Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 08/03/16

Marvair®
AIRXCEL®, Inc.
ISO 9001 2000 REGISTERED COMPANY

Coastal Environmental Package and Corrosion Resistant Coils

May 2007

For wall mounted air conditioners and heat pumps to be installed in close proximity to the ocean or other corrosive environments, Marvair offers the Coastal Environmental Package. This package extends the life of the air conditioner or heat pump by providing a corrosion protection coating or finish on the components located in the outdoor compartment, including the outdoor coil. The package includes the following:

- Dacromet® external fasteners
- A sealed condenser fan motor
- A sealed electrical controls compartment
- A two layer epoxy/urethane applied to all exposed components in the outdoor condenser compartment
- An impregnated polyurethane coating applied to the outdoor coil.

Marvair offers an aluminum-impregnated polyurethane (brand name Blygold® PoluAl XT) protective coil coating. Detailed information on the properties and advantages of the PoluAl XT can be found at www.blygoldamerica.com. The thin (1 mil) coating has a negligible effect on pressure drop and heat transfer of the coated coil. The aluminum-impregnated polyurethane coating is flexible and UV and impact resistant.

The exposed metallic components in the condenser section are first coated with a two part polyamide epoxy and finished with a two part acrylic urethane. This epoxy/urethane system is resistant to alkalis, salts, hydrogen sulfide and moisture, is UV resistant and is manufactured by ICI Devoe Coatings.

All AVP units can be ordered with the Coastal Environmental Package. Please allow 4 additional weeks for units with the Coastal Environmental Package.

A coated outdoor coil is included in the Coastal Environmental Package. However, if the complete corrosion protection is not required, the unit can be ordered with only a corrosion resistant condenser coil. Please allow 4 additional weeks for units with coated coils.

AVPA24ACA050N-A5-500VAR

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Marvair® AIRXCEL™, Inc.
ISO 9001:2008 REGISTERED COMPANY

ComPac® I & ComPac® II 2 to 6 To Vertical Wall Mount Air Conditione

R-410A Refrigerant

Models AVPA24-30-36-42-48-60-72 (Single Stage Compressor)
Models HVEA24-30-36-42-49-60 (Single Stage Compressor)
Models HVESA36-42-49-60 (2-Stage Compressor)

General Description

The Marvair® ComPac® I and ComPac® II air conditioners are used primarily to cool electronic and communication equipment shelters. Due to the high internal heat load, these shelters require cooling even when outside temperatures drop below 60°F (15°C). The ComPac I and ComPac II air conditioners have the necessary controls and components for operation during these (less than 60°F [15°C]) temperatures. All models use the non-ozone depleting R-410A refrigerant.

The primary difference between the ComPac I and the ComPac II units is that the ComPac® II air conditioner has a factory installed economizer. When cool and dry, the economizer uses outside air to cool the shelter. The economizer provides temperature control, energy cost savings, and increased reliability by decreasing the operating hours of the compressor and the condenser fan. The ComPac I and ComPac II air conditioners are problem solvers for a wide range of conditions and applications. To insure proper operation and optimum performance, all economizers are non-removable, factory installed and tested. In addition, factory and field installed accessories can be used to meet specific requirements.

AVPA36ACA-100C

The HVEA and HVESA models are Marvair's most efficient wall mount air conditioners. Electronically commutated indoor fan motors combined with highly efficient scroll compressors result in Energy Efficiency Ratios (EER's) of up to 11.75.

Models HVESA36-42-49-60 have a 2-stage compressor with first stage cooling approximately 65% of the total cooling capacity. The 2-stage compressor provides lower start-up amps which can be critical when operating with a generator. The two stage compressor can also reduce energy costs and is able to more precisely match the cooling capacity of the air conditioner with the heat load in the shelter. Both ComPac I and ComPac II units are available with 2 stage compressors.

Safety Listed and Energy Certified

All ComPac air conditioners are built to UL standard 1995, 2nd edition and CAN/CSA C22, No. 236-5, 2nd edition. For energy efficiency and performance, the units are tested and rated in accordance to the ANSI/ARI (Air-Conditioning and Refrigeration Institute) Standard 390- 2003 (Single Package Vertical Units). All units meet or exceed the efficiency requirements of ANSI/ASHRAE/IESNA 90.1.2007. The ComPac I and ComPac II air conditioners are commercial units and are not intended for use in residential applications.

*ComPac® II air conditioner only

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Standard Features

Designed for Operation in Low Ambient Conditions

- Low ambient control cycles condenser fan to maintain proper refrigerant pressures. Allows operation in mechanical cooling (compressor) down to 0ºF (-18ºC). Note: low temperature operation is affected by ambient conditions, e.g. wind and humidity.
- Three minute by-pass of the low pressure switch for start-up of compressor when outdoor temperatures are below 55°F (13°C).
- Factory built-in economizer.*

High Efficiency

- High efficiency compressor.
- Lanced fins standard on all evaporator and condenser coils.

Built-in Reliability

- High pressure switch and low pressure switch with lockout protects refrigerant circuit.
- Adjustable .03 to ten minute delay on make for short cycle protection.

Remote Alarm Capability

- Dry contacts can be used for remote alarm or notification upon air conditioner lockout.

Ease of Installation

- Sloped top with flashing eliminates need of rainhood.
- Built-in mounting flanges facilitate installation and minimize chance of water leaks.
- Supply and return openings exactly match previous models.
- Factory installed disconnect on all units.

Rugged Construction

- Copper tube, aluminum fin evaporator & condenser coils.
- Field or factory installed heaters on discharge side of evaporator coil (optional)
- Baked on neutral beige finish galvanneal steel for maximum cabinet life. (Other finishes are available.)

Ease of Service

- Service access valves are standard.
- Standard 2” (50 mm) pleated filter with a MERV rating of 7 changeable from outside.
- All major components are readily accessible.
- Front Control Panel allows easy access and complies with NEC clearance codes on redundant side-by-side systems.
- LEDs indicate operational status and fault conditions.
- Foiled backed insulation on the indoor air path.

