KeepRite®

PAE

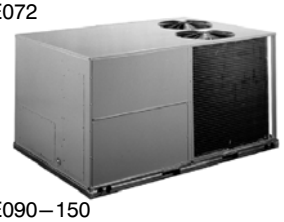
Product Specifications

COMMERCIAL ASHRAE EFFICIENT PACKAGE AIR CONDITIONER UNITS R−22 SINGLE PACKAGE ROOFTOP 6 − 25 TONS (3−Phase)

BUILT TO LAST, EASY TO INSTALL AND SERVICE

- One−piece, high efficiency electric cooling with a low profile, prewired, tested, and charged at the factory.
- Field convertible supply and return openings (072−150) are intended for installation on a roof top or ground level.
- Hermetic−type scroll compressors: single compressor on 072 models, dual compressors on 090−240 models, three compressors on 300 models
- Refrigeration System: Loss−of−charge, freeze protection, and high pressure safety switches per circuit
- Units 090 to 300 have 2−stage cooling operation
- Refrigerant circuits contain a filter drier to trap dirt and moisture
- Non−corrosive condensate pan on 072−150 models with choice of bottom or side drain connections. All models have self draining sloping design
- Single−point electrical connections on field installed electric heat units
- Adjustable belt drive indoor fan standard on all units, with permanently lubricated motors
- Direct−drive propeller outdoor fan totally enclosed with permanently lubricated bearings
- Prepainted, galvanized steel cabinet, primer inner panels, certified at 500−hr salt spray test and noncorrosive screws
- Easily removable panels provide ready access to unit components for rapid removal or maintenance
- Two inch disposable fiberglass type return air filters in dedicated rack with tool−less filter access door
- Outdoor temperature cooling operation down to 25°F and up to 125°F
- Fixed orifice metering devices on 072−150 models to precisely control flow to circuits individually, TXV on 180−300 models
- Factory−run test printout included in each rooftop
- 24−Volt control circuit with resettable circuit breaker on 072−150 models
- Indoor and outdoor coils constructed of aluminum fins mechanically bonded to seamless copper tubes
- 25% Manual outside air damper on 180−300 models
- Thru−the−bottom power entry capability

PAE072



PAE090−150

PAE180−240

PAE300

WARRANTY

- 5 Year compressor limited warranty
- 1 Year parts limited warranty

ISO 9001:2000 QMI REGISTERED

ARI PERFORMANCE CERTIFIED ARI Standard 210/240 Unitary Heat Pumps

ARI PERFORMANCE CERTIFIED ARI Standard 340/360

c UL us

c ETL LISTED 180−300

ASHRAE 90.1 COMPLIANT

UNIT PERFORMANCE DATA

UNIT PAE 3−Phase	NOMINAL TONS	COOLING			Unit Dimensions H x W x L	Unit Weight
		Net Cap. (Btuh)	EER	Total kW		
PAE072*0A00AA	6	71,000	10.3	6.9	33 5/16" x 73 11/16" x 45"	529
PAE090*0A00AA	7 1/2	89,000	10.3	8.6	41 5/16" x 87 3/8" x 57 3/4"	766
PAE102*0A00AA	8 1/2	100,000	10.2	9.7	41 5/16" x 87 3/8" x 57 3/4"	776
PAE120*0A00AA	10	115,000	10.3	11.2	41 5/16" x 87 3/8" x 57 3/4"	937
PAE150*0A00AA	12 1/2	136,000	9.7	14.0	41 5/16" x 87 3/8" x 57 3/4"	957
PAE180*0A00AA	15	178,000	9.7	16.8	45" x 91 1/4" x 86 1/8"	1550
PAE210*0A00AA	17 1/2	204,000	10.0	20.1	45" x 91 1/4" x 86 1/8"	1650
PAE240*0A00AA	20	236,000	9.7	24.6	45" x 91 1/4" x 86 1/8"	1700
PAE300*0A00AA	25	278,000	9.8	28.3	52 1/4" x 120 1/4" x 86 1/8"	1850

* Indicates unit voltage: H = 208/230V, L = 460V, S = 575V

NOTE: BASE MODEL NUMBERS LISTED. SEE MODEL NOMENCLATURE LISTING FOR ADDITIONAL OPTIONS

TABLE OF CONTENTS

ROOFTOP PRODUCT MODEL NUMBER IDENTIFICATION GUIDE

Position No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Example	**P**	**A**	**E**	**1**	**5**	**0**	**H**	**D**	**B**	**0**	**0**	**A**	**A**	**A**

P = Package

A = Air Conditioning (Cooling Only)

G = Gas Electric — **TYPE**

E = ASHRAE 90.1 — **EFFICIENCY**

072 = 72,000 BTUH = 6 Tons
090 = 90,000 BTUH = 7.5 Tons
102 = 102,000 BTUH = 8.5 Tons
120 = 120,000 BTUH = 10 Tons
150 = 150,000 BTUH = 12.5 Tons
155 = 155,000 BTUH = 13 Tons
180 = 180,000 BTUH = 15 Tons
210 = 210,000 BTUH = 17.5 Tons
240 = 240,000 BTUH = 20 Tons
300 = 300,000 BTUH = 25 Tons

NOMINAL COOLING CAPACITY

H = 208/230−3−60

L = 460−3−60

S = 575−3−60 — **VOLTAGE**

0 = No Heat

HEATING CAPACITY (See spec for actual capacity)

A = Standard Motor

B = High Static Motor — **MOTOR (Indoor Fan)**

00 = No Options

XX = Option Codes

FACTORY INSTALLED OPTIONS (See FIOP Selection Guide for Details)

A = Copper Aluminum

CONDENSER COIL CONFIGURATION (See Spec Sheet for Details)

Initial Offering — **SALES DIGIT**

Original Design — **ENGINEERING REVISION**

FEATURES/BENEFITS

Every compact one-piece unit arrives fully assembled, charged, tested, and ready to run.

QUIET, EFFICIENT OPERATION AND DEPENDABLE PERFORMANCE — Compressors have vibration isolators for quiet operation. Efficient fan and motor design permits operation at low sound levels.

Unit sizes 090−300 offer lower utility costs through part-load operation using 2 stages of cooling.

Quiet and efficient operation is provided by belt-driven evaporator fans (standard on all units over 5 tons). The belt-driven evaporator-fan is equipped with variable-pitch pulleys which allow adjustment within the rpm ranges of the factory-supplied pulleys.

Increased operating efficiency is achieved through computer-designed coils featuring staggered internally enhanced copper tubes. Fins are ripple-edged for strength, lanced, and double waved for higher heat transfer.

DURABLE, DEPENDABLE CONSTRUCTION — Designed for durability in any climate, the weather-resistant cabinets are constructed of galvanized steel and bonderized, and all exterior panels are coated with a prepainted baked enamel finish. The paint finish is non-chalking, and is capable of withstanding ASTM (American Society for Testing and Materials) B117 500-hour Salt Spray Test. All internal cabinet panels are primed, permitting longer life and a more attractive appearance for the entire unit.

In addition, all size 072−150 units are designed with a single, continuous top piece to eliminate any possible leaks at seams or gasketing. Totally enclosed condenser-fan motors and permanently lubricated bearings provide additional unit dependability.

EASY INSTALLATION AND CONVERSION

All Units are Shipped in the Vertical Duct Configuration for fit-up to standard roof curbs. The contractor can order and install the roof curb early in the construction stage, before decisions on size requirements are made.

All units feature a base rail design with forklift slots and rigging holes for easier maneuvering. Durable packaging protects all units during shipment and storage.

The units can be easily converted from a vertical to a horizontal duct configuration by relocating the panels supplied with the unit (sizes 072−150 only).

To Convert Size 072−150 Units from vertical to horizontal discharge, simply relocate 2 panels. The same basic unit can be used for a variety of applications and can be quickly modified at the jobsite.

To Convert Size 180−300 Units from vertical to horizontal discharge, use the optional horizontal supply/return adapter roof curb.

Convenient Duct Openings in the unit basepans permit side-by-side or concentric duct connections (see Application data section) without requiring internal unit modification.

NOTE: On units using horizontal supply and return, the accessory barometric relief or power exhaust MUST be installed on the return ductwork.

Thru-the-Bottom Service Connection Capability comes standard with the rooftop unit to allow power and control wiring to be routed through the unit's basepan, thereby minimizing roof penetrations (to prevent water leaks). Power and control connections are made on the same side of the unit to simplify installation.

The Non-Corrosive Sloped Condensate Drain Pan (Sizes 072−150) permits either an external horizontal side condensate drain (outside the roof curb) or an internal vertical bottom drain (inside the roof curb). Both options require an external, field-supplied P-trap.

Standard 2-in. Throwaway Filters are easily accessed through a removable panel located above the air intake hood. No tools are required to change unit filters.

Belt-Driven Evaporator-Fan Motors allow maximum on-site flexibility without changing motors or drives.

Field-Installed Accessory Electric Heaters are available in a wide range of capacities. An available single-point wiring kit makes installation simple.

Low Voltage Wiring Connections are easily made thanks to the large terminal board which is located for quick, convenient access.

In addition, color-coded wires permit easy tracing and diagnostics.

PROVEN COMPRESSOR RELIABILITY

Design techniques feature computer-programmed balance between compressor, condenser, and evaporator. Hermetic compressors are equipped with compressor overcurrent and overtemperature protection to ensure dependability.

All units have a metering device which precisely controls refrigerant flow, preventing slugging and flood-back, while maintaining optimum unit performance. Refrigerant filter driers are standard.

INTEGRATED ECONOMIZERS AND OUTDOOR-AIR DAMPERS

Available as factory installed options or accessories, economizers and manual outdoor-air dampers introduce outdoor air which mixes with the conditioned air, improving indoor-air quality and often reducing energy consumption.

All economizers incorporate a parallel blade, gear-driven damper system for efficient air mixing and reliable control. In addition, the standard damper actuator includes a spring return to provide reliable closure on power loss. The economizers for sizes 072−150 are equipped with up to 100% barometric relief capability for high outdoor airflow operations. Economizers for unit sizes 072−150 are available, factory-installed, for vertical return only. Economizers for unit sizes 180−300 are compatible for vertical or horizontal return. An optional field-installed barometric relief package is available for 180−300 size units.

In addition, single-stage power exhaust is available as a field-installed accessory for Economizer to help maintain proper building pressure.

For units without economizer, year-round ventilation is enhanced by a manual outdoor-air damper. On size 072−150 units, a manual damper is available as a field-installed accessory. Unit sizes 180−300 are equipped with a manual 25% damper.

INDOOR-AIR QUALITY

Sloped condensate pans minimize biological growth in rooftop units in accordance with ASHRAE (American Society of Heating, Refrigeration and Air Conditioning Engineers) Standard 62. Two-inch filters with optional dirty filter indicator switch provide for greater particle reduction in the return air. The face-split evaporator coils improve the dehumidification capability of standard units, maximize building humidity control.

Optional proportional reacting CO_2 sensor is available with the Economizer outdoor air damper option or accessory to aid the IAQ (indoor air quality) benefits.

ARI* CAPACITY RATINGS — PAE072−150

UNIT PAE	NOMINAL TONS	STANDARD CFM	NET COOLING CAPACITY (Btuh)	TOTAL kW	EER	SOUND RATING (dB)	IPLV
072	6	2400	71,000	6.9	10.3	80	††
090	7½	3000	89,000	8.6	10.3	82	10.60
102	8½	3000	100,000	9.7	10.2	82	10.60
120	10	4000	115,000	11.2	10.3	84	11.10
150	12½	4500	136,000	14.0	9.7	86	10.10

LEGEND

dB — Sound Levels (decibels)
db — dry bulb
EER — Energy Efficiency Ratio
IPLV — Integrated Part-Load Values
SEER — Seasonal Energy Efficiency Ratio
wb — wet bulb

*Air Conditioning and Refrigeration Institute.
†Applies only to units with capacity of 65,000 Btuh or less.
**Not ASHRAE 90.1 compliant.
††The IPLV applies only to 2-stage cooling units.

NOTES:

1. Rated in accordance with ARI Standards 210/240 (036−121) or 340/360 (150, 151) and 270.
2. Ratings are net values, reflecting the effects of circulating fan heat.
3. Ratings are based on:

Cooling Standard: 80°F db, 67°F wb indoor entering-air temperature and 95°F db air entering outdoor unit.

IPLV Standard: 80°F db, 67°F wb indoor entering-air temperature and 80°F db outdoor entering-air temperature.

4. All PAE072, 090, 102, 120, 150 units are in compliance with ASHRAE 90.1−1999 Energy Standard for minimum SEER and EER requirements. Refer to state and local codes or visit the following website: http://bcap-energy.org to determine if compliance with this standard pertains to a given geographical area of the United States.

ARI Standard 210/240 UAC

ARI Standard 340/360

ARI* CAPACITY RATINGS — PAE180−300

UNIT PAE	NOMINAL TONS	STANDARD CFM	NET COOLING CAPACITY (Btuh)	TOTAL WATTS	EER	SOUND RATING (dB)	IPLV
180	15	5300	178,000	16,828	9.7	88	9.9
210	18	5500	204,000	20,582	10.0	88	10.5
240	20	6200	236,000	24,559	9.7	95	10.4
300	25	7200	278,000	28,325	9.8	95	10.5

LEGEND

dB — Sound Levels (decibels)
db — Dry Bulb
EER — Energy Efficiency Ratio
IPLV — Integrated Part-Load Values
wb — Wet Bulb

*Air Conditioning and Refrigeration Institute.

NOTES:

1. Rated in accordance with ARI Standards 360−89 and 270−89.
2. The PAE300 is beyond the scope of the ARI Certification Program.
3. ARI ratings are net values, reflecting the effects of circulating fan heat.
4. Ratings are based on:

Cooling Standard: 80°F db, 67°F wb indoor entering-air temperature and 95°F db air entering outdoor unit.

IPLV Standard: 80°F db, 67°F wb indoor entering-air temperature and 80°F db outdoor entering-air temperature.

5. All PAE180−300 units are in compliance with ASHRAE 90.1−1999 Energy Standard for minimum SEER and EER requirements. Refer to state and local codes or visit the following website: http://bcap-energy.org to determine if compliance with this standard pertains to a given geographical area of the United States.

ARI Standard 340/360

ASHRAE 90.1 COMPLIANT

COOLING OPERATION LOW OUTDOOR TEMPERATURE OPERATING LIMITS (°F)

UNITS	TEMPERATURE
All — Standard Unit	40
180 and 210 with Low Ambient Kit	10
240 and 300 with Low Ambient Kit	25
All with Head Pressure Control	−20

OPTIONS AND ACCESSORIES − PAE072−150

ITEM	OPTION*	ACCESSORY†
High Static Motors and Drives	X	
Compressor Cycle Delay		X
Economizer with Controller	X	X
Electronic Programmable Thermostat**		X
Indoor Air Quality (CO_2) Sensor (For Return Air)		X
Manual Outdoor−Air Damper	X	
Low Ambient Kits		X
Outdoor Air Enthalpy Sensor		X
Outdoor Coil Grille		X
Outdoor Coil Hail Guard Assembly		X
Outdoor Air/Return Air Temperature Sensor		X
Power Exhaust with Barometric Relief		X
Return Air Enthalpy Sensor		X
Return Air Temperature Sensor		X
Roof Curbs (Vertical and Horizontal Discharge)		X
Thermostats and Subbases**		X
Thru−the−Bottom Utility Connections		X
Unit−Mounted Non−Fused Disconnect		X

OPTIONS AND ACCESSORIES − PAE180−300

ITEM	OPTION*	ACCESSORY†
High Static Motors and Drives	X	
Barometric Relief Damper (Not for use with horizontal roof curb) sizes 180−300 only		X
Compressor Cycle Delay		X
Economizer with Controller	X	X
Electronic Programmable Thermostat**		X
Horizontal Adapter Curb		X
Indoor Air Quality (CO_2) Sensor		X
Manual Outdoor−Air Damper		X
Low Ambient Kit		X
Outdoor Air Enthalpy Sensor		X
Power Exhaust without Barometric Relief		X
Return Air Enthalpy Sensor		X
Return Air Temperature Sensor		X
Roof Curbs (Vertical and Horizontal Discharge)		X
Thermostats and Subbases **		X
Winter Start Time Delay		X

*Factory−installed.
†Field−installed.
**Available through FAST Parts.

NOTES:

1. Refer to unit specifications or contact your local representative for accessory and option package information.
2. Some options may increase product lead times.

OPTIONS AND ACCESSORIES

Roof Curbs (Horizontal and Vertical) permit installation and securing of ductwork to curb prior to mounting unit on the curb. Both 14-in. and 24-in. roof curbs are available.

Economizer is available as a factory-installed option in vertical supply/return configuration only for unit sizes 072−150. Vertical or horizontal configuration is available for unit sizes 180−300. (Economizer is available as a field−installed accessory for horizontal and/or vertical supply return configurations)

Manual Outdoor-Air Damper can be preset to admit up to 50% outdoor air for year round ventilation.

Low Ambient Pressure Control accessory package maintains condensing temperature between 90°F and 110°F at outdoor ambient temperatures down to –20°F by condenser-fan speed modulation or condenser-fan cycling and wind baffles.

Electric Resistance Heaters are UL listed and available to match heating requirements. Single point kits available for each heater when required.

Unit-Mounted, Non-Fused Disconnect Switch provides unit power shutoff. The switch is accessible from outside the unit and provides power off lockout capability.

Convenience Outlet can be installed and internally mounted with easily accessible 115−v female receptacle. Requires separate field supplied power source.

Compressor Cycle Delay prevents unit from restarting for minimum of 5 minutes after shutdown.

Thru-the-Bottom Utility Connectors permit electrical connections to be brought to the unit through the basepan.

Power Exhaust accessory will provide system exhaust of up to 100% of return air (vertical only). The power exhaust is a field-installed accessory (separate vertical and horizontal design).

ACCESSORIES − PAE072−300

FLAT ROOF CURBS		
Model Number	**Height**	**Use With Model Size**
AXB035CLA	8" High Roof Curb	072
AXB035CMA	14" High Roof Curb	072
AXB035CHA	24" High Roof Curb	072
AXB045CLA	8" High Roof Curb	090 - 150
AXB045CMA	14" High Roof Curb	090 - 150
AXB045CHA	24" High Roof Curb	090 - 150
AXB060CMA	Vertical Discharge Roof Curb - 14" High	180 - 240
AXB060CHA	Vertical Discharge Roof Curb - 24" High	180 - 240
AXB065CHA	Horizontal Discharge Roof Curbs - 24" High	180 - 240
AXB165CHA	Horizontal Discharge Roof Curbs - 24" High with Duct	180 - 240
AXB090CMA	Vertical Discharge Roof Curb - 14" High	300
AXB090CHA	Vertical Discharge Roof Curb - 24" High	300
AXB095CHA	Horizontal Discharge Roof Curbs - 24" High	300
AXB195CHA	Horizontal Discharge Roof Curbs - 24" High with Duct	300

ECONOMIZERS		
Model Number	**Description**	**Use With Model Size**
DNECOMZR020A02	Vertical 3-Position -- with W7212 controller	072
DNECOMZR021A02	Vertical 3-Position -- with W7212 controller	090 - 150
DNECOMZR024A02	Horizontal 3-Position -- with W7212 controller	072
DNECOMZR025A02	Horizontal 3-Position -- with W7212 controller	090 - 150
DNECOMZR008C00	Vertical or Horizontal 3-Position -- with W7212 controller	180 - 300
*Economizer model numbers for factory installed economizers. Must use the 'DN' power exhaust with 'DN' economizers		
ALTERNATE ECONOMIZERS		
Model Number	**Description**	**Model Size**
AXB035EMA	Fully Modulating Economizer - Downflow	072
AXB035EPA	Three Position Economizer - Downflow	072
AXB035HEA	Fully Modulating Economizer - Horizontal	072
AXB035HPA	Three Position Economizer - Horizontal	072
AXB145EMA	Fully Modulating Economizer - Downflow	90,102
AXB245EMA	Fully Modulating Economizer - Downflow	120,150
AXB145EPA	Three Position Economizer - Downflow	90,102
AXB245EPA	Three Position Economizer - Downflow	120,150
AXB145HEA	Fully Modulating Economizer - Horizontal	90,102
AXB245HEA	Fully Modulating Economizer - Horizontal	120,150
AXB145HPA	Three Position Economizer - Horizontal	90,102
AXB245HPA	Three Position Economizer - Horizontal	120,150
AXB060EMA	Fully Modulating Economizer - Horizontal/Downflow	180 - 300
AXB060EPA	Three Position Economizer - Horizontal/Downflow	180 - 300

ACCESSORIES − PAE072−300

POWER EXHAUST		
Model Number	**Description**	**Use With Model Size**
DNPWREXH030A01	Vertical Power Exhaust 208/230 volt	072
DNPWREXH021A01	Vertical Power Exhaust 460 volt	072
DNPWREXH022A01	Vertical Power Exhaust 208/230 volt	090 - 150
DNPWREXH023A01	Vertical Power Exhaust 460 volt	090 - 150
DNPWREXH028A01	Horizontal Power Exhaust 208/230 volt	072 - 150
DNPWREXH029A01	Horizontal Power Exhaust 460 volt	072 - 150
DNPWREXH008B00	Power Exhaust 460 volt (field convertiable to 208/230 volt)	180 - 240
DNPWREXH010B00	Power Exhaust 575 volt	180 - 240
ALTERNATE POWER EXHAUST		
Model Number	**Description**	**Model Size**
AXB035PEH	Power Exhaust 208/230 volt	072
AXB035PEL	Power Exhaust 460 volt	072
AXB035PES	Power Exhaust 575 volt	072
AXB145PEH	Power Exhaust 208/230 volt	090, 102
AXB145PEL	Power Exhaust 460 volt	090, 102
AXB145PES	Power Exhaust 575 volt	090, 102
AXB245PEH	Power Exhaust 208/230 volt	120, 150
AXB245PEL	Power Exhaust 460 volt	120, 150
AXB245PES	Power Exhaust 575 volt	120, 150
AXB060PEH	Power Exhaust 208/230 volt	180 - 300
AXB060PEL	Power Exhaust 460 volt	180 - 300
AXB060PES	Power Exhaust 575 volt	180 - 300

MANUAL OUTDOOR AIR DAMPERS		
Model Number	**Description**	**Use With Model Size**
DNMANDPR001A03	Manual Fresh Air Damper	072
DNMANDPR002A03	Manual Fresh Air Damper	090-150
DNBARREL001A00	Barometric Relief Damper	180-300
ALTERNATE DAMPERS		
Model Number	**Description**	**Model Size**
AXB035FAA	Manual Fresh Air Damper	072
AXB035FMA	Motorized Fresh Air Damper	072
AXB145FAA	Fresh Air Damper - 35% Manual	90,102
AXB245FAA	Fresh Air Damper - 35% Manual	120,150
AXB145FMA	Fresh Air Damper - 35% Motorized	90,102
AXB245FMA	Fresh Air Damper - 35% Motorized	120,150
AXB060FMA	Fresh Air Damper - 35% Motorized	180 - 300

LOW AMBIENT CONTROLS		
Model Number	**Description**	**Use With Model Size**
AXB035LAA	Low Ambient Kit (0 Deg. F)	072 - 150
AXB045LAA	Low Ambient / OFM Sequencing Kit (-20 Deg. F) 208/230v	090 - 150
AXB160LAA	OFM Sequencing kit (3 fans) (10 Deg.)	180, 210, 300
AXB260LAA	Low Ambient Kit (25 Deg. F)	240
DNLOWAMB002A01	Low Ambient Kit (25 Deg. F)	240, 300
DNLOWAMB015A00	208/230 Volt Motor Controller (-20 Deg. F)	240
DNLOWAMB016A00	460 Volt Motor Controller (-20 Deg. F)	240

WINTER START KIT		
Model Number	**Description**	**Use With Model Size**
DNWINSTR001A00	Low pressure switch bypass (time delay)	ALL

ACCESSORIES − PAE072−300 (cont)

PHASE MONITOR CONTROL		
Model Number	**Description**	**Use With Model Size**
DNPHASE3001A01	Electronic phase monitor breaks “R” control signal if trouble is detected	ALL

THROUGH−THE−BOTTOM/CURB POWER CONNECTION		
Model Number	**Description**	**Use With Model Size**
DNBTMPWR001A01	Thru-the-bottom electrical + thru--the curb Gas	072
DNBTMPWR002A01	Thru-the-bottom electrical + thru--the curb Gas	090 - 150
DNBTMPWR003A01	Thru-the-bottom electrical and Gas (AXB035PKA)	072
AXB045PKA	Thru-the-bottom electrical and Gas	090 - 150
DNGASSER006A00	Thru-the-curb power kit	072 - 150

ECONOMIZER SENSORS		
Model Number	**Description**	**Use With Model Size**
DNTEMPSN002A00	Single or Differential Temp’ (dry bulb) Control	ALL Economizers With W7212 Controller
DNCBDIOX005A00	Single or Differential Temp’ (dry bulb) Control	ALL Economizers With W7212 Controller
DNENTDIF004A00	Return Air Enthalpy Sensor	ALL Economizers With W7212 Controller

ANTI−CYCLE TIMER		
Model Number	**Description**	**Use With Model Size**
DNTIMEGD001A00	Five minute compressor delay	ALL

COIL PROTECTION		
Model Number	**Description**	**Use With Model Size**
AXB035CGA	Coil Guard	072
AXB035HGA	Hail Guard	072
AXB145CGA	Coil Guard	090, 102
AXB245CGA	Coil Guard	120, 150
AXB145HGA	Hail Guard	090, 102
AXB245HGA	Hail Guard	120, 150
AXB060CGA	Coil Guard	180 - 240
AXB060HGA	Hail Guard	180 - 240
AXB090CGA	Coil Guard	300
AXB090HGA	Hail Guard	300

ACCESSORIES − PAE072−300 (cont)

CONCENTRIC DIFFUSERS AND DUCT KITS		
Model Number	**Description**	**Model Size**
AXB035CTA	20" Round Concentric Duct Kit	072
AXB445CTA	20" Round Concentric Duct Kit	090, 102
AXB545CTA	Concentric Duct Kit 18" x 28" Rect.	120
AXB645CTA	Concentric Duct Kit 18" x 32" Rect.	150
AXB160CTA	Concentric Duct Kit 18" x 36"	180, 210
AXB260CTA	Concentric Duct Kit 24" x 48"	240, 300
AXB030CFA	Concentric Diffuser - Flush Mount	072
AXB030CSA	Concentric Diffuser - Step Down	072
AXB040CFA	Concentric Diffuser - Flush Mount	072
	Concentric Diffuser - Flush Mount (use with AXB445CTA)	090, 102
AXB040CSA	Concentric Diffuser - Step Down	072
	Concentric Diffuser - Step Down (use with AXB445CTA)	090, 102
AXB045CFA	Concentric Diffuser - Flush Mount (use with AXB545CTA)	120
AXB045CSA	Concentric Diffuser - Step Down (use with AXB545CTA)	120
AXB050CFA	Concentric Diffuser - Flush Mount (use with AXB645CTA)	150
AXB050CSA	Concentric Diffuser - Step Down (use with AXB645CTA)	150
AXB055CFA	Concentric Diffuser - Flush Mount (use with AXB160CTA)	180, 210
AXB055CSA	Concentric Diffuser - Step Down (use with AXB160CTA)	180, 210
AXB058CFA	Concentric Diffuser - Flush Mount	240, 300
AXB058CSA	Concentric Diffuser - Step Down	240, 300

ACCESSORIES − PAE072−300 (cont)

ELECTRIC HEATER USAGE − PAE072−102				
UNIT PAE	**Voltage**	**Accessory kW**	**Accessory Heater Part Number**	**Single Point Box Package No.**
072	208/230/240 (3 phase)	4.9/5.8/ 6.5	AES007EHA	−
		7.8/ 9.6/ 10.5	AES009EHA	−
		12.0/ 14.7/ 16.0	AES015EHA	−
		15.8/ 19.3/ 21.0	AES009EHA+AES009EHA	AXB002SPA**
		19.9/ 24.3/ 26.5	AES009EHA+AES015EHA	AXB002SPA**
	460/480 (3 phase)	5.5/ 6.0	AES006ELA	−
		10.6/ 11.5	AES011ELA	−
		12.9/ 14.0	AES013ELA	−
		21.1/ 23.0	AES011ELA	−
		23.4/ 25.5	AES011ELA+AES013ELA	−
090	208/230/240 (3 phase)	7.8/ 9.6/ 10.4	AES010EHA	AXB006SPA
		12.0/ 14.7/ 16.0	AES016EHA	AXB006SPA
		18.6/ 22.8/ 24.8	AES024EHA	AXB007SPA
		24.0/ 29.4/ 32.0	AES032EHA	AXB007SPA
		31.8/ 39.0/ 42.4	AES032EHA+AES010EHA	AXB009SPA
	460/480 (3 phase)	12.8/ 13.9	AES014ELA	AXB006SPA
		15.2/ 16.5	AES016ELA	AXB006SPA
		25.6/ 27.8	AES027ELA	AXB006SPA
		30.4/ 33.0	AES033ELA	AXB006SPA
		38.4/ 41.7	AES027ELA+AES014ELA	AXB008SPA
	575 (3 phase)	17.0	AES018ESA	AXB006SPA
		34.0	AES036ESA	AXB006SPA
102	208/230/240 (3 phase)	7.8/ 9.6/ 10.4	AES010EHA	AXB006SPA
		12.0/ 14.7/ 16.0	AES016EHA	AXB006SPA
		18.6/ 22.8/ 24.8	AES024EHA	AXB007SPA
		24.0/ 29.4/ 32.0	AES032EHA	AXB007SPA
		31.8/ 39.0/ 42.4	AES032EHA+AES010EHA	AXB009SPA
	460/480 (3 phase)	12.8/ 13.9	AES014ELA	AXB006SPA
		15.2/ 16.5	AES016ELA	AXB006SPA
		25.6/ 27.8	AES027ELA	AXB006SPA
		30.4/ 33.0	AES033ELA	AXB006SPA
		38.4/ 41.7	AES027ELA+AES014ELA	AXB008SPA
	575 (3 phase)	17.0	AES018ESA	AXB006SPA
		34.0	AES036ESA	AXB006SPA
120	208/230/240 (3 phase)	7.8/ 9.6/ 10.4	AES010EHA	AXB011SPA
		12.0/ 14.7/ 16.0	AES016EHA	AXB012SPA
		24.0/ 29.4/ 32.0	AES032EHA	AXB012SPA
		31.8/ 38.9/ 42.4	AES032EHA+AES010EHA	AXB015SPA
		37.5/ 46.0/ 50.0	AES016EHA+AES032EHA	AXB015SPA
	460/480 (3 phase)	12.8/ 13.9	AES014ELA	AXB011SPA
		15.2/ 16.5	AES016ELA	AXB011SPA
		30.4/ 33.0	AES033ELA	AXB011SPA
		38.4/ 41.7	AES027ELA+AES014ELA	AXB014SPA
		46.0/ 50.0	AES016ELA+AES033ELA	AXB014SPA
	575 (3 phase)	17.0	AES018ESA	AXB011SPA
		34.0	AES036ESA	AXB011SPA
		51.0	AES036ESA + AES036ESA	AXB014SPA
150	208/230/240 (3 phase)	7.8/ 9.6/ 10.5	AES010EHA	AXB012SPA
		12.0/ 14.7/ 16.0	AES016EHA	AXB012SPA
		24.0/ 29.4/ 32.0	AES032EHA	AXB012SPA
		31.8/ 38.9/ 42.4	AES032EHA+AES010EHA	AXB015SPA
		37.5/ 46.0/ 50.0	AES016EHA+AES032EHA	AXB015SPA
	460/480 (3 phase)	15.2/ 16.5	AES016ELA	AXB011SPA
		25.6/ 27.8	AES027ELA	AXB011SPA
		30.4/ 33.0	AES033ELA	AXB011SPA
		38.4/ 41.7	AES027ELA+AES014ELA	AXB014SPA
		46.0/ 50.0	AES016ELA+AES033ELA	AXB014SPA
	575 (3 phase)	17.0	AES018ESA	AXB011SPA
		34.0	AES036ESA	AXB011SPA
		51.0	AES036ESA + AES036ESA	AXB014SPA

** AXB002SPA on high static units with convenience outlet

NOTES: Some units require two heater packages to provide kW indicated

ACCESSORIES − PAE072−300 (cont)

ELECTRIC HEATER USAGE − PAE180−300			
Unit PAE	**Voltage**	**kW**	**Model Number**
180	208−3−60	26	AES034EHA
		42	AES056EHA
		56	AES075EHA
	240−3−60	34	AES034EHA
		56	AES056EHA
		75	AES075EHA
	480−3−60	32	AES132ELA
		55	AES055ELA
		80	AES080ELA
210	208−3−60	26	AES034EHA
		42	AES056EHA
		56	AES075EHA
	240−3−60	34	AES034EHA
		56	AES056EHA
		75	AES075EHA
	480−3−60	32	AES132ELA
		55	AES055ELA
		80	AES080ELA
240	208−3−60	26	AES034EHA
		42	AES056EHA
		56	AES075EHA
	240−3−60	34	AES034EHA
		56	AES056EHA
		75	AES075EHA
	480−3−60	32	AES132ELA
		55	AES055ELA
		80	AES080ELA
300	208−3−60	26	AES034EHA
		42	AES056EHA
		56	AES075EHA
	240−3−60	34	AES034EHA
		56	AES056EHA
		75	AES075EHA
	480−3−60	32	AES132ELA
		55	AES055ELA
		80	AES080ELA

PHYSICAL DATA — PAE072−090

UNIT SIZE PAE		072	090
NOMINAL CAPACITY (tons)		6	7½
OPERATING WEIGHT (lb)			
Unit Al/Cu*		529	755
COMPRESSOR		Scroll	Reciprocating
Quantity		1	2
No. Cylinders (per circuit)		2	2
Oil (oz)		60	42
REFRIGERANT TYPE		R−22	
Expansion Device		Fixed Orifice Metering Device	
Operating Charge (lb-oz)			
Circuit 1 (first stage)		11−0	7−10
Circuit 2 (second stage)		—	8−2
CONDENSER COIL		⅜−in. OD Enhanced Copper Tubes, Aluminum Lanced Fins	
Rows...Fins/in.		2...17	2...17
Total Face Area (sq ft)		16.50	20.50
CONDENSER FAN		Propeller Type	
Nominal Cfm		4100	6500
Quantity...Diameter (in.)		1...22.0	2...22
Motor Hp...Rpm		¼...1100	¼...1100
Watts Input (Total)		320	650
EVAPORATOR COIL		⅜-in. OD Enhanced Copper Tubes, Aluminum Double-Wavy Fins	
Rows...Fins/in.		4...15	3...15
Total Face Area (sq ft)		5.5	8.9
EVAPORATOR FAN		Centrifugal Type	
Quantity...Size (in.)	Std	1...10 x 10	1...15 x 15
	High-Static	1...10 x 10	1...15 x 15
Type Drive	Std	Belt	Belt
	High-Static	Belt	Belt
Nominal Cfm		2100	2900
Maximum Continuous Bhp	Std	2.40	2.40
	High-Static	2.90	3.70
Motor Frame Size	Std	56	56
	High-Static	56	56
Nominal Rpm High/Low	Std	—	–
	High-Static	1725	–
Fan Rpm Range	Std	1070−1460	590−840
	High-Static	1300−1685	860−1080
Motor Bearing Type		Ball	Ball
Maximum Allowable Rpm		2100	2100
Motor Pulley Pitch Diameter Min/Max (in.)	Std	2.8/3.8	2.4/3.4
	High-Static	3.4/4.4	4.0/5.0
Nominal Motor Shaft Diameter (in.)	Std	⅝	⅝
	High-Static	⅝	⅞
Fan Pulley Pitch Diameter (in.)	Std	4.5	7.0
	High-Static	4.5	8.0
Belt, Quantity...Type...Length (in.)	Std	1...A...39	1...A...48
	High-Static	1...A...40	1...A...53
Pulley Center Line Distance (in.)	Std	14.7−15.5	16.75−19.25
	High-Static	14.7−15.5	16.75−19.25
Speed Change per Full Turn of Movable Pulley Flange (rpm)	Std	80	50
	High-Static	60	60
Movable Pulley Maximum Full Turns From Closed Position	Std	5	5
	High-Static	5	5
Factory Setting	Std	3	5
	High-Static	3½	5
Factory Speed Setting (rpm)	Std	1225	590
	High-Static	1396	860
Fan Shaft Diameter at Pulley (in.)		⅝	1
HIGH-PRESSURE SWITCH (psig)			
Standard Compressor Internal Relief (Differential)		500 ± 50	450 ± 50
Cutout		428	
Reset (Auto.)		320	
LOSS-OF-CHARGE (LOW-PRESSURE) SWITCH (psig)			
Cutout		7 ± 3	
Reset (Auto.)		22 ± 7	
FREEZE-PROTECTION THERMOSTAT (F)			
Opens		30 ± 5	
Closes		45 ± 5	
RETURN-AIR FILTERS		Throwaway	Throwaway
Quantity...Size (in.)		2...16 x 25 x 2	4...16 x 20 x 2

LEGEND

Al — Aluminum
Bhp — Brake Horsepower
Cu — Copper

*Evaporator coil fin material/condenser coil fin material. Contact your local representative for details about coated fins.

