .81 |
| | 2360 | 47.7 | 7.60 | 0.46 | 0.63 | 0.79 | 43.9 | 8.82 | 0.46 | 0.65 | 0.82 | 39.7 | 10.31 | 0.46 | 0.66 | 0.85 | 38.2 | 10.84 | .46 | .66 | .86 |

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 48°C | | | | | 50°C | | | | | 51.7°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1795 | 31.0 | 11.00 | .82 | 1.00 | 1.00 | 30.0 | 11.45 | .83 | 1.00 | 1.00 | 29.3 | 11.85 | 0.85 | 1.00 | 1.00 |
| | 2075 | 32.5 | 11.06 | .87 | 1.00 | 1.00 | 31.6 | 11.50 | .88 | 1.00 | 1.00 | 30.8 | 11.92 | 0.9 | 1.00 | 1.00 |
| | 2360 | 33.8 | 11.11 | .92 | 1.00 | 1.00 | 32.9 | 11.56 | .93 | 1.00 | 1.00 | 32.0 | 11.96 | 0.95 | 1.00 | 1.00 |
| 19.4°C | 1795 | 33.2 | 11.09 | .62 | .80 | .97 | 32.1 | 11.54 | .62 | .80 | .98 | 31.2 | 11.93 | 0.63 | 0.82 | 0.99 |
| | 2075 | 34.1 | 11.12 | .65 | .84 | 1.00 | 33.0 | 11.57 | .65 | .86 | 1.00 | 32.1 | 11.97 | 0.66 | 0.88 | 1.00 |
| | 2360 | 34.8 | 11.15 | .68 | .90 | 1.00 | 33.8 | 11.59 | .68 | .91 | 1.00 | 32.9 | 12.00 | 0.69 | 0.93 | 1.00 |
| 21.7°C | 1795 | 35.4 | 11.18 | .43 | .60 | .77 | 34.4 | 11.63 | .43 | .61 | .78 | 33.4 | 12.03 | 0.43 | 0.62 | 0.8 |
| | 2075 | 36.4 | 11.22 | .45 | .64 | .82 | 35.3 | 11.66 | .45 | .64 | .83 | 34.3 | 12.08 | 0.45 | 0.65 | 0.85 |
| | 2360 | 37.2 | 11.25 | .46 | .67 | .87 | 36.0 | 11.71 | .46 | .68 | .88 | 35.0 | 12.10 | 0.46 | 0.69 | 0.9 |

## RATINGS - HIGH EFFICIENCY

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

### 26 KW HIGH EFFICIENCY - KCA092H4 (1ST STAGE) - CONSTANT AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 18.3°C | | | | | 23.9°C | | | | | 29.4°C | | | | | 35°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1135 | 12.4 | 1.62 | 0.7 | 0.85 | 1 | 11.9 | 1.83 | 0.71 | 0.87 | 1 | 11.3 | 2.06 | 0.72 | 0.89 | 1 | 10.6 | 2.33 | 0.74 | 0.93 | 1 |
| | 1415 | 13 | 1.62 | 0.76 | 0.95 | 1 | 12.5 | 1.83 | 0.77 | 0.98 | 1 | 11.8 | 2.07 | 0.78 | 1 | 1 | 11.2 | 2.33 | 0.81 | 1 | 1 |
| | 1700 | 13.6 | 1.63 | 0.81 | 1 | 1 | 13 | 1.84 | 0.84 | 1 | 1 | 12.5 | 2.07 | 0.86 | 1 | 1 | 11.8 | 2.33 | 0.9 | 1 | 1 |
| 19.4°C | 1135 | 13.2 | 1.62 | 0.55 | 0.68 | 0.81 | 12.6 | 1.83 | 0.56 | 0.69 | 0.83 | 12 | 2.07 | 0.56 | 0.7 | 0.85 | 11.3 | 2.33 | 0.56 | 0.72 | 0.89 |
| | 1415 | 13.8 | 1.63 | 0.59 | 0.74 | 0.91 | 13.2 | 1.84 | 0.6 | 0.75 | 0.94 | 12.5 | 2.07 | 0.6 | 0.76 | 0.97 | 11.8 | 2.33 | 0.61 | 0.78 | 1 |
| | 1700 | 14.2 | 1.63 | 0.61 | 0.79 | 1 | 13.6 | 1.84 | 0.63 | 0.81 | 1 | 12.9 | 2.07 | 0.63 | 0.84 | 1 | 12.1 | 2.33 | 0.65 | 0.87 | 1 |
| 21.7°C | 1135 | 13.9 | 1.63 | 0.41 | 0.53 | 0.66 | 13.3 | 1.84 | 0.42 | 0.53 | 0.67 | 12.7 | 2.07 | 0.42 | 0.55 | 0.68 | 12 | 2.33 | 0.42 | 0.56 | 0.7 |
| | 1415 | 14.5 | 1.63 | 0.43 | 0.57 | 0.72 | 13.9 | 1.84 | 0.44 | 0.59 | 0.73 | 13.2 | 2.07 | 0.44 | 0.59 | 0.74 | 12.5 | 2.33 | 0.43 | 0.6 | 0.76 |
| | 1700 | 15 | 1.64 | 0.45 | 0.61 | 0.77 | 14.3 | 1.85 | 0.44 | 0.62 | 0.79 | 13.5 | 2.08 | 0.45 | 0.63 | 0.82 | 12.8 | 2.34 | 0.45 | 0.64 | 0.84 |

### 26 KW HIGH EFFICIENCY - KCA092H4 (2ND STAGE) - CONSTANT AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 26.7°C | | | | | 35°C | | | | | 43.3°C | | | | | 46°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1135 | 23.2 | 3.89 | 0.72 | 0.88 | 1 | 21.3 | 4.66 | 0.74 | 0.93 | 1 | 19.3 | 5.61 | 0.76 | 0.98 | 1 | 18.8 | 5.97 | .82 | 1.00 | 1.00 |
| | 1415 | 24.3 | 3.89 | 0.78 | 0.99 | 1 | 22.5 | 4.66 | 0.81 | 1 | 1 | 20.6 | 5.62 | 0.86 | 1 | 1 | 20.1 | 5.96 | .91 | 1.00 | 1.00 |
| | 1700 | 25.5 | 3.9 | 0.85 | 1 | 1 | 23.7 | 4.67 | 0.9 | 1 | 1 | 21.6 | 5.62 | 0.96 | 1 | 1 | 21.1 | 5.96 | .99 | 1.00 | 1.00 |
| 19.4°C | 1135 | 24.6 | 3.9 | 0.55 | 0.69 | 0.84 | 22.6 | 4.66 | 0.57 | 0.72 | 0.89 | 20.5 | 5.61 | 0.58 | 0.74 | 0.94 | 19.8 | 5.96 | .61 | .81 | .94 |
| | 1415 | 25.7 | 3.9 | 0.6 | 0.76 | 0.95 | 23.6 | 4.67 | 0.61 | 0.78 | 0.99 | 21.3 | 5.62 | 0.62 | 0.83 | 1 | 20.6 | 5.96 | .67 | .90 | 1.00 |
| | 1700 | 26.4 | 3.91 | 0.63 | 0.83 | 1 | 24.3 | 4.67 | 0.65 | 0.87 | 1 | 22 | 5.62 | 0.68 | 0.94 | 1 | 21.2 | 5.97 | .73 | .99 | 1.00 |
| 21.7°C | 1135 | 26 | 3.91 | 0.41 | 0.53 | 0.67 | 24 | 4.67 | 0.42 | 0.56 | 0.7 | 21.8 | 5.62 | 0.42 | 0.57 | 0.72 | 21.0 | 5.96 | .43 | .61 | .73 |
| | 1415 | 27.1 | 3.91 | 0.43 | 0.59 | 0.74 | 24.9 | 4.67 | 0.43 | 0.6 | 0.76 | 22.6 | 5.62 | 0.44 | 0.62 | 0.8 | 21.9 | 5.96 | .45 | .67 | .82 |
| | 1700 | 27.9 | 3.92 | 0.45 | 0.62 | 0.8 | 25.6 | 4.68 | 0.45 | 0.64 | 0.84 | 23.2 | 5.62 | 0.46 | 0.68 | 0.91 | 22.4 | 5.96 | .48 | .74 | .91 |

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 48°C | | | | | 50°C | | | | | 51.7°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1135 | 18.2 | 6.25 | 0.78 | 1 | 1 | 17.7 | 6.55 | 0.80 | 1 | 1 | 17.3 | 6.81 | 0.81 | 1 | 1 |
| | 1415 | 19.5 | 6.25 | 0.90 | 1 | 1 | 18.9 | 6.54 | 0.92 | 1 | 1 | 18.4 | 6.8 | 0.94 | 1 | 1 |
| | 1700 | 20.4 | 6.25 | 0.99 | 1 | 1 | 19.8 | 6.54 | 1.00 | 1 | 1 | 19.4 | 6.8 | 1 | 1 | 1 |
| 19.4°C | 1135 | 19.2 | 6.25 | 0.59 | 0.76 | 0.98 | 18.7 | 6.55 | 0.59 | 0.77 | 0.99 | 18.2 | 6.81 | 0.6 | 0.79 | 1 |
| | 1415 | 20.0 | 6.25 | 0.64 | 0.87 | 1 | 19.4 | 6.54 | 0.65 | 0.89 | 1 | 18.9 | 6.8 | 0.66 | 0.91 | 1 |
| | 1700 | 20.5 | 6.25 | 0.70 | 0.98 | 1 | 19.9 | 6.54 | 0.71 | 0.99 | 1 | 19.4 | 6.8 | 0.71 | 1 | 1 |
| 21.7°C | 1135 | 20.4 | 6.25 | 0.42 | 0.58 | 0.74 | 19.8 | 6.54 | 0.42 | 0.58 | 0.75 | 19.3 | 6.8 | 0.42 | 0.59 | 0.76 |
| | 1415 | 21.2 | 6.24 | 0.44 | 0.63 | 0.84 | 20.6 | 6.54 | 0.44 | 0.65 | 0.86 | 20 | 6.79 | 0.45 | 0.66 | 0.88 |
| | 1700 | 21.7 | 6.24 | 0.47 | 0.69 | 0.95 | 21.1 | 6.54 | 0.47 | 0.70 | 0.97 | 20.5 | 6.79 | 0.47 | 0.71 | 0.99 |

## RATINGS - HIGH EFFICIENCY

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

### 30 KW HIGH EFFICIENCY - KCA102H4 (1ST STAGE) - CONSTANT AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 18.3°C | | | | | 23.9°C | | | | | 29.4°C | | | | | 35°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1285 | 13.8 | 1.79 | 0.64 | 0.82 | 1 | 13 | 2.03 | 0.65 | 0.85 | 1 | 12.2 | 2.29 | 0.66 | 0.89 | 1 | 11.3 | 2.59 | 0.67 | 0.93 | 1 |
| | 1605 | 14.5 | 1.8 | 0.7 | 0.97 | 1 | 13.7 | 2.04 | 0.71 | 0.99 | 1 | 12.9 | 2.3 | 0.72 | 1 | 1 | 12.1 | 2.6 | 0.76 | 1 | 1 |
| | 1925 | 15.2 | 1.81 | 0.77 | 1 | 1 | 14.4 | 2.04 | 0.79 | 1 | 1 | 13.6 | 2.3 | 0.83 | 1 | 1 | 12.8 | 2.6 | 0.88 | 1 | 1 |
| 19.4°C | 1285 | 14.7 | 1.8 | 0.5 | 0.63 | 0.77 | 13.9 | 2.04 | 0.5 | 0.63 | 0.79 | 13.1 | 2.3 | 0.51 | 0.65 | 0.83 | 12.1 | 2.6 | 0.51 | 0.66 | 0.87 |
| | 1605 | 15.4 | 1.81 | 0.54 | 0.68 | 0.91 | 14.5 | 2.04 | 0.54 | 0.69 | 0.95 | 13.6 | 2.3 | 0.54 | 0.7 | 0.98 | 12.7 | 2.6 | 0.55 | 0.72 | 1 |
| | 1925 | 15.9 | 1.81 | 0.56 | 0.74 | 1 | 15 | 2.05 | 0.57 | 0.77 | 1 | 14.1 | 2.31 | 0.57 | 0.8 | 1 | 13.1 | 2.6 | 0.59 | 0.86 | 1 |
| 21.7°C | 1285 | 15.6 | 1.81 | 0.38 | 0.49 | 0.61 | 14.7 | 2.04 | 0.37 | 0.49 | 0.61 | 13.9 | 2.3 | 0.37 | 0.5 | 0.63 | 13 | 2.6 | 0.37 | 0.5 | 0.64 |
| | 1605 | 16.3 | 1.82 | 0.4 | 0.53 | 0.66 | 15.4 | 2.05 | 0.39 | 0.54 | 0.68 | 14.5 | 2.31 | 0.38 | 0.54 | 0.68 | 13.5 | 2.6 | 0.38 | 0.55 | 0.71 |
| | 1925 | 16.8 | 1.82 | 0.41 | 0.56 | 0.71 | 15.9 | 2.05 | 0.41 | 0.57 | 0.74 | 14.9 | 2.31 | 0.4 | 0.58 | 0.76 | 13.9 | 2.61 | 0.4 | 0.58 | 0.82 |

### 30 KW HIGH EFFICIENCY - KCA102H4 (2ND STAGE) - CONSTANT AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 26.7°C | | | | | 35°C | | | | | 43.3°C | | | | | 46°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1285 | 26.1 | 4.32 | 0.73 | 0.91 | 1 | 23.5 | 5.19 | 0.75 | 0.95 | 1 | 20.7 | 6.27 | 0.77 | 1 | 1 | 20.4 | 6.89 | .81 | 1.00 | 1.00 |
| | 1605 | 27.5 | 4.33 | 0.79 | 1 | 1 | 25.1 | 5.2 | 0.83 | 1 | 1 | 22.4 | 6.27 | 0.88 | 1 | 1 | 22.1 | 6.86 | .92 | 1.00 | 1.00 |
| | 1925 | 29 | 4.34 | 0.87 | 1 | 1 | 26.4 | 5.2 | 0.92 | 1 | 1 | 23.7 | 6.28 | 0.98 | 1 | 1 | 23.4 | 6.83 | 1.00 | 1.00 | 1.00 |
| 19.4°C | 1285 | 27.9 | 4.33 | 0.57 | 0.71 | 0.87 | 25.2 | 5.2 | 0.57 | 0.73 | 0.91 | 22.2 | 6.27 | 0.57 | 0.75 | 0.96 | 21.7 | 6.87 | .59 | .81 | .95 |
| | 1605 | 29.1 | 4.34 | 0.61 | 0.78 | 0.98 | 26.3 | 5.2 | 0.61 | 0.8 | 1 | 23.2 | 6.27 | 0.62 | 0.85 | 1 | 22.7 | 6.84 | .65 | .91 | 1.00 |
| | 1925 | 30 | 4.35 | 0.64 | 0.85 | 1 | 27.1 | 5.21 | 0.66 | 0.9 | 1 | 24 | 6.28 | 0.68 | 0.96 | 1 | 23.4 | 6.82 | .72 | 1.00 | 1.00 |
| 21.7°C | 1285 | 29.6 | 4.34 | 0.41 | 0.56 | 0.69 | 26.8 | 5.21 | 0.41 | 0.56 | 0.71 | 23.8 | 6.27 | 0.39 | 0.56 | 0.73 | 23.4 | 6.83 | .40 | .59 | .73 |
| | 1605 | 30.9 | 4.35 | 0.43 | 0.6 | 0.76 | 28 | 5.21 | 0.42 | 0.61 | 0.79 | 24.8 | 6.27 | 0.42 | 0.62 | 0.82 | 24.4 | 6.81 | .43 | .66 | .82 |
| | 1925 | 31.9 | 4.36 | 0.45 | 0.64 | 0.83 | 28.8 | 5.22 | 0.45 | 0.65 | 0.87 | 25.6 | 6.28 | 0.45 | 0.68 | 0.94 | 25.1 | 6.80 | .46 | .73 | .91 |

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 48°C | | | | | 50°C | | | | | 51.7°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1285 | 19.5 | 7.25 | 0.79 | 1 | 1 | 18.8 | 7.65 | 0.80 | 1 | 1 | 18.1 | 7.63 | 0.82 | 1 | 1 |
| | 1605 | 21.2 | 7.20 | 0.91 | 1 | 1 | 20.5 | 7.58 | 0.93 | 1 | 1 | 19.5 | 7.61 | 0.96 | 1 | 1 |
| | 1925 | 22.5 | 7.18 | 1 | 1 | 1 | 21.7 | 7.55 | 1.00 | 1 | 1 | 20.7 | 7.62 | 1 | 1 | 1 |
| 19.4°C | 1285 | 20.9 | 7.23 | 0.57 | 0.76 | 0.99 | 20.1 | 7.61 | 0.57 | 0.78 | 1.00 | 19.1 | 7.62 | 0.58 | 0.8 | 1 |
| | 1605 | 21.9 | 7.19 | 0.63 | 0.88 | 1.00 | 21.1 | 7.58 | 0.64 | 0.90 | 1.00 | 20 | 7.62 | 0.65 | 0.93 | 1 |
| | 1925 | 22.6 | 7.18 | 0.69 | 0.98 | 1.00 | 21.7 | 7.53 | 0.70 | 1.00 | 1.00 | 20.6 | 7.61 | 0.71 | 1 | 1 |
| 21.7°C | 1285 | 22.5 | 7.18 | 0.38 | 0.56 | 0.74 | 21.7 | 7.56 | 0.37 | 0.57 | 0.75 | 20.5 | 7.61 | 0.38 | 0.58 | 0.78 |
| | 1605 | 23.5 | 7.16 | 0.41 | 0.62 | 0.85 | 22.7 | 7.51 | 0.40 | 0.63 | 0.87 | 21.5 | 7.61 | 0.41 | 0.65 | 0.9 |
| | 1925 | 24.2 | 7.16 | 0.44 | 0.69 | 0.96 | 23.4 | 7.52 | 0.44 | 0.70 | 0.98 | 22 | 7.61 | 0.44 | 0.72 | 1 |