*ComPac® II air conditioner only

A Marvair® First – Factory Installed Economizer

Marvair’s ComPac® II air conditioner has been the industry standard since its introduction in 1986. Tens of thousands of ComPac II air conditioners are in operation from the metropolitan areas of North America to the deserts of the Mid-East to the Siberian tundra. Here’s how the economizer works:

On a signal from the wall mounted indoor thermostat that cooling is required, either mechanical cooling with the compressor or free cooling with the economizer is provided. A factory installed enthalpy controller determines whether the outside air is sufficiently cool and dry to be used for cooling. If suitable, the compressor is locked out and the economizer damper opens to bring in outside air. Integral pressure relief allows the interior air to exit the shelter, permitting outside air to enter the shelter. The temperature at which the economizer opens is adjustable from 63°F (17°C) at 50% Relative Humidity to 73°F (23°C) at 50% Relative Humidity.

After the enthalpy control has activated and outside air is being brought into the building, the mixed air sensor measures the temperature of the air entering the indoor blower and then modulates the economizer damper to mix the right proportion of cool outside air with warm indoor air to maintain 50-63°F (10 - 17°C) air being delivered to the building. This prevents shocking the electronic components with cold outside air. The compressor is not permitted to operate when the economizer is functioning.

If the outside air becomes too hot or humid, the economizer damper closes completely, or to a minimum open position with an optional minimum position potentiometer, and mechanical cooling is activated.

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Savings with an Economizer

The following table shows the annual electrical cost of cooling a 10 ft. x 20 ft. x 9 ft. (3m x 6m x 2.7 shelter in nine cities in the US. Costs are shown for an air conditioner without an economizer (ComPac units), for an air conditioner with an economizer (ComPac II units) and the savings. The savings do not include any demand charges. The savings are based on the electrical usage of a five ton air conditioner and an electric rate of $.10 per kilowatt-hour, the approximate average commercial rate in the US.

Hours of Operation	Atlanta, GA	Boston, MA	Chicago, IL	Dallas, TX	Denver, CO	Houston, TX
Annual Compressor & Condenser Motor Run Time without Economizer (Hrs.)	6,531	6,348	6,361	6,628	6,472	6,655
Annual Compressor & Condenser Motor Run Time with Economizer (Hrs.)	3,841	2,153	2,424	3,798	750	4,970
Run Time Savings with the Economimizer (Hrs.)	2,690	4,195	3,937	2,830	5,722	1,685
Annual Costs Saving ($) of 9.0 EER unit with an Economizer (ComPac II)						
Annual Operating Cost 9.0 EER Unit without Economizer ($)	$4,100.00	$3,985.00	$4,792.00	$4,161.00	$3,657.00	$4,178.00
Annual Operating Cost 9.0 EER with Economizer	$2,685.00	$1,784.00	$2,315.00	$2,671.00	$940.00	$3,291.00
Annual Savings using 9.0 EER Unit with Economizer	$1,415.00	$2,201.00	$2,477.00	$1,490.00	$2,717.00	$887.00

Hours of Operation	Los Angeles, CA	Miami, FL	Phoenix, AZ	Pittsburgh, PA	Seattle, WA	St. Louis, MO
Annual Compressor & Condenser Motor Run Time without Economizer (Hrs.)	6,467	6,779	6,765	6,386	6,465	6,472
Annual Compressor & Condenser Motor Run Time with Economizer (Hrs.)	3,862	6,391	3,106	1,929	1,654	2,716
Run Time Savings with the Economimizer (Hrs.)	2,605	388	3,659	4,457	4,811	3,756
Annual Costs Saving ($) of 9.0 EER unit with an Economizer (ComPac II)						
Annual Operating Cost 9.0 EER Unit without Economizer ($)	$4,060.00	$4,255.00	$4,247.00	$4,009.00	$3,653.00	$4,063.00
Annual Operating Cost 9.0 EER with Economizer	$2,686.00	$4,051.00	$2,315.00	$1,667.00	$1,368.00	$2,090.00
Annual Savings using 9.0 EER Unit with Economizer	$1,374.00	$204.00	$1,932.00	$2,342.00	$2,285.00	$1,973.00

Shelter Metrics:
- 10′ x 20′ x 9′ building
- Internal heat gain (electronics load): 12,000 watts.
- Building surface area (excluding floor area): 740 ft²
- R-Value of walls and ceiling: R-12
- Internal shelter temperature (Thermostat set point): 75ºF

Air Conditioner Metrics:
- ComPac II Economizer setting: 57ºF (wet bulb)
- A/C unit capacity: 60,000 BTUH (5 tons) with 1-stage compressor
- Nominal EER (unit efficiency): 9.0 (models AVPA)
- Cost of power: $.10 per KWH

Operation of the 2-Stage Compressor Air Conditioners with a CommStat 4™ Lead/Lag Thermostat Controller

Marvair's HVESA air conditioners have 2-stage compressors. These units can provide substantial energy savings and better control of temperature and humidity by matching the cooling requirement with the performance of the air conditioner. First stage is typically 65% of the total (2-stage) capacity of the air conditioner. When operated from power supplied by a generator, starting the air conditioner in 1-stage means lower start-up amps.

When two, 2-stage air conditioners are controlled by a CommStat 4 lead/lag controller in a redundant application, one of the air conditioners is the lead unit and the second is the lag unit. On a call for cooling, the lead unit starts operation in the 1-stage (low capacity). If the temperature in the building continues to rise above the set point temperature, the 1-stage (low capacity) of the lag unit will be initiated. When the temperature in the building drops to the set point, the air conditioners will turn off. On a subsequent call for cooling the process will repeat.

If the set point temperature is not reached with 1-stage capacity operation of both air conditioners after approximately six minutes (this time period is field adjustable), the lead air conditioner will commence operation in 2-stage (full capacity). If the temperature in the building continues to rise past the setpoint, the lag unit will switch to 2-stage cooling approximately six minutes (field adjustable) after it began operation. At that time, both air conditioners are operating in maximum capacity.

When the temperature in the building is satisfied, both units will turn off.

If the units have economizers (ComPac II air conditioners), the enthalpy sensor determines whether to use outside air or use mechanical cooling. When the economizer is used, the compressors do not operate.

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Controllers and Thermostats

Controllers

CommStat 4 Telecom HVAC Controller
P/N S/7846

The CommStat 4 HVAC controller is designed specifically for controlling two redundant air conditioners, heat pumps or air conditioners with 2-stage compressors in a telecommunication shelter. The CommStat 4 has seven outputs for remote alarms or notification. Status LED's indicate HEAT, COOL, POWER and the LEAD unit. When a fault is detected, an alarm LED flashes and the LCD screen displays the fault.

