PACKAGED GAS/ELECTRIC

ZGB

Raider® Rooftop Units

50 Hz

COMMERCIAL
PRODUCT SPECIFICATIONS

Bulletin No. 490181
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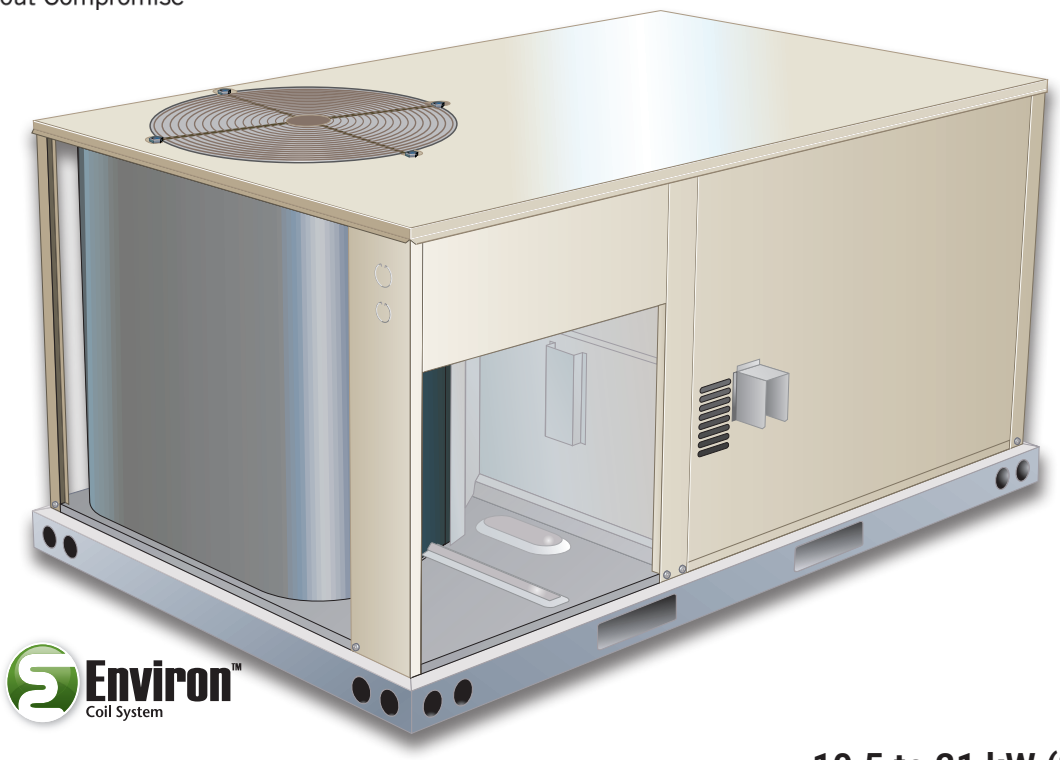
Supersedes April 2019

RAIDER®
Value Without Compromise®



10.5 to 21 kW (3 to 6 Tons)
Net Cooling Capacity – 8.8 to 16.9 kW (30 200 to 57 500 Btuh)
Gas Input Heat Capacity – 16.7 to 38.7 kW (57 000 to 132 000 Btuh)

MODEL NUMBER IDENTIFICATION

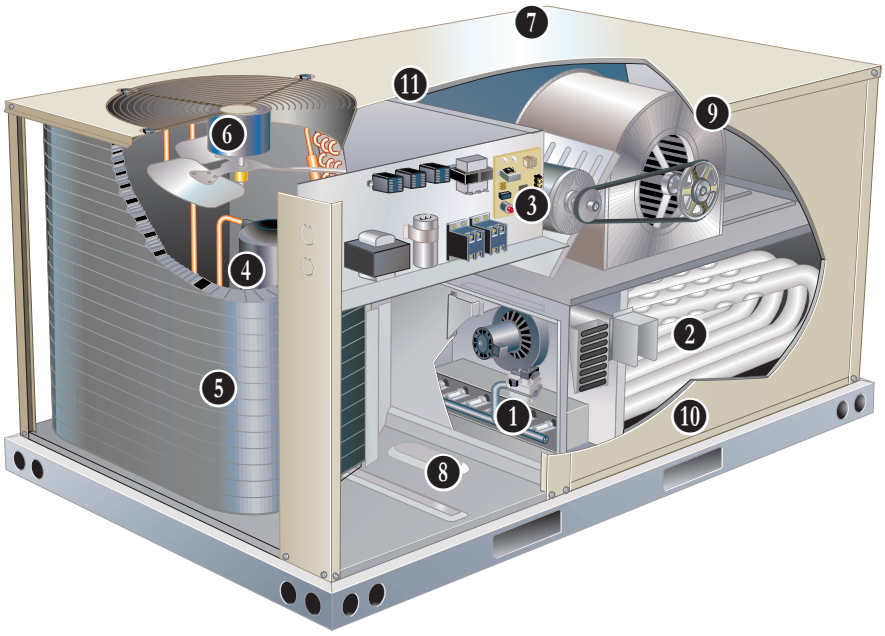
Z G B 060 S 4 B S 1 M

- **Brand/Family**
  Z = Raider® Product Line
- **Unit Type**
  G = Packaged Gas Heat w/ Electric Cooling
- **Major Design Sequence**
  B = 2nd Generation
- **Nominal Cooling Capacity - Tons**
  036 = 10.5 kW (3 Ton)
  048 = 14.0 kW (4 Ton)
  060 = 17.5 kW (5 Ton)
  074 = 21 kW (6 Ton)
- **Cooling Efficiency**
  S = Standard Efficiency
- **Refrigerant Type**
  4 = R-410A
- **Blower Type**
  B = Belt Drive
  T = Belt Drive (2 Speed)
- **Heating Type**
  S = Standard Gas Heat, 1 Stage
  M = Medium Gas Heat, 1 Stage
  U = Medium Gas Heat, 2 Stage
  T = High Gas Heat, 1 Stage
  H = High Gas Heat, 2 Stage
- **Minor Design Sequence**
  1 = 1st Revision
  2 = 2nd Revision
  3 = 3rd Revision
- **Voltage**
  M = 380/420V-3 phase-50Hz

FEATURE HIGHLIGHTS

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

1. Aluminized Steel Inshot Burners
2. Heat Exchanger
3. Electronic Pilot Ignition
4. Scroll Compressor
5. Coil System
6. Outdoor Coil Fan Motor
7. Construction
8. Power Entry
9. Exterior Panel
10. Insulation
11. Blower



CONTENTS

APPROVALS

- 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) Standards 210/240 (10.5 to 17.5 kW models) and 340/360 (21 kW models) while operating at rated voltage and air volumes
- International Organization for Standardization (ISO) 9001 Registered Manufacturing Quality System

FEATURES AND BENEFITS

HEATING SYSTEM

1 - Aluminized steel inshot burners
- Direct spark ignition
- Electronic flame sensor
- Combustion air inducer
- Redundant automatic single or dual stage gas valve with manual shut-off

2 Heat Exchanger
- Tubular construction
- Aluminized steel
- Life cycle tested

3 Electronic Pilot Ignition
- Electronic spark igniter provides positive direct ignition of burners on each operating cycle
- 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

Limit Controls
- Factory installed, redundant limit controls with fixed temperature setting
- Heat limit controls protect 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 (1 Stage) 16.7 kW (57 000 Btuh)
- Medium Gas Heat (1 Stage) 27.8 kW (95 000 Btuh)
- Medium Gas Heat (2 Stage) 20.8/27.8 kW (71 000/95 000 Btuh)
- High Gas Heat (1 Stage) 38.7 kW (132 000 Btuh)
- High Gas Heat (2 Stage) 29.0/38.7 kW (99 000/132 000 Btuh)

Options / Accessories

Field Installed

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
- Also prevents ice formation on intake louvers

COOLING SYSTEM

- Designed to maximize sensible and latent cooling performance at design conditions
- System can operate from 35°F to 125°F without any additional controls

R-410A Refrigerant
- Non-chlorine based
- Ozone friendly

4 Single Speed Scroll Compressor (036 through 060 Models)
- Resiliently mounted on rubber grommets for quiet operation
- Scroll compressors for high performance, reliability and quiet operation

Two-Stage Compressor (074 Models)
- Two-stage scroll compressors for increased part load efficiency, high performance, reliability and quiet operation
- Resiliently mounted on rubber grommets for quiet operation

Thermal Expansion Valve (074 Models)
- Ensures optimal performance throughout the application range
- Removable element head

FEATURES AND BENEFITS

COOLING SYSTEM (continued)

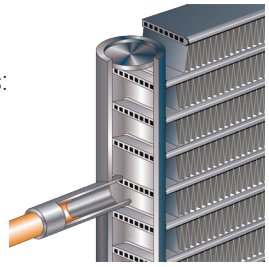
Refrigerant Metering Orifice (036 through 060 Models)
- Accurately meters refrigerant in system
- Refrigerant control is accomplished by exact sizing of refrigerant metering orifice

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

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

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

5 Lennox' Environ™ Coil System
- Lightweight, all aluminum brazed fin construction
- Constructed of three components:
  - A flat extrusion tube
  - Fins in-between the flat extrusion tube
  - Two refrigerant manifolds



Environ™ Coil System Features:
- Improved heat transfer performance due to high primary surface area (flat tubes) versus secondary surface (fins)
- 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
- Factory leak tested
- Cross row circuiting with rifled tubing

Condensate Drain Pan
- Plastic pan, sloped to meet drainage requirements of ASHRAE 62.1
- End drain connection

6 Outdoor Coil Fan Motor
- Thermal overload protected
- Totally enclosed
- Permanently lubricated bearings
- Shaft down
- Fan guard mount

Outdoor Coil Fan Guard
- Polyvinyl chloride (PVC) coated fan guard furnished

Required Selections

Cooling Capacity
- Specify nominal cooling capacity of the unit

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 fan while allowing compressor operation in the cooling cycle
- 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 -18°C

NOTE - A crankcase heater must be installed on the compressor.

CABINET

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

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

NOTE - Units can be field converted to horizontal airflow.

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

NOTE - Optional Bottom Power Entry Kit is available.

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

10 Insulation
- Fully insulated with non-hygroscopic fiberglass insulation (conditioned areas)

FEATURES AND BENEFITS

CABINET (continued)

Access Panels
- Compressor
- Heating
- Controls
- Blower
- Air filter/economizer section

Options / Accessories

Factory Installed

Corrosion Protection
- Completely flexible immersed coating
- 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
- Outdoor Corrosion Protection
  - Coated coil

Field Installed

Combination Coil/Hail Guards
- Heavy gauge steel frame
- Painted to match cabinet
- Expanded metal mesh protects outdoor coil

CONTROLS

Unit Control
- All control voltage is provided via a 24V (secondary) transformer with inline fuse protection
- Heat/Cool Staging - Capable of up to 1 heat / 2 cool staging with a thermostat
- Night Setback Mode - Saves energy by closing outdoor air dampers and operating supply fan on thermostat demand only

Options/Accessories

Field Installed

Smoke Detectors

NOTE - Smoke detectors are not available and must be field provided by installer.

Thermostats
- Control system and thermostat options, see page 8

BLOWER

11 • A wide selection of supply air blower options are available to meet a variety of air flow requirements

Motor
- Overload protected
- Ball bearings
- Belt drive motors are offered on all models and are available in several different sizes to maximize air performance
- Two-speed belt drive motor (low static/high static) is available on 074 models

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

Required Selections

Supply Air Blower
- Forward curved blades
- Blower wheel statically and dynamically balanced.
- Ball bearings

Adjustable pulley (allows speed change)

INDOOR AIR QUALITY

Air Filters
- Disposable 51 mm filters furnished as standard

Options / Accessories

Field Installed

Indoor Air Quality (CO_2) Sensor
- Monitors CO_2 levels adjusts economizer dampers as needed for Demand Control Ventilation

ELECTRICAL

Marked & Color-Coded Wiring
- All electrical wiring is color-coded and marked to identify which components it is connecting

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

Required Selections

Voltage Choice
- Specify when ordering base unit

OPTIONS / ACCESSORIES

ECONOMIZER

Factory or Field Installed

Economizer (Downflow or Horizontal)
(Standard and High Performance Common Features)

- Outdoor Air Hood is furnished
- Includes Barometric Relief Dampers with Exhaust Hood
- Barometric Relief Dampers allow relief of excess air,
- Aluminum blade dampers prevent blow back and outdoor air infiltration during off cycle
- Exhaust hood with bird screen furnished
- Demand Control Ventilation (DCV) ready using optional CO_2 sensors
- Single temperature control is furnished with Economizer
- Outdoor air sensor enables Economizer if the outdoor temperature is less than the setpoint of the control

NOTE - Horizontal Economizer is field installed only.

Standard Economizer Features (Not for Title 24)

- 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 55°F when CO_2 is higher than the CO_2 setpoint
- Demand Control Ventilation (DCV) LED - A steady green Demand Control Ventilation LED indicates the IAQ reading is higher than setpoint and requires more fresh air
- Free Cool LED - A steady green LED indicates outdoor air is suitable for free cooling

NOTE - 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

- Approved for California Title 24 building standards
- Low leakage dampers are Air Movement and Control Association International (AMCA) Class 1A Certified - Maximum 3 CFM per sq. ft. leakage at 1 in. w.g.
- ASHRAE 90.1-2010 compliant
- Gear-driven action
- High torque 24-volt fully-modulating spring return damper motor
- Return air and outdoor air dampers
- Plug-in connections to unit
- Stainless steel bearings
- Enhanced thermoplastic vulcanizate (TPV) blade edge seals
- Flexible stainless steel jamb seals minimize air leakage

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

NOTE - The Free Cooling setpoint for Title 24 applications must be set based on the Climate Zone where the system is installed. See Section 140.4 "Prescriptive Requirements for Space Conditioning Systems" of the California Energy Commission's 2013 Building Energy Efficiency Standards. Refer to Installation Instructions for complete setup information and menu parameters available.

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

OPTIONS / ACCESSORIES

ECONOMIZER (continued)

High Performance Economizer Control Module (continued)
Main Menu Structure:

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

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

Field Installed

Single Enthalpy Temperature Control (Not for Title 24)

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

EXHAUST

Field Installed

Power Exhaust Fan - Downflow or Horizontal

- Installs external to unit for applications with Economizer option
- Provides exhaust air pressure relief
- Interlocked to run when supply air blower is operating
- Fan runs when outdoor air dampers are 50% open (adjustable)
- Motor is overload protected
- Fan is 305 mm diameter with
- Five fan blades
- 0.25 kW motor

OUTDOOR AIR

Field Installed

Outdoor Air Dampers - Downflow

- Single blade damper
- 0 to 25% (fixed) outdoor air adjustable
- Installs in unit
- Automatic model features fully modulating spring return damper motor with plug-in connection
- Manual model features a slide damper

NOTE - Maximum mixed air temperature in cooling mode is 38°C.

ROOF CURBS

Field Installed

Hybrid Roof Curbs, Downflow

- Nailer strip furnished; mates to unit
- US National Roofing Contractors approved
- Shipped knocked down
- Interlocking tabs fasten corners together; no tools required
- Can also be fastened together with furnished hardware
- Available in 203, 356, 457, and 610 mm heights

Adaptor Curbs (not shown)

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

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

CEILING DIFFUSERS

Field Installed

- Flush or Step-Down
- White powder coat finish on diffuser face and grilles
- Insulated UL listed duct liner
- Diffuser box has collars for duct connection
- Step-down diffusers have double deflection blades
- Flush diffusers have fixed blades
- Provisions for suspending
- Internally sealed to prevent recirculation
- Removable return air grille
- Adapts to T-bar ceiling grids or plaster ceilings

Transitions (Supply and Return)

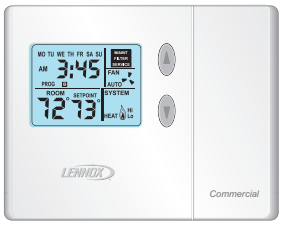
NOTE - Ceiling Diffuser Transitions are not furnished and must be field fabricated.

OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

ComfortSense® 7500 Commercial 7-Day Programmable Thermostat

- Four-Stage Heating / Two-Stage Cooling
- Universal Multi-Stage
- Intuitive Touchscreen Interface
- Automatic Changeover between Heating and Cooling
- Full Seven-Day Programming
- Four Time Periods Per Day
- Temperature and Humidity Control
- One-Touch Away Mode
- Holiday Scheduling
- Smooth Setback Recovery (SSR)
- Performance Reports
- Notifications/Reminders
- Economizer Relay Control
- Backlit Display
- Wallplate Furnished
- FDD, ASHRAE, and IECC Compliant

ComfortSense® 3000 Commercial 5-2 Day Programmable Thermostat



- Two-Stage Heating / Two-Stage Cooling
- Conventional Systems
- Intuitive Interface
- 5-2 Day Programming
- Program Hold
- Remote Indoor Temperature Sensing
- Smooth Setback Recovery (SSR)
- Economizer Relay Control
- Maintenance/Filter/Service Reminders
- Backlit Display
- Wallplate Furnished
- Simple Up and Down Temperature Control

Description		Model No.	Catalog No.
ComfortSense® 7500 7-Day Programmable		C0STAT06FF2L	**17G74**
	Universal thermostat locking guard (clear)	C0MISC15AE1-	**39P21**
Temperature Sensors	[1] Remote non-adjustable wall-mount 20k	C0SNZN01AE2-	**47W36**
	[1] Remote non-adjustable wall-mount 10k	C0SNZN73AE1-	**47W37**
	Remote non-adjustable discharge air (duct mount)	C0SNDC00AE1-	**19L22**
	Outdoor temperature sensor	C0SNSR03AE1-	**X2658**
[1] Remote wall-mount sensors can be applied in any of the following combinations: One Sensor - (1) 47W36, Two Sensors - (2) 47W37, Three Sensors - (2) 47W36 and (1) 47W37 Four Sensors - (4) 47W36, Five Sensors - (3) 47W36 and (2) 47W37			
ComfortSense® 3000 5-2 Day Programmable		C0STAT05FF1L	**11Y05**
	Thermostat wall mounting plate	C0MISC17AE1-	**X2659**
Temperature Sensor	Remote non-adjustable wall mount 10k averaging	C0SNZN73AE1-	**47W37**
BACnet Controls	7-Day BACnet Thermostat	- - -	**Y8241**
	BACnet Module (factory or field)	K0CTRL31A-2	**16X70**
[2] BACnet Room Sensors	With Display	K0SNSR01FF1	**97W23**
	Without Display	K0SNSR00FF1	**97W24**

[2] Only compatible with BACnet Module (16X70).

Bacnet Compatible Thermostat With Reheat Function

- 7-Day Programmable
- BTL listed MS/TP ensures compatibility with any BACnet system
- Built-in control programs for conventional and heat pump applications
- Conventional systems up to 3-stage heat and 3-stage cool
- Heat pumps with 1 or 2 compressors and up to 2-stage auxiliary heat
- On-board temperature and humidity sensor
- Multiple configurable inputs and outputs enable advanced control strategies
- Set-up Wizard enables rapid system configuration
- No special tools required for installation or commissioning
- Seven-day (2, 4 or 6 event) occupancy scheduling per day
- Backlit 5-inch LCD touchscreen

OPTIONS / ACCESSORIES

Item		Catalog No.	ZGB 036	ZGB 048	ZGB 060	ZGB 074
COOLING SYSTEM						
Condensate Drain Trap	Polyvinyl Chloride (PVC) - C1TRAP20AD2	**22H54**	X	X	X	X
	Copper - C1TRAP10AD2	**76W27**	X	X	X	X
Drain Pan Overflow Switch	Z1SNSR90A1	**99W59**	X	X	X	X
Low Ambient Kit	Z1SNSR33A-1	**99W67**	X	X	X	X
HEATING SYSTEM						
Gas Heat Input	Standard 1 Stage - 16.7 kW input	Factory	O	O	O	O
	Medium 1 Stage - 27 kW input	Factory	O	O	O	O
	Medium 2 Stage - 20.8/27 kW input	Factory	O	O	O	O
	High 1 Stage - 38.7 kW input	Factory		O	O	O
	High 2 Stage - 29.0/38.7 kW input	Factory		O	O	O
Propane Conversion Kits	For 1 Stage models - C1PROP10AP3	**21Z22**	X	X	X	X
	For 2 Stage models - C1PROP20AP3	**21Z23**	X	X	X	X
Vertical Vent Extension Kit	C1EXTN20FF1	**31W62**	X	X	X	X
BLOWER - SUPPLY AIR						
Motors	Belt Drive - 0.62 kW Standard Efficiency	Factory	O	O		
	Belt Drive - 0.93 kW Standard Efficiency	Factory	O	O	O	
	Belt Drive - 1.24 kW Standard Efficiency	Factory			O	O
	Belt Drive - 1.24 kW (2 Speed)	Factory				O
Drive Kits See Blower Data Tables for selection	Kit #ZA07 - 705-1077 rev/min	Factory	O			
	Kit #ZA08 - 759-1158 rev/min	Factory		O		
	Kit #ZA09 - 919-1247 rev/min	Factory			O	
	Kit #ZA10 - 1025-1391 rev/min	Factory	O			
	[1] Kit #ZA11 -1111-1437 rev/min	Factory		O		
	[2] Kit #ZA12 - 1190-1540 rev/min	Factory			O	
	Kit #ZAA03 - 665-921 rev/min	Factory				O
	Kit #ZAA04 - 768-1023 rev/min	Factory				O
	Kit #ZAA05 - 921-1177 rev/min	Factory				O
CABINET						
Combination Coil/Hail Guards	Z1GARD52A-1	**12X19**	X	X		
	Z1GARD52AT1	**12X20**			X	X
Corrosion Protection		Factory	O	O	O	O
ELECTRICAL						
Voltage 50 Hz with neutral	380/420V - 3 phase	Factory	O	O	O	O
Bottom Power Entry Kit	Z1PEKT01A-1	**98W08**	X	X	X	X
ECONOMIZERS						
Standard Economizer With Outdoor Air Hood						
Standard Economizer (Downflow) Includes Barometric Exhaust Dampers and Exhaust Hood	Z1ECON30A-2	**14D94**	OX	OX	OX	OX
Standard Economizer (Horizontal) Includes Barometric Exhaust Dampers and Exhaust Hood	Z1ECON16A-2	**14D92**	X	X	X	X
Standard Economizer Controls						
Single Enthalpy Control	C1SNSR64FF1	**21Z09**	X	X	X	X
High Performance Economizer With Outdoor Air Hood						
High Performance Economizer (Downflow) Includeds Barometric Exhaust Dampers and Exhaust Hood	Z1ECON32A-4	**20V23**	OX	OX	OX	OX
High Performance Economizer (Horizontal) Includes Barometric Exhaust Dampers and Exhaust Hood	Z1ECON33A-4	**20V24**	X	X	X	X
High Performance Economizer Controls						
Single Enthalpy Control	C1SNSR61FF1	**11G21**	X	X	X	X

[1] ZA11 drive kits require the 0.93 kW motor.

[2] ZA12 drive kit requires the 1.24 kW motor.

NOTE - The catalog and model numbers that appear here are for ordering field installed accessories only.

OX - Field Installed or Configure to Order (factory installed)

O - Configure to Order (Factory Installed)

X - Field Installed.

OPTIONS / ACCESSORIES

Item		Catalog No.	ZGB 036	ZGB 048	ZGB 060	ZGB 074
OUTDOOR AIR						
Outdoor Air Dampers - Includes Outdoor Air Hood						
Motorized	Z1DAMP21A-2	**15D19**	X	X	X	X
Manual	Z1DAMP11A-2	**15D20**	X	X	X	X
POWER EXHAUST FAN						
Standard Static (Downflow)	380/420V-3ph - Z1PWRE10A-1G	**23E01**	X	X	X	X
Standard Static (Horizontal)	380/420V-3ph - Z1PWRE10A-1G	**28E01**	X	X	X	X
INDOOR AIR QUALITY						
Indoor Air Quality (CO_2) Sensors						
Sensor - Wall-mount, off-white plastic cover with LCD display	C0SNSR50AE1L	**77N39**	X	X	X	X
Sensor - Wall-mount, black plastic case, no display, rated for plenum mounting	C0SNSR53AE1L	**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 sensor (**77N39**)	C0MISC16AE1	**90N43**	X	X	X	X
ROOF CURBS						
Hybrid Roof Curbs, Downflow						
203 mm height	Z1CURB70A-1	**11F76**	X	X	X	X
356 mm height	Z1CURB71A-1	**11F77**	X	X	X	X
457 mm height	Z1CURB72A-1	**11F78**	X	X	X	X
610 mm height	Z1CURB73A-1	**11F79**	X	X	X	X
CEILING DIFFUSERS						
Step-Down - Order one	RTD9-65S	**13K60**	X	X	X	
	RTD11-95S	**13K61**				X
Flush - Order one	FD9-65S	**13K55**	X	X	X	
	FD11-95S	**13K56**				X

NOTE - Ceiling Diffuser Transitions are not furnished and must be field fabricated.

NOTE - The catalog and model numbers that appear here are for ordering field installed accessories only.

OX - Field Installed or Configure to Order (factory installed)

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SPECIFICATIONS — BELT DRIVE MODELS | 10.5 kW - 17.5 kW

General Data	**Nominal Size**	**10.5 kW (3 Ton)**	**14.0 kW (4 Ton)**	**17.5 kW (5 Ton)**
	Model No.	**ZGB036S4B**	**ZGB048S4B**	**ZGB060S4B**
	Efficiency Type	**Standard**	**Standard**	**Standard**
	Blower Type	Single Speed Belt Drive	Single Speed Belt Drive	Single Speed Belt Drive
Cooling Performance	Gross Cooling Capacity - kW (Btuh)	9.2 (31 400)	12.0 (40 900)	14.6 (49 900)
	[1] Net Cooling Capacity - kW (Btuh)	8.8 (30 200)	11.6 (39 700)	14.2 (48 600)
	Rated Air Flow - L/s (cfm)	560 (1190)	650 (1380)	815 (1725)
	[3] Sound Rating Number (SRN) (dBA)	77	80	78
	Total Unit Power - kW	2.55	3.5	4.3
	[1] SEER (Btuh/Watt)	14.0	14.0	14.0
	[1] EER (Btuh/Watt) at 35°C (95°F)	[1] 11.8	[1] 11.3	[1] 11.3
	[2] EER (Btuh/Watt) at 46°C (115°F)	8.6	8.2	7.3
Refrigerant	Type	R-410A	R-410A	R-410A
	Charge Furnished	2.32 kg (5 lbs. 2 oz.)	2.38 kg (5 lbs. 4 oz.)	3.32 kg (7 lbs. 5 oz.)
Gas Heating Options - See page 13		Standard (1 Stage) or Medium (1 or 2 Stage)	Standard (1 Stage), Medium (1 or 2 Stage) or High (1 or 2 Stage)	
Compressor Type (one per unit)		Scroll	Scroll	Scroll
Outdoor Coil	Net face area - m^2 (sq. ft.)	1.41 (15.2)	1.41 (15.2)	1.85 (19.9)
	Number of rows	1	1	1
	Fins per m (in.)	906 (23)	906 (23)	906 (23)
Outdoor Coil Fan	Motor W (hp)	(1) 187 (1/4)	(1) 187 (1/4)	(1) 187 (1/4)
	Motor rev/min	690	690	690
	Total motor watts	260	260	260
	Diameter - mm (in.)	(1) 559 (22)	(1) 559 (22)	(1) 559 (22)
	Number of blades	4	4	4
	Total air volume - L/s (cfm)	1453 (3080)	1453 (3080)	1453 (3080)
Indoor Coil	Net face area - m^2 (sq. ft.)	0.78 (8.4)	0.78 (8.4)	1.0 (10.8)
	Tube diameter - mm (in.)	9.5 (3/8)	9.5 (3/8)	9.5 (3/8)
	Number of rows	3	3	3
	Fins per m (in.)	551 (14)	551 (14)	551 (14)
	Drain Connection (no.and size) - in.	(1) 1 NPT	(1) 1 NPT	(1) 1 NPT
	Expansion device type	Fixed Orifice	Fixed Orifice	Fixed Orifice
[4] **Indoor Blower & Drive Selection**	Nominal Motor Size kW (hp)	0.62 (0.83), 0.93 (1.25)	0.62 (0.83), 0.93 (1.25)	0.93 (1.25), 1.24 (1.66)
	Maximum Usable Motor Size kW (hp)	0.71 (0.95), 1.07 (1.43)	0.71 (0.95), 1.07 (1.43)	1.07 (1.43), 1.42 (1.91)
	Available Drive Kits	ZA07 705 - 1077 rev/min ZA10 1025 - 1391 rev/min	ZA08 759 - 1158 rev/min [5] ZA11 1111 - 1437 rev/min	ZA09 919-1247 rev/min [6] ZA12 1190-1540 rev/min
	Wheel nominal diameter x width - mm (in.)	254 x 254 (10 x 10)	254 x 254 (10 x 10)	254 x 254 (10 x 10)
Filters	Type	Disposable		
	Number and size - mm (in.)	(4) 356 x 508 x 51 (14 x 20 x 2)		(2) 406 x 508 x 51 (16 x 20 x 2) (2) 508 x 508 x 51 (20 x 20 x 2)
Electrical Characteristics - 50 Hz		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 210/240; 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] Sound Rating Number (SRN) rated in accordance with test conditions included in ANSI/AHRI Standard 270-2008.

[4] Using total air volume and system static pressure requirements determine from blower performance tables rev/min and motor size required. Maximum usable size of motors furnished is shown. If motors of comparable size are used, be sure to keep within the service factor limitations outlined on the motor nameplate.
0.62 kW = 0.83 hp (1.0 nominal hp) while operating at rated voltage and frequency.
0.93 kW = 1.25 hp (1.5 nominal hp) while operating at rated voltage and frequency.
1.24 kW = 1.66 hp (2.0 nominal hp) while operating at rated voltage and frequency.

[5] ZA11 drive kits require the 0.93 kW motor.

[6] ZA12 drive kit requires the 1.24 kW motor.

SPECIFICATIONS — BELT DRIVE MODELS | 21 kW - 17.5 kW

General Data		**Nominal Size**	**21 kW (6 Ton)**	**21 kW (6 Ton)**
		Model No.	**ZGB074S4T**	**ZGB074S4B**
		Efficiency Type	**Standard**	**Standard**
		Blower Type	Two Speed Belt Drive	Single Speed Belt Drive
Cooling Performance	Gross Cooling Capacity - kW (Btuh)		17.3 (59 000)	17.3 (59 000)
	[1] Net Cooling Capacity - kW (Btuh)		16.9 (57 500)	16.9 (57 500)
	Rated Air Flow - L/s (cfm)		1038 (2200)	1038 (2200)
	[3] Sound Rating Number (SRN) (dBA)		84	84
	Total Unit Power - kW		5.1	5.2
	[1] IEER (Btuh/Watt)		15.0	13.0
	[1] EER (Btuh/Watt) at 35°C (95°F)		11.0	11.0
	[2] EER (Btuh/Watt) at 46°C (115°F)		7.6	7.6
Refrigerant		Type	R-410A	R-410A
		Charge Furnished	3.26 kg (7 lbs. 3 oz.)	3.26 kg (7 lbs. 3 oz.)
Gas Heating Options - See page 13			Standard (1 Stage), Medium (1 or 2 Stage) or High (1 or 2 Stage)	
Compressor Type (one per unit)			Scroll	Scroll
Outdoor Coil		Net face area - m^2 (sq. ft.)	1.85 (19.9)	1.85 (19.9)
		Number of rows	1	1
		Fins per m (in.)	906 (23)	906 (23)
Outdoor Coil Fan		Motor W (hp)	(1) 249 (1/3)	(1) 249 (1/3)
		Motor rev/min	900	900
		Total motor watts	290	290
		Diameter - mm (in.)	(1) 559 (22)	(1) 559 (22)
		Number of blades	3	3
		Total air volume - L/s (cfm)	1680 (3500)	1680 (3560)
Indoor Coil		Net face area - m^2 (sq. ft.)	1.0 (10.8)	1.0 (10.8)
		Tube diameter - mm (in.)	9.5 (3/8)	9.5 (3/8)
		Number of rows	3	3
		Fins per m (in.)	551 (14)	551 (14)
		Drain Connection (no.and size) - in.	(1) 1 NPT	(1) 1 NPT
		Expansion device type	Balance port TXV, removable head	Balance port TXV, removable head
[4] **Indoor Blower & Drive Selection**		Nominal Motor Size kW (hp)	1.24 (1.66)	1.24 (1.66)
		Maximum Usable Motor Size kW (hp)	1.42 (1.91)	1.42 (1.91)
		Available Drive Kits	ZAA03 665-921 rev/min ZAA04 768-1023 rev/min ZAA05 921-1177 rev/min	ZAA03 665-921 rev/min ZAA04 768-1023 rev/min ZAA05 921-1177 rev/min
		Wheel nominal diameter x width - mm (in.)	381 x 229 (15 x 9)	381 x 229 (15 x 9)
Filters		Type	Disposable	Disposable
		Number and size - mm (in.)	(2) 406 x 508 x 51 (16 x 20 x 2) (2) 508 x 508 x 51 (20 x 20 x 2)	(2) 406 x 508 x 51 (16 x 20 x 2) (2) 508 x 508 x 51 (20 x 20 x 2)
Electrical Characteristics - 50 Hz			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] Rating test conditions are those included in Air-Conditioning, Heating and Refrigeration Institute (AHRI) Standard 340/360; 35°C (95°F) outdoor air temperature and 27°C (80°F) db/19°C (67°F) wb 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] Sound Rating Number (SRN) rated in accordance with test conditions included in ANSI/AHRI Standard 270-2008.