## RATINGS - HIGH EFFICIENCY

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

### 35 KW HIGH EFFICIENCY - KCA120H4 (1ST STAGE) - CONSTANT AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 18.3°C | | | | | 23.9°C | | | | | 29.4°C | | | | | 35°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1510 | 17.5 | 2.32 | 0.69 | 0.85 | 1 | 16.6 | 2.63 | 0.7 | 0.87 | 1 | 15.7 | 2.99 | 0.71 | 0.89 | 1 | 14.7 | 3.39 | 0.73 | 0.93 | 1 |
| | 1890 | 18.3 | 2.34 | 0.75 | 0.95 | 1 | 17.4 | 2.65 | 0.76 | 0.98 | 1 | 16.5 | 3 | 0.78 | 1 | 1 | 15.6 | 3.4 | 0.8 | 1 | 1 |
| | 2265 | 19 | 2.36 | 0.81 | 1 | 1 | 18.2 | 2.68 | 0.82 | 1 | 1 | 17.3 | 3.03 | 0.85 | 1 | 1 | 16.4 | 3.43 | 0.88 | 1 | 1 |
| 19.4°C | 1510 | 18.5 | 2.34 | 0.55 | 0.67 | 0.81 | 17.6 | 2.66 | 0.55 | 0.68 | 0.83 | 16.7 | 3 | 0.55 | 0.69 | 0.85 | 15.7 | 3.41 | 0.56 | 0.71 | 0.88 |
| | 1890 | 19.4 | 2.37 | 0.58 | 0.73 | 0.91 | 18.4 | 2.69 | 0.59 | 0.74 | 0.94 | 17.5 | 3.03 | 0.59 | 0.76 | 0.97 | 16.4 | 3.43 | 0.6 | 0.77 | 0.99 |
| | 2265 | 20 | 2.38 | 0.61 | 0.79 | 0.99 | 19 | 2.7 | 0.62 | 0.8 | 1 | 18 | 3.05 | 0.63 | 0.83 | 1 | 16.9 | 3.44 | 0.63 | 0.86 | 1 |
| 21.7°C | 1510 | 19.6 | 2.37 | 0.41 | 0.54 | 0.65 | 18.7 | 2.69 | 0.39 | 0.54 | 0.66 | 17.7 | 3.04 | 0.41 | 0.54 | 0.67 | 16.7 | 3.44 | 0.4 | 0.55 | 0.69 |
| | 1890 | 20.5 | 2.4 | 0.43 | 0.57 | 0.71 | 19.5 | 2.72 | 0.43 | 0.58 | 0.73 | 18.5 | 3.07 | 0.42 | 0.59 | 0.74 | 17.4 | 3.46 | 0.43 | 0.59 | 0.75 |
| | 2265 | 21.1 | 2.42 | 0.45 | 0.61 | 0.77 | 20.1 | 2.74 | 0.44 | 0.61 | 0.78 | 19 | 3.09 | 0.44 | 0.62 | 0.8 | 17.9 | 3.48 | 0.44 | 0.63 | 0.83 |

### 35 KW HIGH EFFICIENCY - KCA120H4 (2ND STAGE) - CONSTANT AIR VOLUME

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 26.7°C | | | | | 35°C | | | | | 43.3°C | | | | | 46°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1510 | 32.3 | 5.61 | 0.71 | 0.88 | 1 | 29.5 | 6.8 | 0.73 | 0.93 | 1 | 26.4 | 8.29 | 0.75 | 0.98 | 1 | 24.8 | 8.44 | .82 | 1.00 | 1.00 |
| | 1890 | 33.9 | 5.65 | 0.77 | 0.99 | 1 | 31 | 6.82 | 0.79 | 1 | 1 | 28.2 | 8.3 | 0.84 | 1 | 1 | 26.7 | 8.52 | .92 | 1.00 | 1.00 |
| | 2265 | 35.4 | 5.7 | 0.84 | 1 | 1 | 32.8 | 6.87 | 0.88 | 1 | 1 | 29.7 | 8.31 | 0.95 | 1 | 1 | 28.1 | 8.57 | 1.00 | 1.00 | 1.00 |
| 19.4°C | 1510 | 34.3 | 5.67 | 0.55 | 0.69 | 0.84 | 31.4 | 6.84 | 0.56 | 0.71 | 0.88 | 28.2 | 8.28 | 0.56 | 0.73 | 0.94 | 26.2 | 8.49 | .60 | .82 | .96 |
| | 1890 | 35.9 | 5.72 | 0.59 | 0.75 | 0.95 | 32.7 | 6.86 | 0.6 | 0.77 | 0.99 | 29.4 | 8.31 | 0.61 | 0.82 | 1 | 27.3 | 8.54 | .66 | .91 | 1.00 |
| | 2265 | 36.9 | 5.75 | 0.62 | 0.81 | 1 | 33.7 | 6.89 | 0.63 | 0.86 | 1 | 30.3 | 8.34 | 0.66 | 0.92 | 1 | 28.1 | 8.57 | .73 | 1.00 | 1.00 |
| 21.7°C | 1510 | 36.3 | 5.72 | 0.39 | 0.54 | 0.67 | 33.4 | 6.88 | 0.4 | 0.55 | 0.69 | 30.1 | 8.32 | 0.4 | 0.56 | 0.71 | 28.0 | 8.57 | .41 | .61 | .74 |
| | 1890 | 37.9 | 5.78 | 0.42 | 0.58 | 0.73 | 34.8 | 6.93 | 0.43 | 0.59 | 0.75 | 31.3 | 8.36 | 0.41 | 0.61 | 0.79 | 29.1 | 8.61 | .44 | .67 | .83 |
| | 2265 | 39 | 5.82 | 0.44 | 0.62 | 0.79 | 35.8 | 6.96 | 0.44 | 0.63 | 0.84 | 32.2 | 8.37 | 0.44 | 0.65 | 0.89 | 29.9 | 8.65 | .47 | .74 | .91 |

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 48°C | | | | | 50°C | | | | | 51.7°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1510 | 24.5 | 9.29 | 0.77 | 1 | 1 | 23.7 | 9.76 | 0.78 | 1 | 1 | 23.1 | 10.2 | 0.79 | 1 | 1 |
| | 1890 | 26.5 | 9.28 | 0.88 | 1 | 1 | 25.6 | 9.77 | 0.90 | 1 | 1 | 24.9 | 10.14 | 0.92 | 1 | 1 |
| | 2265 | 27.8 | 9.30 | 0.99 | 1 | 1 | 27.0 | 9.76 | 1 | 1 | 1 | 26.3 | 10.15 | 1 | 1 | 1 |
| 19.4°C | 1510 | 26.2 | 9.27 | 0.57 | 0.75 | 0.97 | 25.3 | 9.77 | 0.57 | 0.75 | 0.99 | 24.6 | 10.2 | 0.57 | 0.76 | 1 |
| | 1890 | 27.4 | 9.28 | 0.62 | 0.85 | 1.00 | 26.4 | 9.76 | 0.62 | 0.87 | 1.00 | 25.6 | 10.18 | 0.63 | 0.89 | 1 |
| | 2265 | 28.2 | 9.31 | 0.67 | 0.96 | 1.00 | 27.3 | 9.75 | 0.68 | 0.98 | 1.00 | 26.4 | 10.16 | 0.69 | 0.99 | 1 |
| 21.7°C | 1510 | 28.1 | 9.31 | 0.39 | 0.56 | 0.73 | 27.1 | 9.75 | 0.39 | 0.56 | 0.73 | 26.3 | 10.17 | 0.39 | 0.57 | 0.74 |
| | 1890 | 29.2 | 9.29 | 0.41 | 0.61 | 0.82 | 28.2 | 9.74 | 0.41 | 0.62 | 0.84 | 27.4 | 10.16 | 0.41 | 0.62 | 0.86 |
| | 2265 | 30.1 | 9.34 | 0.44 | 0.67 | 0.94 | 29.1 | 9.79 | 0.44 | 0.68 | 0.96 | 28.2 | 10.18 | 0.44 | 0.69 | 0.97 |

## RATINGS - HIGH EFFICIENCY

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

### 35 KW HIGH EFFICIENCY - KCB120S4M (1ST STAGE) - MSAV® (MULTI-STAGE AIR VOLUME) SUPPLY AIR BLOWER

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 18.3°C | | | | | 23.9°C | | | | | 29.4°C | | | | | 35°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 906 | 14.9 | 2.19 | 0.67 | 0.77 | 0.87 | 14.2 | 2.51 | 0.67 | 0.78 | 0.89 | 13.4 | 2.87 | 0.68 | 0.79 | 0.9 | 12.6 | 3.26 | 0.68 | 0.8 | 0.92 |
| | 1133 | 15.9 | 2.22 | 0.7 | 0.82 | 0.93 | 15.2 | 2.54 | 0.71 | 0.83 | 0.95 | 14.3 | 2.9 | 0.72 | 0.85 | 0.97 | 13.5 | 3.29 | 0.73 | 0.86 | 0.99 |
| | 1359 | 16.7 | 2.24 | 0.74 | 0.87 | 0.99 | 15.9 | 2.56 | 0.74 | 0.88 | 1.00 | 15.0 | 2.92 | 0.75 | 0.90 | 1.00 | 14.1 | 3.32 | 0.77 | 0.92 | 1.00 |
| 19.4°C | 906 | 15.9 | 2.21 | 0.54 | 0.64 | 0.74 | 15.1 | 2.54 | 0.54 | 0.65 | 0.75 | 14.3 | 2.9 | 0.54 | 0.65 | 0.76 | 13.5 | 3.29 | 0.54 | 0.66 | 0.77 |
| | 1133 | 17.0 | 2.24 | 0.56 | 0.68 | 0.79 | 16.1 | 2.57 | 0.56 | 0.68 | 0.8 | 15.3 | 2.93 | 0.56 | 0.69 | 0.81 | 14.4 | 3.32 | 0.57 | 0.7 | 0.83 |
| | 1359 | 17.8 | 2.26 | 0.58 | 0.71 | 0.83 | 16.9 | 2.59 | 0.59 | 0.72 | 0.85 | 16.0 | 2.95 | 0.59 | 0.73 | 0.87 | 15.1 | 3.34 | 0.59 | 0.74 | 0.89 |
| 21.7°C | 906 | 16.8 | 2.24 | 0.43 | 0.53 | 0.62 | 16.0 | 2.56 | 0.42 | 0.52 | 0.62 | 15.2 | 2.93 | 0.42 | 0.52 | 0.63 | 14.4 | 3.32 | 0.41 | 0.52 | 0.63 |
| | 1133 | 18.0 | 2.26 | 0.43 | 0.55 | 0.65 | 17.1 | 2.59 | 0.43 | 0.55 | 0.66 | 16.2 | 2.95 | 0.43 | 0.55 | 0.67 | 15.4 | 3.35 | 0.42 | 0.55 | 0.68 |
| | 1359 | 18.9 | 2.28 | 0.44 | 0.57 | 0.69 | 18.0 | 2.61 | 0.44 | 0.57 | 0.70 | 17.0 | 2.97 | 0.44 | 0.58 | 0.71 | 16.1 | 3.37 | 0.43 | 0.58 | 0.72 |

### 35 KW HIGH EFFICIENCY - KCB120S4M (2ND STAGE) - MSAV® (MULTI-STAGE AIR VOLUME) SUPPLY AIR BLOWER

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 26.7°C | | | | | 35°C | | | | | 43.3°C | | | | | 46°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1285 | 30 | 5.47 | 0.74 | 0.88 | 1.00 | 27.3 | 6.63 | 0.76 | 0.91 | 1.00 | 24.3 | 7.96 | 0.78 | 0.95 | 1.00 | 23.3 | 8.42 | .78 | .96 | 1.00 |
| | 1605 | 31.7 | 5.52 | 0.79 | 0.95 | 1.00 | 28.8 | 6.68 | 0.82 | 0.98 | 1.00 | 25.8 | 8.01 | 0.85 | 1.00 | 1.00 | 24.9 | 8.47 | .86 | 1.00 | 1.00 |
| | 1925 | 33 | 5.55 | 0.84 | 1.00 | 1.00 | 30.2 | 6.72 | 0.87 | 1.00 | 1.00 | 27.3 | 8.06 | 0.91 | 1.00 | 1.00 | 26.3 | 8.52 | .93 | 1.00 | 1.00 |
| 19.4°C | 1285 | 32.1 | 5.53 | 0.58 | 0.72 | 0.85 | 29.3 | 6.69 | 0.58 | 0.73 | 0.87 | 26.2 | 8.02 | 0.59 | 0.76 | 0.91 | 25.1 | 8.48 | .58 | .76 | .92 |
| | 1605 | 33.8 | 5.57 | 0.61 | 0.77 | 0.92 | 30.8 | 6.73 | 0.62 | 0.79 | 0.95 | 27.5 | 8.06 | 0.63 | 0.83 | 0.99 | 26.3 | 8.52 | .63 | .83 | 1.00 |
| | 1925 | 35.1 | 5.59 | 0.65 | 0.82 | 0.98 | 31.9 | 6.76 | 0.66 | 0.85 | 1.00 | 28.4 | 8.09 | 0.68 | 0.89 | 1.00 | 27.2 | 8.55 | .68 | .90 | 1.00 |
| 21.7°C | 1285 | 34.1 | 5.57 | 0.43 | 0.57 | 0.69 | 31.2 | 6.74 | 0.43 | 0.57 | 0.71 | 28 | 8.07 | 0.42 | 0.58 | 0.73 | 26.9 | 8.53 | .41 | .58 | .73 |
| | 1605 | 35.9 | 5.61 | 0.45 | 0.6 | 0.75 | 32.8 | 6.78 | 0.44 | 0.61 | 0.77 | 29.4 | 8.11 | 0.44 | 0.63 | 0.8 | 28.2 | 8.57 | .44 | .63 | .81 |
| | 1925 | 37.2 | 5.63 | 0.46 | 0.64 | 0.8 | 34 | 6.8 | 0.46 | 0.65 | 0.83 | 30.4 | 8.13 | 0.46 | 0.67 | 0.87 | 29.2 | 8.59 | .46 | .67 | .88 |

| Entering Wet Bulb Temperature | Total Air Volume | Outdoor Air Temperature Entering Outdoor Coil | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 48°C | | | | | 50°C | | | | | 51.7°C | | | | |
| | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | | Total Cool Cap. | Comp. Motor Input | Sensible To Total Ratio (S/T) Dry Bulb | | |
| | L/s | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C | kW | kW | 24°C | 27°C | 29°C |
| 17.2°C | 1285 | 22.5 | 8.77 | .79 | .97 | 1.00 | 21.7 | 9.15 | .80 | .99 | 1.00 | 21 | 9.48 | 0.82 | 1.00 | 1.00 |
| | 1605 | 24.1 | 8.83 | .87 | 1.00 | 1.00 | 23.3 | 9.21 | .88 | 1.00 | 1.00 | 22.7 | 9.54 | 0.9 | 1.00 | 1.00 |
| | 1925 | 25.5 | 8.88 | .94 | 1.00 | 1.00 | 24.8 | 9.25 | .95 | 1.00 | 1.00 | 24 | 9.58 | 0.97 | 1.00 | 1.00 |
| 19.4°C | 1285 | 24.3 | 8.84 | .59 | .77 | .94 | 23.4 | 9.21 | .59 | .77 | .95 | 22.6 | 9.54 | 0.6 | 0.79 | 0.97 |
| | 1605 | 25.4 | 8.88 | .64 | .84 | 1.00 | 24.5 | 9.24 | .64 | .85 | 1.00 | 23.7 | 9.57 | 0.66 | 0.87 | 1.00 |
| | 1925 | 26.3 | 8.90 | .68 | .92 | 1.00 | 25.4 | 9.27 | .69 | .93 | 1.00 | 24.5 | 9.59 | 0.71 | 0.95 | 1.00 |
| 21.7°C | 1285 | 26.0 | 8.89 | .41 | .58 | .74 | 25.1 | 9.26 | .41 | .58 | .75 | 24.4 | 9.59 | 0.41 | 0.59 | 0.77 |
| | 1605 | 27.3 | 8.93 | .44 | .63 | .82 | 26.4 | 9.30 | .43 | .64 | .83 | 25.6 | 9.62 | 0.44 | 0.65 | 0.85 |
| | 1925 | 28.2 | 8.95 | .46 | .68 | .89 | 27.3 | 9.32 | .46 | .69 | .91 | 26.3 | 9.64 | 0.46 | 0.7 | 0.93 |

## 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 31 for blower motors and drives.

See page 31 for wet coil and option/accessory air resistance data.