The CommStat 4 uses RS-485 communications via a RJ11 jack. It is capable of interfacing with a secondary control board which can interpret Marvair's communication protocol and provide Internet capability. **(Note: the end user must provide the interface board and the Graphical User Interface (GUI) software to gain access via the Internet).** It can be daisy chained with a second CommStat 4 controllers for controlling up to four air conditioners in one shelter. When two CommStat 4 controllers are daisy chained together, one is the MASTER and the other controller is the SLAVE. Any settings to the MASTER unit immediately take effect on the SLAVE unit. See the CommStat 4 Product Data Sheet for complete details.

CommStat3™ Lead/Lag Microprocessor Controller
P/N S/04581

Solid state controller designed to operate a fully or partially redundant air conditioning system. Insures equal wear on both air conditioners while allowing the lag unit to assist upon demand. Lead/lag changeover is factory set at 7 days, but is field programmable in 1/2 day increments from 1/2 to 7 days. The CommStat 3™ Controller has LED's to indicate status & function, digital display of temperature, a comfort override button for energy savings, five alarm relays, a built in temperature sensor and is fully programmable. See CommS 3™ Controller Product Data Sheet for details o operation & installation.

LL357D4 Lead/Lag Controller

Two stage heat and cool thermostat with solid state module for redundant operation. (See the LL357D4 Product Data Sheet for details.)

Thermostats & Thermostat Guards

Note: All air conditioners with 2-stage compressors, models HVESA, require a 2 stage cooling thermostat.

Thermostat P/N 50123

Digital thermostat. 1 stage heat, 1 stage cool. 7 day programmable. Fan switch: Auto & On. Auto-change over. Keypad lockout. Non-volatile program memory.

Thermostat P/N 50107

Digital thermostat. 2 stage heat, 2 stage cool. 7 day programmable. Fan switch: Auto & On. Auto-change over. Status LED's. Backlit display. Programmable fan. Non-volatile program memory.

Thermostat Guard P/N 50092

Thermostat guard for use with the 50123 and 50107 thermostats.

Thermostat P/N 50218

Digital, non-programmable thermostat. 1 stage cool and 1 stage heat. Auto-changeover.

Digital Humidistat P/N 50254

To be used with units with hot gas or electric reheat. Programmable dehumidistatand ventilation controller. Permanent memory retention of set points.Humidity sensor can be field calibrated. High & low dehumidification set points. Outdoor temperature and humidity sensor included. °F or °C selectable.

Thermostat P/N 50252

Non-programmable digital thermostat with backlit display. 2 stage heat and 2 stage cool. Auto changeover.

Accessories

Supply Grilles

For AVPA24
20" x 8" (508 mm x 203 mm) P/N 80674

For AVPA30,36 and HVEA24
28" x 8" (711 mm x 203 mm) P/N 80675

For AVPA42,48,60,72 and HVEA30, 36, 42, 49, 60
30" x 10" (762 mm x 254 mm) P/N 80676

Return Grilles

For AVPA24
20" x 12" (508 mm x 305 mm) P/N 80677

For AVPA30,36 and HVEA24
28" x 14" (711 mm x 356 mm) P/N 80678

For AVPA42,48,60,72 and HVEA30, 36, 42, 49, 60
30" x 16" (762 mm x 406 mm) P/N 80679

Return Filter Grilles

Used when filter must be changed from the interior. Not recommended for ComPac® II air conditioner. Note: Filter used in Return Filter Grille is 1" (25 mm) thick.

For AVPA24
20" x 12" (508 mm x 305 mm) P/N 80671

For AVPA30,36 and HVEA24
28" x 14" (711 mm x 356 mm) P/N 80672

For AVPA42,48,60,72 and HVEA30, 36, 42, 49, 60
30" x 16" (762 mm x 406 mm) P/N 80673

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Accessories (cont'd)

Security Cages. Deters theft of the air conditioner and components. Constructed of 1" by 11 gauge square tube and 3/4", #9 expanded metal. Hinges and latch are made from steel plate. The complete cage is powder coated for longevity and to match the color of Marvair air conditioners. Field installed.

Options

The ComPac® I and ComPac® II air conditioners were designed and are built to stringent requirements of the communications/electronic shelter. Applications occur that have special requirements. Numerous options are available for the ComPac I and ComPac II air conditioners that meet these special needs.

Hard Start Kit - Used on single phase equipment to give the compressor higher starting torque under low voltage conditions. (Field installed only) (Note: Not recommended for use on scroll compressors.)

Dehumidification – ComPac® I and ComPac® II A/C – Allows the electric heat to operate simultaneously with cooling. See Dehumidification Application Bulletin for details. Note: The electrical characteristics and requirements of air conditioners with the dehumidification option are different from standard air conditioners. Refer to the appropriate Summary Rating Charts for the electrical characteristics of units with Electric Reheat.

Coastal Environment Package – ComPac® I A/C only – Recommended for units to be installed near an ocean or on seacoast. Includes corrosion resistant fasteners, sealed or partially sealed condenser fan motor, protective coating applied to all exposed internal copper and metal in the in the condenser section and an impregnated polyurethane on the condenser coil. See Coastal Environmental Technical Bulletin for more details.

External Low Noise Blower (ELNB) – ComPac® I and ComPac® II A/C – A field installed kit that consists of a condenser air hood, centrifugal blowers, controls and a compressor jacket to reduce the sound level by up to 6 dbA of Marvair ComPac air conditioners. Available for models AVP30-60. See External Low Noise Blower Product Data Sheet for details.

ComPac® II Air Conditioner Transition Curb – ComPac II A/C only – A sheet metal curb that enables a 3-1/2, 4 or 5 ton ComPac II air conditioner to replace a 2-1/2 or 3 ton ComPac II unit. Cur transitions supply and return openings of the 3 and 5 ton units to the smaller openings.

Economizer Damper Control – ComPac® II A/C only – A minimum position potentiometer that can be adjusted to prevent the economizer damper from closing completely. This control ensures that whenever the evaporator fan is operating, fresh air is being introduced into the building. Factory installed.

Hot Gas By-pass – ComPac® I A/C Only – Used in specialty applications; i.e., Magnetic Resonance Imaging (MRI) buildings, to prevent magnetic voltage disturbance caused by compressor cycling. Hot gas by-pass option packages are available to allow operation to 20°F (-7°C). Please refer to Hot Gas By-pass Application Bulletin for details. Not available on the AVPA24.

High Filtration – Units are built with larger blowers/motors for use with higher efficiency filters with MERV ratings of 11, 13 and 14 when tested to ASHRAE 52.2. Units with economizers have a prefilter on the outside air.