[4] Using total air volume and system static pressure requirements determine from blower performance tables rev/min and motor size required. Maximum usable size of motors furnished is shown. If motors of comparable size are used, be sure to keep within the service factor limitations outlined on the motor nameplate.
0.62 kW = 0.83 hp (1.0 nominal hp) while operating at rated voltage and frequency.
0.93 kW = 1.25 hp (1.5 nominal hp) while operating at rated voltage and frequency.
1.24 kW = 1.66 hp (2.0 nominal hp) while operating at rated voltage and frequency.

SPECIFICATIONS — GAS HEAT

Model No.		036, 048, 060	074	036, 048, 060	074	036, 048, 060	074	048, 060	074	048, 060	074
Heat Input Type		Standard (1 Stage)		Medium (1 Stage)		Medium (2 Stage)		High (1 Stage)		High (2 Stage)	
Input Btuh	1st Stage	16.7 (57 000)		27.8 (95 000)		20.2 (71 000)		38.7 (132 000)		30.8 (99 000)	
	2nd Stage	- - -		- - -		27.8 (95 000)		- - -		38.7 (132 000)	
Output Btuh	1st Stage	13.5 (46 000)		22.3 (76 000)		17.3 (57 000)		31.1 (106 000)		25.1 (79 000)	
	2nd Stage	- - -		- - -		22.3 (76 000)		- - -		31.1 (106 000)	
Temperature Rise Range - °F	1st Stage	6-22°C (10-40°F)	3-19°C (5-35°F)	17-33°C (30-60°F)	8-25°C (15-45°F)	11-28°C (20-50°F)	3-19°C (5-35°F)	22-39°C (40-70°F)	17-33°C (30-60°F)	14-31°C (25-55°F)	11-28°C (20-50°F)
	2nd Stage	- - -	- - -	- - -	- - -	17-33°C (30-60°F)	8-25°C (15-45°F)	- - -	- - -	22-39°C (40-70°F)	17-33°C (30-60°F)
[1] Thermal Efficiency		80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
Gas Supply Connections		1/2 in. NPT									
Recommended Gas Supply Pressure	Natural Gas	1.7 kPa (7.0 in. w.c.)									
	Propane	2.7 kPa (11.0 in. w.c.)									

[1] Thermal Efficiency at full input.

HIGH ALTITUDE DERATE

NOTE - Units may be installed at altitudes up to 610 m (2000 ft) above sea level without any modifications. At altitudes above 610 m (2000 ft.), units must be derated to match information in the table shown. At altitudes above 1372 m (4500 ft.), unit must be derated 2% for each 305 m (1000 ft.) above sea level. Example: 1524 m (5000 ft.) above sea level = 5 x 2% or 10% derate.

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

Heat Input Type	Gas Manifold Pressure							
	Altitude		kPa		in. w.g.		Input Rate	
	meters	feet	Natural Gas	LPG/Propane	Natural Gas	LPG/Propane	kW	Btuh
Standard (1 stage)	610 - 1372	2001 - 4500	0.57	1.7	2.3	6.9	15.5	53 000
Medium (1 stage)	610 - 1372	2001 - 4500	0.57	1.7	2.3	6.9	25.8	88 000
Medium (2 stage)	610 - 1372	2001 - 4500	0.57 / 0.32	1.7 / 0.97	2.3 / 1.3	6.9 / 3.9	25.8 / 19.3	88 000 / 66 000
High (1 stage)	610 - 1372	2001 - 4500	0.57	1.7	2.3	6.9	35.8	122 000
High (2 stage)	610 - 1372	2001 - 4500	0.57 / 0.32	1.7 / 0.97	2.3 / 1.3	6.9 / 3.9	35.8 / 27.0	122 000 / 92 000

RATINGS

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

10.5 KW - ZGB036S4

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					46°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C
17.2°C	455	9.1	1.62	0.73	0.89	1.00	8.3	1.92	0.75	0.94	1.00	7.4	2.29	0.79	0.99	1.00	7.1	2.43	.84	1.00	1.00
	565	9.6	1.62	0.79	0.99	1.00	8.8	1.93	0.82	1.00	1.00	7.9	2.30	0.88	1.00	1.00	7.6	2.44	.92	1.00	1.00
	680	10.0	1.63	0.86	1.00	1.00	9.2	1.94	0.91	1.00	1.00	8.3	2.31	0.97	1.00	1.00	8.0	2.45	.99	1.00	1.00
19.4°C	455	9.6	1.63	0.57	0.71	0.85	8.8	1.93	0.58	0.73	0.90	7.9	2.30	0.60	0.77	0.96	7.5	2.44	.62	.81	.98
	565	10.1	1.63	0.61	0.77	0.95	9.2	1.94	0.62	0.80	1.00	8.1	2.31	0.65	0.86	1.00	7.8	2.45	.68	.90	1.00
	680	10.4	1.64	0.65	0.83	1.00	9.5	1.94	0.67	0.88	1.00	8.4	2.31	0.69	0.95	1.00	8.0	2.45	.73	.98	1.00
21.7°C	455	10.2	1.64	0.43	0.56	0.69	9.3	1.94	0.43	0.57	0.71	8.3	2.31	0.43	0.59	0.74	7.9	2.45	.43	.61	.78
	565	10.7	1.65	0.44	0.60	0.75	9.7	1.95	0.45	0.62	0.78	8.6	2.31	0.45	0.64	0.83	8.3	2.45	.46	.67	.87
	680	11.0	1.66	0.46	0.64	0.81	10.0	1.95	0.46	0.66	0.86	8.9	2.32	0.48	0.69	1.00	8.5	2.46	.48	.73	.96

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		48°C					50°C					51.7°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C
17.2°C	455	6.9	2.54	.82	1.00	1.00	6.7	2.65	.84	1.00	1.00	6.7	2.81	.83	.97	.97
	565	7.3	2.55	.93	1.00	1.00	7.1	2.66	.95	1.00	1.00	7.1	2.81	.92	.97	.97
	680	7.7	2.55	1.00	1.00	1.00	7.4	2.67	1.00	1.00	1.00	7.5	2.82	.97	.97	.97
19.4°C	455	7.2	2.54	.62	.80	1.00	6.9	2.66	.62	.81	1.00	7.0	2.81	.62	.81	.97
	565	7.5	2.55	.67	.90	1.00	7.2	2.66	.68	.92	1.00	7.3	2.82	.68	.90	.97
	680	7.7	2.55	.72	.99	1.00	7.4	2.67	.73	1.00	1.00	7.5	2.82	.73	.97	.97
21.7°C	455	7.7	2.55	.43	.61	.78	7.4	2.66	.43	.62	.79	7.4	2.82	.43	.61	.79
	565	8.0	2.56	.45	.66	.87	7.6	2.67	.46	.68	.90	7.7	2.82	.46	.67	.88
	680	8.1	2.56	.48	.72	.97	7.8	2.67	.49	.73	.99	7.9	2.83	.48	.73	.95

14.0 KW - ZGB048S4

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					46°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C
17.2°C	604	11.7	2.29	0.75	0.90	1.00	11.1	2.74	0.78	0.95	1.00	10.6	3.30	0.82	1.00	1.00	10.5	3.51	.87	1.00	1.00
	755	12.1	2.30	0.79	0.99	1.00	11.6	2.75	0.84	1.00	1.00	11.1	3.33	0.90	1.00	1.00	10.9	3.54	.94	1.00	1.00
	906	12.5	2.32	0.86	1.00	1.00	12.0	2.77	0.92	1.00	1.00	11.4	3.35	0.98	1.00	1.00	11.3	3.57	1.00	1.00	1.00
19.4°C	604	12.2	2.30	0.59	0.72	0.86	11.6	2.76	0.62	0.76	0.91	11.0	3.33	0.65	0.79	0.97	10.8	3.54	.69	.86	.97
	755	12.6	2.32	0.62	0.78	0.96	12.0	2.77	0.65	0.81	1.00	11.3	3.34	0.69	0.87	1.00	11.1	3.56	.74	.94	1.00
	906	12.9	2.33	0.66	0.84	1.00	12.2	2.79	0.69	0.89	1.00	11.5	3.36	0.73	0.96	1.00	11.3	3.57	.78	1.00	1.00
21.7°C	604	12.7	2.32	0.45	0.57	0.70	12.1	2.78	0.47	0.60	0.73	11.4	3.35	0.50	0.64	0.77	11.2	3.57	.53	.69	.79
	755	13.2	2.34	0.46	0.61	0.75	12.5	2.80	0.49	0.64	0.79	11.8	3.38	0.52	0.68	0.85	11.5	3.59	.55	.74	.87
	906	13.5	2.36	0.47	0.65	0.81	12.8	2.81	0.50	0.69	0.87	12.0	3.39	0.53	0.72	0.93	11.7	3.60	.57	.79	.94

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		48°C					50°C					51.7°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C
17.2°C	604	10.3	3.69	.84	1.00	1.00	10.2	3.87	.86	1.00	1.00	10.1	4.05	0.88	1.00	1.00
	755	10.7	3.72	.93	1.00	1.00	10.6	3.91	.95	1.00	1.00	10.4	4.08	0.97	1.00	1.00
	906	11.0	3.75	1.00	1.00	1.00	10.9	3.94	1.00	1.00	1.00	10.7	4.11	1.00	1.00	1.00
19.4°C	604	10.6	3.71	.67	.82	1.00	10.5	3.90	.69	.84	1.00	10.3	4.07	0.69	0.85	1.00
	755	10.9	3.73	.71	.91	1.00	10.7	3.92	.73	.93	1.00	10.6	4.09	0.74	0.95	1.00
	906	11.1	3.75	.76	.99	1.00	10.9	3.93	.77	1.00	1.00	10.7	4.11	0.78	1.00	1.00
21.7°C	604	11.0	3.75	.52	.66	.80	10.8	3.93	.53	.67	.81	10.7	4.10	0.54	0.68	0.83
	755	11.3	3.77	.53	.70	.89	11.1	3.96	.54	.72	.91	10.9	4.13	0.55	0.73	0.93
	906	11.5	3.78	.55	.75	.98	11.3	3.97	.56	.76	.99	11.0	4.14	0.57	0.77	1.00

RATINGS

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

17.5 KW - ZGB060S4

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					46°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C
17.2°C	755	14.7	2.88	0.78	0.93	1.00	12.7	3.43	0.79	0.96	1.00	10.7	4.12	0.81	0.99	1.00	10.2	4.38	.80	1.00	1.00
	945	15.5	2.89	0.86	0.99	1.00	13.7	3.44	0.87	1.00	1.00	11.8	4.16	0.9	1.00	1.00	11.2	4.43	.91	1.00	1.00
	1135	16.5	2.91	0.91	1.00	1.00	14.7	3.47	0.94	1.00	1.00	12.6	4.19	0.97	1.00	1.00	12.0	4.46	.99	1.00	1.00
19.4°C	755	15.9	2.9	0.6	0.76	0.91	13.9	3.45	0.59	0.77	0.93	11.7	4.16	0.57	0.79	0.97	11.0	4.41	.56	.80	.95
	945	16.7	2.91	0.64	0.83	0.97	14.6	3.46	0.64	0.86	1.00	12.4	4.18	0.64	0.89	1.00	11.6	4.44	.63	.90	1.00
	1135	17.4	2.92	0.69	0.89	1.00	15.1	3.47	0.69	0.92	1.00	12.9	4.20	0.71	0.96	1.00	12.1	4.46	.70	.99	1.00
21.7°C	755	17.0	2.91	0.43	0.59	0.74	15.0	3.48	0.41	0.58	0.75	12.7	4.19	0.36	0.57	0.77	12.0	4.46	.36	.58	.72
	945	17.9	2.93	0.45	0.64	0.81	15.8	3.49	0.43	0.63	0.83	13.5	4.22	0.4	0.65	0.87	12.7	4.49	.39	.66	.82
	1135	18.6	2.95	0.48	0.69	0.88	16.3	3.51	0.46	0.69	0.90	13.9	4.25	0.44	0.71	0.94	13.1	4.52	.43	.72	.91

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		48°C					50°C					51.7°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C
17.2°C	755	9.6	4.59	.83	1.00	1.00	9.1	4.82	.85	1.00	1.00	8.7	5.03	0.86	1.00	1.00
	945	10.6	4.64	.93	1.00	1.00	10.1	4.88	.94	1.00	1.00	9.6	5.09	0.96	1.00	1.00
	1135	11.3	4.68	1.00	1.00	1.00	10.8	4.91	1.00	1.00	1.00	10.3	5.13	1.00	1.00	1.00
19.4°C	755	10.4	4.63	.57	.81	.99	9.8	4.86	.57	.82	1.00	9.3	5.07	0.56	0.84	1.00
	945	11.0	4.66	.64	.92	1.00	10.4	4.89	.65	.93	1.00	9.8	5.10	0.65	0.94	1.00
	1135	11.4	4.69	.72	.99	1.00	10.8	4.92	.73	1.00	1.00	10.3	5.13	0.73	1.00	1.00
21.7°C	755	11.4	4.68	.33	.57	.79	10.8	4.91	.32	.57	.80	10.2	5.12	0.32	0.57	0.81
	945	12.0	4.71	.38	.65	.90	11.3	4.94	.37	.65	.91	10.8	5.16	0.36	0.66	0.92
	1135	12.4	4.74	.42	.73	.97	11.8	4.98	.41	.73	.98	11.2	5.19	0.41	0.75	1.00

RATINGS

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

21 KW - ZGB074S4T - COOLING CAPACITY (1ST STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		18.1°C					24°C					29°C					35°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C
17.2°C	565	13.0	1.85	0.74	0.88	0.98	12.1	2.13	0.74	0.90	1.00	11.3	2.39	0.75	0.92	1.00	10.3	2.76	0.76	0.95	1.00
	755	14.1	1.84	0.81	0.99	1.00	13.2	2.12	0.82	1.00	1.00	12.4	2.39	0.83	1.00	1.00	11.5	2.76	0.86	1.00	1.00
	945	15.2	1.83	0.88	1.00	1.00	14.3	2.11	0.90	1.00	1.00	13.5	2.39	0.93	1.00	1.00	12.5	2.75	0.95	1.00	1.00
19.4°C	565	13.9	1.84	0.59	0.73	0.83	13.0	2.12	0.59	0.74	0.84	12.2	2.39	0.59	0.75	0.86	11.1	2.76	0.59	0.76	0.88
	755	15.1	1.83	0.65	0.82	0.93	14.0	2.12	0.65	0.83	0.95	13.1	2.39	0.65	0.84	0.97	12.0	2.76	0.66	0.87	1.00
	945	15.8	1.83	0.70	0.89	1.00	14.7	2.11	0.70	0.91	1.00	13.8	2.38	0.71	0.93	1.00	12.6	2.75	0.72	0.97	1.00
21.7°C	565	15.2	1.83	0.41	0.54	0.63	14.3	2.12	0.40	0.54	0.63	13.5	2.39	0.39	0.54	0.63	12.3	2.75	0.37	0.53	0.64
	755	16.5	1.82	0.42	0.59	0.69	15.4	2.11	0.42	0.59	0.70	14.5	2.38	0.41	0.59	0.71	13.3	2.75	0.39	0.59	0.72
	945	17.3	1.81	0.45	0.63	0.74	16.2	2.10	0.44	0.64	0.76	15.2	2.37	0.43	0.64	0.78	13.9	2.74	0.42	0.65	0.80