PHYSICAL DATA — PAE102,120,150

UNIT SIZE PAE		102	120	150
NOMINAL CAPACITY (tons)		8½	10	12½
OPERATING WEIGHT (lb)				
Unit − Al/Cu*		760	915	930
COMPRESSOR				
Quantity		2	2	2
No. Cylinders (per Circuit)		2	2	2
Oil (oz) (each compressor)		53	50	60
REFRIGERANT TYPE			R−22	
Expansion Device			Fixed Orifice Metering Device	
Operating Charge (lb-oz)				
Circuit 1 (first stage)		7−14	8−10	9−8
Circuit 2 (second stage)		8−5	8−8	9−5
CONDENSER COIL			⅜-in. OD Enhanced Copper Tubes, Aluminum Lanced Fins	
Rows...Fins/in.		2...17	2...17	2...17
Total Face Area (sq ft)		20.50	25.00	25.00
CONDENSER FAN			Propeller Type	
Nominal Cfm		6500	7000	7000
Quantity...Diameter (in.)		2...22	2...22	2...22
Motor Hp...Rpm		¼...1100	¼...1100	¼...1100
Watts Input (Total)		650	650	650
EVAPORATOR COIL			⅜-in. OD Enhanced Copper Tubes, Aluminum Double-Wavy Fins, Face Split	
Rows...Fins/in.		3...15	3...15	4...15
Total Face Area (sq ft)		8.9	10.0	11.1
EVAPORATOR FAN			Centrifugal Type	
Quantity...Size (in.)	Std	1...15 x 15	1...15 x 15	1...15 x 15
	High-Static	1...15 x 15	1...15 x 15	1...15 x 15
Type Drive	Std	Belt	Belt	Belt
	High−Static	Belt	Belt	Belt
Nominal Cfm		3000	3200	5000
Maximum Continuous Bhp	Std	2.40	2.40	3.70
	High-Static	3.70	5.25	5.25
Motor Frame Size	Std	56	56	56
	High-Static	56	56	56
Fan Rpm Range	Std	685−935	685−935	860−1080
	High-Static	860−1080	830−1130	830−1130
Motor Bearing Type		Ball	Ball	Ball
Maximum Allowable Rpm		2100	2100	2100
Motor Pulley Pitch Diameter Min/Max (in.)	Std	2.8/3.8	2.8/3.8	4.0/5.0
	High-Static	4.0/5.0	2.8/3.8	3.1/4.1
Nominal Motor Shaft Diameter (in.)	Std	⅝	⅝	⅞
	High-Static	⅞	⅞	⅞
Fan Pulley Pitch Diameter (in.)	Std	7.0	7.0	8.0
	High-Static	8.0	5.8	5.9
Belt, Quantity...Type...Length (in.)	Std	1...A...48	1...A...49	1...A...53
	High-Static	1...A...53	1...BX...48	1...BX...48
Pulley Center Line Distance (in.)	Std	16.75−19.25	15.85−17.50	15.85−17.50
	High-Static	16.75−19.25	15.85−17.50	15.85−17.50
Speed Change per Full Turn of	Std	50	50	44
	High-Static	60	60	50
Movable Pulley Maximum Full Turns	Std	5	5	5
	High-Static	5	6	6
Factory Setting	Std	5	5	5
	High-Static	5	5	5
Factory Speed Setting (rpm)	Std	685	685	860
	High-Static	860	887	887
Fan Shaft Diameter at Pulley (in.)		1	1	1
HIGH-PRESSURE SWITCH (psig)				
Standard Compressor			450 ± 50	500 ± 50
Internal Relief (Differential)				
Cutout			428	428
Reset (Auto.)			320	320
LOW-PRESSURE SWITCH (psig)				
Cutout			7 ± 3	
Reset (Auto.)			22 ± 7	
FREEZE PROTECTION THERMOSTAT (F)				
Opens			30 ± 5	
Closes			45 ± 5	
RETURN-AIR FILTERS			Throwaway	
Quantity...Size (in.)		4...20 x 20 x 2	4...20 x 20 x 2	4...20 x 20 x 2

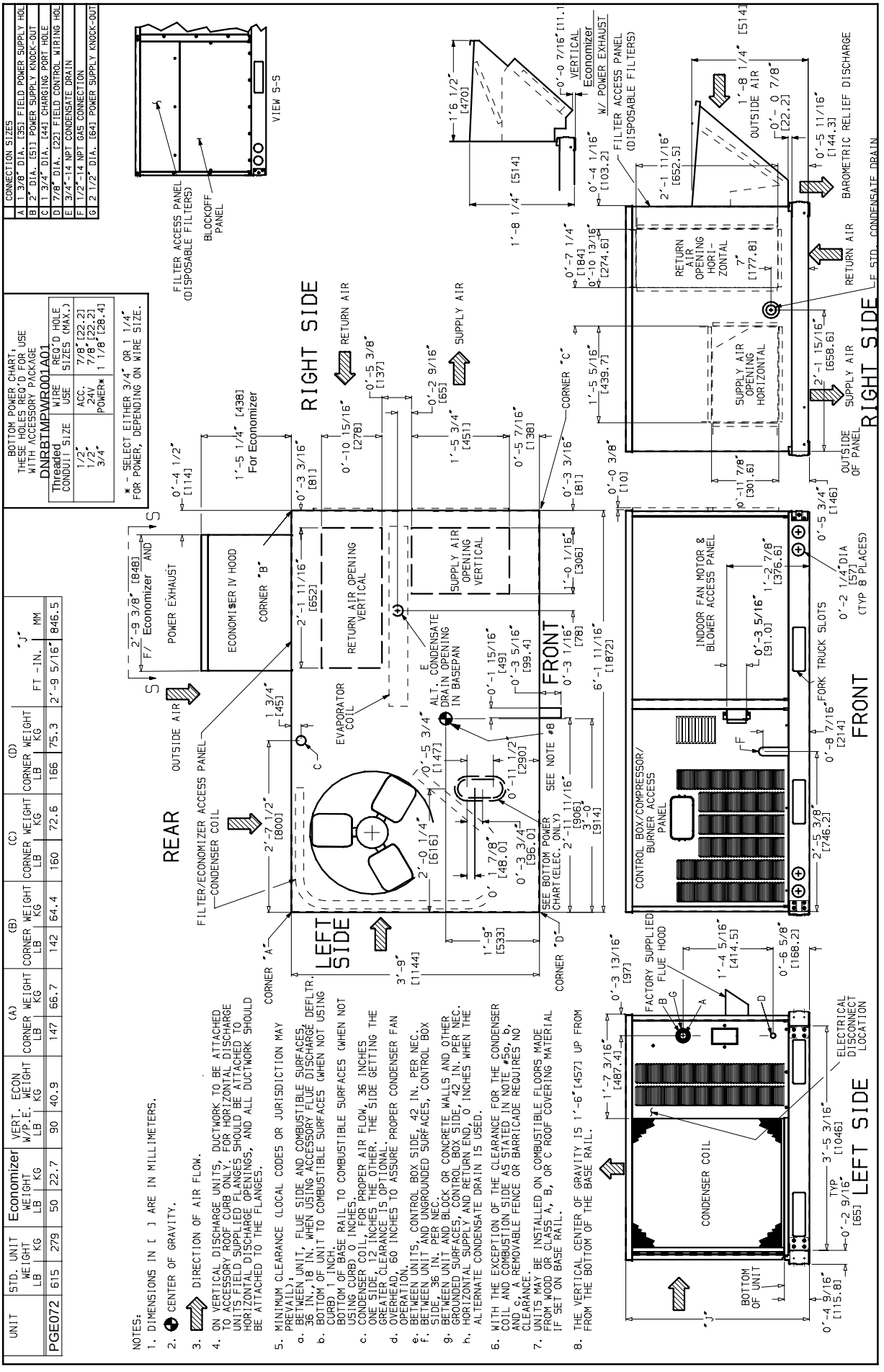
LEGEND

Al — Aluminum
Bhp — Brake Horsepower
Cu — Copper

*Evaporator coil fin material/condenser coil fin material. Contact your local representative for details about coated fins.

†Alternate/High Static drive package for 150 size

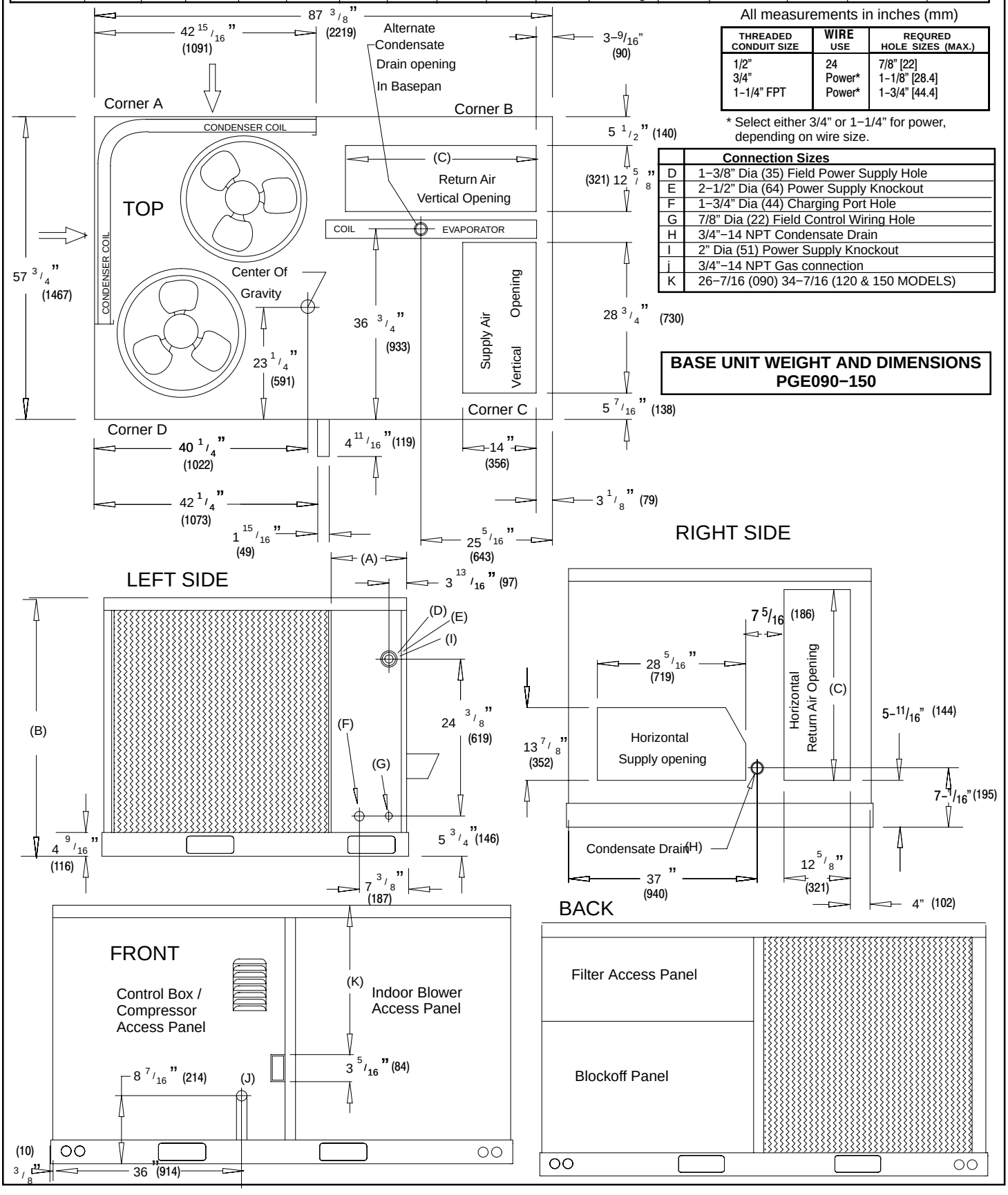
BASE UNIT DIMENSIONS — PAE072



UNIT	STD. UNIT WEIGHT LB	KG	Economizer WEIGHT LB	KG	VERT. ECON W/P.E. WEIGHT LB	KG	(A) CORNER WEIGHT LB	KG	(B) CORNER WEIGHT LB	KG	(C) CORNER WEIGHT LB	KG	(D) CORNER WEIGHT LB	KG	FT -IN.	"J" MM
PGE072	615	279	50	22.7	90	40.9	147	66.7	142	64.4	160	72.6	166	75.3	2'-9 5/16"	846.5

BASE UNIT DIMENSIONS — PAE090, 102, 120, 150

Unit	Total		Corner A		Corner B		Corner C		Corner D		Dim A		Dim B		Dim C	
Size	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	ft–in	mm	ft–in	mm	ft–in	mm
090	870	395	189	86	161	73	239	109	280	127	1–2 7/8	378	3–5 5/16	1050	2–9 11/16	856
102	880	399	191	87	153	74	242	110	284	129	3–3 7/8	1013	3–5 5/16	1050	2–9 11/16	856
120	1035	489	225	102	192	87	285	129	333	151	2–5 7/8	759	4–1 5/16	1253	3–3/8	924
150	1050	476	228	103	195	88	289	131	338	153	1–2 7/8	378	4–1 5/16	1253	3–3/8	924



PERFORMANCE DATA PAE072−150

COOLING CAPACITIES (cont)

PAE072 (6 TONS)													
Temp (F) Air Entering Condenser (Edb)		Air Entering Evaporator — Cfm/BF											
		1800/0.06			2100/0.07			2400/0.09			3000/0.11		
		Air Entering Evaporator — Ewb (F)											
		72	67	62	72	67	62	72	67	62	72	67	62
75	TC	81.3	77.8	71.3	82.7	78.7	72.9	84.2	79.7	74.6	85.3	82.5	76.7
	SHC	38.2	51.3	61.6	40.2	54.2	65.9	42.3	57.1	70.2	43.7	64	76.4
	kW	4.69	4.63	4.52	4.73	4.65	4.56	4.77	4.67	4.6	4.8	4.75	4.63
85	TC	78.8	75.6	69	81.1	77.1	70.7	83.3	78.6	72.3	85	80.5	75
	SHC	37.7	50.4	60.5	40	53.9	64.9	42.2	57.5	69.2	44.3	63.6	74.9
	kW	5.21	5.16	5.05	5.27	5.2	5.09	5.34	5.24	5.13	5.39	5.29	5.17
95	TC	77.1	73.3	66.9	79.2	74.8	68.5	81.3	76.2	70.1	82	78	73.3
	SHC	37	49.9	59.7	39.4	53.3	64	41.8	56.8	68.3	43.5	63.4	73.2
	kW	5.8	5.78	5.65	5.87	5.81	5.7	5.94	5.85	5.74	5.95	5.88	5.8
105	TC	75.4	70.7	62.9	76.6	72.1	64.8	77.9	73.4	66.7	79.7	74.9	70.9
	SHC	36.7	48.7	58.2	38.6	52.3	62.2	40.6	55.9	66.3	43	62.4	70.9
	kW	6.49	6.45	6.26	6.53	6.48	6.32	6.56	6.51	6.38	6.61	6.53	6.46
115	TC	72.1	67.9	59	73.6	69	61.1	75.2	70.1	63.3	76.7	71.9	68.1
	SHC	35.3	47.5	57.2	37.6	51.2	60.2	39.9	54.8	63.3	42.2	61.5	68.1
	kW	7.2	7.17	6.94	7.25	7.18	7.01	7.29	7.2	7.08	7.35	7.26	7.15

PAE090 (7½ TONS)													
Temp (F) Air Entering Condenser (Edb)		Air Entering Evaporator — Cfm/BF											
		2250/0.10			2800/0.11			3000/0.11			3750/0.14		
		Air Entering Evaporator — Ewb (F)											
		72	67	62	72	67	62	72	67	62	72	67	62
75	TC	105.8	97.6	88.7	108.9	101.1	92.6	109.5	101.9	93.5	112.4	104.6	96.4
	SHC	50.9	63.6	75.4	54.1	69.8	84.0	55.2	71.9	86.5	59.9	79.7	94.9
	kW	6.34	6.05	5.77	6.46	6.19	5.93	6.50	6.25	5.96	6.62	6.37	6.09
85	TC	101.1	92.9	84.0	104.8	96.4	87.7	105.6	97.2	88.5	107.7	99.6	92.2
	SHC	49.4	62.0	73.3	53.1	68.4	81.9	54.4	70.6	84.4	58.5	78.2	92.0
	kW	6.80	6.51	6.21	6.94	6.66	6.37	6.98	6.69	6.41	7.08	6.82	6.57
95	TC	96.6	87.7	78.9	99.9	91.0	82.4	100.5	91.6	83.6	102.3	93.9	87.7
	SHC	47.8	59.9	70.8	51.7	66.5	79.5	52.9	68.8	81.3	57.2	76.6	87.7
	kW	7.26	6.96	6.64	7.42	7.10	6.78	7.46	7.14	6.83	7.54	7.24	7.03
105	TC	91.0	82.1	72.9	93.7	85.2	76.8	94.3	85.9	78.2	96.6	87.9	83.0
	SHC	45.9	57.9	67.9	49.6	64.4	76.4	50.9	66.7	77.8	55.8	74.5	83.0
	kW	7.70	7.37	7.08	7.81	7.51	7.22	7.86	7.54	7.28	7.97	7.67	7.47
115	TC	85.2	76.0	67.9	87.7	79.1	71.6	88.1	79.7	73.1	90.2	81.7	78.2
	SHC	43.9	55.4	65.1	47.8	62.2	71.6	49.2	64.4	73.1	54.4	72.5	78.0
	kW	8.13	7.79	7.47	8.25	7.92	7.67	8.29	7.95	7.74	8.41	8.08	7.93

PAE102 (8½ TONS)													
Temp (F) Air Entering Condenser (Edb)		Air Entering Evaporator — Cfm/BF											
		2550/0.08			3000/0.09			3400/0.11			4250/0.13		
		Air Entering Evaporator — Ewb											
		72	67	62	72	67	62	72	67	62	72	67	62
75	TC	117.7	104.1	93.4	121.3	107.5	97.2	122.9	109.0	98.7	124.4	111.1	101.8
	SHC	55.7	64.7	76.6	59.3	70.6	85.0	61.3	74.7	91.4	66.8	82.1	99.7
	kW	6.42	6.34	6.26	6.46	6.38	6.30	6.47	6.39	6.33	6.50	6.41	6.35
85	TC	113.8	100.4	89.2	117.9	103.8	93.4	119.6	105.3	94.7	122.1	107.5	97.2
	SHC	54.3	63.3	75.0	58.0	69.4	83.8	60.4	73.4	89.1	65.2	81.7	97.0
	kW	7.35	7.26	7.17	7.41	7.31	7.24	7.43	7.33	7.24	7.46	7.37	7.28
95	TC	109.6	96.2	85.3	113.3	99.7	89.2	115.4	101.1	90.3	118.3	103.2	93.1
	SHC	52.9	61.9	73.1	56.5	67.9	81.7	59.1	71.9	87.3	64.0	80.3	93.1
	kW	8.37	8.27	8.16	8.42	8.33	8.24	8.46	8.34	8.22	8.51	8.40	8.31
105	TC	105.6	92.1	81.3	108.8	95.2	84.6	110.4	96.4	86.3	113.2	98.4	89.1
	SHC	51.4	60.4	71.6	55.2	66.4	80.0	57.5	70.3	85.3	62.5	78.3	89.1
	kW	9.49	9.37	9.27	9.55	9.44	9.34	9.57	9.45	9.35	9.61	9.49	9.41
115	TC	100.4	87.9	76.8	103.1	90.4	80.3	105.1	91.7	82.1	107.6	93.5	85.0
	SHC	49.4	58.6	69.6	52.9	64.7	78.3	55.8	68.5	81.9	60.6	76.6	85.0
	kW	10.63	10.56	10.46	10.70	10.62	10.55	10.74	10.62	10.54	10.80	10.68	10.58
125	TC	95.8	83.0	72.0	98.5	85.5	74.9	99.8	86.6	77.5	101.4	88.2	80.7
	SHC	48.0	56.8	67.5	51.6	62.9	74.9	54.0	66.9	77.5	58.2	74.6	80.7
	kW	11.97	11.83	11.61	12.02	11.89	11.73	12.05	11.92	11.80	12.09	11.97	11.86

PERFORMANCE DATA PAE072−150 (cont)

COOLING CAPACITIES (cont)

PAE120 (10 TONS)										
Temp (F) Air Entering Condenser (Edb)		Air Entering Evaporator — Cfm/BF								
		3000/0.095			4000/0.125			5000/0.15		
		Air Entering Evaporator — Ewb (F)								
		72	67	62	72	67	62	72	67	62
75	TC	138.2	127.0	114.0	145.0	132.9	122.0	149.1	136.6	125.9
	SHC	68.0	84.1	99.1	74.5	95.1	114.7	81.1	106.3	125.3
	kW	8.37	8.07	7.80	8.57	8.24	7.95	8.72	8.36	8.07
85	TC	132.3	121.7	105.9	138.4	127.2	116.6	142.5	130.2	120.9
	SHC	65.5	81.9	95.5	72.4	93.3	112.2	78.9	103.6	120.8
	kW	8.92	8.63	8.35	9.15	8.81	8.52	9.29	8.92	8.65
95	TC	126.3	115.7	98.4	131.8	121.0	108.8	135.2	124.2	116.1
	SHC	63.3	79.8	91.6	70.3	91.4	107.8	76.2	101.9	116.0
	kW	9.54	9.24	8.91	9.75	9.42	9.11	9.87	9.55	9.28
105	TC	120.2	106.5	89.5	124.9	113.8	100.3	128.3	117.2	109.9
	SHC	61.5	76.2	86.7	68.1	89.3	100.3	74.4	100.1	109.9
	kW	10.23	9.87	9.51	10.40	10.06	9.78	10.52	10.19	9.99
115	TC	117.1	99.8	85.7	122.2	105.7	95.1	124.8	111.8	104.6
	SHC	60.5	73.7	84.9	67.6	86.3	95.1	74.1	98.6	104.6
	kW	10.51	10.13	9.77	10.70	10.34	10.10	10.80	10.46	10.29

PAE150 (12½ TONS)													
Temp (F) Air Entering Condenser (Edb)		Air Entering Evaporator — Cfm/BF											
		3750/0.08			4300/0.09			5000/0.11			6250/0.13		
		Air Entering Evaporator — Ewb											
		72	67	62	72	67	62	72	67	62	72	67	62
75	TC	164.6	152.0	139.9	167.3	155.3	142.6	170.9	158.2	146.2	173.9	162.0	151.0
	SHC	81.3	101.9	121.7	84.5	108.1	130.0	88.9	115.9	139.8	96.7	128.7	150.8
	kW	10.24	9.96	9.71	10.31	10.05	9.78	10.42	10.12	9.84	10.50	10.23	9.95
85	TC	159.9	147.1	133.6	162.6	150.2	137.4	166.3	153.0	141.3	169.5	156.8	147.1
	SHC	79.7	99.9	119.1	83.1	106.3	128.0	88.3	114.1	137.7	96.1	127.4	146.9
	kW	11.38	11.05	10.82	11.45	11.14	10.87	11.58	11.20	10.97	11.66	11.32	11.08
95	TC	154.2	141.5	124.4	157.2	144.6	129.3	159.9	147.6	134.5	164.0	150.9	142.3
	SHC	77.9	98.0	114.8	81.8	104.5	124.1	86.3	112.5	133.8	94.4	125.8	142.2
	kW	12.59	12.26	11.95	12.68	12.36	12.04	12.75	12.44	12.15	12.88	12.54	12.31
105	TC	147.8	134.2	114.0	150.7	137.2	119.1	153.3	140.4	136.4	156.4	143.7	136.7
	SHC	75.4	95.2	109.5	79.6	101.9	118.2	84.4	110.6	126.5	92.2	124.0	136.6
	kW	13.84	13.48	13.12	13.92	13.58	13.24	14.01	13.69	13.37	14.06	13.80	13.58
115	TC	139.7	120.4	102.8	142.1	124.2	109.1	145.5	127.5	117.1	148.4	133.2	128.1
	SHC	72.5	89.8	102.6	76.7	97.0	109.1	82.1	105.7	116.6	90.4	120.1	128.0
	kW	15.03	14.70	14.34	15.12	14.80	15.24	15.24	14.90	14.65	15.35	15.04	14.86
125	TC	130.5	107.0	92.5	132.8	109.7	135.5	135.5	112.7	105.0	138.2	121.1	118.3
	SHC	69.8	84.4	92.4	73.7	91.5	99.2	79.0	99.9	104.9	87.7	114.6	118.3
	kW	16.32	15.91	15.67	16.43	16.00	15.79	16.52	16.11	15.97	16.59	16.21	16.10

Standard Ratings

LEGEND

BF — Bypass Factor
Edb — Entering Dry-Bulb
Ewb — Entering Wet-Bulb
kW — Compressor Motor Power Input
Ldb — Leaving Dry-Bulb
Lwb — Leaving Wet-Bulb
SHC — Sensible Heat Capacity (1000 Btuh) Gross
TC — Total Capacity (1000 Btuh) Gross

NOTES:

1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

t_{lwb} = Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{lwb})

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where: h_{ewb} = Enthalpy of air entering evaporator coil

3. The SHC is based on 80°F edb temperature of air entering evaporator coil. Below 80°F edb, subtract (corr factor x cfm) from SHC. *Above 80°F edb, add (corr factor x cfm) to SHC.*

BYPASS FACTOR (BF)	ENTERING AIR DRY-BULB TEMP (F)					
	79	78	77	76	75	under 75
	81	*82*	*83*	*84*	*85*	*over 85*
	Correction Factor					
.05	1.04	2.07	3.11	4.14	5.18	Use formula shown below.
.10	.98	1.96	2.94	3.92	4.90	
.20	.87	1.74	2.62	3.49	4.36	
.30	.76	1.53	2.29	3.05	3.82	

Interpolation is permissible.
Correction Factor = 1.10 x (1 − BF) x (edb − 80).

PERFORMANCE DATA PAE072−150

FAN PERFORMANCE — VERTICAL DISCHARGE UNITS

PAE072 (6 TONS) — STANDARD MOTOR (BELT DRIVE)*

Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
1800	**905**	**0.62**	**551**	**1001**	**0.77**	**687**	1087	0.94	832	1165	1.11	985	1238	1.29	1148
1900	**944**	**0.71**	**633**	**1037**	**0.87**	**774**	1120	1.04	925	1197	1.22	1084	1268	1.41	1251
2000	**983**	**0.81**	**723**	1073	0.98	870	1154	1.16	1026	1229	1.34	1190	1299	1.53	1362
2100	**1023**	**0.92**	**821**	1110	1.10	975	1189	1.28	1137	1262	1.47	1306	1330	1.67	1483
2200	**1063**	**1.05**	**929**	1147	1.23	1089	1224	1.41	1256	1295	1.61	1431	1362	1.82	1614
2300	1104	1.18	1046	1185	1.37	1212	1260	1.56	1386	1329	1.76	1567	1395	1.98	1754
2400	1145	1.32	1174	1223	1.52	1346	1296	1.72	1526	1364	1.93	1712	1428	2.15	1905
2500	1185	1.48	1311	1262	1.68	1490	1333	1.89	1676	1399	2.10	1868	**1462**	**2.33**	**2067**
2600	1227	1.64	1460	1301	1.85	1646	1370	2.07	1837	1435	2.29	2035	—	—	—
2700	1268	1.82	1621	1340	2.04	1812	1407	2.26	2010	—	—	—	—	—	—
2800	1309	2.02	1793	1379	2.24	1991	—	—	—	—	—	—	—	—	—
2900	1351	2.23	1977	—	—	—	—	—	—	—	—	—	—	—	—
3000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

PAE072 (6 TONS) — STANDARD MOTOR (BELT DRIVE)* (cont)

Airflow (Cfm)	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
1800	1306	1.48	1318	1370	1.69	1497	1431	1.90	1683	**1489**	**2.11**	**1877**	**1545**	**2.34**	**2078**
1900	1335	1.61	1426	1398	1.81	1609	1458	2.03	1799	**1515**	**2.25**	**1997**	—	—	—
2000	1364	1.74	1542	1427	1.95	1730	**1486**	**2.17**	**1925**	**1542**	**2.39**	**2126**	—	—	—
2100	1395	1.88	1668	1456	2.09	1860	**1514**	**2.32**	**2060**	—	—	—	—	—	—
2200	1426	2.03	1804	**1486**	**2.25**	**2001**	—	—	—	—	—	—	—	—	—
2300	1457	2.19	1949	—	—	—	—	—	—	—	—	—	—	—	—
2400	**1489**	**2.37**	**2106**	—	—	—	—	—	—	—	—	—	—	—	—
2500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 1070 to 1460 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See general fan performance notes.

PAE072 (6 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)*

Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
1800	**905**	**0.62**	**551**	**1001**	**0.77**	**687**	**1087**	**0.94**	**832**	**1165**	**1.11**	**985**	**1238**	**1.29**	**1148**
1900	**944**	**0.71**	**633**	**1037**	**0.87**	**774**	**1120**	**1.04**	**925**	**1197**	**1.22**	**1084**	**1268**	**1.41**	**1251**
2000	**983**	**0.81**	**723**	**1073**	**0.98**	**870**	**1154**	**1.16**	**1026**	**1229**	**1.34**	**1190**	**1299**	**1.53**	**1362**
2100	**1023**	**0.92**	**821**	**1110**	**1.10**	**975**	**1189**	**1.28**	**1137**	**1262**	**1.47**	**1306**	1330	1.67	1483
2200	**1063**	**1.05**	**929**	**1147**	**1.23**	**1089**	**1224**	**1.41**	**1256**	**1295**	**1.61**	**1431**	1362	1.82	1614
2300	**1104**	**1.18**	**1046**	**1185**	**1.37**	**1212**	**1260**	**1.56**	**1386**	1329	1.76	1567	1395	1.98	1754
2400	**1145**	**1.32**	**1174**	**1223**	**1.52**	**1346**	**1296**	**1.72**	**1526**	1364	1.93	1712	1428	2.15	1905
2500	**1185**	**1.48**	**1311**	**1262**	**1.68**	**1490**	1333	1.89	1676	1399	2.10	1868	1462	2.33	2067
2600	**1227**	**1.64**	**1460**	1301	1.85	1646	1370	2.07	1837	1435	2.29	2035	1496	2.52	2240
2700	**1268**	**1.82**	**1621**	1340	2.04	1812	1407	2.26	2010	1470	2.49	2214	1531	2.73	2424
2800	1309	2.02	1793	1379	2.24	1991	1445	2.47	2195	1507	2.71	2405	—	—	—
2900	1351	2.23	1977	1419	2.46	2181	1483	2.69	2392	—	—	—	—	—	—
3000	1393	2.45	2174	1459	2.69	2385	—	—	—	—	—	—	—	—	—

PAE072 (6 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont)

Airflow (Cfm)	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
1800	1306	1.48	1318	1370	1.69	1497	1431	1.90	1683	1489	2.11	1877	1545	2.34	2078
1900	1335	1.61	1426	1398	1.81	1609	1458	2.03	1799	1515	2.25	1997	1570	2.48	2202
2000	1364	1.74	1542	1427	1.95	1730	1486	2.17	1925	1542	2.39	2126	1596	2.63	2335
2100	1395	1.88	1668	1456	2.09	1860	1514	2.32	2060	1570	2.55	2265	1623	2.79	2478
2200	1426	2.03	1804	1486	2.25	2001	1543	2.48	2204	1598	2.72	2415	—	—	—
2300	1457	2.19	1949	1516	2.42	2151	1573	2.66	2360	1627	2.90	2574	—	—	—
2400	1489	2.37	2106	1547	2.60	2312	1603	2.84	2526	—	—	—	—	—	—
2500	1522	2.56	2272	1579	2.80	2484	—	—	—	—	—	—	—	—	—
2600	1555	2.76	2451	—	—	—	—	—	—	—	—	—	—	—	—
2700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 1300 to 1685 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.90.
3. See general fan performance notes.

PERFORMANCE DATA PAE072−150 (cont)

FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

PAE090 (7½ TONS) — STANDARD MOTOR (BELT DRIVE)*

Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
2250	**511**	**0.53**	**492**	591	0.73	680	660	0.95	885	722	1.19	1106	779	1.44	1342
2300	**519**	**0.56**	**518**	597	0.76	709	666	0.98	916	727	1.22	1140	784	1.48	1378
2400	**534**	**0.61**	**571**	611	0.82	768	678	1.05	982	739	1.30	1210	795	1.56	1453
2500	**550**	**0.67**	**629**	624	0.89	832	690	1.13	1051	750	1.38	1285	805	1.64	1533
2550	**558**	**0.71**	**660**	631	0.93	866	697	1.17	1088	756	1.42	1324	811	1.69	1574
2600	**565**	**0.74**	**691**	638	0.97	901	703	1.21	1125	762	1.46	1365	816	1.73	1617
2700	**581**	**0.81**	**758**	652	1.04	974	716	1.29	1204	774	1.55	1449	828	1.83	1707
2800	597	0.89	829	667	1.13	1051	729	1.38	1287	786	1.65	1538	839	1.93	1801
2900	613	0.97	905	681	1.22	1133	742	1.48	1376	799	1.75	1632	**851**	**2.04**	**1900**
3000	630	1.06	985	696	1.31	1220	756	1.58	1469	811	1.86	1731	**863**	**2.15**	**2004**
3100	646	1.15	1071	711	1.41	1313	770	1.68	1568	824	1.97	1835	**875**	**2.27**	**2114**
3200	663	1.25	1162	726	1.51	1411	784	1.79	1672	837	2.09	1944	**888**	**2.39**	**2229**
3300	679	1.35	1259	741	1.62	1514	798	1.91	1781	**851**	**2.21**	**2060**	—	—	—
3400	696	1.46	1361	756	1.74	1623	812	2.03	1896	**864**	**2.34**	2181	—	—	—
3500	713	1.58	1469	772	1.86	1737	827	2.16	2017	—	—	—	—	—	—
3600	729	1.70	1583	787	1.99	1857	**841**	**2.30**	**2144**	—	—	—	—	—	—
3700	746	1.83	1703	803	2.13	1985	—	—	—	—	—	—	—	—	—
3750	755	1.89	1766	811	2.20	2051	—	—	—	—	—	—	—	—	—

PAE090 (7½ TONS) — STANDARD MOTOR (BELT DRIVE)* (cont)

Airflow (Cfm)0	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
2250	832	1.71	1592	**882**	**1.99**	**1855**	**928**	**2.29**	**2131**	—	—	—	—	—	—
2300	837	1.75	1630	**886**	**2.03**	**1896**	**933**	**2.33**	**2174**	—	—	—	—	—	—
2400	**847**	**1.83**	**1710**	**896**	**2.12**	**1980**	—	—	—	—	—	—	—	—	—
2500	**857**	**1.92**	**1794**	**905**	**2.22**	**2069**	—	—	—	—	—	—	—	—	—
2550	**862**	**1.97**	**1838**	**910**	**2.27**	**2114**	—	—	—	—	—	—	—	—	—
2600	**867**	**2.02**	**1884**	**915**	**2.32**	**2162**	—	—	—	—	—	—	—	—	—
2700	**878**	**2.12**	**1978**	—	—	—	—	—	—	—	—	—	—	—	—
2800	**889**	**2.23**	**2077**	—	—	—	—	—	—	—	—	—	—	—	—
2900	**900**	**2.34**	**2181**	—	—	—	—	—	—	—	—	—	—	—	—
3000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3750	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 590 to 840 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See general fan performance notes.

PERFORMANCE DATA PAE072−150 (cont)

FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

PAE090 (7½ TONS) — HIGH-STATIC MOTOR (BELT DRIVE)*															
Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
2250	**511**	**0.53**	**492**	**591**	**0.73**	**680**	**660**	**0.95**	**885**	**722**	**1.19**	**1106**	**779**	**1.44**	**1342**
2300	**519**	**0.56**	**518**	**597**	**0.76**	**709**	**666**	**0.98**	**916**	**727**	**1.22**	**1140**	**784**	**1.48**	**1378**
2400	**534**	**0.61**	**571**	**611**	**0.82**	**768**	**678**	**1.05**	**982**	**739**	**1.30**	**1210**	**795**	**1.56**	**1453**
2500	**550**	**0.67**	**629**	**624**	**0.89**	**832**	**690**	**1.13**	**1051**	**750**	**1.38**	**1285**	**805**	**1.64**	**1533**
2550	**558**	**0.71**	**660**	**631**	**0.93**	**866**	**697**	**1.17**	**1088**	**756**	**1.42**	**1324**	**811**	**1.69**	**1574**
2600	**565**	**0.74**	**691**	**638**	**0.97**	**901**	**703**	**1.21**	**1125**	**762**	**1.46**	**1365**	**816**	**1.73**	**1617**
2700	**581**	**0.81**	**758**	**652**	**1.04**	**974**	**716**	**1.29**	**1204**	**774**	**1.55**	**1449**	**828**	**1.83**	**1707**
2800	**597**	**0.89**	**829**	**667**	**1.13**	**1051**	**729**	**1.38**	**1287**	**786**	**1.65**	**1538**	**839**	**1.93**	**1801**
2900	**613**	**0.97**	**905**	**681**	**1.22**	**1133**	**742**	**1.48**	**1376**	**799**	**1.75**	**1632**	**851**	**2.04**	**1900**
3000	**630**	**1.06**	**985**	**696**	**1.31**	**1220**	**756**	**1.58**	**1469**	**811**	**1.86**	**1731**	863	2.15	2004
3100	**646**	**1.15**	**1071**	**711**	**1.41**	**1313**	**770**	**1.68**	**1568**	**824**	**1.97**	**1835**	875	2.27	2114
3200	**663**	**1.25**	**1162**	**726**	**1.51**	**1411**	**784**	**1.79**	**1672**	**837**	**2.09**	**1944**	888	2.39	2229
3300	**679**	**1.35**	**1259**	**741**	**1.62**	**1514**	**798**	**1.91**	**1781**	**851**	**2.21**	**2060**	900	2.52	2351
3400	**696**	**1.46**	**1361**	**756**	**1.74**	**1623**	**812**	**2.03**	**1896**	864	2.34	2181	913	2.66	2478
3500	**713**	**1.58**	**1469**	**772**	**1.86**	**1737**	**827**	**2.16**	**2017**	878	2.48	2308	926	2.80	2610
3600	**729**	**1.70**	**1583**	**787**	**1.99**	**1857**	**841**	**2.30**	**2144**	892	2.62	2441	939	2.95	2749
3700	**746**	**1.83**	**1703**	**803**	**2.13**	**1985**	**856**	**2.44**	**2277**	906	2.77	2580	953	3.10	2894
3750	**755**	**1.89**	**1766**	**811**	**2.20**	**2051**	864	2.52	2346	913	2.84	2653	959	3.18	2969

PAE090 (7½ TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont)															
Airflow (Cfm)	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
2250	**832**	**1.71**	**1592**	882	1.99	1855	928	2.29	2131	973	2.59	2420	1015	2.92	2720
2300	**837**	**1.75**	**1630**	886	2.03	1896	933	2.33	2174	977	2.64	2463	1020	2.97	2766
2400	**847**	**1.83**	**1710**	896	2.12	1980	942	2.43	2262	986	2.74	2556	1028	3.07	2861
2500	**857**	**1.92**	**1794**	905	2.22	2069	951	2.52	2355	995	2.84	2653	1037	3.18	2962
2550	862	1.97	1838	910	2.27	2114	956	2.58	2403	999	2.90	2704	1041	3.23	3014
2600	867	2.02	1884	915	2.32	2162	961	2.63	2453	1004	2.95	2755	1045	3.29	3068
2700	878	2.12	1978	926	2.42	2261	971	2.74	2556	1013	3.07	2862	1055	3.41	3180
2800	889	2.23	2077	936	2.54	2365	981	2.86	2664	1023	3.19	2975	1064	3.54	3297
2900	900	2.34	2181	947	2.65	2474	991	2.98	2778	1033	3.32	3094	1073	3.67	3419
3000	912	2.46	2290	958	2.78	2588	1001	3.11	2897	1043	3.45	3217	—	—	—
3100	923	2.58	2406	969	2.90	2708	1012	3.24	3022	1053	3.59	3347	—	—	—
3200	935	2.71	2526	980	3.04	2834	1023	3.38	3152	—	—	—	—	—	—
3300	947	2.84	2652	992	3.18	2966	1034	3.53	3289	—	—	—	—	—	—
3400	959	2.99	2785	1003	3.33	3103	1045	3.68	3432	—	—	—	—	—	—
3500	972	3.13	2923	1015	3.48	3246	—	—	—	—	—	—	—	—	—
3600	984	3.29	3068	1027	3.64	3396	—	—	—	—	—	—	—	—	—
3700	997	3.45	3218	—	—	—	—	—	—	—	—	—	—	—	—
3750	1004	3.54	3296	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 860 to 1080 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 3.70.
3. See general fan performance notes.

PERFORMANCE DATA PAE072−150 (cont)

FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

PAE102 (8½ TONS) — STANDARD MOTOR (BELT DRIVE)*

Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
2200	**504**	**0.50**	**468**	**584**	**0.70**	**653**	**654**	**0.92**	**855**	716	1.15	1074	774	1.40	1307
2250	**511**	**0.53**	**492**	**591**	**0.73**	**680**	**660**	**0.95**	**885**	722	1.19	1106	779	1.44	1342
2300	**519**	**0.56**	**518**	**597**	**0.76**	**709**	**666**	**0.98**	**916**	727	1.22	1140	784	1.48	1378
2400	**534**	**0.61**	**571**	**611**	**0.82**	**768**	**678**	**1.05**	**982**	739	1.30	1210	795	1.56	1453
2500	**550**	**0.67**	**629**	**624**	**0.89**	**832**	690	1.13	1051	750	1.38	1285	805	1.64	1533
2550	**558**	**0.71**	**660**	**631**	**0.93**	**866**	697	1.17	1088	756	1.42	1324	811	1.69	1574
2600	**565**	**0.74**	**691**	**638**	**0.97**	**901**	703	1.21	1125	762	1.46	1365	816	1.73	1617
2700	**581**	**0.81**	**758**	**652**	**1.04**	**974**	716	1.29	1204	774	1.55	1449	828	1.83	1707
2800	**597**	**0.89**	**829**	**667**	**1.13**	**1051**	729	1.38	1287	786	1.65	1538	839	1.93	1801
2900	**613**	**0.97**	**905**	**681**	**1.22**	**1133**	742	1.48	1376	799	1.75	1632	851	2.04	1900
3000	**630**	**1.06**	**985**	696	1.31	1220	756	1.58	1469	811	1.86	1731	863	2.15	2004
3100	**646**	**1.15**	**1071**	711	1.41	1313	770	1.68	1568	824	1.97	1835	875	2.27	2114
3200	**663**	**1.25**	**1162**	726	1.51	1411	784	1.79	1672	837	2.09	1944	888	2.39	2229
3300	**679**	**1.35**	**1259**	741	1.62	1514	798	1.91	1781	851	2.21	2060	—	—	—
3400	696	1.46	1361	756	1.74	1623	812	2.03	1896	864	2.34	2181	—	—	—
3500	713	1.58	1469	772	1.86	1737	827	2.16	2017	—	—	—	—	—	—
3600	729	1.70	1583	787	1.99	1857	841	2.30	2144	—	—	—	—	—	—
3700	746	1.83	1703	803	2.13	1985	—	—	—	—	—	—	—	—	—
3750	755	1.89	1766	811	2.20	2051	—	—	—	—	—	—	—	—	—
3800	763	1.96	1830	819	2.27	2118	—	—	—	—	—	—	—	—	—
3900	780	2.10	1963	—	—	—	—	—	—	—	—	—	—	—	—
4000	798	2.25	2102	—	—	—	—	—	—	—	—	—	—	—	—
4100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4250	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

PAE102 (8½ TONS) — STANDARD MOTOR (BELT DRIVE)* (cont)

Airflow (Cfm)	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
2200	827	1.67	1555	877	1.95	1816	924	2.24	2090	—	—	—	—	—	—
2250	832	1.71	1592	882	1.99	1855	928	2.29	2131	—	—	—	—	—	—
2300	837	1.75	1630	886	2.03	1896	933	2.33	2174	—	—	—	—	—	—
2400	847	1.83	1710	896	2.12	1980	—	—	—	—	—	—	—	—	—
2500	857	1.92	1794	905	2.22	2069	—	—	—	—	—	—	—	—	—
2550	862	1.97	1838	910	2.27	2114	—	—	—	—	—	—	—	—	—
2600	867	2.02	1884	915	2.32	2162	—	—	—	—	—	—	—	—	—
2700	878	2.12	1978	—	—	—	—	—	—	—	—	—	—	—	—
2800	889	2.23	2077	—	—	—	—	—	—	—	—	—	—	—	—
2900	900	2.34	2181	—	—	—	—	—	—	—	—	—	—	—	—
3000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3750	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4250	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 685 to 935 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See general fan performance notes.