**MINIMUM AIR VOLUME REQUIRED FOR USE WITH OPTIONAL ELECTRIC HEAT - Maximum Static Pressure - 500 Pa (2.0 in. w.g.)**

5.7 kW, 11.5 kW, 17.2 kW, 23 kW and 34.5 kW - 1320 L/s (2800 cfm)

| Air Volume | | TOTAL STATIC PRESSURE - Pa (Inches Water Gauge) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 50 (0.20) | | | 100 (0.40) | | | 150 (0.60) | | | 200 (0.80) | | | 250 (1.00) | | | 300 (1.20) | | | 350 (1.40) | | |
| L/s | cfm | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP |
| 825 | 1750 | 608 | 0.04 | 0.05 | 651 | 0.02 | 0.03 | 696 | 0.04 | 0.06 | 744 | 0.16 | 0.22 | 794 | 0.45 | 0.60 | 845 | 0.71 | 0.95 | 894 | 0.93 | 1.24 |
| 945 | 2000 | 615 | 0.05 | 0.07 | 657 | 0.04 | 0.05 | 702 | 0.07 | 0.10 | 748 | 0.27 | 0.36 | 797 | 0.54 | 0.72 | 846 | 0.78 | 1.05 | 892 | 0.97 | 1.30 |
| 1062 | 2250 | 624 | 0.07 | 0.09 | 664 | 0.05 | 0.07 | 707 | 0.10 | 0.14 | 753 | 0.37 | 0.50 | 800 | 0.63 | 0.84 | 847 | 0.86 | 1.15 | 892 | 1.03 | 1.38 |
| 1180 | 2500 | 632 | 0.08 | 0.11 | 672 | 0.07 | 0.09 | 714 | 0.22 | 0.29 | 758 | 0.48 | 0.64 | 803 | 0.72 | 0.97 | 849 | 0.94 | 1.26 | 893 | 1.10 | 1.48 |
| 1298 | 2750 | 641 | 0.10 | 0.13 | 680 | 0.08 | 0.11 | 721 | 0.34 | 0.45 | 763 | 0.58 | 0.78 | 807 | 0.81 | 1.09 | 852 | 1.02 | 1.37 | 896 | 1.18 | 1.58 |
| 1416 | 3000 | 651 | 0.11 | 0.15 | 689 | 0.22 | 0.29 | 728 | 0.46 | 0.61 | 770 | 0.69 | 0.93 | 812 | 0.92 | 1.23 | 856 | 1.11 | 1.49 | 901 | 1.27 | 1.70 |
| 1534 | 3250 | 661 | 0.13 | 0.17 | 698 | 0.34 | 0.46 | 737 | 0.58 | 0.78 | 777 | 0.81 | 1.09 | 819 | 1.03 | 1.38 | 862 | 1.22 | 1.63 | 908 | 1.37 | 1.84 |
| 1652 | 3500 | 672 | 0.27 | 0.36 | 708 | 0.48 | 0.65 | 746 | 0.71 | 0.95 | 786 | 0.93 | 1.25 | 827 | 1.14 | 1.53 | 870 | 1.33 | 1.78 | 916 | 1.48 | 1.99 |
| 1770 | 3750 | 684 | 0.42 | 0.56 | 719 | 0.63 | 0.85 | 756 | 0.85 | 1.14 | 795 | 1.07 | 1.43 | 836 | 1.27 | 1.7 | 880 | 1.45 | 1.95 | 927 | 1.61 | 2.16 |
| 1888 | 4000 | 697 | 0.58 | 0.78 | 731 | 0.78 | 1.05 | 768 | 1.00 | 1.34 | 807 | 1.21 | 1.62 | 848 | 1.41 | 1.89 | 892 | 1.59 | 2.13 | 940 | 1.75 | 2.34 |
| 2006 | 4250 | 710 | 0.75 | 1.0 | 745 | 0.95 | 1.27 | 781 | 1.16 | 1.55 | 819 | 1.37 | 1.83 | 861 | 1.56 | 2.09 | 906 | 1.74 | 2.33 | 954 | 1.90 | 2.55 |

| Air Volume | | TOTAL STATIC PRESSURE - Pa (Inches Water Gauge) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 400 (1.60) | | | 450 (1.80) | | | 500 (2.00) | | | 550 (2.20) | | | 600 (2.40) | | | 650 (2.60) | | |
| L/s | cfm | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP |
| 825 | 1750 | 934 | 1.03 | 1.38 | 978 | 1.10 | 1.47 | 1047 | 1.24 | 1.66 | 1120 | 1.41 | 1.89 | 1179 | 1.60 | 2.15 | 1230 | 1.79 | 2.40 |
| 945 | 2000 | 933 | 1.08 | 1.45 | 977 | 1.16 | 1.55 | 1049 | 1.31 | 1.75 | 1124 | 1.49 | 2.00 | 1181 | 1.66 | 2.23 | 1234 | 1.84 | 2.47 |
| 1062 | 2250 | 934 | 1.14 | 1.53 | 979 | 1.23 | 1.65 | 1051 | 1.39 | 1.86 | 1126 | 1.58 | 2.12 | 1183 | 1.76 | 2.36 | 1238 | 1.95 | 2.62 |
| 1180 | 2500 | 936 | 1.22 | 1.63 | 983 | 1.31 | 1.75 | 1052 | 1.46 | 1.96 | 1124 | 1.66 | 2.22 | 1184 | 1.86 | 2.49 | 1241 | 2.07 | 2.77 |
| 1298 | 2750 | 940 | 1.30 | 1.74 | 989 | 1.40 | 1.88 | 1053 | 1.55 | 2.08 | 1121 | 1.75 | 2.34 | 1185 | 1.96 | 2.63 | 1244 | 2.19 | 2.93 |
| 1416 | 3000 | 947 | 1.40 | 1.87 | 996 | 1.51 | 2.02 | 1055 | 1.65 | 2.21 | 1120 | 1.84 | 2.47 | 1186 | 2.07 | 2.78 | 1248 | 2.31 | 3.10 |
| 1534 | 3250 | 955 | 1.50 | 2.01 | 1004 | 1.62 | 2.17 | 1059 | 1.76 | 2.36 | 1122 | 1.95 | 2.62 | 1189 | 2.19 | 2.94 | 1252 | 2.45 | 3.28 |
| 1652 | 3500 | 965 | 1.62 | 2.17 | 1013 | 1.74 | 2.33 | 1065 | 1.88 | 2.52 | 1126 | 2.08 | 2.79 | 1193 | 2.33 | 3.12 | 1257 | 2.59 | 3.47 |
| 1770 | 3750 | 976 | 1.75 | 2.34 | 1023 | 1.87 | 2.51 | 1073 | 2.02 | 2.71 | 1133 | 2.22 | 2.98 | 1198 | 2.48 | 3.32 | 1263 | 2.74 | 3.67 |
| 1888 | 4000 | 988 | 1.89 | 2.53 | 1034 | 2.02 | 2.71 | 1083 | 2.17 | 2.91 | 1141 | 2.38 | 3.19 | 1205 | 2.63 | 3.53 | 1270 | 2.90 | 3.89 |
| 2006 | 4250 | 1001 | 2.04 | 2.74 | 1046 | 2.19 | 2.93 | 1094 | 2.34 | 3.14 | 1151 | 2.55 | 3.42 | 1214 | 2.80 | 3.76 | 1278 | 3.07 | 4.12 |

## 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 31 for blower motors and drives.

See page 31 for wet coil and option/accessory air resistance data.

**MINIMUM AIR VOLUME REQUIRED FOR USE WITH OPTIONAL ELECTRIC HEAT - Maximum Static Pressure - 500 Pa (2.0 in. w.g.)**

5.7 kW, 11.5 kW, 17.2 kW, 23 kW and 34.5 kW - 1320 L/s (2800 cfm)

| Air Volume | | TOTAL STATIC PRESSURE - Pa (Inches Water Gauge) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 50 (0.20) | | | 100 (0.40) | | | 150 (0.60) | | | 200 (0.80) | | | 250 (1.00) | | | 300 (1.20) | | | 350 (1.40) | | |
| L/s | cfm | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP |
| 825 | 1750 | 481 | 0.16 | 0.21 | 549 | 0.30 | 0.4 | 618 | 0.43 | 0.57 | 688 | 0.52 | 0.70 | 758 | 0.61 | 0.82 | 824 | 0.69 | 0.93 | 885 | 0.81 | 1.08 |
| 945 | 2000 | 493 | 0.22 | 0.29 | 561 | 0.35 | 0.47 | 629 | 0.48 | 0.64 | 700 | 0.57 | 0.77 | 768 | 0.67 | 0.90 | 832 | 0.76 | 1.02 | 892 | 0.87 | 1.17 |
| 1062 | 2250 | 507 | 0.28 | 0.37 | 574 | 0.42 | 0.56 | 643 | 0.54 | 0.72 | 712 | 0.64 | 0.86 | 779 | 0.74 | 0.99 | 842 | 0.84 | 1.13 | 900 | 0.95 | 1.28 |
| 1180 | 2500 | 521 | 0.34 | 0.46 | 588 | 0.48 | 0.64 | 657 | 0.60 | 0.81 | 727 | 0.71 | 0.95 | 792 | 0.81 | 1.09 | 853 | 0.93 | 1.24 | 909 | 1.04 | 1.40 |
| 1298 | 2750 | 537 | 0.42 | 0.56 | 604 | 0.55 | 0.74 | 674 | 0.68 | 0.91 | 743 | 0.79 | 1.06 | 806 | 0.90 | 1.21 | 865 | 1.01 | 1.36 | 920 | 1.14 | 1.53 |
| 1416 | 3000 | 554 | 0.50 | 0.67 | 622 | 0.64 | 0.86 | 692 | 0.76 | 1.02 | 760 | 0.88 | 1.18 | 822 | 1.00 | 1.34 | 878 | 1.12 | 1.50 | 931 | 1.25 | 1.68 |
| 1534 | 3250 | 572 | 0.58 | 0.78 | 641 | 0.73 | 0.98 | 712 | 0.86 | 1.15 | 778 | 0.98 | 1.32 | 838 | 1.11 | 1.49 | 892 | 1.24 | 1.66 | 943 | 1.37 | 1.84 |
| 1652 | 3500 | 592 | 0.67 | 0.90 | 663 | 0.84 | 1.12 | 733 | 0.97 | 1.30 | 798 | 1.10 | 1.47 | 855 | 1.23 | 1.65 | 907 | 1.37 | 1.83 | 956 | 1.51 | 2.02 |
| 1770 | 3750 | 614 | 0.78 | 1.04 | 687 | 0.95 | 1.28 | 756 | 1.10 | 1.47 | 818 | 1.23 | 1.65 | 872 | 1.37 | 1.83 | 923 | 1.51 | 2.02 | 970 | 1.66 | 2.22 |
| 1888 | 4000 | 639 | 0.91 | 1.22 | 713 | 1.10 | 1.48 | 780 | 1.24 | 1.66 | 838 | 1.37 | 1.83 | 890 | 1.51 | 2.02 | 939 | 1.66 | 2.22 | 984 | 1.82 | 2.44 |
| 2006 | 4250 | 667 | 1.07 | 1.43 | 741 | 1.26 | 1.69 | 805 | 1.39 | 1.86 | 859 | 1.51 | 2.02 | 909 | 1.66 | 2.22 | 956 | 1.83 | 2.45 | 998 | 2.00 | 2.68 |

| Air Volume | | TOTAL STATIC PRESSURE - Pa (Inches Water Gauge) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 400 (1.60) | | | 450 (1.80) | | | 500 (2.00) | | | 550 (2.20) | | | 600 (2.40) | | | 650 (2.60) | | |
| L/s | cfm | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP |
| 825 | 1750 | 941 | 0.92 | 1.23 | 991 | 1.04 | 1.39 | 1038 | 1.15 | 1.54 | 1082 | 1.25 | 1.68 | 1124 | 1.36 | 1.82 | 1166 | 1.45 | 1.95 |
| 945 | 2000 | 946 | 0.99 | 1.33 | 995 | 1.11 | 1.49 | 1041 | 1.24 | 1.66 | 1085 | 1.35 | 1.81 | 1126 | 1.47 | 1.97 | 1167 | 1.58 | 2.12 |
| 1062 | 2250 | 953 | 1.07 | 1.44 | 1001 | 1.20 | 1.61 | 1045 | 1.33 | 1.78 | 1088 | 1.45 | 1.95 | 1128 | 1.58 | 2.12 | 1168 | 1.72 | 2.30 |
| 1180 | 2500 | 960 | 1.17 | 1.57 | 1007 | 1.30 | 1.74 | 1050 | 1.44 | 1.93 | 1091 | 1.57 | 2.11 | 1130 | 1.71 | 2.29 | 1170 | 1.85 | 2.48 |
| 1298 | 2750 | 969 | 1.28 | 1.71 | 1014 | 1.41 | 1.89 | 1055 | 1.55 | 2.08 | 1095 | 1.69 | 2.27 | 1133 | 1.84 | 2.47 | 1172 | 1.98 | 2.66 |
| 1416 | 3000 | 979 | 1.39 | 1.86 | 1021 | 1.54 | 2.06 | 1061 | 1.69 | 2.26 | 1099 | 1.84 | 2.46 | 1136 | 1.98 | 2.65 | 1174 | 2.13 | 2.85 |
| 1534 | 3250 | 989 | 1.51 | 2.03 | 1030 | 1.67 | 2.24 | 1068 | 1.83 | 2.45 | 1105 | 1.98 | 2.65 | 1141 | 2.13 | 2.85 | 1178 | 2.28 | 3.06 |
| 1652 | 3500 | 1000 | 1.66 | 2.22 | 1039 | 1.82 | 2.44 | 1076 | 1.98 | 2.65 | 1111 | 2.13 | 2.86 | 1146 | 2.29 | 3.07 | 1183 | 2.44 | 3.27 |
| 1770 | 3750 | 1011 | 1.81 | 2.43 | 1049 | 1.98 | 2.65 | 1084 | 2.14 | 2.87 | 1118 | 2.31 | 3.09 | 1152 | 2.45 | 3.29 | 1189 | 2.62 | 3.51 |
| 1888 | 4000 | 1023 | 1.98 | 2.66 | 1059 | 2.16 | 2.89 | 1093 | 2.32 | 3.11 | 1126 | 2.48 | 3.33 | 1160 | 2.64 | 3.54 | 1197 | 2.81 | 3.77 |
| 2006 | 4250 | 1036 | 2.18 | 2.92 | 1070 | 2.35 | 3.15 | 1103 | 2.51 | 3.37 | 1135 | 2.68 | 3.59 | 1169 | 2.84 | 3.81 | 1207 | 3.02 | 4.05 |

## BLOWER DATA

### 102S AND 120S 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 31 for blower motors and drives.

See page 31 for wet coil and option/accessory air resistance data.

**MINIMUM AIR VOLUME REQUIRED FOR USE WITH OPTIONAL ELECTRIC HEAT - Maximum Static Pressure - 500 Pa (2.0 in. w.g.)**

11.5 kW, 17.2 kW, 23 kW and 34.5 kW - 1320 L/s (2800 cfm)

45.9 kW - 1885 L/s (4000 cfm)

| Air Volume | | TOTAL STATIC PRESSURE - Pa (Inches Water Gauge) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 50 (0.20) | | | 100 (0.40) | | | 150 (0.60) | | | 200 (0.80) | | | 250 (1.00) | | | 300 (1.20) | | | 350 (1.40) | | |
| L/s | cfm | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP |
| 944 | 2000 | 593 | 0.08 | 0.11 | 636 | 0.05 | 0.07 | 682 | 0.07 | 0.10 | 731 | 0.16 | 0.22 | 784 | 0.45 | 0.60 | 840 | 0.72 | 0.96 | 898 | 0.94 | 1.26 |
| 1062 | 2250 | 604 | 0.11 | 0.15 | 645 | 0.08 | 0.11 | 690 | 0.11 | 0.15 | 739 | 0.29 | 0.39 | 790 | 0.55 | 0.74 | 846 | 0.81 | 1.08 | 901 | 1.00 | 1.34 |
| 1180 | 2500 | 615 | 0.14 | 0.19 | 655 | 0.11 | 0.15 | 699 | 0.15 | 0.20 | 747 | 0.41 | 0.55 | 797 | 0.66 | 0.89 | 851 | 0.90 | 1.20 | 906 | 1.07 | 1.44 |
| 1298 | 2750 | 626 | 0.17 | 0.23 | 666 | 0.14 | 0.19 | 709 | 0.28 | 0.37 | 755 | 0.53 | 0.71 | 805 | 0.77 | 1.03 | 858 | 0.98 | 1.32 | 912 | 1.16 | 1.55 |
| 1416 | 3000 | 637 | 0.20 | 0.27 | 677 | 0.18 | 0.24 | 719 | 0.41 | 0.55 | 764 | 0.65 | 0.87 | 813 | 0.88 | 1.18 | 866 | 1.08 | 1.45 | 920 | 1.25 | 1.67 |
| 1534 | 3250 | 650 | 0.23 | 0.31 | 688 | 0.32 | 0.43 | 730 | 0.54 | 0.73 | 775 | 0.78 | 1.04 | 823 | 1.00 | 1.34 | 875 | 1.19 | 1.60 | 930 | 1.35 | 1.81 |
| 1652 | 3500 | 663 | 0.26 | 0.35 | 700 | 0.47 | 0.63 | 741 | 0.69 | 0.92 | 786 | 0.91 | 1.22 | 834 | 1.12 | 1.50 | 886 | 1.31 | 1.76 | 942 | 1.46 | 1.96 |
| 1770 | 3750 | 676 | 0.43 | 0.57 | 714 | 0.63 | 0.84 | 754 | 0.84 | 1.12 | 798 | 1.05 | 1.41 | 846 | 1.25 | 1.68 | 899 | 1.44 | 1.93 | 956 | 1.60 | 2.14 |
| 1888 | 4000 | 691 | 0.59 | 0.79 | 728 | 0.78 | 1.05 | 768 | 0.99 | 1.33 | 812 | 1.20 | 1.61 | 860 | 1.40 | 1.88 | 914 | 1.58 | 2.12 | 971 | 1.75 | 2.34 |
| 2006 | 4250 | 706 | 0.77 | 1.03 | 743 | 0.95 | 1.28 | 783 | 1.16 | 1.55 | 827 | 1.36 | 1.82 | 876 | 1.56 | 2.09 | 931 | 1.74 | 2.33 | 987 | 1.90 | 2.55 |
| 2124 | 4500 | 722 | 0.95 | 1.27 | 759 | 1.13 | 1.52 | 799 | 1.33 | 1.78 | 844 | 1.53 | 2.05 | 894 | 1.72 | 2.31 | 949 | 1.91 | 2.56 | 1003 | 2.08 | 2.79 |
| 2242 | 4750 | 739 | 1.14 | 1.53 | 776 | 1.32 | 1.77 | 817 | 1.51 | 2.03 | 862 | 1.72 | 2.30 | 913 | 1.91 | 2.56 | 968 | 2.10 | 2.81 | 1020 | 2.27 | 3.04 |
| 2360 | 5000 | 757 | 1.34 | 1.79 | 794 | 1.52 | 2.04 | 835 | 1.72 | 2.30 | 882 | 1.91 | 2.56 | 934 | 2.11 | 2.83 | 988 | 2.30 | 3.08 | 1036 | 2.48 | 3.32 |

