

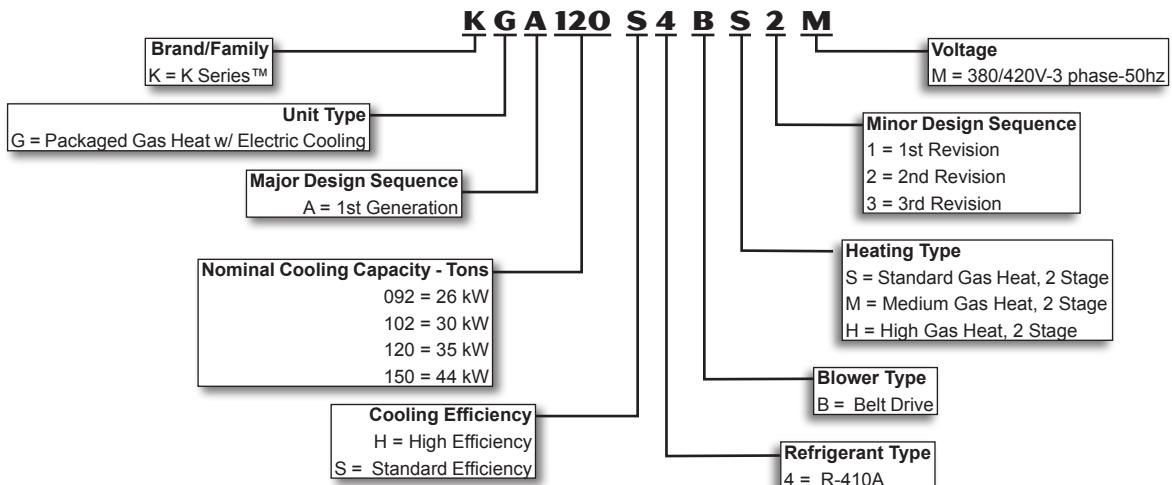
PRODUCT SPECIFICATIONS

Bulletin No. KGA-092-150-50HZ (2/2017)

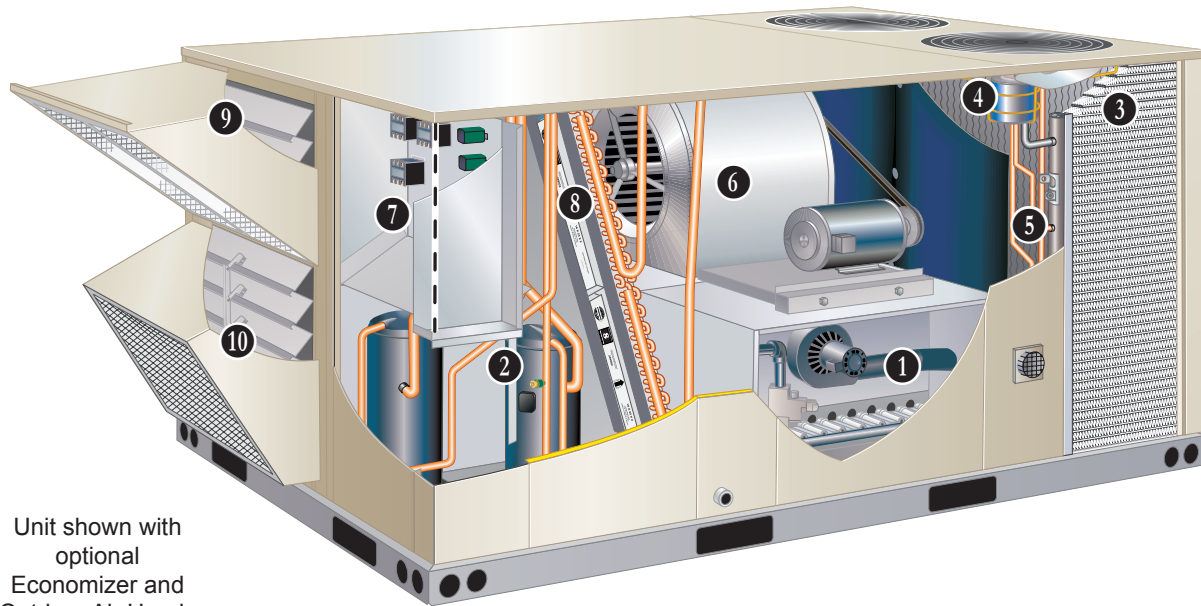


26 to 44 kW (7.5 to 12.5 Ton)
Net Cooling Capacity - 22.4 to 35.5 kW (74 500 to 119 200 Btuh)
Gas Input Heat Capacity - 24.7 to 70.3 kW (84 500 to 240 000 Btuh)

MODEL NUMBER IDENTIFICATION



FEATURES AND BENEFITS



Unit shown with
optional
Economizer and
Outdoor Air Hoods

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

- **Aluminized Steel Heat Exchanger With Inshot Burners** - Life cycle tested.
- **R-410A Refrigerant** - Environmentally friendly.
- **Scroll Compressors** - Single speed scroll compressors are furnished on all models.
- **Eco-Last™ Coil System** - Smaller, lighter condenser coil.
- **High Pressure Switches** - Protect compressor.
- **Isolated Compressor Compartment** - Allows performance check during normal compressor operation without disrupting airflow.
- **Independent Motor Mounts** - Allows for easy and efficient service access without removing the top panel.
- **Constant Air Volume (CAV) Blower** - Allows constant 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 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.

FEATURES AND BENEFITS

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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 340/360-2007 while operating at rated voltage and air volumes.

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

HEATING SYSTEM

Aluminized steel inshot burners, direct spark ignition, electronic flame sensor, combustion air inducer, redundant automatic dual stage gas valve with manual shut-off.

1 Heat Exchanger

Tubular construction, aluminized steel, life cycle tested.

Optional Stainless Steel Heat Exchanger is required if mixed air temperature is below 7°C.

Electronic Pilot Ignition

Solid-state electronic spark igniter provides positive direct ignition of burners on each operating cycle. The system permits main gas valve to stay open only when the burners are proven to be lit. Should a loss of flame occur, the gas valve closes, shutting off the gas to the burners. Ignition module has LED to indicate status and aid in troubleshooting.

Watchguard circuit on module automatically resets ignition controls after one hour of continuous thermostat demand after unit lockout, eliminating nuisance service calls.

Ignition control is factory installed in the controls section.

Limit Control

Factory installed, limit control with fixed temperature setting. Heat limit control protects heat exchanger and other components from overheating.

Safety Switches

Flame roll-out switch, flame sensor and combustion air inducer proving switch protect system operation.

Required Selections

Gas Input Choice - Order one:

Standard Gas Heat, 2 Stage
(24.7/38.1 kW)

Medium Gas Heat, 2 Stage
(34.3/52.7 kW)

High Gas Heat, 2 Stage
(45.7/70.3 kW)

Options/Accessories

Factory Installed

Stainless Steel Heat Exchanger

Required if mixed air temperature is below 7°C.

Field Installed

Bottom Gas Piping Kit

Allows bottom gas entry.

Combustion Air Intake Extensions

Recommended for use with existing flue extension kits in areas where high snow areas can block intake air.

LPG/Propane Kits

Conversion kit to field change over units from Natural Gas to LPG/ Propane.

Vertical Vent Extension Kit

Use to exhaust flue gases vertically above unit. Required when unit vent is too close to fresh air intakes per building codes. The vent kit also prevents ice formation on intake louvers.

Kit contains vent transition, vent tee, drain cap and installation hardware.

NOTE - Straight vent pipes (102 mm B-Vent) and caps are not furnished and must be field supplied. Refer to kit instructions for additional information.

FEATURES AND BENEFITS

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 based, ozone friendly, R-410A.



2 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 (High Efficiency Models)

Assures optimal performance throughout the application range. Removable element head.

Refrigerant Metering Orifice (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

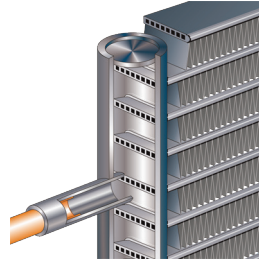
Protects the evaporator coil from damaging ice build-up due to conditions such as low/no airflow, or low refrigerant charge.

Eco-Last™ Coil System

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.



Eco-Last™ Coil System Features:

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

Face-split design.

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

Evaporator Coil

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

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

Condensate Drain Pan

Plastic pan, sloped to meet drainage requirements 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.

4 Outdoor Coil Fans

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

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 Kit

Cycles the outdoor fans while allowing compressor operation in the cooling cycle. This intermittent fan operation allows the system to operate without icing the evaporator coil and losing capacity. Designed for use in ambient temperatures no lower than 0°F.

FEATURES AND BENEFITS

CABINET

5 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

Factory Installed

Corrosion Protection

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

Indoor Corrosion Protection:

- Coated coil
- Painted blower housing
- Painted base

Outdoor Corrosion Protection:

- Coated coil
- Painted base

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).

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.

6 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

Order blower motor horsepower and drive kit number required when base unit is ordered, see Drive Kit Specifications Table.

FEATURES AND BENEFITS

CONTROLS

7 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

Aftermarket unit controller options, see Options/Accessories table.

ELECTRICAL

Required Selections

Voltage Choice

Specify when ordering base unit.

INDOOR AIR QUALITY

8 Air Filters

Disposable 51 mm filters furnished as standard.

Options / Accessories

Field Installed

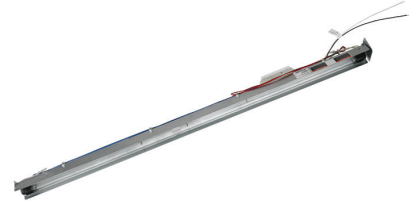
High Efficiency Air Filters

Disposable MERV 8 or MERV 13 (Minimum Efficiency Reporting Value based on ASHRAE 52.2) efficiency 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.

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 (CO₂) Sensors

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

ECONOMIZER OPTIONS

Factory or Field Installed

9 Economizer (Standard and High Performance Common Features)

Downflow or Horizontal with Outdoor Air Hood and Barometric Relief Dampers with Exhaust Hood.