Color - ComPac® I and ComPac® II air conditioners are available in five different cabinet colors -the standard Marvair® beige, white, gray, brown and dark bronze. The standard cabinet's sides, top and front panels are constructed of 20 gauge painted steel. As an option, these panels can be built of 16 gauge steel in beige & gray or .050 stucco aluminum. When the 16 gauge painted steel or the aluminum is used, only the side, top and front panels are 16 gauge or aluminum. Contact your Marvair representative for color chips. The cabinet can also be constructed of type 316 stainless steel. Two stainless steel cabinet constructions are available- the complete cabinet, including most internal sheet metal or only the exterior sheet metal.

Protective Coil Coatings - Either the condenser or evaporator coil can be coated, however, coating of the evaporator coil is not common. For harsh conditions, e.g., power plants, paper mills or sites were the unit will be exposed to salt water, the coil should be coated. Note: Cooling capacity may be reduced by up to 5% on units with coated coils.

Extended Warranty - A first year labor - Silver, and a two year labor - Gold, are available.

Dirty Filter Indicator - A factory installed option that measures the difference in pressure across the internal filter and illuminates a LED when the pressure exceeds the desired difference.

Single Point Power Entry - A field installed option that allows a single power entry into the air conditioner. Single point power entry should only be selected when the air conditioner has two electrical circuits. See the Summary Ratings Charts for units with two electrical circuits.

Phase Monitor - Monitors 3Ø power supply and will

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turn the air conditioner off if power supply is not phased properly. Not required on 1Ø units.

Thermal Expansion Valve - Available on all ComPac air conditioners. Improves performance in hot ambient temperatures.

Sealed Condenser Fan Motors - Recommended on units to be installed in corrosive sites, e.g., near the ocean and in deserts with blowing sand. Available on all units.

Compressor Sound Jacket - To reduce sound of compressor.

Extreme Duty Package
(HVEA & HVESA air conditioners only)
Allows Marvair® air conditioners to operate in extremely cold and hot ambient conditions. The Extreme Duty Kit is always factory installed and is available on all HVEA air conditioners. ComPac I units without an economizer will operate from 0°F to 130°F (-18° to 54°C). ComPac II units with an economizer will operate from -20°F to 130°F (-29° to 54°C).

The Extreme Duty Package includes a suction line accumulator, thermal expansion valve (TXV), crankcase heater, hard start kit, an auto reset high pressure switch and an outdoor thermostat and fan cycle switch. The fan cycle control is standard on all ComPac air conditioners and operates based upon the liquid line pressure. The outside thermostat opens whenever the outside temperature is below 50° (10°C) and closes when the outside temperatu 50°F (10°C) or higher. Whenever the temperat is below 50°F (10°C), the fan cycle switch is in the circuit; when temperatures are 50°F (10°C) or higher, the fan cycle switch is not in the circuit. The outdoor thermostat is used with a TXV to prevent excessive cycling or "hunting" of the TXV.

Lockable Disconnect Access Cover Plate - The access plate to the service disconnect switch can be equipped with a lockable cover.

Cold Climate kit (AVPA units) – Controls and components which allow the units to operate in extremely cold temperatures. The kit includes a suction line accumulator, thermal expansion valve (TXV), crankcase heater, hard start kit, and an outdoor thermostat and fan cycle switch. The fan cycle control is standard on all ComPac air conditioners and operates based upon the liquid line pressure. The outside thermostat opens whenever the outside temperature is below 50°F (10°C) and closes when the outside temperature is 50°F (10°C) or higher. Whenever the temperature is below 50°F (10°C), the fan cycle switch is in the circuit; when temperatures are 50°F (10°C) or higher, the fan cycle switch is not in the circuit. The outdoor thermostat is used with a TXV to prevent excessive cycling or "hunting" of the TXV.

Control Box

The internal control board in the ComPac® air conditioners simplifies wiring, consolidates several of the electrical functions onto one device and improves the reliability of the air conditioner. In addition, the control board has LED's that indicate operational status and fault conditions.

LED Indicator Lights

COLOR	TYPE	STATUS	DESCRIPTION
Green	Power	Constant On	24 VAC power has been applied
Red	Status	Constant On	Normal operation
		1 Blink	High pressure switch has opened twice
		2 Blinks	Low pressure switch has opened twice
		3 Blinks	Freeze stat (optional) - indoor coil temperature is below 35°F (1°C)

Modes of Operation

Normal Start-up: On a call for cooling, and the with the high pressure switch closed, the cooling system (compressor, indoor blower motor and outdoor fan motor) will be energized. (Note: See the Delay on Make feature). The cooling system will remain energized during the three minute low pressure switch bypass cycle. If the low pressure is closed, the cooling system will continue to operate after the three-minute bypass. If the low pressure switch is open after the three-minute bypass, the cooling system will be de-energized.

Lockout Mode: If either the high or low pressure switch opens twice on the same call for cooling, the control board enters into the lockout mode. In the lockout mode, the compressor is turned off, the alarm output is energized and the status LED's will blink to indicate which fault has occurred. If there is a call for air flow, the indoor blower will remain energized. When the lockout condition has cleared, the unit will reset if the demand of the thermostat is removed or when power is reset. The lockout circuit is factory wired for normally open contacts. The user can now have normally closed contacts by moving a wire on the control board.

Delay on Make: On initial power up or on resumption of power, the air conditioner will wait .03 to 10 minutes from a call for cooling before allowing the contactor to energize.

Includes corrosion resistant fasteners, a sealed or partially sealed condenser fan mo
protective coating applied to all exposed internal copper and metal in the condense
and a protective coating on the condenser coil.