PERFORMANCE DATA PAE072−150 (cont)

FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

PAE102 (8½ TONS) — HIGH-STATIC MOTOR (BELT DRIVE)*

Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
2200	**504**	**0.50**	**468**	**584**	**0.70**	**653**	**654**	**0.92**	**855**	**716**	**1.15**	**1074**	**774**	**1.40**	**1307**
2250	**511**	**0.53**	**492**	**591**	**0.73**	**680**	**660**	**0.95**	**885**	**722**	**1.19**	**1106**	**779**	**1.44**	**1342**
2300	**519**	**0.56**	**518**	**597**	**0.76**	**709**	**666**	**0.98**	**916**	**727**	**1.22**	**1140**	**784**	**1.48**	**1378**
2400	**534**	**0.61**	**571**	**611**	**0.82**	**768**	**678**	**1.05**	**982**	**739**	**1.30**	**1210**	**795**	**1.56**	**1453**
2500	**550**	**0.67**	**629**	**624**	**0.89**	**832**	**690**	**1.13**	**1051**	**750**	**1.38**	**1285**	**805**	**1.64**	**1533**
2550	**558**	**0.71**	**660**	**631**	**0.93**	**866**	**697**	**1.17**	**1088**	**756**	**1.42**	**1324**	**811**	**1.69**	**1574**
2600	**565**	**0.74**	**691**	**638**	**0.97**	**901**	**703**	**1.21**	**1125**	**762**	**1.46**	**1365**	**816**	**1.73**	**1617**
2700	**581**	**0.81**	**758**	**652**	**1.04**	**974**	**716**	**1.29**	**1204**	**774**	**1.55**	**1449**	**828**	**1.83**	**1707**
2800	**597**	**0.89**	**829**	**667**	**1.13**	**1051**	**729**	**1.38**	**1287**	**786**	**1.65**	**1538**	**839**	**1.93**	**1801**
2900	**613**	**0.97**	**905**	**681**	**1.22**	**1133**	**742**	**1.48**	**1376**	**799**	**1.75**	**1632**	**851**	**2.04**	**1900**
3000	**630**	**1.06**	**985**	**696**	**1.31**	**1220**	**756**	**1.58**	**1469**	**811**	**1.86**	**1731**	863	2.15	2004
3100	**646**	**1.15**	**1071**	**711**	**1.41**	**1313**	**770**	**1.68**	**1568**	**824**	**1.97**	**1835**	875	2.27	2114
3200	**663**	**1.25**	**1162**	**726**	**1.51**	**1411**	**784**	**1.79**	**1672**	**837**	**2.09**	**1944**	888	2.39	2229
3300	**679**	**1.35**	**1259**	**741**	**1.62**	**1514**	**798**	**1.91**	**1781**	**851**	**2.21**	**2060**	900	2.52	2351
3400	**696**	**1.46**	**1361**	**756**	**1.74**	**1623**	**812**	**2.03**	**1896**	864	2.34	2181	913	2.66	2478
3500	**713**	**1.58**	**1469**	**772**	**1.86**	**1737**	**827**	**2.16**	**2017**	878	2.48	2308	926	2.80	2610
3600	**729**	**1.70**	**1583**	**787**	**1.99**	**1857**	**841**	**2.30**	**2144**	892	2.62	2441	939	2.95	2749
3700	**746**	**1.83**	**1703**	**803**	**2.13**	**1985**	**856**	**2.44**	**2277**	906	2.77	2580	953	3.10	2894
3750	**755**	**1.89**	**1766**	**811**	**2.20**	**2051**	864	2.52	2346	913	2.84	2653	959	3.18	2969
3800	**763**	**1.96**	**1830**	**819**	**2.27**	**2118**	871	2.59	2417	920	2.92	2726	966	3.27	3046
3900	**780**	**2.10**	**1963**	**835**	**2.42**	**2257**	886	2.75	2563	934	3.09	2879	980	3.44	3204
4000	**798**	**2.25**	**2102**	**851**	**2.58**	**2404**	901	2.91	2716	949	3.26	3037	994	3.61	3369
4100	**815**	**2.41**	**2248**	867	2.74	2556	917	3.08	2875	963	3.44	3203	—	—	—
4200	**832**	**2.57**	**2401**	884	2.91	2717	932	3.26	3042	978	3.62	3376	—	—	—
4250	**841**	**2.66**	**2481**	892	3.00	2799	940	3.35	3127	—	—	—	—	—	—

PAE102 (8½ TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont)

Airflow (Cfm)	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
2200	**827**	**1.67**	**1555**	877	1.95	1816	924	2.24	2090	969	2.55	2377	1011	2.87	2674
2250	**832**	**1.71**	**1592**	882	1.99	1855	928	2.29	2131	973	2.59	2420	1015	2.92	2720
2300	**837**	**1.75**	**1630**	886	2.03	1896	933	2.33	2174	977	2.64	2463	1020	2.97	2766
2400	**847**	**1.83**	**1710**	896	2.12	1980	942	2.43	2262	986	2.74	2556	1028	3.07	2861
2500	**857**	**1.92**	**1794**	905	2.22	2069	951	2.52	2355	995	2.84	2653	1037	3.18	2962
2550	862	1.97	1838	910	2.27	2114	956	2.58	2403	999	2.90	2704	1041	3.23	3014
2600	867	2.02	1884	915	2.32	2162	961	2.63	2453	1004	2.95	2755	1045	3.29	3068
2700	878	2.12	1978	926	2.42	2261	971	2.74	2556	1013	3.07	2862	1055	3.41	3180
2800	889	2.23	2077	936	2.54	2365	981	2.86	2664	1023	3.19	2975	1064	3.54	3297
2900	900	2.34	2181	947	2.65	2474	991	2.98	2778	1033	3.32	3094	1073	3.67	3419
3000	912	2.46	2290	958	2.78	2588	1001	3.11	2897	1043	3.45	3217	—	—	—
3100	923	2.58	2406	969	2.90	2708	1012	3.24	3022	1053	3.59	3347	—	—	—
3200	935	2.71	2526	980	3.04	2834	1023	3.38	3152	—	—	—	—	—	—
3300	947	2.84	2652	992	3.18	2966	1034	3.53	3289	—	—	—	—	—	—
3400	959	2.99	2785	1003	3.33	3103	1045	3.68	3432	—	—	—	—	—	—
3500	972	3.13	2923	1015	3.48	3246	—	—	—	—	—	—	—	—	—
3600	984	3.29	3068	1027	3.64	3396	—	—	—	—	—	—	—	—	—
3700	997	3.45	3218	—	—	—	—	—	—	—	—	—	—	—	—
3750	1004	3.54	3296	—	—	—	—	—	—	—	—	—	—	—	—
3800	1010	3.62	3376	—	—	—	—	—	—	—	—	—	—	—	—
3900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4250	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 685 to 935 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See general fan performance notes.

PERFORMANCE DATA PAE072−150 (cont)

FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

PAE120 (10 TONS) — STANDARD MOTOR (BELT DRIVE)*

Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
3000	**532**	**0.64**	**559**	**604**	**0.80**	**702**	**668**	**0.96**	**846**	726	1.13	990	779	1.29	1136
3100	**545**	**0.69**	**607**	**615**	**0.86**	**755**	**678**	**1.03**	**903**	735	1.20	1052	788	1.37	1202
3200	**557**	**0.75**	**658**	**627**	**0.92**	**810**	689	1.10	963	745	1.27	1117	797	1.45	1271
3300	**570**	**0.81**	**712**	**638**	**0.99**	**869**	699	1.17	1026	755	1.35	1184	806	1.53	1343
3400	**583**	**0.88**	**768**	**650**	**1.06**	**930**	710	1.24	1092	765	1.43	1255	816	1.62	1418
3500	**596**	**0.94**	**828**	**662**	**1.13**	**995**	721	1.32	1162	775	1.51	1329	825	1.71	1497
3600	**609**	**1.02**	**891**	**673**	**1.21**	**1063**	732	1.41	1234	785	1.60	1406	835	1.80	1579
3700	**623**	**1.09**	**958**	685	1.29	1134	743	1.49	1310	796	1.69	1487	845	1.90	1664
3800	**636**	**1.17**	**1028**	698	1.38	1209	754	1.58	1390	806	1.79	1571	855	2.00	1753
3900	**649**	**1.25**	**1101**	710	1.47	1287	765	1.68	1472	817	1.89	1658	865	2.10	1845
4000	**663**	**1.34**	**1178**	722	1.56	1369	777	1.78	1559	828	1.99	1749	875	2.21	1941
4100	**676**	**1.43**	**1258**	735	1.66	1454	788	1.88	1649	838	2.10	1844	886	2.32	2040
4200	690	1.53	1343	747	1.76	1543	800	1.99	1743	850	2.21	1943	—	—	—
4300	703	1.63	1431	760	1.86	1636	812	2.10	1841	861	2.33	2046	—	—	—
4400	717	1.74	1523	772	1.98	1734	824	2.21	1943	—	—	—	—	—	—
4500	731	1.85	1620	785	2.09	1835	836	2.33	2049	—	—	—	—	—	—
4600	744	1.96	1720	798	2.21	1940	—	—	—	—	—	—	—	—	—
4700	758	2.08	1825	811	2.34	2049	—	—	—	—	—	—	—	—	—
4800	772	2.20	1934	—	—	—	—	—	—	—	—	—	—	—	—
4900	786	2.33	2047	—	—	—	—	—	—	—	—	—	—	—	—
5000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

PAE120 (10 TONS) — STANDARD MOTOR (BELT DRIVE)* (cont)

Airflow (Cfm)	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
3000	829	1.46	1283	876	1.63	1432	920	1.80	1582	**963**	**1.98**	**1734**	**1003**	**2.15**	**1889**
3100	838	1.54	1353	884	1.72	1506	928	1.89	1661	**970**	**2.07**	**1818**	**1010**	**2.25**	**1976**
3200	846	1.63	1427	892	1.81	1584	**936**	**1.99**	**1743**	**978**	**2.17**	**1904**	**1018**	**2.35**	**2066**
3300	855	1.71	1503	901	1.90	1665	**944**	**2.08**	**1828**	**985**	**2.27**	**1993**	—	—	—
3400	864	1.80	1583	909	1.99	1749	**952**	**2.18**	**1917**	**993**	**2.38**	**2085**	—	—	—
3500	873	1.90	1666	918	2.09	1837	**960**	**2.29**	**2008**	—	—	—	—	—	—
3600	882	2.00	1752	927	2.20	1927	**969**	**2.40**	**2103**	—	—	—	—	—	—
3700	891	2.10	1842	935	2.30	2021	—	—	—	—	—	—	—	—	—
3800	901	2.21	1935	—	—	—	—	—	—	—	—	—	—	—	—
3900	911	2.32	2032	—	—	—	—	—	—	—	—	—	—	—	—
4000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 685 to 935 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See general fan performance notes.

PERFORMANCE DATA PAE072−150 (cont)

FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

PAE120 (10 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)*

Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
3000	**532**	**0.64**	**559**	**604**	**0.80**	**702**	**668**	**0.96**	**846**	**726**	**1.13**	**990**	**779**	**1.29**	**1136**
3100	**545**	**0.69**	**607**	**615**	**0.86**	**755**	**678**	**1.03**	**903**	**735**	**1.20**	**1052**	**788**	**1.37**	**1202**
3200	**557**	**0.75**	**658**	**627**	**0.92**	**810**	**689**	**1.10**	**963**	**745**	**1.27**	**1117**	**797**	**1.45**	**1271**
3300	**570**	**0.81**	**712**	**638**	**0.99**	**869**	**699**	**1.17**	**1026**	**755**	**1.35**	**1184**	**806**	**1.53**	**1343**
3400	**583**	**0.88**	**768**	**650**	**1.06**	**930**	**710**	**1.24**	**1092**	**765**	**1.43**	**1255**	**816**	**1.62**	**1418**
3500	**596**	**0.94**	**828**	**662**	**1.13**	**995**	**721**	**1.32**	**1162**	**775**	**1.51**	**1329**	**825**	**1.71**	**1497**
3600	**609**	**1.02**	**891**	**673**	**1.21**	**1063**	**732**	**1.41**	**1234**	**785**	**1.60**	**1406**	835	1.80	1579
3700	**623**	**1.09**	**958**	**685**	**1.29**	**1134**	**743**	**1.49**	**1310**	**796**	**1.69**	**1487**	845	1.90	1664
3800	**636**	**1.17**	**1028**	**698**	**1.38**	**1209**	**754**	**1.58**	**1390**	**806**	**1.79**	**1571**	855	2.00	1753
3900	**649**	**1.25**	**1101**	**710**	**1.47**	**1287**	**765**	**1.68**	**1472**	**817**	**1.89**	**1658**	865	2.10	1845
4000	**663**	**1.34**	**1178**	**722**	**1.56**	**1369**	**777**	**1.78**	**1559**	**828**	**1.99**	**1749**	875	2.21	1941
4100	**676**	**1.43**	**1258**	**735**	**1.66**	**1454**	**788**	**1.88**	**1649**	838	2.10	1844	886	2.32	2040
4200	**690**	**1.53**	**1343**	**747**	**1.76**	**1543**	**800**	**1.99**	**1743**	850	2.21	1943	896	2.44	2143
4300	**703**	**1.63**	**1431**	**760**	**1.86**	**1636**	**812**	**2.10**	**1841**	861	2.33	2046	907	2.56	2251
4400	**717**	**1.74**	**1523**	**772**	**1.98**	**1734**	**824**	**2.21**	**1943**	872	2.45	2153	917	2.69	2362
4500	**731**	**1.85**	**1620**	**785**	**2.09**	**1835**	836	2.33	2049	883	2.58	2263	928	2.82	2478
4600	**744**	**1.96**	**1720**	**798**	**2.21**	**1940**	848	2.46	2159	895	2.71	2378	939	2.96	2597
4700	**758**	**2.08**	**1825**	**811**	**2.34**	**2049**	860	2.59	2273	906	2.85	2497	950	3.10	2721
4800	**772**	**2.20**	**1934**	**824**	**2.47**	**2163**	872	2.73	2392	918	2.99	2621	961	3.25	2850
4900	**786**	**2.33**	**2047**	837	2.60	2282	885	2.87	2515	930	3.13	2749	973	3.40	2982
5000	**800**	**2.47**	**2165**	850	2.74	2405	897	3.01	2643	942	3.28	2881	984	3.55	3119

PAE120 (10 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont)

Airflow (Cfm)	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
3000	**829**	**1.46**	**1283**	876	1.63	1432	920	1.80	1582	963	1.98	1734	1003	2.15	1889
3100	838	1.54	1353	884	1.72	1506	928	1.89	1661	970	2.07	1818	1010	2.25	1976
3200	846	1.63	1427	892	1.81	1584	936	1.99	1743	978	2.17	1904	1018	2.35	2066
3300	855	1.71	1503	901	1.90	1665	944	2.08	1828	985	2.27	1993	1025	2.46	2159
3400	864	1.80	1583	909	1.99	1749	952	2.18	1917	993	2.38	2085	1033	2.57	2256
3500	873	1.90	1666	918	2.09	1837	960	2.29	2008	1001	2.49	2181	1040	2.68	2356
3600	882	2.00	1752	927	2.20	1927	969	2.40	2103	1009	2.60	2281	1048	2.80	2459
3700	891	2.10	1842	935	2.30	2021	977	2.51	2202	1018	2.72	2384	1056	2.92	2567
3800	901	2.21	1935	945	2.41	2119	986	2.63	2304	1026	2.84	2490	1064	3.05	2677
3900	911	2.32	2032	954	2.53	2220	995	2.74	2409	1035	2.96	2600	1073	3.18	2791
4000	920	2.43	2132	963	2.65	2325	1004	2.87	2518	1043	3.09	2713	1081	3.31	2909
4100	930	2.55	2237	973	2.77	2433	1013	3.00	2632	1052	3.23	2831	1090	3.45	3031
4200	940	2.67	2345	982	2.90	2546	1023	3.13	2749	1061	3.36	2952	1098	3.60	3157
4300	950	2.80	2456	992	3.03	2663	1032	3.27	2870	1070	3.51	3078	1107	3.74	3287
4400	961	2.93	2572	1002	3.17	2783	1041	3.41	2995	1079	3.65	3207	1116	3.90	3420
4500	971	3.07	2692	1012	3.31	2908	1051	3.56	3124	1089	3.81	3341	1125	4.05	3559
4600	982	3.21	2817	1022	3.46	3036	1061	3.71	3257	1098	3.96	3479	**1134**	**4.22**	**3701**
4700	992	3.36	2945	1032	3.61	3170	1071	3.87	3395	1108	4.13	3621	**1144**	**4.38**	**3847**
4800	1003	3.51	3078	1043	3.77	3307	1081	4.03	3537	1117	4.29	3768	**1153**	**4.56**	**3999**
4900	1014	3.66	3216	1053	3.93	3449	1091	4.20	3684	1127	4.47	3919	**1162**	**4.73**	**4154**
5000	1025	3.83	3357	1063	4.10	3596	1101	4.37	3835	**1137**	**4.64**	**4075**	**1172**	**4.92**	**4315**

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 830 to 1130 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 5.25.
3. See general fan performance notes.

PERFORMANCE DATA PAE072−150 (cont)

FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

PAE150 (12½ TONS) — STANDARD MOTOR (BELT DRIVE)*

Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
3700	**654**	**1.11**	**1040**	**713**	**1.31**	**1218**	**767**	**1.50**	**1395**	**817**	**1.69**	**1571**	863	1.87	1748
3800	**668**	**1.20**	**1116**	**726**	**1.39**	**1299**	**779**	**1.59**	**1481**	**828**	**1.78**	**1662**	874	1.98	1844
3900	**683**	**1.28**	**1197**	**739**	**1.48**	**1385**	**792**	**1.69**	**1572**	**840**	**1.88**	**1758**	886	2.08	1943
4000	**697**	**1.37**	**1281**	**753**	**1.58**	**1474**	**804**	**1.79**	**1666**	**852**	**1.99**	**1857**	897	2.20	2048
4100	**712**	**1.47**	**1370**	**766**	**1.68**	**1567**	**817**	**1.89**	**1764**	864	2.10	1960	909	2.31	2155
4200	**726**	**1.57**	**1462**	**780**	**1.79**	**1665**	**830**	**2.00**	**1866**	876	2.22	2067	920	2.43	2268
4300	**741**	**1.67**	**1559**	**794**	**1.89**	**1767**	**843**	**2.12**	**1973**	889	2.34	2179	932	2.56	2384
4400	**755**	**1.78**	**1660**	**807**	**2.01**	**1873**	**856**	**2.23**	**2084**	901	2.46	2295	944	2.69	2505
4500	**770**	**1.89**	**1766**	**821**	**2.13**	**1984**	869	2.36	2200	914	2.59	2415	956	2.82	2630
4600	**785**	**2.01**	**1876**	**835**	**2.25**	**2099**	882	2.49	2320	926	2.72	2541	968	2.96	2760
4700	**800**	**2.14**	**1991**	**849**	**2.38**	**2219**	895	2.62	2445	939	2.86	2670	980	3.10	2895
4800	**815**	**2.26**	**2111**	863	2.51	2344	909	2.76	2575	952	3.01	2805	993	3.25	3034
4900	**829**	**2.40**	**2235**	877	2.65	2473	922	2.91	2709	965	3.16	2944	1005	3.41	3178
5000	**844**	**2.54**	**2365**	891	2.80	2608	936	3.06	2849	978	3.31	3089	1018	3.57	3328
5100	**859**	**2.68**	**2499**	906	2.95	2747	949	3.21	2994	991	3.47	3238	—	—	—
5200	874	2.83	2640	920	3.10	2892	963	3.37	3143	1004	3.64	3393	—	—	—
5300	889	2.99	2784	934	3.26	3042	977	3.54	3298	—	—	—	—	—	—
5400	904	3.15	2936	949	3.43	3198	—	—	—	—	—	—	—	—	—
5500	920	3.32	3092	963	3.60	3359	—	—	—	—	—	—	—	—	—
5600	935	3.49	3253	—	—	—	—	—	—	—	—	—	—	—	—
5700	950	3.67	3421	—	—	—	—	—	—	—	—	—	—	—	—
5800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

PAE150 (12½ TONS) — STANDARD MOTOR (BELT DRIVE)* (cont)

Airflow (Cfm)	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
3700	907	2.06	1924	949	2.25	2101	989	2.44	2279	1027	2.63	2457	1063	2.83	2636
3800	918	2.17	2025	959	2.37	2207	999	2.56	2389	1036	2.76	2571	1073	2.95	2755
3900	929	2.28	2130	970	2.48	2316	1009	2.68	2502	1046	2.88	2690	**1082**	**3.09**	**2877**
4000	940	2.40	2238	980	2.61	2429	1019	2.81	2620	1056	3.02	2812	**1092**	**3.22**	**3004**
4100	951	2.52	2351	991	2.73	2547	1029	2.94	2743	1066	3.15	2939	**1102**	**3.36**	**3136**
4200	962	2.65	2468	1002	2.86	2668	1040	3.08	2869	1076	3.29	3070	**1112**	**3.51**	**3271**
4300	973	2.78	2589	1013	3.00	2794	1050	3.22	2999	**1087**	**3.44**	**3205**	**1122**	**3.66**	**3411**
4400	985	2.91	2715	1024	3.14	2924	1061	3.36	3134	**1097**	**3.59**	**3345**	—	—	—
4500	996	3.05	2845	1035	3.28	3059	1072	3.51	3274	—	—	—	—	—	—
4600	1008	3.20	2979	1046	3.43	3199	**1083**	**3.67**	**3418**	—	—	—	—	—	—
4700	1020	3.34	3119	1058	3.58	3343	—	—	—	—	—	—	—	—	—
4800	1032	3.50	3263	—	—	—	—	—	—	—	—	—	—	—	—
4900	1044	3.66	3413	—	—	—	—	—	—	—	—	—	—	—	—
5000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 860 to 1080 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 3.70.
3. See general fan performance notes.

PERFORMANCE DATA PAE072−150 (cont)

FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

PAE150 (12½ TONS) — ALTERNATE/HIGH STATIC MOTOR (BELT DRIVE)*

Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
3700	**654**	**1.11**	**1040**	**713**	**1.31**	**1218**	**767**	**1.50**	**1395**	**817**	**1.69**	**1571**	863	1.87	1748
3800	**668**	**1.20**	**1116**	**726**	**1.39**	**1299**	**779**	**1.59**	**1481**	**828**	**1.78**	**1662**	874	1.98	1844
3900	**683**	**1.28**	**1197**	**739**	**1.48**	**1385**	**792**	**1.69**	**1572**	840	1.88	1758	886	2.08	1943
4000	**697**	**1.37**	**1281**	**753**	**1.58**	**1474**	**804**	**1.79**	**1666**	852	1.99	1857	897	2.20	2048
4100	**712**	**1.47**	**1370**	**766**	**1.68**	**1567**	**817**	**1.89**	**1764**	864	2.10	1960	909	2.31	2155
4200	**726**	**1.57**	**1462**	**780**	**1.79**	**1665**	830	2.00	1866	876	2.22	2067	920	2.43	2268
4300	**741**	**1.67**	**1559**	**794**	**1.89**	**1767**	843	2.12	1973	889	2.34	2179	932	2.56	2384
4400	**755**	**1.78**	**1660**	**807**	**2.01**	**1873**	856	2.23	2084	901	2.46	2295	944	2.69	2505
4500	**770**	**1.89**	**1766**	**821**	**2.13**	**1984**	869	2.36	2200	914	2.59	2415	956	2.82	2630
4600	**785**	**2.01**	**1876**	835	2.25	2099	882	2.49	2320	926	2.72	2541	968	2.96	2760
4700	**800**	**2.14**	**1991**	849	2.38	2219	895	2.62	2445	939	2.86	2670	980	3.10	2895
4800	**815**	**2.26**	**2111**	863	2.51	2344	909	2.76	2575	952	3.01	2805	993	3.25	3034
4900	**829**	**2.40**	**2235**	877	2.65	2473	922	2.91	2709	965	3.16	2944	1005	3.41	3178
5000	844	2.54	2365	891	2.80	2608	936	3.06	2849	978	3.31	3089	1018	3.57	3328
5100	859	2.68	2499	906	2.95	2747	949	3.21	2994	991	3.47	3238	1030	3.73	3483
5200	874	2.83	2640	920	3.10	2892	963	3.37	3143	1004	3.64	3393	1043	3.91	3642
5300	889	2.99	2784	934	3.26	3042	977	3.54	3298	1017	3.81	3553	1056	4.08	3807
5400	904	3.15	2936	949	3.43	3198	990	3.71	3459	1030	3.99	3719	1068	4.27	3977
5500	920	3.32	3092	963	3.60	3359	1004	3.89	3625	1044	4.17	3890	1081	4.45	4153
5600	935	3.49	3253	977	3.78	3525	1018	4.07	3796	1057	4.36	4066	1094	4.65	4335
5700	950	3.67	3421	992	3.97	3698	1032	4.26	3974	1070	4.56	4249	1107	4.85	4522
5800	965	3.85	3594	1006	4.16	3876	1046	4.46	4157	1084	4.76	4436	1120	5.06	4715
5900	980	4.05	3773	1021	4.35	4060	1060	4.66	4346	1098	4.97	4630	—	—	—
6000	995	4.24	3958	1036	4.56	4250	1074	4.87	4541	1111	5.18	4831	—	—	—
6100	1011	4.45	4149	1050	4.77	4446	1088	5.09	4742	—	—	—	—	—	—
6200	1026	4.66	4347	1065	4.99	4649	—	—	—	—	—	—	—	—	—
6300	1041	4.88	4550	1080	5.21	4857	—	—	—	—	—	—	—	—	—

PAE150 (12½ TONS) — ALTERNATE/HIGH STATIC MOTOR (BELT DRIVE)* (cont)

Airflow (Cfm)	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
3700	907	2.06	1924	949	2.25	2101	989	2.44	2279	1027	2.63	2457	1063	2.83	2636
3800	918	2.17	2025	959	2.37	2207	999	2.56	2389	1036	2.76	2571	1073	2.95	2755
3900	929	2.28	2130	970	2.48	2316	1009	2.68	2502	1046	2.88	2690	1082	3.09	2877
4000	940	2.40	2238	980	2.61	2429	1019	2.81	2620	1056	3.02	2812	1092	3.22	3004
4100	951	2.52	2351	991	2.73	2547	1029	2.94	2743	1066	3.15	2939	1102	3.36	3136
4200	962	2.65	2468	1002	2.86	2668	1040	3.08	2869	1076	3.29	3070	1112	3.51	3271
4300	973	2.78	2589	1013	3.00	2794	1050	3.22	2999	1087	3.44	3205	1122	3.66	3411
4400	985	2.91	2715	1024	3.14	2924	1061	3.36	3134	1097	3.59	3345	**1132**	**3.81**	**3555**
4500	996	3.05	2845	1035	3.28	3059	1072	3.51	3274	1108	3.74	3489	**1142**	**3.97**	**3704**
4600	1008	3.20	2979	1046	3.43	3199	1083	3.67	3418	1118	3.90	3638	**1152**	**4.14**	**3857**
4700	1020	3.34	3119	1058	3.58	3343	1094	3.83	3567	1129	4.07	3792	**1163**	**4.31**	**4016**
4800	1032	3.50	3263	1069	3.74	3492	1105	3.99	3721	**1140**	**4.24**	**3950**	**1174**	**4.48**	**4179**
4900	1044	3.66	3413	1081	3.91	3646	1117	4.16	3880	**1151**	**4.41**	**4113**	**1184**	**4.66**	**4347**
5000	1056	3.82	3566	1093	4.08	3805	1128	4.34	4044	**1162**	**4.59**	**4282**	**1195**	**4.85**	**4520**
5100	1068	4.00	3726	1104	4.26	3969	**1139**	**4.52**	**4212**	**1173**	**4.78**	**4456**	**1206**	**5.04**	**4699**
5200	1080	4.17	3891	1116	4.44	4139	**1151**	**4.70**	**4386**	**1185**	**4.97**	**4634**	**1217**	**5.24**	**4882**
5300	1093	4.35	4060	1128	4.63	4314	**1163**	**4.90**	**4566**	**1196**	**5.17**	**4819**	—	—	—
5400	1105	4.54	4236	**1140**	**4.82**	**4494**	**1174**	**5.10**	**4751**	—	—	—	—	—	—
5500	1118	4.74	4417	**1152**	**5.02**	**4679**	—	—	—	—	—	—	—	—	—
5600	1130	4.94	4603	**1165**	**5.22**	**4870**	—	—	—	—	—	—	—	—	—
5700	**1143**	**5.14**	**4795**	—	—	—	—	—	—	—	—	—	—	—	—
5800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 830 to 1130 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 5.25.
3. See general fan performance notes.

PERFORMANCE DATA PAE072−150 (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

PAE072 (6 TONS) — STANDARD MOTOR (BELT DRIVE)*															
AIRFLOW CFM	EXTERNAL STATIC PRESSURE (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
1800	**823**	**0.52**	**458**	**924**	**0.65**	**579**	**1015**	**0.80**	**712**	1099	0.96	857	1177	1.14	1013
1900	**857**	**0.59**	**525**	**955**	**0.73**	**650**	**1043**	**0.89**	**787**	1125	1.05	936	1201	1.23	1096
2000	**892**	**0.67**	**599**	**986**	**0.82**	**729**	1072	0.98	870	1151	1.15	1022	1226	1.33	1185
2100	**927**	**0.77**	**680**	**1017**	**0.92**	**815**	1101	1.08	960	1178	1.26	1116	1251	1.44	1283
2200	**962**	**0.87**	**769**	**1050**	**1.02**	**909**	1131	1.19	1059	1206	1.37	1218	1277	1.56	1389
2300	**997**	**0.97**	**865**	1082	1.14	1010	1161	1.31	1165	1235	1.50	1329	1304	1.69	1503
2400	**1033**	**1.09**	**970**	1115	1.26	1120	1192	1.44	1279	1264	1.63	1448	1332	1.83	1625
2500	**1069**	**1.22**	**1084**	1149	1.39	1239	1223	1.58	1403	1293	1.77	1576	1360	1.98	1757
2600	1106	1.36	1206	1183	1.54	1367	1255	1.73	1535	1323	1.93	1713	1389	2.14	1898
2700	1142	1.51	1338	1217	1.69	1503	1287	1.89	1677	1354	2.09	1859	1418	2.31	2049
2800	1179	1.67	1480	1251	1.86	1650	1320	2.06	1829	1385	2.27	2015	—	—	—
2900	1216	1.84	1632	1286	2.04	1807	1353	2.24	1991	—	—	—	—	—	—
3000	1253	2.02	1794	1321	2.22	1975	—	—	—	—	—	—	—	—	—

PAE072 (6 TONS) — STANDARD MOTOR (BELT DRIVE)* (Cont.)															
AIRFLOW CFM	EXTERNAL STATIC PRESSURE (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
1800	1250	1.33	1181	1319	1.53	1360	1385	1.74	1549	1448	1.97	1748	**1508**	**2.20**	**1957**
1900	1273	1.43	1266	1341	1.63	1447	1405	1.84	1638	**1467**	**2.07**	**1839**	**1527**	**2.31**	**2050**
2000	1296	1.53	1359	1363	1.74	1542	1427	1.95	1736	**1488**	**2.18**	**1939**	—	—	—
2100	1320	1.64	1459	1386	1.85	1646	1448	2.07	1842	**1508**	**2.30**	**2047**	—	—	—
2200	1345	1.77	1568	1409	1.98	1758	**1471**	**2.20**	**1956**	—	—	—	—	—	—
2300	1371	1.90	1686	1434	2.11	1878	**1494**	**2.34**	**2080**	—	—	—	—	—	—
2400	1397	2.04	1812	1459	2.26	2008	—	—	—	—	—	—	—	—	—
2500	1424	2.19	1948	—	—	—	—	—	—	—	—	—	—	—	—
2600	1451	2.36	2093	—	—	—	—	—	—	—	—	—	—	—	—
2700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 1070 to 1460 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See general fan performance notes.

PERFORMANCE DATA PAE072−150 (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

PAE072 (6 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)*

Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
1800	**823**	**0.52**	**458**	**924**	**0.65**	**579**	**1015**	**0.80**	**712**	**1099**	**0.96**	**857**	**1177**	**1.14**	**1013**
1900	**857**	**0.59**	**525**	**955**	**0.73**	**650**	**1043**	**0.89**	**787**	**1125**	**1.05**	**936**	**1201**	**1.23**	**1096**
2000	**892**	**0.67**	**599**	**986**	**0.82**	**729**	**1072**	**0.98**	**870**	**1151**	**1.15**	**1022**	**1226**	**1.33**	**1185**
2100	**927**	**0.77**	**680**	**1017**	**0.92**	**815**	**1101**	**1.08**	**960**	**1178**	**1.26**	**1116**	**1251**	**1.44**	**1283**
2200	**962**	**0.87**	**769**	**1050**	**1.02**	**909**	**1131**	**1.19**	**1059**	**1206**	**1.37**	**1218**	**1277**	**1.56**	**1389**
2300	**997**	**0.97**	**865**	**1082**	**1.14**	**1010**	**1161**	**1.31**	**1165**	**1235**	**1.50**	**1329**	1304	1.69	1503
2400	**1033**	**1.09**	**970**	**1115**	**1.26**	**1120**	**1192**	**1.44**	**1279**	**1264**	**1.63**	**1448**	1332	1.83	1625
2500	**1069**	**1.22**	**1084**	**1149**	**1.39**	**1239**	**1223**	**1.58**	**1403**	**1293**	**1.77**	**1576**	1360	1.98	1757
2600	**1106**	**1.36**	**1206**	**1183**	**1.54**	**1367**	**1255**	**1.73**	**1535**	1323	1.93	1713	1389	2.14	1898
2700	**1142**	**1.51**	**1338**	**1217**	**1.69**	**1503**	**1287**	**1.89**	**1677**	1354	2.09	1859	1418	2.31	2049
2800	**1179**	**1.67**	**1480**	**1251**	**1.86**	**1650**	1320	2.06	1829	1385	2.27	2015	1447	2.49	2210
2900	**1216**	**1.84**	**1632**	**1286**	**2.04**	**1807**	1353	2.24	1991	1416	2.46	2182	1477	2.68	2381
3000	**1253**	**2.02**	**1794**	1321	2.22	1975	1386	2.44	2163	1448	2.66	2359	1508	2.89	2563

PAE072 (6 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont)

Airflow (Cfm)	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
1800	**1250**	**1.33**	**1181**	1319	1.53	1360	1385	1.74	1549	1448	1.97	1748	1508	2.20	1957
1900	**1273**	**1.43**	**1266**	1341	1.63	1447	1405	1.84	1638	1467	2.07	1839	1527	2.31	2050
2000	**1296**	**1.53**	**1359**	1363	1.74	1542	1427	1.95	1736	1488	2.18	1939	1546	2.42	2151
2100	1320	1.64	1459	1386	1.85	1646	1448	2.07	1842	1508	2.30	2047	1566	2.55	2262
2200	1345	1.77	1568	1409	1.98	1758	1471	2.20	1956	1530	2.44	2164	1587	2.68	2380
2300	1371	1.90	1686	1434	2.11	1878	1494	2.34	2080	1553	2.58	2290	1609	2.83	2509
2400	1397	2.04	1812	1459	2.26	2008	1518	2.49	2213	1576	2.73	2425	—	—	—
2500	1424	2.19	1948	1484	2.42	2147	1543	2.65	2355	1599	2.89	2571	—	—	—
2600	1451	2.36	2093	1511	2.58	2295	1568	2.82	2507	—	—	—	—	—	—
2700	1479	2.53	2248	1537	2.76	2454	—	—	—	—	—	—	—	—	—
2800	1507	2.72	2412	—	—	—	—	—	—	—	—	—	—	—	—
2900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 1300 to 1685 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.90.
3. See general fan performance notes.

PERFORMANCE DATA PAE072−150 (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

PAE090 (7½ TONS) — STANDARD MOTOR (BELT DRIVE)*

Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
2250	**465**	**0.43**	**402**	**555**	**0.64**	**596**	629	0.86	802	694	1.10	1021	753	1.34	1252
2300	**471**	**0.45**	**421**	**560**	**0.66**	**618**	634	0.89	828	699	1.13	1050	757	1.38	1283
2400	**483**	**0.49**	**461**	**571**	**0.71**	**665**	644	0.94	881	708	1.19	1109	766	1.45	1348
2500	**495**	**0.54**	**503**	**581**	**0.77**	**715**	654	1.01	937	717	1.26	1171	775	1.52	1416
2550	**501**	**0.56**	**526**	**587**	**0.79**	**740**	659	1.04	967	722	1.29	1204	779	1.56	1452
2600	**507**	**0.59**	**549**	592	0.82	767	664	1.07	996	727	1.33	1237	784	1.60	1488
2700	**519**	**0.64**	**597**	603	0.88	823	674	1.14	1059	737	1.40	1306	793	1.68	1563
2800	**532**	**0.70**	**649**	614	0.95	882	684	1.21	1125	746	1.48	1378	803	1.76	1641
2900	**544**	**0.75**	**703**	625	1.01	944	695	1.28	1194	756	1.56	1453	812	1.85	1723
3000	**557**	**0.82**	**761**	637	1.08	1009	705	1.36	1266	766	1.64	1533	822	1.94	1808
3100	**570**	**0.88**	**823**	648	1.16	1079	716	1.44	1342	776	1.73	1615	831	2.03	1897
3200	**583**	**0.95**	**888**	660	1.23	1151	727	1.53	1422	787	1.82	1702	**841**	**2.13**	**1991**
3300	596	1.03	957	672	1.32	1228	738	1.61	1506	797	1.92	1792	**851**	**2.24**	**2088**
3400	609	1.10	1030	684	1.40	1308	749	1.71	1593	808	2.02	1887	**861**	**2.35**	**2188**
3500	622	1.19	1106	696	1.49	1392	760	1.81	1685	818	2.13	1985	—	—	—
3600	635	1.27	1187	708	1.59	1481	771	1.91	1781	829	2.24	2088	—	—	—
3700	649	1.36	1272	720	1.69	1573	783	2.02	1881	840	2.35	2195	—	—	—
3750	655	1.41	1316	726	1.74	1621	789	2.07	1932	—	—	—	—	—	—

PAE090 (7½ TONS) — STANDARD MOTOR (BELT DRIVE)* (cont)

Airflow (Cfm)	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
2250	806	1.60	1494	**856**	**1.87**	**1747**	**903**	**2.15**	**2009**	—	—	—	—	—	—
2300	811	1.64	1528	**860**	**1.91**	**1784**	**907**	**2.20**	**2048**	—	—	—	—	—	—
2400	819	1.71	1599	**868**	**1.99**	**1859**	**915**	**2.28**	**2129**	—	—	—	—	—	—
2500	828	1.79	1672	**877**	**2.08**	**1938**	**923**	**2.37**	**2214**	—	—	—	—	—	—
2550	832	1.83	1710	**881**	**2.12**	**1979**	—	—	—	—	—	—	—	—	—
2600	836	1.88	1749	**885**	**2.17**	**2021**	—	—	—	—	—	—	—	—	—
2700	**845**	**1.96**	**1830**	**894**	**2.26**	**2107**	—	—	—	—	—	—	—	—	—
2800	**854**	**2.05**	**1914**	**903**	**2.36**	**2197**	—	—	—	—	—	—	—	—	—
2900	**864**	**2.15**	**2002**	—	—	—	—	—	—	—	—	—	—	—	—
3000	**873**	**2.24**	**2093**	—	—	—	—	—	—	—	—	—	—	—	—
3100	**882**	**2.35**	**2189**	—	—	—	—	—	—	—	—	—	—	—	—
3200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3750	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 590 to 840 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See general fan performance notes.