21 KW - ZGB074S4T - COOLING CAPACITY (2ND STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					46°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C
17.2°C	905	16.9	3.26	0.79	0.97	1.00	15.1	3.90	0.82	1.00	1.00	13.5	4.69	0.85	1.00	1.00	12.9	4.98	0.86	1.00	1.00
	1135	18.0	3.29	0.86	1.00	1.00	16.3	3.95	0.90	1.00	1.00	14.5	4.74	0.95	1.00	1.00	13.9	5.03	0.97	1.00	1.00
	1360	18.9	3.33	0.94	1.00	1.00	17.2	3.98	0.97	1.00	1.00	15.3	4.77	1.00	1.00	1.00	14.7	5.06	1.00	1.00	1.00
19.4°C	905	17.9	3.29	0.63	0.80	0.91	16.1	3.94	0.63	0.83	0.95	14.1	4.72	0.65	0.86	1.00	13.4	5.00	0.65	0.88	1.00
	1135	18.7	3.32	0.68	0.88	1.00	16.8	3.97	0.69	0.91	1.00	14.7	4.75	0.71	0.96	1.00	14.0	5.03	0.72	0.98	1.00
	1360	19.3	3.34	0.73	0.95	1.00	17.3	3.99	0.74	0.99	1.00	15.3	4.77	0.77	1.00	1.00	14.7	5.06	0.79	1.00	1.00
21.7°C	905	19.4	3.35	0.41	0.57	0.67	17.5	4.00	0.40	0.58	0.69	15.5	4.78	0.38	0.58	0.71	14.8	5.07	0.38	0.59	0.72
	1135	20.3	3.38	0.43	0.62	0.74	18.3	4.03	0.42	0.63	0.76	16.1	4.81	0.41	0.64	0.80	15.4	5.10	0.40	0.65	0.81
	1360	21.0	3.41	0.44	0.66	0.80	18.9	4.06	0.44	0.68	0.83	16.6	4.84	0.43	0.70	0.88	15.9	5.13	0.43	0.71	0.89

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		48°C					50°C					51.7°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C
17.2°C	905	12.5	5.21	0.88	1.00	1.00	12.0	5.46	0.89	1.00	1.00	11.6	5.68	0.91	1.00	1.00
	1135	13.4	5.25	0.98	1.00	1.00	12.9	5.50	1.00	1.00	1.00	12.5	5.72	1.00	1.00	1.00
	1360	14.2	5.29	1.00	1.00	1.00	13.6	5.54	1.00	1.00	1.00	13.2	5.75	1.00	1.00	1.00
19.4°C	905	12.9	5.23	0.66	0.89	1.00	12.3	5.47	0.66	0.91	1.00	11.8	5.69	0.67	0.93	1.00
	1135	13.5	5.26	0.73	1.00	1.00	13.0	5.50	0.74	1.00	1.00	12.5	5.72	0.75	1.00	1.00
	1360	14.2	5.29	0.80	1.00	1.00	13.6	5.53	0.81	1.00	1.00	13.2	5.75	0.83	1.00	1.00
21.7°C	905	14.2	5.29	0.37	0.59	0.73	13.7	5.54	0.37	0.60	0.74	13.2	5.75	0.37	0.60	0.75
	1135	14.9	5.32	0.40	0.66	0.82	14.2	5.57	0.40	0.67	0.84	13.7	5.78	0.40	0.67	0.85
	1360	15.3	5.35	0.43	0.72	0.91	14.7	5.59	0.43	0.73	0.93	14.1	5.81	0.43	0.74	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.

21 KW - ZGB074S4B - COOLING CAPACITY (1ST STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		18.1°C					24°C					29°C					35°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C
17.2°C	905	15.9	18.6	.86	1.00	1.00	14.9	21.5	.88	1.00	1.00	14.1	24.3	.90	1.00	1.00	13.1	28.0	.93	1.00	1.00
	1135	17.1	18.5	.95	1.00	1.00	16.1	21.4	.97	1.00	1.00	15.2	24.2	.99	1.00	1.00	14.1	28.0	1.00	1.00	1.00
	1360	18.0	18.4	1.00	1.00	1.00	16.9	21.3	1.00	1.00	1.00	16.1	24.1	1.00	1.00	1.00	14.9	27.9	1.00	1.00	1.00
19.4°C	905	16.6	18.5	.68	.87	.99	15.6	21.5	.68	.89	1.00	14.6	24.2	.69	.91	1.00	13.4	28.0	.70	.94	1.00
	1135	17.3	18.5	.73	.96	1.00	16.2	21.4	.75	.98	1.00	15.3	24.2	.76	1.00	1.00	14.1	28.0	.77	1.00	1.00
	1360	18.0	18.4	.79	1.00	1.00	17.0	21.4	.80	1.00	1.00	16.0	24.1	.82	1.00	1.00	14.9	27.9	.84	1.00	1.00
21.7°C	905	18.2	18.4	.44	.62	.73	17.1	21.3	.43	.62	.74	16.1	24.1	.42	.63	.76	14.9	27.9	.42	.64	.77
	1135	19.0	18.3	.46	.67	.80	17.8	21.3	.45	.67	.82	16.8	24.0	.45	.68	.84	15.5	27.9	.44	.70	.86
	1360	19.6	18.2	.48	.72	.87	18.3	21.2	.47	.73	.89	17.3	24.0	.47	.74	.91	15.9	27.9	.47	.76	.95

21 KW - ZGB074S4B - COOLING CAPACITY (2ND STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					46°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C
17.2°C	905	17.6	32.7	.79	.97	1.00	15.8	39.2	.82	1.00	1.00	14.1	47.1	.85	1.00	1.00	13.5	50.0	.86	1.00	1.00
	1135	18.8	33.0	.86	1.00	1.00	17.1	39.6	.90	1.00	1.00	15.2	47.5	.95	1.00	1.00	14.6	50.4	.97	1.00	1.00
	1360	19.8	33.4	.94	1.00	1.00	18.0	40.0	.97	1.00	1.00	16.1	47.9	1.00	1.00	1.00	15.4	50.8	1.00	1.00	1.00
19.4°C	905	18.7	33.0	.63	.80	.91	16.8	39.5	.63	.83	.95	14.8	47.4	.65	.87	1.00	14.1	50.2	.65	.88	1.00
	1135	19.5	33.3	.68	.88	1.00	17.6	39.8	.69	.91	1.00	15.4	47.6	.71	.96	1.00	14.7	50.5	.72	.98	1.00
	1360	20.1	33.6	.73	.95	1.00	18.1	40.0	.74	.99	1.00	16.1	47.9	.77	1.00	1.00	15.4	50.8	.79	1.00	1.00
21.7°C	905	20.3	33.6	.41	.57	.67	18.3	40.1	.40	.58	.69	16.3	48.0	.38	.59	.71	15.5	50.8	.38	.59	.73
	1135	21.2	33.9	.43	.62	.74	19.1	40.5	.42	.63	.76	16.9	48.3	.41	.65	.80	16.1	51.2	.41	.65	.81
	1360	21.9	34.2	.44	.66	.80	19.7	40.7	.44	.68	.83	17.4	48.6	.43	.70	.88	16.7	51.4	.43	.71	.89

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		48°C					50°C					51.7°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C
17.2°C	905	13.1	52.3	.88	1.00	1.00	12.6	54.8	.89	1.00	1.00	12.2	57.0	.91	1.00	1.00
	1135	14.1	52.7	.98	1.00	1.00	13.6	55.2	1.00	1.00	1.00	13.1	57.4	1.00	1.00	1.00
	1360	14.9	53.1	1.00	1.00	1.00	14.3	55.5	1.00	1.00	1.00	13.9	57.7	1.00	1.00	1.00
19.4°C	905	13.6	52.5	.66	.89	1.00	12.9	54.9	.66	.91	1.00	12.4	57.1	.67	.93	1.00
	1135	14.1	52.8	.73	1.00	1.00	13.6	55.2	.74	1.00	1.00	13.2	57.5	.75	1.00	1.00
	1360	14.9	53.1	.80	1.00	1.00	14.3	55.5	.81	1.00	1.00	13.9	57.7	.83	1.00	1.00
21.7°C	905	14.9	53.1	.38	.59	.73	14.4	55.6	.37	.60	.74	13.9	57.7	.37	.60	.75
	1135	15.6	53.4	.40	.66	.82	14.9	55.9	.40	.67	.84	14.4	58.0	.40	.67	.85
	1360	16.1	53.7	.43	.72	.91	15.4	56.1	.43	.73	.93	14.8	58.3	.43	.74	.94

BLOWER DATA

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

FOR ALL UNITS ADD:

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

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

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

DOWNFLOW

Air Volume		External Static - Pa (in.w.g.)																							
		25 (0.10)			50 (0.20)			75 (0.30)			100 (0.40)			125 (0.50)			150 (0.60)			175 (0.70)			200 (0.80)		
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	Rev/ min	kW	BHP
425	900	573	0.12	0.16	639	0.13	0.18	707	0.14	0.19	776	0.16	0.21	844	0.17	0.23	908	0.19	0.25	967	0.20	0.27	1022	0.22	0.30
472	1000	600	0.13	0.18	665	0.15	0.20	733	0.16	0.22	802	0.17	0.23	868	0.19	0.25	930	0.21	0.28	986	0.23	0.31	1038	0.25	0.33
519	1100	628	0.16	0.21	695	0.16	0.22	762	0.18	0.24	829	0.19	0.26	893	0.22	0.29	953	0.23	0.31	1007	0.26	0.35	1057	0.28	0.38
566	1200	660	0.17	0.23	727	0.19	0.25	794	0.20	0.27	859	0.22	0.29	921	0.24	0.32	977	0.27	0.36	1029	0.29	0.39	1077	0.31	0.42
613	1300	695	0.19	0.26	761	0.21	0.28	827	0.23	0.31	890	0.25	0.33	949	0.28	0.37	1003	0.30	0.40	1053	0.33	0.44	1099	0.35	0.47
661	1400	734	0.22	0.30	799	0.24	0.32	862	0.26	0.35	923	0.28	0.38	978	0.31	0.41	1030	0.34	0.45	1078	0.37	0.49	1122	0.40	0.53
708	1500	775	0.25	0.34	837	0.28	0.37	898	0.30	0.40	955	0.32	0.43	1009	0.34	0.46	1058	0.37	0.50	1104	0.40	0.54	1147	0.43	0.58

Air Volume		External Static - Pa (in.w.g.)																							
		225 (0.90)			250 (1.00)			275 (1.10)			300 (1.20)			325 (1.30)			350 (1.40)			375 (1.50)			400 (1.60)		
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	Rev/ min	kW	BHP
425	900	1072	0.24	0.32	1120	0.26	0.35	1166	0.28	0.38	1210	0.31	0.41	1252	0.33	0.44	1292	0.35	0.47	1331	0.37	0.50	1370	0.40	0.54
472	1000	1087	0.27	0.36	1134	0.29	0.39	1179	0.31	0.42	1222	0.34	0.45	1263	0.36	0.48	1303	0.38	0.51	1341	0.41	0.55	1379	0.43	0.58
519	1100	1104	0.30	0.40	1150	0.32	0.43	1194	0.34	0.46	1236	0.37	0.49	1277	0.40	0.53	1315	0.42	0.56	1353	0.45	0.60	1390	0.48	0.64
566	1200	1123	0.34	0.45	1167	0.36	0.48	1210	0.38	0.51	1251	0.41	0.55	1291	0.43	0.58	1330	0.46	0.62	1367	0.49	0.66	1403	0.52	0.70
613	1300	1143	0.37	0.50	1186	0.40	0.54	1228	0.43	0.57	1268	0.45	0.60	1308	0.48	0.64	1346	0.51	0.68	1382	0.54	0.72	1418	0.57	0.76
661	1400	1165	0.42	0.56	1206	0.44	0.59	1247	0.47	0.63	1287	0.50	0.67	1326	0.52	0.70	1363	0.56	0.75	1399	0.59	0.79	1435	0.62	0.83
708	1500	1188	0.46	0.62	1229	0.49	0.66	1269	0.51	0.69	1308	0.54	0.73	1346	0.57	0.77	1382	0.61	0.82	1418	0.64	0.86	1453	0.67	0.90

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

FOR ALL UNITS ADD:

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

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

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

HORIZONTAL

Air Volume		External Static - Pa (in.w.g.)																							
		25 (0.10)			50 (0.20)			75 (0.30)			100 (0.40)			125 (0.50)			150 (0.60)			175 (0.70)			200 (0.80)		
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	Rev/ min	kW	BHP
425	900	573	0.10	0.14	642	0.12	0.16	712	0.13	0.18	780	0.16	0.21	846	0.17	0.23	909	0.19	0.26	967	0.21	0.28	1022	0.23	0.31
472	1000	599	0.12	0.16	668	0.13	0.18	737	0.16	0.21	804	0.17	0.23	868	0.19	0.26	928	0.22	0.29	984	0.24	0.32	1037	0.26	0.35
519	1100	626	0.13	0.18	695	0.16	0.21	764	0.18	0.24	830	0.19	0.26	892	0.22	0.29	950	0.24	0.32	1003	0.27	0.36	1053	0.29	0.39
566	1200	656	0.16	0.21	726	0.18	0.24	794	0.20	0.27	858	0.22	0.3	918	0.25	0.33	973	0.28	0.37	1024	0.30	0.4	1072	0.32	0.43
613	1300	691	0.19	0.25	761	0.21	0.28	827	0.23	0.31	889	0.25	0.34	945	0.28	0.38	998	0.31	0.41	1047	0.34	0.45	1093	0.36	0.48
661	1400	731	0.22	0.29	798	0.24	0.32	862	0.26	0.35	920	0.29	0.39	974	0.31	0.42	1024	0.34	0.46	1071	0.37	0.49	1115	0.40	0.53
708	1500	773	0.25	0.34	838	0.28	0.37	898	0.30	0.40	952	0.33	0.44	1004	0.35	0.47	1051	0.38	0.51	1096	0.41	0.55	1139	0.43	0.58

Air Volume		External Static - Pa (in.w.g.)																							
		225 (0.90)			250 (1.00)			275 (1.10)			300 (1.20)			325 (1.30)			350 (1.40)			375 (1.50)			400 (1.60)		
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	Rev/ min	kW	BHP
425	900	1074	0.25	0.33	1123	0.27	0.36	1171	0.29	0.39	1216	0.31	0.41	1260	0.33	0.44	1301	0.35	0.47	1340	0.37	0.49	1378	0.39	0.52
472	1000	1087	0.28	0.37	1135	0.30	0.4	1181	0.31	0.42	1226	0.34	0.45	1269	0.36	0.48	1310	0.38	0.51	1350	0.40	0.54	1388	0.43	0.57
519	1100	1101	0.31	0.41	1148	0.33	0.44	1193	0.35	0.47	1237	0.37	0.49	1279	0.39	0.52	1321	0.41	0.55	1360	0.44	0.59	1398	0.46	0.62
566	1200	1118	0.34	0.46	1163	0.36	0.48	1208	0.38	0.51	1251	0.40	0.54	1293	0.43	0.58	1334	0.46	0.61	1375	0.48	0.64	1414	0.51	0.68
613	1300	1137	0.38	0.51	1181	0.40	0.53	1224	0.43	0.57	1267	0.45	0.6	1309	0.47	0.63	1350	0.50	0.67	1391	0.53	0.71	1432	0.56	0.75
661	1400	1158	0.42	0.56	1200	0.44	0.59	1242	0.46	0.62	1284	0.49	0.66	1326	0.52	0.7	1367	0.55	0.74	1407	0.59	0.79	1448	0.62	0.83
708	1500	1180	0.46	0.61	1222	0.48	0.65	1263	0.51	0.69	1304	0.54	0.73	1345	0.57	0.77	1386	0.61	0.82	1427	0.65	0.87	1467	0.69	0.92

BLOWER DATA

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

FOR ALL UNITS ADD:

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

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

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

DOWNFLOW

Air Volume		External Static - Pa (in.w.g.)																							
		25 (0.10)			50 (0.20)			75 (0.30)			100 (0.40)			125 (0.50)			150 (0.60)			175 (0.70)			200 (0.80)		
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	Rev/ min	kW	BHP
566	1200	660	0.17	0.23	727	0.19	0.25	794	0.20	0.27	859	0.22	0.29	921	0.24	0.32	977	0.27	0.36	1029	0.29	0.39	1077	0.31	0.42
613	1300	695	0.19	0.26	761	0.21	0.28	827	0.23	0.31	890	0.25	0.33	949	0.28	0.37	1003	0.30	0.40	1053	0.33	0.44	1099	0.35	0.47
661	1400	734	0.22	0.30	799	0.24	0.32	862	0.26	0.35	923	0.28	0.38	978	0.31	0.41	1030	0.34	0.45	1078	0.37	0.49	1122	0.40	0.53
708	1500	775	0.25	0.34	837	0.28	0.37	898	0.30	0.40	955	0.32	0.43	1009	0.34	0.46	1058	0.37	0.50	1104	0.40	0.54	1147	0.43	0.58
755	1600	817	0.29	0.39	877	0.31	0.42	935	0.34	0.45	989	0.36	0.48	1040	0.39	0.52	1087	0.42	0.56	1131	0.45	0.60	1173	0.48	0.65
802	1700	859	0.33	0.44	917	0.35	0.47	972	0.37	0.50	1023	0.40	0.54	1071	0.43	0.58	1117	0.46	0.62	1159	0.50	0.67	1199	0.53	0.71
849	1800	902	0.37	0.49	957	0.40	0.53	1008	0.42	0.56	1057	0.45	0.60	1103	0.48	0.64	1147	0.51	0.69	1188	0.55	0.74	1227	0.59	0.79
897	1900	944	0.42	0.56	996	0.44	0.59	1045	0.47	0.63	1092	0.51	0.68	1136	0.54	0.72	1178	0.57	0.77	1218	0.61	0.82	1257	0.65	0.87
944	2000	986	0.47	0.63	1035	0.50	0.67	1083	0.53	0.71	1127	0.57	0.76	1170	0.60	0.81	1210	0.64	0.86	1249	0.68	0.91	1287	0.72	0.97