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Model Identification

•VP S A • AC • • • • • •••

A = Air Source Vertical Package
H = High Efficiency Vertical Package

2-Stage Compressor

Refrigerant
A = R410A

Nominal Cooling
24 = 24,000 BTUH
30 = 30,000 BTUH
36 = 36,000 BTUH
42 = 42,000 BTUH
48/49 = 48,000 BTUH
60 = 60,000 BTUH
72 = 72,000 BTUH

System Type
Air Conditioner

Power Supply
A = 208/230V,1ø,60Hz
C = 208.230V,3ø,60Hz
D = 460V,3ø,60Hz

Electric Heat – kW
000 = No Heat
040 = 4 kW
050 = 5 kW
080 - 8 kW
090 = 9 kW
100 = 10 kW
150 = 15 kW

Configuration
N = ComPac® I A/C
C = ComPac® II A/C

Special Option Code
R = Electric Reheat
U = Scroll Compressor

Cabinet Color
100 = Beige
200 = Gray
300 = Brown
400 = White
500 = Stainless Steel (Exterior Only)
SS-500 = Stainless Steel
600 = Dark Bronze
700 = Aluminum Stucco

Certified Efficiency and Capacity Ratings at ANSI/AHRI Standard 390 - AVPA Air Conditioners

Model Number	AVPA24			AVPA30			AVPA36			AVPA42			AVPA48			AVPA60			AVPA72	AVPA72	
	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD
Cooling BTUH[1]	24,000			29,000			35,000			42,000			46,500			54,500			62,000	70,000	
EER[2]	9.25			9.25			9.25			9.25			9.50			9.25			10.00	10.00	
Rated Air Flow (CFM[3])	840			1,000			1,220			1,575			1,760			1,850			2,050	2,050	

[1]Cooling rated at 95°F (35°C) outdoor and 80°F DB/67° WB (26.5°C DB/19.5°C WB) return air. [2]EER=Energy Efficiency Ratio [3]CFM=Cubic Feet per Minute
Ratings are with no outside air. Performance will be affected by altitude.
Ratings are at 230 volts for 208/230 volt units ("A" & "C" models) and 460 volts for "D" models. Operation of units at a different voltage from that of the rating point will affect performance and air flow.

Sensible Total Heat Ratio @ 95ºF (35ºC) Outside Air Dry Bulb - AVPA Air Conditioners

Model Number	AVPA24			AVPA30			AVPA36			AVPA42			AVPA48			AVPA60			AVPA72	AVPA72	
	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD
Total Capacity	24,000			29,000			35,000			42,000			46,500			54,500			62,000	70,000	
Sensible Heat Ratio	0.71			0.75			0.69			0.75			0.76			0.72			0.71	0.66	
Sensible Capacity	16,950			21,740			24,155			31,640			35,125			39,000			43,815	46,190	
Rated Air Flow (CFM[1])	840			1,000			1,220			1,575			1,760			1,850			2,050	2,050	

[1]CFM=Cubic Feet per Minute. Sensible heat ratios based upon ANSI/AHRI std. 390 outdoor air conditions of 95°F (35°C) and 80°F DB/67° WB (26.5°C DB/19.5°C WB) return air.

Cooling Performance (BTUH) at Various Outdoor Temperatures - AVPA Air Conditioners

Model Number	Outdoor Temperature								
	75ºF / 24ºC	80ºF / 26.5ºC	85ºF / 29ºC	90ºF / 32ºC	95ºF / 35ºC	100ºF / 38ºC	105ºF / 40.5ºC	110ºF / 43.3ºC	115ºF / 46ºC
AVPA24AC	27,840	26,880	25,920	24,960	24,000	23,040	22,080	21,120	20,640
AVPA30AC	33,640	32,480	31,320	30,160	29,000	27,840	26,680	25,520	24,940
AVPA36AC	40,600	39,200	37,800	36,400	35,000	33,600	32,200	30,800	30,100
AVPA42AC	48,720	47,040	45,360	43,680	42,000	40,320	38,640	36,960	36,120
AVPA48AC	53,940	52,080	50,220	48,360	46,500	44,640	42,780	40,920	39,900
AVPA60AC	63,220	61,040	58,860	56,680	54,500	52,320	50,140	47,960	46,870
AVPA72ACA	71,920	69,440	66,960	64,480	62,000	59,520	57,040	54,560	53,320
AVPA72ACC, ACD	81,200	78,400	75,600	72,800	70,000	67,200	64,400	61,600	60,200

Based upon ANSI/AHRI std. 390 return air conditions of 80°F DB/67° WB (26.5°C DB/19.5°C WB) at various outdoor temperatures.

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Electrical Characteristics - Compressor, Fan & Blower Motors
AVPA Air Conditioner

BASIC MODEL	COMPRESSOR				OUTDOOR FAN MOTOR				INDOOR FAN MOTOR			
	Type	VOLTS-HZ-PH	RLA[1]	LRA[2]	VOLTS-HZ-PH	RPM[3]	FLA[4]	HP[5]	VOLTS-HZ-PH	RPM[3]	FLA[4]	HP[5]
AVPA24ACA	RECIPROCATING	208/230-60-1	12.8	54.0	208/230-60-1	1075	1.5	1/5	208/230-60-1	1075	1.5	1/5
AVPA30ACA		208/230-60-1	14.1	74.0	208/230-60-1	1075	1.8	1/4	208/230-60-1	1075	2.5	1/4
AVPA36ACA		208/230-60-1	17.9	84.0	208/230-60-1	1075	1.8	1/4	208/230-60-1	1075	2.5	1/4
AVPA42ACA		208/230-60-1	19.8	84.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	3.1	1/2
AVPA48ACA		208/230-60-1	21.8	102.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	3.1	1/2
AVPA60ACA		208/230-60-1	26.2	130.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	5.2	3/4
AVPA24ACA	SCROLL	208/230-60-1	12.8	64.0	208/230-60-1	1075	1.5	1/5	208/230-60-1	1075	1.5	1/5
AVPA30ACA		208/230-60-1	14.1	77.0	208/230-60-1	1075	1.8	1/4	208/230-60-1	1075	2.5	1/4
AVPA36ACA		208/230-60-1	17.9	112.0	208/230-60-1	1075	1.8	1/4	208/230-60-1	1075	2.5	1/4
AVPA42ACA		208/230-60-1	19.8	109.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	3.1	1/2
AVPA48ACA		208/230-60-1	21.8	117.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	3.1	1/2
AVPA60ACA		208/230-60-1	26.2	134.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	5.2	3/4
AVPA72ACA		208/230-60-1	30.1	158.0	208/230-60-1	825	2.9	1/2	208/230-60-1	1075	5.2	3/4
AVPA24ACC	SCROLL	208/230-60-3	8.3	61.0	208/230-60-1	1075	1.5	1/5	208/230-60-1	1075	1.5	1/5
AVPA30ACC		208/230-60-3	9.0	71.0	208/230-60-1	1075	1.8	1/4	208/230-60-1	1075	2.5	1/4
AVPA36ACC		208/230-60-3	13.2	88.0	208/230-60-1	1075	1.8	1/4	208/230-60-1	1075	2.5	1/4
AVPA42ACC		208/230-60-3	13.6	83.1	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	3.1	1/2
AVPA48ACC		208/230-60-3	13.7	83.1	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	3.1	1/2
AVPA60ACC		208/230-60-3	15.6	111.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	5.2	3/4
AVPA72ACC		208/230-60-3	22.4	149.0	208/230-60-1	825	2.9	1/2	208/230-60-1	1075	5.2	3/4
AVPA24ACD	SCROLL	460-60-3	5.1	28.0	208/230-60-1	1075	1.5	1/5	208/230-60-1	1075	1.5	1/5
AVPA30ACD		460-60-3	5.6	38.0	208/230-60-1	1075	1.8	1/4	208/230-60-1	1075	2.5	1/4
AVPA36ACD		460-60-3	6.0	44.0	208/230-60-1	1075	1.8	1/4	208/230-60-1	1075	2.5	1/4
AVPA42ACD		460-60-3	6.1	41.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	3.1	1/2
AVPA48ACD		460-60-3	6.2	41.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	3.1	1/2
AVPA60ACD		460-60-3	7.7	52.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	5.2	3/4
AVPA72ACD		460-60-3	10.6	75.0	208/230-60-1	825	2.9	1/2	208/230-60-1	1075	5.2	3/4