PERFORMANCE DATA PAE072−150 (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

PAE090 (7½ TONS) — HIGH-STATIC MOTOR (BELT DRIVE)*															
Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
2250	**465**	**0.43**	**402**	**555**	**0.64**	**596**	**629**	**0.86**	**802**	**694**	**1.10**	**1021**	**753**	**1.34**	**1252**
2300	**471**	**0.45**	**421**	**560**	**0.66**	**618**	**634**	**0.89**	**828**	**699**	**1.13**	**1050**	**757**	**1.38**	**1283**
2400	**483**	**0.49**	**461**	**571**	**0.71**	**665**	**644**	**0.94**	**881**	**708**	**1.19**	**1109**	**766**	**1.45**	**1348**
2500	**495**	**0.54**	**503**	**581**	**0.77**	**715**	**654**	**1.01**	**937**	**717**	**1.26**	**1171**	**775**	**1.52**	**1416**
2550	**501**	**0.56**	**526**	**587**	**0.79**	**740**	**659**	**1.04**	**967**	**722**	**1.29**	**1204**	**779**	**1.56**	**1452**
2600	**507**	**0.59**	**549**	**592**	**0.82**	**767**	**664**	**1.07**	**996**	**727**	**1.33**	**1237**	**784**	**1.60**	**1488**
2700	**519**	**0.64**	**597**	**603**	**0.88**	**823**	**674**	**1.14**	**1059**	**737**	**1.40**	**1306**	**793**	**1.68**	**1563**
2800	**532**	**0.70**	**649**	**614**	**0.95**	**882**	**684**	**1.21**	**1125**	**746**	**1.48**	**1378**	**803**	**1.76**	**1641**
2900	**544**	**0.75**	**703**	**625**	**1.01**	**944**	**695**	**1.28**	**1194**	**756**	**1.56**	**1453**	**812**	**1.85**	**1723**
3000	**557**	**0.82**	**761**	**637**	**1.08**	**1009**	**705**	**1.36**	**1266**	**766**	**1.64**	**1533**	**822**	**1.94**	**1808**
3100	**570**	**0.88**	**823**	**648**	**1.16**	**1079**	**716**	**1.44**	**1342**	**776**	**1.73**	**1615**	**831**	**2.03**	**1897**
3200	**583**	**0.95**	**888**	**660**	**1.23**	**1151**	**727**	**1.53**	**1422**	**787**	**1.82**	**1702**	**841**	**2.13**	**1991**
3300	**596**	**1.03**	**957**	**672**	**1.32**	**1228**	**738**	**1.61**	**1506**	**797**	**1.92**	**1792**	**851**	**2.24**	**2088**
3400	**609**	**1.10**	**1030**	**684**	**1.40**	**1308**	**749**	**1.71**	**1593**	**808**	**2.02**	**1887**	861	2.35	2188
3500	**622**	**1.19**	**1106**	**696**	**1.49**	**1392**	**760**	**1.81**	**1685**	**818**	**2.13**	**1985**	872	2.46	2294
3600	**635**	**1.27**	**1187**	**708**	**1.59**	**1481**	**771**	**1.91**	**1781**	**829**	**2.24**	**2088**	882	2.58	2403
3700	**649**	**1.36**	**1272**	**720**	**1.69**	**1573**	**783**	**2.02**	**1881**	**840**	**2.35**	**2195**	892	2.70	2517
3750	**655**	**1.41**	**1316**	**726**	**1.74**	**1621**	**789**	**2.07**	**1932**	**845**	**2.41**	**2250**	897	2.76	2575

PAE090 (7½ TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont)															
Airflow (Cfm)	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
2250	**806**	**1.60**	**1494**	**856**	**1.87**	**1747**	903	2.15	2009	947	2.45	2282	988	2.75	2564
2300	**811**	**1.64**	**1528**	860	1.91	1784	907	2.20	2048	950	2.49	2323	992	2.80	2607
2400	**819**	**1.71**	**1599**	868	1.99	1859	915	2.28	2129	958	2.58	2410	1000	2.89	2698
2500	**828**	**1.79**	**1672**	877	2.08	1938	923	2.37	2214	966	2.68	2499	1008	3.00	2793
2550	**832**	**1.83**	**1710**	881	2.12	1979	927	2.42	2258	971	2.73	2545	1012	3.05	2842
2600	**836**	**1.88**	**1749**	885	2.17	2021	931	2.47	2302	975	2.78	2592	1016	3.10	2891
2700	**845**	**1.96**	**1830**	894	2.26	2107	940	2.57	2394	983	2.88	2689	1024	3.21	2993
2800	**854**	**2.05**	**1914**	903	2.36	2197	948	2.67	2488	991	2.99	2790	1032	3.32	3099
2900	864	2.15	2002	912	2.46	2290	957	2.77	2587	1000	3.10	2894	1041	3.44	3209
3000	873	2.24	2093	921	2.56	2388	966	2.89	2691	1008	3.22	3003	1049	3.56	3323
3100	882	2.35	2189	930	2.67	2489	975	3.00	2798	1017	3.34	3115	1057	3.69	3441
3200	892	2.45	2288	939	2.78	2595	984	3.12	2909	1026	3.47	3233	—	—	—
3300	901	2.56	2391	948	2.90	2704	993	3.24	3024	1035	3.60	3353	—	—	—
3400	911	2.68	2499	958	3.02	2817	1002	3.37	3144	—	—	—	—	—	—
3500	921	2.80	2610	967	3.15	2935	1011	3.50	3268	—	—	—	—	—	—
3600	931	2.92	2726	977	3.28	3057	1021	3.64	3396	—	—	—	—	—	—
3700	941	3.05	2847	987	3.41	3184	—	—	—	—	—	—	—	—	—
3750	946	3.12	2908	992	3.48	3249	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 860 to 1080 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 3.70.
3. See general fan performance notes.

PERFORMANCE DATA PAE072−150 (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

PAE102 (8½ TONS) — STANDARD MOTOR (BELT DRIVE)*

Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
2200	**459**	**0.41**	**384**	**550**	**0.62**	**575**	**625**	**0.83**	**778**	690	1.07	994	748	1.31	1221
2250	**465**	**0.43**	**402**	**555**	**0.64**	**596**	**629**	**0.86**	**802**	694	1.10	1021	753	1.34	1252
2300	**471**	**0.45**	**421**	**560**	**0.66**	**618**	**634**	**0.89**	**828**	699	1.13	1050	757	1.38	1283
2400	**483**	**0.49**	**461**	**571**	**0.71**	**665**	**644**	**0.94**	**881**	708	1.19	1109	766	1.45	1348
2500	**495**	**0.54**	**503**	**581**	**0.77**	**715**	**654**	**1.01**	**937**	717	1.26	1171	775	1.52	1416
2550	**501**	**0.56**	**526**	**587**	**0.79**	**740**	**659**	**1.04**	**967**	722	1.29	1204	779	1.56	1452
2600	**507**	**0.59**	**549**	**592**	**0.82**	**767**	**664**	**1.07**	**996**	727	1.33	1237	784	1.60	1488
2700	**519**	**0.64**	**597**	**603**	**0.88**	**823**	**674**	**1.14**	**1059**	737	1.40	1306	793	1.68	1563
2800	**532**	**0.70**	**649**	**614**	**0.95**	**882**	**684**	**1.21**	**1125**	746	1.48	1378	803	1.76	1641
2900	**544**	**0.75**	**703**	**625**	**1.01**	**944**	695	1.28	1194	756	1.56	1453	812	1.85	1723
3000	**557**	**0.82**	**761**	**637**	**1.08**	**1009**	705	1.36	1266	766	1.64	1533	822	1.94	1808
3100	**570**	**0.88**	**823**	**648**	**1.16**	**1079**	716	1.44	1342	776	1.73	1615	831	2.03	1897
3200	**583**	**0.95**	**888**	**660**	**1.23**	**1151**	727	1.53	1422	787	1.82	1702	841	2.13	1991
3300	**596**	**1.03**	**957**	**672**	**1.32**	**1228**	738	1.61	1506	797	1.92	1792	851	2.24	2088
3400	**609**	**1.10**	**1030**	**684**	**1.40**	**1308**	749	1.71	1593	808	2.02	1887	861	2.35	2188
3500	**622**	**1.19**	**1106**	696	1.49	1392	760	1.81	1685	818	2.13	1985	—	—	—
3600	**635**	**1.27**	**1187**	708	1.59	1481	771	1.91	1781	829	2.24	2088	—	—	—
3700	**649**	**1.36**	**1272**	720	1.69	1573	783	2.02	1881	840	2.35	2195	—	—	—
3750	**655**	**1.41**	**1316**	726	1.74	1621	789	2.07	1932	—	—	—	—	—	—
3800	**662**	**1.46**	**1361**	732	1.79	1670	794	2.13	1985	—	—	—	—	—	—
3900	**675**	**1.56**	**1454**	745	1.90	1771	806	2.25	2093	—	—	—	—	—	—
4000	689	1.66	1553	757	2.01	1877	818	2.37	2207	—	—	—	—	—	—
4100	703	1.77	1655	770	2.13	1988	—	—	—	—	—	—	—	—	—
4200	716	1.89	1762	782	2.25	2103	—	—	—	—	—	—	—	—	—
4250	723	1.95	1818	789	2.32	2162	—	—	—	—	—	—	—	—	—

PAE102 (8½ TONS) — STANDARD MOTOR (BELT DRIVE)* (cont)

Airflow (Cfm)	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
2200	802	1.57	1461	852	1.83	1711	899	2.11	1971	943	2.40	2241	—	—	—
2250	806	1.60	1494	856	1.87	1747	903	2.15	2009	—	—	—	—	—	—
2300	811	1.64	1528	860	1.91	1784	907	2.20	2048	—	—	—	—	—	—
2400	819	1.71	1599	868	1.99	1859	915	2.28	2129	—	—	—	—	—	—
2500	828	1.79	1672	877	2.08	1938	923	2.37	2214	—	—	—	—	—	—
2550	832	1.83	1710	881	2.12	1979	—	—	—	—	—	—	—	—	—
2600	836	1.88	1749	885	2.17	2021	—	—	—	—	—	—	—	—	—
2700	845	1.96	1830	894	2.26	2107	—	—	—	—	—	—	—	—	—
2800	854	2.05	1914	903	2.36	2197	—	—	—	—	—	—	—	—	—
2900	864	2.15	2002	—	—	—	—	—	—	—	—	—	—	—	—
3000	873	2.24	2093	—	—	—	—	—	—	—	—	—	—	—	—
3100	882	2.35	2189	—	—	—	—	—	—	—	—	—	—	—	—
3200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3750	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4250	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 685 to 935 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See general fan performance notes.

PERFORMANCE DATA PAE072−150 (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

PAE102 (8½ TONS) — HIGH-STATIC MOTOR (BELT DRIVE)*

Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
2200	**459**	**0.41**	**384**	**550**	**0.62**	**575**	**625**	**0.83**	**778**	**690**	**1.07**	**994**	**748**	**1.31**	**1221**
2250	**465**	**0.43**	**402**	**555**	**0.64**	**596**	**629**	**0.86**	**802**	**694**	**1.10**	**1021**	**753**	**1.34**	**1252**
2300	**471**	**0.45**	**421**	**560**	**0.66**	**618**	**634**	**0.89**	**828**	**699**	**1.13**	**1050**	**757**	**1.38**	**1283**
2400	**483**	**0.49**	**461**	**571**	**0.71**	**665**	**644**	**0.94**	**881**	**708**	**1.19**	**1109**	**766**	**1.45**	**1348**
2500	**495**	**0.54**	**503**	**581**	**0.77**	**715**	**654**	**1.01**	**937**	**717**	**1.26**	**1171**	**775**	**1.52**	**1416**
2550	**501**	**0.56**	**526**	**587**	**0.79**	**740**	**659**	**1.04**	**967**	**722**	**1.29**	**1204**	**779**	**1.56**	**1452**
2600	**507**	**0.59**	**549**	**592**	**0.82**	**767**	**664**	**1.07**	**996**	**727**	**1.33**	**1237**	**784**	**1.60**	**1488**
2700	**519**	**0.64**	**597**	**603**	**0.88**	**823**	**674**	**1.14**	**1059**	**737**	**1.40**	**1306**	**793**	**1.68**	**1563**
2800	**532**	**0.70**	**649**	**614**	**0.95**	**882**	**684**	**1.21**	**1125**	**746**	**1.48**	**1378**	**803**	**1.76**	**1641**
2900	**544**	**0.75**	**703**	**625**	**1.01**	**944**	**695**	**1.28**	**1194**	**756**	**1.56**	**1453**	**812**	**1.85**	**1723**
3000	**557**	**0.82**	**761**	**637**	**1.08**	**1009**	**705**	**1.36**	**1266**	**766**	**1.64**	**1533**	**822**	**1.94**	**1808**
3100	**570**	**0.88**	**823**	**648**	**1.16**	**1079**	**716**	**1.44**	**1342**	**776**	**1.73**	**1615**	**831**	**2.03**	**1897**
3200	**583**	**0.95**	**888**	**660**	**1.23**	**1151**	**727**	**1.53**	**1422**	**787**	**1.82**	**1702**	**841**	**2.13**	**1991**
3300	**596**	**1.03**	**957**	**672**	**1.32**	**1228**	**738**	**1.61**	**1506**	**797**	**1.92**	**1792**	**851**	**2.24**	**2088**
3400	**609**	**1.10**	**1030**	**684**	**1.40**	**1308**	**749**	**1.71**	**1593**	**808**	**2.02**	**1887**	861	2.35	2188
3500	**622**	**1.19**	**1106**	**696**	**1.49**	**1392**	**760**	**1.81**	**1685**	**818**	**2.13**	**1985**	872	2.46	2294
3600	**635**	**1.27**	**1187**	**708**	**1.59**	**1481**	**771**	**1.91**	**1781**	**829**	**2.24**	**2088**	882	2.58	2403
3700	**649**	**1.36**	**1272**	**720**	**1.69**	**1573**	**783**	**2.02**	**1881**	**840**	**2.35**	**2195**	892	2.70	2517
3750	**655**	**1.41**	**1316**	**726**	**1.74**	**1621**	**789**	**2.07**	**1932**	**845**	**2.41**	**2250**	897	2.76	2575
3800	**662**	**1.46**	**1361**	**732**	**1.79**	**1670**	**794**	**2.13**	**1985**	**851**	**2.47**	**2307**	903	2.83	2635
3900	**675**	**1.56**	**1454**	**745**	**1.90**	**1771**	**806**	**2.25**	**2093**	862	2.60	2422	913	2.96	2758
4000	**689**	**1.66**	**1553**	**757**	**2.01**	**1877**	**818**	**2.37**	**2207**	873	2.73	2543	924	3.09	2886
4100	**703**	**1.77**	**1655**	**770**	**2.13**	**1988**	**830**	**2.49**	**2325**	884	2.86	2668	935	3.24	3018
4200	**716**	**1.89**	**1762**	**782**	**2.25**	**2103**	**842**	**2.62**	**2447**	896	3.00	2798	946	3.38	3155
4250	**723**	**1.95**	**1818**	**789**	**2.32**	**2162**	**848**	**2.69**	**2511**	901	3.07	2865	951	3.46	3226

PAE102 (8½ TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont)

Airflow (Cfm)	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
2200	**802**	**1.57**	**1461**	**852**	**1.83**	**1711**	899	2.11	1971	943	2.40	2241	985	2.70	2521
2250	**806**	**1.60**	**1494**	**856**	**1.87**	**1747**	903	2.15	2009	947	2.45	2282	988	2.75	2564
2300	**811**	**1.64**	**1528**	860	1.91	1784	907	2.20	2048	950	2.49	2323	992	2.80	2607
2400	**819**	**1.71**	**1599**	868	1.99	1859	915	2.28	2129	958	2.58	2410	1000	2.89	2698
2500	**828**	**1.79**	**1672**	877	2.08	1938	923	2.37	2214	966	2.68	2499	1008	3.00	2793
2550	**832**	**1.83**	**1710**	881	2.12	1979	927	2.42	2258	971	2.73	2545	1012	3.05	2842
2600	**836**	**1.88**	**1749**	885	2.17	2021	931	2.47	2302	975	2.78	2592	1016	3.10	2891
2700	**845**	**1.96**	**1830**	894	2.26	2107	940	2.57	2394	983	2.88	2689	1024	3.21	2993
2800	**854**	**2.05**	**1914**	903	2.36	2197	948	2.67	2488	991	2.99	2790	1032	3.32	3099
2900	864	2.15	2002	912	2.46	2290	957	2.77	2587	1000	3.10	2894	1041	3.44	3209
3000	873	2.24	2093	921	2.56	2388	966	2.89	2691	1008	3.22	3003	1049	3.56	3323
3100	882	2.35	2189	930	2.67	2489	975	3.00	2798	1017	3.34	3115	1057	3.69	3441
3200	892	2.45	2288	939	2.78	2595	984	3.12	2909	1026	3.47	3233	—	—	—
3300	901	2.56	2391	948	2.90	2704	993	3.24	3024	1035	3.60	3353	—	—	—
3400	911	2.68	2499	958	3.02	2817	1002	3.37	3144	—	—	—	—	—	—
3500	921	2.80	2610	967	3.15	2935	1011	3.50	3268	—	—	—	—	—	—
3600	931	2.92	2726	977	3.28	3057	1021	3.64	3396	—	—	—	—	—	—
3700	941	3.05	2847	987	3.41	3184	—	—	—	—	—	—	—	—	—
3750	946	3.12	2908	992	3.48	3249	—	—	—	—	—	—	—	—	—
3800	951	3.19	2971	997	3.56	3316	—	—	—	—	—	—	—	—	—
3900	961	3.33	3101	1007	3.70	3451	—	—	—	—	—	—	—	—	—
4000	972	3.47	3235	—	—	—	—	—	—	—	—	—	—	—	—
4100	982	3.62	3375	—	—	—	—	—	—	—	—	—	—	—	—
4200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4250	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 860 to 1080 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 3.70.
3. See general fan performance notes.

PERFORMANCE DATA PAE072−150 (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

PAE120 (10 TONS) — STANDARD MOTOR (BELT DRIVE)*

Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
3000	**484**	**0.58**	**506**	**562**	**0.71**	**625**	**630**	**0.86**	**752**	691	1.01	888	747	1.18	1035
3100	**494**	**0.63**	**550**	**571**	**0.77**	**672**	**638**	**0.91**	**802**	699	1.07	941	754	1.24	1089
3200	**505**	**0.68**	**597**	**581**	**0.82**	**723**	**647**	**0.97**	**855**	706	1.13	996	761	1.31	1146
3300	**516**	**0.74**	**647**	**590**	**0.88**	**776**	**655**	**1.04**	**911**	714	1.20	1055	768	1.38	1207
3400	**526**	**0.80**	**699**	**600**	**0.95**	**832**	**664**	**1.11**	**970**	722	1.27	1116	776	1.45	1271
3500	**537**	**0.86**	**755**	**609**	**1.01**	**891**	**673**	**1.18**	**1032**	731	1.35	1181	784	1.52	1338
3600	**548**	**0.93**	**813**	**619**	**1.09**	**953**	**682**	**1.25**	**1097**	739	1.42	1249	792	1.60	1408
3700	**559**	**1.00**	**875**	**629**	**1.16**	**1018**	691	1.33	1166	747	1.50	1320	799	1.69	1482
3800	**571**	**1.07**	**940**	**639**	**1.24**	**1087**	700	1.41	1237	756	1.59	1395	808	1.78	1559
3900	**582**	**1.15**	**1008**	**649**	**1.32**	**1158**	709	1.50	1313	765	1.68	1473	816	1.87	1640
4000	**593**	**1.23**	**1080**	**659**	**1.41**	**1234**	719	1.59	1391	773	1.77	1554	824	1.96	1724
4100	**604**	**1.32**	**1155**	**669**	**1.50**	**1312**	728	1.68	1473	782	1.87	1639	832	2.06	1811
4200	**616**	**1.41**	**1233**	**680**	**1.59**	**1395**	738	1.78	1559	791	1.97	1728	841	2.17	1903
4300	**627**	**1.50**	**1316**	690	1.69	1481	747	1.88	1648	800	2.07	1821	850	2.28	1999
4400	**639**	**1.60**	**1402**	701	1.79	1570	757	1.98	1741	809	2.18	1917	858	2.39	2098
4500	**650**	**1.70**	**1492**	711	1.90	1664	767	2.10	1839	819	2.30	2017	—	—	—
4600	**662**	**1.81**	**1585**	722	2.01	1762	777	2.21	1940	—	—	—	—	—	—
4700	**674**	**1.92**	**1683**	733	2.12	1863	787	2.33	2045	—	—	—	—	—	—
4800	685	2.03	1785	744	2.24	1969	—	—	—	—	—	—	—	—	—
4900	697	2.15	1891	754	2.37	2078	—	—	—	—	—	—	—	—	—
5000	709	2.28	2001	**—**	**—**	**—**	—	—	—	—	—	—	—	—	—

PAE120 (10 TONS) — STANDARD MOTOR (BELT DRIVE)* (cont)

Airflow (Cfm)	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
3000	798	1.36	1191	846	1.55	1357	892	1.75	1534	935	1.96	1719	**976**	**2.18**	**1915**
3100	805	1.42	1247	853	1.61	1415	898	1.81	1592	**941**	**2.03**	**1779**	**982**	**2.25**	**1974**
3200	812	1.49	1306	859	1.68	1476	904	1.88	1654	**947**	**2.10**	**1842**	**987**	**2.32**	**2038**
3300	819	1.56	1369	866	1.75	1539	911	1.96	1719	**953**	**2.17**	**1908**	**994**	**2.40**	**2106**
3400	826	1.63	1434	873	1.83	1606	917	2.04	1788	**959**	**2.25**	**1978**	—	—	—
3500	833	1.71	1503	880	1.91	1677	924	2.12	1860	**966**	**2.34**	**2051**	—	—	—
3600	841	1.80	1576	887	2.00	1751	931	2.21	1936	—	—	—	—	—	—
3700	848	1.88	1651	894	2.08	1829	**938**	**2.30**	**2015**	—	—	—	—	—	—
3800	856	1.97	1731	901	2.18	1911	**945**	**2.39**	**2098**	—	—	—	—	—	—
3900	864	2.07	1814	909	2.27	1995	—	—	—	—	—	—	—	—	—
4000	872	2.17	1900	916	2.37	2084	—	—	—	—	—	—	—	—	—
4100	880	2.27	1991	—	—	—	—	—	—	—	—	—	—	—	—
4200	888	2.38	2085	—	—	—	—	—	—	—	—	—	—	—	—
4300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 685 to 935 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See general fan performance notes.

PERFORMANCE DATA PAE072−150 (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

PAE120 (10 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)*

Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
3000	**484**	**0.58**	**506**	**562**	**0.71**	**625**	**630**	**0.86**	**752**	**691**	**1.01**	**888**	**747**	**1.18**	**1035**
3100	**494**	**0.63**	**550**	**571**	**0.77**	**672**	**638**	**0.91**	**802**	**699**	**1.07**	**941**	**754**	**1.24**	**1089**
3200	**505**	**0.68**	**597**	**581**	**0.82**	**723**	**647**	**0.97**	**855**	**706**	**1.13**	**996**	**761**	**1.31**	**1146**
3300	**516**	**0.74**	**647**	**590**	**0.88**	**776**	**655**	**1.04**	**911**	**714**	**1.20**	**1055**	**768**	**1.38**	**1207**
3400	**526**	**0.80**	**699**	**600**	**0.95**	**832**	**664**	**1.11**	**970**	**722**	**1.27**	**1116**	**776**	**1.45**	**1271**
3500	**537**	**0.86**	**755**	**609**	**1.01**	**891**	**673**	**1.18**	**1032**	**731**	**1.35**	**1181**	**784**	**1.52**	**1338**
3600	**548**	**0.93**	**813**	**619**	**1.09**	**953**	**682**	**1.25**	**1097**	**739**	**1.42**	**1249**	**792**	**1.60**	**1408**
3700	**559**	**1.00**	**875**	**629**	**1.16**	**1018**	**691**	**1.33**	**1166**	**747**	**1.50**	**1320**	**799**	**1.69**	**1482**
3800	**571**	**1.07**	**940**	**639**	**1.24**	**1087**	**700**	**1.41**	**1237**	**756**	**1.59**	**1395**	**808**	**1.78**	**1559**
3900	**582**	**1.15**	**1008**	**649**	**1.32**	**1158**	**709**	**1.50**	**1313**	**765**	**1.68**	**1473**	**816**	**1.87**	**1640**
4000	**593**	**1.23**	**1080**	**659**	**1.41**	**1234**	**719**	**1.59**	**1391**	**773**	**1.77**	**1554**	**824**	**1.96**	**1724**
4100	**604**	**1.32**	**1155**	**669**	**1.50**	**1312**	**728**	**1.68**	**1473**	**782**	**1.87**	**1639**	832	2.06	1811
4200	**616**	**1.41**	**1233**	**680**	**1.59**	**1395**	**738**	**1.78**	**1559**	**791**	**1.97**	**1728**	841	2.17	1903
4300	**627**	**1.50**	**1316**	**690**	**1.69**	**1481**	**747**	**1.88**	**1648**	**800**	**2.07**	**1821**	850	2.28	1999
4400	**639**	**1.60**	**1402**	**701**	**1.79**	**1570**	**757**	**1.98**	**1741**	**809**	**2.18**	**1917**	858	2.39	2098
4500	**650**	**1.70**	**1492**	**711**	**1.90**	**1664**	**767**	**2.10**	**1839**	**819**	**2.30**	**2017**	867	2.51	2201
4600	**662**	**1.81**	**1585**	**722**	**2.01**	**1762**	**777**	**2.21**	**1940**	**828**	**2.42**	**2122**	876	2.63	2308
4700	**674**	**1.92**	**1683**	**733**	**2.12**	**1863**	**787**	**2.33**	**2045**	838	2.54	2230	885	2.76	2420
4800	**685**	**2.03**	**1785**	**744**	**2.24**	**1969**	**797**	**2.45**	**2154**	847	2.67	2343	894	2.89	2536
4900	**697**	**2.15**	**1891**	**754**	**2.37**	**2078**	**807**	**2.58**	**2268**	857	2.80	2459	903	3.03	2656
5000	**709**	**2.28**	**2001**	**765**	**2.50**	**2193**	**818**	**2.72**	**2385**	866	2.94	2580	912	3.17	2780

PAE120 (10 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont)

Airflow (Cfm)	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
3000	**798**	**1.36**	**1191**	846	1.55	1357	892	1.75	1534	935	1.96	1719	976	2.18	1915
3100	**805**	**1.42**	**1247**	853	1.61	1415	898	1.81	1592	941	2.03	1779	982	2.25	1974
3200	**812**	**1.49**	**1306**	859	1.68	1476	904	1.88	1654	947	2.10	1842	987	2.32	2038
3300	**819**	**1.56**	**1369**	866	1.75	1539	911	1.96	1719	953	2.17	1908	994	2.40	2106
3400	**826**	**1.63**	**1434**	873	1.83	1606	917	2.04	1788	959	2.25	1978	1000	2.48	2176
3500	833	1.71	1503	880	1.91	1677	924	2.12	1860	966	2.34	2051	1006	2.56	2251
3600	841	1.80	1576	887	2.00	1751	931	2.21	1936	972	2.42	2128	1012	2.65	2329
3700	848	1.88	1651	894	2.08	1829	938	2.30	2015	979	2.52	2209	1019	2.75	2411
3800	856	1.97	1731	901	2.18	1911	945	2.39	2098	986	2.61	2294	1025	2.85	2498
3900	864	2.07	1814	909	2.27	1995	952	2.49	2185	993	2.71	2382	1032	2.95	2587
4000	872	2.17	1900	916	2.37	2084	959	2.59	2276	1000	2.82	2475	1039	3.05	2681
4100	880	2.27	1991	924	2.48	2177	966	2.70	2370	1007	2.93	2571	1046	3.17	2779
4200	888	2.38	2085	932	2.59	2273	974	2.81	2469	1014	3.04	2672	1053	3.28	2881
4300	896	2.49	2183	940	2.70	2374	981	2.93	2571	1021	3.16	2776	1060	3.40	2987
4400	904	2.60	2285	948	2.82	2478	989	3.05	2678	1029	3.29	2884	1067	3.53	3098
4500	913	2.72	2391	956	2.95	2586	997	3.18	2788	1036	3.41	2997	1074	3.66	3212
4600	921	2.85	2501	964	3.08	2699	1005	3.31	2904	1044	3.55	3115	1082	3.80	3332
4700	930	2.98	2615	972	3.21	2816	1013	3.44	3023	1052	3.69	3236	1089	3.94	3455
4800	938	3.11	2733	981	3.35	2937	1021	3.58	3146	1060	3.83	3362	1097	4.08	3583
4900	947	3.25	2856	989	3.49	3063	1029	3.73	3275	1067	3.98	3492	1104	4.23	3716
5000	956	3.40	2984	998	3.64	3193	1037	3.88	3407	1075	4.13	3627	1112	4.39	3853

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 830 to 1130 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 5.25.
3. See general fan performance notes.

PERFORMANCE DATA PAE072−150 (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

PAE150 (12½TONS) — STANDARD MOTOR (BELT DRIVE)*

Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
3700	**614**	**1.00**	**929**	**673**	**1.17**	**1095**	**728**	**1.36**	**1267**	**781**	**1.55**	**1445**	**832**	**1.75**	**1629**
3800	**628**	**1.07**	**997**	**685**	**1.25**	**1167**	**739**	**1.44**	**1343**	**791**	**1.64**	**1525**	**841**	**1.84**	**1712**
3900	**641**	**1.15**	**1069**	**697**	**1.33**	**1243**	**750**	**1.53**	**1423**	**801**	**1.72**	**1608**	**850**	**1.93**	**1799**
4000	**655**	**1.23**	**1144**	**709**	**1.42**	**1322**	**761**	**1.61**	**1506**	**812**	**1.82**	**1695**	860	2.03	1890
4100	**668**	**1.31**	**1223**	**722**	**1.51**	**1405**	**773**	**1.71**	**1593**	**822**	**1.92**	**1786**	870	2.13	1984
4200	**682**	**1.40**	**1305**	**734**	**1.60**	**1492**	**784**	**1.80**	**1683**	**833**	**2.02**	**1880**	880	2.23	2082
4300	**696**	**1.49**	**1392**	**747**	**1.70**	**1582**	**796**	**1.91**	**1777**	**844**	**2.12**	**1979**	890	2.34	2184
4400	**710**	**1.59**	**1482**	**760**	**1.80**	**1677**	**808**	**2.01**	**1876**	**855**	**2.23**	**2081**	900	2.46	2290
4500	**723**	**1.69**	**1577**	**773**	**1.90**	**1775**	**820**	**2.12**	**1978**	866	2.35	2187	910	2.57	2400
4600	**737**	**1.80**	**1675**	**785**	**2.01**	**1877**	**832**	**2.24**	**2085**	877	2.46	2297	921	2.70	2514
4700	**751**	**1.91**	**1778**	**798**	**2.13**	**1984**	**844**	**2.35**	**2195**	889	2.59	2412	932	2.82	2633
4800	**765**	**2.02**	**1885**	**812**	**2.25**	**2095**	**856**	**2.48**	**2310**	900	2.71	2531	942	2.95	2756
4900	**779**	**2.14**	**1996**	**825**	**2.37**	**2210**	869	2.61	2430	912	2.85	2654	953	3.09	2883
5000	**793**	**2.26**	**2112**	**838**	**2.50**	**2330**	881	2.74	2554	923	2.98	2782	965	3.23	3014
5100	**807**	**2.39**	**2232**	**851**	**2.63**	**2455**	894	2.88	2682	935	3.13	2914	976	3.38	3150
5200	**821**	**2.53**	**2357**	864	2.77	2584	906	3.02	2815	947	3.27	3050	987	3.53	3292
5300	**835**	**2.67**	**2487**	878	2.91	2718	919	3.17	2953	959	3.42	3193	999	3.69	3437
5400	**850**	**2.81**	**2622**	891	3.06	2856	932	3.32	3096	971	3.58	3339	—	—	—
5500	864	2.96	2762	905	3.22	3000	945	3.48	3242	—	—	—	—	—	—
5600	878	3.12	2906	918	3.38	3148	958	3.64	3396	—	—	—	—	—	—
5700	892	3.28	3055	932	3.54	3302	—	—	—	—	—	—	—	—	—
5800	907	3.44	3211	—	—	—	—	—	—	—	—	—	—	—	—
5900	921	3.61	3370	—	—	—	—	—	—	—	—	—	—	—	—
6000	**—**	**—**	**—**	—	—	—	—	—	—	—	—	—	—	—	—
6100	**—**	**—**	**—**	—	—	—	—	—	—	—	—	—	—	—	—
6200	**—**	**—**	**—**	—	—	—	—	—	—	—	—	—	—	—	—
6300	**—**	**—**	**—**	—	—	—	—	—	—	—	—	—	—	—	—

PAE150 (12½TONS) — STANDARD MOTOR (BELT DRIVE)* (cont)

Airflow (Cfm)	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
3700	881	1.95	1816	928	2.16	2010	974	2.37	2207	1019	2.58	2409	1062	2.80	2615
3800	889	2.04	1904	936	2.25	2100	981	2.47	2302	1025	2.69	2507	1068	2.91	2716
3900	898	2.14	1995	944	2.35	2195	988	2.57	2399	1032	2.80	2608	1074	3.03	2821
4000	907	2.24	2089	952	2.46	2293	996	2.68	2501	1038	2.91	2713	1080	3.14	2930
4100	916	2.35	2187	960	2.57	2395	1004	2.80	2607	1046	3.03	2822	**1087**	**3.26**	**3042**
4200	925	2.45	2289	969	2.68	2500	1011	2.91	2716	1053	3.15	2935	**1094**	**3.39**	**3159**
4300	934	2.57	2395	978	2.80	2610	1020	3.03	2828	1061	3.27	3052	**1101**	**3.52**	**3279**
4400	944	2.69	2504	986	2.92	2723	1028	3.16	2946	1068	3.40	3173	**1108**	**3.65**	**3403**
4500	954	2.81	2618	996	3.05	2840	1037	3.29	3067	1076	3.54	3297	—	—	—
4600	963	2.93	2736	1005	3.18	2962	1045	3.42	3192	**1085**	**3.67**	**3426**	—	—	—
4700	974	3.07	2858	1014	3.31	3088	1054	3.56	3322	—	—	—	—	—	—
4800	984	3.20	2985	1024	3.45	3219	—	—	—	—	—	—	—	—	—
4900	994	3.34	3116	1034	3.60	3353	—	—	—	—	—	—	—	—	—
5000	1005	3.49	3251	—	—	—	—	—	—	—	—	—	—	—	—
5100	1015	3.64	3391	—	—	—	—	—	—	—	—	—	—	—	—
5200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 860 to 1080 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 3.70.
3. See general fan performance notes.