Air Volume		External Static - Pa (in.w.g.)																							
		225 (0.90)			250 (1.00)			275 (1.10)			300 (1.20)			325 (1.30)			350 (1.40)			375 (1.50)			400 (1.60)		
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	Rev/ min	kW	BHP
566	1200	1123	0.34	0.45	1167	0.36	0.48	1210	0.38	0.51	1251	0.41	0.55	1291	0.43	0.58	1330	0.46	0.62	1367	0.49	0.66	1403	0.52	0.70
613	1300	1143	0.37	0.50	1186	0.40	0.54	1228	0.43	0.57	1268	0.45	0.60	1308	0.48	0.64	1346	0.51	0.68	1382	0.54	0.72	1418	0.57	0.76
661	1400	1165	0.42	0.56	1206	0.44	0.59	1247	0.47	0.63	1287	0.50	0.67	1326	0.52	0.70	1363	0.56	0.75	1399	0.59	0.79	1435	0.62	0.83
708	1500	1188	0.46	0.62	1229	0.49	0.66	1269	0.51	0.69	1308	0.54	0.73	1346	0.57	0.77	1382	0.61	0.82	1418	0.64	0.86	1453	0.67	0.90
755	1600	1213	0.51	0.69	1252	0.54	0.73	1292	0.57	0.77	1330	0.60	0.81	1367	0.63	0.85	1403	0.66	0.89	1438	0.70	0.94	1472	0.73	0.98
802	1700	1239	0.57	0.76	1278	0.60	0.80	1316	0.63	0.84	1354	0.66	0.89	1390	0.69	0.93	1425	0.73	0.98	1459	0.76	1.02	1492	0.80	1.07
849	1800	1266	0.62	0.83	1304	0.66	0.88	1342	0.69	0.93	1378	0.73	0.98	1414	0.76	1.02	1448	0.80	1.07	1481	0.84	1.12	1514	0.87	1.16
897	1900	1294	0.69	0.92	1332	0.72	0.97	1369	0.76	1.02	1404	0.80	1.07	1439	0.84	1.12	1472	0.87	1.17	1504	0.90	1.21	1536	0.94	1.26
944	2000	1324	0.76	1.02	1360	0.80	1.07	1396	0.84	1.13	1431	0.88	1.18	1465	0.92	1.23	1497	0.95	1.27	1529	0.98	1.32	1560	1.02	1.37

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

FOR ALL UNITS ADD:

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

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

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

HORIZONTAL

Air Volume		External Static - Pa (in.w.g.)																							
		25 (0.10)			50 (0.20)			75 (0.30)			100 (0.40)			125 (0.50)			150 (0.60)			175 (0.70)			200 (0.80)		
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	Rev/ min	kW	BHP
566	1200	656	0.16	0.21	726	0.18	0.24	794	0.20	0.27	858	0.22	0.30	918	0.25	0.33	973	0.28	0.37	1024	0.30	0.40	1072	0.32	0.43
613	1300	691	0.19	0.25	761	0.21	0.28	827	0.23	0.31	889	0.25	0.34	945	0.28	0.38	998	0.31	0.41	1047	0.34	0.45	1093	0.36	0.48
661	1400	731	0.22	0.29	798	0.24	0.32	862	0.26	0.35	920	0.29	0.39	974	0.31	0.42	1024	0.34	0.46	1071	0.37	0.49	1115	0.40	0.53
708	1500	773	0.25	0.34	838	0.28	0.37	898	0.30	0.40	952	0.33	0.44	1004	0.35	0.47	1051	0.38	0.51	1096	0.41	0.55	1139	0.43	0.58
755	1600	817	0.29	0.39	878	0.31	0.42	934	0.34	0.46	985	0.37	0.49	1034	0.40	0.53	1080	0.42	0.56	1123	0.45	0.60	1164	0.48	0.64
802	1700	861	0.34	0.45	918	0.36	0.48	970	0.38	0.51	1018	0.41	0.55	1065	0.43	0.58	1108	0.46	0.62	1150	0.49	0.66	1190	0.52	0.70
849	1800	904	0.38	0.51	957	0.40	0.54	1006	0.43	0.57	1052	0.46	0.61	1096	0.48	0.65	1138	0.51	0.69	1178	0.54	0.73	1217	0.58	0.78
897	1900	946	0.43	0.57	996	0.46	0.61	1042	0.48	0.64	1086	0.51	0.68	1128	0.54	0.72	1168	0.57	0.76	1207	0.60	0.81	1245	0.64	0.86
944	2000	988	0.48	0.64	1035	0.51	0.68	1079	0.54	0.72	1120	0.57	0.76	1161	0.60	0.81	1199	0.63	0.85	1237	0.67	0.90	1275	0.72	0.96

Air Volume		External Static - Pa (in.w.g.)																							
		225 (0.90)			250 (1.00)			275 (1.10)			300 (1.20)			325 (1.30)			350 (1.40)			375 (1.50)			400 (1.60)		
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	Rev/ min	kW	BHP
566	1200	1118	0.34	0.46	1163	0.36	0.48	1208	0.38	0.51	1251	0.40	0.54	1293	0.43	0.58	1334	0.46	0.61	1375	0.48	0.64	1414	0.51	0.68
613	1300	1137	0.38	0.51	1181	0.40	0.53	1224	0.43	0.57	1267	0.45	0.60	1309	0.47	0.63	1350	0.50	0.67	1391	0.53	0.71	1432	0.56	0.75
661	1400	1158	0.42	0.56	1200	0.44	0.59	1242	0.46	0.62	1284	0.49	0.66	1326	0.52	0.70	1367	0.55	0.74	1407	0.59	0.79	1448	0.62	0.83
708	1500	1180	0.46	0.61	1222	0.48	0.65	1263	0.51	0.69	1304	0.54	0.73	1345	0.57	0.77	1386	0.61	0.82	1427	0.65	0.87	1467	0.69	0.92
755	1600	1204	0.51	0.68	1245	0.54	0.72	1285	0.57	0.76	1325	0.60	0.80	1366	0.63	0.85	1406	0.67	0.90	1447	0.72	0.96	1487	0.76	1.02
802	1700	1229	0.56	0.75	1269	0.59	0.79	1309	0.63	0.84	1348	0.66	0.89	1388	0.70	0.94	1428	0.75	1.00	1468	0.79	1.06	1508	0.84	1.12
849	1800	1256	0.62	0.83	1295	0.66	0.88	1334	0.69	0.93	1373	0.73	0.98	1412	0.78	1.04	1451	0.82	1.10	1490	0.87	1.16	1529	0.92	1.23
897	1900	1283	0.69	0.92	1322	0.72	0.97	1360	0.77	1.03	1398	0.81	1.09	1436	0.86	1.15	1474	0.90	1.21	1511	0.95	1.27	1549	1.00	1.34
944	2000	1312	0.76	1.02	1350	0.80	1.07	1387	0.84	1.13	1424	0.90	1.20	1461	0.94	1.26	1498	0.98	1.32	1535	1.03	1.38	1571	1.08	1.45

BLOWER DATA

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

FOR ALL UNITS ADD:

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

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

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

DOWNFLOW

Air Volume		External Static - Pa (in.w.g.)																							
		25 (0.10)			50 (0.20)			75 (0.30)			100 (0.40)			125 (0.50)			150 (0.60)			175 (0.70)			200 (0.80)		
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	Rev/ min	kW	BHP
566	1200	848	0.36	0.48	905	0.40	0.53	961	0.43	0.57	1015	0.46	0.61	1064	0.49	0.66	1107	0.51	0.69	1148	0.54	0.73	1189	0.57	0.76
613	1300	898	0.42	0.56	952	0.45	0.60	1005	0.48	0.65	1054	0.51	0.69	1099	0.54	0.73	1140	0.57	0.77	1180	0.60	0.80	1221	0.62	0.83
661	1400	948	0.47	0.63	998	0.51	0.68	1047	0.54	0.73	1093	0.58	0.78	1136	0.61	0.82	1175	0.63	0.85	1214	0.66	0.88	1255	0.68	0.91
708	1500	996	0.54	0.72	1042	0.57	0.77	1088	0.61	0.82	1132	0.64	0.86	1173	0.67	0.90	1211	0.70	0.94	1250	0.72	0.97	1290	0.75	1.00
755	1600	1041	0.60	0.81	1084	0.64	0.86	1128	0.68	0.91	1170	0.71	0.95	1210	0.74	0.99	1249	0.77	1.03	1287	0.79	1.06	1326	0.82	1.10
802	1700	1084	0.68	0.91	1126	0.71	0.95	1168	0.75	1.00	1209	0.78	1.04	1249	0.81	1.08	1287	0.84	1.12	1324	0.87	1.17	1362	0.90	1.21
849	1800	1128	0.75	1.01	1169	0.78	1.05	1210	0.82	1.10	1250	0.85	1.14	1288	0.89	1.19	1326	0.92	1.23	1363	0.95	1.28	1399	1.00	1.34
897	1900	1173	0.83	1.11	1214	0.87	1.16	1253	0.90	1.20	1292	0.93	1.25	1329	0.97	1.30	1366	1.01	1.36	1402	1.06	1.42	1437	1.10	1.48
944	2000	1220	0.92	1.23	1259	0.95	1.28	1297	0.99	1.33	1335	1.03	1.38	1371	1.07	1.44	1406	1.12	1.50	1442	1.17	1.57	1476	1.22	1.63

Air Volume		External Static - Pa (in.w.g.)																							
		225 (0.90)			250 (1.00)			275 (1.10)			300 (1.20)			325 (1.30)			350 (1.40)			375 (1.50)			400 (1.60)		
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	Rev/ min	kW	BHP
566	1200	1232	0.59	0.79	1274	0.61	0.82	1316	0.64	0.86	1356	0.67	0.90	1395	0.70	0.94	1433	0.74	0.99	1470	0.78	1.04	1506	0.81	1.09
613	1300	1263	0.64	0.86	1304	0.67	0.90	1344	0.70	0.94	1383	0.74	0.99	1421	0.78	1.04	1458	0.81	1.09	1494	0.85	1.14	1530	0.89	1.19
661	1400	1295	0.71	0.95	1335	0.74	0.99	1374	0.78	1.04	1412	0.81	1.09	1448	0.85	1.14	1484	0.90	1.20	1520	0.93	1.25	1556	0.97	1.30
708	1500	1329	0.78	1.04	1368	0.81	1.09	1405	0.86	1.15	1441	0.90	1.20	1477	0.94	1.26	1513	0.98	1.31	1548	1.02	1.37	1583	1.06	1.42
755	1600	1364	0.86	1.15	1401	0.90	1.21	1437	0.95	1.27	1472	0.99	1.33	1507	1.03	1.38	1543	1.07	1.44	1578	1.11	1.49	1613	1.15	1.54
802	1700	1399	0.95	1.27	1435	0.99	1.33	1470	1.04	1.40	1505	1.09	1.46	1539	1.13	1.51	1574	1.16	1.56	1609	1.20	1.61	1645	1.24	1.66
849	1800	1435	1.04	1.40	1470	1.10	1.47	1504	1.14	1.53	1538	1.19	1.59	1573	1.23	1.65	1608	1.27	1.70	1642	1.30	1.74	1678	1.34	1.79
897	1900	1472	1.15	1.54	1506	1.20	1.61	1540	1.25	1.67	1574	1.29	1.73	1608	1.33	1.78	1642	1.37	1.83	1677	1.40	1.88	1712	1.44	1.93
944	2000	1510	1.27	1.70	1544	1.31	1.76	1577	1.36	1.82	1610	1.40	1.88	1644	1.44	1.93	1678	1.47	1.97	1713	1.51	2.02	1748	1.54	2.07

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

FOR ALL UNITS ADD:

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

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

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

HORIZONTAL

Air Volume		External Static - Pa (in.w.g.)																							
		25 (0.10)			50 (0.20)			75 (0.30)			100 (0.40)			125 (0.50)			150 (0.60)			175 (0.70)			200 (0.80)		
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	Rev/ min	kW	BHP
566	1200	761	0.32	0.43	820	0.35	0.47	879	0.39	0.52	937	0.42	0.56	994	0.46	0.61	1045	0.48	0.65	1090	0.51	0.69	1132	0.54	0.72
613	1300	803	0.37	0.49	861	0.40	0.53	918	0.43	0.58	973	0.47	0.63	1025	0.50	0.67	1072	0.54	0.72	1114	0.56	0.75	1155	0.58	0.78
661	1400	846	0.42	0.56	901	0.45	0.60	955	0.48	0.65	1008	0.52	0.70	1056	0.56	0.75	1099	0.59	0.79	1140	0.61	0.82	1181	0.63	0.85
708	1500	889	0.47	0.63	941	0.51	0.68	993	0.54	0.73	1042	0.58	0.78	1087	0.62	0.83	1129	0.65	0.87	1168	0.67	0.90	1209	0.69	0.93
755	1600	933	0.53	0.71	981	0.57	0.76	1030	0.60	0.81	1076	0.64	0.86	1119	0.68	0.91	1159	0.71	0.95	1198	0.73	0.98	1238	0.75	1.01
802	1700	974	0.59	0.79	1020	0.63	0.85	1065	0.67	0.90	1109	0.72	0.96	1151	0.75	1.00	1190	0.78	1.04	1229	0.80	1.07	1268	0.83	1.11
849	1800	1013	0.66	0.89	1057	0.70	0.94	1100	0.74	0.99	1143	0.78	1.05	1183	0.81	1.09	1222	0.84	1.13	1261	0.87	1.17	1299	0.90	1.21
897	1900	1050	0.74	0.99	1093	0.78	1.04	1135	0.81	1.09	1177	0.85	1.14	1217	0.88	1.18	1255	0.92	1.23	1293	0.95	1.27	1331	0.98	1.32
944	2000	1088	0.81	1.09	1129	0.85	1.14	1170	0.89	1.19	1211	0.92	1.23	1250	0.95	1.28	1289	0.99	1.33	1326	1.03	1.38	1363	1.07	1.44

Air Volume		External Static - Pa (in.w.g.)																							
		225 (0.90)			250 (1.00)			275 (1.10)			300 (1.20)			325 (1.30)			350 (1.40)			375 (1.50)			400 (1.60)		
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	Rev/ min	kW	BHP
566	1200	1175	0.57	0.76	1218	0.59	0.79	1260	0.61	0.82	1302	0.63	0.85	1343	0.66	0.89	1383	0.69	0.93	1421	0.73	0.98	1458	0.77	1.03
613	1300	1198	0.61	0.82	1241	0.63	0.85	1283	0.66	0.89	1324	0.69	0.93	1364	0.72	0.97	1402	0.76	1.02	1439	0.80	1.07	1476	0.84	1.12
661	1400	1223	0.66	0.89	1265	0.69	0.92	1307	0.72	0.96	1347	0.75	1.01	1386	0.79	1.06	1423	0.83	1.11	1459	0.87	1.16	1495	0.90	1.21
708	1500	1250	0.72	0.96	1292	0.75	1.01	1332	0.78	1.05	1371	0.82	1.10	1408	0.86	1.15	1445	0.90	1.21	1481	0.95	1.27	1516	0.98	1.32
755	1600	1279	0.78	1.05	1319	0.82	1.10	1358	0.86	1.15	1396	0.90	1.20	1432	0.94	1.26	1468	0.98	1.32	1504	1.03	1.38	1539	1.07	1.44
802	1700	1308	0.86	1.15	1347	0.90	1.20	1385	0.94	1.26	1421	0.98	1.32	1457	1.03	1.38	1493	1.07	1.44	1528	1.12	1.50	1563	1.16	1.56
849	1800	1338	0.94	1.26	1376	0.98	1.31	1412	1.03	1.38	1448	1.08	1.45	1483	1.13	1.51	1518	1.17	1.57	1553	1.22	1.63	1588	1.25	1.68
897	1900	1368	1.02	1.37	1405	1.07	1.44	1441	1.13	1.51	1476	1.18	1.58	1510	1.22	1.64	1545	1.27	1.70	1580	1.31	1.76	1615	1.35	1.81
944	2000	1400	1.12	1.50	1435	1.17	1.57	1470	1.23	1.65	1505	1.28	1.72	1539	1.33	1.78	1573	1.37	1.84	1608	1.41	1.89	1643	1.45	1.94