[1]RLA = Rated Load Amps [2]LRA = Locked Rotor Amps [3]RPM = Revolutions per Minute [4]FLA = Full Load Amps [5]HP = Horsepower
The 460 volt units will have a step down transformer for the 230 volt motors.

Summary Electrical Ratings (Wire Sizing) -
AVPA Air Conditioners - Manual Damper ("N") or Economizer ("C")

ELECTRIC HEAT		000 = None		036 = 3.6 kw		040 = 4 kw		050 = 5 kw		060 = 6 kw		080 = 8 kw		090 = 9 kw		100 = 10 kw		120 = 12 kw				150 = 15 kw			
BASIC MODEL	VOLTAGE PHASE / HZ	CKT #1		CKT #1		CKT #1		CKT #1		CKT #1		CKT #1		CKT #1		CKT #1		CKT #1		CKT #2		CKT #1		CKT #2	
		MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]
AVPA24ACA	208/230-1-60	19.0	30			22.4	30	27.5	30	32.8	35	43.1	45			53.6	60								
AVPA30ACA	208/230-1-60	21.9	35			23.4	35	28.5	35	33.8	35	44.1	45			54.6	60	23.4	35	41.6	45	28.5	35	52.1	60
AVPA36ACA	208/230-1-60	26.7	40			26.7	40	28.5	40	33.8	40	44.1	45			54.6	60	26.7	40	41.6	45	28.5	40	52.1	60
AVPA42ACA	208/230-1-60	30.7	50					30.7	50							55.2	60	30.7	50	41.6	45	30.7	50	52.1	60
AVPA48ACA	208/230-1-60	33.2	50					33.2	50							55.2	60	33.2	50	41.6	45	33.2	50	52.1	60
AVPA60ACA	208/230-1-60	40.8	60					40.8	60							57.3	60	40.8	60	41.6	45	40.8	60	52.1	60
AVPA72ACA	208/230-1-60	45.6	60					45.6	60							57.3	60	45.6	60	41.6	45	45.6	60	52.1	60
AVPA24ACC	208/230-3-60	13.4	20							19.5	20			28.6	30			37.6	40						
AVPA30ACC	208/230-3-60	15.6	20							20.5	25			29.6	30			38.6	40			47.6	50		
AVPA36ACC	208/230-3-60	20.8	30							20.8	30			29.6	30			38.6	40			47.6	50		
AVPA42ACC	208/230-3-60	22.9	35							22.9	35			30.2	35			39.2	40			48.2	50		
AVPA48ACC	208/230-3-60	23.0	35							23.0	35			30.2	35			39.2	40			48.2	50		
AVPA60ACC	208/230-3-60	27.5	40							27.5	40			32.3	40			41.3	45			50.3	60		
AVPA72ACC	208/230-3-60	36.1	50							36.1	50			36.1	50			41.3	50			50.3	60		
AVPA24ACD	460-3-60	7.9	15							9.8	15			14.3	15			18.8	20			23.3	25		
AVPA30ACD	460-3-60	9.2	15							10.3	15			14.8	15			19.3	20			23.8	25		
AVPA36ACD	460-3-60	9.7	15							10.3	15			14.8	15			19.3	20			23.8	25		
AVPA42ACD	460-3-60	10.6	15							10.6	15			15.1	20			19.6	20			24.1	25		
AVPA48ACD	460-3-60	10.7	15							10.6	15			15.1	20			19.6	20			24.1	25		
AVPA60ACD	460-3-60	13.6	20							13.6	20			16.1	20			20.6	25			25.1	30		
AVPA72ACD	460-3-60	17.3	25							17.3	25			17.3	25			20.6	25			25.1	30		

[1]MCA = Minimum Circuit Ampacity (Wiring Size Amps) [2]MFS = Maximum Fuse Size or HACR Breaker
This chart should only be used as a guideline for estimating conductor size and overcurrent protection. Always refer to the data label on the unit for the requirements of the specific unit. MCA & MFS are calculated at 230v. for the 208-230v units (A & C models) and at 460 volt for the 460v. units (D models).
The 460 v. units (D models) have a step down transformer for the 230v. motors.

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Summary Electrical Ratings (Wire Sizing) - AVPA Air Conditioner with "R" Reheat

Manual Damper ("N") or Economizer ("C")

ELECTRIC HEAT		050 = 5 kw				060 = 6 kw		090 = 9 kw		120 = 12 kw (8 kw Reheat on 1ø models)				150 = 15 kw (10 kw Reheat on 1ø models)			
BASIC MODEL	VOLTAGE PHASE / HZ	CKT #1		CKT #2		CKT #1		CKT #1		CKT #1		CKT #2		CKT #1		CKT #2	
		MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]
AVPA24ACA	208/230-1-60	45.0	45			50.3	60										
AVPA30ACA	208/230-1-60					53.2	60										
AVPA36ACA	208/230-1-60									26.7	40	41.6	45				
AVPA42ACA	208/230-1-60													30.7	50	52.1	60
AVPA48ACA	208/230-1-60													33.2	50	52.1	60
AVPA60ACA	208/230-1-60													40.8	60	52.1	60
AVPA72ACA	208/230-1-60													45.6	60	52.1	60
AVPA24ACC	208/230-3-60					31.4	35										
AVPA30ACC	208/230-3-60					33.6	35										
AVPA36ACC	208/230-3-60					38.8	40										
AVPA42ACC	208/230-3-60							50.0	60								
AVPA48ACC	208/230-3-60							50.2	60								
AVPA60ACC	208/230-3-60									27.5	40	36.1	40				
AVPA72ACC	208/230-3-60													36.1	50	45.1	50
AVPA24ACD	460-3-60					16.9	20										
AVPA30ACD	460-3-60					18.2	20										
AVPA36ACD	460-3-60					18.7	20										
AVPA42ACD	460-3-60							23.3	25								
AVPA48ACD	460-3-60							24.2	25								
AVPA60ACD	460-3-60									31.6	35						
AVPA72ACD	460-3-60													39.8	40		