PERFORMANCE DATA PAE072−150 (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

PAE150 (12½TONS) — ALTERNATE/HIGH STATIC MOTOR (BELT DRIVE)*															
Airflow (Cfm)	External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
3700	**614**	**1.00**	**929**	**673**	**1.17**	**1095**	**728**	**1.36**	**1267**	**781**	**1.55**	**1445**	832	1.75	1629
3800	**628**	**1.07**	**997**	**685**	**1.25**	**1167**	**739**	**1.44**	**1343**	**791**	**1.64**	**1525**	841	1.84	1712
3900	**641**	**1.15**	**1069**	**697**	**1.33**	**1243**	**750**	**1.53**	**1423**	**801**	**1.72**	**1608**	850	1.93	1799
4000	**655**	**1.23**	**1144**	**709**	**1.42**	**1322**	**761**	**1.61**	**1506**	**812**	**1.82**	**1695**	860	2.03	1890
4100	**668**	**1.31**	**1223**	**722**	**1.51**	**1405**	**773**	**1.71**	**1593**	**822**	**1.92**	**1786**	870	2.13	1984
4200	**682**	**1.40**	**1305**	**734**	**1.60**	**1492**	**784**	**1.80**	**1683**	833	2.02	1880	880	2.23	2082
4300	**696**	**1.49**	**1392**	**747**	**1.70**	**1582**	**796**	**1.91**	**1777**	844	2.12	1979	890	2.34	2184
4400	**710**	**1.59**	**1482**	**760**	**1.80**	**1677**	**808**	**2.01**	**1876**	855	2.23	2081	900	2.46	2290
4500	**723**	**1.69**	**1577**	**773**	**1.90**	**1775**	**820**	**2.12**	**1978**	866	2.35	2187	910	2.57	2400
4600	**737**	**1.80**	**1675**	**785**	**2.01**	**1877**	832	2.24	2085	877	2.46	2297	921	2.70	2514
4700	**751**	**1.91**	**1778**	**798**	**2.13**	**1984**	844	2.35	2195	889	2.59	2412	932	2.82	2633
4800	**765**	**2.02**	**1885**	**812**	**2.25**	**2095**	856	2.48	2310	900	2.71	2531	942	2.95	2756
4900	**779**	**2.14**	**1996**	**825**	**2.37**	**2210**	869	2.61	2430	912	2.85	2654	953	3.09	2883
5000	**793**	**2.26**	**2112**	838	2.50	2330	881	2.74	2554	923	2.98	2782	965	3.23	3014
5100	**807**	**2.39**	**2232**	851	2.63	2455	894	2.88	2682	935	3.13	2914	976	3.38	3150
5200	**821**	**2.53**	**2357**	864	2.77	2584	906	3.02	2815	947	3.27	3050	987	3.53	3292
5300	835	2.67	2487	878	2.91	2718	919	3.17	2953	959	3.42	3193	999	3.69	3437
5400	850	2.81	2622	891	3.06	2856	932	3.32	3096	971	3.58	3339	1010	3.85	3588
5500	864	2.96	2762	905	3.22	3000	945	3.48	3242	984	3.74	3491	1022	4.01	3743
5600	878	3.12	2906	918	3.38	3148	958	3.64	3396	996	3.91	3648	1034	4.19	3903
5700	892	3.28	3055	932	3.54	3302	971	3.81	3554	1008	4.09	3810	1045	4.36	4069
5800	907	3.44	3211	945	3.71	3461	984	3.99	3716	1021	4.26	3976	1057	4.55	4240
5900	921	3.61	3370	959	3.89	3626	997	4.17	3885	1033	4.45	4149	1069	4.74	4416
6000	935	3.79	3536	973	4.07	3795	1010	4.35	4059	1046	4.64	4326	1082	4.93	4598
6100	949	3.98	3707	987	4.26	3970	1023	4.54	4238	1059	4.84	4510	1094	5.13	4785
6200	964	4.16	3883	1000	4.45	4151	1036	4.74	4422	1071	5.04	4698	—	—	—
6300	978	4.36	4066	1014	4.65	4337	1050	4.95	4613	1084	5.25	4892	—	—	—

PAE150 (12½TONS) — ALTERNATE/HIGH STATIC MOTOR (BELT DRIVE)* (cont)															
Airflow (Cfm)	External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
3700	881	1.95	1816	928	2.16	2010	974	2.37	2207	1019	2.58	2409	1062	2.80	2615
3800	889	2.04	1904	936	2.25	2100	981	2.47	2302	1025	2.69	2507	1068	2.91	2716
3900	898	2.14	1995	944	2.35	2195	988	2.57	2399	1032	2.80	2608	1074	3.03	2821
4000	907	2.24	2089	952	2.46	2293	996	2.68	2501	1038	2.91	2713	1080	3.14	2930
4100	916	2.35	2187	960	2.57	2395	1004	2.80	2607	1046	3.03	2822	1087	3.26	3042
4200	925	2.45	2289	969	2.68	2500	1011	2.91	2716	1053	3.15	2935	1094	3.39	3159
4300	934	2.57	2395	978	2.80	2610	1020	3.03	2828	1061	3.27	3052	1101	3.52	3279
4400	944	2.69	2504	986	2.92	2723	1028	3.16	2946	1068	3.40	3173	1108	3.65	3403
4500	954	2.81	2618	996	3.05	2840	1037	3.29	3067	1076	3.54	3297	1115	3.79	3531
4600	963	2.93	2736	1005	3.18	2962	1045	3.42	3192	1085	3.67	3426	1123	3.93	3664
4700	974	3.07	2858	1014	3.31	3088	1054	3.56	3322	1093	3.82	3560	**1131**	**4.08**	**3801**
4800	984	3.20	2985	1024	3.45	3219	1063	3.71	3456	1102	3.96	3697	**1139**	**4.23**	**3943**
4900	994	3.34	3116	1034	3.60	3353	1073	3.85	3594	1111	4.12	3839	**1148**	**4.38**	**4088**
5000	1005	3.49	3251	1044	3.74	3492	1082	4.01	3737	1119	4.27	3986	**1156**	**4.55**	**4238**
5100	1015	3.64	3391	1054	3.90	3636	1092	4.17	3885	1129	4.44	4137	**1165**	**4.71**	**4393**
5200	1026	3.79	3536	1064	4.06	3784	1101	4.33	4037	**1138**	**4.60**	**4293**	**1174**	**4.88**	**4553**
5300	1037	3.95	3685	1075	4.22	3938	1111	4.50	4194	**1147**	**4.78**	**4454**	**1183**	**5.06**	**4718**
5400	1048	4.12	3840	1085	4.39	4096	1121	4.67	4356	**1157**	**4.95**	**4619**	**1192**	**5.24**	**4886**
5500	1059	4.29	3999	1096	4.57	4259	**1132**	**4.85**	**4523**	**1167**	**5.14**	**4790**	—	—	—
5600	1070	4.46	4163	1106	4.75	4427	**1142**	**5.03**	**4695**	—	—	—	—	—	—
5700	1082	4.65	4333	1117	4.93	4601	**1152**	**5.22**	**4872**	—	—	—	—	—	—
5800	1093	4.83	4508	1128	5.13	4779	—	—	—	—	—	—	—	—	—
5900	1105	5.03	4688	—	—	—	—	—	—	—	—	—	—	—	—
6000	1116	5.23	4873	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

Watts — Input Watts to Motor

*Motor drive range: 830 to 1130 rpm. All other rpms require field-supplied drive.

NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 5.25.
3. See below for general fan performance notes.

GENERAL FAN PERFORMANCE NOTES

NOTES:

1. Values include losses for filters, unit casing, and wet coils. See page 58 for accessory/factory-installed option static pressure information.
2. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using fan motors up to the wattage ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Performance tables on additional information.
3. Use of a field-supplied motor may affect wire sizing.
4. Interpolation is permissible. Do not extrapolate.

PERFORMANCE DATA PAE072−150 (cont)

ACCESSORY/ELECTRIC HEAT STATIC PRESSURE (in. wg) — PAE072

COMPONENT	CFM									
	900	1200	1400	1600	1800	2000	2200	2400	2600	3000
1 Heater Module	0.05	0.07	0.09	0.09	0.10	0.11	0.11	0.12	0.13	0.15
2 Heater Modules	0.15	0.16	0.16	0.16	0.17	0.17	0.17	0.18	0.18	0.19

LEGEND
FIOP — Factory-Installed Option

*The static pressure must be added to external static pressure. The sum and the evaporator entering-air cfm should then be used in conjunction with the Fan Performance tables to determine blower rpm and watts.

ACCESSORY/ELECTRIC HEAT STATIC PRESSURE* (in. wg) — PAE090−150

COMPONENT	CFM									
	2250	2500	3000	3500	4000	4500	5000	5500	6000	6250
1 Heater Module	0.02	0.03	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.17
2 Heater Modules	0.03	0.05	0.07	0.09	0.12	0.14	0.16	0.19	0.21	0.20

LEGEND
FIOP — Factory-Installed Option

*The static pressure must be added to external static pressure. The sum and the evaporator entering-air cfm should then be used in conjunction with the Fan Performance tables to determine blower rpm and watts.

ACCESSORY/FIOP ECONOMIZER STATIC PRESSURE* (in. wg) — PAE072

COMPONENT	CFM							
	1250	1500	1750	2000	2250	2500	2750	3000
Vertical Economizer	0.045	0.065	0.08	0.12	0.145	0.175	0.22	0.255
Horizontal Economizer	—	—	0.1	0.125	0.15	0.18	0.225	0.275

LEGEND
FIOP — Factory-Installed Option
NOTE: Performance is for the DN Series Economizer

*The static pressure must be added to external static pressure. The sum and the evaporator entering-air cfm should be used in conjunction with the Fan Performance tables to determine indoor blower rpm and watts.

ACCESSORY/FIOP ECONOMIZER STATIC PRESSURE* (in. wg) — PAE090−150

COMPONENT	CFM													
	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	6250
Vertical Economizer	0.06	0.075	0.09	0.115	0.13	0.15	0.17	0.195	0.22	0.25	0.285	0.325	0.36	—
Horizontal Economizer	—	0.1	0.125	0.15	0.18	0.21	0.25	0.275	0.3	0.34	0.388	—	—	—

LEGEND
FIOP — Factory-Installed Option
NOTE: Performance is for the DN Series Economizer

*The static pressure must be added to external static pressure. The sum and the evaporator entering-air cfm should be used in conjunction with the Fan Performance tables to determine indoor blower rpm and watts.

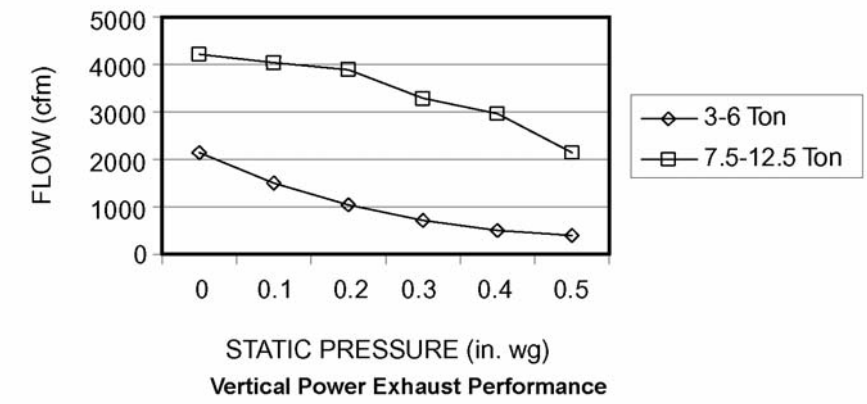
FAN RPM AT MOTOR PULLEY SETTINGS*

UNIT PAE	MOTOR PULLEY TURNS OPEN												
	0	½	1	1½	2	2½	3	3½	4	4½	5	5½	6
072††	1460	1420	1380	1345	1305	1265	1225	1185	1150	1110	1070	—	—
072**	1685	1589	1557	1525	1493	1460	1428	1396	1364	1332	1300	—	—
090††	840	815	790	765	740	715	690	665	635	615	590	—	—
090**	1080	1025	1007	988	970	952	933	915	897	878	860	—	—
102††	935	910	885	860	835	810	785	760	735	710	685	—	—
102**	1080	1025	1007	988	970	952	933	915	897	878	860	—	—
120††	935	910	885	860	835	810	785	760	735	710	685	—	—
120**	1130	1112	1087	1062	1037	1012	987	962	937	912	887	862	830
150††	1080	1060	1035	1015	990	970	950	925	905	880	860	—	—
150†	1130	1112	1087	1062	1037	1012	987	962	937	912	887	862	830

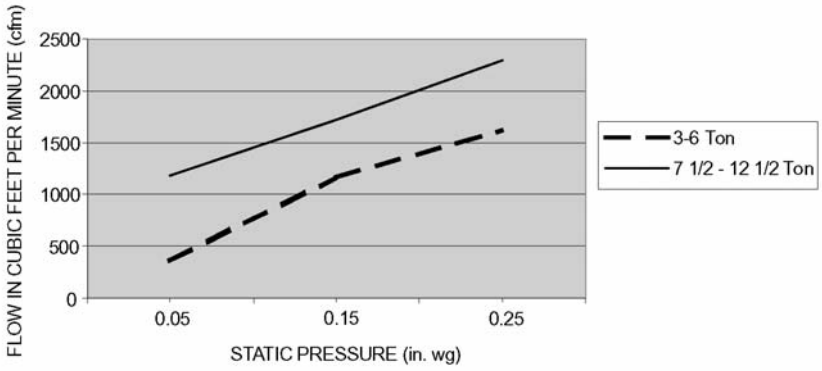
*Approximate fan rpm shown.
†Indicates alternate/high-static motor and drive package.
**Indicates high-static motor and drive package.
††Indicates standard motor and drive package.

PERFORMANCE DATA PAE072−150 (cont)

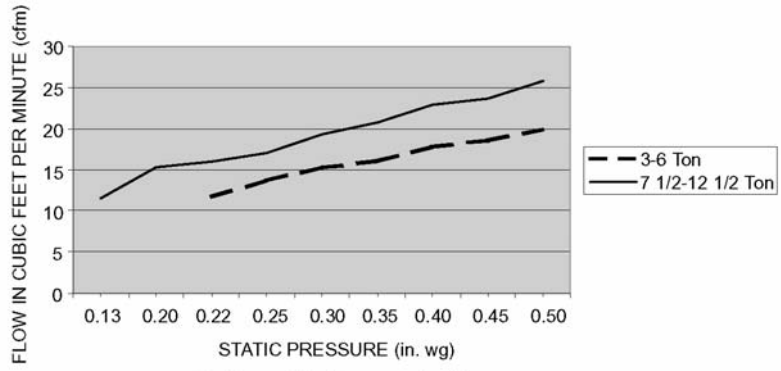
Vertical Economizer Performance Data (PAE072−150)



Vertical Power Exhaust Performance



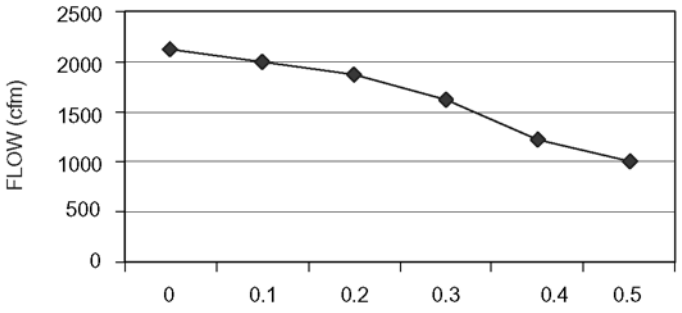
Barometric Relief Flow Capacity



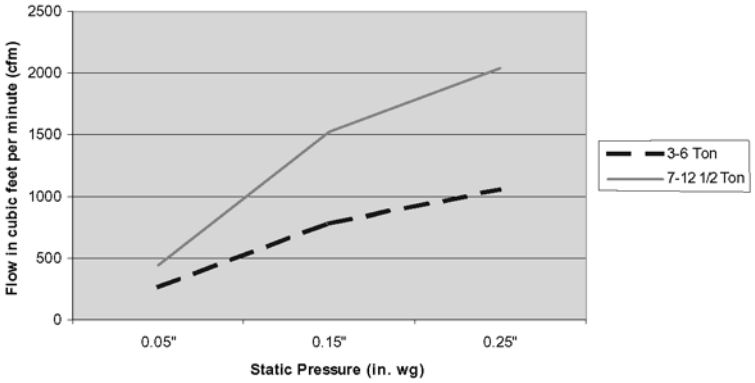
Outdoor Air Damper Leakage

NOTE: Performance is for the DN Series Economizer

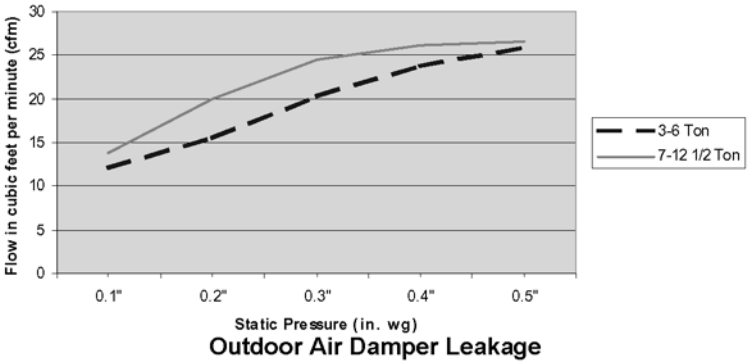
PERFORMANCE DATA PAE072−150 (cont)



Horizontal Power Exhaust Performance



Barometric Relief Capacity



Outdoor Air Damper Leakage

NOTE: Performance is for the DN Series Economizer

Horizontal Economizer Performance Data (PAE072−150)

OUTDOOR SOUND DATA (Total Unit)

UNIT PAE	SOUND RATING (dB)	A-WEIGHTED (dB)	SOUND POWER Octave Bands							
			63	125	250	500	1000	2000	4000	8000
072	80	80.0	59.1	68.9	68.7	71.9	74.0	68.9	65.7	59.0
090,102	82	82.0	62.2	69.3	71.5	74.7	76.2	72.9	68.7	61.5
120	84	84.0	64.6	71.7	73.3	76.9	77.6	73.7	70.6	63.7
150	86	86.0	63.7	69.9	72.5	78.2	81.1	77.3	73.3	66.8

LEGEND
dB — Sound Levels (decibels)

EVAPORATOR-FAN MOTOR EFFICIENCY

UNIT PAE	MOTOR EFFICIENCY (%)
072	84
090−120	80
150	87

*Single-phase/three-phase.
NOTE: All indoor fan motors 5 Hp and larger meet the minimum efficiency requirements as established by the Energy Policy Act of 1992 (EPACT) effective October 24, 1997.

PERFORMANCE DATA PAE072−150 (cont)

EVAPORATOR-FAN MOTOR PERFORMANCE

UNIT PAE	EVAPORATOR-FAN MOTOR	UNIT VOLTAGE	MAXIMUM ACCEPTABLE CONTINUOUS BHP*	MAXIMUM ACCEPTABLE OPERATING WATTS	MAXIMUM AMP DRAW
072	Standard	208/230	2.40	2120	6.7
		460			3.0
		575			3.0
	High Static	208/230	2.90	2562	8.6
		460			3.9
		575			3.9
090	Standard, Alternate	208/230	2.40	2120	6.7
		460			3.0
		575			3.0
	High Static	208/230	3.70	3313	12.2
		460			5.5
		575			5.5
102	Standard	208/230	2.40	2120	6.7
		460			3.0
		575			3.0
	High Static	208/230	3.70	3313	12.2
		460			5.5
		575			5.5
120	Standard	208/230	2.40	2120	6.7
		460			3.0
		575			3.0
	High Static	208/230	5.25	4400	17.3
		460			8.5
		575			8.5
150	Standard	208/230	3.70	3313	12.2
		460			5.5
		575			5.5
	Alternate/High Static	208/230	5.25	4400	17.3
		460			8.5
		575			8.5

LEGEND

Bhp — Brake Horsepower

*Extensive motor and electrical testing on these units ensures that the full horsepower range of the motors can be utilized with confidence. Using fan motors up to the horsepower ratings shown in this table will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected.

†Three-phase.

NOTES:

1. All indoor-fan motors 5 hp and larger meet the minimum efficiency requirements as established by the Energy Policy Act of 1992 (EPACT) effective October 24, 1997.

ELECTRICAL DATA — PAE072−150

ELECTRICAL DATA — PAE072−150

Unit Size	Nominal V−PH−Hz	IFM Type	Voltage Range		Compressor (each)			OFM (each)		IFM FLA	Electric Heat		Power Supply		Disconnect Size†	
			Min	Max	Qty	RLA	LRA	Qty	FLA		Actual kW	FLA	MCA	MOCP*	FLA	LRA
072	208/230−3−60	STD	187	254	1	20.6	146	1	1.4	5.2	—/—	—/—	32.4/32.4	40/40	31/31	180
											4.9/5.8	13.6/15.6	32.4/32.4	40/40	31/31	180
											7.9/9.6	21.9/25.3	33.9/38.1	35/40	31/35	180
											12.0/14.7	33.4/38.4	48.2/54.6	50/60	44/50	180
											15.8/19.3	43.8/50.5	61.2/69.6	70/70	56/64	180
											19.9/24.3	55.2/63.8	75.6/86.2	80/90	70/79	180
		HIGH								7.5	—/—	—/—	34.7/34.7	40/40	34/34	205
											4.9/5.8	13.6/15.6	34.7/34.7	40/40	34/34	205
											7.9/9.6	21.9/25.3	36.7/40.9	40/45	34/38	205
											12.0/14.7	33.4/38.4	51.1/57.4	60/60	47/53	205
											15.8/19.3	43.8/50.5	64.1/72.5	70/80	59/67	205
											19.9/24.3	55.2/63.8	78.4/89.1	80/90	72/82	205
	460−3−60	STD	414	508	1	9.5	73	1	0.9	2.6	—	—	15.4	20	15	90
											5.5	7.2	15.4	20	15	90
											10.6	13.8	20.5	25	19	90
											12.9	16.8	24.3	25	22	90
											21.1	27.7	37.8	40	35	90
											23.4	30.7	41.6	45	38	90
		HIGH								3.4	—	—	16.2	20	16	103
											5.5	7.2	16.2	20	16	103
											10.6	13.8	21.5	25	20	103
											12.9	16.8	25.3	30	23	103
											21.1	27.7	38.8	40	36	103
											23.4	30.7	42.6	45	39	103
	575−3−60	STD	518	632	1	7.6	62	1	0.6	2.0	–	–	10.5	15	11	72
		HIGH								2.8	–	–	10.8	15	12	79
090	208/230−3−60	STD	187	254	2	14	91	2	1.4	5.8	—/—	—/—	40.1/40.1	45/45	42/42	229
											7.8/9.6	21.7/25.0	40.1/40.1	45/45	42/42	229
											12.0/14.7	33.4/38.5	48.9/55.4	50/60	45/51	229
											18.4/22.8	51.7/59.7	71.9/81.8	80/90	66/75	229
											24.0/29.4	66.7/77.0	90.6/103.5	100/110	83/95	229
											31.8/39.0	88.4/102.0	117.7/134.8	125/150	108/124	229
		HIGH								10.6	—/—	—/—	44.9/44.9	50/50	48/48	273
											7.8/9.6	21.7/25.0	44.9/44.9	50/50	48/48	273
											12.0/14.7	33.4/38.5	54.9/61.4	60/70	51/56	273
											18.4/22.8	51.7/59.7	77.9/87.8	80/90	72/81	273
											24.0/29.4	66.7/77.0	96.6/109.5	100/110	89/101	273
											31.8/39.0	88.4/102.0	123.7/140.8	125/150	114/129	273
	460−3−60	STD	414	508	2	6.4	42	2	0.7	2.6	—	—	18.4	20	19	108
											12.8	16.7	24.1	25	22	108
											15.2	19.8	28.1	30	26	108
											25.5	33.4	45.0	50	41	108
											30.3	39.7	52.9	60	49	108
											38.3	50.2	65.9	70	61	108
		HIGH								4.8	—	—	20.6	25	22	130
											12.8	16.7	26.9	30	25	130
											15.2	19.8	30.8	35	28	130
											25.5	33.4	47.8	50	44	130
											30.3	39.7	55.6	60	51	130
											38.3	50.2	68.7	70	63	110
	575−3−60	STD	518	632	2	5.2	39	2	0.6	2.0	–	–	14.9	20	16	92
											17.0	17.1	23.9	25	22	92
											34.0	34.1	45.3	50	42	92
		HIGH								2.8	–	–	16.7	20	17	101
											17.0	17.1	27.0	30	23	101
											34.0	34.1	46.2	50	44	101

ELECTRICAL DATA — PAE072−150

ELECTRICAL DATA — PAE072−150 (cont)

Unit Size	Nominal V−PH−Hz	IFM Type	Voltage Range		Compressor (each)			OFM (each)		IFM FLA	Electric Heat		Power Supply		Disconnect Size†	
			Min	Max	Qty	RLA	LRA	Qty	FLA		Actual kW	FLA	MCA	MOCP*	FLA	LRA
102	208/230−3−60	STD	187	254	2	17.3	120	2	1.4	5.8	—/—	—/—	44.3/44.3	50/50	46/46	272
											7.8/9.6	21.7/25.0	44.3/44.3	50/50	46/46	272
											12.0/14.7	33.4/38.5	48.9/55.4	50/60	46/51	272
											18.4/22.8	51.7/59.7	71.9/81.8	80/90	66/75	272
											24.0/29.4	66.7/77.0	90.6/103.5	100/110	83/95	272
											31.8/39.0	88.4/102.0	117.7/134.8	125/150	108/124	272
		HIGH								10.6	—/—	—/—	49.1/49.1	60/60	52/52	316
											7.8/9.6	21.7/25.0	49.1/49.1	60/60	52/52	316
											12.0/14.7	33.4/38.5	54.9/61.4	60/70	52/56	316
											18.4/22.8	51.7/59.7	77.9/87.8	80/90	72/81	316
											24.0/29.4	66.7/77.0	96.6/109.5	100/110	89/101	316
											31.8/39.0	88.4/102.0	123.7/140.8	125/150	114/129	316
	460−3−60	STD	414	508	2	7.9	70	2	0.7	2.6	—	—	21.0	25	22	149
											12.8	16.7	24.1	25	22	149
											15.2	19.8	28.1	30	26	149
											25.5	33.4	45.0	50	41	149
											30.3	39.7	52.9	60	49	149
											38.3	50.2	65.9	70	61	149
		HIGH								4.8	—	—	23.2	30	24	171
											12.8	16.7	26.9	30	25	171
											15.2	19.8	30.8	35	28	171
											25.5	33.4	47.8	50	44	171
											30.3	39.7	55.6	60	51	171
	575−3−60	STD	518	632	2	5.5	50	2	0.6	2.0	–	–	16.7	20	17	104
											17.0	17.1	23.9	25	22	104
											34.0	34.1	45.3	50	42	104
		HIGH								2.8	–	–	17.3	20	18	113
											17.0	17.1	24.8	25	23	113
											34.0	34.1	48.3	50	42	113
120	208/230−3−60	STD	187	254	2	16	125	2	1.4	5.8	—/—	—/—	44.6/44.6	50/50	47/47	297
											7.8/9.6	21.7/25.0	44.6/44.6	50/50	47/47	297
											12.0/14.7	33.4/38.5	48.9/55.4	50/60	47/51	297
											24.0/29.4	66.7/77.0	90.6/103.5	100/110	83/95	297
											31.8/38.9	88.4/102.0	117.7/134.8	125/150	108/124	297
											37.6/46.0	104.2/120.3	137.5/157.6	150/175	127/145	297
		HIGH								15.0	—/—	—/—	53.8/53.8	60/60	57/57	364
											7.8/9.6	21.7/25.0	53.8/53.8	60/60	57/57	364
											12.0/14.7	33.4/38.5	60.4/66.9	70/80	57/62	364
											24.0/29.4	66.7/77.0	102.1/115.0	110/125	94/106	364
											31.8/38.9	88.4/102.0	129.2/146.3	150/150	119/135	364
											37.6/46.0	104.2/120.3	149.0/169.1	150/175	137/156	364
	460−3−60	STD	414	508	2	8	62.5	2	0.7	2.6	—	—	22.0	25	23	149
											15.2	19.8	28.1	30	26	149
											25.5	33.4	45.0	50	41	149
											30.3	39.7	52.9	60	49	149
											38.3	50.2	65.9	70	61	149
											46.0	60.1	78.4	80	72	149
		HIGH								7.4	—	—	26.8	30	29	182
											15.2	19.8	34.1	40	31	182
											25.5	33.4	51.0	60	47	182
											30.3	39.7	58.9	60	54	182
											38.3	50.2	71.9	80	66	182
											46.0	60.1	84.4	90	78	182
	575−3−60	STD	518	632	2	6.3	50	2	0.6	2.0	–	–	17.4	20	18	114
											17.0	17.1	23.9	25	22	114
											34.0	34.1	45.3	50	42	114
											51.0	51.2	66.6	70	61	114
		HIGH								3.3	–	–	18.7	25	20	133
											17.0	17.1	25.5	30	23	133
											34.0	34.1	46.8	50	43	133
											51.0	51.2	68.1	70	63	133

ELECTRICAL DATA — PAE072−150

ELECTRICAL DATA — PAE072−150 (cont)

Unit Size	Nominal V−PH−Hz	IFM Type	Voltage Range		Compressor (each)			OFM (each)		IFM FLA	Electric Heat		Power Supply		Disconnect Size†	
			Min	Max	Qty	RLA	LRA	Qty	FLA		Actual kW	FLA	MCA	MOCP*	FLA	LRA
150	208/230−3−60	STD	187	254	2	19	156	2	1.4	10.6	—/—	—/—	56.2/56.2	70/70	59/59	359
											7.8/9.6	21.7/25.0	56.2/56.2	70/70	59/59	359
											12.0/14.7	33.4/38.5	56.2/61.4	70/70	59/59	359
											24.0/29.4	66.7/77.0	96.6/109.5	100/110	89/101	359
											31.8/38.9	88.4/102.0	123.7/140.8	125/150	114/129	359
											37.6/46.0	104.2/120.3	143.5/163.6	150/175	132/151	359
		ALT								15.0	—/—	—/—	60.6/60.6	70/70	64/64	378
											7.8/9.6	21.7/25.0	60.6/60.6	70/70	64/64	378
											12.0/14.7	33.4/38.5	60.6/66.9	70/80	64/64	378
											24.0/29.4	66.7/77.0	102.1/115.0	110/125	94/106	378
											31.8/38.9	88.4/102.0	129.2/146.3	150/150	119/135	378
											37.6/46.0	104.2/120.3	149.0/169.1	150/175	137/156	378
		HIGH	high static motor option not offered for this tonnage													
	460−3−60	STD	414	508	2	9	75	2	0.7	4.8	—	—	26.5	30	28	174
											15.2	19.8	30.8	35	28	174
											25.5	33.4	47.8	50	44	174
											30.3	39.7	55.6	60	51	174
											38.3	50.2	68.7	70	63	174
											45.9	60.1	81.2	90	75	174
		ALT								7.4	—	—	29.1	35	31	213
											15.2	19.8	34.1	40	31	213
											25.5	33.4	51.0	60	47	213
											30.3	39.7	58.9	60	54	213
											38.3	50.2	71.9	80	66	213
											45.9	60.1	84.4	90	78	213
		HIGH	high static motor option not offered for this tonnage													
	575−3−60	STD	518	632	2	7.4	54	2	0.6	2.8	–	–	21.6	25	22	141
											17.0	17.1	26.1	30	23	141
											34.0	34.1	46.8	50	43	141
											51.0	51.2	68.1	70	63	141
		HIGH								3.3	–	–	23.7	30	25	147
											17.0	17.1	28.7	35	26	147
											34.0	34.1	49.7	50	46	147
											51.0	51.2	71.0	80	65	147

LEGEND

FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
IFM — Indoor (Evaporator) Fan Motor
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps
MOCP — Maximum Overcurrent Protection
NEC — National Electrical Code
OFM — Outdoor (Condenser) Fan Motor
RLA — Rated Load Amps

*Used to determine minimum disconnect per NEC.

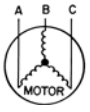
†Fuse or HACR circuit breaker.

NOTES:

1. In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. Canadian units may be fuse or circuit breaker.
2. **Unbalanced 3-Phase Supply Voltage**. *Never operate a motor where a phase imbalance in supply voltage is greater than 2%.* Use the following formula to determine the percent of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

Example: Supply voltage is 460−3−60.



AB = 452 v
BC = 464 v
AC = 455 v

$$\text{Average Voltage} = \frac{452 + 464 + 455}{3} = \frac{1371}{3} = 457$$

Determine maximum deviation from average voltage.

(AB) 457 − 452 = 5 v
(BC) 464 − 457 = 7 v
(AC) 457 − 455 = 2 v

Maximum deviation is 7 v.

Determine percent of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{7}{457}$$

= 1.53%

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

IMPORTANT: If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

3. For units with power exhaust: If a single power source is to be used, size wire to include power exhaust MCA and MOCP. Check MCA and MOCP when power exhaust is powered through the unit (must be in accordance with NEC and/or local codes). Determine the new MCA including the power exhaust using the following formula:

MCA New = MCA unit only + MCA of Power Exhaust

If the new MCA does not exceed the published MOCP, then MOCP would not change. The MOCP in this example is 35 amps, the MCA New is below 35, therefore the MOCP is acceptable. If "MCA New" is larger than the published MOCP, raise the MOCP to the next larger size. For separate power, the MOCP for the power exhaust will be 15 amps per NEC.

POWER EXHAUST ELECTRICAL DATA — PAE072−150

POWER EXHAUST PART NO.	APPLICATION USAGE	MCA (230v)	MCA (460v)	MOCP (separate power source only)
DNPWREXH021A01	072	N/A	0.68	15
DNPWREXH022A01	090*	3.4	N/A	15
DNPWREXH023A01	090−150	N/A	1.4	15
DNPWREXH028A01	ALL*	1.7	N/A	15
DNPWREXH029A01	ALL	N/A	0.7	15

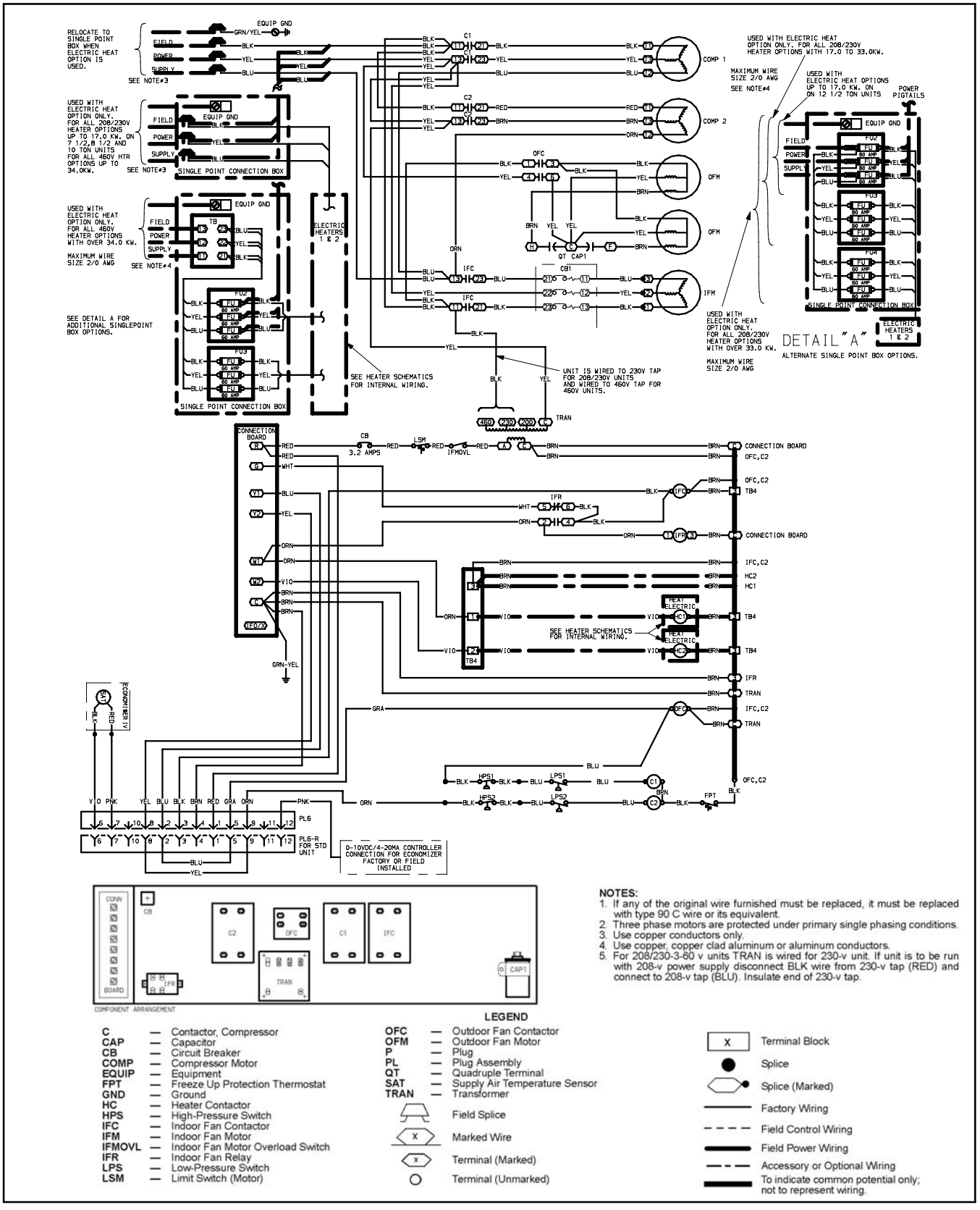
Model	Volt/Phase/Hertz	Application Useage	Unit			
			LRA	FLA	MCA	Fuse Size
AXB035PEH	208/230/1/60	072	10.2	4.3	5.4	10
AXB035PEL	460/1/60	072	4.1	1.7	2.2	4
AXB035PES	575/1/60	072	4.1	1.7	2.2	4
AXB145PEH	208-230/1/60	090-102	10.2	4.3	5.4	8
AXB145PEL	460/1/60	090-102	4.1	1.7	2.2	5
AXB145PES	575/1/60	090-102	4.1	1.7	2.2	5
AXB245PEH	208-230/1/60	120-150	24.9	5.0	6.3	10
AXB245PEL	460/1/60	120-150	N/A	2.2	2.8	5
AXB245PES	575/1/60	120-150	N/A	1.5	1.9	4

*Single or three phase.

NOTE: AXB power exhaust is wired single phase, drop third leg when installing.

TYPICAL WIRING SCHEMATICS — PAE

PAE090 Shown



NOTES:
1. If any of the original wire furnished must be replaced, it must be replaced with type 90 C wire or its equivalent.
2. Three phase motors are protected under primary single phasing conditions.
3. Use copper conductors only.
4. Use copper, copper clad aluminum or aluminum conductors.
5. For 208/230-3-60 v units TRAN is wired for 230-v unit. If unit is to be run with 208-v power supply disconnect BLK wire from 230-v tap (RED) and connect to 208-v tap (BLU). Insulate end of 230-v tap.

LEGEND

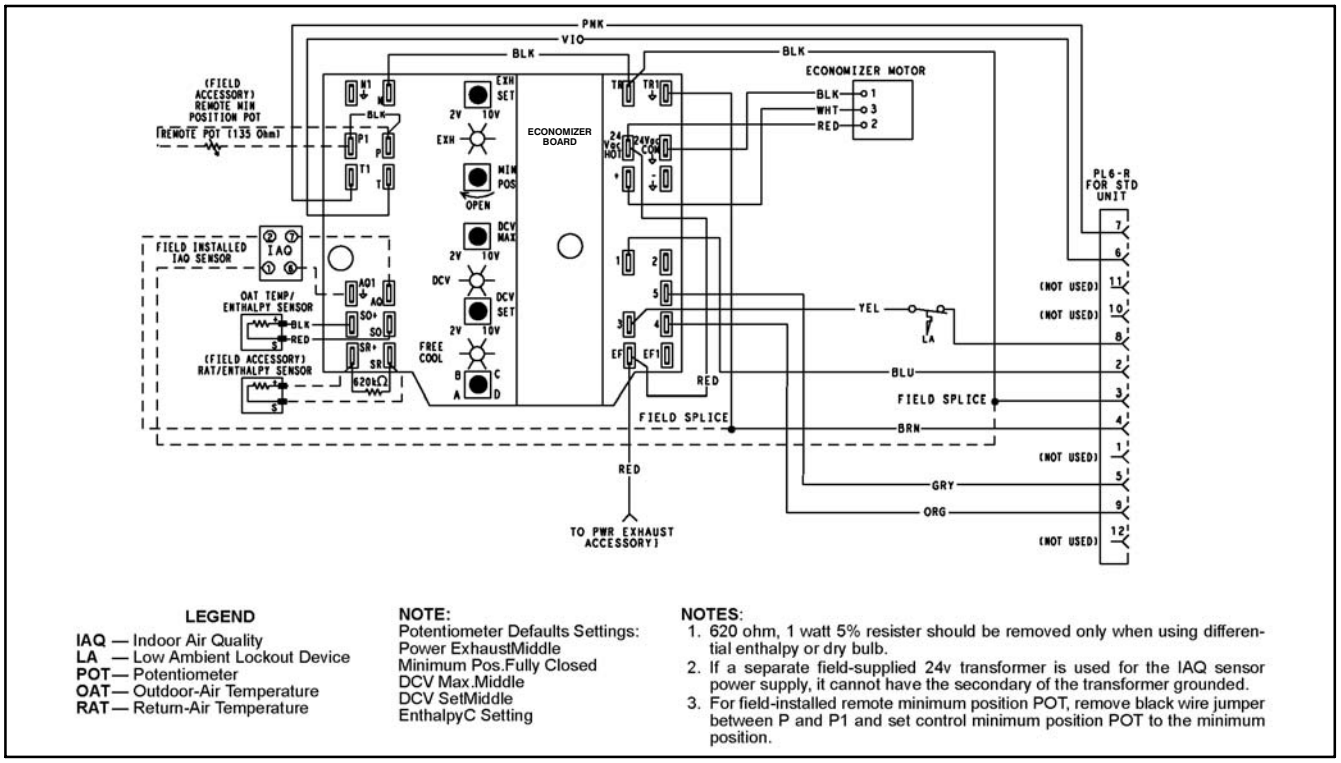
C	Contactor, Compressor	OFC	Outdoor Fan Contactor
CAP	Capacitor	OFM	Outdoor Fan Motor
CB	Circuit Breaker	P	Plug
COMP	Compressor Motor	PL	Plug Assembly
EQUIP	Equipment	QT	Quadruple Terminal
FPT	Freeze Up Protection Thermostat	SAT	Supply Air Temperature Sensor
GND	Ground	TRAN	Transformer
HC	Heater Contactor		
HPS	High-Pressure Switch		
IFC	Indoor Fan Contactor		
IFM	Indoor Fan Motor		
IFMOVL	Indoor Fan Motor Overload Switch		
IFR	Indoor Fan Relay		
LPS	Low-Pressure Switch		
LSM	Limit Switch (Motor)		

Field Splice
Marked Wire
Terminal (Marked)
Terminal (Unmarked)

Terminal Block
Splice
Splice (Marked)
Factory Wiring
Field Control Wiring
Field Power Wiring
Accessory or Optional Wiring
To indicate common potential only; not to represent wiring.