| Air Volume | | TOTAL STATIC PRESSURE - Pa (Inches Water Gauge) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 400 (1.60) | | | 450 (1.80) | | | 500 (2.00) | | | 550 (2.20) | | | 600 (2.40) | | | 650 (2.60) | | |
| L/s | cfm | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP |
| 944 | 2000 | 948 | 1.03 | 1.38 | 996 | 1.10 | 1.47 | 1045 | 1.17 | 1.57 | 1092 | 1.28 | 1.71 | 1140 | 1.43 | 1.92 | 1188 | 1.73 | 2.32 |
| 1062 | 2250 | 953 | 1.10 | 1.48 | 1002 | 1.17 | 1.57 | 1052 | 1.27 | 1.70 | 1100 | 1.39 | 1.86 | 1149 | 1.56 | 2.09 | 1197 | 1.81 | 2.42 |
| 1180 | 2500 | 959 | 1.18 | 1.58 | 1009 | 1.25 | 1.68 | 1059 | 1.37 | 1.83 | 1108 | 1.50 | 2.01 | 1158 | 1.69 | 2.26 | 1206 | 1.88 | 2.52 |
| 1298 | 2750 | 966 | 1.27 | 1.70 | 1017 | 1.35 | 1.81 | 1067 | 1.47 | 1.97 | 1117 | 1.62 | 2.17 | 1166 | 1.82 | 2.44 | 1215 | 2.02 | 2.71 |
| 1416 | 3000 | 975 | 1.36 | 1.82 | 1026 | 1.46 | 1.96 | 1076 | 1.59 | 2.13 | 1126 | 1.75 | 2.35 | 1176 | 1.96 | 2.63 | 1225 | 2.18 | 2.92 |
| 1534 | 3250 | 985 | 1.47 | 1.97 | 1036 | 1.58 | 2.12 | 1086 | 1.72 | 2.31 | 1136 | 1.89 | 2.54 | 1186 | 2.11 | 2.83 | 1235 | 2.33 | 3.13 |
| 1652 | 3500 | 997 | 1.60 | 2.14 | 1048 | 1.72 | 2.31 | 1097 | 1.87 | 2.51 | 1147 | 2.05 | 2.75 | 1196 | 2.27 | 3.04 | 1245 | 2.50 | 3.35 |
| 1770 | 3750 | 1010 | 1.73 | 2.32 | 1060 | 1.87 | 2.51 | 1109 | 2.03 | 2.72 | 1158 | 2.22 | 2.98 | 1207 | 2.44 | 3.27 | 1255 | 2.67 | 3.58 |
| 1888 | 4000 | 1023 | 1.89 | 2.53 | 1072 | 2.04 | 2.73 | 1121 | 2.20 | 2.95 | 1169 | 2.40 | 3.22 | 1218 | 2.62 | 3.51 | 1266 | 2.86 | 3.83 |
| 2006 | 4250 | 1037 | 2.06 | 2.76 | 1085 | 2.22 | 2.97 | 1133 | 2.39 | 3.20 | 1181 | 2.59 | 3.47 | 1229 | 2.80 | 3.76 | 1277 | 3.04 | 4.08 |
| 2124 | 4500 | 1052 | 2.24 | 3.00 | 1098 | 2.40 | 3.22 | 1145 | 2.58 | 3.46 | 1193 | 2.78 | 3.73 | 1241 | 3.01 | 4.03 | 1289 | 3.24 | 4.34 |
| 2242 | 4750 | 1066 | 2.44 | 3.27 | 1112 | 2.60 | 3.49 | 1158 | 2.79 | 3.74 | 1205 | 2.99 | 4.01 | 1253 | 3.21 | 4.30 | 1301 | 3.44 | 4.61 |
| 2360 | 5000 | 1081 | 2.65 | 3.55 | 1125 | 2.82 | 3.78 | 1171 | 3.00 | 4.02 | 1218 | 3.20 | 4.29 | 1265 | 3.42 | 4.59 | 1312 | 3.65 | 4.89 |

## BLOWER DATA

### 120H HIGH EFFICIENCY AND 150S 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 31 for blower motors and drives.

See page 31 for wet coil and option/accessory air resistance data.

**MINIMUM AIR VOLUME REQUIRED FOR USE WITH OPTIONAL ELECTRIC HEAT - Maximum Static Pressure - 500 Pa (2.0 in. w.g.)**

11.5 kW, 17.2 kW, 23 kW and 34.5 kW - 1320 L/s (2800 cfm)

45.9 kW - 1885 L/s (4000 cfm)

| Air Volume | | TOTAL STATIC PRESSURE - Pa (Inches Water Gauge) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 50 (0.20) | | | 100 (0.40) | | | 150 (0.60) | | | 200 (0.80) | | | 250 (1.00) | | | 300 (1.20) | | | 350 (1.40) | | |
| L/s | cfm | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP |
| 944 | 2000 | 497 | 0.19 | 0.25 | 558 | 0.33 | 0.44 | 624 | 0.45 | 0.60 | 694 | 0.55 | 0.74 | 764 | 0.63 | 0.85 | 830 | 0.74 | 0.99 | 889 | 0.87 | 1.16 |
| 1062 | 2250 | 511 | 0.25 | 0.34 | 573 | 0.39 | 0.52 | 638 | 0.51 | 0.68 | 708 | 0.61 | 0.82 | 776 | 0.70 | 0.94 | 839 | 0.81 | 1.09 | 896 | 0.94 | 1.26 |
| 1180 | 2500 | 527 | 0.33 | 0.44 | 589 | 0.46 | 0.62 | 654 | 0.58 | 0.78 | 723 | 0.68 | 0.91 | 789 | 0.78 | 1.05 | 850 | 0.90 | 1.21 | 904 | 1.04 | 1.39 |
| 1298 | 2750 | 545 | 0.41 | 0.55 | 606 | 0.54 | 0.72 | 672 | 0.66 | 0.88 | 740 | 0.77 | 1.03 | 804 | 0.87 | 1.17 | 861 | 1.00 | 1.34 | 914 | 1.14 | 1.53 |
| 1416 | 3000 | 564 | 0.49 | 0.66 | 626 | 0.63 | 0.84 | 692 | 0.75 | 1.01 | 759 | 0.87 | 1.16 | 819 | 0.98 | 1.32 | 874 | 1.11 | 1.49 | 924 | 1.25 | 1.68 |
| 1534 | 3250 | 585 | 0.59 | 0.79 | 648 | 0.73 | 0.98 | 714 | 0.85 | 1.14 | 778 | 0.98 | 1.31 | 836 | 1.10 | 1.48 | 887 | 1.24 | 1.66 | 935 | 1.39 | 1.86 |
| 1652 | 3500 | 607 | 0.69 | 0.93 | 672 | 0.84 | 1.13 | 737 | 0.98 | 1.31 | 798 | 1.10 | 1.48 | 852 | 1.24 | 1.66 | 901 | 1.38 | 1.85 | 948 | 1.53 | 2.05 |
| 1770 | 3750 | 632 | 0.82 | 1.10 | 698 | 0.98 | 1.31 | 762 | 1.12 | 1.50 | 819 | 1.25 | 1.67 | 869 | 1.39 | 1.86 | 915 | 1.53 | 2.05 | 961 | 1.68 | 2.25 |
| 1888 | 4000 | 660 | 0.97 | 1.30 | 726 | 1.13 | 1.52 | 787 | 1.27 | 1.70 | 838 | 1.40 | 1.87 | 885 | 1.54 | 2.06 | 930 | 1.69 | 2.26 | 974 | 1.85 | 2.48 |
| 2006 | 4250 | 691 | 1.14 | 1.53 | 755 | 1.31 | 1.75 | 810 | 1.42 | 1.91 | 857 | 1.54 | 2.07 | 901 | 1.69 | 2.27 | 945 | 1.87 | 2.50 | 990 | 2.04 | 2.74 |
| 2124 | 4500 | 724 | 1.33 | 1.78 | 783 | 1.48 | 1.98 | 831 | 1.58 | 2.12 | 874 | 1.70 | 2.28 | 917 | 1.87 | 2.50 | 962 | 2.05 | 2.75 | 1006 | 2.25 | 3.02 |
| 2242 | 4750 | 757 | 1.53 | 2.05 | 809 | 1.64 | 2.20 | 851 | 1.74 | 2.33 | 891 | 1.87 | 2.51 | 935 | 2.06 | 2.76 | 980 | 2.28 | 3.05 | 1025 | 2.48 | 3.33 |
| 2360 | 5000 | 787 | 1.72 | 2.31 | 831 | 1.81 | 2.43 | 870 | 1.92 | 2.57 | 910 | 2.07 | 2.78 | 954 | 2.28 | 3.06 | 1000 | 2.52 | 3.38 | 1046 | 2.75 | 3.68 |
| 2477 | 5250 | 814 | 1.90 | 2.55 | 852 | 1.98 | 2.66 | 889 | 2.11 | 2.83 | 930 | 2.31 | 3.09 | 975 | 2.54 | 3.41 | 1023 | 2.80 | 3.76 | 1070 | 3.04 | 4.08 |
| 2595 | 5500 | 835 | 2.07 | 2.78 | 871 | 2.17 | 2.91 | 909 | 2.33 | 3.13 | 952 | 2.57 | 3.44 | 999 | 2.84 | 3.81 | 1049 | 3.12 | 4.18 | 1096 | 3.36 | 4.51 |
| 2713 | 5750 | 854 | 2.25 | 3.01 | 890 | 2.38 | 3.19 | 930 | 2.60 | 3.48 | 977 | 2.88 | 3.86 | 1027 | 3.19 | 4.27 | 1078 | 3.48 | 4.66 | 1126 | 3.72 | 4.99 |
| 2831 | 6000 | 871 | 2.43 | 3.26 | 910 | 2.63 | 3.53 | 955 | 2.91 | 3.90 | 1006 | 3.24 | 4.34 | 1060 | 3.58 | 4.80 | 1111 | 3.87 | 5.19 | 1158 | 4.11 | 5.51 |
| 2949 | 6250 | 890 | 2.66 | 3.57 | 934 | 2.94 | 3.94 | 985 | 3.29 | 4.41 | 1041 | 3.66 | 4.91 | 1096 | 4.01 | 5.38 | - - - | - - - | - - - | - - - | - - - | - - - |

| Air Volume | | TOTAL STATIC PRESSURE - Pa (Inches Water Gauge) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 400 (1.60) | | | 450 (1.80) | | | 500 (2.00) | | | 550 (2.20) | | | 600 (2.40) | | | 650 (2.60) | | |
| L/s | cfm | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP | rev/ min | kW | BHP |
| 944 | 2000 | 943 | 1.00 | 1.34 | 994 | 1.13 | 1.52 | 1045 | 1.28 | 1.71 | 1096 | 1.41 | 1.89 | 1146 | 1.55 | 2.08 | 1197 | 1.69 | 2.27 |
| 1062 | 2250 | 948 | 1.08 | 1.45 | 998 | 1.22 | 1.64 | 1048 | 1.37 | 1.83 | 1098 | 1.50 | 2.01 | 1149 | 1.64 | 2.20 | 1200 | 1.79 | 2.40 |
| 1180 | 2500 | 955 | 1.18 | 1.58 | 1003 | 1.32 | 1.77 | 1052 | 1.46 | 1.96 | 1101 | 1.60 | 2.14 | 1152 | 1.74 | 2.33 | 1203 | 1.89 | 2.53 |
| 1298 | 2750 | 962 | 1.28 | 1.72 | 1010 | 1.43 | 1.92 | 1057 | 1.57 | 2.10 | 1105 | 1.71 | 2.29 | 1154 | 1.84 | 2.47 | 1206 | 2.00 | 2.68 |
| 1416 | 3000 | 971 | 1.40 | 1.88 | 1017 | 1.55 | 2.08 | 1063 | 1.69 | 2.26 | 1110 | 1.82 | 2.44 | 1158 | 1.96 | 2.63 | 1208 | 2.11 | 2.83 |
| 1534 | 3250 | 981 | 1.54 | 2.06 | 1026 | 1.69 | 2.26 | 1071 | 1.83 | 2.45 | 1117 | 1.96 | 2.63 | 1163 | 2.09 | 2.80 | 1213 | 2.24 | 3.00 |
| 1652 | 3500 | 993 | 1.69 | 2.26 | 1037 | 1.84 | 2.46 | 1081 | 1.98 | 2.65 | 1125 | 2.11 | 2.83 | 1171 | 2.25 | 3.01 | 1221 | 2.39 | 3.21 |
| 1770 | 3750 | 1005 | 1.84 | 2.47 | 1049 | 2.00 | 2.68 | 1092 | 2.15 | 2.88 | 1136 | 2.28 | 3.05 | 1181 | 2.42 | 3.24 | 1231 | 2.57 | 3.45 |
| 1888 | 4000 | 1018 | 2.02 | 2.71 | 1062 | 2.19 | 2.93 | 1105 | 2.33 | 3.12 | 1149 | 2.46 | 3.30 | 1194 | 2.60 | 3.49 | 1245 | 2.78 | 3.72 |
| 2006 | 4250 | 1034 | 2.22 | 2.98 | 1077 | 2.39 | 3.20 | 1120 | 2.53 | 3.39 | 1163 | 2.67 | 3.58 | 1210 | 2.83 | 3.79 | 1262 | 3.01 | 4.03 |
| 2124 | 4500 | 1051 | 2.44 | 3.27 | 1094 | 2.60 | 3.49 | 1137 | 2.76 | 3.70 | 1181 | 2.90 | 3.89 | 1228 | 3.07 | 4.11 | 1281 | 3.27 | 4.38 |
| 2242 | 4750 | 1070 | 2.68 | 3.59 | 1113 | 2.85 | 3.82 | 1156 | 3.01 | 4.03 | 1201 | 3.16 | 4.24 | 1249 | 3.33 | 4.47 | 1303 | 3.54 | 4.75 |
| 2360 | 5000 | 1091 | 2.95 | 3.95 | 1135 | 3.13 | 4.19 | 1178 | 3.28 | 4.40 | 1224 | 3.45 | 4.62 | 1272 | 3.63 | 4.86 | 1325 | 3.83 | 5.13 |
| 2477 | 5250 | 1115 | 3.25 | 4.35 | 1159 | 3.42 | 4.59 | 1203 | 3.59 | 4.81 | 1248 | 3.75 | 5.03 | 1297 | 3.93 | 5.27 | 1350 | 4.13 | 5.53 |
| 2595 | 5500 | 1142 | 3.57 | 4.79 | 1186 | 3.75 | 5.03 | 1229 | 3.91 | 5.24 | 1275 | 4.07 | 5.46 | 1324 | 4.24 | 5.69 | - - - | - - - | - - - |
| 2713 | 5750 | 1171 | 3.92 | 5.26 | 1214 | 4.10 | 5.49 | 1258 | 4.25 | 5.70 | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - |
| 2831 | 6000 | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - |
| 2949 | 6250 | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - |

## BLOWER DATA

### FACTORY INSTALLED BELT DRIVE KIT SPECIFICATIONS

| Nominal | | Maximum | | Drive Kit Number | Rev/Min Range | |
|---|---|---|---|---|---|---|
| kW | hp | kW | hp | | CAV | **MSAV**MSAV |
| 1.5 | 2 | 1.7 | 2.3 | 1 | 490 - 740 | 590-890 |
| 1.5 | 2 | 1.7 | 2.3 | 2 | 665 - 920 | 800-1105 |
| 1.5 | 2 | 1.7 | 2.3 | 3 | 660 - 995 | 795-1195 |
| 2.2 | 3 | 2.6 | 3.45 | 7 | 610 - 810 | 730-970 |
| 2.2 | 3 | 2.6 | 3.45 | 8 | 780 - 1000 | 940-1200 |
| 2.2 | 3 | 2.6 | 3.45 | 9 | 845 - 1085 | 1015-1300 |
| 3.7 | 5 | 4.3 | 5.75 | 10 | 750 - 945 | 900-1135 |
| 3.7 | 5 | 4.3 | 5.75 | 11 | 865 - 1095 | 1040-1315 |
| 3.7 | 5 | 4.3 | 5.75 | 12 | 940 - 1190 | 1125-1425 |

NOTE - Using total air volume and system static pressure requirements determine from blower performance tables rev/min and motor output required. Maximum usable output of motors furnished are shown 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 MSAV® (Multi-Stage Air Volume) option are limited to a motor service factor of 1.0.