BLOWER DATA

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

FOR ALL UNITS ADD:

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

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

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

DOWNFLOW

Air Volume		External Static - Pa (in.w.g.)																							
		25 (0.10)			50 (0.20)			75 (0.30)			100 (0.40)			125 (0.50)			150 (0.60)			175 (0.70)			200 (0.80)		
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	Rev/ min	kW	BHP
900	1900	578	0.33	0.44	610	0.37	0.49	643	0.40	0.54	678	0.45	0.60	714	0.48	0.65	749	0.52	0.70	785	0.57	0.76	819	0.61	0.82
945	2000	600	0.37	0.50	632	0.42	0.56	665	0.46	0.61	699	0.49	0.66	734	0.53	0.71	769	0.57	0.77	803	0.62	0.83	837	0.67	0.90
990	2100	623	0.43	0.57	655	0.46	0.62	688	0.51	0.68	721	0.54	0.73	755	0.59	0.79	789	0.63	0.84	822	0.68	0.91	854	0.73	0.98
1040	2200	647	0.48	0.65	678	0.52	0.70	711	0.56	0.75	743	0.60	0.81	776	0.64	0.86	809	0.69	0.93	841	0.75	1.00	872	0.79	1.06
1085	2300	671	0.54	0.73	702	0.58	0.78	734	0.62	0.83	766	0.66	0.89	798	0.71	0.95	829	0.76	1.02	860	0.81	1.09	890	0.87	1.16
1135	2400	696	0.60	0.81	726	0.65	0.87	757	0.69	0.92	788	0.73	0.98	819	0.78	1.04	850	0.83	1.11	880	0.89	1.19	909	0.94	1.26
1180	2500	720	0.67	0.90	750	0.71	0.95	780	0.75	1.01	811	0.80	1.07	841	0.85	1.14	871	0.91	1.22	900	0.97	1.30	929	1.02	1.37
1225	2600	745	0.74	0.99	774	0.78	1.05	804	0.83	1.11	834	0.87	1.17	864	0.93	1.25	893	0.99	1.33	921	1.05	1.41	949	1.11	1.49
1275	2700	770	0.81	1.09	799	0.86	1.15	828	0.90	1.21	858	0.95	1.28	887	1.01	1.36	916	1.07	1.44	943	1.14	1.53	969	1.20	1.61
1320	2800	795	0.89	1.19	824	0.93	1.25	853	0.99	1.33	882	1.04	1.40	911	1.10	1.48	939	1.16	1.56	965	1.23	1.65	990	1.29	1.73
1370	2900	820	0.97	1.30	849	1.02	1.37	878	1.08	1.45	907	1.14	1.53	935	1.20	1.61	962	1.27	1.70	988	1.33	1.78	1012	1.39	1.86

Air Volume		External Static - Pa (in.w.g.)																							
		820			250 (1.00)			275 (1.10)			300 (1.20)			325 (1.30)			350 (1.40)			375 (1.50)			400 (1.60)		
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	Rev/ min	kW	BHP
900	1900	853	0.66	0.88	885	0.70	0.94	915	0.74	0.99	944	0.78	1.05	971	0.83	1.11	996	0.87	1.17	1021	0.92	1.23	1045	0.96	1.29
945	2000	869	0.72	0.96	899	0.75	1.01	929	0.80	1.07	957	0.84	1.13	984	0.89	1.19	1009	0.93	1.25	1033	0.98	1.31	1058	1.03	1.38
990	2100	885	0.78	1.04	915	0.82	1.10	944	0.86	1.15	971	0.91	1.22	997	0.95	1.28	1022	1.00	1.34	1046	1.04	1.40	1070	1.09	1.46
1040	2200	902	0.84	1.13	931	0.89	1.19	959	0.93	1.24	986	0.98	1.31	1012	1.02	1.37	1036	1.07	1.43	1060	1.12	1.50	1084	1.16	1.56
1085	2300	920	0.92	1.23	948	0.96	1.29	975	1.01	1.35	1001	1.05	1.41	1027	1.10	1.47	1051	1.14	1.53	1075	1.19	1.60	1098	1.24	1.66
1135	2400	938	0.99	1.33	965	1.04	1.39	992	1.08	1.45	1017	1.13	1.52	1042	1.18	1.58	1066	1.22	1.64	1090	1.27	1.70	1113	1.32	1.77
1180	2500	956	1.07	1.44	983	1.13	1.51	1009	1.17	1.57	1034	1.22	1.63	1059	1.26	1.69	1082	1.31	1.75	1105	1.36	1.82	1128	1.40	1.88
1225	2600	975	1.16	1.56	1001	1.22	1.63	1026	1.26	1.69	1051	1.31	1.75	1075	1.35	1.81	1098	1.40	1.87	1121	1.44	1.93	1143	1.49	2.00
1275	2700	995	1.25	1.68	1020	1.31	1.75	1044	1.35	1.81	1069	1.40	1.87	1092	1.44	1.93	1114	1.48	1.99	1136	1.54	2.06	1158	1.59	2.13
1320	2800	1015	1.35	1.81	1039	1.40	1.87	1063	1.45	1.94	1086	1.49	2.00	1109	1.54	2.06	1131	1.58	2.12	1152	1.63	2.19	1174	1.69	2.26
1370	2900	1035	1.45	1.94	1058	1.49	2.00	1081	1.54	2.07	1104	1.59	2.13	1126	1.63	2.19	1147	1.69	2.26	1168	1.74	2.33	1189	1.79	2.40

BLOWER DATA

BELT DRIVE | 6 TON

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

FOR ALL UNITS ADD:

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

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

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

HORIZONTAL

Air Volume		External Static - Pa (in.w.g.)																							
		25 (0.10)			50 (0.20)			75 (0.30)			100 (0.40)			125 (0.50)			150 (0.60)			175 (0.70)			200 (0.80)		
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	Rev/ min	kW	BHP
900	1900	581	0.33	0.44	618	0.37	0.49	655	0.40	0.54	692	0.44	0.59	729	0.48	0.64	765	0.51	0.69	800	0.56	0.75	833	0.60	0.80
945	2000	602	0.37	0.50	639	0.41	0.55	676	0.46	0.61	713	0.49	0.66	749	0.53	0.71	784	0.57	0.76	818	0.61	0.82	850	0.66	0.88
990	2100	625	0.43	0.57	661	0.46	0.62	698	0.50	0.67	735	0.54	0.73	770	0.58	0.78	804	0.63	0.84	837	0.67	0.90	868	0.72	0.96
1040	2200	648	0.48	0.64	685	0.51	0.69	721	0.56	0.75	757	0.60	0.80	791	0.64	0.86	824	0.69	0.92	856	0.73	0.98	886	0.78	1.05
1085	2300	673	0.53	0.71	709	0.57	0.77	745	0.62	0.83	780	0.66	0.88	813	0.70	0.94	845	0.75	1.01	876	0.81	1.08	905	0.86	1.15
1135	2400	699	0.59	0.79	734	0.63	0.85	769	0.68	0.91	803	0.72	0.97	835	0.78	1.04	866	0.83	1.11	896	0.88	1.18	924	0.93	1.25
1180	2500	725	0.66	0.88	759	0.70	0.94	793	0.75	1.00	826	0.80	1.07	857	0.85	1.14	887	0.90	1.21	916	0.95	1.28	944	1.01	1.36
1225	2600	752	0.72	0.97	785	0.78	1.04	818	0.82	1.10	850	0.87	1.17	880	0.93	1.25	909	0.98	1.32	937	1.04	1.40	964	1.10	1.48
1275	2700	779	0.80	1.07	811	0.85	1.14	843	0.90	1.21	873	0.96	1.29	902	1.02	1.37	931	1.07	1.44	958	1.13	1.52	984	1.19	1.60
1320	2800	805	0.88	1.18	837	0.94	1.26	868	0.99	1.33	897	1.05	1.41	925	1.11	1.49	952	1.17	1.57	979	1.24	1.66	1004	1.30	1.74
1370	2900	832	0.97	1.30	863	1.03	1.38	892	1.09	1.46	921	1.15	1.54	948	1.22	1.63	974	1.28	1.71	1000	1.34	1.80	1024	1.40	1.88

Air Volume		External Static - Pa (in.w.g.)																							
		225 (0.90)			250 (1.00)			275 (1.10)			300 (1.20)			325 (1.30)			350 (1.40)			375 (1.50)			400 (1.60)		
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	Rev/ min	kW	BHP
900	1900	864	0.65	0.87	895	0.69	0.93	924	0.74	0.99	953	0.79	1.06	980	0.84	1.12	1007	0.88	1.18	1032	0.93	1.25	1056	0.98	1.31
945	2000	881	0.71	0.95	911	0.75	1.01	940	0.81	1.08	967	0.85	1.14	994	0.90	1.21	1020	0.95	1.27	1044	1.00	1.34	1068	1.04	1.40
990	2100	898	0.77	1.03	927	0.82	1.10	955	0.87	1.17	982	0.92	1.23	1008	0.97	1.30	1033	1.02	1.37	1057	1.07	1.43	1080	1.12	1.50
1040	2200	916	0.84	1.12	944	0.89	1.19	971	0.94	1.26	998	0.99	1.33	1023	1.04	1.40	1047	1.10	1.47	1071	1.15	1.54	1093	1.19	1.60
1085	2300	934	0.91	1.22	961	0.96	1.29	988	1.01	1.36	1014	1.07	1.43	1038	1.12	1.50	1062	1.18	1.58	1085	1.23	1.65	1107	1.28	1.71
1135	2400	952	0.98	1.32	979	1.04	1.40	1005	1.10	1.47	1030	1.15	1.54	1054	1.21	1.62	1077	1.26	1.69	1099	1.31	1.76	1121	1.37	1.83
1180	2500	971	1.07	1.43	997	1.13	1.51	1022	1.19	1.59	1046	1.24	1.66	1069	1.30	1.74	1092	1.35	1.81	1114	1.40	1.88	1135	1.45	1.95
1225	2600	990	1.16	1.55	1015	1.22	1.63	1039	1.28	1.71	1063	1.34	1.79	1086	1.39	1.86	1108	1.45	1.94	1129	1.50	2.01	1150	1.54	2.07
1275	2700	1009	1.25	1.68	1034	1.31	1.76	1057	1.37	1.84	1080	1.43	1.92	1102	1.48	1.99	1124	1.54	2.07	1145	1.60	2.14	1166	1.65	2.21
1320	2800	1028	1.36	1.82	1052	1.42	1.90	1075	1.48	1.98	1097	1.54	2.06	1119	1.59	2.13	1140	1.65	2.21	1161	1.70	2.28	1182	1.75	2.34
1370	2900	1048	1.46	1.96	1071	1.52	2.04	1093	1.58	2.12	1115	1.64	2.20	1136	1.70	2.28	1157	1.75	2.35	1177	1.81	2.42	1198	1.85	2.48

BLOWER DATA

BELT DRIVE KIT SPECIFICATIONS - 036-060

Model No.	Motor kW (HP)		No. of Speeds	Drive Kits and Rev/Min Range					
	Nominal	Maximum		ZA07	ZA08	ZA09	ZA10	[1] ZA11	[2] ZA12
036	0.62 (0.83)	0.71 (0.95)	1	705 - 1077	- - -	- - -	1025 - 1391	- - -	- - -
	0.93 (1.25)	1.07 (1.43)	1	705 - 1077	- - -	- - -	1025 - 1391	- - -	- - -
048	0.62 (0.83)	0.71 (0.95)	1	- - -	759 -1158	- - -	- - -	1111 - 1437	- - -
	0.93 (1.25)	1.07 (1.43)	1	- - -	759 -1158	- - -	- - -	1111 - 1437	- - -
060	0.93 (1.25)	1.07 (1.43)	1	- - -	- - -	919 - 1247	- - -	- - -	1190 - 1540
	1.24 (1.66)	1.42 (1.91)	1	- - -	- - -	919 - 1247	- - -	- - -	1190 - 1540

NOTE - Using total air volume and system static pressure requirements determine from blower performance tables rev/min and motor size required. Maximum usable size of motors furnished are shown. If motors of comparable size are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

[1] ZA11 drive kits require the 0.93 kW (1.25 hp) motor.

[2] ZA12 drive kit requires the 1.24 kW (1.66 hp) motor.

BELT DRIVE KIT SPECIFICATIONS - 074

Model No.	Motor kW (HP)		No. of Speeds	Drive Kits and Rev/Min Range		
	Nominal	Maximum		ZAA03	ZAA04	ZAA05
074	1.24 (1.66)	1.42 (1.91)	1	665 - 921	768 - 1023	921 - 1177
	1.24 (1.66)	1.42 (1.91)	2	665 - 921	768 - 1023	921 - 1177

NOTE - Using total air volume and system static pressure requirements determine from blower performance tables rev/min and motor size required. Maximum usable size of motors furnished are shown. If motors of comparable size are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

POWER EXHAUST FAN PERFORMANCE

Return Air System Static Pressure		Air Volume Exhausted	
Pa	in. w.g.	L/s	cfm
0	0.00	880	1865
12	0.05	842	1785
25	0.10	807	1710
37	0.15	769	1630
50	0.20	729	1545
62	0.25	684	1450
75	0.30	637	1350
87	0.35	585	1240

OPTIONS / ACCESSORIES AIR RESISTANCE

Air Volume		Wet Indoor Coil				Gas Heat Exchanger				Economizer			
		036, 048		060, 074		Medium		High		Downflow		Horizontal	
L/s	cfm	Pa	in. w.g.	Pa	in. w.g.	Pa	in. w.g.	Pa	in. w.g.	Pa	in. w.g.	Pa	in. w.g.
425	900	2	0.01	- - -	- - -	0.01	0.05	0.01	0.06	7	0.03	10	0.04
472	1000	5	0.02	- - -	- - -	0.01	0.06	0.01	0.06	7	0.03	12	0.05
519	1100	5	0.02	- - -	- - -	0.01	0.06	0.02	0.07	10	0.04	12	0.05
566	1200	5	0.02	- - -	- - -	0.01	0.06	0.02	0.07	12	0.05	15	0.06
613	1300	7	0.03	- - -	- - -	0.02	0.07	0.02	0.07	12	0.05	17	0.07
661	1400	7	0.03	- - -	- - -	0.02	0.07	0.02	0.08	15	0.06	20	0.08
708	1500	10	0.04	- - -	- - -	0.02	0.07	0.02	0.08	17	0.07	20	0.08
755	1600	10	0.04	7	0.03	0.02	0.07	0.02	0.08	20	0.08	22	0.09
802	1700	12	0.05	7	0.03	0.02	0.07	0.02	0.08	22	0.09	25	0.10
849	1800	12	0.05	7	0.03	0.01	0.06	0.02	0.08	25	0.10	27	0.11
897	1900	15	0.06	10	0.04	0.01	0.06	0.02	0.08	27	0.11	30	0.12
944	2000	15	0.06	10	0.04	0.02	0.07	0.02	0.09	30	0.12	32	0.13
991	2100	- - -	- - -	12	0.05	0.02	0.08	0.02	0.10	32	0.13	35	0.14
1038	2200	- - -	- - -	12	0.05	0.02	0.10	0.03	0.12	35	0.14	37	0.15
1085	2300	- - -	- - -	12	0.05	0.03	0.11	0.03	0.14	37	0.15	40	0.16
1133	2400	- - -	- - -	15	0.06	0.03	0.11	0.03	0.13	40	0.16	45	0.18
1180	2500	- - -	- - -	15	0.06	0.03	0.11	0.04	0.15	45	0.18	47	0.19
1227	2600	- - -	- - -	17	0.07	0.03	0.13	0.04	0.16	47	0.19	50	0.20
1274	2700	- - -	- - -	17	0.07	0.04	0.15	0.04	0.18	50	0.20	52	0.21
1321	2800	- - -	- - -	17	0.07	0.03	0.13	0.04	0.16	55	0.22	57	0.23
1369	2900	- - -	- - -	20	0.08	0.03	0.13	0.04	0.18	57	0.23	60	0.24