10 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 CO₂ 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 CO₂ is higher than the CO₂ setpoint.
- Demand Control Ventilation (DCV) LED - A steady green Demand Control Ventilation LED indicates the IAQ reading is higher than setpoint and requires more fresh air.
- Free Cool LED - A steady green LED indicates outdoor air is suitable for free cooling.

Free Cooling runs when outdoor air temperature is lower than the set temperature on the economizer control.

NOTE: The Free Cooling default setting for outdoor air temperature sensor is 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, CO₂ 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.

ECONOMIZER OPTIONS

(continued)

Factory or Field Installed

Single Enthalpy Temperature Control

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

Field Installed

Differential Enthalpy Control

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.

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
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 Kit	K1SNSR33B-1	54W16	X	X	X	X
Refrigerant Type		R-410A	O	O	O	O
HEATING SYSTEM						
Bottom Gas Piping Kit	C1GPKT01B-01	54W95	X	X	X	X
Combustion Air Intake Extensions	T1EXTN10AN1	19W51	X	X	X	X
Gas Heat Input	Standard Heat 38.1 kW (130,000 Btuh)	Factory	O	O	O	O
	Medium Heat 52.7 kW (180,000 Btuh)	Factory	O	O	O	O
	High Heat 70.3 kW (240,000 Btuh)	Factory	O	O	O	O
LPG/Propane Conversion Kits	Standard Heat - C1PROP23BS1	14N22	X	X	X	X
	Medium Heat - C1PROP22BS1	14N23	X	X	X	X
	High Heat - C1PROP21BS1	14N25	X	X	X	X
Stainless Steel Heat Exchanger		Factory	O	O	O	O
Vertical Vent Extension	C1EXTN2021	42W16	X	X	X	X
BLOWER - SUPPLY AIR						
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	Kit #1 490-740 rev/min	Factory	O	O	O	O
See Blower Data Tables for selection	Kit #2 665-920 rev/min	Factory	O	O	O	O
	Kit #3 660-995 rev/min	Factory	O	O	O	O
	Kit #7 610-810 rev/min	Factory	O	O	O	O
	Kit #8 780-1000 rev/min	Factory	O	O	O	O
	Kit #9 845-1085 rev/min	Factory	O	O	O	O
	Kit #10 750-945 rev/min	Factory	O	O	O	O
	Kit #11 865-1095 rev/min	Factory	O	O	O	O
	Kit #12 940-1190 rev/min	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 L Series® and T-Class™ replacement)	C1CONV10B-1	54W96	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
CONTROLS						
BACnet®	K0CTRL31B-1	96W15	OX	OX	OX	OX
BACnet® Thermostat with Display	K0SNSR01FF1	97W23	X	X	X	X
BACnet® Thermostat without Display	K0SNSR00FF1	97W24	X	X	X	X
Novar® 2051	K0CTRL30B-1	96W12	OX	OX	OX	OX
Plenum Cable - 23 m (75 ft.)	K0MISC00FF1	97W25	X	X	X	X
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
INDOOR AIR QUALITY						
Air Filters						
High Efficiency Air Filters 208 x 635 x 51 mm (Order 4 per unit)	MERV 8 - C1FLTR15B-1	50W61	X	X	X	X
	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 (CO₂) 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 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
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-1	10U58	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

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)

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OPTIONS / ACCESSORIES

Item Description	Model Number	Catalog Number	Unit Model No			
			092	102	120	150
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

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SPECIFICATIONS

General Data		Nominal kW (Tons)	26 (7.5)	26 (7.5)	30 (8.5)	30 (8.5)
		Model Number	KGA092S4B	KGA092H4B	KGA102S4B	KGA102H4B
		Efficiency Type	Standard	High	Standard	High
		Blower Type	Constant Air Volume CAV	Constant Air Volume CAV	Constant Air Volume CAV	Constant Air Volume CAV
Cooling Performance	Gross Cooling Capacity - kW (Btuh)		22.5 (76 700)	23.6 (80 500)	25.5 (86 900)	26.8 (91 500)
	¹ Net Cooling Capacity - kW (Btuh)		21.8 (74 500)	22.7 (77 500)	24.7 (84 300)	25.6 (87 500)
	AHRI Rated Air Flow - L/s (cfm)		1416 (3000)	1416 (3000)	1320 (2800)	1605 (3400)
	Total Unit Power - kW		6.6	6.4	7.5	7.3
	¹ EER (Btuh/Watt) at 35°C (95°F)		11.3	12.7	11.2	12.4
	² EER (Btuh/Watt) at 46°C (115°F)		8.7	---	---	---
	¹ IEER (Btuh/Watt)		11.2	12.9	11.2	12.9
	Refrigerant Type		R-410A	R-410A	R-410A	R-410A
Refrigerant Charge Furnished	Circuit 1		1.9 kg (4 lbs. 3 oz.)	3.1 kg (6 lbs. 13 oz.)	2.0 kg (4 lbs. 5 oz.)	3.0 kg (6 lbs. 8 oz.)
	Circuit 2		1.5 kg (3 lbs. 6 oz.)	3.2 kg (7 lbs. 2 oz.)	1.9 kg (4 lbs. 3 oz.)	3.1 kg (6 lbs. 15 oz.)
Gas Heating Options Available - See page 9			Standard (2 stage), Medium (2 Stage), High (2 Stage)			
Compressor Type (number)			Scroll (2)			
Outdoor Coils	Net face area (total) - m ² (sq. ft.)		1.9 (20.5)	2.6 (28.0)	1.9 (20.5)	2.6 (28.0)
	Number of rows		1	1	1	1
	Fins per m (inch)		906 (23)	787 (20)	906 (23)	787 (20)
Outdoor Coil Fans	Motor - (No.) W (HP)		(2) 249 (1/3)	(2) 249 (1/3)	(2) 249 (1/3)	(2) 249 (1/3)
	Motor rev/min		896	896	896	896
	Total Motor watts		565	611	564	611
	Diameter - (No.) mm (in.)		(2) 610 (24)	(2) 610 (24)	(2) 610 (24)	(2) 610 (24)
	Number of blades		3	3	3	3
	Total Air volume - L/s (cfm)		3460 (7335)	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)	1.19 (12.8)
	Tube diameter - mm (in.)		9.5 (3/8)	9.5 (3/8)	9.5 (3/8)	9.5 (3/8)
	Number of rows		2	4	3	4
	Fins per m (inch)		551 (14)	551 (14)	551 (14)	551 (14)
	Drain connection - Number and size		(1) 1 in. NPT coupling			
	Expansion device type		Refrigerant Metering Orifice (RFC)	Balance port TXV, removable head	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)	1.5 (2)
	Maximum usable motor kW (HP)		1.7 (2.3)	1.7 (2.3)	1.7 (2.3)	1.7 (2.3)
	Kit # and rev/min range		⁴ #1 (490-740)	⁴ #1 (490-740)	#1 (490-740)	#1 (490-740)
			#2 (665-920)	#2 (665-920)	#2 (665-920)	#2 (665-920)
			#3 (660-995)	#3 (660-995)	#3 (660-995)	#3 (660-995)
	Nominal motor kW (HP)		2.2 (3)	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)	2.6 (3.45)
	Kit # and rev/min range		#7 (610-810)	#7 (610-810)	³ #7 (610-810)	#7 (610-810)
			#8 (780-1000)	#8 (780-1000)	#8 (780-1000)	#8 (780-1000)
			#9 (845-1085)	#9 (845-1085)	#9 (845-1085)	#9 (845-1085)
	Nominal motor kW (HP)		3.7 (5)	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)	4.3 (5.75)
Kit # and rev/min range		#10 (750-945)	#10 (750-945)	#10 (750-945)	⁴ #10 (750-945)	
		#11 (865-1095)	#11 (865-1095)	#11 (865-1095)	#11 (865-1095)	
		#12 (940-1190)	#12 (940-1190)	#12 (940-1190)	#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)	(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.

⁴ Standard motor and drive kit furnished with unit.

SPECIFICATIONS

General Data		Nominal kW (Tons)	35 (10)	35 (10)	44 (12.5)
		Model Number	KGA120S4B	KGA120H4B	KGA150S4B
		Efficiency Type	Standard	High	Standard
		Blower Type	Constant Air Volume CAV	Constant Air Volume CAV	Constant Air Volume CAV
Cooling Performance	Gross Cooling Capacity - kW (Btuh)		30.3 (103 500)	32.1 (109 700)	36.3 (123 800)
	¹ Net Cooling Capacity - kW (Btuh)		29.3 (100 000)	30.9 (105 600)	34.9 (119 200)
	AHRI Rated Air Flow - L/s (cfm)		1794 (3800)	1700 (3600)	1935 (4100)
	Total Unit Power - kW		9.0	8.9	10.8
	¹ EER (Btuh/Watt) at 35°C (95°F)		11.1	12.2	10.8
	² EER (Btuh/Watt) at 46°C (115°F)		8.2	---	8.1
	¹ IEER (Btuh/Watt)		11.2	12.7	11.0
	Refrigerant Type		R-410A	R-410A	R-410A
	Refrigerant Charge Furnished	Circuit 1	2.2 kg (4 lbs. 12 oz.)	3.3 kg (7 lbs. 4 oz.)	3.3 kg (7 lbs. 4 oz.)
		Circuit 2	2.1 kg (4 lbs. 10 oz.)	3.4 kg (7 lbs. 8 oz.)	3.1 kg (6 lbs. 12 oz.)
Gas Heating Options Available - See page 9			Standard (2 stage), Medium (2 Stage), High (2 Stage)		
Compressor Type (number)			Scroll (2)		
Outdoor Coils	Net face area (total) - m ² (sq. ft.)		2.6 (28.0)	2.6 (28.0)	2.6 (28.0)
	Number of rows		1	1	1
	Fins per m (inch)		906 (23)	787 (20)	787 (20)
Outdoor Coil Fans	Motor - (No.) W (HP)		(2) 249 (1/3)	(2) 249 (1/3)	(2) 373 (1/2)
	Motor rev/min		896	896	896
	Total Motor watts		527	611	802
	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)	3460 (7335)	3815 (8085)
Indoor Coils	Net face area (total) - m ² (sq. ft.)		1.19 (12.8)	1.26 (13.5)	1.26 (13.5)
	Tube diameter - mm (in.)		9.5 (3/8)	9.5 (3/8)	9.5 (3/8)
	Number of rows		3	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)	Balance port TXV, removable head	Refrigerant Metering Orifice (RFC)
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)	#1 (490-740)	#1 (490-740)
			#2 (665-920)	#2 (665-920)	#2 (665-920)
			#3 (660-995)	#3 (660-995)	#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		⁴ #7 (610-810)	⁴ #7 (610-810)	#7 (610-810)
			#8 (780-1000)	#8 (780-1000)	#8 (780-1000)
			#9 (845-1085)	#9 (845-1085)	#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)	#10 (750-945)	⁴ #10 (750-945)	
		#11 (865-1095)	#11 (865-1095)	#11 (865-1095)	
		#12 (940-1190)	#12 (940-1190)	#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.