TYPICAL WIRING SCHEMATICS — PAE (cont)

Economizer Wiring — PAE072—150



LEGEND

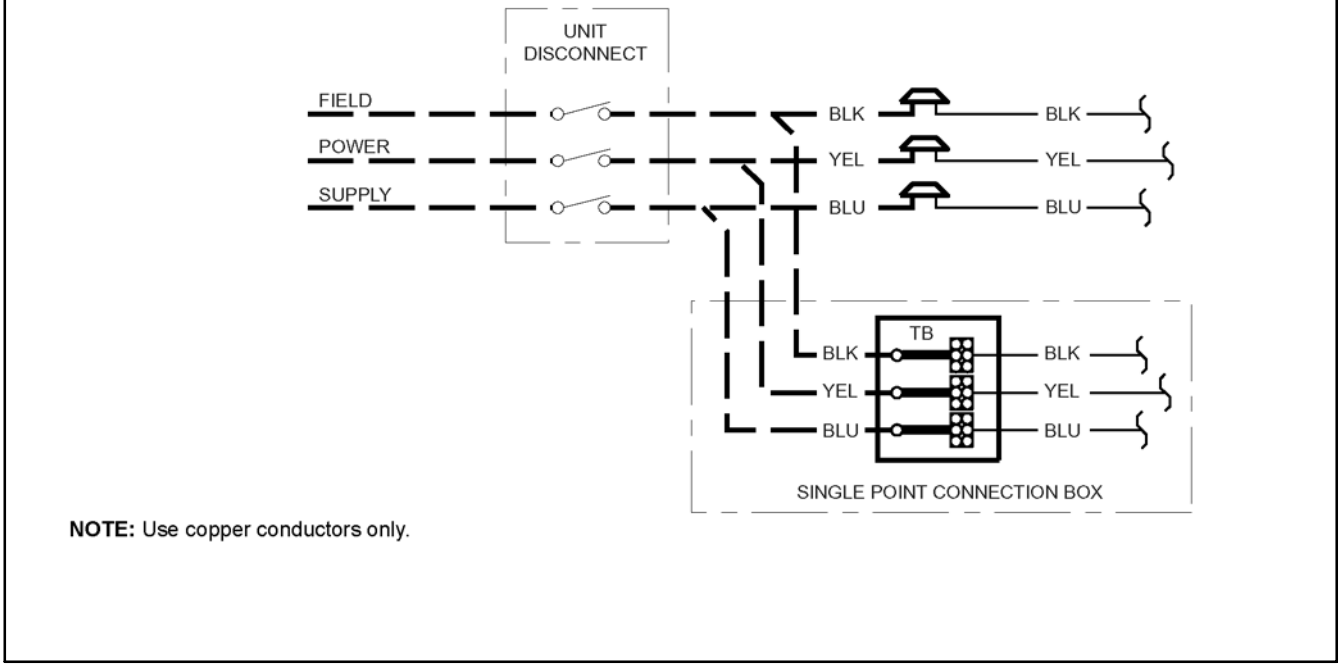
IAQ — Indoor Air Quality
LA — Low Ambient Lockout Device
POT— Potentiometer
OAT— Outdoor-Air Temperature
RAT— Return-Air Temperature

NOTE:
Potentiometer Defaults Settings:
Power ExhaustMiddle
Minimum Pos.Fully Closed
DCV Max.Middle
DCV SetMiddle
EnthalpyC Setting

NOTES:
1. 620 ohm, 1 watt 5% resister should be removed only when using differential enthalpy or dry bulb.
2. If a separate field-supplied 24v transformer is used for the IAQ sensor power supply, it cannot have the secondary of the transformer grounded.
3. For field-installed remote minimum position POT, remove black wire jumper between P and P1 and set control minimum position POT to the minimum position.

NOTE: Wiring is for the DN Series Economizer

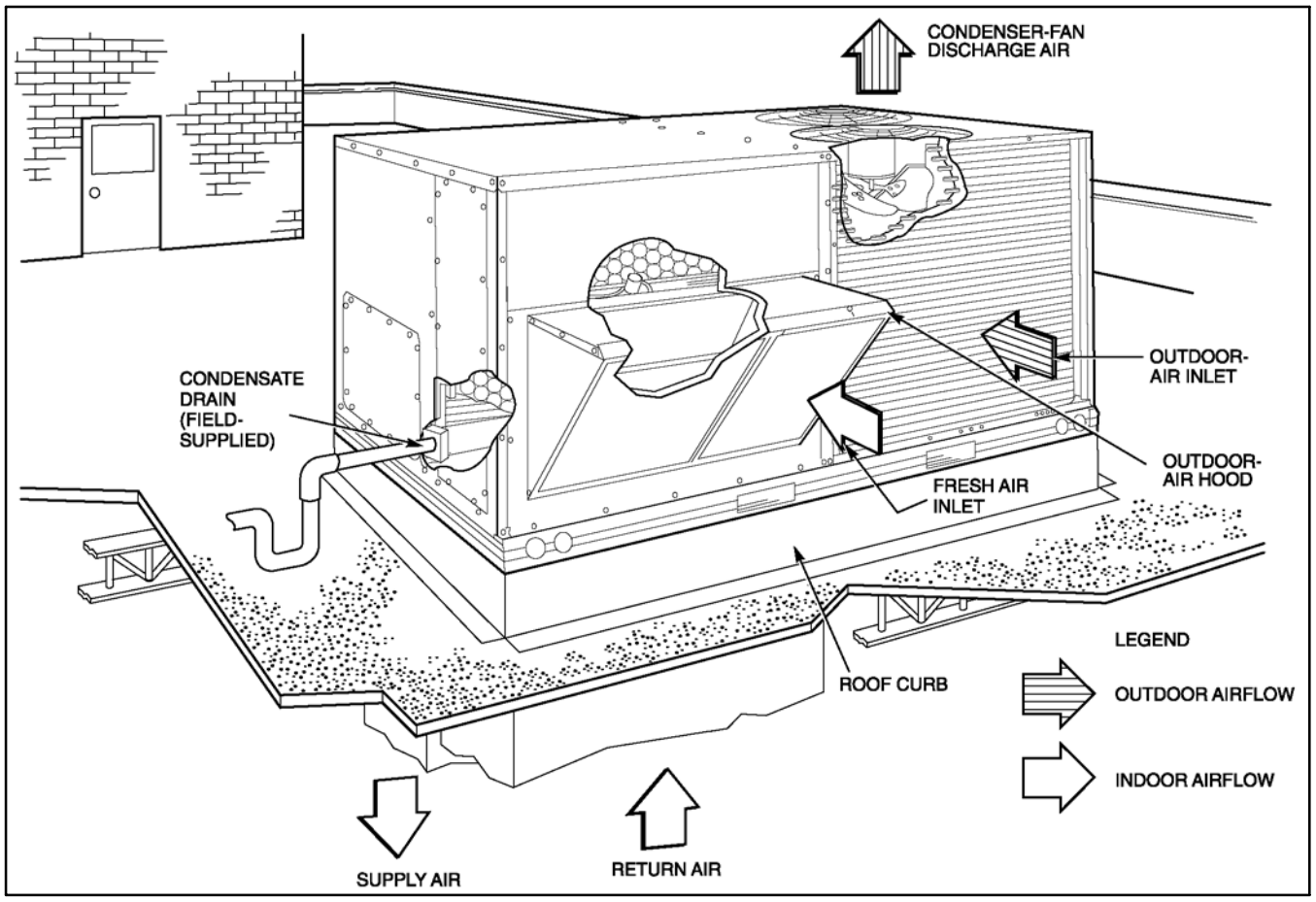
Non-Fused Disconnect (Optional) — PAE072—150



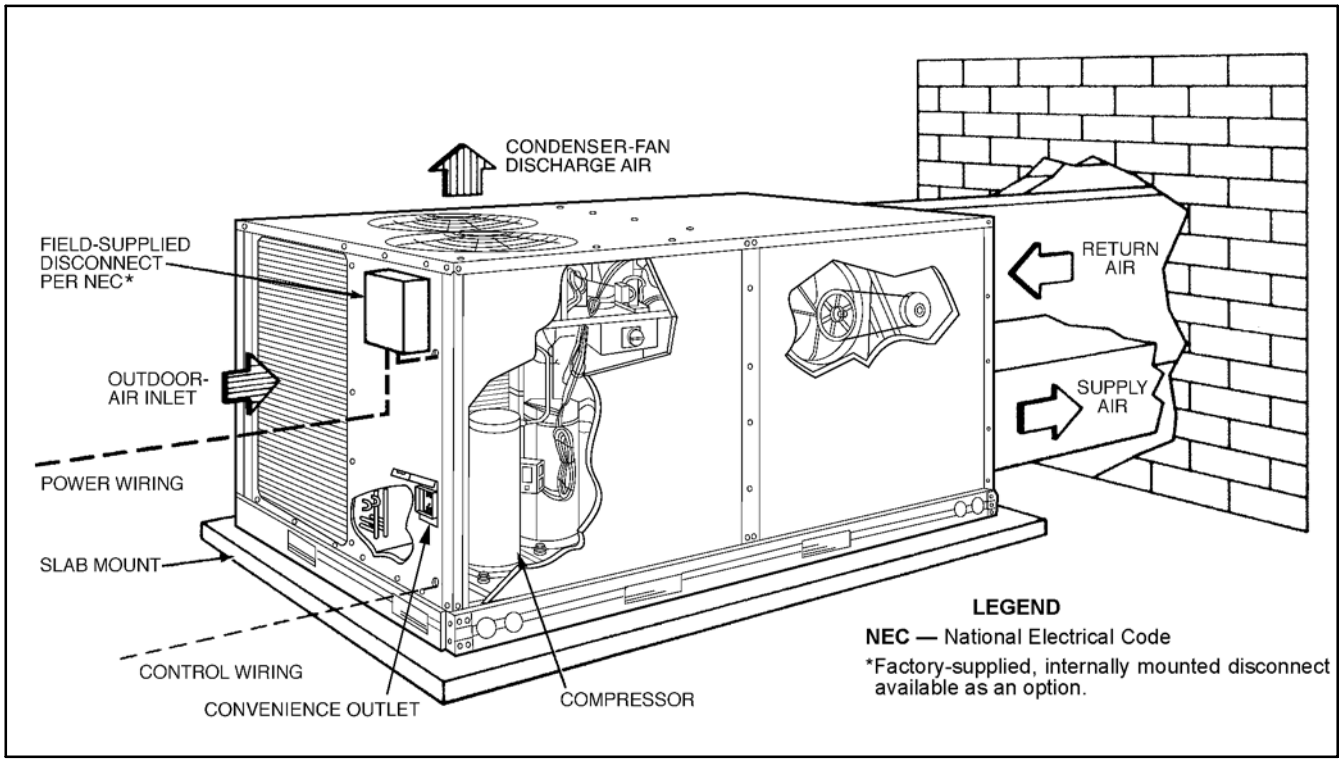
NOTE: Use copper conductors only.

TYPICAL PIPING AND WIRING — PAE072−150

Vertical Discharge Ducting



Horizontal Discharge Ducting



GUIDE SPECIFICATIONS − PAE072−150

PART 1 − GENERAL

1.01 SYSTEM DESCRIPTION

Outdoor rooftop mounted, electrically controlled heating and cooling unit utilizing a hermetic compressor(s) for cooling duty and electric heat accessories for heating duty. Unit shall discharge supply air vertically or horizontally as shown on contract drawings.

1.02 QUALITY ASSURANCE

A. Unit well exceeds ASHRAE 90.1−2001 Energy Standards.
B. Unit shall be rated in accordance with ARI Standards 210 or 360. Designed in accordance with UL Standard 1995.
C. Unit shall be designed to conform to ASHRAE 15, latest revision.
D. Unit shall be UL tested and certified in accordance with ANSI Z21.47 Standards and UL listed and certified under Canadian standards as a total package for safety requirements.
E. Roof curb shall be designed to conform to NRCA Standards.
F. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
G. Unit casing shall be capable of withstanding 500−hour salt spray exposure per ASTM B117 (scribed specimen).
H. H. Unit shall be designed in accordance with ISO 9001:2000, and shall be manufactured in a facility registered to ISO 9001:2000.
I. Each unit shall be subjected to a completely automated run testing on the assembly line. A factory supplied printout indicating tested pressures, amperages, data, and inspectors; providing certification of the unit status at the time of manufacture, shall be available upon request.

1.03 DELIVERY, STORAGE, AND HANDLING

Unit shall be stored and handled per manufacturer's recommendations.

PART 2 − PRODUCTS

2.01 EQUIPMENT (STANDARD)

A. General: Factory assembled, single piece heating and cooling unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, refrigerant charge (R−22), and special features required prior to field start−up.
B. Unit Cabinet:
   1. Unit cabinet shall be constructed of galvanized steel, and shall be bonderized and coated with a pre−painted baked enamel finish on all externally exposed surfaces.
   2. Evaporator fan compartment interior cabinet surfaces shall be insulated with a minimum 2 in. thick, 1 lb density, flexible fiberglass insulation, neoprene coated on the air side.
   3. Cabinet panels shall be easily removable for servicing.
   4. Holes shall be provided in the base rails for rigging shackles to facilitate maneuvering and overhead rigging.
   5. Unit shall have a factory installed, sloped condensate drain pan made of a non corrosive material, providing a minimum w in.−14 NPT connection with both vertical and horizontal drains, and shall comply with ASHRAE Standard 62.
   6. Unit shall have a factory installed filter access panel to provide filter access with toolless removal.
   7. Unit shall have standard thru−the−bottom power connection capability (accessory kit is required).
C. Fans:
   1. Evaporator Fan:
      a. Fan shall be direct or belt driven as shown on the equipment drawings. Belt drive shall include an adjustable pitch motor pulley.
      b. Fan wheel shall be double inlet type with forward curved blades.
      c. Bearings shall be sealed, permanently lubricated ball bearing type for longer life and lower maintenance.
   2. Evaporator fan shall be made from steel with a corrosion resistant finish and shall be dynamically balanced.
   3. Rooftop evaporator fan motors smaller than 5 hp are specifically designed and are rated in maximum continuous Bhp or maximum continuous watts. The motors do not have a horsepower rating on the nameplate.
   4. Condenser fan shall be of the direct driven (with totally enclosed motors) propeller type and shall discharge air vertically.
   5. Condenser fan shall have aluminum blades riveted to corrosion resistant steel spiders and shall be dynamically balanced.
D. Compressor(s):
   1. Fully hermetic type, internally protected scroll type.
   2. Factory mounted on rubber grommets and internally spring mounted for vibration isolation.
   3. On dual electrically and mechanically independent circuits (090−150).
E. Coils:
   1. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved $^{3}/_{8}$in. OD copper tubes with all joints brazed.
   2. Dual compressor models (size 090−150) shall have face−split type evaporator coil (circuit no. 1 on bottom).
   3. Testing:
      a. Evaporator and condenser coils shall be qualified to UL 1995 burst test at 2,200 psi.
      b. Evaporator and condenser coils shall be leak tested to 150 psig and pressure tested to 400 psig.
   4. Optional Coils:
      a. Copper fin coils shall be constructed of copper fins mechanically bonded to copper tubes and copper tube sheets. Galvanized steel tube sheets shall not be acceptable. A polymer strip shall prevent coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan. All copper construction shall provide protection in moderate coastal environments.
F. Refrigerant Components: Refrigerant circuit components shall include:
   1. Fixed orifice metering system.
   2. Refrigerant filter drier.
   3. Service gage connections on suction, discharge, and liquid lines.

G. Filter Section:
   1. Standard filter section shall consist of factory installed, low velocity, throwaway 2−in. thick fiberglass filters of commercially available sizes.
   2. Filter face velocity shall not exceed 320 fpm at nominal airflows.
   3. Filter section should use only one size filter.
   4. Filters shall be accessible through an access panel with no−tool−removal.

H. Controls and Safeties:
   1. Unit Controls: Unit shall be complete with self contained low voltage control circuit protected by a fuse on the 24v transformer side (090−150 units have a resettable circuit breaker).
   2. Safeties:
      a. Unit shall incorporate a solid state compressor protector which provides anti−cycle reset capability at the space thermostat, should any of the following standard safety devices trip and shut off compressor.
         (1.) Compressor overtemperature, overcurrent.
         (2.) Loss of charge/low pressure switch.
         (3.) Freeze protection thermostat, evaporator coil.
         (4.) High pressure switch.
         (5.) Automatic reset motor thermal overload protector. The lockout protection shall be easily disconnected at the control board, if necessary.

I. Operating Characteristics:
   1. Unit shall be capable of starting and running at 125°F ambient outdoor temperature, meeting maximum load criteria of ARI Standard 210/240 or 360 at + 10% voltage.
   2. Compressor with standard controls shall be capable of operation down to 25°F ambient outdoor temperature.

J. Electrical Requirements: All unit power wiring shall enter unit cabinet at a single factory predrilled location.

K. Motors:
   1. Compressor motors shall be cooled by refrigerant gas passing through motor windings and shall have line break thermal and current overload protection.
   2. Evaporator fan motor shall have permanently lubricated bearings and inherent automatic reset thermal overload protection. Evaporator motors are specifically designed and do *not* have conventional horsepower (HP) ratings listed on the motor nameplate. Motors are designed and qualified in the airover location downstream of the cooling coil and carry a maximum continuous bhp rating that is the maximum application bhp rating for the motor; no safety factors above that rating may be applied.
   3. Totally enclosed condenser fan motor shall have permanently lubricated bearings, and inherent automatic reset thermal overload protection.

L. Special Features
   1. Integrated Economizers
      a. Integrated integral modulating type capable of simultaneous economizer and compressor operation.
      b. Available as a factory−installed option in vertical supply/return configuration only. (Available as a field−installed accessory for dedicated horizontal and/or vertical supply return configurations.)
      c. Includes all hardware and controls to provide cooling with outdoor air.
      d. Equipped with low−leakage dampers, not to exceed 2% leakage at 1 in. wg pressure differential.
      e. Capable of introducing up to 100% outdoor air.
      f. Economizer shall be equipped with a barometric relief damper capable of relieving up to 100% return air.
      g. Designed to close damper(s) during loss−of power situations with spring return built into motor.
      h. Dry bulb outdoor−air temperature sensor shall be provided as standard. Outdoor air sensor set point is adjustable and shall range from 40° to 100° F. For the economizer, the return air sensor, indoor enthalpy sensor, and outdoor enthalpy sensor shall be provided as field installed accessories to provide enthalpy control, differential enthalpy control, and differential dry bulb temperature control.
      i. Economizer controller shall use a mixed air thermistor mounted on the evaporator fan housing to control economizer operation to a supply air temperature of 55° F.
      j. The economizer shall have a gear−driven parallel blade design.
      k. Economizer controller shall provide control of internal building pressure through its accessory power exhaust function. Factory set at 100%, with a range of 0% to 100%.
      l. Economizer Controller Occupied Minimum Damper Position Setting maintains the minimum airflow into the building during occupied period providing design ventilation rate for full occupancy (damper position during heating). A remote potentiometer may be used to override the set point.
      m. Economizer Controller Unoccupied Minimum Damper Position Setting − The economizer damper shall be completely closed when the unit is in the occupied mode.
      n. Economizer Controller IAQ/DCV Maximum Damper Position Setting − Setting the maximum position of the damper prevents the introduction of large amounts of hot or cold air into the space. This position is intended to satisfy the base minimum ventilation rate.
      o. Economizer controller IAQ/DCV control modulates the outdoor−air damper to provide ventilation based on the optional 2 to 10 vdc CO2 sensor input.
      p. Compressor lockout sensor (opens at 35° F, closes at 50° F).
      q. Actuator shall be direct coupled to economizer gear, eliminating linkage arms and rods.
      r. Control LEDs:
         1. When the outdoor−air damper is capable of providing free cooling, the “Free Cool” LED shall illuminate.
         2. The IAQ LED indicates when the module is on the DCV mode.
         3. The EXH LED indicates when the exhaust fan contact is closed.
      s. Remote Minimum Position Control − A field−installed accessory remote potentiometer shall allow the outdoor−air damper to be opened or closed beyond the minimum position in the occupied mode for modified ventilation.

PHYSICAL DATA — PAE180−300

UNIT PAE		180	210	240	300
NOMINAL CAPACITY (tons)		15	18	20	25
OPERATING WEIGHT		1650	1710	1770	2120
COMPRESSOR/MANUFACTURER				Scroll/Copeland	
Quantity...Model (Ckt 1, Ckt 2)		1...ZR94KC, 1...ZR72KC	1...ZR108KC, 1...ZR94KC	1...ZR125KC, 1...ZR108KC	1...ZRU140KC*, 1...ZR144KC
Stages of Capacity Control (%)		60/40	55/45	55/45	50/50
Number of Refrigerant Circuits		2	2	2	2
Oil (oz) (Ckt 1, Ckt 2)		85,60	106,81	106,106	136, 106
REFRIGERANT TYPE				R−22	
Expansion Device				TXV	
Operating Charge (lb-oz) . Circuit 1†		19−8	19−8	19−11	26−13
. . . . . Circuit 2		13−8	19−2	13−14	25−10
CONDENSER COIL				Cross-Hatched ⅜-in. Copper Tubes, Aluminum Lanced, Aluminum Pre-Coated, or Copper Plate Fins	
Rows...Fins/in.		4...15	4...15	4...15	3...15 (2 coils)
Total Face Area (sq ft)		21.7	21.7	21.7	43.4
CONDENSER FAN					
Nominal Cfm		10,500	10,500	14,200	14,200
Quantity...Diameter (in.)		3...22	3...22	2...30	6...30
Motor Hp...Rpm		½...1050	½...1050	1...1075	1...1075
Watts Input (Total)		1100	1100	3400	3400
EVAPORATOR COIL				Cross-Hatched ⅜-in. Copper Tubes, Aluminum Lanced or Copper Plate Fins, Face Split	
Rows...Fins/in.		4...15	3...15	4...15	4...15
Total Face Area (sq ft)		17.5	17.5	17.5	17.5
EVAPORATOR FAN					
Quantity...Size (in.)		2...12x12	2...12 x 12	2...12 x 12	2...12 x 12
Type Drive		Belt	Belt	Belt	Belt
Nominal Cfm		6000	7200	8000	10,000
Motor Hp		5	5	7.5	10
Motor Nominal Rpm		1745	1745	1745	1740
Maximum Continuous Bhp		6.13	5.90	8.70 [208/230,575 v] 9.50 [460 v]	10.20 [208/230,575 v] 11.80 [460 v]
Motor Frame Size		184T	184T	213T	215T
Fan Rpm Range	Low-Med. Static	873−1021	910−1095	1002−1225	1066−1283
	High Static	1025−1200	1069−1287	1193−1367	1332−1550
Motor Bearing Type		Ball	Ball	Ball	Ball
Maximum Allowable Rpm		1550	1550	1550	1550
Motor Pulley Pitch Diameter Min/Max (in.)	Low-Med. Static	4.9/5.9	4.9/5.9	5.4/6.6	4.9/5.9
	High Static	4.9/5.9	4.9/5.9	5.4/6.6	4.9/5.9
Nominal Motor Shaft Diameter (in.)		1⅛	1⅛	1⅜	1⅜
Fan Pulley Pitch Diameter (in.)	Low-Med. Static	9.4	9.4	9.4	8.0
	High Static	8.0	8.0	7.9	6.4
Nominal Fan Shaft Diameter (in.)		1 7/16	1 7/16	1 7/16	1 7/16
Belt, Quantity...Type...Length (in.)	Low-Med. Static	1...BX...50	1...BX...50	1...BX...53	2...BX...50
	High Static	1...BX...48	1...BX...48	1...BX...50	2...BX...47
Pulley Center Line Distance (in.)		13.3−14.8	13.3−14.8	14.6−15.4	14.6−15.4
Speed Change per Full Turn of Movable Pulley Flange (rpm)	Low-Med. Static	37	37	37	36
	High Static	44	34	44	45
Movable Pulley Maximum Full Turns From Closed Position		4	5	5	5
Factory Speed		3.5	3.5	3.5	3.5
Factory Speed Setting (rpm)	Low-Med. Static	965	1002	1120	1182
	High Static	1134	1178	1328	1470
Fan Shaft Diameter at Pulley (in.)		1 7/16	1 7/16	1 7/16	1 7/16
HIGH-PRESSURE SWITCH (psig)					
Cutout				426	
Reset (Auto)				320	
LOW-PRESSURE SWITCH (psig)					
Cutout				27	
Reset (Auto)				44	
FREEZE PROTECTION THERMOSTAT (F)					
Opens				30 ± 5	
Closes				45 ± 5	
OUTDOOR-AIR INLET SCREENS				Cleanable	
Quantity...Size (in.)				2...20 X 25 X 1 1...20 X 20 X 1	
RETURN-AIR FILTERS				Throwaway	
Quantity...Size (in.)				4...20 x 20 x 2 4...16 x 20 x 2	
POWER EXHAUST***				½Hp, 208/230−460 v Motor Direct Drive, Propeller-Fan (Factory-Wired for 460 v)	

LEGEND

Bhp — Brake Horsepower

TXV — Thermostatic Expansion Valve

*The ZRU140KC compressor is a tandem compressor, consisting of a ZR72KC (25% total capacity) and a ZR68KC (24% total capacity).

†Circuit 1 uses the lower portion of the condenser coil and lower portion of the evaporator coils; and Circuit 2 uses the upper portion of both coils.

**The PAE300 unit requires 2-in. industrial-grade filters capable of handling face velocities up to 625 ft/min (such as American Air Filter no. 5700 or equivalent).

NOTE: The PAE180−300 units have a low-pressure switch (standard) located on the suction side.

***DN series power exhaust.

PHYSICAL DATA — PAE180−300 (cont)

OPERATING WEIGHTS

UNIT	BASE UNIT OPERATING WEIGHTS*							
	180		210		240		300	
	lb	kg	lb	kg	lb	kg	lb	kg
PAE	1650	748	1710	776	1770	803	2120	962

*Base unit weight does not include electric heaters, copper coils, economizer, power exhaust, barometric relief or crating. See Options and Accessories table below for more information.

NOTE: For 180, 210 units add 75 lb (34 kg) for domestic crating. For 240 and 300 unit sizes add 135 lb (61 kg).

ELECTRIC HEATER USAGE — PAE180−300

UNIT PAE	HEATER kW Unit Voltages				HEATER STAGES	HEAT PER STAGE	MAXIMUM STAGES*	MINIMUM HEATING CFM	
	208	230	460	575				Cfm	L/s
180	26	31	30	—	2	50/50	2	3750	1770
	42	52	50	—	2	33/67	3		
	56	69	73	—	2	50/50	4		
210	26	34	32	—	2	50/50	2	5400	2549
	42	56	55	—	2	33/67	3		
	56	75	80	—	2	50/50	4		
240	26	31	30	—	2	50/50	2	5000	2360
	42	52	50	—	2	33/67	3		
	56	69	73	—	2	50/50	4		
300	26	34	32	—	2	50/50	2	7000	3304
	42	56	55	—	2	33/67	3		
	56	75	80	—	2	50/50	4		

*Maximum number of stages using accessory low-ambient kit or head pressure control device and low-ambient kit.

NOTE: Heaters are rated at 240, 480, and 600 v. Use the Multiplication Factors table below to determine heater capacity for your particular voltage.

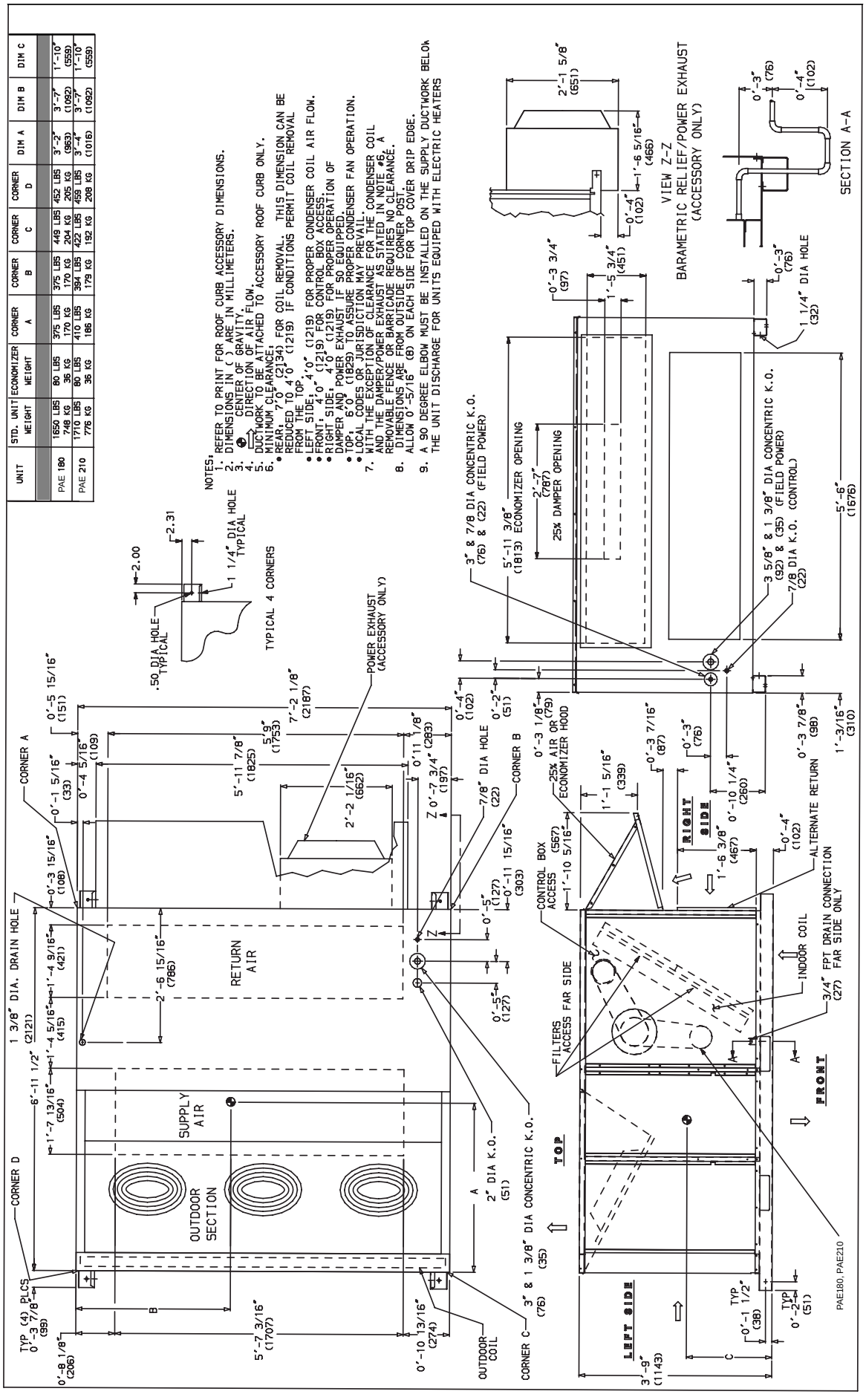
MULTIPLICATION FACTORS

HEATER RATING VOLTAGE	ACTUAL HEATER VOLTAGE										
	200	208	230	240	380	440	460	480	550	575	600
240	0.694	0.751	0.918	1.000	—	—	—	—	—	—	—
480	—	—	—	—	0.626	0.840	0.918	1.000	—	—	—
600	—	—	—	—	—	—	—	—	0.840	0.918	1.000

NOTE: The following equation converts kW of heat energy to Btuh:
kW x 3.413 = Btuh.

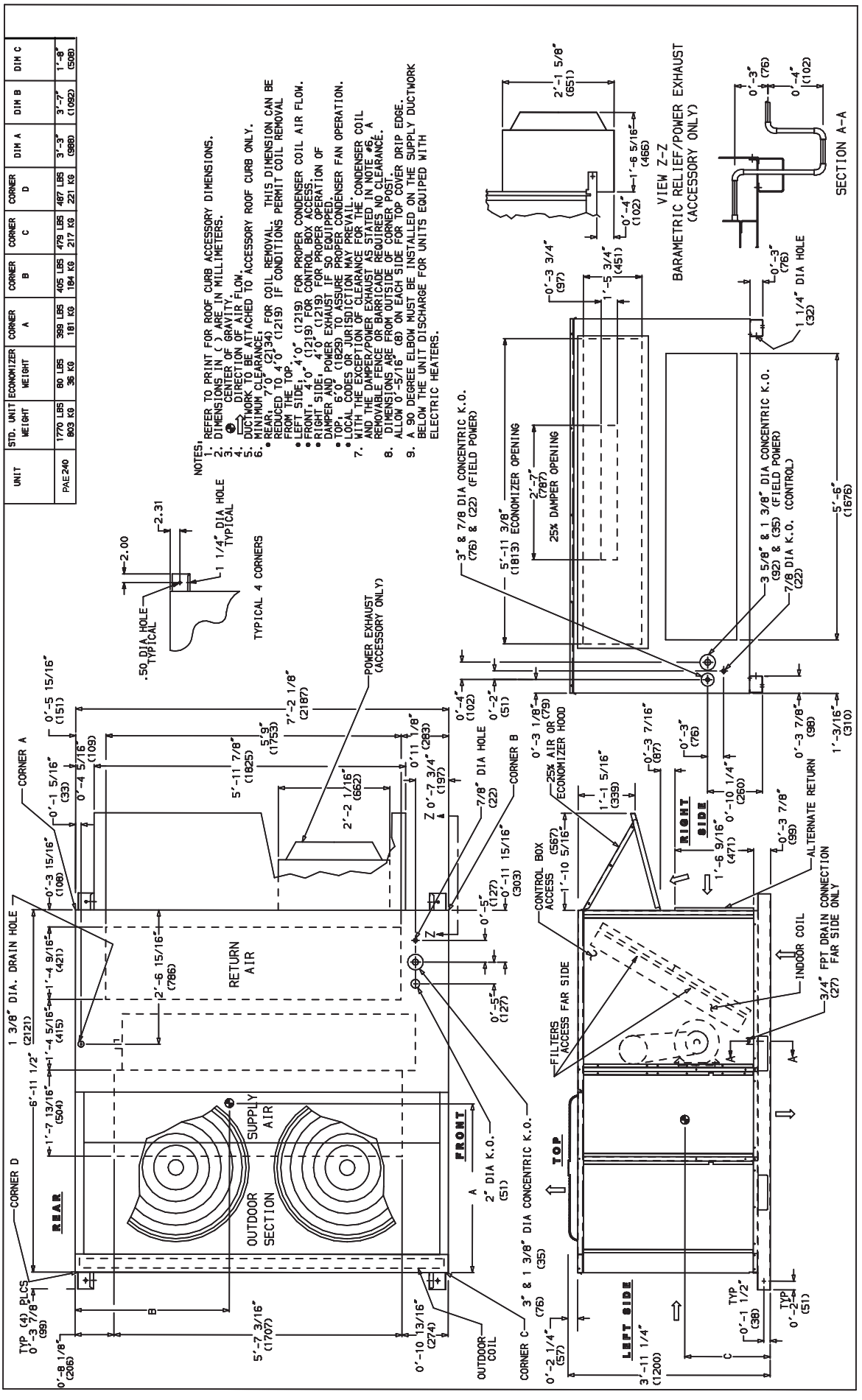
EXAMPLE: 34 kW (at 230 v) heater on 208 v
= 34.0 (.751 mult factor)
= 25.5 kW capacity at 208 v.