BLOWER DATA

CEILING DIFFUSERS AIR RESISTANCE

Air Volume		RTD9-65S Step–Down Diffuser						FD9-65S Flush Diffuser		RTD11-95S Step–Down Diffuser						FD11-95S Flush Diffuser	
		2 Ends Open		1 Side & 2 Ends Open		All Ends & Sides Open				2 Ends Open		1 Side & 2 Ends Open		All Ends & Sides Open			
L/s	cfm	Pa	in. w.g.	Pa	in. w.g.	Pa	in. w.g.	Pa	in. w.g.	Pa	in. w.g.	Pa	in. w.g.	Pa	in. w.g.	Pa	in. w.g.
375	800	37	0.15	32	0.13	27	0.11	27	0.11	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
470	1000	47	0.19	40	0.16	35	0.14	35	0.14	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
565	1200	62	0.25	50	0.20	42	0.17	42	0.17	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
660	1400	82	0.33	65	0.26	50	0.20	50	0.20	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
755	1600	107	0.43	80	0.32	50	0.20	50	0.24	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
850	1800	139	0.56	99	0.40	75	0.30	75	0.30	32	0.13	27	0.11	22	0.09	22	0.09
945	2000	182	0.73	124	0.50	90	0.36	90	0.36	37	0.15	32	0.13	27	0.11	25	0.10
1040	2200	236	0.95	157	0.63	109	0.44	109	0.44	45	0.18	37	0.15	30	0.12	30	0.12
1130	2400	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	52	0.21	45	0.18	37	0.15	35	0.14
1225	2600	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	60	0.24	52	0.21	45	0.18	42	0.17
1320	2800	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	67	0.27	60	0.24	52	0.21	50	0.20
1415	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
1605	3400	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	124	0.50	112	0.45	97	0.39	92	0.37
1700	3600	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	152	0.61	134	0.54	119	0.48	109	0.44

CEILING DIFFUSER AIR THROW DATA

Air Volume		[1] Effective Throw			
Model No.		RTD9-65S		FD9-65S	
L/s	cfm	m	ft.	m	ft.
375	800	3 - 5	10 - 17	4 - 5	14 - 18
470	1000	3 - 5	10 - 17	5 - 6	15 - 20
565	1200	3 - 5	11 - 18	5 - 7	16 - 22
660	1400	4 - 6	12 - 19	5 - 7	17 - 24
755	1600	4 - 6	12 - 20	5 - 8	18 - 25
850	1800	4 - 6	13 - 21	6 - 9	20 - 28
945	2000	4 - 7	14 - 23	6 - 9	21 - 29
1040	2200	5 - 8	16 - 25	7 - 9	22 - 30
Model No.		RTD11-95S		FD11-95S	
1225	2600	7 - 9	24 - 29	6 - 7	19 - 24
1320	2800	8 - 9	25 - 30	6 - 9	20 - 28
1415	3000	8 - 10	27 - 33	6 - 9	21 - 29
1510	3200	9 - 11	28 - 35	7 9	22 - 29
1605	3400	9 - 11	30 - 37	7 - 9	22 - 30
1700	3600	8 - 10	25 - 33	7 - 8	22 - 24

[1] Effective throw based on terminal velocities of 23 m per minute (75 ft. per minute).

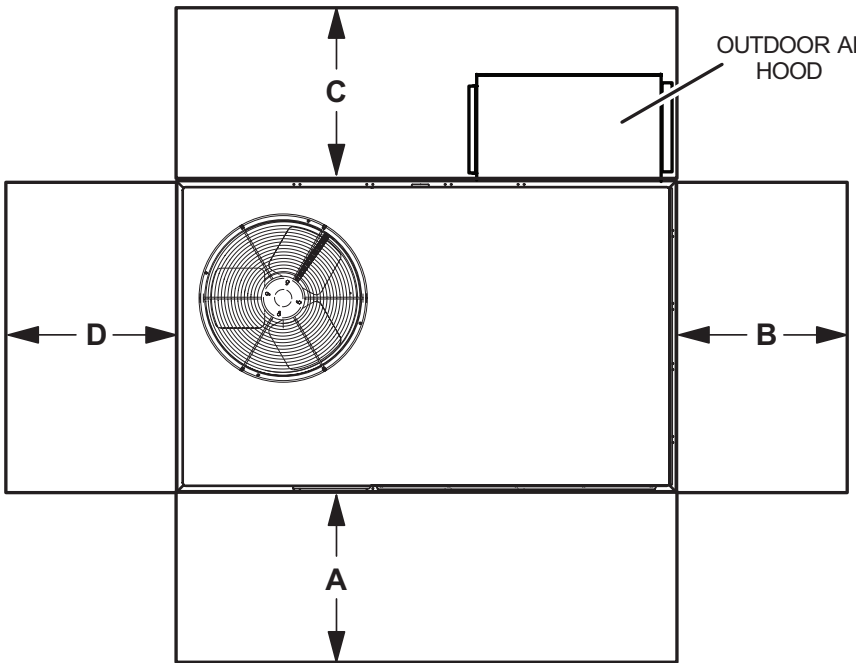
ELECTRICAL DATA

Model No.		ZGB036S4		ZGB048S4		ZGB060S4		ZGB074S4
[1] Voltage - 50Hz with Neutral		380/420V - 3 Ph		380/420V - 3 Ph		380/420V - 3 Ph		380/420V - 3 Ph
Compressor	Rated Load Amps	4		5.5		8		8.5
	Locked Rotor Amps	31		37		59		66
Outdoor Fan Motor	Full Load Amps	0.9		0.9		0.9		1
Power Exhaust (1) 0.25 kW	Full Load Amps	0.6		0.6		0.6		1.3
Indoor Blower Motor	kW	0.62	0.93	0.62	0.93	0.93	1.24	1.24
	Full Load Amps	1.6	2	1.6	2	2	2.6	2.6
[2] Maximum Overcurrent Protection	Unit Only	15	15	15	15	20	20	20
	With (1) 0.25 kW Power Exhaust	15	15	15	15	20	20	20
[3] Minimum Circuit Ampacity	Unit Only	8	8	10	10	13	14	15
	With (1) 0.25 kW Power Exhaust	9	9	10	11	14	15	16

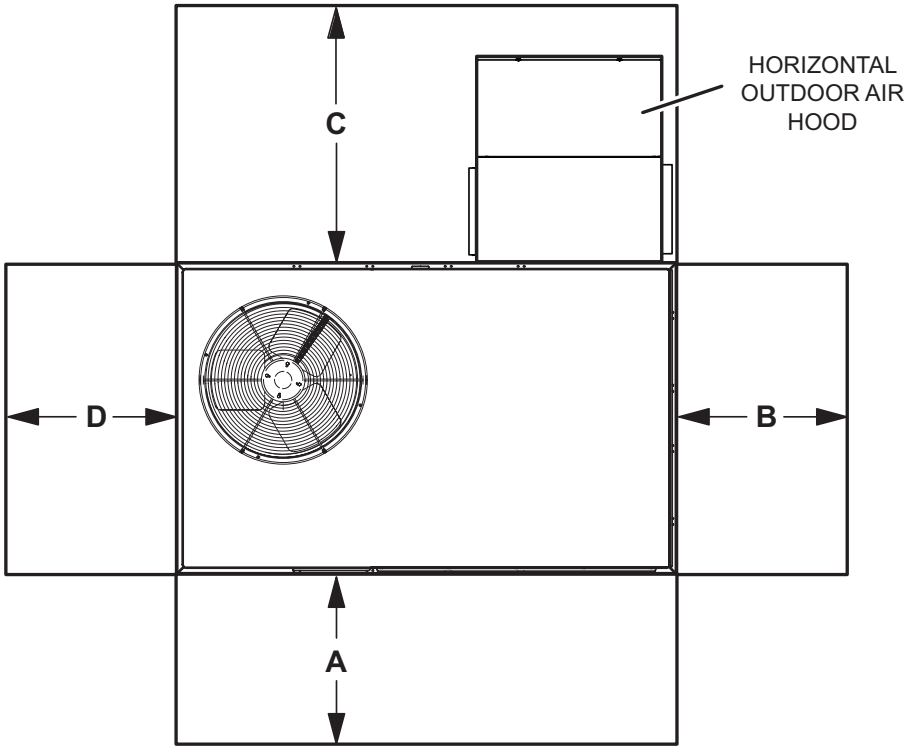
[1] Extremes of operating range are plus and minus 10% of line voltage.
[2] Heating, Air Conditioning, Refrigeration type breaker or fuse.
[3] Refer to local electrical code to determine wire, fuse and disconnect size requirements.

UNIT CLEARANCES

UNIT WITH DOWNFLOW ECONOMIZER



UNIT WITH HORIZONTAL ECONOMIZER



[1] Unit Clearance	A		B		C Downflow		C Horizontal		D		Top Clearance
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	
Service Clearance	914	36	914	36	914	36	1524	60	914	36	**Unobstructed**
Clearance to Combustibles	914	36	25	1	25	1	25	1	25	1	
Minimum Operation Clearance	914	36	914	36	914	36	1524	60	914	36	

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

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

OUTDOOR SOUND DATA

Unit Model No.	Octave Band Sound Power Levels dBA, re 10^{-12} Watts - Center Frequency - Hz							[1] Sound Rating Number (dBA)
	125	250	500	1000	2000	4000	8000	
ZGB036	81	78	77	72	68	66	61	77
ZGB048	84	80	79	74	70	67	63	80
ZGB060	80	76	76	73	68	66	64	78
ZGB074	88	85	84	79	72	66	64	84

[1] Sound Rating Number according to AHRI Standard 270-2008. Sound Rating Number is the overall A-Weighted Sound Power Level, (LWA), dB (100 Hz to 10,000 Hz).

WEIGHT DATA — UNIT

Model Number	Net				Shipping			
	Base		Max.		Base		Max.	
	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.
ZGB036	238	524	269	594	240	529	272	599
ZGB048	242	533	274	603	244	538	276	608
ZGB060	269	592	301	664	271	597	303	669
ZGB074	290	640	323	712	293	645	325	717

Base Unit - The unit with NO OPTIONS.

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

WEIGHT DATA — OPTIONS / ACCESSORIES

		Shipping Weights	
		kg	lbs.
ECONOMIZER			
Economizer			
Economizer, Includes Outdoor Air Hood and Barometric Relief Dampers with Hood	Downflow	34	75
	Horizontal	46	102
OUTDOOR AIR			
Outdoor Air Dampers			
Motorized		18	39
Manual		13	29
POWER EXHAUST			
Standard Static	Downflow	24	54
	Horizontal	19	41
GAS HEAT			
	Medium Heat (adder over standard heat)	4	8
	High Heat (adder over standard heat)	9	19
ROOF CURBS			
Hybrid Roof Curbs, Downflow			
203 mm height		29	63
356 mm height		38	83
457 mm height		42	93
610 mm height		51	113
CEILING DIFFUSERS			
Step-Down	RTD9-65S	36	80
	RTD11-95S	54	118
Flush	FD9-65S	36	80
	FD11-95S	54	118

DIMENSIONS — UNIT

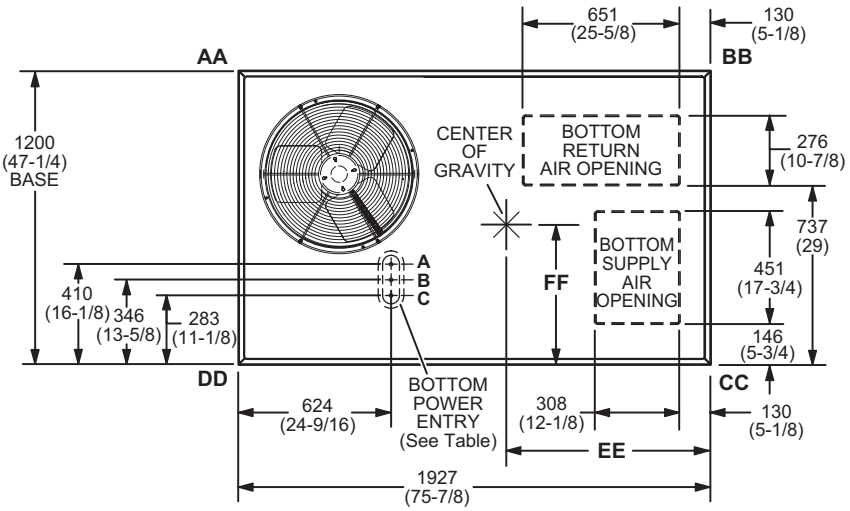
Model No.	CORNER WEIGHTS																CENTER OF GRAVITY							
	AA				BB				CC				DD				EE				FF			
	Base		Max.		Base		Max.		Base		Max.		Base		Max.		Base		Max.		Base		Max.	
	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	mm	in.	mm	in.	mm	in.	mm	in.
036	58	129	67	147	56	124	64	141	60	133	68	150	63	138	70	156	984	39	933	37	578	23	622	25
048	60	132	68	149	57	126	65	143	61	135	69	152	64	140	72	159	984	39	933	37	578	23	622	25
060	73	162	83	182	66	146	74	164	61	134	68	151	68	149	76	167	1016	40	965	38	622	25	660	26
074	69	153	77	170	69	153	77	170	76	167	84	186	76	167	84	186	965	38	914	36	572	22.5	610	24

Base Unit - The unit with NO OPTIONS.

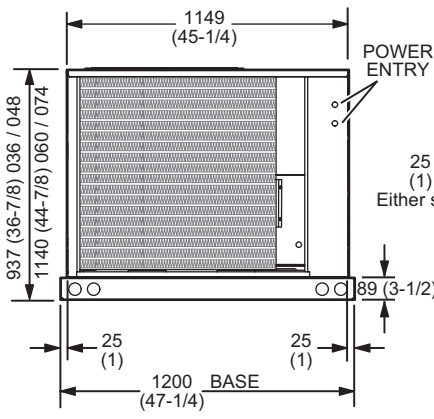
Max. Unit - The unit with ALL OPTIONS Installed. (Economizer, high heat, largest blower motor, etc.).

BOTTOM POWER ENTRY
Holes required for Optional Bottom Power Entry Kit

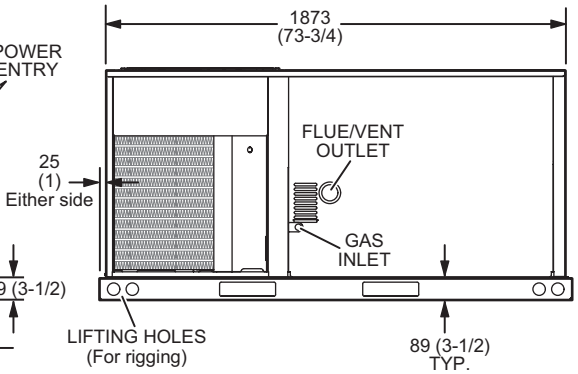
	Threaded Conduit Fittings (Provided in Kit)	Wire Use	Hole Diameter Required in Unit Base (Max.)
A	1/2	ACC	23 (7/8)
B	1/2	24V	23 (7/8)
C	3/4	POWER	29 (1-1/8)



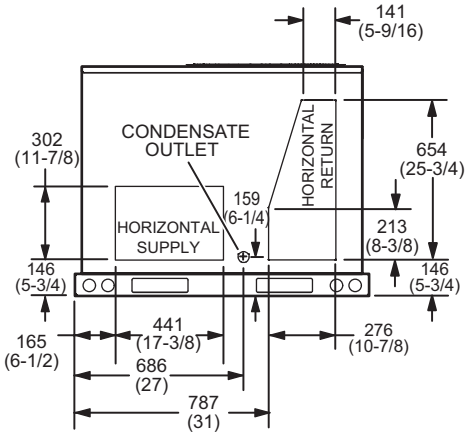
TOP VIEW (Base)



END VIEW

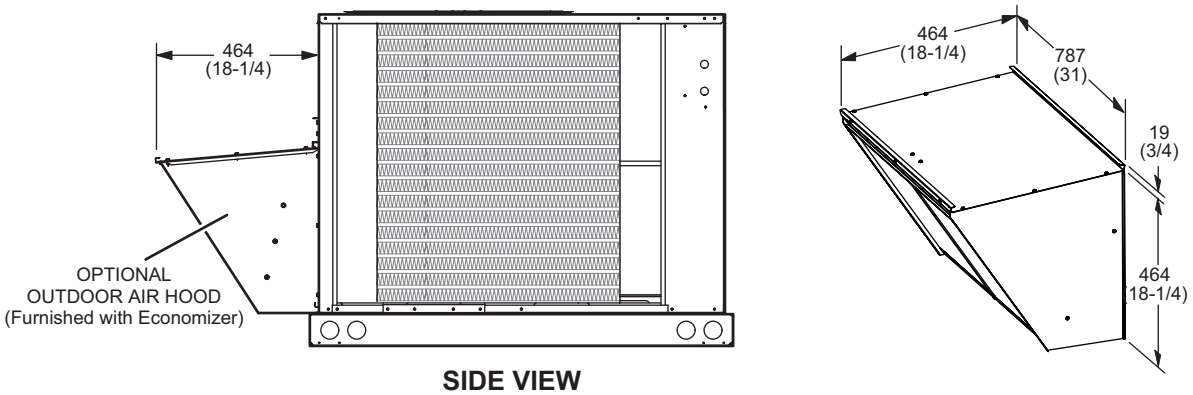


FRONT VIEW



END VIEW

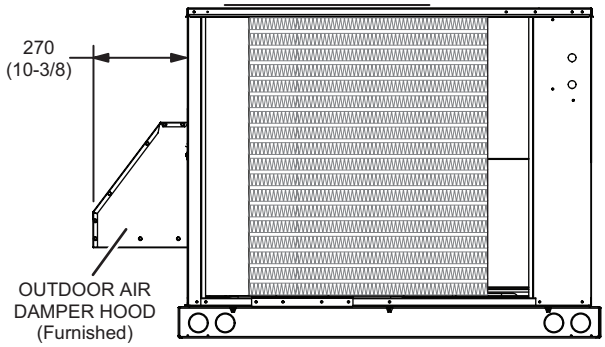
OUTDOOR AIR HOOD DETAIL FOR OPTIONAL ECONOMIZER (Downflow Applications)