⁴ Standard motor and drive kit furnished with unit.

SPECIFICATIONS - GAS HEAT

		Heat Input Type	Standard	Medium	High
		Number of Gas Heat Stages	2	2	2
Gas Heating Performance	Input - kW (Btuh)	First Stage	24.8 (84 500)	34.3 (117 000)	45.7 (156 000)
		Second Stage	33.4 (114 000)	46.7 (159 500)	61.5 (210 000)
	Output - kW (Btuh)	Second Stage	26.7 (91 200)	36.9 (126 000)	49.2 (168 000)
		Temperature Rise Range - °C (°F)	8 - 25 (15 - 45)	17 - 33 (30 - 60)	22 - 39 (40 - 70)
		Thermal Efficiency	81%	81%	81%
Gas Supply Connections			3/4 in. NPT	3/4 in. NPT	3/4 in. NPT
Recommended Gas Supply Pressure - kPa (in. w.g.)	Natural		0.70 (2.8)	0.70 (2.8)	0.70 (2.8)
	LPG/Propane		1.97 (7.9)	1.97 (7.9)	1.97 (7.9)

HIGH ALTITUDE DERATE

Units may be installed at altitudes up to 610 m (2000 feet) above sea level without any modification.

At altitudes above 610 m (2000 feet), units must be derated to match gas manifold pressures shown in table below.

At altitudes above 1372 m (4500 feet) unit must be derated 2% for each 305 m (1000 feet) above sea level.

NOTE - This is the only permissible derate for these units.

Gas Heat Type	Altitude m (Feet)	Gas Manifold Pressure kPa (in. w.g.)		Input Rate - Btuh (Natural Gas or LPG/Propane)	
		Natural Gas	LPG/Propane Gas	First Stage	Second Stage
Standard	610 - 1372 (2001-4500)	0.62 (2.5)	1.82 (7.3)	24.8 (84 500)	31.7 (108 000)
Medium	610 - 1372 (2001-4500)	0.62 (2.5)	1.82 (7.3)	34.3 (117 000)	43.7 (149 000)
High	610 - 1372 (2001-4500)	0.62 (2.5)	1.82 (7.3)	45.7 (156 000)	58 (198 000)

RATINGS

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 - KGA092S4 (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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
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 - KGA092S4 (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					51.7°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
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	15.9	7.84	0.81	1.00	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	17.0	7.88	0.90	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	17.8	7.92	0.97	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	16.8	7.88	0.59	0.78	0.98
	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	17.5	7.91	0.64	0.88	1.00
	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	18.0	7.94	0.69	0.96	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	17.8	7.92	0.40	0.59	0.76
	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	18.6	7.96	0.43	0.64	0.85
	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	19.2	7.99	0.46	0.69	0.94

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil									
		48°C					50°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb		
L/s	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
	1415	18.1	7.23	0.87	1.00	1.00	17.5	7.58	0.88	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
19.4°C	1135	18.1	7.23	0.58	0.76	0.95	17.4	7.58	0.59	0.77	0.97
	1415	18.9	7.26	0.63	0.84	1.00	18.1	7.60	0.64	0.86	1.00
	1700	19.4	7.29	0.67	0.92	1.00	18.7	7.63	0.68	0.94	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
	1415	20.0	7.31	0.43	0.62	0.82	19.3	7.65	0.43	0.63	0.83
	1700	20.6	7.33	0.45	0.67	0.90	19.8	7.68	0.45	0.68	0.92

RATINGS

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 - KGA092H4 (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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
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 - KGA092H4 (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					51.7°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
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	17.3	6.81	0.81	1	1
	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	18.4	6.8	0.94	1	1
	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	19.4	6.8	1	1	1
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	18.2	6.81	0.6	0.79	1
	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	18.9	6.8	0.66	0.91	1
	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	19.4	6.8	0.71	1	1
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	19.3	6.8	0.42	0.59	0.76
	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	20	6.79	0.45	0.66	0.88
	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	20.5	6.79	0.47	0.71	0.99

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil										
		48°C					50°C					
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			
				Dry Bulb					Dry Bulb			
L/s	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	
	1415	19.5	6.25	0.90	1	1	18.9	6.54	0.92	1	1	
	1700	20.4	6.25	0.99	1	1	19.8	6.54	1.00	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	
	1415	20.0	6.25	0.64	0.87	1	19.4	6.54	0.65	0.89	1	
	1700	20.5	6.25	0.70	0.98	1	19.9	6.54	0.71	0.99	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	
	1415	21.2	6.24	0.44	0.63	0.84	20.6	6.54	0.44	0.65	0.86	
	1700	21.7	6.24	0.47	0.69	0.95	21.1	6.54	0.47	0.70	0.97	

RATINGS

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 - KGA102S4 (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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
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 - KGA102S4 (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					51.7°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
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	15.3	8.86	0.75	1.00	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	16.9	8.89	0.87	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	18.0	8.88	0.96	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	16.7	8.88	0.51	0.74	0.97
	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	17.7	8.87	0.57	0.84	1.00
	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	18.4	8.88	0.63	0.94	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	18.1	8.89	0.30	0.52	0.72
	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	19.2	8.89	0.34	0.58	0.82
	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	19.9	8.89	0.37	0.64	0.91

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil									
		48°C					50°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb		
L/s	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
	1605	18.4	8.10	0.83	1.00	1.00	17.6	8.51	0.85	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
19.4°C	1285	18.5	8.10	0.52	0.72	0.94	17.6	8.51	0.51	0.73	0.96
	1605	19.5	8.10	0.57	0.81	1.00	18.6	8.51	0.57	0.83	1.00
	1925	20.3	8.10	0.62	0.90	1.00	19.3	8.52	0.63	0.92	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
	1605	21.0	8.12	0.35	0.58	0.79	20.0	8.53	0.34	0.58	0.80
	1925	21.9	8.13	0.38	0.63	0.88	20.8	8.52	0.38	0.63	0.90

RATINGS

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 - KGA102H4 (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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
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 - KGA102H4 (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					51.7°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
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	18.1	7.63	0.82	1	1
	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	19.5	7.61	0.96	1	1
	1925	29	4.34	0.87	1	1	26.4	5.2	0.92	1	1	23.7	6.28	0.98	1	1	20.7	7.62	1	1	1
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	19.1	7.62	0.58	0.8	1
	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	20	7.62	0.65	0.93	1
	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	20.6	7.61	0.71	1	1
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	20.5	7.61	0.38	0.58	0.78
	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	21.5	7.61	0.41	0.65	0.9
	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	22	7.61	0.44	0.72	1

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		48°C									50°C										
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
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	19.5	7.25	0.79	1	1	18.8	7.65	0.80	1	1										
	1605	21.2	7.20	0.91	1	1	20.5	7.58	0.93	1	1										
	1925	22.5	7.18	1	1	1	21.7	7.55	1.00	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										
	1605	21.9	7.19	0.63	0.88	1.00	21.1	7.58	0.64	0.90	1.00										
	1925	22.6	7.18	0.69	0.98	1.00	21.7	7.53	0.70	1.00	1.00										
21.7°C	1285	22.5	7.18	0.38	0.56	0.74	21.7	7.56	0.37	0.57	0.75										
	1605	23.5	7.16	0.41	0.62	0.85	22.7	7.51	0.40	0.63	0.87										
	1925	24.2	7.16	0.44	0.69	0.96	23.4	7.52	0.44	0.70	0.98										

RATINGS

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 - KGA120S4 (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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
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 - KGA120S4 (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					51.7°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
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	17.9	9.90	0.78	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	19.9	9.97	0.91	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	21.3	10.03	1.00	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	19.5	9.96	0.50	0.75	1.00
	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	20.6	10.00	0.58	0.88	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	21.6	10.04	0.65	0.98	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	21.5	10.04	0.28	0.51	0.73
	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	22.7	10.08	0.33	0.59	0.85
	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	23.5	10.12	0.36	0.66	0.96

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil									
		48°C					50°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb		
L/s	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
	1890	21.8	9.19	0.87	1.00	1.00	20.8	9.60	0.89	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
19.4°C	1510	21.7	9.18	0.51	0.74	0.97	20.5	9.59	0.51	0.75	0.99
	1890	22.9	9.23	0.58	0.84	1.00	21.7	9.64	0.58	0.86	1.00
	2265	23.9	9.26	0.64	0.95	1.00	22.6	9.67	0.64	0.97	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
	1890	25.1	9.30	0.34	0.58	0.82	23.8	9.71	0.33	0.59	0.83
	2265	25.9	9.30	0.38	0.65	0.92	24.6	9.74	0.37	0.65	0.94

RATINGS

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 - KGA120H4 (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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
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 - KGA120H4 (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					51.7°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
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	23.1	10.2	0.79	1	1
	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	24.9	10.14	0.92	1	1
	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	26.3	10.15	1	1	1
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	24.6	10.2	0.57	0.76	1
	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	25.6	10.18	0.63	0.89	1
	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	26.4	10.16	0.69	0.99	1
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	26.3	10.17	0.39	0.57	0.74
	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	27.4	10.16	0.41	0.62	0.86
	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	28.2	10.18	0.44	0.69	0.97