BASE UNIT DIMENSIONS — PAE180, 210



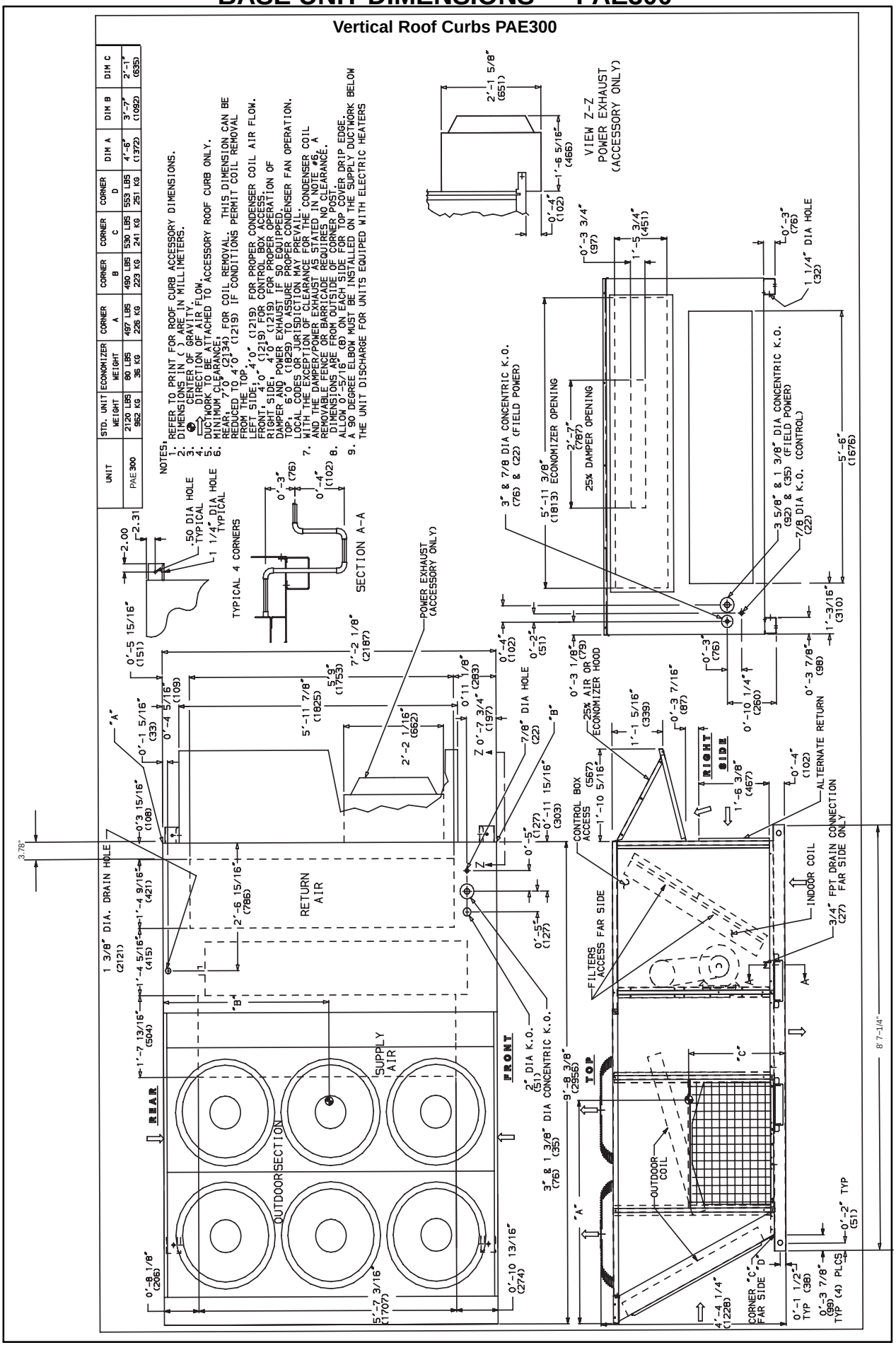
UNIT	STD. UNIT WEIGHT	ECONOMIZER WEIGHT	CORNER A	CORNER B	CORNER C	CORNER D	DIM A	DIM B	DIM C
PAE 180	1650 LBS 748 KG	80 LBS 36 KG	375 LBS 170 KG	375 LBS 170 KG	449 LBS 204 KG	452 LBS 205 KG	3'-2" (963)	3'-7" (1092)	1'-10" (559)
PAE 210	1710 LBS 776 KG	80 LBS 36 KG	410 LBS 186 KG	394 LBS 179 KG	422 LBS 192 KG	459 LBS 208 KG	3'-4" (1016)	3'-7" (1092)	1'-10" (559)

BASE UNIT DIMENSIONS — PAE240



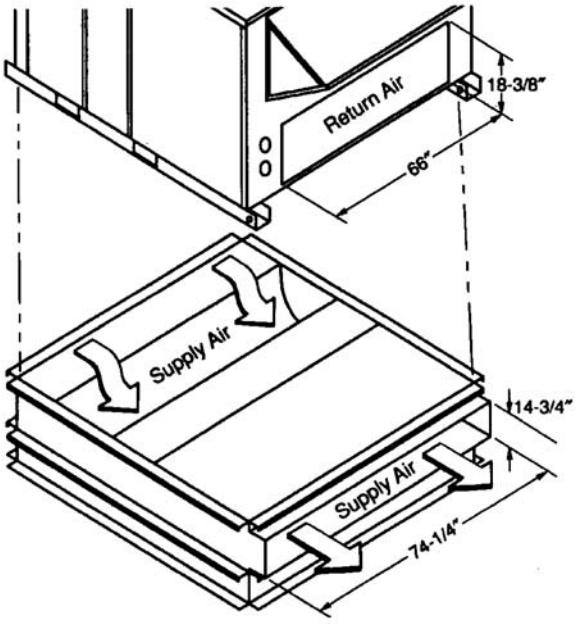
BASE UNIT DIMENSIONS — PAE300

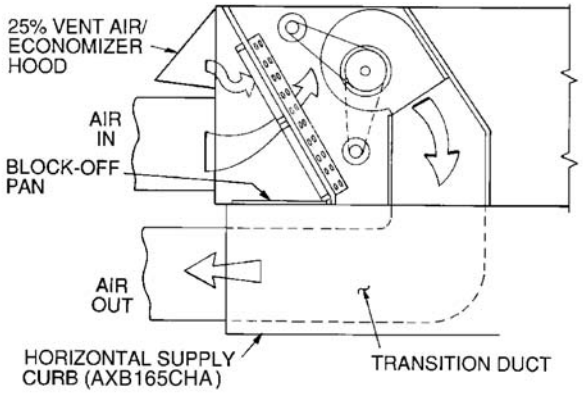
Vertical Roof Curbs PAE300

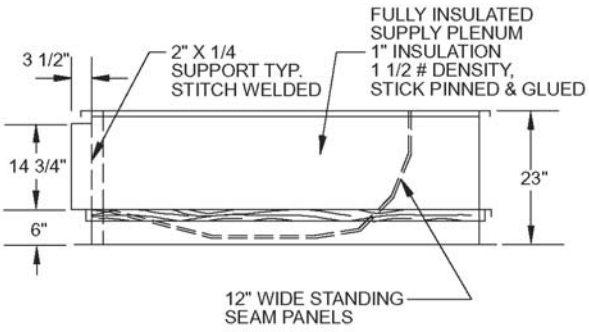


ACCESSORY DIMENSIONS — PAE180−300 (cont)

Horizontal Supply/Return Adapter Installation (PAE180−240 Only)





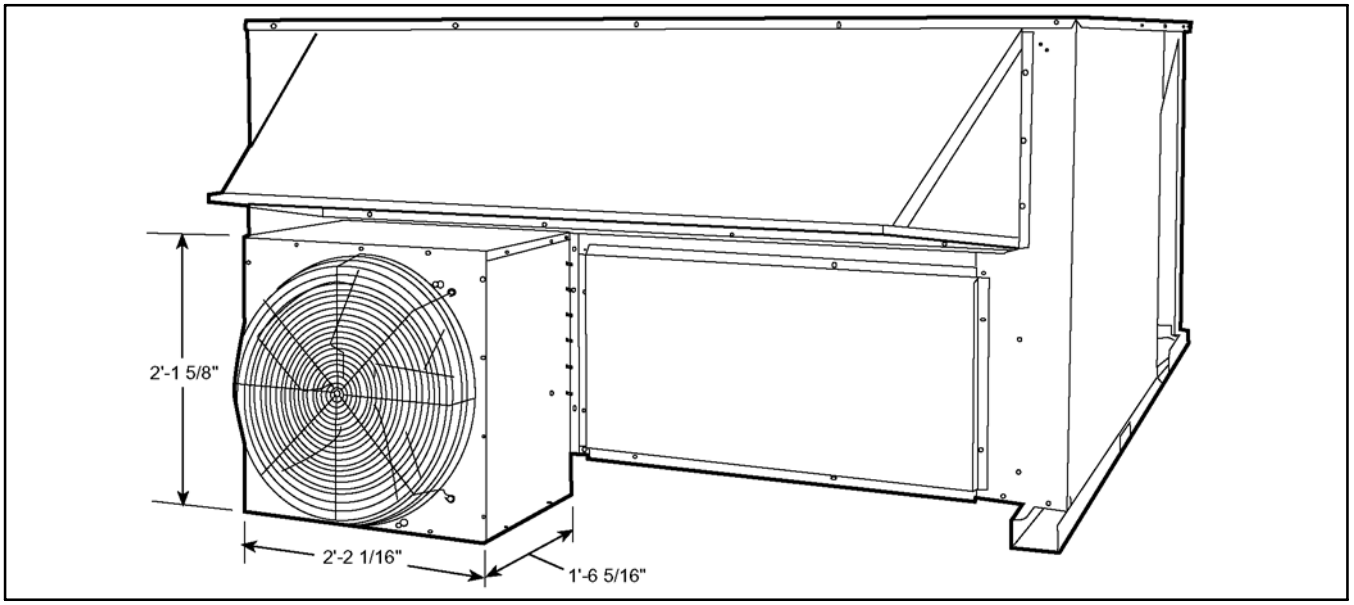


NOTE: AXB165CHA is a fully factory preassembled horizontal adapter and includes an insulated transition duct. The pressure drop through the adapter curb is negligible.

For horizontal return applications: The power exhaust and barometric relief dampers must be installed in the return air duct.

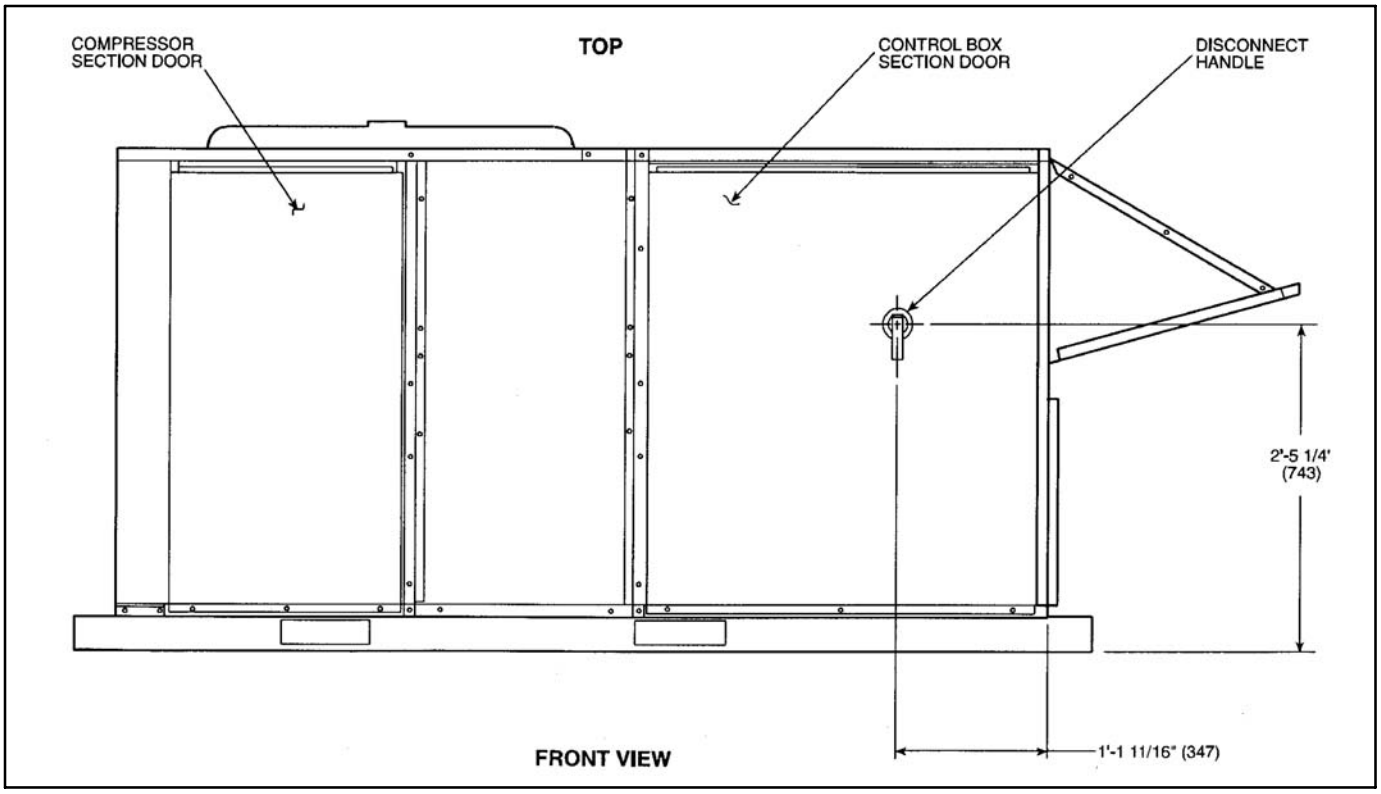
ACCESSORY PACKAGE NO.	CURB HEIGHT	DESCRIPTION
AXB165CHA	1′-11″ (584)	Pre-Assembled Horizontal Adapter Roof Curb

Barometric Relief/Power Exhaust



ACCESSORY DIMENSIONS — PAE180−300 (cont)

Factory-Installed Non-Fused Disconnect



PERFORMANCE DATA — PAE

COOLING CAPACITIES

PAE180 (15 TONS)

Temp (F) Air Entering Condenser (Edb)		Air Entering Evaporator — Cfm/BF														
		4,500/0.02			5,250/0.03			6,000/0.04			6,750/0.04			7,500/0.05		
		Air Entering Evaporator — Ewb (F)														
		62	67	72	62	67	72	62	67	72	62	67	72	62	67	72
75	TC	180	195	212	185	200	216	188	203	218	193	205	219	197	207	222
	SHC	147	123	99	159	132	104	172	142	112	180	152	120	185	162	125
	kW	11.2	11.6	12.0	11.3	11.7	12.1	11.4	11.8	12.1	11.6	11.9	12.2	11.7	11.9	12.2
85	TC	174	189	204	179	193	208	183	197	211	187	199	212	191	201	213
	SHC	144	121	96	156	130	102	167	138	106	175	148	114	179	156	119
	kW	12.3	12.7	13.1	12.5	12.8	13.2	12.6	12.9	13.3	12.7	13.0	13.3	12.8	13.1	13.4
95	TC	167	182	196	172	186	200	175	189	202	180	191	204	184	193	205
	SHC	141	118	93	153	126	98	163	135	102	169	144	108	173	152	112
	kW	13.5	13.9	14.3	13.6	14.0	14.4	13.8	14.1	14.5	13.9	14.2	14.6	14.0	14.3	14.6
105	TC	160	173	187	164	177	190	168	180	192	172	181	193	177	183	194
	SHC	138	114	90	149	123	94	157	132	98	162	140	102	165	147	106
	kW	14.8	15.2	15.6	14.9	15.3	15.7	15.1	15.4	15.7	15.2	15.5	15.8	15.3	15.5	15.8
115	TC	152	165	178	156	168	179	161	170	180	165	172	182	168	173	182
	SHC	134	111	86	144	119	90	150	128	94	154	135	98	158	142	100
	kW	16.1	16.5	16.9	16.2	16.6	17.0	16.4	16.7	17.0	16.6	16.8	17.1	16.7	16.9	17.1
118	TC	149	162	174	153	165	176	158	167	—	162	168	—	166	170	—
	SHC	133	110	86	142	118	89	148	127	—	152	133	—	155	140	—
	kW	16.5	16.9	17.3	16.6	17.0	17.4	16.8	17.1	—	17.0	17.2	—	17.1	17.2	—
120	TC	148	160	—	152	—	—	156	—	—	—	—	—	—	—	—
	SHC	132	109	—	141	—	—	147	—	—	—	—	—	—	—	—
	kW	16.8	17.2	—	16.9	—	—	17.1	—	—	—	—	—	—	—	—

PAE210 (18 TONS)

Temp (F) Air Entering Condenser (Edb)		Air Entering Evaporator — Cfm/BF														
		5,400/0.095			6,000/0.105			7,000/0.120			8,000/0.140			9,000/0.150		
		Air Entering Evaporator — Ewb (F)														
		62	67	72	62	67	72	62	67	72	62	67	72	62	67	72
75	TC	227	247	269	232	251	274	237	255	277	241	258	280	248	261	283
	SHC	200	167	134	215	178	141	231	194	152	241	205	160	248	219	167
	kW	15.9	16.5	17.2	16.1	16.7	17.3	16.3	16.8	17.5	16.5	16.9	17.6	16.7	17.0	17.7
85	TC	219	238	259	224	242	265	229	247	269	235	250	272	241	252	273
	SHC	197	164	131	210	175	137	225	188	145	234	200	153	240	214	163
	kW	17.2	17.8	18.5	17.4	17.9	18.6	17.6	18.1	18.8	17.8	18.3	19.0	18.0	18.3	19.0
95	TC	210	229	248	214	233	253	219	237	258	225	239	261	231	242	263
	SHC	192	160	126	205	171	133	218	183	141	225	194	148	231	206	156
	kW	18.5	19.2	19.9	18.7	19.3	20.0	19.0	19.5	20.2	19.2	19.6	20.3	19.4	19.7	20.4
105	TC	200	218	237	205	222	241	210	225	245	216	228	249	221	230	250
	SHC	186	155	123	199	166	129	210	178	136	216	190	143	221	201	150
	kW	19.9	20.5	21.2	20.1	20.7	21.3	20.4	20.8	21.5	20.6	21.0	21.7	20.8	21.0	21.8
115	TC	190	207	225	195	210	228	201	213	232	206	216	235	211	217	236
	SHC	181	151	118	193	161	124	201	173	132	206	185	139	211	196	146
	kW	21.3	21.9	22.6	21.5	22.1	22.8	21.8	22.2	22.9	22.0	22.4	23.1	22.2	22.4	23.1
120	TC	185	200	—	189	205	—	196	207	—	201	—	—	205	—	—
	SHC	179	149	—	189	159	—	196	171	—	201	—	—	205	—	—
	kW	22.1	22.6	—	22.3	22.8	—	22.5	22.9	—	22.7	—	—	22.9	—	—

PAE240 (20 TONS)

Temp (F) Air Entering Condenser (Edb)		Air Entering Evaporator — Cfm/BF														
		6,000/0.04			7,000/0.05			8,000/0.06			9,000/0.07			10,000/0.08		
		Air Entering Evaporator — Ewb (F)														
		62	67	72	62	67	72	62	67	72	62	67	72	62	67	72
75	TC	237	258	282	242	264	288	247	268	291	252	271	295	258	274	298
	SHC	204	171	138	221	184	146	237	199	156	247	210	164	257	221	172
	kW	16.7	17.4	18.1	16.9	17.6	18.3	17.1	17.8	18.5	17.3	17.9	18.6	17.5	18.0	18.7
85	TC	229	249	272	234	254	278	239	260	283	245	262	286	250	265	287
	SHC	201	167	135	216	180	142	231	193	150	240	203	157	250	217	167
	kW	18.1	18.7	19.5	18.3	18.9	19.7	18.5	19.1	19.9	18.7	19.3	20.1	18.8	19.4	20.1
95	TC	220	239	261	225	245	267	230	249	271	235	251	275	241	255	277
	SHC	195	163	130	211	176	138	224	188	145	233	199	152	241	210	160
	kW	19.4	20.2	20.9	19.7	20.4	21.2	19.9	20.6	21.3	20.1	20.6	21.4	20.3	20.8	21.6
105	TC	209	228	249	216	234	254	220	237	259	225	240	262	230	242	263
	SHC	189	159	126	206	171	134	217	183	140	225	195	148	230	205	154
	kW	20.9	21.5	22.3	21.2	21.8	22.5	21.4	22.0	22.7	21.6	22.1	22.9	21.8	22.2	23.0
115	TC	200	217	237	205	222	241	211	225	244	216	227	248	221	229	249
	SHC	185	154	122	199	166	129	209	178	136	216	189	143	221	200	150
	kW	22.5	23.1	23.8	22.7	23.3	24.0	22.9	23.4	24.2	23.2	23.6	24.4	23.4	23.7	24.4
120	TC	194	211	230	199	216	—	205	218	—	210	—	—	214	—	—
	SHC	183	152	121	195	164	—	204	175	—	210	—	—	214	—	—
	kW	23.2	23.8	24.6	23.5	24.0	—	23.7	24.2	—	23.9	—	—	24.1	—	—

LEGEND

BF — Bypass Factor
Edb — Entering Dry-Bulb
Ewb — Entering Wet-Bulb
kW — Compressor Motor Power Input
Ldb — Leaving Dry-Bulb
Lwb — Leaving Wet-Bulb
SHC — Sensible Heat Capacity (1000 Btuh) Gross
TC — Total Capacity (1000 Btuh) Gross

NOTE:

1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

t_{lwb} = Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{lwb})

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where: h_{ewb} = Enthalpy of air entering evaporator coil.

3. The SHC is based on 80°F edb temperature of air entering evaporator coil. Below 80°F edb, subtract (corr factor x cfm) from SHC. *Above 80°F edb, add (corr factor x cfm) to SHC.*

BYPASS FACTOR (BF)	ENTERING AIR DRY-BULB TEMP (F)					
	79	78	77	76	75	under 75
	81	*82*	*83*	*84*	*85*	*over 85*
	Correction Factor					
.05	1.04	2.07	3.11	4.14	5.18	Use formula shown below.
.10	.98	1.96	2.94	3.92	4.90	
.20	.87	1.74	2.62	3.49	4.36	
.30	.76	1.53	2.29	3.05	3.82	

Interpolation is permissible.
Correction Factor = 1.10 x (1 – BF) x (edb – 80).

PERFORMANCE DATA — PAE (cont)

COOLING CAPACITIES (cont)

PAE300 (25 TONS)																						
Temp (F) Air Entering Condenser (Edb)		Air Entering Evaporator — Cfm/BF																				
		7,000/0.05				8,000/0.06				9,000/0.07				10,000/0.08				11,250/0.09			
		Air Entering Evaporator — Ewb (F)																			
		57	62	67	72	57	62	67	72	57	62	67	72	57	62	67	72	57	62	67	72
75	TC	256	271	299	327	267	278	305	336	276	283	309	341	285	286	313	344	294	294	316	347
	SHC	256	232	196	159	267	249	208	166	276	265	220	173	285	281	232	182	294	294	252	198
	kW	18.0	18.3	18.9	19.6	18.3	18.5	19.1	19.8	18.5	18.7	19.2	19.9	18.7	18.8	19.4	20.1	19.0	19.0	19.5	20.2
85	TC	248	262	288	316	259	267	293	322	267	273	298	328	276	276	302	331	284	285	305	336
	SHC	248	228	192	154	259	244	204	161	267	259	216	169	276	274	228	175	284	284	244	187
	kW	20.0	20.4	20.9	21.5	20.3	20.4	21	21.7	20.6	20.6	21.2	21.9	20.8	20.8	21.3	22	21	21	21.5	22.1
95	TC	241	252	277	303	251	257	281	309	259	262	286	314	266	267	290	317	274	275	293	321
	SHC	241	223	187	149	251	239	198	157	259	254	210	164	266	265	222	171	274	275	238	180
	kW	22.4	22.6	23.1	23.7	22.6	22.7	23.3	23.9	22.8	22.9	23.4	24	23	23	23.5	24.2	23.2	23.2	23.6	24.2
105	TC	233	243	266	289	242	247	270	295	250	252	273	299	256	258	277	303	264	265	280	306
	SHC	233	218	182	145	242	233	194	152	250	248	206	159	256	257	217	166	264	265	232	176
	kW	24.9	25.1	25.6	26.2	25.2	25.3	25.8	26.3	25.4	25.4	25.9	26.5	25.6	25.6	26	26.6	25.8	25.8	26.1	26.7
115	TC	225	232	254	277	234	236	258	281	241	242	261	285	247	247	264	288	254	255	267	291
	SHC	225	214	178	140	234	228	189	148	241	241	201	155	247	247	211	162	253	255	227	171
	kW	27.9	27.9	28.5	29	28	28.1	28.6	29.2	28.2	28.2	28.7	29.2	28.4	28.4	28.8	29.3	28.7	28.7	28.9	29.5
125	TC	216	221	241	263	224	225	245	267	231	231	248	269	237	236	251	273	243	242	253	276
	SHC	216	208	173	136	223	221	184	142	230	231	196	149	236	236	206	157	243	242	221	166
	kW	30.9	31.1	31.6	32	31.2	31.2	31.7	32.2	31.4	31.4	31.7	32.3	31.6	31.6	31.9	32.3	31.7	31.7	31.9	32.5

LEGEND

BF — Bypass Factor
Edb — Entering Dry-Bulb
Ewb — Entering Wet-Bulb
kW — Compressor Motor Power Input
Ldb — Leaving Dry-Bulb
Lwb — Leaving Wet-Bulb
SHC — Sensible Heat Capacity (1000 Btuh) Gross
TC — Total Ca

NOTES:

1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

t_{lwb} = Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{lwb})

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where: h_{ewb} = Enthalpy of air entering evaporator coil.

3. The SHC is based on 80°F edb temperature of air entering evaporator coil. Below 80°F edb, subtract (corr factor x cfm) from SHC. *Above 80°F edb, add (corr factor x cfm) to SHC.*

BYPASS FACTOR (BF)	ENTERING AIR DRY-BULB TEMP (F)					
	79	78	77	76	75	under 75
	81	*82*	*83*	*84*	*85*	*over 85*
	Correction Factor					
.05	1.04	2.07	3.11	4.14	5.18	Use formula shown below.
.10	.98	1.96	2.94	3.92	4.90	
.20	.87	1.74	2.62	3.49	4.36	
.30	.76	1.53	2.29	3.05	3.82	

Interpolation is permissible.

Correction Factor = 1.10 x (1 – BF) x (edb – 80).

PERFORMANCE DATA — PAE (cont)

FAN PERFORMANCE — PAE180—300 UNITS

PAE180* (15 TONS)

Cfm	Available External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp
4500	753	1307	1.53	753	1307	1.53	784	1397	1.64	859	1635	1.92	928	1880	2.20
4800	747	1384	1.62	747	1384	1.62	806	1563	1.83	878	1808	2.12	946	2060	2.42
5100	741	1465	1.72	752	1500	1.76	828	1745	2.05	898	1996	2.34	964	2255	2.65
5700	735	1659	1.95	805	1895	2.22	876	2156	2.53	942	2423	2.84	1004	2696	3.16
6000	759	1854	2.18	832	2118	2.48	901	2388	2.80	965	2663	3.12	1026	2943	3.45
6300	790	2088	2.45	860	2360	2.77	926	2638	3.09	988	2920	3.43	1048	3208	3.76
6600	821	2340	2.74	888	2621	3.07	952	2906	3.41	1013	3196	3.75	1070	3491	4.10
6900	852	2611	3.06	917	2900	3.40	979	3194	3.75	1038	3492	4.10	1094	3794	4.45
7200	883	2903	3.40	946	3200	3.75	1006	3501	4.11	1063	3807	4.47	1118	4117	4.83
7500	914	3215	3.77	975	3521	4.13	1033	3830	4.49	1089	4143	4.86	1142	4461	5.23

PAE180* (15 TONS) (cont)

Cfm	Available External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp
4500	993	2133	2.50	1055	2394	2.81	1114	2662	3.12	1170	2938	3.45	1224	3220	3.78
4800	1009	2319	2.72	1070	2585	3.03	1127	2859	3.35	1183	3139	3.68	1236	3427	4.02
5100	1026	2521	2.96	1086	2794	3.28	1142	3073	3.60	1196	3359	3.94	1248	3650	4.28
5700	1064	2975	3.49	1120	3260	3.82	1174	3551	4.17	1226	3848	4.51	1277	4151	4.87
6000	1083	3228	3.79	1139	3520	4.13	1192	3817	4.48	1243	4119	4.83	1292	4427	5.19
6300	1104	3501	4.11	1158	3799	4.46	1210	4102	4.81	1260	4410	5.17	1309	4724	5.54
6600	1125	3791	4.45	1178	4095	4.80	1229	4405	5.17	1278	4720	5.54	1326	5039	5.91
6900	1147	4101	4.81	1199	4412	5.18	1249	4728	5.55	1297	5050	5.92	—	—	—
7200	1170	4431	5.20	1221	4749	5.57	1270	5072	5.95	—	—	—	—	—	—
7500	1193	4781	5.61	1243	5107	5.99	—	—	—	—	—	—	—	—	—

PAE180* (15 TONS) (cont)

Cfm	Available External Static Pressure (in. wg)																	
	2.2			2.4			2.6			2.8			3.0			3.2		
	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp
4500	1276	3509	4.12	1326	3805	4.46	1375	4107	4.82	1421	4414	5.18	1467	4728	5.55	1511	5047	5.92
4800	1287	3721	4.36	1336	4020	4.72	1384	4326	5.07	1430	4638	5.44	1475	4955	5.81	—	—	—
5100	1299	3949	4.63	1347	4253	4.99	1395	4563	5.35	1440	4879	5.72	—	—	—	—	—	—
5700	1325	4458	5.23	1373	4772	5.60	1418	5091	5.97	—	—	—	—	—	—	—	—	—
6000	1340	4741	5.56	1387	5060	5.93	—	—	—	—	—	—	—	—	—	—	—	—
6300	1356	5043	5.91	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower

Watts — Input Watts to Motor

*Standard low-medium static drive range is 873 to 1021 rpm. Alternate high-static drive range is 1025 to 1200. Other rpms require a field-supplied drive.

NOTES:

1. Maximum continuous bhp for the standard motor is 6.13. The maximum continuous watts is 5180. Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm.
2. See general fan performance notes.

PAE210* (18 TONS)

Airflow (Cfm)	Available External Static Pressure (in. wg)																	
	0.2			0.4			0.6			0.8			1.0			1.2		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
5,500	682	1.99	1675	760	2.29	1922	832	2.59	2177	901	2.90	2441	965	3.22	2712	1027	3.56	2990
6,000	730	2.38	2005	802	2.68	2257	871	2.99	2516	935	3.31	2783	997	3.63	3057	1056	3.97	3337
6,500	778	2.82	2373	846	3.13	2630	911	3.44	2893	972	3.76	3164	1031	4.09	3440	1087	4.43	3722
7,000	828	3.31	2780	892	3.62	3042	953	3.94	3310	1011	4.26	3583	1067	4.59	3863	1121	4.93	4148
7,500	878	3.84	3227	938	4.15	3494	996	4.48	3766	1051	4.81	4043	1105	5.14	4326	1156	5.49	4613
8,000	928	4.42	3715	985	4.74	3986	1040	5.07	4263	1093	5.40	4544	1144	5.74	4830	1194	6.09	5120
8,500	979	5.05	4245	1033	5.38	4521	1085	5.71	4801	1136	6.05	5086	1185	6.39	5375	1232	6.74	5669
9,000	1030	5.73	4817	1082	6.06	5098	1131	6.40	5382	1180	6.74	5671	1227	7.09	5964	1272	7.44	6260
9,500	1082	6.46	5433	1131	6.80	5718	1178	7.14	6007	1225	7.49	6299	1270	7.84	6595	1313	8.20	6895
10,000	1134	7.25	6093	1180	7.59	6382	1226	7.94	6675	1270	8.29	6971	1313	8.65	7271	1356	9.01	7574

PAE210* (18 TONS) (cont)

Airflow (Cfm)	Available External Static Pressure (in. wg)														
	1.4			1.6			1.8			1.9			2.0		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
5,500	1086	3.89	3275	1142	4.24	3567	1197	4.59	3864	1223	4.77	4015	1249	4.96	4167
6,000	1112	4.31	3623	1167	4.66	3915	1219	5.01	4213	1245	5.19	4364	1270	5.37	4516
6,500	1142	4.77	4010	1194	5.12	4304	1245	5.47	4602	1270	5.65	4754	1294	5.83	4906
7,000	1173	5.28	4438	1224	5.63	4733	1273	5.98	5033	1296	6.17	5184	1320	6.35	5337
7,500	1207	5.83	4906	1255	6.19	5203	1302	6.55	5504	1326	6.73	5657	1348	6.91	5810
8,000	1242	6.44	5415	1289	6.80	5714	1334	7.16	6018	1357	7.34	6171	1379	7.52	6325
8,500	1279	7.10	5966	1324	7.45	6268	1368	7.82	6573	1389	8.00	6728	1411	8.18	6883
9,000	1317	7.80	6561	1360	8.16	6865	1403	8.53	7173	1424	8.71	7328	1445	8.90	7484
9,500	1356	8.56	7198	1398	8.93	7505	1440	9.29	7815	1460	9.48	7972	1480	9.67	8129
10,000	1397	9.37	7881	1438	9.74	8190	1477	10.11	8503	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower

Watts — Input Watts to Motor

*Standard low-medium static drive range is 910 to 1095 rpm. Alternate high-static drive range is 1069 to 1287 rpm. Other rpms require a field-supplied drive.

NOTES:

1. Maximum continuous bhp is 5.90. The maximum continuous watts is 5180. Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm.
2. See general fan performance notes.

PERFORMANCE DATA — PAE (cont)

FAN PERFORMANCE — PAE180–300 UNITS (cont)

PAE240* (20 TONS)															
Cfm	Available External Static Pressure (in. wg)														
	0.2			0.4			0.6			0.8			1.0		
	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp
6,000	753	2385	2.83	816	2579	3.06	884	2807	3.33	949	3040	3.61	1010	3277	3.89
6,500	793	2738	3.25	861	2959	3.51	925	3186	3.78	987	3418	4.05	1045	3653	4.33
7,000	844	3151	3.74	908	3372	4.00	968	3598	4.27	1026	3828	4.54	1082	4062	4.82
7,500	895	3596	4.27	955	3817	4.53	1013	4042	4.80	1068	4271	5.07	1121	4504	5.34
8,000	947	4073	4.83	1004	4294	5.09	1058	4518	5.36	1111	4747	5.63	1162	4978	5.91
8,500	999	4583	5.44	1053	4803	5.70	1105	5027	5.96	1155	5255	6.23	1204	5485	6.51
9,000	1052	5125	6.08	1103	5345	6.34	1152	5569	6.61	1200	5796	6.88	1247	6025	7.15
9,500	1105	5699	6.76	1153	5919	7.02	1200	6142	7.29	1246	6369	7.56	1291	6598	7.83
10,000	1158	6306	7.48	1204	6526	7.74	1249	6750	8.01	1293	6975	8.27	1336	7203	8.55

PAE240* (20 TONS) (cont)															
Cfm	Available External Static Pressure (in. wg)														
	1.2			1.4			1.6			1.8			2.0		
	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp
6,000	1069	3517	4.17	1125	3761	4.46	1180	4006	4.75	1232	4255	5.05	1283	4506	5.35
6,500	1102	3891	4.62	1156	4132	4.90	1208	4377	5.19	1259	4623	5.48	1308	4871	5.78
7,000	1136	4299	5.10	1188	4538	5.38	1239	4780	5.67	1288	5025	5.96	1335	5271	6.25
7,500	1173	4739	5.62	1223	4977	5.90	1272	5217	6.19	1319	5460	6.48	1365	5705	6.77
8,000	1211	5212	6.18	1259	5449	6.46	1306	5688	6.75	1352	5929	7.03	1396	6172	7.32
8,500	1251	5718	6.78	1297	5954	7.06	1342	6192	7.35	1386	6431	7.63	1429	6673	7.92
9,000	1292	6257	7.42	1337	6492	7.70	1380	6729	7.98	1423	6967	8.27	1464	7207	8.55
9,500	1335	6830	8.10	1377	7063	8.38	1419	7299	8.66	1460	7536	8.94	1501	7776	9.22
10,000	1378	7434	8.82	1419	7667	9.10	1460	7902	9.37	1499	8138	9.65	1538	8377	9.94

PAE240* (20 TONS) (cont)															
Cfm	Available External Static Pressure (in. wg)														
	2.2			2.4			2.6			2.8			3.0		
	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp	Rpm	Watts	Bhp
6,000	1332	4750	5.65	1380	5015	5.95	1427	5272	6.25	1472	5531	6.56	1517	5793	6.87
6,500	1356	5122	6.08	1402	5375	6.38	1447	5630	6.68	1492	5886	6.98	1535	6144	7.29
7,000	1381	5519	6.55	1427	5770	6.84	1471	6022	7.14	1514	6276	7.45	—	—	—
7,500	1409	5951	7.06	1453	6199	7.35	1496	6449	7.65	1538	6701	7.95	—	—	—
8,000	1440	6417	7.61	1482	6663	7.90	1523	6911	8.20	—	—	—	—	—	—
8,500	1471	6916	8.20	1513	7161	8.49	—	—	—	—	—	—	—	—	—
9,000	1505	7449	8.84	1545	7693	9.13	—	—	—	—	—	—	—	—	—
9,500	1540	8016	9.51	—	—	—	—	—	—	—	—	—	—	—	—
10,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower

Watts — Input Watts to Motor

*Standard low-medium static drive range is 1002 to 1151 rpm. Alternate high-static drive range is 1193 to 1369. Other rpms require a field-supplied drive.

NOTES:

1. Maximum continuous bhp for the standard motor is 8.7 (for 208/230–v units) and 9.5 (for 460–v and 575–v units). The maximum continuous watts is 7915 (for 208/230–v units) and 8640 (for 460–v and 575–v units). Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm.
2. See general fan performance notes.

PERFORMANCE DATA PAE (cont)

FAN PERFORMANCE — PAE180—300 UNITS (cont)

PAE300 (25 TONS)*																		
Airflow (Cfm)	Available External Static Pressure (in. wg)																	
	0.2			0.4			0.6			0.8			1.0			1.2		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
7,000	845	3.26	2693	909	3.60	2979	969	3.96	3272	1028	4.32	3574	1083	4.70	3883	1137	5.08	4,200
7,500	896	3.82	3156	956	4.17	3450	1014	4.54	3752	1069	4.91	4060	1123	5.29	4375	1174	5.68	4,698
8,000	948	4.43	3667	1005	4.80	3969	1060	5.17	4278	1112	5.56	4593	1163	5.94	4915	1213	6.34	5,243
8,500	1001	5.11	4226	1054	5.49	4537	1106	5.87	4853	1156	6.26	5175	1205	6.66	5504	1253	7.06	5,838
9,000	1053	5.85	4836	1104	6.23	5155	1154	6.63	5478	1202	7.02	5808	1248	7.43	6142	1294	7.84	6,483
9,500	1106	6.65	5498	1155	7.04	5824	1202	7.44	6155	1248	7.85	6492	1293	8.26	6833	1336	8.68	7,179
10,000	1159	7.52	6214	1206	7.92	6547	1251	8.33	6886	1295	8.74	7229	1338	9.16	7577	1380	9.59	7,929
10,500	1213	8.45	6984	1257	8.86	7325	1300	9.28	7671	1342	9.70	8020	1384	10.13	8375	1424	10.56	8,733
11,000	1266	9.45	7810	1309	9.87	8159	1350	10.29	8511	1391	10.73	8868	1431	11.16	9229	1470	11.60	9,594
11,250	1293	9.97	8245	1334	10.40	8597	1375	10.83	8953	1415	11.26	9313	1454	11.70	9677	1493	12.15	10,045

PAE300 (25 TONS)* (cont)									
Airflow (Cfm)	Available External Static Pressure (in. wg)								
	1.4			1.6			1.8		
	Rpm	Bhp	Watts	Rpm	Bhp	Watts	Rpm	Bhp	Watts
7,000	1189	5.47	4,524	1239	5.87	4,854	1288	4.91	5191
7,500	1224	6.08	5,026	1272	6.48	5,362	1320	5.56	5703
8,000	1261	6.75	5,577	1307	7.16	5,917	1353	6.26	6263
8,500	1299	7.47	6,177	1344	7.89	6,523	1388	7.02	6873
9,000	1338	8.26	6,828	1382	8.68	7,179	1424	7.85	7534
9,500	1379	9.11	7,530	1421	9.54	7,887	1462	8.74	8247
10,000	1421	10.02	8,286	1461	10.46	8,648	1501	9.70	9014
10,500	1464	11.00	9,096	1503	11.45	9,464	1541	10.73	9835
11,000	1508	12.05	9,963	1546	12.50	10,336	—	—	—
11,250	1530	12.60	10,417	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower

Watts — Input Watts to Motor

*Standard low-medium static drive range is 1066 to 1283 rpm. Alternate high-static drive range is 1332 to 1550. Other rpms require a field-supplied drive.

NOTES:

1. Maximum continuous bhp is 10.20 (208/230 v) or 11.80 (460—v and 575—v) and the maximum continuous watts are 9510 (208/230 v) or 11,000 (460—v and 575—v). Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm
2. See below for general fan performance notes.

GENERAL FAN PERFORMANCE NOTES

NOTES:

1. Values include losses for filters, unit casing, and wet coils. See below for accessory/factory-installed option static pressure information.
2. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the wattage ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Performance table for additional information.
3. Use of a field-supplied motor may affect wire sizing.
4. Interpolation is permissible. Do not extrapolate.

OUTDOOR SOUND POWER

UNIT PAE	SOUND RATING (60 Hz) dB	A-WEIGHTED (dB)	OCTAVE BANDS							
			63	125	250	500	1000	2000	4000	8000
180	88	87.6	90.8	88.7	86.4	84.3	83.5	78.4	75.6	66.8
210	88	87.8	90.8	88.7	86.4	84.3	83.5	78.4	75.6	66.8
240	95	94.1	90.6	87.2	89.9	86.2	85.8	81.0	75.6	69.6
300	95	94.1	98.7	92.3	93.8	90.9	89.6	85.9	80.3	74.3

LEGEND

dB — Sound Levels (decibels)

ACCESSORY/FIOP STATIC PRESSURE (in. wg)* — PAE180—300

COMPONENT	CFM					
	5400	6000	7200	9000	10,000	11,250
Economizer	0.06	0.07	0.09	0.11	0.12	0.14
Electric Heat (kW) 26/34	0.08	0.09	0.11	0.15	0.17	0.20
32	0.08	0.09	0.11	0.15	0.17	0.20
42/56	0.11	0.12	0.15	0.19	0.21	0.24
55	0.11	0.12	0.15	0.19	0.21	0.24
56/75	0.14	0.15	0.20	0.24	0.26	0.29
80	0.14	0.15	0.20	0.24	0.26	0.29

LEGEND

FIOP — Factory-Installed Option

*The static pressure must be added to external static pressure. The sum and the evaporator entering-air cfm should then be used in conjunction with the Fan Performance tables to determine blower rpm and watts.

NOTE: Performance is for the DN Series Economizer

PERFORMANCE DATA PAE (cont)

FAN RPM AT MOTOR PULLEY SETTINGS*

UNIT PAE	MOTOR PULLEY TURNS OPEN												
	0	½	1	1½	2	2½	3	3½	4	4½	5	5½	6
180†	††	††	††	††	1021	1002	984	965	947	928	910	891	873
180**	††	††	††	††	1200	1178	1156	1134	1112	1091	1069	1047	1025
210†	††	††	1095	1077	1058	1040	1021	1002	984	965	947	928	910
210**	††	††	1287	1265	1243	1222	1200	1178	1156	1134	1112	1091	1069
240†	††	††	1225	1209	1187	1165	1143	1120	1098	1076	1053	1031	1002
240**	††	††	1458	1434	1407	1381	1354	1328	1301	1275	1248	1222	1193
300†	††	††	1283	1269	1247	1225	1203	1182	1160	1138	1116	1095	1066
300**	††	††	—	—	1551	1524	1497	1470	1443	1415	1388	1361	1332

* Approximate fan rpm shown.

† Indicates standard drive package.

** Indicates alternate drive package.

†† Due to belt and pulley size, pulley cannot be set to this number of turns open.