### POWER EXHAUST FAN PERFORMANCE

| Return Air System Static Pressure | | Air Volume Exhausted | |
|---|---|---|---|
| Pa | in. w.g. | L/s | cfm |
| 0 | 0 | 1498 | 3175 |
| 12 | 0.05 | 1394 | 2955 |
| 25 | 0.10 | 1267 | 2685 |
| 37 | 0.15 | 1137 | 2410 |
| 50 | 0.20 | 1022 | 2165 |
| 62 | 0.25 | 906 | 1920 |
| 75 | 0.30 | 670 | 1420 |
| 87 | 0.35 | 566 | 1200 |

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

| Air Volume | | Wet Indoor Coil | | | | Electric Heat | | Economizer | | Filters | | | | Return Air Adaptor Plate | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 092, 102 | | 120, 150 | | | | | | MERV 8 | | MERV 13 | | | |
| L/s | cfm | Pa | in. w.g. | Pa | in. w.g. | Pa | in. w.g. | Pa | in. w.g. | Pa | in. w.g. | Pa | in. w.g. | Pa | in. w.g. |
| 826 | 1750 | 10 | 0.04 | 10 | 0.04 | 7 | 0.03 | 12 | 0.05 | 2 | 0.01 | 7 | 0.03 | 0 | 0.00 |
| 944 | 2000 | 12 | 0.05 | 12 | 0.05 | 7 | 0.03 | 15 | 0.06 | 2 | 0.01 | 7 | 0.03 | 0 | 0.00 |
| 1062 | 2250 | 15 | 0.06 | 15 | 0.06 | 10 | 0.04 | 20 | 0.08 | 2 | 0.01 | 10 | 0.04 | 0 | 0.00 |
| 1180 | 2500 | 17 | 0.07 | 17 | 0.07 | 10 | 0.04 | 27 | 0.11 | 2 | 0.01 | 12 | 0.05 | 0 | 0.00 |
| 1298 | 2750 | 20 | 0.08 | 20 | 0.08 | 12 | 0.05 | 30 | 0.12 | 5 | 0.02 | 12 | 0.05 | 0 | 0.00 |
| 1416 | 3000 | 25 | 0.10 | 22 | 0.09 | 15 | 0.06 | 32 | 0.13 | 5 | 0.02 | 15 | 0.06 | 5 | 0.02 |
| 1534 | 3250 | 27 | 0.11 | 25 | 0.10 | 15 | 0.06 | 37 | 0.15 | 5 | 0.02 | 15 | 0.06 | 5 | 0.02 |
| 1652 | 3500 | 30 | 0.12 | 27 | 0.11 | 22 | 0.09 | 37 | 0.15 | 7 | 0.03 | 17 | 0.07 | 10 | 0.04 |
| 1770 | 3750 | 35 | 0.14 | 32 | 0.13 | 22 | 0.09 | 37 | 0.15 | 7 | 0.03 | 20 | 0.08 | 17 | 0.07 |
| 1888 | 4000 | 37 | 0.15 | 35 | 0.14 | 22 | 0.09 | 47 | 0.19 | 10 | 0.04 | 20 | 0.08 | 22 | 0.09 |
| 2006 | 4250 | 42 | 0.17 | 37 | 0.15 | 32 | 0.13 | 47 | 0.19 | 10 | 0.04 | 22 | 0.09 | 27 | 0.11 |
| 2124 | 4500 | 47 | 0.19 | 42 | 0.17 | 35 | 0.14 | 55 | 0.22 | 10 | 0.04 | 22 | 0.09 | 30 | 0.12 |
| 2242 | 4750 | 50 | 0.20 | 45 | 0.18 | 42 | 0.17 | 62 | 0.25 | 12 | 0.05 | 25 | 0.10 | 40 | 0.16 |
| 2360 | 5000 | 55 | 0.22 | 50 | 0.20 | 50 | 0.20 | 72 | 0.29 | 15 | 0.06 | 25 | 0.10 | 45 | 0.18 |
| 2477 | 5250 | 60 | 0.24 | 55 | 0.22 | 55 | 0.22 | 80 | 0.32 | 15 | 0.06 | 27 | 0.11 | 47 | 0.19 |
| 2595 | 5500 | 62 | 0.25 | 57 | 0.23 | 62 | 0.25 | 85 | 0.34 | 17 | 0.07 | 30 | 0.12 | 55 | 0.22 |
| 2713 | 5750 | 67 | 0.27 | 62 | 0.25 | 77 | 0.31 | 112 | 0.45 | 17 | 0.07 | 30 | 0.12 | 62 | 0.25 |
| 2831 | 6000 | 72 | 0.29 | 67 | 0.27 | 82 | 0.33 | 129 | 0.52 | 20 | 0.08 | 32 | 0.13 | 67 | 0.27 |

## BLOWER DATA

### CEILING DIFFUSERS AIR RESISTANCE

| Unit Size | RTD11 Step-Down Diffuser | | | | | | | | FD11 Flush Diffuser | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Air Volume | | 2 Ends Open | | 1 Side, 2 Ends Open | | All Ends & Sides Open | | | |
| | Pa | in. w.g. | Pa | in. w.g. | Pa | in. w.g. | Pa | in. w.g. | Pa | in. w.g. |
| 092 Models | 1133 | 2400 | 52 | 0.21 | 45 | 0.18 | 37 | 0.15 | 35 | 0.14 |
| | 1227 | 2600 | 60 | 0.24 | 52 | 0.21 | 45 | 0.18 | 42 | 0.17 |
| | 1321 | 2800 | 67 | 0.27 | 60 | 0.24 | 52 | 0.21 | 50 | 0.20 |
| | 1416 | 3000 | 80 | 0.32 | 72 | 0.29 | 62 | 0.25 | 62 | 0.25 |
| | 1510 | 3200 | 102 | 0.41 | 92 | 0.37 | 80 | 0.32 | 77 | 0.31 |
| | 1604 | 3400 | 124 | 0.50 | 112 | 0.45 | 97 | 0.39 | 92 | 0.37 |
| | 1699 | 3600 | 152 | 0.61 | 134 | 0.54 | 119 | 0.48 | 109 | 0.44 |
| | 1793 | 3800 | 182 | 0.73 | 157 | 0.63 | 142 | 0.57 | 127 | 0.51 |
| 102 & 120 Models | 1699 | 3600 | 90 | 0.36 | 70 | 0.28 | 57 | 0.23 | 37 | 0.15 |
| | 1793 | 3800 | 99 | 0.40 | 80 | 0.32 | 65 | 0.26 | 45 | 0.18 |
| | 1888 | 4000 | 109 | 0.44 | 90 | 0.36 | 72 | 0.29 | 52 | 0.21 |
| | 1982 | 4200 | 122 | 0.49 | 99 | 0.40 | 82 | 0.33 | 60 | 0.24 |
| | 2076 | 4400 | 134 | 0.54 | 109 | 0.44 | 92 | 0.37 | 67 | 0.27 |
| | 2171 | 4600 | 149 | 0.60 | 122 | 0.49 | 104 | 0.42 | 77 | 0.31 |
| | 2265 | 4800 | 162 | 0.65 | 132 | 0.53 | 114 | 0.46 | 87 | 0.35 |
| | 2360 | 5000 | 172 | 0.69 | 144 | 0.58 | 124 | 0.50 | 97 | 0.39 |
| | 2454 | 5200 | 186 | 0.75 | 154 | 0.62 | 134 | 0.54 | 107 | 0.43 |
| 150 Models | 1982 | 4200 | 55 | 0.22 | 47 | 0.19 | 40 | 0.16 | 25 | 0.10 |
| | 2076 | 4400 | 70 | 0.28 | 60 | 0.24 | 50 | 0.20 | 30 | 0.12 |
| | 2171 | 4600 | 85 | 0.34 | 72 | 0.29 | 60 | 0.24 | 37 | 0.15 |
| | 2265 | 4800 | 99 | 0.40 | 85 | 0.34 | 72 | 0.29 | 47 | 0.19 |
| | 2360 | 5000 | 114 | 0.46 | 97 | 0.39 | 85 | 0.34 | 57 | 0.23 |
| | 2454 | 5200 | 129 | 0.52 | 109 | 0.44 | 97 | 0.39 | 67 | 0.27 |
| | 2548 | 5400 | 144 | 0.58 | 122 | 0.49 | 107 | 0.43 | 77 | 0.31 |
| | 2643 | 5600 | 159 | 0.64 | 134 | 0.54 | 117 | 0.47 | 87 | 0.35 |
| | 2737 | 5800 | 174 | 0.70 | 147 | 0.59 | 127 | 0.51 | 97 | 0.39 |

### CEILING DIFFUSER AIR THROW DATA

| Model No. | Air Volume | | [1] Effective Throw Range | | | |
|---|---|---|---|---|---|---|
| | | | RTD11 Step-Down | | FD11 Flush | |
| | L/s | cfm | m | ft. | m | ft. |
| 092 Models | 1227 | 2600 | 7 - 9 | 24 - 29 | 6 - 7 | 19 - 24 |
| | 1321 | 2800 | 8 - 9 | 25 - 30 | 6 - 9 | 20 - 28 |
| | 1416 | 3000 | 8 - 10 | 27 - 33 | 6 - 9 | 21 - 29 |
| | 1510 | 3200 | 9 - 11 | 28 - 35 | 7 - 9 | 22 - 29 |
| | 1604 | 3400 | 9 - 11 | 30 - 37 | 7 - 9 | 22 - 30 |
| 102, 120 Models | 1699 | 3600 | 8 - 10 | 25 - 33 | 7 - 9 | 22 - 29 |
| | 1793 | 3800 | 8 - 11 | 27 - 35 | 7 - 9 | 22 - 30 |
| | 1888 | 4000 | 9 - 11 | 29- 37 | 7 - 10 | 24 - 33 |
| | 1982 | 4200 | 10 - 12 | 32 - 40 | 8 - 11 | 26 - 35 |
| | 2076 | 4400 | 10 - 13 | 34 - 42 | 9 - 11 | 28 - 37 |
| 150 Models | 2643 | 5600 | 12 - 15 | 39 - 49 | 9 - 11 | 28 - 37 |
| | 2737 | 5800 | 13 - 16 | 42 - 51 | 9 - 12 | 29 - 38 |
| | 2831 | 6000 | 13 - 17 | 44 - 54 | 12 - 15 | 40 - 50 |
| | 2926 | 6200 | 14 - 17 | 45 - 55 | 13 - 16 | 42 - 51 |
| | 3020 | 6400 | 14 - 17 | 46 - 55 | 13 - 16 | 43 - 52 |
| | 3115 | 6600 | 14 - 17 | 47 - 56 | 14 - 17 | 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 15 m (50 ft.) per minute. Four sides open.

## ELECTRICAL/ELECTRIC HEAT DATA

| Model No. | | KCB092S4 | | | KCA092H4 | | | KCB102S4 | | | KCA102H4 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [1] Voltage - 50hz 3 Phase with neutral | | 380/420V | | | 380/420V | | | 380/420V | | | 380/420V | | |
| **Compressor 1** | Rated Load Amps | 6.1 | | | 5.6 | | | 6 | | | 5.5 | | |
| | Locked Rotor Amps | 41 | | | 33 | | | 51 | | | 37 | | |
| **Compressor 2** | Rated Load Amps | 6.1 | | | 5.6 | | | 6 | | | 5.5 | | |
| | Locked Rotor Amps | 41 | | | 33 | | | 51 | | | 37 | | |
| **Outdoor Fan Motors (2)** | Full Load Amps | 1.3 | | | 1.3 | | | 1.3 | | | 1.3 | | |
| | (total) | (2.6) | | | (2.6) | | | (2.6) | | | (2.6) | | |
| **Power Exhaust (1) 0.25 kW (0.33 HP)** | Full Load Amps | 1.3 | | | 1.3 | | | 1.3 | | | 1.3 | | |
| **Indoor Blower** | kW | 1.5 | 2.2 | 3.7 | 1.5 | 2.2 | 3.7 | 1.5 | 2.2 | 3.7 | 1.5 | 2.2 | 3.7 |
| **Motor** | Full Load Amps | 3.6 | 5.3 | 8.2 | 3.6 | 5.3 | 8.2 | 3.6 | 5.3 | 8.2 | 3.6 | 5.3 | 8.2 |
| [2] **Maximum Overcurrent Protection** | Unit Only | 25 | 25 | 30 | 20 | 25 | 30 | 25 | 25 | 30 | 20 | 25 | 30 |
| | With 0.25 kW (0.33 HP) Power Exhaust | 25 | 25 | 30 | 25 | 25 | 30 | 25 | 25 | 30 | 25 | 25 | 30 |
| [3] **Minimum Circuit Ampacity** | Unit Only | 20 | 22 | 26 | 19 | 21 | 25 | 20 | 22 | 25 | 19 | 21 | 24 |
| | With 0.25 kW (0.33 HP) Power Exhaust | 22 | 23 | 27 | 21 | 22 | 26 | 22 | 23 | 27 | 20 | 22 | 26 |

## ELECTRIC HEAT DATA

| Electric Heat Voltage | | | 420V | 420V | 420V | 420V | 420V | 420V | 420V | 420V | 420V | 420V | 420V | 420V |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [2] **Maximum Overcurrent Protection** | Unit+ [4] Electric Heat | **5.7 kW** | 25 | 25 | 30 | 20 | 25 | 30 | 25 | 25 | 30 | 20 | 25 | 30 |
| | | **11.5 kW** | 25 | 30 | 30 | 25 | 30 | 30 | 25 | 30 | 30 | 25 | 30 | 30 |
| | | **17.2 kW** | 35 | 40 | 40 | 35 | 40 | 40 | 35 | 40 | 40 | 35 | 40 | 40 |
| | | **23 kW** | 45 | 50 | 50 | 45 | 50 | 50 | 45 | 50 | 50 | 45 | 50 | 50 |
| | | **34.5 kW** | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| [3] **Minimum Circuit Ampacity** | Unit+ [4] Electric Heat | **5.7 kW** | 20 | 22 | 26 | 19 | 21 | 25 | 20 | 22 | 25 | 19 | 21 | 24 |
| | | **11.5 kW** | 25 | 27 | 30 | 25 | 27 | 30 | 25 | 27 | 30 | 25 | 27 | 30 |
| | | **17.2 kW** | 35 | 37 | 40 | 35 | 37 | 40 | 35 | 37 | 40 | 35 | 37 | 40 |
| | | **23 kW** | 44 | 47 | 50 | 44 | 47 | 50 | 44 | 47 | 50 | 44 | 47 | 50 |
| | | **34.5 kW** | 64 | 66 | 70 | 64 | 66 | 70 | 64 | 66 | 70 | 64 | 66 | 70 |
| [2] **Maximum Overcurrent Protection** | Unit+ [4] Electric Heat and 0.25 kW (0.33 HP)Power Exhaust | **5.7 kW** | 25 | 25 | 30 | 25 | 25 | 30 | 25 | 25 | 30 | 25 | 25 | 30 |
| | | **11.5 kW** | 30 | 30 | 35 | 30 | 30 | 35 | 30 | 30 | 35 | 30 | 30 | 35 |
| | | **17.2 kW** | 40 | 40 | 45 | 40 | 40 | 45 | 40 | 40 | 45 | 40 | 40 | 45 |
| | | **23 kW** | 50 | 50 | 60 | 50 | 50 | 60 | 50 | 50 | 60 | 50 | 50 | 60 |
| | | **34.5 kW** | 70 | 70 | 80 | 70 | 70 | 80 | 70 | 70 | 80 | 70 | 70 | 80 |
| [3] **Minimum Circuit Ampacity** | Unit+ [4] Electric Heat and 0.25 kW (0.33 HP)Power Exhaust | **5.7 kW** | 22 | 23 | 27 | 21 | 22 | 26 | 22 | 23 | 27 | 20 | 22 | 26 |
| | | **11.5 kW** | 26 | 28 | 32 | 26 | 28 | 32 | 26 | 28 | 32 | 26 | 28 | 32 |
| | | **17.2 kW** | 36 | 38 | 42 | 36 | 38 | 42 | 36 | 38 | 42 | 36 | 38 | 42 |
| | | **23 kW** | 46 | 48 | 52 | 46 | 48 | 52 | 46 | 48 | 52 | 46 | 48 | 52 |
| | | **34.5 kW** | 66 | 68 | 72 | 66 | 68 | 72 | 66 | 68 | 72 | 66 | 68 | 72 |

[1] Extremes of operating range are plus and minus 10% of line voltage.
[2] Heating / Air Conditioning / Refrigeration (HACR) type breaker or fuse.
[3] Refer to local codes to determine wire, fuse and disconnect size requirements.
[4] Nominal kW based on 420V-3ph-50hz.