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil									
		48°C					50°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb		
L/s	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
	1890	26.5	9.28	0.88	1	1	25.6	9.77	0.90	1	1
	2265	27.8	9.30	0.99	1	1	27.0	9.76	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
	1890	27.4	9.28	0.62	0.85	1.00	26.4	9.76	0.62	0.87	1.00
	2265	28.2	9.31	0.67	0.96	1.00	27.3	9.75	0.68	0.98	1.00
21.7°C	1510	28.1	9.31	0.39	0.56	0.73	27.1	9.75	0.39	0.56	0.73
	1890	29.2	9.29	0.41	0.61	0.82	28.2	9.74	0.41	0.62	0.84
	2265	30.1	9.34	0.44	0.67	0.94	29.1	9.79	0.44	0.68	0.96

RATINGS

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 - KGA150S4 (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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
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	20.7	2.71	0.66	0.83	1.00	19.3	3.04	0.67	0.85	1.00	17.7	3.41	0.67	0.88	1.00	16.0	3.82	0.69	0.92	1.00
	2075	21.5	2.73	0.70	0.90	1.00	20.0	3.06	0.71	0.93	1.00	18.4	3.43	0.72	0.97	1.00	16.7	3.84	0.74	1.00	1.00
	2360	22.2	2.74	0.74	0.96	1.00	20.6	3.08	0.75	0.99	1.00	19.0	3.44	0.77	1.00	1.00	17.4	3.86	0.80	1.00	1.00
19.4°C	1795	22.3	2.74	0.52	0.64	0.79	20.7	3.08	0.51	0.65	0.81	19.1	3.44	0.51	0.66	0.84	17.3	3.86	0.51	0.67	0.87
	2075	23.1	2.76	0.54	0.68	0.85	21.5	3.09	0.54	0.68	0.88	19.8	3.47	0.54	0.70	0.92	18.0	3.88	0.54	0.71	0.96
	2360	23.7	2.78	0.57	0.71	0.92	22.1	3.11	0.56	0.73	0.96	20.3	3.48	0.57	0.75	0.99	18.5	3.90	0.56	0.77	1.00
21.7°C	1795	23.8	2.78	0.39	0.51	0.63	22.2	3.11	0.38	0.51	0.63	20.5	3.48	0.37	0.50	0.64	18.7	3.90	0.35	0.50	0.65
	2075	24.6	2.80	0.41	0.54	0.66	22.9	3.14	0.39	0.54	0.67	21.2	3.51	0.38	0.53	0.68	19.3	3.92	0.37	0.53	0.70
	2360	25.3	2.81	0.42	0.56	0.69	23.5	3.15	0.41	0.56	0.71	21.7	3.53	0.39	0.56	0.72	19.8	3.94	0.38	0.56	0.75

44 KW STANDARD EFFICIENCY - KGA150S4 (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					51.7°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
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	37.3	6.62	0.73	0.90	1.00	32.3	7.86	0.75	0.95	1.00	27.1	9.37	0.77	1.00	1.00	22.0	11.28	0.82	1.00	1.00
	2075	38.7	6.66	0.78	0.96	1.00	33.7	7.90	0.8	1.00	1.00	28.8	9.43	0.83	1.00	1.00	23.6	11.35	0.91	1.00	1.00
	2360	40.1	6.70	0.82	1.00	1.00	35.3	7.95	0.85	1.00	1.00	30.3	9.49	0.90	1.00	1.00	24.7	11.39	0.99	1.00	1.00
19.4°C	1795	40.2	6.70	0.56	0.71	0.86	35.1	7.94	0.55	0.73	0.90	29.6	9.46	0.55	0.75	0.96	23.5	11.35	0.53	0.79	1.00
	2075	41.6	6.74	0.59	0.75	0.93	36.3	7.99	0.59	0.78	0.98	30.7	9.50	0.58	0.82	1.00	24.5	11.38	0.58	0.88	1.00
	2360	42.8	6.78	0.62	0.80	0.98	37.3	8.02	0.62	0.83	1.00	31.5	9.53	0.62	0.88	1.00	25.2	11.41	0.64	0.96	1.00
21.7°C	1795	43.1	6.78	0.41	0.55	0.69	37.7	8.03	0.39	0.55	0.71	32.1	9.55	0.35	0.55	0.73	25.9	11.42	0.31	0.54	0.78
	2075	44.5	6.82	0.42	0.58	0.74	39.0	8.08	0.40	0.58	0.76	33.3	9.59	0.37	0.59	0.79	26.8	11.47	0.33	0.59	0.86
	2360	45.7	6.86	0.43	0.61	0.78	40.1	8.11	0.42	0.62	0.81	34.1	9.62	0.39	0.62	0.86	27.6	11.50	0.35	0.65	0.94

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil									
		48°C					50°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1795	24.2	10.38	0.79	1.00	1.00	23.0	10.85	0.80	1.00	1.00
	2075	25.9	10.44	0.87	1.00	1.00	24.7	10.92	0.89	1.00	1.00
	2360	27.3	10.50	0.94	1.00	1.00	25.9	10.97	0.96	1.00	1.00
19.4°C	1795	26.3	10.46	0.54	0.77	1.00	24.8	10.92	0.53	0.78	1.00
	2075	27.2	10.50	0.58	0.85	1.00	25.8	10.96	0.59	0.86	1.00
	2360	28.1	10.53	0.63	0.92	1.00	26.6	10.99	0.63	0.94	1.00
21.7°C	1795	28.8	10.55	0.33	0.55	0.75	27.3	11.02	0.32	0.54	0.76
	2075	29.7	10.58	0.35	0.59	0.82	28.2	11.05	0.34	0.59	0.84
	2360	30.5	10.61	0.38	0.63	0.89	28.9	11.08	0.36	0.64	0.92

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 26 for blower motors and drives.

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

MAXIMUM STATIC PRESSURE WITH GAS HEAT - 500 Pa (2.0 in. w.g.)

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 26 for blower motors and drives.

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

MAXIMUM STATIC PRESSURE WITH GAS HEAT - 500 Pa (2.0 in. w.g.)

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	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 26 for blower motors and drives.

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

MAXIMUM STATIC PRESSURE WITH GAS HEAT - 500 Pa (2.0 in. w.g.)

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 26 for blower motors and drives.

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

MAXIMUM STATIC PRESSURE WITH GAS HEAT - 500 Pa (2.0 in. w.g.)

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		
1.5	2	1.7	2.3	1	490 - 740
1.5	2	1.7	2.3	2	665 - 920
1.5	2	1.7	2.3	3	660 - 995
2.2	3	2.6	3.45	7	610 - 810
2.2	3	2.6	3.45	8	780 - 1000
2.2	3	2.6	3.45	9	845 - 1085
3.7	5	4.3	5.75	10	750 - 945
3.7	5	4.3	5.75	11	865 - 1095
3.7	5	4.3	5.75	12	940 - 1190

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 - in. w.g.

Air Volume cfm	Wet Indoor Coil		Gas Heat Exchanger			Economizer	Filters	
	092, 102	120, 150	Standard Heat	Medium Heat	High Heat		MERV 8	MERV 13
1750	0.04	0.04	0.06	0.02	0.02	0.05	0.01	0.03
2000	0.05	0.05	0.07	0.05	0.06	0.06	0.01	0.03
2250	0.06	0.06	0.07	0.07	0.08	0.08	0.01	0.04
2500	0.07	0.07	0.09	0.10	0.11	0.11	0.01	0.05
2750	0.08	0.08	0.09	0.11	0.12	0.12	0.02	0.05
3000	0.10	0.09	0.11	0.12	0.13	0.13	0.02	0.06
3250	0.11	0.10	0.12	0.15	0.16	0.15	0.02	0.06
3500	0.12	0.11	0.12	0.16	0.17	0.15	0.03	0.07
3750	0.14	0.13	0.14	0.19	0.20	0.15	0.03	0.08
4000	0.15	0.14	0.14	0.21	0.22	0.19	0.04	0.08
4250	0.17	0.15	0.14	0.24	0.28	0.19	0.04	0.09
4500	0.19	0.17	0.15	0.26	0.32	0.22	0.04	0.09
4750	0.20	0.18	0.16	0.29	0.37	0.25	0.05	0.10
5000	0.22	0.20	0.16	0.34	0.43	0.29	0.06	0.10
5250	0.24	0.22	0.16	0.37	0.47	0.32	0.06	0.11
5500	0.25	0.23	0.18	0.44	0.54	0.34	0.07	0.12
5750	0.27	0.25	0.19	0.49	0.59	0.45	0.07	0.12
6000	0.29	0.27	0.20	0.54	0.64	0.52	0.08	0.13

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	88

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

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

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
150 Models	2454	5200	186	0.75	154	0.62	134	0.54	107	0.43
	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 DATA

Model No.		KGA092S4			KGA092H4			KGA102S4			KGA102H4		
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 Motor	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
	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

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.