EVAPORATOR-FAN MOTOR PERFORMANCE

UNIT PAE	UNIT VOLTAGE	MAXIMUM ACCEPTABLE CONTINUOUS BHP*	MAXIMUM ACCEPTABLE CONTINUOUS BkW*	MAXIMUM ACCEPTABLE OPERATING WATTS	MAXIMUM AMP DRAW
180	208/230	6.13	4.57	5,180	15.8
	460	6.13	4.57	5,180	7.9
	575	6.13	4.57	5,180	6.0
210	208/230	5.90	4.40	5,180	15.8
	460	5.90	4.40	5,180	7.9
	575	5.90	4.40	5,180	6.0
240	208/230	8.70	6.49	7,915	22.0
	460	9.50	7.08	8,640	13.0
	575	8.70	6.49	7,915	10.0
300	208/230	10.20	7.61	9,510	28.0
	460	11.80	8.80	11,000	14.6
	575	10.20	7.61	9,510	13.0

LEGEND

BHP — Brake Horsepower

BkW — Brake Kilowatts

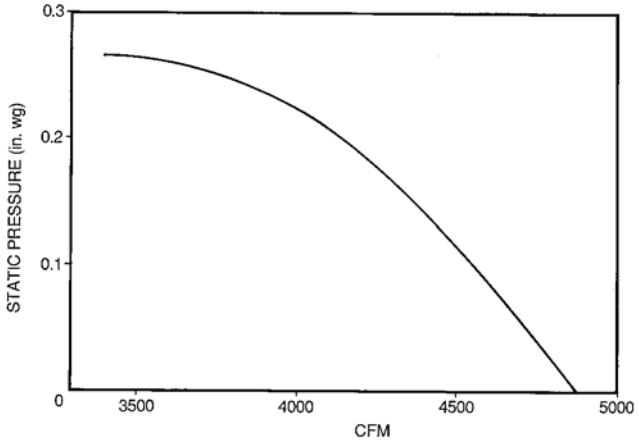
***Extensive motor and electrical testing on these units ensures that the full horsepower (brake kilowatt) range of the motors can be utilized with confidence. Using your fan motors up to the horsepower (brake kilowatt) ratings shown in this table will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected.

NOTE: All indoor-fan motors 5 hp and larger meet the minimum efficiency requirements as established by the Energy Policy Act of 1992 (EPACT) effective October 24, 1997.

EVAPORATOR-FAN MOTOR EFFICIENCY

MOTOR HORSEPOWER	MOTOR EFFICIENCY (%)
5 Hp	87.5
7.5 Hp	88.5
10.0 Hp	89.5

NOTE: All indoor-fan motors 5 hp and larger meet the minimum efficiency requirements as established by the Energy Policy Act of 1992 (EPACT) effective October 24, 1997.



Fan Performance Using Accessory Power Exhaust (PAE180−300)

ELECTRICAL DATA — PAE180−300

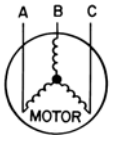
UNIT PAE	NOMINAL VOLTAGE (3 Ph, 60 Hz)	VOLTAGE RANGE		COMPRESSOR NO. 1		COMPRESSOR NO. 1A		COMPRESSOR NO. 2		OFM			IFM		POWER * EXHAUST		ELECTRIC HEAT		POWER SUPPLY	
		Min	Max	RLA	LRA	RLA	LRA	RLA	LRA	Qty	Hp	FLA (ea)	Hp	FLA	FLA	LRA	kW	FLA	MCA	MOCP†
180	208/230	187	253	32.1	195	—	—	20.7	156	3	0.5	1.7	5.0	15.8/15.8	—	—	—	—	82/82	110/110
															4.6	18.8	—	—	86/86	110/110
															—	—	26/34	71/82	109/122	110/125
															4.6	18.8	26/34	71/82	114/128	125/150
															—	—	42/56	117/135	166/155	175/175
															4.6	18.8	42/56	117/135	172/161	175/175
															—	—	56/75	156/180	176/200	200/225
															4.6	18.8	56/75	156/180	182/206	200/225
	460	414	508	16.4	95	—	—	10	70	3	0.5	0.8	5.0	7.9	—	—	—	—	41	50
															2.3	6.0	—	—	43	50
															—	—	32	39	59	60
															2.3	6.0	32	39	62	70
															—	—	55	66	76	90
															2.3	6.0	55	66	79	90
															—	—	80	96	106	125
															2.3	6.0	80	96	109	125
	575	518	633	12.0	80	—	—	8.2	54	3	0.5	0.75	5.0	6.0	—	—	—	—	31	40
															2.1	4.8	—	—	34	40
210	208/230	187	253	30.1	225	—	—	28.8	195	3	0.5	1.7	5.0	15.8/15.8	—	—	—	—	87/87	110/110
															4.6	18.8	—	—	92/92	110/110
															—	—	26/34	71/82	109/122	110/125
															4.6	18.8	26/34	71/82	114/128	125/150
															—	—	42/56	117/135	166/155	175/175
															4.6	18.8	42/56	117/135	172/161	175/175
															—	—	56/75	156/180	176/200	200/225
															4.6	18.8	56/75	156/180	182/206	200/225
	460	414	508	15.5	114	—	—	14.7	95	3	0.5	0.8	5.0	7.9	—	—	—	—	44	50
															2.3	6.0	—	—	47	60
															—	—	32	39	59	60
															2.3	6.0	32	39	61	70
															—	—	55	66	76	90
															2.3	6.0	55	66	79	90
															—	—	80	96	106	125
															2.3	6.0	80	96	109	125
	575	518	633	12.1	80	—	—	10.8	80	3	0.5	0.8	5.0	6.0	—	—	—	—	34	40
															2.1	4.8	—	—	36	40
240	208/230	187	253	42	239	—	—	33.6	225	2	1	6.6	7.5	25.0/25.0	—	—	—	—	124/124	150/150
															4.6	18.8	—	—	129/129	150/150
															—	—	26/34	71/82	124/134	150/150
															4.6	18.8	26/34	71/82	129/140	150/150
															—	—	42/56	117/135	178/166	200/175
															4.6	18.8	42/56	117/135	183/172	200/175
															—	—	56/75	156/180	187/211	200/225
															4.6	18.8	56/75	156/180	193/217	200/225
	460	414	508	19.2	125	—	—	17.3	114	2	1	3.3	7.5	13.0	—	—	—	—	61	80
															2.3	6	—	—	63	80
															—	—	32	39	65	80
															2.3	6	32	39	68	80
															—	—	55	66	82	90
															2.3	6	55	66	85	90
															—	—	80	96	112	125
															2.3	6	80	96	115	125
	575	518	633	13.8	80	—	—	13.5	80	2	1.0	3.4	7.5	10.0	—	—	—	—	48	60
															2.1	4.8	—	—	50	60
300	208/230	187	253	41.4	312	20.7	156	47.1	245	6	0.5	1.7	10	28.0/28.0	—	—	—	—	138/138	175/175
															4.6	18.8	—	—	143/143	175/175
															—	—	26/34	71/82	138/138	175/175
															4.6	18.8	26/34	71/82	143/143	175/175
															—	—	42/56	117/135	181/170	200/175
															4.6	18.8	42/56	117/135	187/176	200/200
															—	—	56/75	156/180	191/215	200/225
															4.6	18.8	56/75	156/180	197/221	200/225
	460	414	508	20	150	10.0	75	19.6	125	6	0.5	0.8	10	14.6	—	—	—	—	64	80
															2.3	6	—	—	66	80
															—	—	32	39	67	80
															2.3	6	32	39	70	80
															—	—	55	66	84	90
															2.3	6	55	66	87	100
															—	—	80	96	114	125
															2.3	6	80	96	117	125
	575	518	633	16.4	108	8.2	54	15.8	100	6	0.5	0.8	10	13.0	—	—	—	—	54	60
															2.1	4.8	—	—	56	70

* Electrical data is for DN series power exhaust, see next page for electrical data for AXB series power exhaust

LEGEND
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
IFM — Indoor (Evaporator) Fan Motor
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps . **OFM** — Outdoor (Condenser) Fan Motor
MOCP — Maximum Overcurrent Protection **RLA** — Rated Load Amps
NEC — National Electrical Code
*Heater capacity (kW) is based on heater voltage of 208 v, 240 v, 480 v, and 600 v. Heaters are rated at 240 v, 480 v, or 600 v. If power distribution voltage to unit varies from rated heater voltage, heater kW will vary accordingly. To determine heater capacity at actual unit voltage, multiply 240 v, 480 v, or 600 v capacity by multipliers found in table on page 174.
†Fuse or HACR circuit breaker.
NOTES:
1. In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. The Canadian units may be fuse or circuit breaker.
2. **Unbalanced 3-Phase Supply Voltage**
Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percent of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

EXAMPLE: Supply voltage is 460−3−60.



AB = 452 v
BC = 464 v
AC = 455 v

$$\text{Average Voltage} = \frac{452 + 464 + 455}{3} = \frac{1371}{3} = 457$$

Determine maximum deviation from average voltage.
(AB) 457 – 452 = 5 v
(BC) 464 – 457 = 7 v
(AC) 457 – 455 = 2 v
Maximum deviation is 7 v.
Determine percent voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{7}{457} = 1.53\%$$

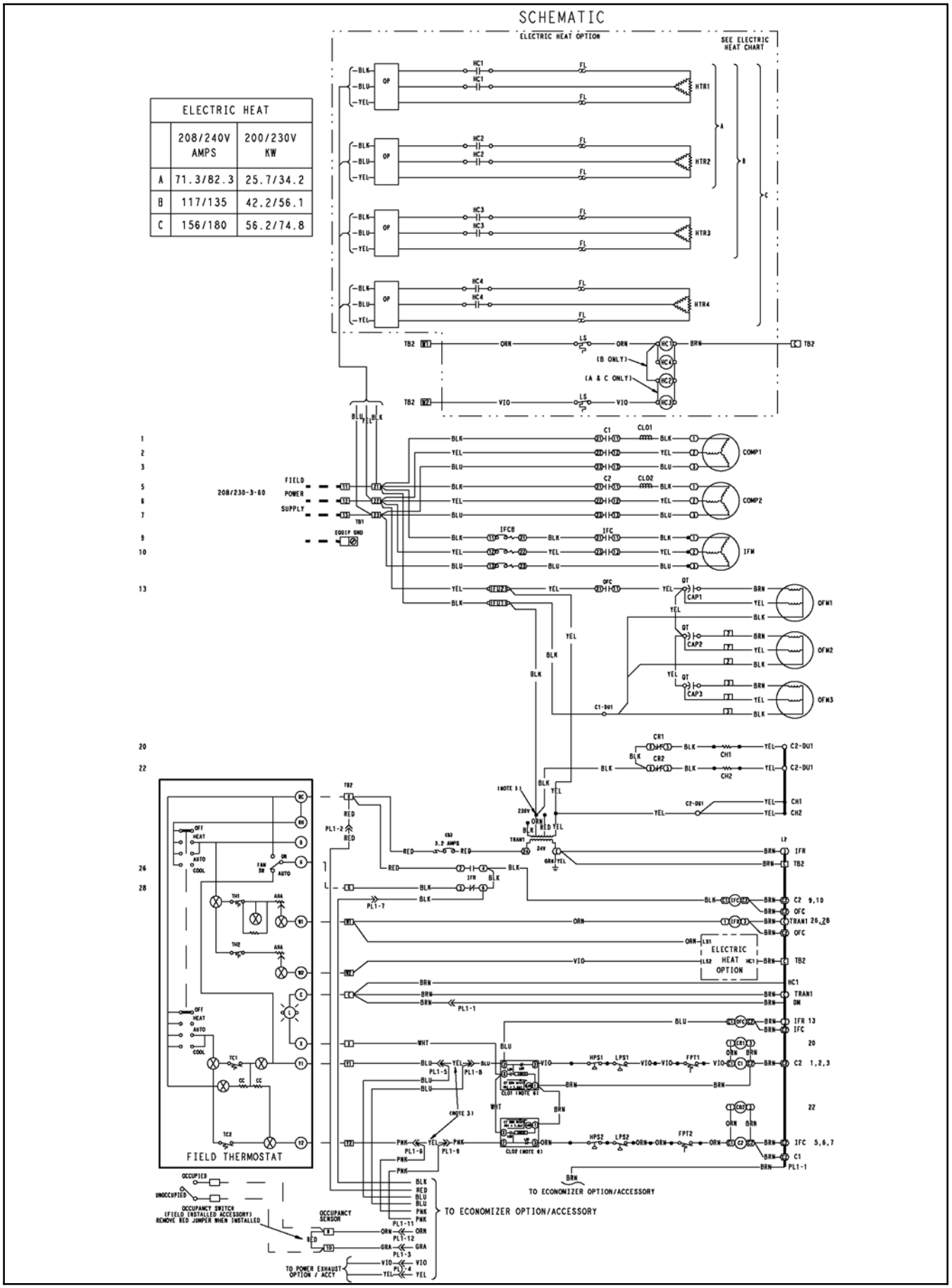
This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.
IMPORTANT: If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.
3. MCA calculation for PAE180−300 units with electric heaters over 50 kW = (1.25 x IFM amps) + (1.00 x heater FLA).

AXB SERIES POWER EXHAUST PERFORMANCE DATA

Model	Voltage	Application Usage	LRA	FLA	MCA	Fuse Size
AXB060PEH	208-230/1/60	180-300	24.9	5.0	6.3	10
AXB060PEL	460/1/60	180-300	N/A	2.2	2.8	5
AXB060PES	575/1/60	180-300	N/A	1.5	1.9	4

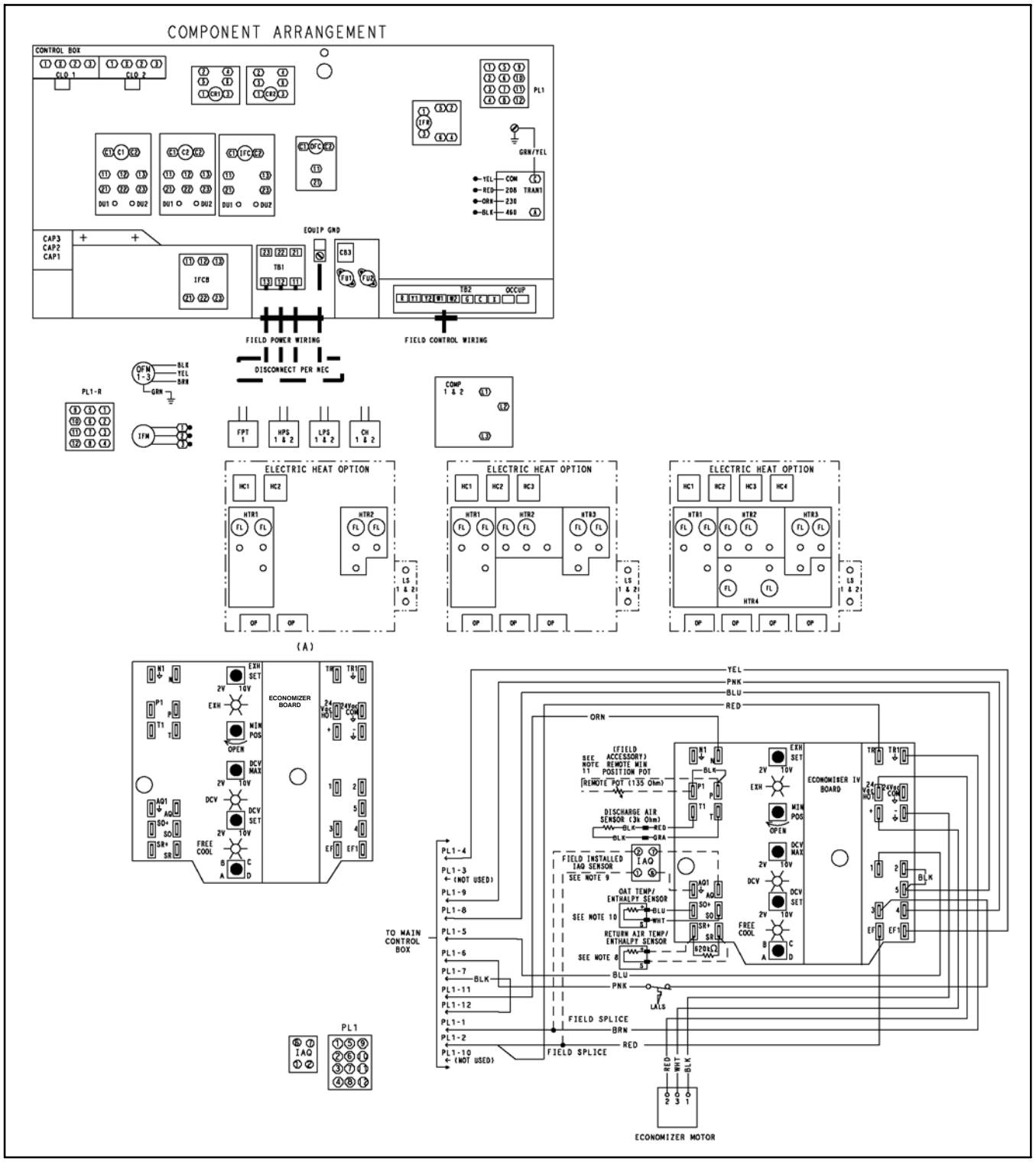
TYPICAL WIRING SCHEMATICS — PAE

Typical Wiring Schematic (PAE240, 208/230—3—60 Shown)



TYPICAL WIRING SCHEMATICS — PAE (cont)

Typical Component Arrangement (PAE240 Shown)



TYPICAL WIRING SCHEMATICS — PAE (cont)

LEGEND

AHA	— Adjustable, Heat Anticipator
C	— Contactor, Compressor
CAP	— Capacitor
CB	— Circuit Breaker
CC	— Cooling Compensator
CH	— Crankcase Heater
CLO	— Compressor Lockout
COMP	— Compressor Motor
CR	— Control Relay
DM	— Damper Motor
DU	— Dummy Terminal
EQUIP	— Equipment
FL	— Fuse Link
FPT	— Freeze Protection Thermostat
FU	— Fuse
GND	— Ground
HC	— Heater Contactor
HPS	— High-Pressure Switch
IAQ	— Indoor Air Quality Sensor
IFC	— Indoor Fan Contactor
IFCB	— Indoor Fan Circuit Breaker
IFM	— Indoor Fan Motor
IFR	— Indoor Fan Relay
L	— Light
LALS	— Low Temperature Lockout Switch
LOR	— Lockout Relay
LPS	— Low-Pressure Switch
LS	— Limit Switch
NEC	— National Electrical Code
OAT	— Outdoor Air Temperature Sensor
OCCUP	— Occupancy Sensor
OFC	— Outdoor Fan Contactor
OFM	— Outdoor Fan Motor
OP	— Overload Protection
PL	— Plug Assembly
PRI	— Primary
QT	— Quadruple Terminal
RAT	— Return Air Temperature Sensor
SW	— Switch
TB	— Terminal Block
TC	— Thermostat Cooling
TH	— Thermostat Heating
TRAN	— Transformer


Terminal (Marked)


Terminal (Unmarked)


Terminal Block


Splice

Factory Wiring

Field Wiring

Option/Accessory Wiring

To indicate common potential only; not to represent wiring.


Economizer Motor


Remote POT Field Accessory


OAT Sensor


Disch Air Sensor


RAT Accessory Sensor

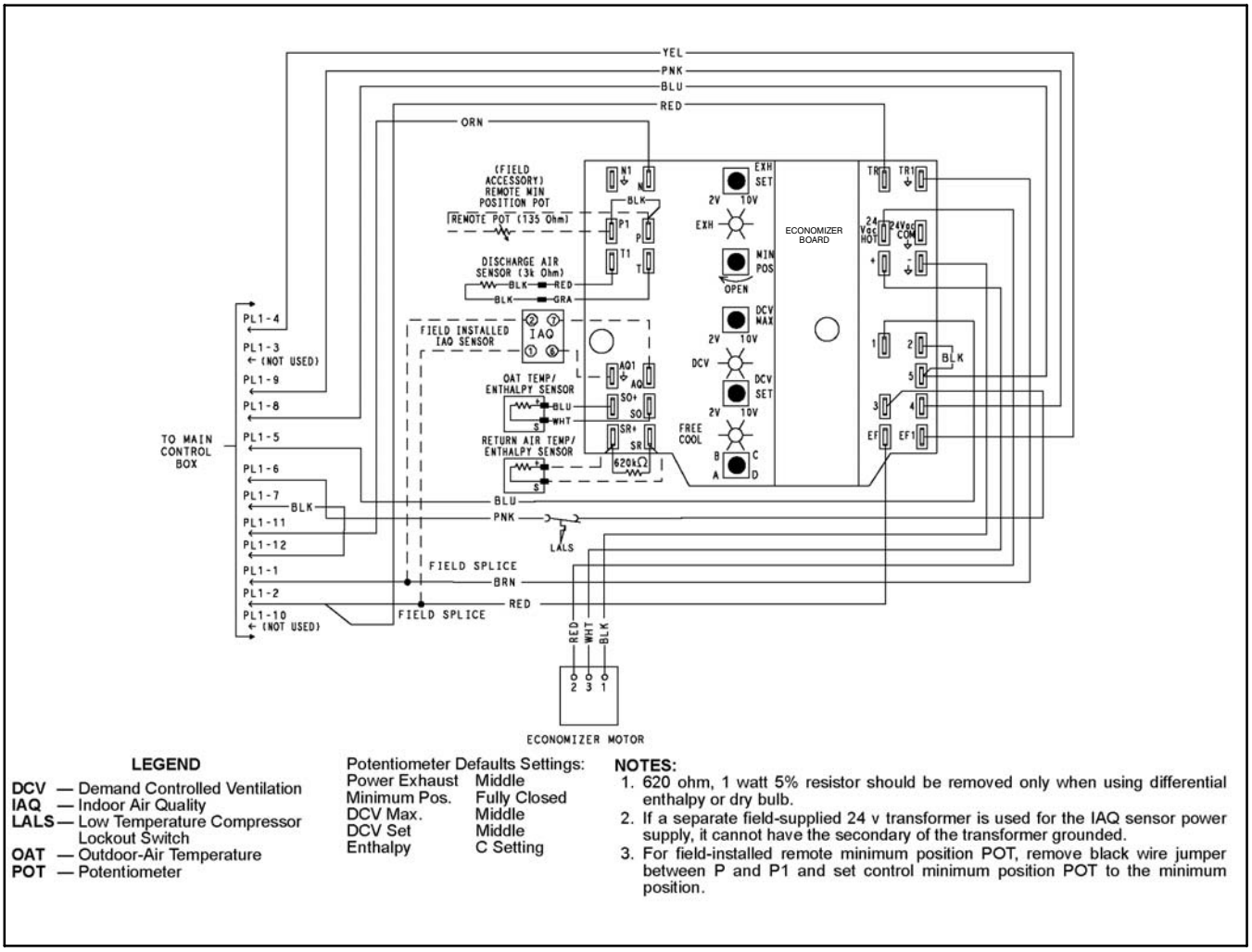

Low Ambient Lockout Switch

NOTES:

1. Compressor and/or fan motor(s) thermally protected. Three-phase motors protected against primary single phasing conditions.
2. If any of the original wire furnished must be replaced, it must be replaced with Type 90°C or its equivalent.
3. Jumpers are omitted when unit is equipped with economizer.
4. IFCB must trip amps is equal to or less than 140% FLA.
5. On TRAN1 use BLK lead or 460-v power supply and ORN lead for 575-v power supply.
6. The CLO locks out the compressor to prevent short cycling on compressor overload and safety devices; before replacing CLO check these devices.
7. Number(s) indicates the line location of used contacts. A bracket over (2) numbers signifies a single pole, double throw contact. An underlined number signifies a normally closed contact. Plain (no line) number signifies a normally open contact.
8. 620 Ohm, 1 watt, 5% resistor should be removed only when using differential enthalpy or dry bulb.
9. If a separate field supplied 24 v transformer is used for the IAQ sensor power supply, it cannot have the secondary of the transformer grounded.
10. OAT sensor is shipped inside unit and must be relocated in the field for proper operation.
11. For field installed remote minimum position POT. Remove black wire jumper between P and P1 and set.

TYPICAL WIRING SCHEMATICS — PAE (cont)

Economizer (PAE180—300)



LEGEND

DCV — Demand Controlled Ventilation
IAQ — Indoor Air Quality
LALS — Low Temperature Compressor Lockout Switch
OAT — Outdoor-Air Temperature
POT — Potentiometer

Potentiometer Defaults Settings:

Power Exhaust	Middle
Minimum Pos.	Fully Closed
DCV Max.	Middle
DCV Set	Middle
Enthalpy	C Setting

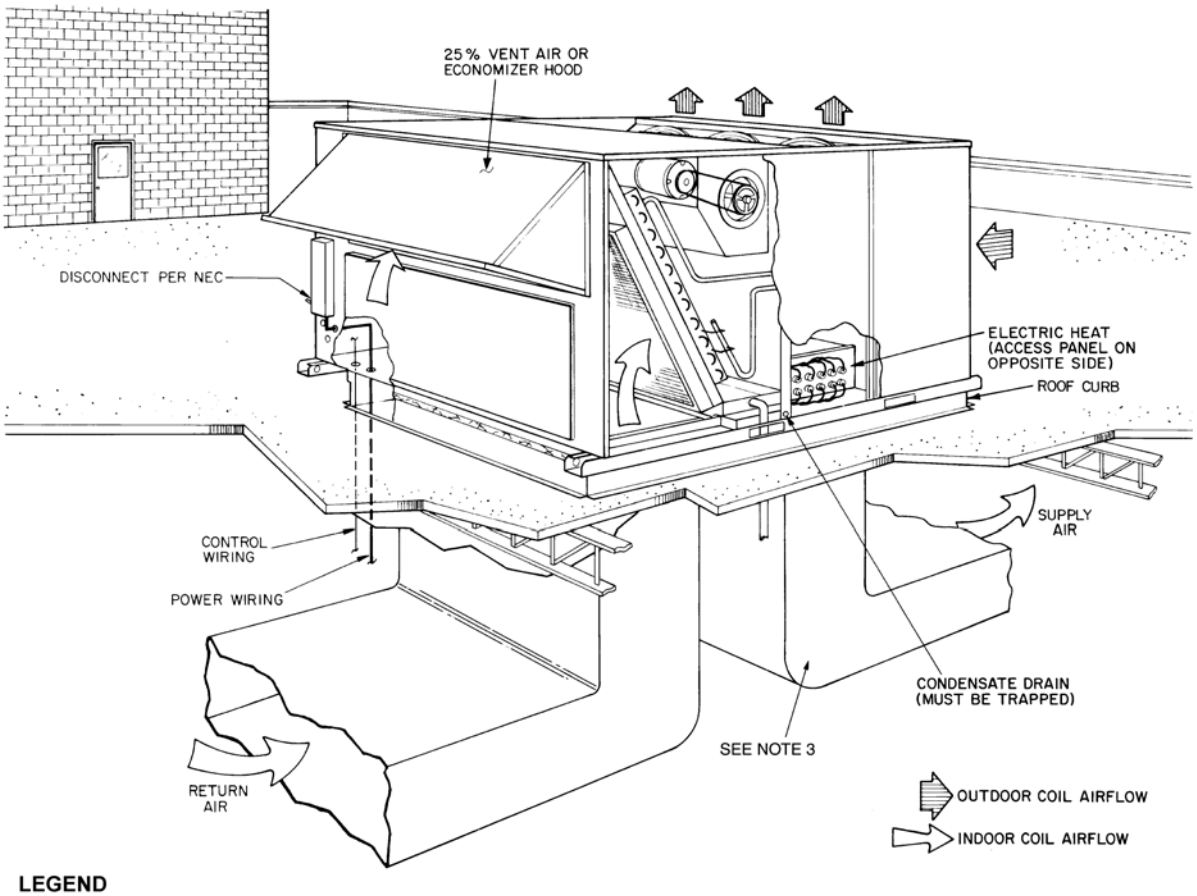
NOTES:

1. 620 ohm, 1 watt 5% resistor should be removed only when using differential enthalpy or dry bulb.
2. If a separate field-supplied 24 v transformer is used for the IAQ sensor power supply, it cannot have the secondary of the transformer grounded.
3. For field-installed remote minimum position POT, remove black wire jumper between P and P1 and set control minimum position POT to the minimum position.

NOTE: Wiring is for the DN Series Economizer

TYPICAL PIPING AND WIRING — PAE

Typical Piping and Wiring PAE180–300 (PAE180 Shown)



LEGEND

NEC — National Electrical Code

NOTES:

1. Illustration shown is a general guide only and is not intended to include all details for any specific installation.
2. Installation must comply with all applicable codes.
3. A 90-degree elbow **must** be installed on the supply ductwork below the unit discharge for units equipped with electric heat.

CONSTANT VOLUME APPLICATION

PART 1 − GENERAL

1.01 SYSTEM DESCRIPTION

Unit is an outdoor rooftop mounted, electrically controlled heating and cooling unit utilizing scroll hermetic compressors for cooling duty and electric heat accessories for heating duty. Supply air shall be discharged downward or horizontally (with horizontal supply/return curb adapter assembly), as shown on contract drawings. Standard unit shall include a manual outdoor air inlet.

1.02 QUALITY ASSURANCE

A. Unit shall be rated in accordance with ARI Standards 270 and 360 and all units shall be designed in accordance with UL Standard 1995.

NOTE: Size 300 units are beyond the scope of ARI certification guidelines.

B. Unit shall be designed to conform to ASHRAE 15.

C. Unit shall be ETL and ETL, Canada tested and certified in accordance with ANSI Z21.47 Standards as a total package.

D. Roof curb shall be designed to conform to NRCA Standards.

E. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.

F. Unit casing shall be capable of withstanding 500−hour salt spray exposure per ASTM B117 (scribed specimen).

G. Unit shall be manufactured in a facility registered to ISO 9001:2000.

1.03 DELIVERY, STORAGE, AND HANDLING

Unit shall be stored and handled per manufacturer's recommendations.

PART 2 − PRODUCTS

2.01 EQUIPMENT (STANDARD)

A. General: Each unit shall be a factory assembled, single piece heating and cooling unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, refrigerant charge (R−22), and special features required prior to field start−up.

B. Unit Cabinet:

1. Constructed of galvanized steel (G90 − 1.8 oz. of zinc per square foot of sheet metal), bonderized and primer coated on both sides and coated with a baked polyester thermosetting powdercoating finish on the outer surface.
2. Indoor blower compartment interior surfaces shall be insulated with a minimum 1/2−in. thick, 1 lb density fiberglass insulation. Fiberglass insulation shall be bonded with a thermosetting resin (8 to 12% by weight nominal, phenol formaldehyde typical), and coated with an acrylic or other material that meets the NFPA 90 flame retardance requirements and has an "R" Value of 3.70.
3. Cabinet panels shall be easily removable for servicing. Cabinet panels are minimum 20 gage. Panels shall have 1/2−in. thick, 1.5−lb. density insulation.
4. Filters shall be accessible through an access panel.
5. Holes shall be provided in the base rails (minimum 12 gage) for rigging shackles to facilitate overhead rigging.
6. Unit shall contain a sloped drain pan, to prevent standing water from accumulating. Pan shall be fabricated of hot dipped zinc coated minimum spangle steel. Zinc coating shall be G90 designation according to ASTM Standard A653. Unit shall contain a factory installed nonferrous main condensate drain connection.

C. Fans:

1. Indoor blower (evaporator fan):
   a. Fan shall be belt driven. Belt drive shall include an adjustable pulley. The standard fan drive shall have a factory installed low−medium external static pressure capable fan drive. The alternate fan drive option shall have a factory installed external high static pressure capable fan drive.
   b. Fan wheel shall be made from steel with a corrosion resistant finish. It shall be a dynamically balanced, double inlet type with forward curved blades.
2. Condenser fans shall be of the direct driven propeller type, with corrosion resistant blades riveted to corrosion resistant steel supports. They shall be dynamically balanced and discharge air upwards.

D. Compressor(s):

1. Fully hermetic, scroll type, internally protected.
2. Factory spring−shock mounted and internally spring mounted for vibration isolation.
3. On electrically and mechanically independent refrigerant circuits.
4. All compressors shall have 70 W crankcase heaters.

E. Coils:

1. Standard evaporator and condenser coils shall have aluminum plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.
2. Coils shall be leak tested at 150 psig and pressure tested at 450 psig.

F. Refrigerant Components: Refrigerant circuit components shall include:

1. Thermostatic expansion valve (TXV).
2. Filter driers.
3. Gage port and connections on suction, discharge, and liquid lines.

G. Filter Section: Standard filter section shall consist of 2 sizes of factory installed 2−in. thick throwaway fiberglass filters of commercially available sizes. Filters shall be approximately 10% efficient with an airside pressure drop of approximately 0.07 in. wg (clean).

H. Controls and Safeties:

1. Unit Controls:
   a. Economizer control (optional).
   b. Capacity control (2 step).
   c. Unit shall be complete with self contained low voltage control circuit.

I. Safeties:
   a. Unit shall incorporate a solid state compressor lockout which provides reset capability at the space thermostat, should any of the following safety devices trip and shut off compressor:
      (1.) Compressor lockout protection provided for either internal or external overload.
      (2.) low pressure switch.
      (3.) Dual freezestats (evaporator coil). 4) High pressure switch.
   b. Supply air thermostat shall be located in the unit.

J. Operating Characteristics:
   (1.) Unit shall be capable of starting and running at 120°F ambient outdoor temperature per maximum load criteria of ARI Standard 360.
   (2.) Unit with standard controls will operate in cooling down to an outdoor ambient temperature of 40°F.
   (3.) Unit shall be provided with fan time delay to prevent cold air delivery.

K. Electrical Requirements:

All unit power wiring shall enter unit cabinet at a single location.

L. Motors:
   (1.) Compressor motors shall be cooled by refrigerant gas passing through motor windings and shall have line break thermal and current overload protection.
   (2.) All fan motors shall have permanently lubricated, sealed bearings and inherent automatic reset thermal overload protection or manual reset calibrated circuit breakers.
   (3.) All indoor fan motors 5 hp and larger shall meet the minimum efficiency requirements as established by the Energy Policy Act of 1992 (EPACT) effective October 24, 1997.

M. Special Features
   1. Integrated Economizers
      a. Integrated integral modulating type capable of simultaneous economizer and compressor operation.
      b. Available as a factory−installed option in vertical supply/return configuration only. (Available as a field−installed accessory for dedicated horizontal and/or vertical supply return configurations.)
      c. Includes all hardware and controls to provide cooling with outdoor air.
      d. Equipped with low−leakage dampers, not to exceed 2% leakage at 1 in. wg pressure differential.
      e. Capable of introducing up to 100% outdoor air.
      f. Economizer shall be equipped with a barometric relief damper.
      g. Designed to close damper(s) during loss−of power situations with spring return built into motor.
      h. Dry bulb outdoor−air temperature sensor shall be provided as standard. Outdoor air sensor set point is adjustable and shall range from 40° to 100° F. For the economizer, the return air sensor, indoor enthalpy sensor, and outdoor enthalpy sensor shall be provided as field installed accessories to provide enthalpy control, differential enthalpy control, and differential dry bulb temperature control.
      i. Economizer controller shall use a mixed air thermistor mounted on the evaporator fan housing to control economizer operation to a supply air temperature of 55° F.
      j. The economizer shall have a gear−driven parallel blade design.
      k. Economizer controller shall provide control of internal building pressure through its accessory power exhaust function. Factory set at 100%, with a range of 0% to 100%.
      l. Economizer Controller Occupied Minimum Damper Position Setting maintains the minimum airflow into the building during occupied period providing design ventilation rate for full occupancy (damper position during heating). A remote potentiometer may be used to override the set point.
      m. Economizer Controller Unoccupied Minimum Damper Position Setting − The economizer damper shall be completely closed when the unit is in the occupied mode.
      n. Economizer Controller IAQ/DCV Maximum Damper Position Setting − Setting the maximum position of the damper prevents the introduction of large amounts of hot or cold air into the space. This position is intended to satisfy the base minimum ventilation rate.
      o. Economizer controller IAQ/DCV control modulates the outdoor−air damper to provide ventilation based on the optional 2 to 10 vdc CO_2 sensor input.
      p. Compressor lockout sensor (opens at 35° F, closes at 50° F).
      q. Actuator shall be direct coupled to economizer gear, eliminating linkage arms and rods.
      r. Control LEDs:
         1. When the outdoor−air damper is capable of providing free cooling, the “Free Cool” LED shall illuminate.
         2. The IAQ LED indicates when the module is on the DCV mode.
         3. The EXH LED indicates when the exhaust fan contact is closed.
      s. Remote Minimum Position Control − A field−installed accessory remote potentiometer shall allow the outdoor−air damper to be opened or closed beyond the minimum position in the occupied mode for modified ventilation.

OPERATING SEQUENCE, SIZE 072−150 UNITS Cooling, Units Without Economizer − When thermostat calls for cooling, terminals G and Y1 are energized. The indoor fan contactor (IFC) and compressor contactor are energized and indoor fan motor, compressor, and outdoor fan starts. The outdoor fan motor runs continuously while unit is cooling. For units with 2 stages of cooling, if the thermostat calls for a second stage of cooling by energizing Y2, compressor contactor no. 2 (C2) is energized and compressor no. 2 starts.

Cooling, Units With Economizer − When free cooling is not available, the compressors will be controlled by the zone thermostat. When free cooling is available, the outdoor air damper is modulated by the economizer control to provide a 50 to 55°F mixed air temperature into the zone. As the mixed air temperature fluctuates above 55 or below 50°F, the dampers will be modulated (open or close) to bring the mixed air temperature back within control.

If mechanical cooling is utilized with free cooling, the outdoor air damper will maintain its current position at the time the compressor is started. If the increase in cooling capacity causes the mixed air temperature to drop below 45°F, then the outdoor air damper position will be decreased to the minimum position. If the mixed air temperature continues to fall, the outdoor air damper will close. Control returns to normal once the mixed air temperature rises above 48°F.

If optional power exhaust is installed, as the outdoor air damper opens and closes, the power exhaust fans will be energized and deenergized.

If field installed accessory CO_2 sensors are connected to the Economizer control, a demand controlled ventilation strategy will begin to operate. As the CO_2 level in the zone increases above the CO_2 set point, the minimum position of the damper will be increased proportionally. As the CO_2 level decreases because of the increase in fresh air, the outdoor air damper will be proportionally closed.

For Economizer operation, there must be a thermostat call for the fan (G). If the unit is occupied and the fan is on, the damper will operate at minimum position. Otherwise, the damper will be closed when the thermostat is satisfied.

When the Economizer control is in the occupied mode and a call for cooling exists (Y1 on the thermostat), the control will first check for indoor fan operation. If the fan is not on, then cooling will not be activated. If the fan is on, then the control will open the Economizer damper to the minimum position.

On the initial power to the Economizer control, it will take the damper up to $2_1/_2$ minutes before it begins to position itself. Any change in damper position will take up to 30 seconds to initiate. Damper movement from full closed to full open (or vice versa) will take between $1_1/_2$ and $2_1/_2$ minutes.

If free cooling can be used as determined from the appropriate changeover command (switch, dry bulb, enthalpy curve, differential dry bulb, or differential enthalpy), then the control will modulate the dampers open to maintain the mixed air temperature set point at 50 to 55°F.

If there is a further demand for cooling (cooling second stage − Y2 is energized), then the control will bring on compressor stage 1 to maintain the mixed air temperature set point. The Economizer damper will be open at maximum position. Economizer operation is limited to a single compressor.

OPERATING SEQUENCE, PAE180−300 Cooling, Units Without Economizer − When thermostat calls for cooling, terminals G and Y1 are energized. The indoor (evaporator) fan contactor (IFC) and compressor contactor no. 1 (C1) are energized, and evaporator fan motor (IFM), compressor no. 1 and condenser fan(s) start. The condenser fan motor(s) runs continuously while unit is cooling. When the thermostat calls for a second stage of cooling by energizing Y2, compressor contactor no. 2 (C2) is energized and compressor no. 2 starts.

Cooling, Units With Economizer − When free cooling is not available, the compressors will be controlled by the zone thermostat. When free cooling is available, the outdoor air damper is modulated by the Economizer control to provide a 50 to 55°F mixed air temperature into the zone. As the mixed air temperature fluctuates above 55 or below 50°F, the dampers will be modulated (open or close) to bring the mixed air temperature back within control.

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