## ELECTRICAL/ELECTRIC HEAT DATA

| Model No. | | KCB120S4 | | | KCA120H4 | | | KCB150S4 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| [1] Voltage - 50hz 3 Phase with neutral | | 380/420V | | | 380/420V | | | 380/420V | | |
| Compressor 1 | Rated Load Amps | 8 | | | 8 | | | 8 | | |
| | Locked Rotor Amps | 59 | | | 59 | | | 67 | | |
| Compressor 2 | Rated Load Amps | 8 | | | 8 | | | 10.6 | | |
| | Locked Rotor Amps | 59 | | | 59 | | | 74 | | |
| Outdoor Fan Motors (2) | Full Load Amps | 1.3 | | | 1.3 | | | 1.5 | | |
| | (total) | (2.6) | | | (2.6) | | | (3.0) | | |
| Power Exhaust (1) 0.25 kW (0.33 HP) | Full Load Amps | 1.3 | | | 1.3 | | | 1.3 | | |
| Indoor Blower Motor | kW | 1.5 | 2.2 | 3.7 | 1.5 | 2.2 | 3.7 | 1.5 | 2.2 | 3.7 |
| | Full Load Amps | 3.6 | 5.3 | 8.2 | 3.6 | 5.3 | 8.2 | 3.6 | 5.3 | 8.2 |
| [2] Maximum Overcurrent Protection | Unit Only | 30 | 30 | 35 | 30 | 30 | 35 | 35 | 40 | 40 |
| | With 0.25 kW (0.33 HP) Power Exhaust | 30 | 35 | 35 | 30 | 35 | 35 | 35 | 40 | 40 |
| [3] Minimum Circuit Ampacity | Unit Only | 25 | 26 | 29 | 25 | 26 | 29 | 28 | 30 | 33 |
| | With 0.25 kW (0.33 HP) Power Exhaust | 26 | 28 | 31 | 26 | 28 | 31 | 30 | 31 | 34 |

## ELECTRIC HEAT DATA

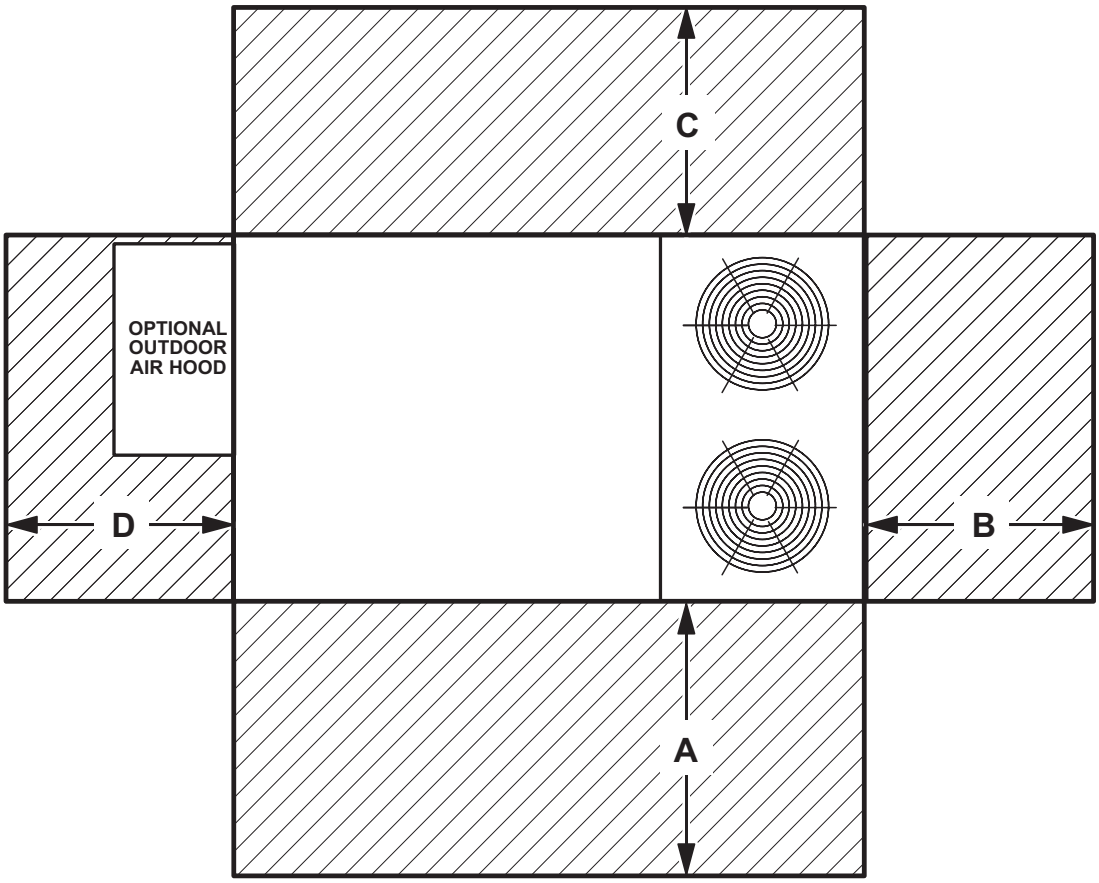
| Electric Heat Voltage | | | 420V | 420V | 420V | 420V | 420V | 420V | 420V | 420V | 420V |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [2] Maximum Overcurrent Protection | Unit+ [4] Electric Heat | 11.5 kW | 30 | 30 | 35 | 30 | 30 | 35 | 30 | 30 | 35 |
| | | 17.2 kW | 35 | 40 | 40 | 35 | 40 | 40 | 35 | 40 | 40 |
| | | 23 kW | 45 | 50 | 50 | 45 | 50 | 50 | 45 | 50 | 50 |
| | | 34.5 kW | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| | | 45.9 kW | 70 | 70 | 80 | 70 | 70 | 80 | 70 | 70 | 80 |
| [3] Minimum Circuit Ampacity | Unit+ [4] Electric Heat | 11.5 kW | 25 | 27 | 30 | 25 | 27 | 30 | 25 | 27 | 30 |
| | | 17.2 kW | 35 | 37 | 40 | 35 | 37 | 40 | 35 | 37 | 40 |
| | | 23 kW | 44 | 47 | 50 | 44 | 47 | 50 | 44 | 47 | 50 |
| | | 34.5 kW | 64 | 66 | 70 | 64 | 66 | 70 | 64 | 66 | 70 |
| | | 45.9 kW | 68 | 70 | 74 | 68 | 70 | 74 | 68 | 70 | 74 |
| [2] Maximum Overcurrent Protection | Unit+ [4] Electric Heat and 0.25 kW (0.33 HP) Power Exhaust | 11.5 kW | 30 | 35 | 35 | 30 | 35 | 35 | 30 | 35 | 35 |
| | | 17.2 kW | 40 | 40 | 45 | 40 | 40 | 45 | 40 | 40 | 45 |
| | | 23 kW | 50 | 50 | 60 | 50 | 50 | 60 | 50 | 50 | 60 |
| | | 34.5 kW | 70 | 70 | 80 | 70 | 70 | 80 | 70 | 70 | 80 |
| | | 45.9 kW | 70 | 80 | 80 | 70 | 80 | 80 | 70 | 80 | 80 |
| [3] Minimum Circuit Ampacity | Unit+ [4] Electric Heat and 0.25 kW (0.33 HP)Power Exhaust | 11.5 kW | 26 | 28 | 32 | 26 | 28 | 32 | 26 | 28 | 32 |
| | | 17.2 kW | 36 | 38 | 42 | 36 | 38 | 42 | 36 | 38 | 42 |
| | | 23 kW | 46 | 48 | 52 | 46 | 48 | 52 | 46 | 48 | 52 |
| | | 34.5 kW | 66 | 68 | 72 | 66 | 68 | 72 | 66 | 68 | 72 |
| | | 45.9 kW | 70 | 72 | 76 | 70 | 72 | 76 | 70 | 72 | 76 |

[1] Extremes of operating range are plus and minus 10% of line voltage.
[2] Heating / Air Conditioning / Refrigeration (HACR) type breaker or fuse.
[3] Refer to local codes to determine wire, fuse and disconnect size requirements.
[4] Nominal kW based on 420V-3ph-50hz.

## ELECTRIC HEAT CAPACITIES

| Volts Input | 5.7 kW | | | 11.5 kW | | | 17.2 kW | | | 23 kW | | | 34.5 kW | | | 45.9 kW | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | kW Input | Btuh Output | No. of Stages | kW Input | Btuh Output | No. of Stages | kW Input | Btuh Output | No. of Stages | kW Input | Btuh Output | No. of Stages | kW Input | Btuh Output | No. of Stages | kW Input | Btuh Output | No. of Stages |
| 380 | 4.7 | 16 000 | 1 | 9.4 | 32 100 | 1 | 14.1 | 48 200 | 1 | 18.8 | 64 200 | 2 | 28.2 | 96 300 | 2 | 37.6 | 128 400 | 2 |
| 400 | 5.2 | 17 800 | 1 | 10.4 | 35 500 | 1 | 15.6 | 53 300 | 1 | 20.9 | 71 400 | 2 | 31.2 | 106 600 | 2 | 41.6 | 142 100 | 2 |
| 420 | 5.7 | 19 500 | 1 | 11.5 | 39 300 | 1 | 17.2 | 58 700 | 1 | 23 | 78 500 | 2 | 34.5 | 117 500 | 2 | 45.9 | 156 800 | 2 |

## UNIT CLEARANCES




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

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

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

## OUTDOOR SOUND DATA

| Unit Model Number | Octave Band Linear Sound Power Levels dBA, re $10^{-12}$ Watts Center Frequency - HZ | | | | | | | [1] Sound Rating Number (dB) |
|---|---|---|---|---|---|---|---|---|
| | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | |
| 092, 102 and 120 | 76 | 79 | 84 | 83 | 79 | 73 | 66 | 88 |
| 150 | 77 | 80 | 85 | 84 | 79 | 74 | 66 | 90 |

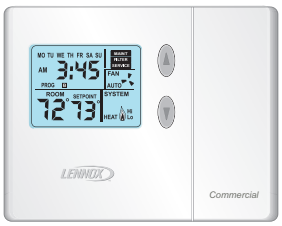
Note - The octave sound power data does not include tonal corrections.

[1] Sound Rating Number according to AHRI Standard 370-2001.

## OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

| Item | | Model No. | Catalog No. |
|---|---|---|---|
| **COMFORTSENSE® 7500 COMMERCIAL 7-DAY PROGRAMMABLE THERMOSTAT** | | | |
| | • Four-Stage Heating / Two-Stage Cooling Universal Multi-Stage<br>• Intuitive Touchscreen Interface<br>• Automatic Changeover between Heating and Cooling<br>• Full Seven-Day Programming<br>• Four Time Periods Per Day<br>• Temperature and Humidity Control<br>• One-Touch Away Mode<br>• Holiday Scheduling<br>• Smooth Setback Recovery (SSR)<br>• Performance Reports<br>• Notifications/Reminders<br>• Dehumidification Control for Split Systems and Rooftop Units<br>• Economizer Relay Control<br>• Backlit Display<br>• Wallplate Furnished<br>• FDD, ASHRAE and IECC Compliant | C0STAT06FF2L | **17G74** |
| **Optional Accessories** | [1] Remote non-adjustable wall mount 20k temperature sensor | C0SNZN01AE2- | **47W36** |
| | [1] Remote non-adjustable wall mount 10k temperature sensor | C0SNZN73AE1- | **47W37** |
| | Remote non-adjustable discharge air (duct mount) temperature sensor | C0SNDC00AE1- | **19L22** |
| | Outdoor temperature sensor | C0SNSR03AE1- | **X2658** |
| | Locking cover (clear) | C0MISC15AE1- | **39P21** |

[1] Remote 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**

| | | | |
|---|---|---|---|
| **COMFORTSENSE® 3000 COMMERCIAL 5-2 DAY PROGRAMMABLE THERMOSTAT** | | | |
|  | • Two-Stage Heating / Two-Stage Cooling Conventional Systems<br>• Intuitive Interface<br>• 5-2 Day Programming<br>• Program Hold<br>• Remote Indoor Temperature Sensing<br>• Smooth Setback Recovery (SSR)<br>• Economizer Relay Control<br>• Maintenance/Filter/Service Reminders<br>• Backlit Display<br>• Wallplate Furnished<br>• Simple Up and Down Temperature Control. | C0STAT05FF1L | **11Y05** |
| **Optional Accessories** | Remote non-adjustable wall mount 10k averaging temperature sensor | C0SNZN73AE1- | **47W37** |
| | Optional wall mounting plate | C0MISC17AE1- | **X2659** |
| **BACnet Controls** | BACnet® Module (factory or field installed) | K0CTRL31B-2 | **16X71** |
| | BACnet® Room Sensor with Display (field installed) | K0SNSR01FF1 | **97W23** |
| | BACnet® Room Sensor without Display (field installed) | K0SNSR00FF1 | **97W24** |
| **Optional Accessories** | Plenum Cable (RJ45/CAT5 75 ft.) | K0MISC00FF1 | **97W25** |

## WEIGHT DATA

| Model Number | Outdoor Coil | Net | | Shipping | | Outdoor Coil | Net | | Shipping | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | kg | lbs. | kg | lbs. | | kg | lbs. | kg | lbs. |
| 092H Base Unit | Environ™ | 477 | 1052 | 516 | 1137 | - - - | - - - | - - - | - - - | - - - |
| 092H Max. Unit | Environ™ | 548 | 1209 | 587 | 1294 | - - - | - - - | - - - | - - - | - - - |
| 102H Base Unit | Environ™ | 480 | 1059 | 519 | 1144 | - - - | - - - | - - - | - - - | - - - |
| 102H Max. Unit | Environ™ | 552 | 1216 | 590 | 1301 | - - - | - - - | - - - | - - - | - - - |
| 120H Base Unit | Environ™ | 496 | 1094 | 535 | 1179 | - - - | - - - | - - - | - - - | - - - |
| 120H Max. Unit | Environ™ | 571 | 1258 | 609 | 1343 | - - - | - - - | - - - | - - - | - - - |
| 092S Base Unit | Environ™ | 395 | 870 | 433 | 955 | Fin/Tube | 421 | 927 | 459 | 1012 |
| 092S Max. Unit | Environ™ | 466 | 1027 | 504 | 1112 | Fin/Tube | 492 | 1084 | 531 | 1169 |
| 102S Base Unit | Environ™ | 404 | 890 | 442 | 975 | Fin/Tube | 430 | 947 | 469 | 1032 |
| 102S Max. Unit | Environ™ | 475 | 1047 | 513 | 1132 | Fin/Tube | 501 | 1104 | 540 | 1189 |
| 120S Base Unit | Environ™ | 432 | 954 | 471 | 1039 | Fin/Tube | 465 | 1025 | 504 | 1110 |
| 120S Max. Unit | Environ™ | 507 | 1118 | 545 | 1203 | Fin/Tube | 540 | 1189 | 578 | 1274 |
| 150S Base Unit | - - - | - - - | - - - | - - - | - - - | Fin/Tube | 492 | 1084 | 531 | 1169 |
| 150S Max. Unit | - - - | - - - | - - - | - - - | - - - | Fin/Tube | 560 | 1234 | 599 | 1319 |

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

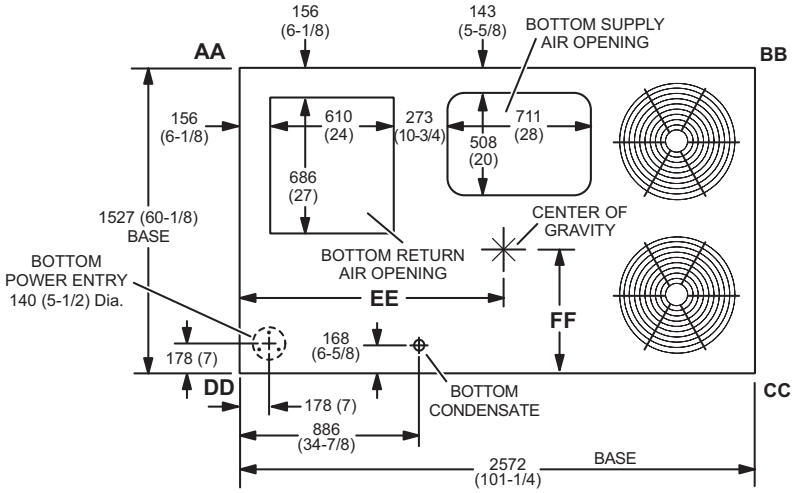
## OPTIONS / ACCESSORIES

| Model Number | | Shipping Weight | |
|---|---|---|---|
| | | kg | lbs. |
| **ECONOMIZER / OUTDOOR AIR / EXHAUST** | | | |
| **Economizer** | | | |
| Economizer Dampers | | 27 | 60 |
| Barometric Relief Dampers (downflow) | | 4 | 8 |
| Barometric Relief Damper Hood (downflow) | | 11 | 25 |
| Outdoor Air Hood (downflow) | | 10 | 23 |
| **Outdoor Air Dampers** | | | |
| Outdoor Air Damper Section (downflow) - Automatic | | 4 | 9 |
| Outdoor Air Damper Section (downflow) - Manual | | 1 | 2 |
| Outdoor Air Damper Hood (downflow) | | 4 | 9 |
| **Power Exhaust** | | 14 | 31 |
| **ELECTRIC HEAT** | | | |
| 5.7 kW | | 23 | 50 |
| 11.5 kW | | 23 | 50 |
| 17.2 kW | | 26 | 57 |
| 23 kW | | 26 | 57 |
| 34.5 kW | | 27 | 59 |
| 45.9 kW | | 31 | 68 |
| **MSAV (MULTI-STAGE AIR VOLUME) SUPPLY AIR BLOWER OPTION** | | | |
| Variable Frequency Drive (VFD) and associated components | | 5 | 10 |
| **ROOF CURBS** | | | |
| **Hybrid Roof Curbs, Downflow** | | | |
| 203 mm height | | 27 | 60 |
| 356 mm height | | 39 | 85 |
| 457 mm height | | 45 | 100 |
| 610 mm height | | 57 | 125 |
| **Adjustable Pitch Curb, Downflow** | | | |
| 356 mm height | | 82 | 191 |
| **CEILING DIFFUSERS** | | | |
| Step-Down | RTD11-95S | 54 | 118 |
| | RTD11-135S | 61 | 135 |
| | RTD11-185S | 76 | 168 |
| Flush | FD11-95S | 54 | 118 |
| | FD11-135S | 61 | 135 |
| | FD11-185S | 76 | 168 |
| Transitions | C1DIFF30B-1 | 14 | 30 |
| | C1DIFF31B-1 | 15 | 32 |
| | C1DIFF32B-1 | 16 | 36 |
| **PACKAGING** | | | |
| LTL Packaging (less than truck load) | | 48 | 105 |