ELECTRICAL DATA

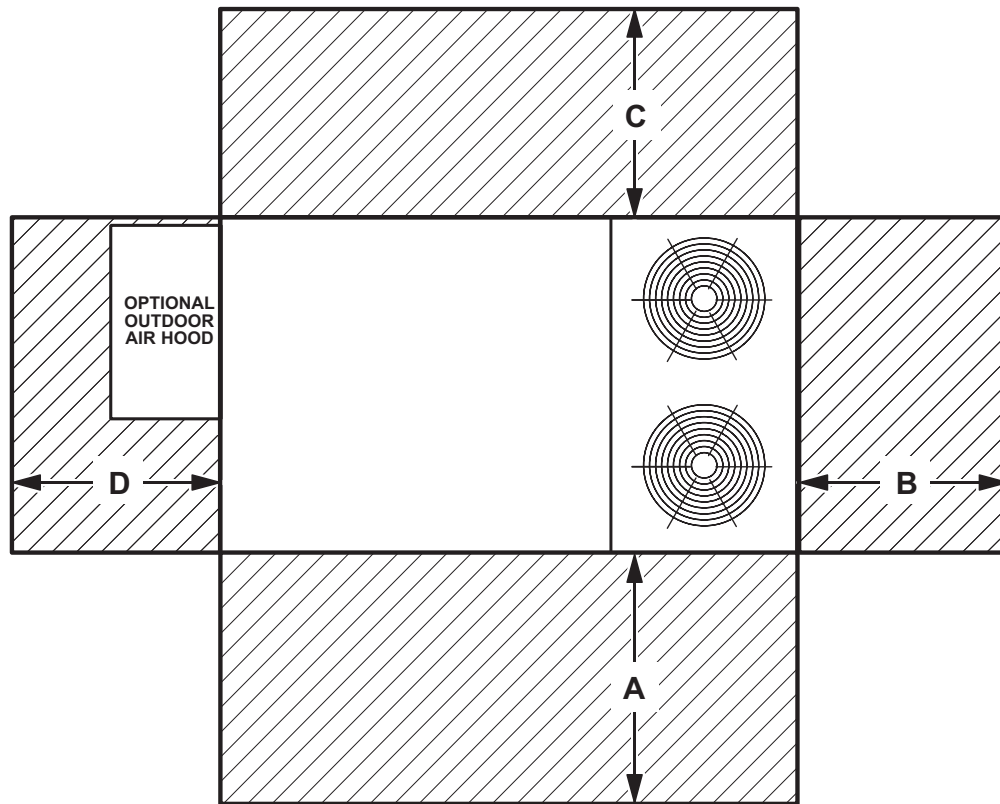
Model No.		KGA120S4			KGA120H4			KGA150S4		
¹ Voltage - 50hz 3 Phase with neutral		380/420V			380/420V			380/420V		
Compressor 1	Rated Load Amps	8			8			8		
	Locked Rotor Amps	59			59			67		
Compressor 2	Rated Load Amps	8			8			8		
	Locked Rotor Amps	59			59			67		
Outdoor Fan Motors (2)	Full Load Amps	1.3			1.3			1.3		
	(total)	(2.6)			(2.6)			(2.6)		
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	30	30	35
	With 0.25 kW (0.33 HP) Power Exhaust	30	35	35	30	35	35	30	35	35
³ Minimum Circuit Ampacity	Unit Only	25	26	29	25	26	29	25	27	30
	With 0.25 kW (0.33 HP) Power Exhaust	26	28	31	26	28	31	26	28	31

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.

UNIT CLEARANCES - MM (INCHES)



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
Clearance to Combustibles	914	36	25	1	25	1	25	1	
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.

Clearance to Combustibles - Required for clearance to combustible material.

Minimum Operation Clearance - Required clearance for proper unit operation.

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WEIGHT DATA

Model Number	Net		Shipping		Model Number	Net		Shipping	
	kg	lbs.	kg	lbs.		kg	lbs.	kg	lbs.
092S Base Unit	416	918	455	1003	092H Base Unit	499	1100	538	1185
092S Max. Unit	485	1069	523	1154	092H Max. Unit	567	1251	606	1336
102S Base Unit	425	938	464	1023	102H Base Unit	502	1107	541	1192
102S Max. Unit	494	1089	533	1174	102H Max. Unit	571	1258	609	1343
120S Base Unit	447	986	486	1071	120H Base Unit	518	1142	557	1227
120S Max. Unit	516	1137	554	1222	120H Max. Unit	586	1293	625	1378
150S Base Unit	486	1072	525	1157					
150S Max. Unit	555	1223	593	1308					

OPTIONS / ACCESSORIES

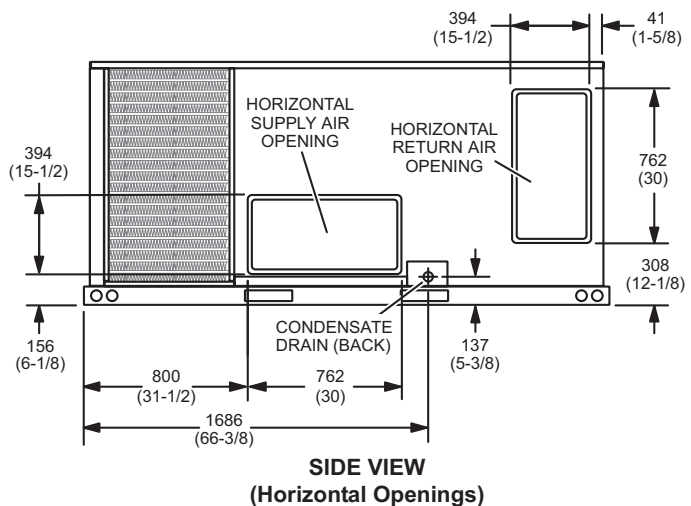
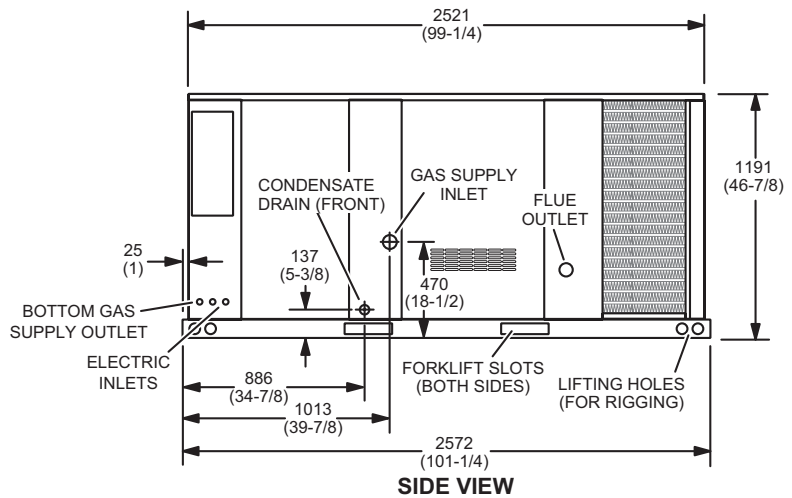
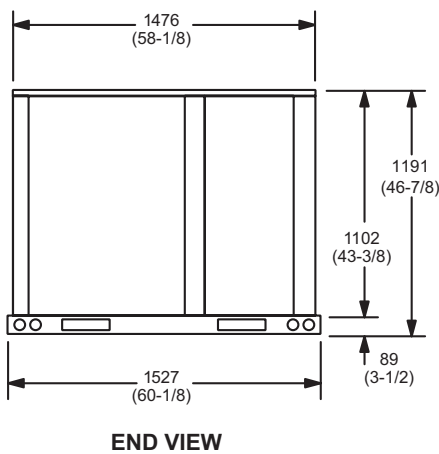
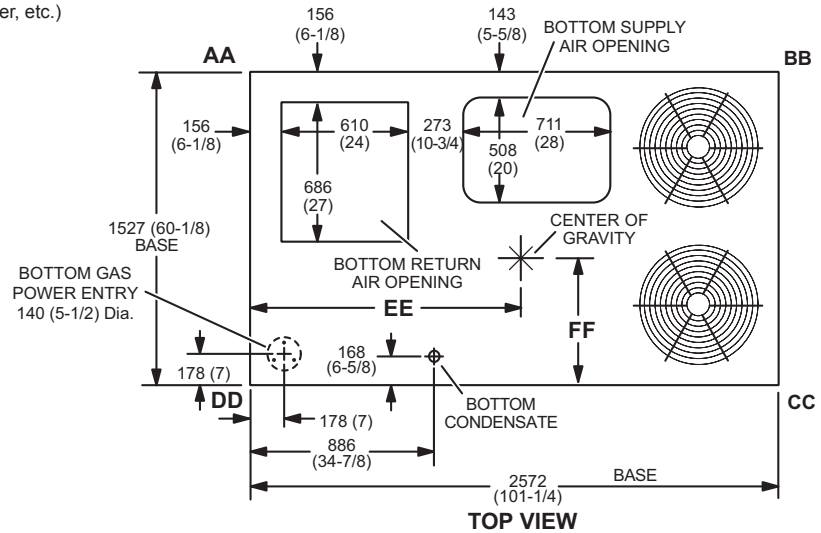
Model Number	Shipping Weight		
	kg	lbs.	
ECONOMIZER / OUTDOOR AIR / EXHAUST			
Economizer			
Economizer Dampers	27	60	
Barometric Relief Dampers (downflow)	4	8	
Barometric Relief Damper Hood (downflow)	11	25	
Outdoor Air Hood (downflow)	10	23	
Outdoor Air Dampers			
Outdoor Air Damper Section (downflow) - Automatic	4	9	
Outdoor Air Damper Section (downflow) - Manual	1	2	
Outdoor Air Damper Hood (downflow)	4	9	
Power Exhaust	14	31	
GAS HEAT EXCHANGER (NET WEIGHT)			
Medium Heat (adder over standard heat)	5	9	
High Heat (adder over standard heat)	15	32	
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			
356 mm height	82	191	
CEILING DIFFUSERS			
Step-Down			
	RTD11-95S	118	54
	RTD11-135S	135	61
	RTD11-185S	168	76
Flush			
	FD11-95S	118	54
	FD11-135S	135	61
	FD11-185S	168	76
Transitions			
	C1DIFF30B-1	14	30
	C1DIFF31B-1	15	32
	C1DIFF32B-1	16	36
PACKAGING			
LTL Packaging (less than truck load)	48	105	

DIMENSIONS - UNIT - INCHES (MM)