[1]MCA = Minimum Circuit Ampacity (Wiring Size Amps) [2]MFS = Maximum Fuse Size or HACR Breaker
This chart should only be used as a guideline for estimating conductor size and overcurrent protection. Always refer to the data label on the unit for the requirements of the specific unit. MCA & MFS are calculated at 230v. for the 208-230v units (A & C models) and at 460 volt for the 460v. units (D models).
The 460 v. units (D models) have a step down transformer for the 230v. motors.

Unit Load Amps - AVPA Air Conditioner

BASIC MODEL NUMBER	VOLTAGE PHASE / HZ	CURRENT AMPS										TOTAL MAXIMUM HEATING AMPS (STANDARD UNIT)								
		AC[1]	IBM[2]	04 kW	05 kW	06 kW	08 kW	09 kW	10 kW	12 kW	15 kW	3.6 Kw	04 Kw	05 Kw	06 Kw	08 Kw	09 Kw	10 Kw	12 Kw	15 Kw
AVPA24ACA	208/230-1-60	15.8	1.5	16.7	20.8	25.0	33.3		41.7				18.2	22.3	26.5	34.8		43.2		
AVPA30ACA	208/230-1-60	18.4	2.5	16.7	20.8	25.0	33.3		41.7	50.0	62.5		19.2	23.3	27.5	35.8		44.2	52.5	65.0
AVPA36ACA	208/230-1-60	22.2	2.5	16.7	20.8	25.0	33.3		41.7	50.0	62.5		19.2	23.3	27.5	35.8		44.2	52.5	65.0
AVPA42ACA	208/230-1-60	25.7	3.1		20.8				41.7	50.0	62.5			23.9				44.8	53.1	65.6
AVPA48ACA	208/230-1-60	27.7	3.1		20.8				41.7	50.0	62.5			23.9				44.8	53.1	65.6
AVPA60ACA	208/230-1-60	34.2	5.2		20.8				41.7	50.0	62.5			26.0				46.9	55.2	67.7
AVPA72ACA	208/230-1-60	38.2	5.2		20.8				41.7	50.0	62.5			26.0				46.9	55.2	67.7
AVPA24ACC	208/230-3-60	11.2	1.5			14.4		21.7		28.9	36.1				15.9		23.2		30.4	37.6
AVPA30ACC	208/230-3-60	13.3	2.5			14.4		21.7		28.9	36.1				16.9		24.2		31.4	38.6
AVPA36ACC	208/230-3-60	17.5	2.5			14.4		21.7		28.9	36.1				16.9		24.2		31.4	38.6
AVPA42ACC	208/230-3-60	19.5	3.1			14.4		21.7		28.9	36.1				17.5		24.8		32.0	39.2
AVPA48ACC	208/230-3-60	19.6	3.1			14.4		21.7		28.9	36.1				17.5		24.8		32.0	39.2
AVPA60ACC	208/230-3-60	23.6	5.2			14.4		21.7		28.9	36.1				19.6		26.9		34.1	41.3
AVPA72ACC	208/230-3-60	30.5	5.2			14.4		21.7		28.9	36.1				19.6		26.9		34.1	41.3
AVPA24ACD	460-3-60	6.6	0.8			7.2		10.8		14.4	18.0				8.0		11.6		15.2	18.8
AVPA30ACD	460-3-60	7.8	1.3			7.2		10.8		14.4	18.0				8.5		12.1		15.7	19.3
AVPA36ACD	460-3-60	8.2	1.3			7.2		10.8		14.4	18.0				8.5		12.1		15.7	19.3
AVPA42ACD	460-3-60	9.1	1.6			7.2		10.8		14.4	18.0				8.8		12.4		16.0	19.6
AVPA48ACD	460-3-60	9.2	1.6			7.2		10.8		14.4	18.0				8.8		12.4		16.0	19.6
AVPA60ACD	460-3-60	11.7	2.6			7.2		10.8		14.4	18.0				9.8		13.4		17.0	20.6
AVPA72ACD	460-3-60	14.7	2.6			7.2		10.8		14.4	18.0				9.8		13.4		17.0	20.6

[1]AC = Air Conditioner (Includes Indoor Blower Motor Amps) [2]IBM = Indoor Blower Motor
Heating kW rated at 240v. for 208-230v. units (A & C models). Derate heat by 25% for operation on 208v. Heating kW rated at 480v. for 460v. units (D models). Total heating amps for all 1ø units with 15 kW of heat includes both circuits (#1 & #2). Note: 3ø units contain 1ø motor loads. Values shown are maximum phase loads.
Loads are not equally balanced on each phase. Total maximum heating and cooling amps include motor loads.

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HVEA High Efficiency Air Conditioners

Certified Efficiency and Capacity Ratings at ANSI/AHRI Standard 390 for HVEA Air Conditioners with Single Stage Compressor

Model Number	HVEA24			HVEA30			HVEA36			HVEA42			HVEA49			HVEA60		
	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD
Cooling BTUH[1]	23,600			29,000			35,600			40,000			49,000			58,000		
EER[2]	11.25			11.75			11.25			10.50			11.50			10.50		
Rated Air Flow (CFM[3])	800			1,000			1,300			1,400			1,750			1,900		

[1]Cooling rated at 95°F (35°C) outdoor and 80°F DB/67° WB (26.5°C DB/19.5°C WB) return air [2]EER=Energy Efficiency Ratio [3]CFM=Cubic Feet per Minute
Ratings are with no outside air. Performance will be affected by altitude.
Ratings are at 230 volts for 208/230 volt units ("A" & "C" models) and 460 volts for "D" models. Operation of units at a different voltage from that of the rating point will affect performance and air flow.