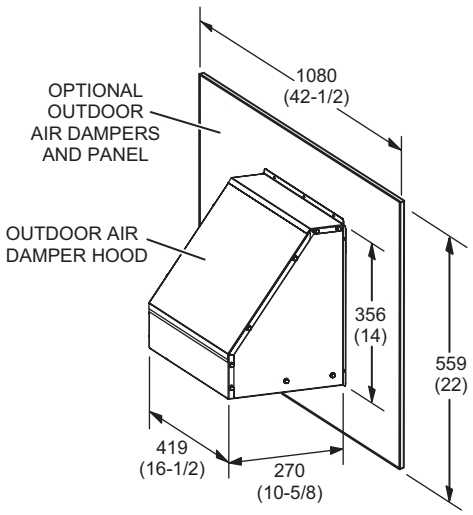
SIDE VIEW

OUTDOOR AIR DAMPER HOOD DETAIL (Downflow or Horizontal Applications)

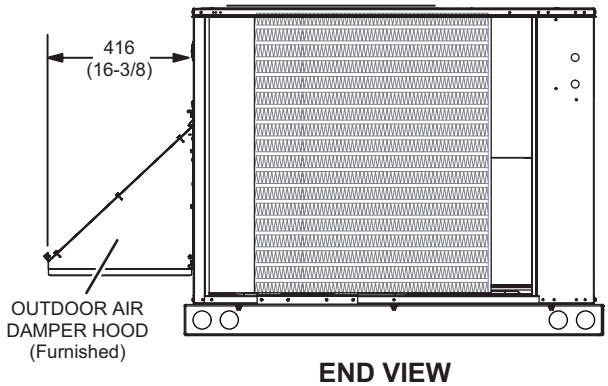
MANUAL OUTDOOR AIR HOOD



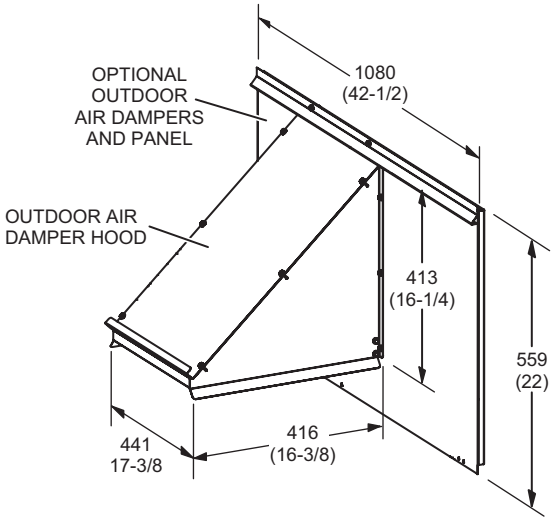
END VIEW



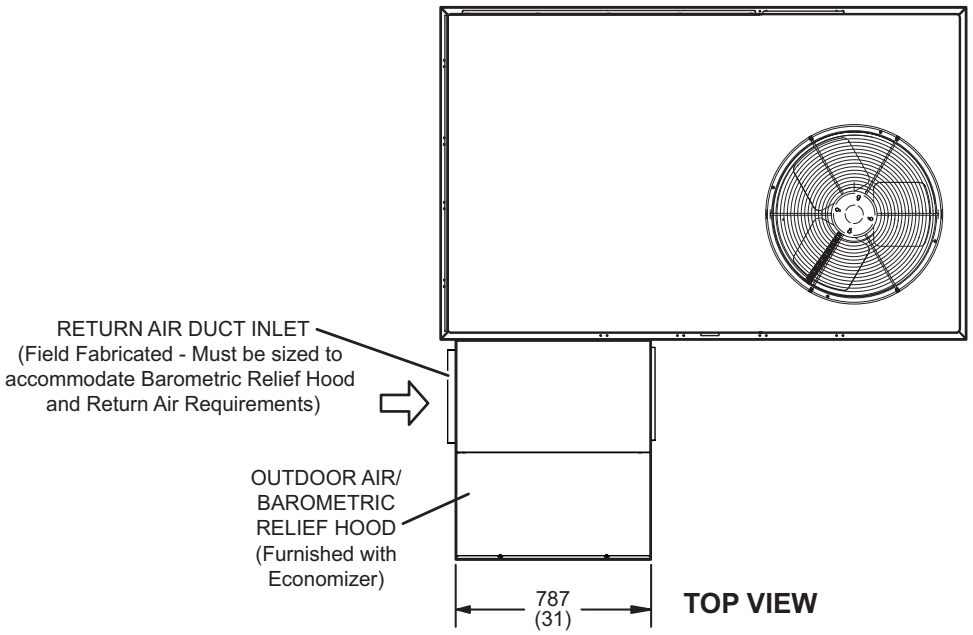
MOTORIZED OUTDOOR AIR HOOD



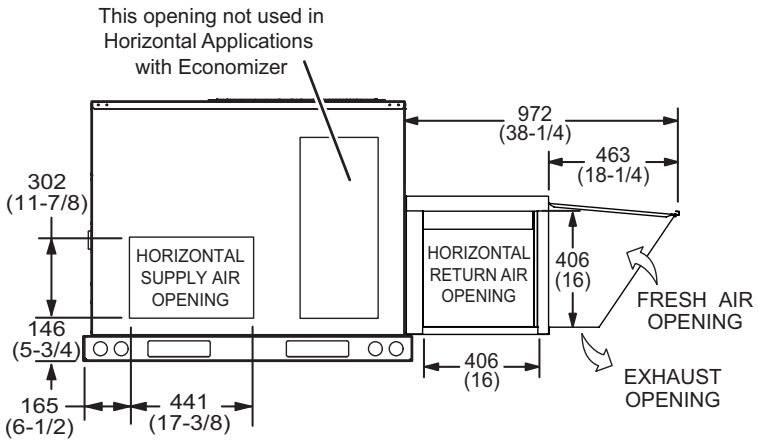
END VIEW



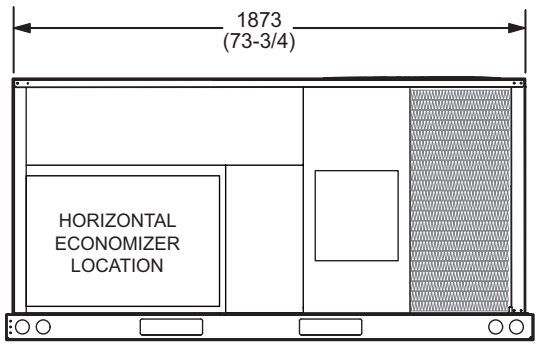
OUTDOOR AIR HOOD DETAIL WITH OPTIONAL ECONOMIZER AND BAROMETRIC RELIEF DAMPERS (Horizontal Applications)



TOP VIEW



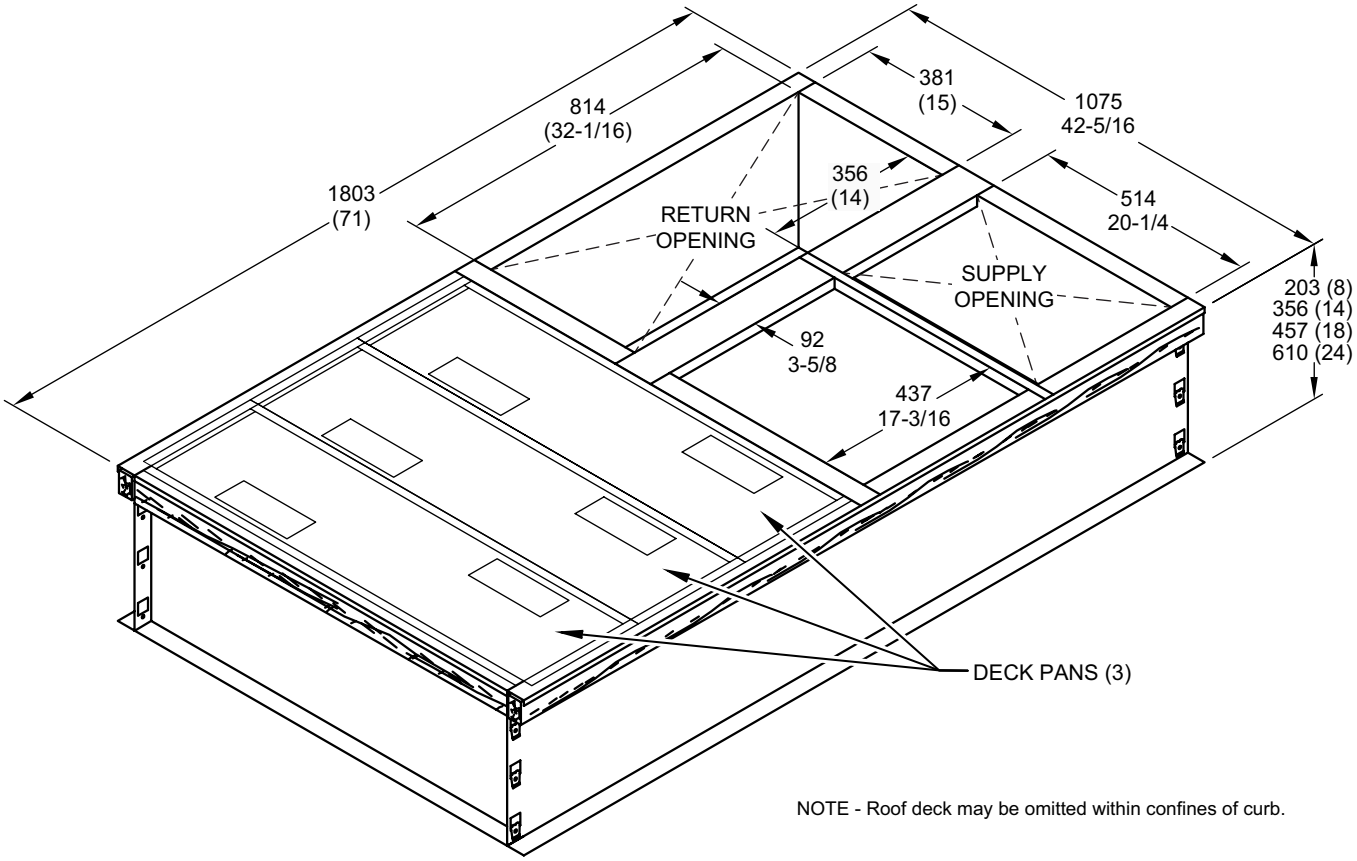
END VIEW



BACK VIEW

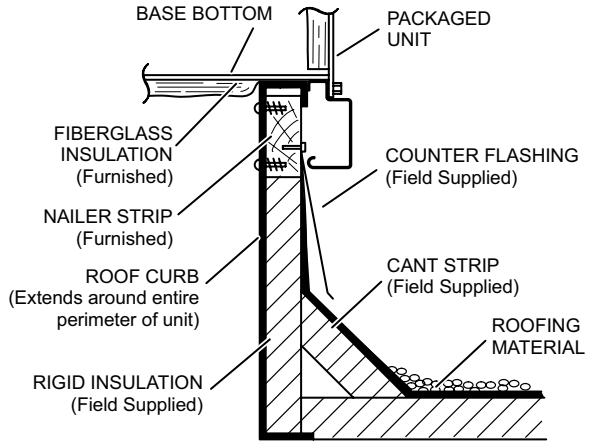
Note - Return Air Duct and Transition must be supported.

HYBRID ROOF CURBS - DOUBLE DUCT OPENING

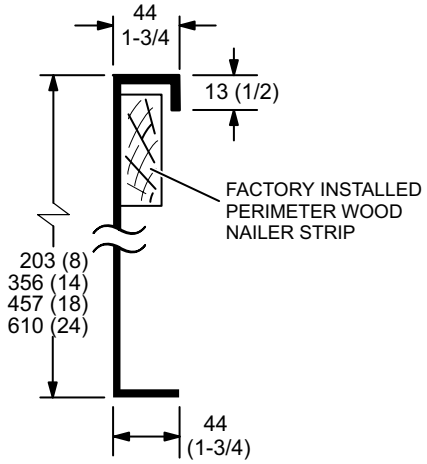


NOTE - Roof deck may be omitted within confines of curb.

TYPICAL FLASHING DETAIL FOR ROOF CURB

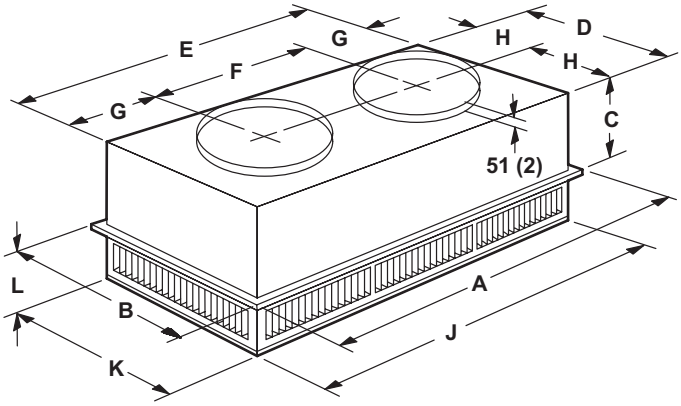


DETAIL ROOF CURB



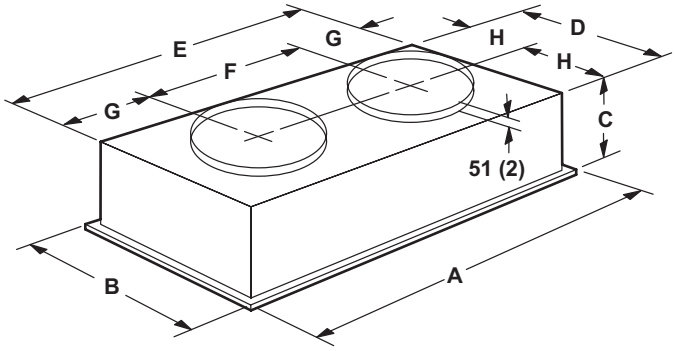
COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

STEP-DOWN CEILING DIFFUSER



Model Number		RTD9-65S	RTD11-95S
A	mm	1159	1159
	in.	47-5/8	47-5/8
B	mm	600	752
	in.	23-5/8	29-5/8
C	mm	289	365
	in.	11-3/8	14-3/8
D	mm	546	699
	in.	21-1/2	27-1/2
E	mm	1156	1158
	in.	45-1/2	45-1/2
F	mm	572	572
	in.	22-1/2	22-1/2
G	mm	292	292
	in.	11-1/2	11-1/2
H	mm	273	349
	in.	10-3/4	13-3/4
J	mm	1156	1156
	in.	45-1/2	45-1/2
K	mm	546	699
	in.	21-1/2	27-1/2
L	mm	181	206
	in.	7-1/8	8-1/8
Duct Size	mm	457 round	508 round
	in.	18 round	20 round

FLUSH CEILING DIFFUSER



Model Number		FD9-65S	FD11-95S
A	mm	1159	1159
	in.	47-5/8	47-5/8
B	mm	600	752
	in.	23-5/8	29-5/8
C	mm	343	422
	in.	13-1/2	16-5/8
D	mm	533	686
	in.	21	27
E	mm	1143	1143
	in.	45	45
F	mm	572	572
	in.	22-1/2	22-1/2
G	mm	286	286
	in.	11-1/4	11-1/4
H	mm	267	343
	in.	10-1/2	13-1/2
Duct Size	mm	457 round	20 round
	in.	18 round	508 round

REVISIONS

Sections	Description of Change
Options/Accessories	**Catalog numbers revised for:** LPG Kits Single Enthalpy