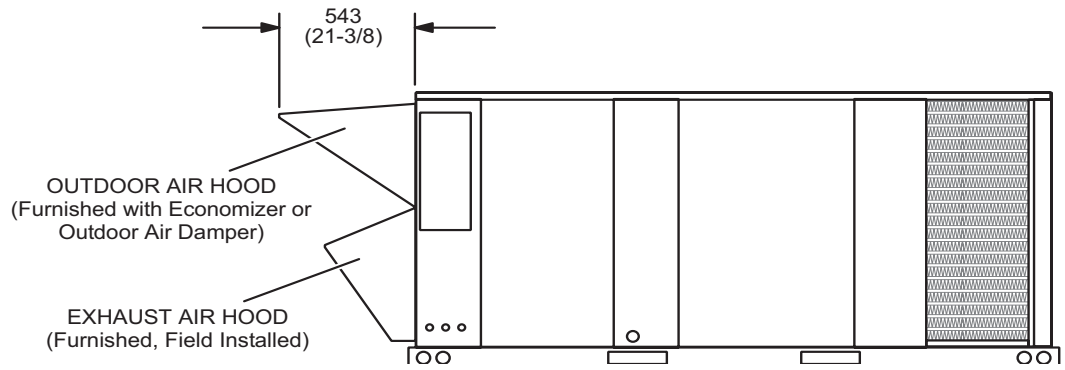
Model No.	CORNER WEIGHTS														CENTER OF GRAVITY									
	AA				BB				CC				DD				EE				FF			
	Base		Max.		Base		Max.		Base		Max.		Base		Max.		Base		Max.		Base		Max.	
	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	mm	in.	mm	in.	mm	in.	mm	in.
092S	107	236	127	280	91	201	105	232	99	218	112	248	120	264	140	309	1130	44.5	1105	43.5	622	24.5	648	25.5
092H	128	282	149	328	109	241	123	272	118	261	131	290	143	316	164	361	1130	44.5	1105	43.5	622	24.5	648	25.5
102S	109	241	130	286	93	205	107	237	101	222	114	252	122	270	143	315	1130	44.5	1105	43.5	622	24.5	648	25.5
102H	129	284	150	330	110	242	124	273	119	263	132	291	144	318	165	363	1130	44.5	1105	43.5	622	24.5	648	25.5
120S	116	255	136	301	97	215	111	246	105	231	118	261	129	285	150	330	1118	44	1092	43	629	24.75	654	25.75
120H	134	295	155	342	113	249	127	279	122	268	134	296	150	330	170	375	1118	44	1092	43	629	24.75	654	25.75
150S	125	275	146	321	105	232	119	263	115	253	128	282	142	312	162	358	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.)



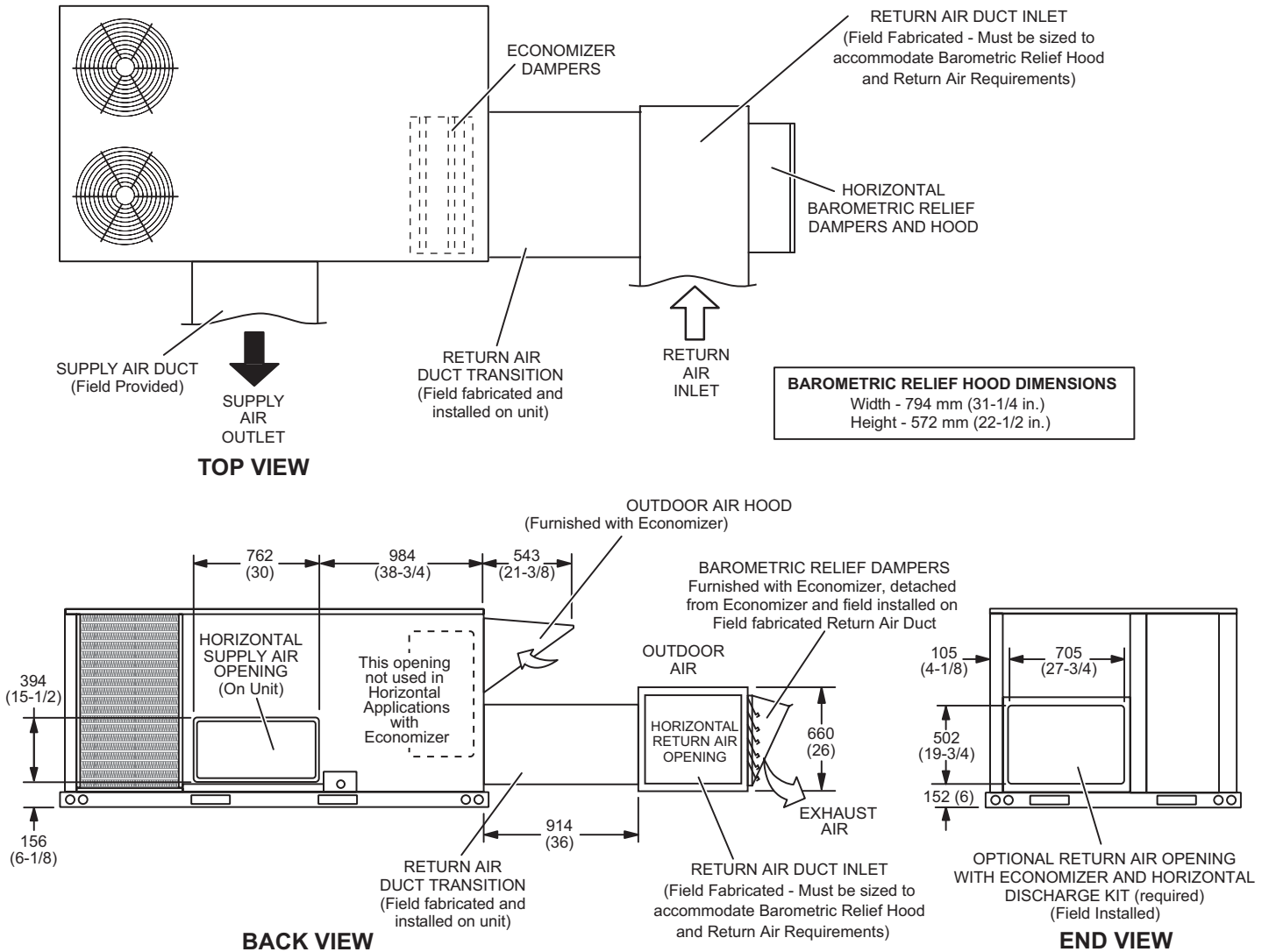
OUTDOOR AIR HOOD DETAIL



DIMENSIONS - ACCESSORIES - MM (INCHES)

HORIZONTAL ECONOMIZER APPLICATION

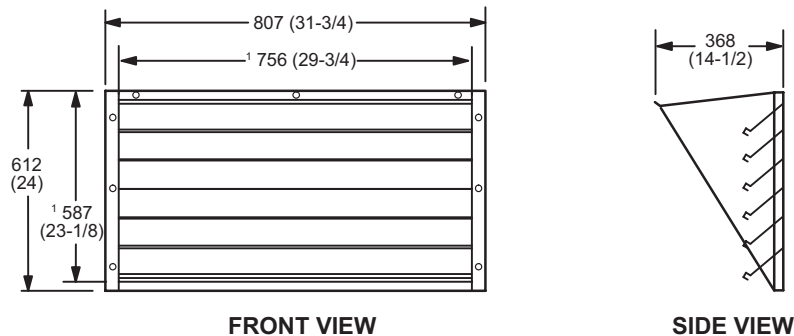
(With Furnished Barometric Relief Dampers and Optional Horizontal Discharge Kit - Required)



NOTE - Return Air Duct and Transition must be supported.

BAROMETRIC RELIEF DAMPERS (Furnished with Economizer)

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

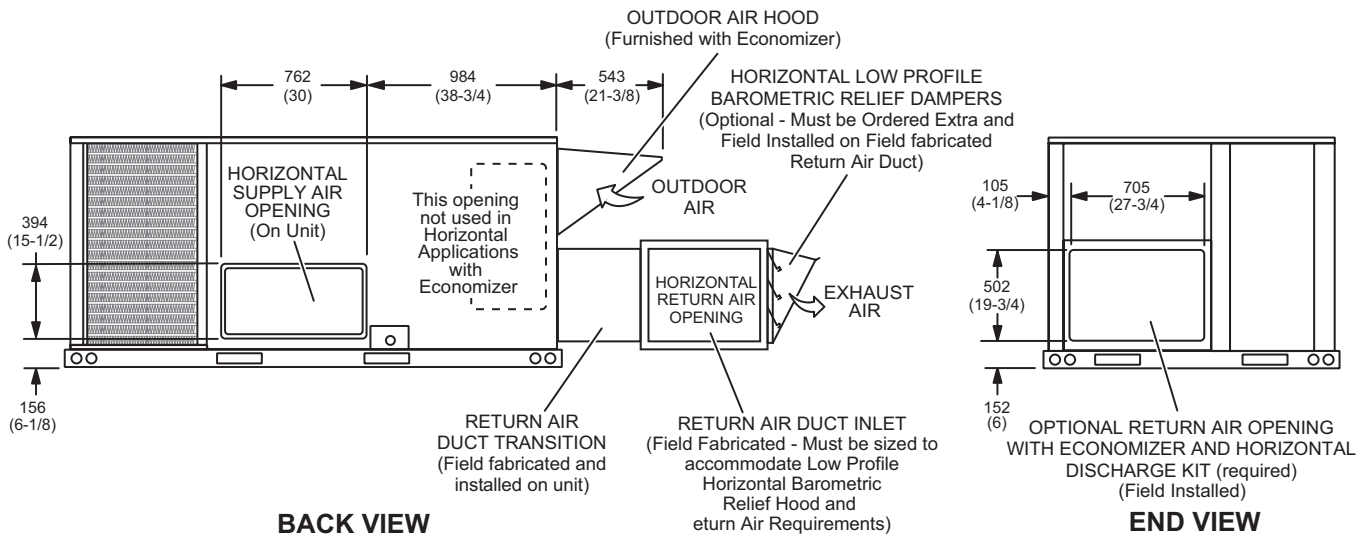
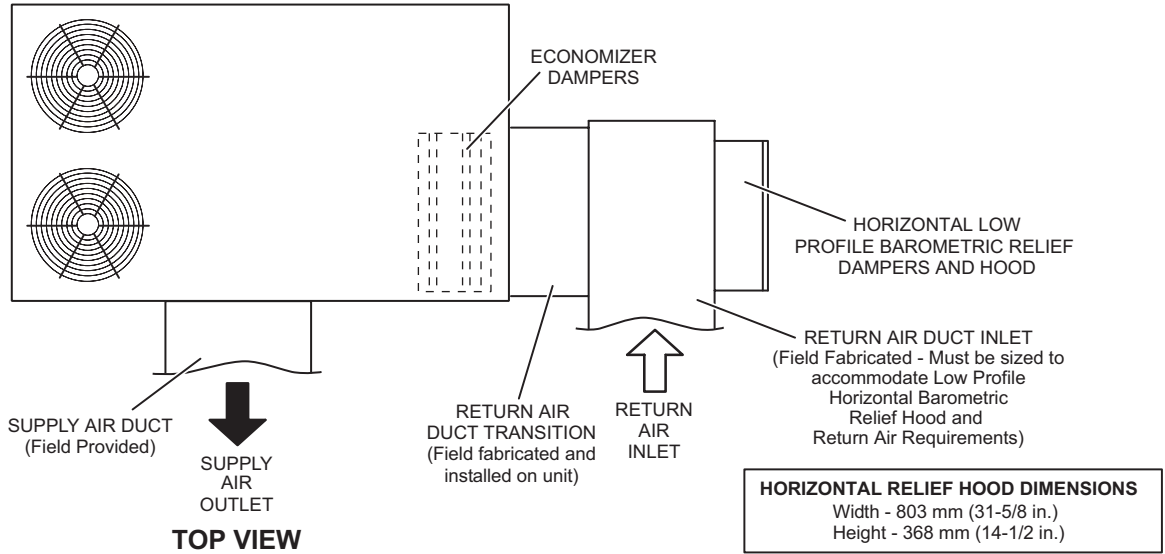