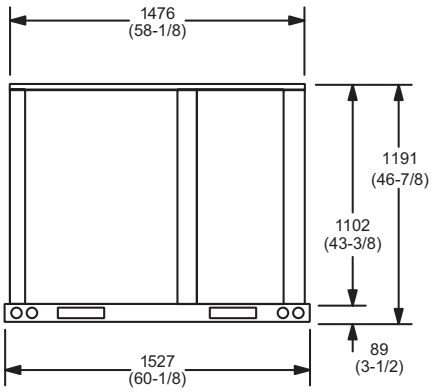
## DIMENSIONS - UNIT

| Model No. | CORNER WEIGHTS | | | | | | | | | | | | | | | | CENTER OF GRAVITY | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AA | | | | BB | | | | CC | | | | DD | | | | EE | | | | FF | | | |
| | Base | | Max. | | Base | | Max. | | Base | | Max. | | Base | | Max. | | Base | | Max. | | Base | | Max. | |
| | kg | lbs. | kg | lbs. | kg | lbs. | kg | lbs. | kg | lbs. | kg | lbs. | kg | lbs. | kg | lbs. | mm | in. | mm | in. | mm | in. | mm | in. |
| 092H | 122 | 270 | 141 | 310 | 104 | 230 | 120 | 265 | 113 | 249 | 130 | 287 | 137 | 302 | 158 | 348 | 1130 | 44-1/2 | 1105 | 43-1/2 | 622 | 24-1/2 | 648 | 25-1/2 |
| 102H | 123 | 272 | 141 | 312 | 105 | 232 | 121 | 266 | 114 | 251 | 131 | 288 | 138 | 304 | 159 | 350 | 1130 | 44-1/2 | 1105 | 43-1/2 | 622 | 24-1/2 | 648 | 25-1/2 |
| 120H | 128 | 283 | 148 | 325 | 108 | 238 | 124 | 274 | 116 | 257 | 134 | 295 | 143 | 316 | 165 | 363 | 1118 | 44 | 1092 | 43 | 629 | 24-3/4 | 654 | 25-3/4 |
| 092S | 101 | 223 | 141 | 309 | 86 | 190 | 118 | 259 | 94 | 206 | 124 | 275 | 113 | 250 | 154 | 341 | 1130 | 44-1/2 | 1105 | 43-1/2 | 622 | 24-1/2 | 648 | 25-1/2 |
| 102S | 104 | 228 | 143 | 316 | 88 | 195 | 119 | 262 | 96 | 211 | 127 | 280 | 116 | 254 | 157 | 347 | 1130 | 44-1/2 | 1105 | 43-1/2 | 622 | 24-1/2 | 648 | 25-1/2 |
| 120S | 110 | 243 | 150 | 331 | 93 | 204 | 124 | 273 | 100 | 220 | 133 | 294 | 123 | 271 | 167 | 369 | 1118 | 44 | 1092 | 43 | 629 | 24-3/4 | 654 | 25-3/4 |
| 150S | 119 | 263 | 138 | 305 | 101 | 222 | 117 | 257 | 110 | 242 | 127 | 280 | 135 | 298 | 157 | 346 | 1118 | 44 | 1092 | 43 | 610 | 24 | 635 | 25 |

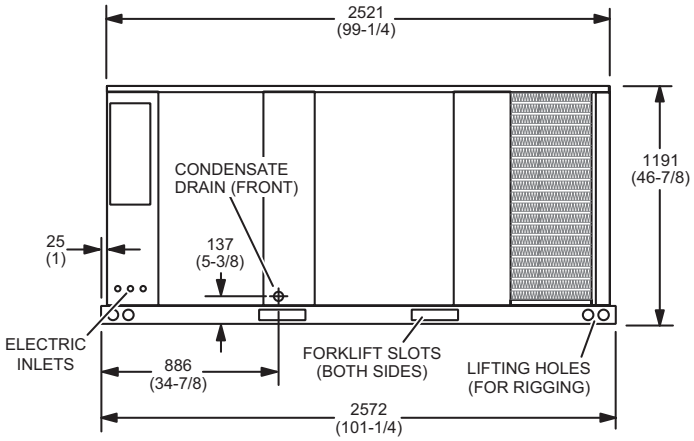
Base Unit - The unit with NO OPTIONS.
Max. Unit - The unit with ALL OPTIONS Installed. (Economizer, etc.)



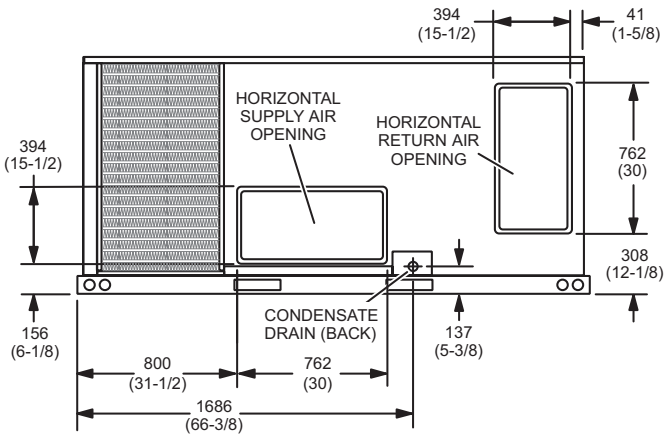

**TOP VIEW**




**END VIEW**

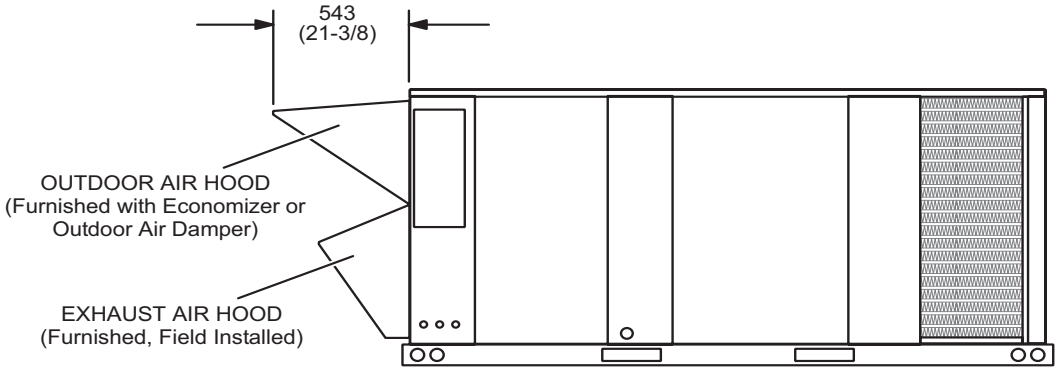



**SIDE VIEW**

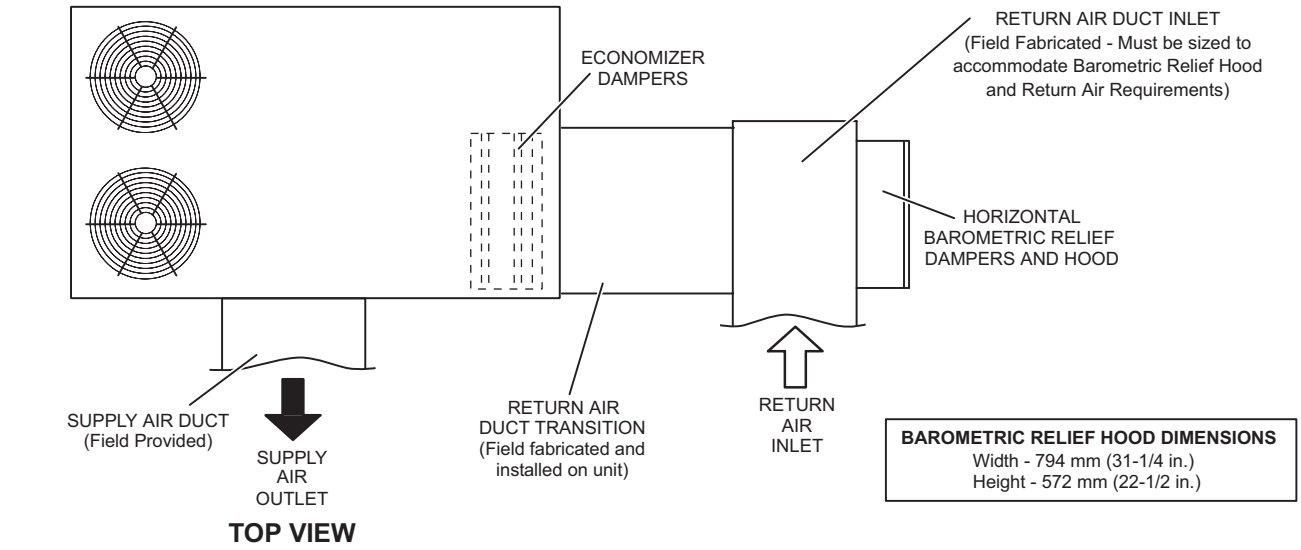



**SIDE VIEW**
**(Horizontal Openings)**

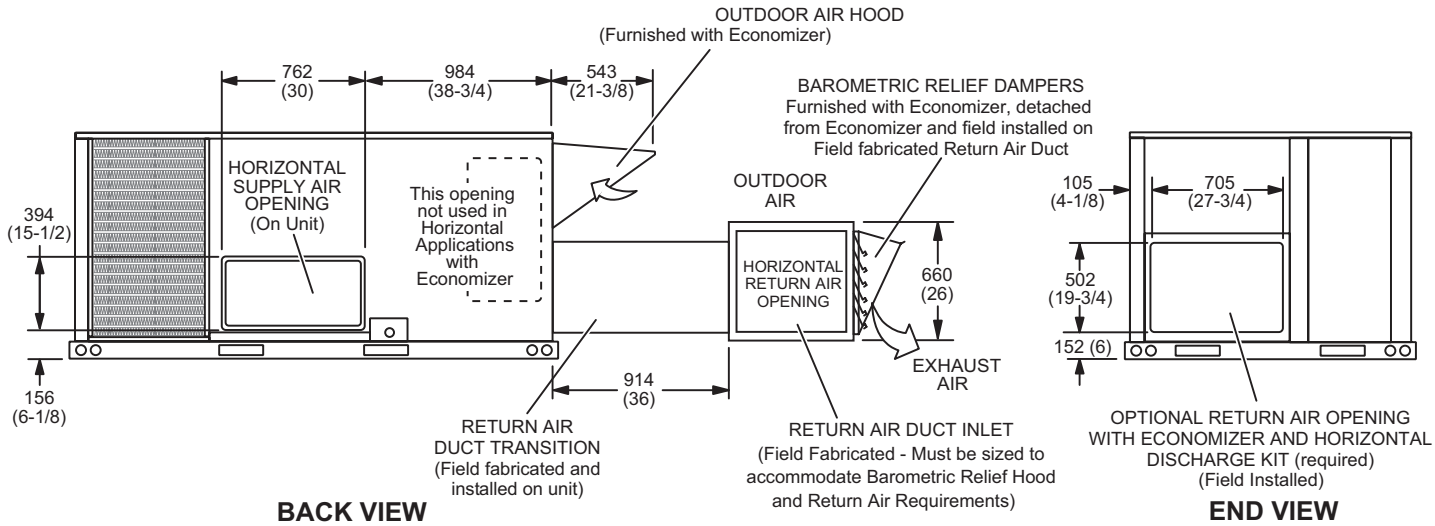
## OUTDOOR AIR HOOD DETAIL



## HORIZONTAL ECONOMIZER APPLICATION
## (With Furnished Barometric Relief Dampers and Optional Horizontal Discharge Kit - Required)




**TOP VIEW**

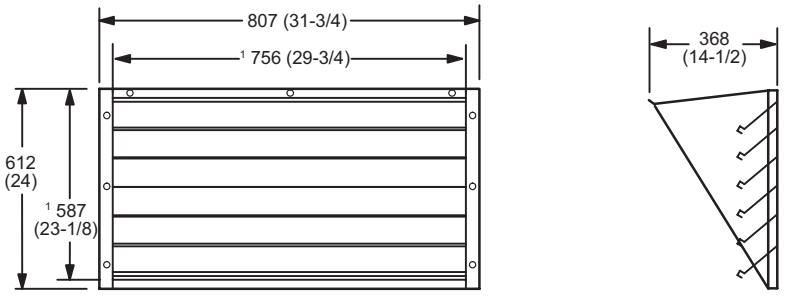



**BACK VIEW** **END VIEW**

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

## BAROMETRIC RELIEF DAMPERS
## (Furnished with Economizer)

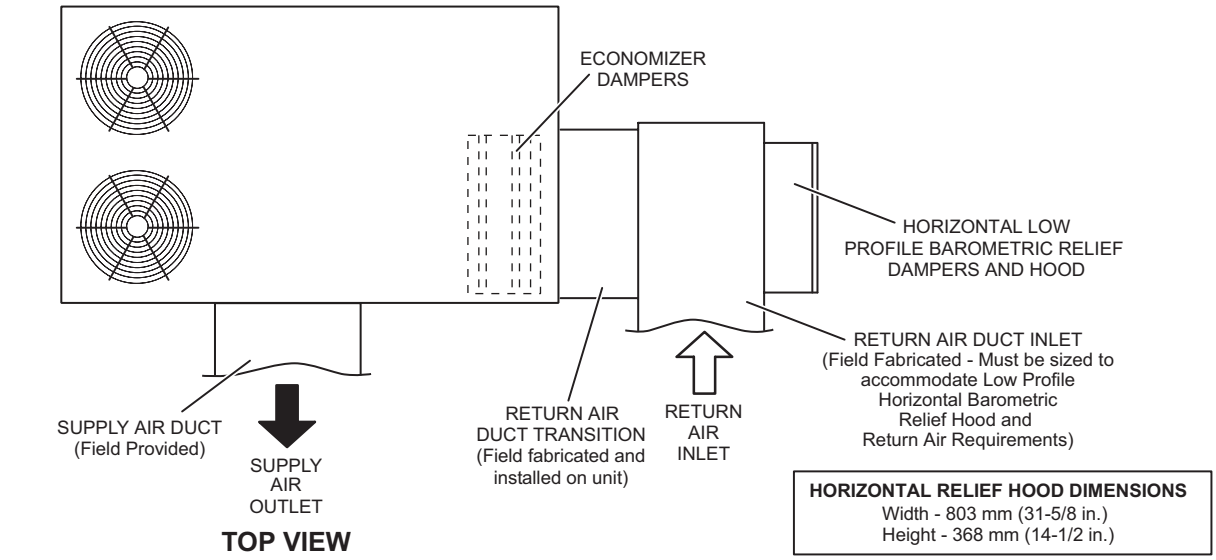
(Field installed in horizontal return air duct adjacent to unit)



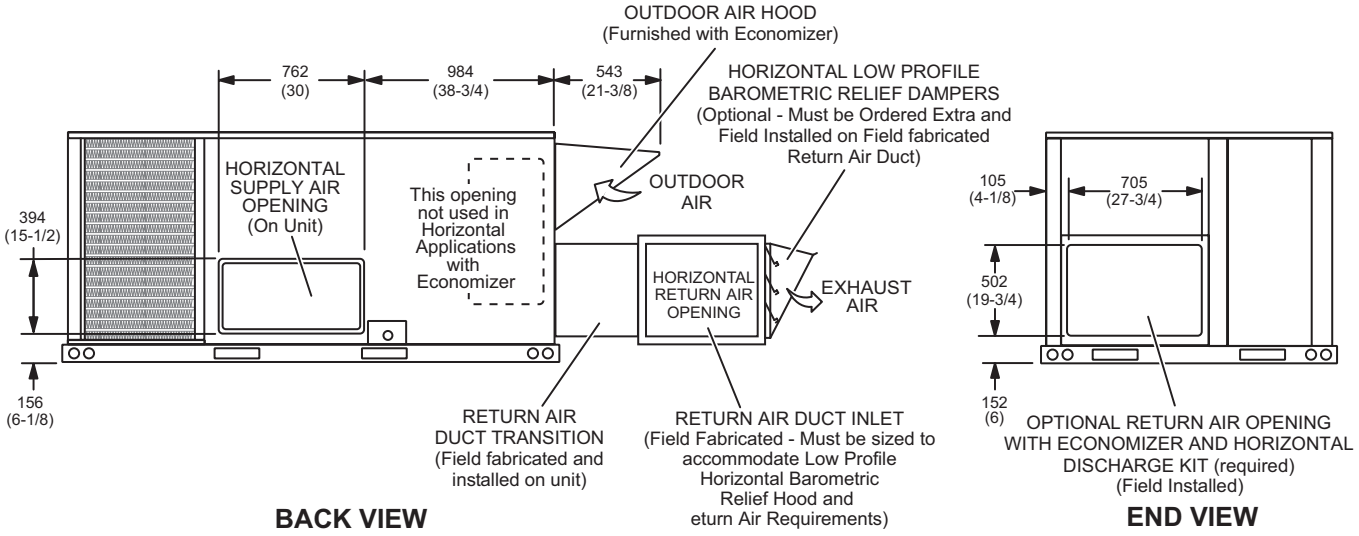

**FRONT VIEW** **SIDE VIEW**

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

## HORIZONTAL ECONOMIZER APPLICATION
## (with Optional Low Profile Horizontal Barometric Relief Dampers and Horizontal Discharge Kit - Required)