¹ NOTE - Opening size required in return air duct

DIMENSIONS - ACCESSORIES - MM (INCHES)

HORIZONTAL ECONOMIZER APPLICATION

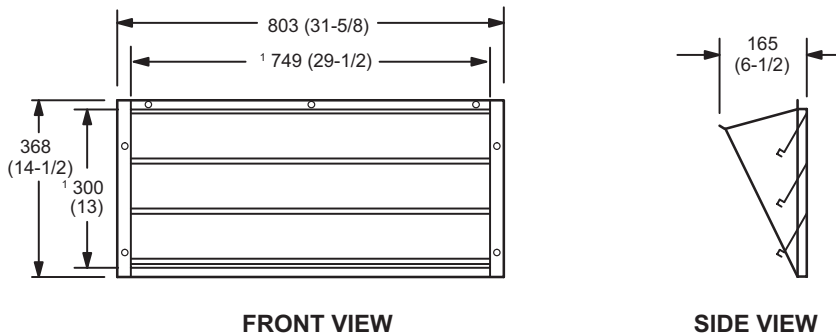
(with Optional Low Profile Horizontal Barometric Relief Dampers and Horizontal Discharge Kit - Required)



NOTE - Return Air Duct and Transition must be supported.

HORIZONTAL LOW PROFILE BAROMETRIC RELIEF DAMPERS

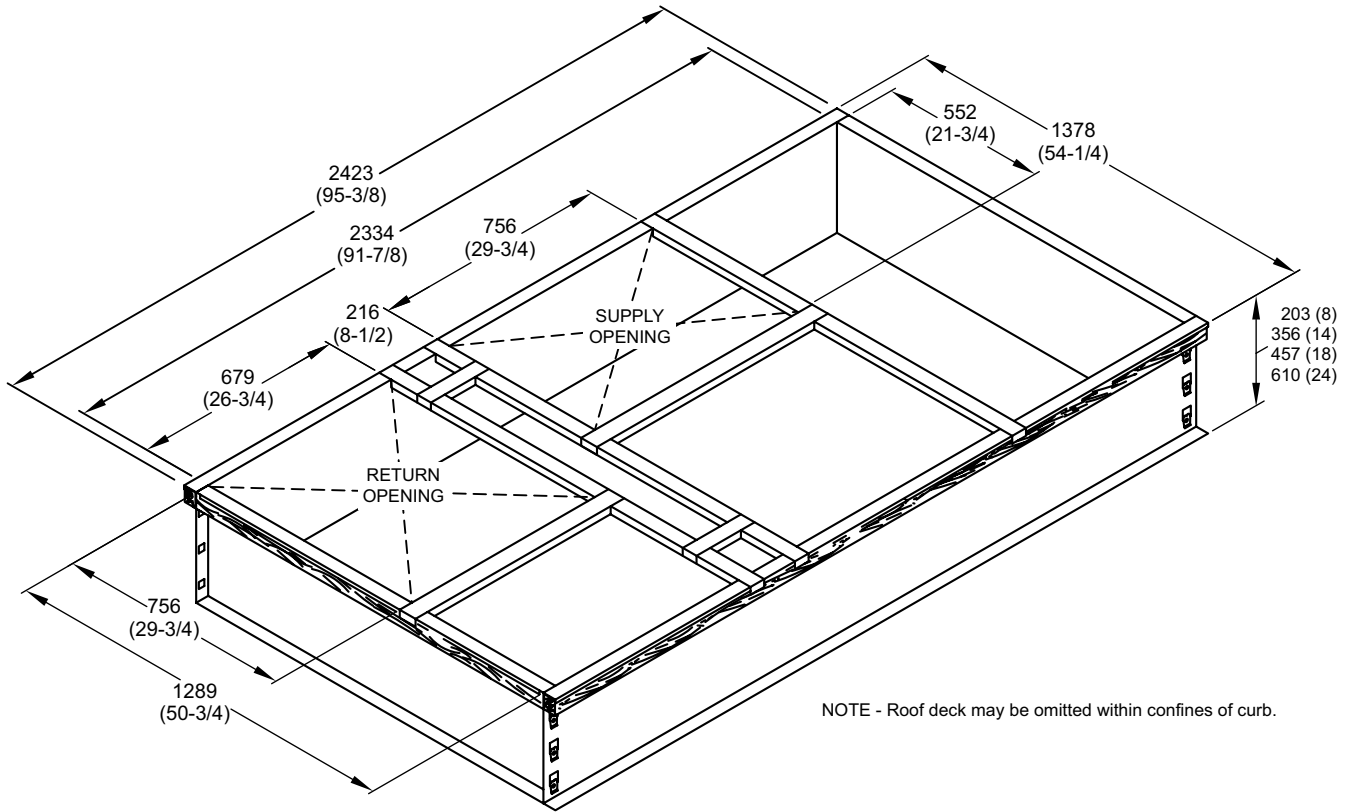
(Field installed in horizontal return air duct adjacent to unit)



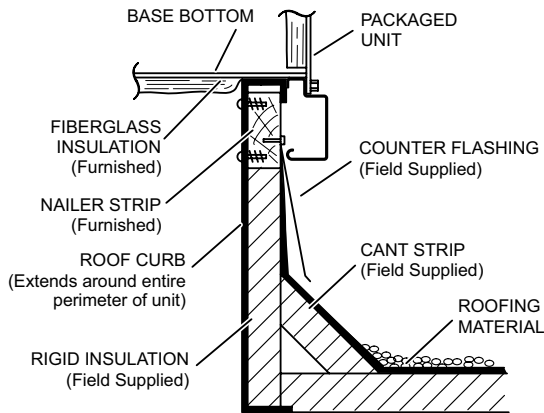
¹ NOTE - Opening size required in return air duct.

DIMENSIONS - ACCESSORIES - MM (INCHES)

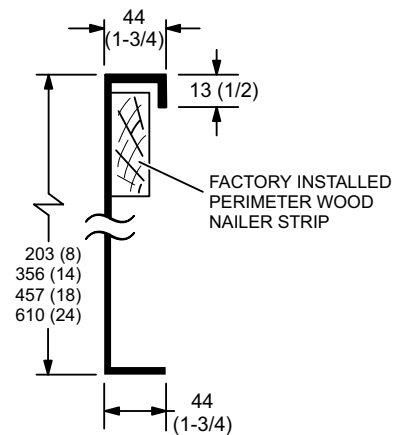
HYBRID ROOF CURBS - DOUBLE DUCT OPENING



TYPICAL FLASHING DETAIL FOR ROOF CURB

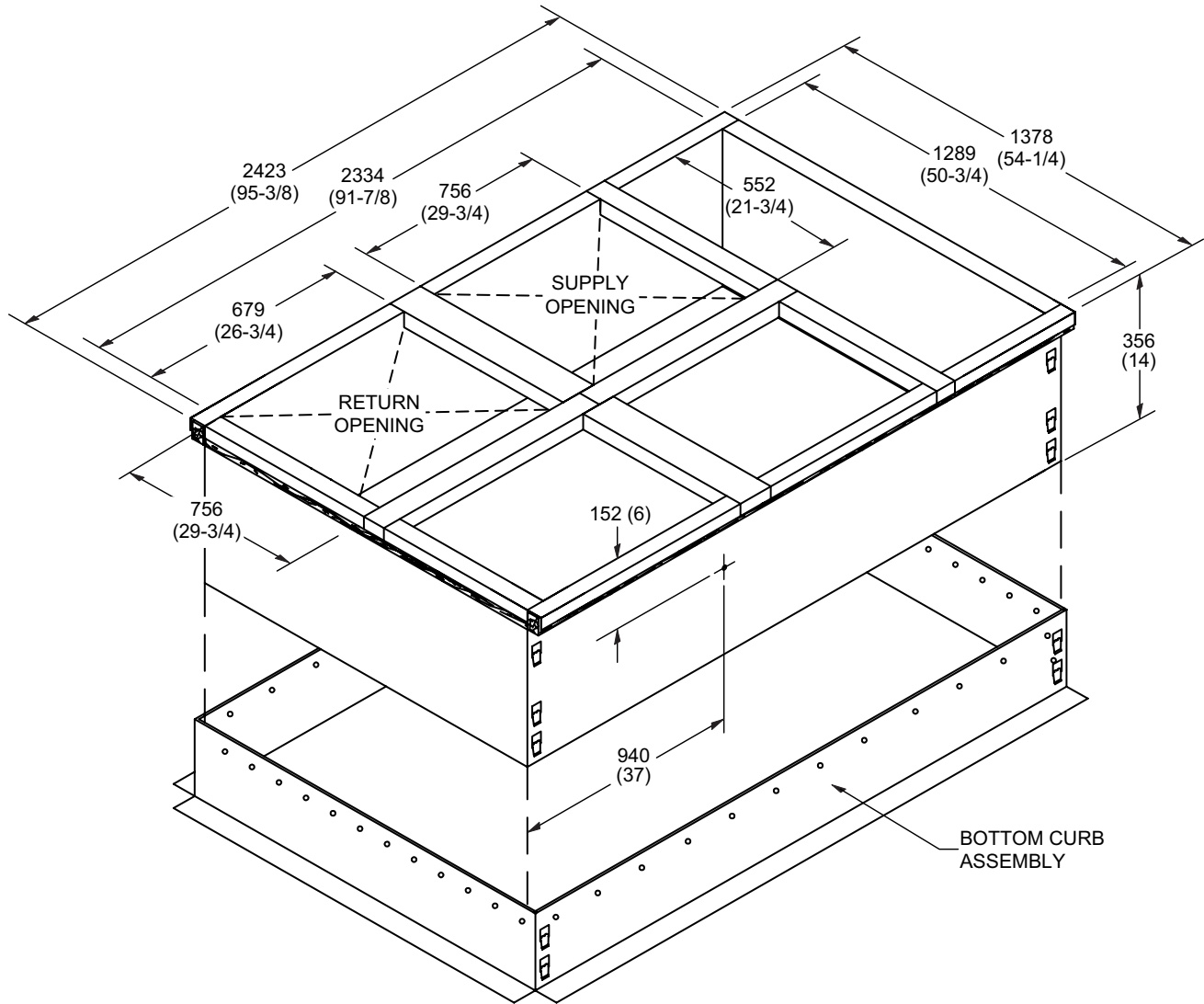


DETAIL ROOF CURB



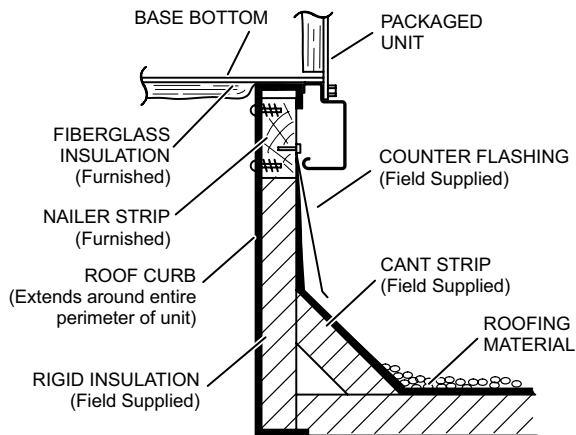
DIMENSIONS - ACCESSORIES - MM (INCHES)

ADJUSTABLE PITCH CURBS - DOUBLE DUCT OPENING

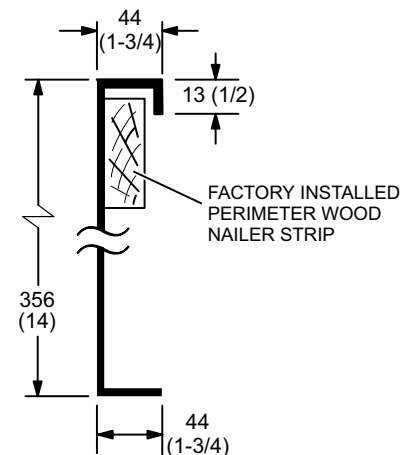


NOTE - Maximum slope pitch is 19 mm per 305 mm (3/4 in. per 1 foot) in any one direction.

TYPICAL FLASHING DETAIL FOR ROOF CURB



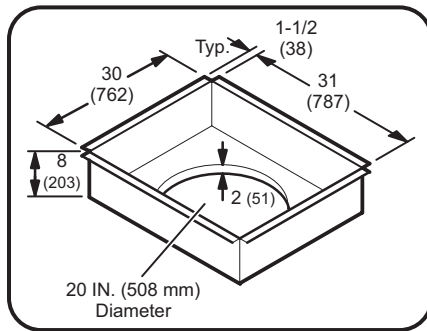
DETAIL ROOF CURB



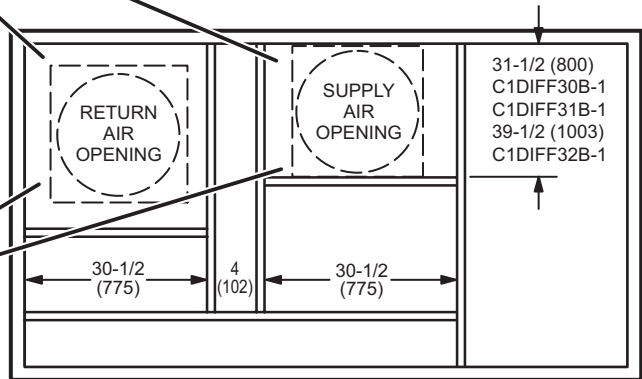
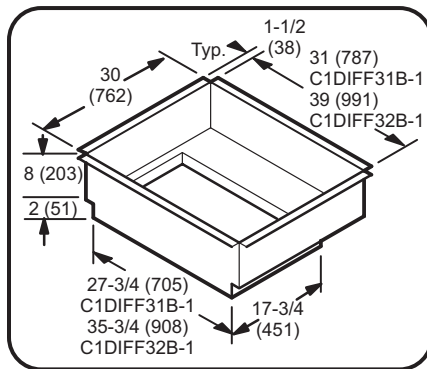
DIMENSIONS - ACCESSORIES - MM (INCHES)

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)

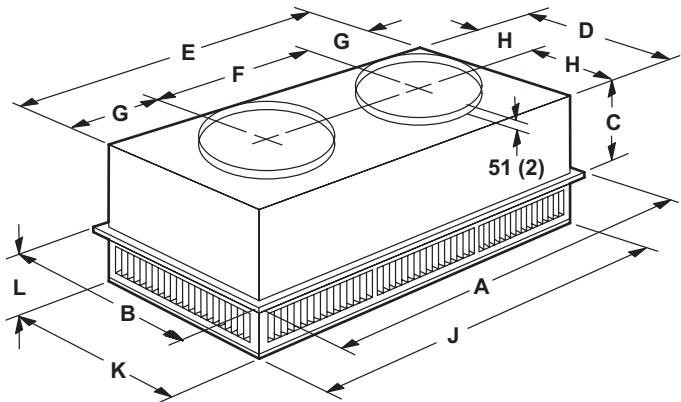


TOP VIEW

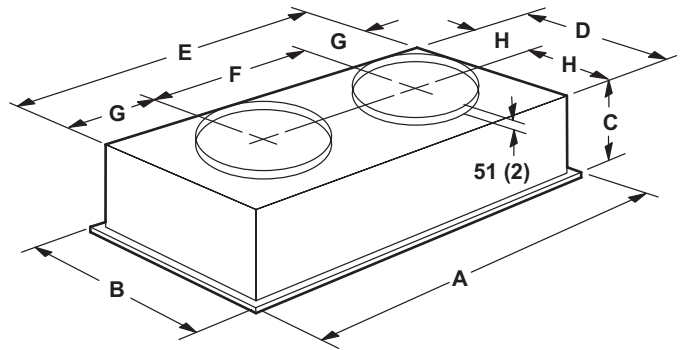
DIMENSIONS - ACCESSORIES - MM (INCHES)

COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

STEP-DOWN CEILING DIFFUSER



FLUSH CEILING DIFFUSER



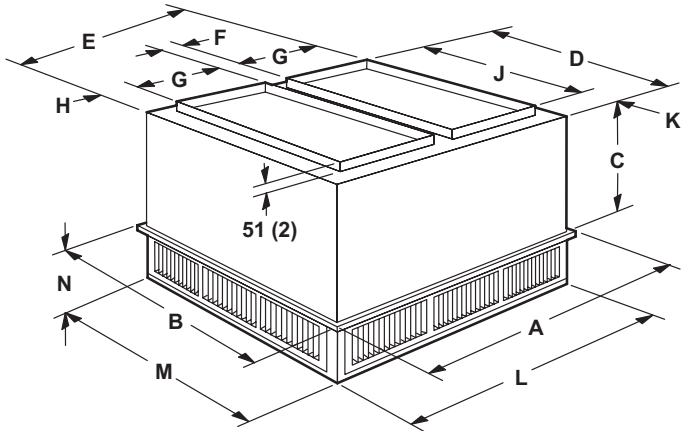
Model Number		RTD11-95S
A	mm	1159
	in.	47-5/8
B	mm	752
	in.	29-5/8
C	mm	365
	in.	14-3/8
D	mm	699
	in.	27-1/2
E	mm	1158
	in.	45-1/2
F	mm	572
	in.	22-1/2
G	mm	292
	in.	11-1/2
H	mm	349
	in.	13-3/4
J	mm	1156
	in.	45-1/2
K	mm	699
	in.	27-1/2
L	mm	206
	in.	8-1/8
Duct Size	mm	508 round
	in.	20 round

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

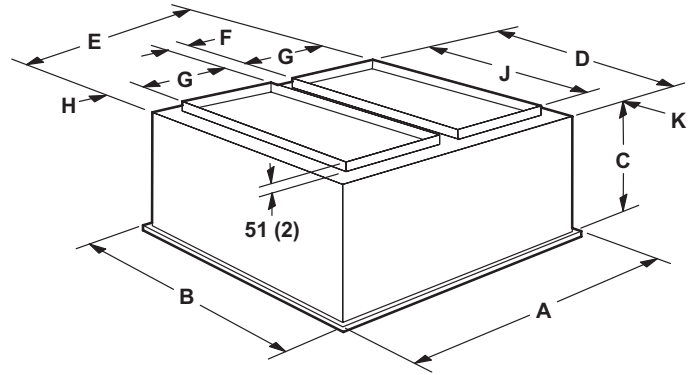
DIMENSIONS - ACCESSORIES - MM (INCHES)

COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

STEP-DOWN CEILING DIFFUSER



FLUSH 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

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
Blower Data	Updated for 102S models.
Electrical Data	Updated for 102S models.
Specifications	Updated for 102S models.



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