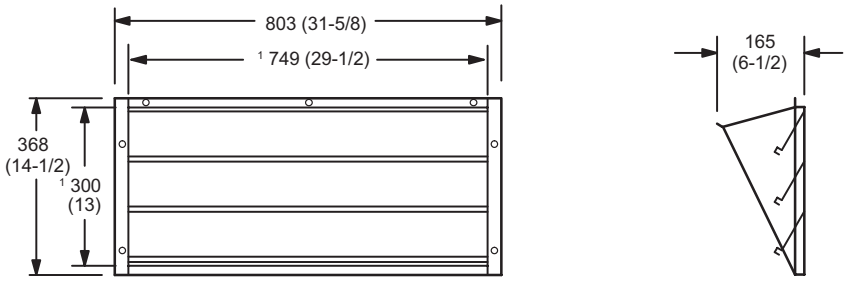

**TOP VIEW**




**BACK VIEW** **END VIEW**

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

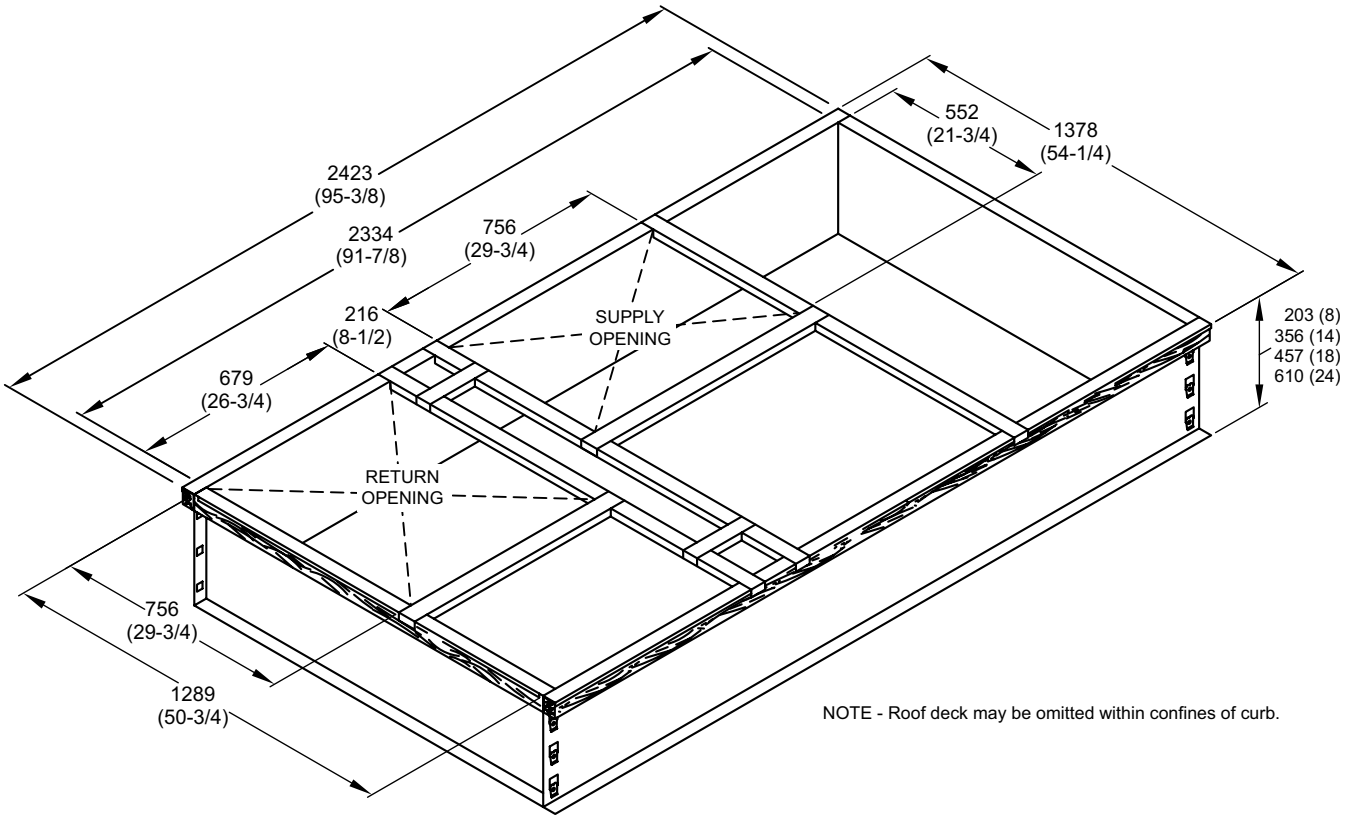
## HORIZONTAL LOW PROFILE BAROMETRIC RELIEF DAMPERS
(Field installed in horizontal return air duct adjacent to unit)




**FRONT VIEW** **SIDE VIEW**

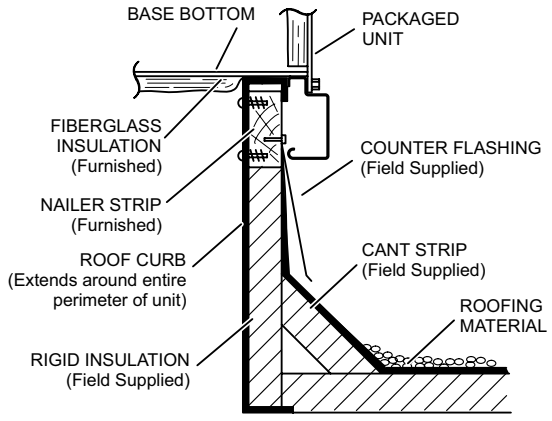
[1] NOTE - Opening size required in return air duct.

## HYBRID ROOF CURBS - DOUBLE DUCT OPENING

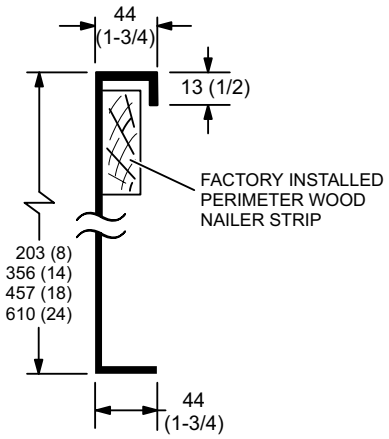



NOTE - Roof deck may be omitted within confines of curb.

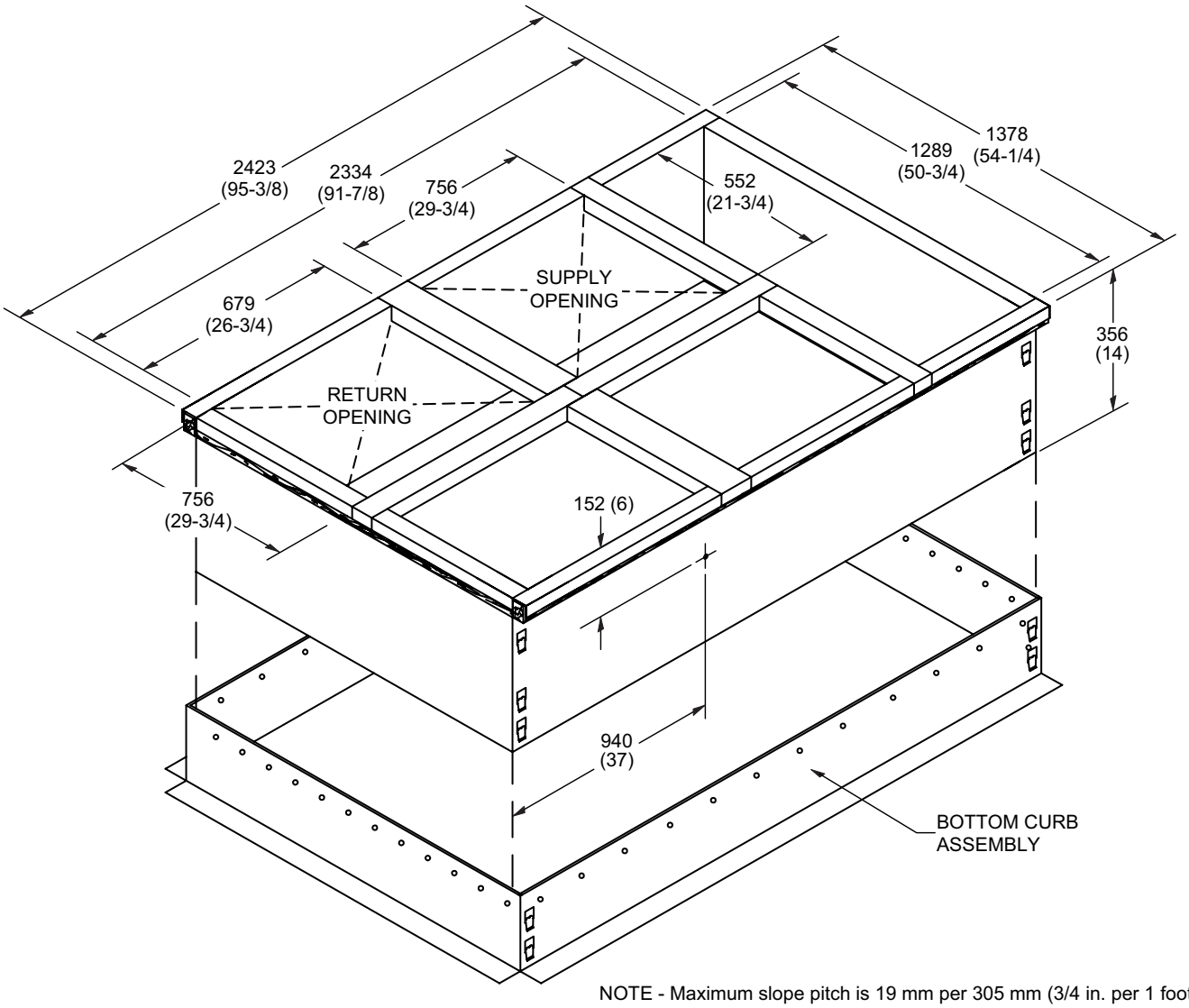
### TYPICAL FLASHING DETAIL FOR ROOF CURB




### DETAIL ROOF CURB

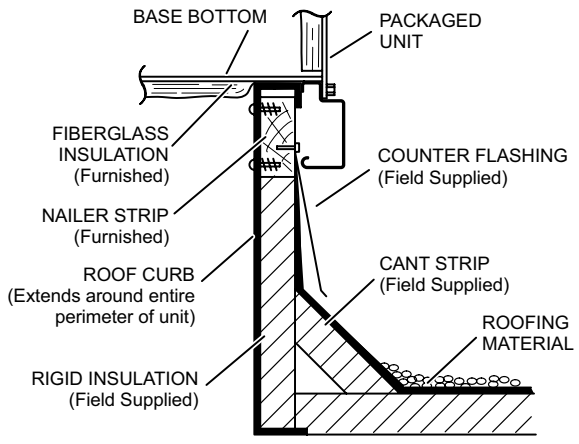


### ADJUSTABLE PITCH CURBS - DOUBLE DUCT OPENING

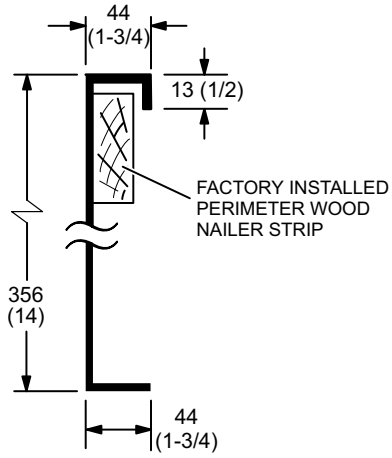



NOTE - Maximum slope pitch is 19 mm per 305 mm (3/4 in. per 1 foot) in any one direction.

### TYPICAL FLASHING DETAIL FOR ROOF CURB

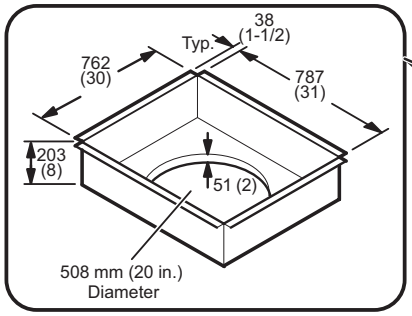



### DETAIL ROOF CURB

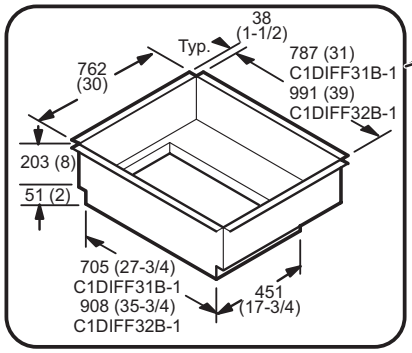


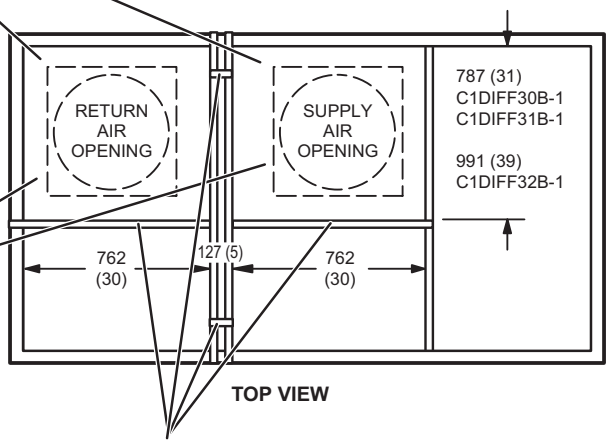
## ROOF CURBS WITH SUPPLY & RETURN AIR TRANSITIONS FOR CEILING DIFFUSERS

**C1DIFF30B-1 ROUND TRANSITIONS**
**(for 092 models)**




**C1DIFF31B-1 & C1DIFF32B-1 RECTANGULAR TRANSITIONS**
**(for 102 thru 150 models)**



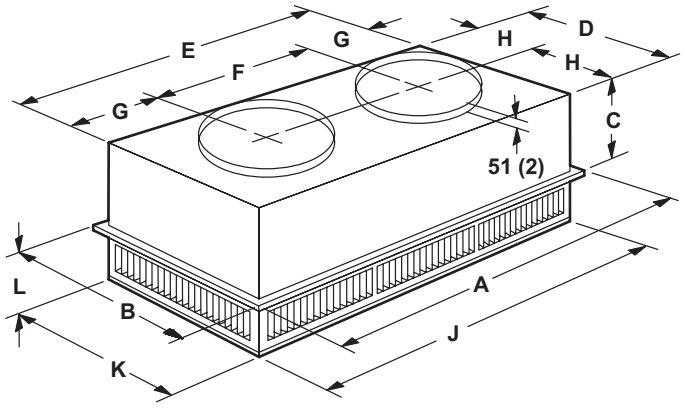




**TOP VIEW**

NOTE - These four supports are furnished with the transitions to replace supports furnished with curb for proper transition spacing.

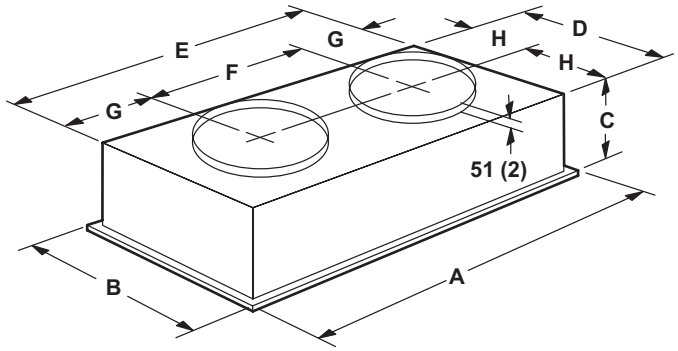
## COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

### STEP-DOWN CEILING DIFFUSER




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

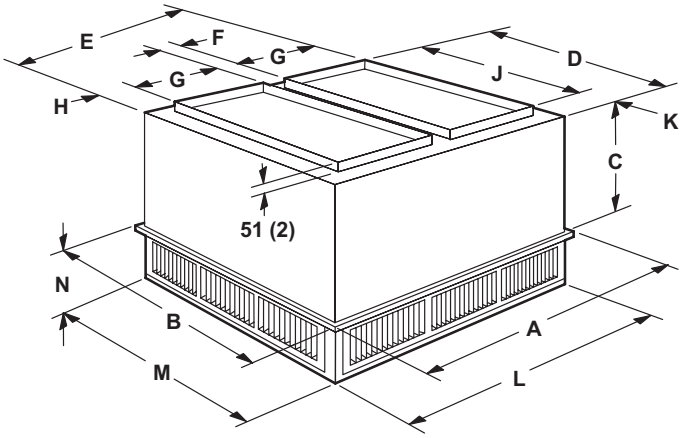
### FLUSH CEILING DIFFUSER




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

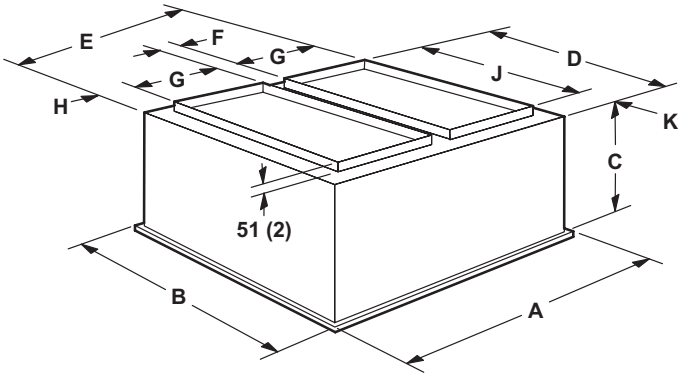
## COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

### STEP-DOWN CEILING DIFFUSER




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

### FLUSH CEILING DIFFUSER




| Model Number | | FD11-135S | FD11-185S |
|---|---|---|---|
| A | mm | 1210 | 1210 |
| | in. | 47-5/8 | 47-5/8 |
| B | mm | 905 | 1210 |
| | in. | 35-5/8 | 47-5/8 |
| C | mm | 591 | 743 |
| | in. | 23-1/4 | 29-1/4 |
| D | mm | 838 | 1143 |
| | in. | 33 | 45 |
| E | mm | 1143 | 1143 |
| | in. | 45 | 45 |
| F | mm | 112 | 112 |
| | in. | 4-1/2 | 4-1/2 |
| G | mm | 457 | 457 |
| | in. | 18 | 18 |
| H | mm | 57 | 57 |
| | in. | 2-1/4 | 2-1/4 |
| J | mm | 711 | 914 |
| | in. | 28 | 36 |
| K | mm | 64 | 114 |
| | in. | 2-1/2 | 4-1/2 |
| Duct Size | mm | 457 x 711 | 457 x 914 |
| | in. | 18 x 28 | 18 x 36 |

## REVISIONS

| Section | Description |
|---|---|
| Optional Accessories | Added Low Ambient Controls.<br>Updated High Performance Economizer model and catalog numbers. |

**Visit us at www.lennox.com**

**For the latest technical information, www.lennoxcommercial.com**

**Contact us at 1-800-4-LENNOX**

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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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