Sensible Total Heat Ratio @ 95ºF (35ºC) Outside Air Dry Bulb - HVEA Air Conditioners with Single Stage Compressor

Model Number	HVEA24			HVEA30			HVEA36			HVEA42			HVEA49			HVEA60		
	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD
Total Capacity	23,600			29,000			35,600			40,000			49,000			58,000		
Sensible Heat Ratio	0.74			0.76			0.76			0.73			0.74			0.73		
Sensible Capacity	17,435			22,020			26,945			29,270			36,175			42,505		
Rated Air Flow (CFM[1])	800			1,000			1,300			1,400			1,750			1,900		

[1]CFM=Cubic Feet per Minute
Sensible heat ratios based upon ANSI/AHRI std. 390 outdoor air conditions of 95°F (35°C) and 80°F DB/67° WB (26.5°C DB/19.5°C WB) return air.

Cooling Performance (BTUH) at Various Outdoor Temperatures for HVEA Air Conditioners with Single Stage Compressor

Model Number	Outdoor Temperature											
	75ºF / 24ºC	80ºF / 26.5ºC	85ºF / 29ºC	90ºF / 32ºC	95ºF / 35ºC	100ºF / 38ºC	105ºF / 40.5ºC	110ºF / 43.3ºC	115ºF / 46.1ºC	120ºF / 48.9ºC	125ºF / 51.7ºC	130ºF / 54.4ºC
HVEA24AC	27,375	26,430	25,490	24,545	23,600	22,655	21,710	20,770	20,295	19,870	19,445	19,020
HVEA30AC	33,640	32,480	31,320	30,160	29,000	27,840	26,680	25,520	24,940	24,420	23,895	23,375
HVEA36AC	41,295	39,870	38,450	37,025	35,600	34,175	32,750	31,320	30,615	29,975	29,335	28,695
HVEA42AC	46,400	44,800	43,200	41,600	40,000	38,400	36,800	35,200	34,400	33,680	32,960	32,240
HVEA49AC	56,840	54,880	52,920	50,960	49,000	47,040	45,080	43,120	42,140	41,260	40,375	39,495
HVEA60AC	67,280	64,960	62,640	60,320	58,000	55,680	53,360	51,040	49,880	48,835	47,790	46,745

Based upon ANSI/AHRI std. 390 return air conditions of 80°F DB/67° WB (26.5°C DB/19.5°C WB) at various outdoor temperatures.

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Electrical Characteristics - Compressor, Fan & Blower Motors
HVEA Air Conditioner with Single Stage Compressor

BASIC MODEL	COMPRESSOR				OUTDOOR FAN MOTOR				INDOOR FAN MOTOR (ECM)			
	Type	VOLTS-HZ-PH	RLA[1]	LRA[2]	VOLTS-HZ-PH	RPM[3]	FLA[4]	HP[5]	VOLTS-HZ-PH	RPM[3]	FLA[4]	HP[5]
HVEA24ACA	SCROLL	208/230-60-1	12.8	58.3	208/230-60-1	1075	1.8	1/4	208/230-60-1	1500	2.8	1/3
HVEA30ACA		208/230-60-1	12.8	64.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1500	2.8	1/2
HVEA36ACA		208/230-60-1	16.6	79.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1500	2.8	1/2
HVEA42ACA		208/230-60-1	19.8	109.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1500	2.8	1/2
HVEA49ACA		208/230-60-1	21.8	117.0	208/230-60-1	825	2.8	1/2	208/230-60-1	1500	4.3	3/4
HVEA60ACA		208/230-60-1	26.4	134.0	208/230-60-1	825	2.8	1/2	208/230-60-1	1500	4.3	3/4
HVEA24ACC	SCROLL	208/230-60-3	7.7	55.4	208/230-60-1	1075	1.8	1/4	208/230-60-1	1500	2.8	1/3
HVEA30ACC		208/230-60-3	8.3	61.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1500	2.8	1/2
HVEA36ACC		208/230-60-3	10.4	88.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1500	2.8	1/2
HVEA42ACC		208/230-60-3	13.6	83.1	208/230-60-1	825	2.8	1/3	208/230-60-1	1500	2.8	1/2
HVEA49ACC		208/230-60-3	13.7	83.1	208/230-60-1	825	2.8	1/2	208/230-60-1	1500	4.3	3/4
HVEA60ACC		208/230-60-3	15.9	111.0	208/230-60-1	825	2.8	1/2	208/230-60-1	1500	4.3	3/4
HVEA24ACD	SCROLL	460-60-3	4.0	28.0	208/230-60-1	1075	1.8	1/4	208/230-60-1	1500	2.8	1/3
HVEA30ACD		460-60-3	5.1	28.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1500	2.8	1/2
HVEA36ACD		460-60-3	5.8	38.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1500	2.8	1/2
HVEA42ACD		460-60-3	6.1	41.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1500	2.8	1/2
HVEA49ACD		460-60-3	6.2	41.0	208/230-60-1	825	2.8	1/2	208/230-60-1	1500	4.3	3/4
HVEA60ACD		460-60-3	7.7	52.0	208/230-60-1	825	2.8	1/2	208/230-60-1	1500	4.3	3/4

[1]RLA = Rated Load Amps [2]LRA = Locked Rotor Amps [3]RPM = Revolutions per Minute [4]FLA = Full Load Amps [5]HP = Horsepower
The 460 volt units will have a step down transformer for the 230 volt motors.

Summary Electrical Ratings (Wire Sizing) -
HVEA Air Conditioner with Single Stage Compressor
Manual Damper ("N") or Economizer ("C")

ELECT. HEAT		000 = None		040 = 4 kw		050 = 5 kw		060 = 6 kw		080 = 8 kw		090 = 9 kw		100 = 10 kw		120 = 12 kw				150 = 15 kw			
BASIC MODEL	VOLTAGE PHASE	CKT #1		CKT #1		CKT #1		CKT #1		CKT #1		CKT #1		CKT #1		CKT #1		CKT #2		CKT #1		CKT #2	
		MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]
HVEA24ACA	208-230/1	20.6	30	23.7	30	28.8	30	34.1	35	44.4	45			54.9	60								
HVEA30ACA	208-230/1	21.6	30	23.7	30	28.8	30	34.1	35	44.4	45			54.9	60	23.7	30	41.6	45	28.8	30	52.1	60
HVEA36ACA	208-230/1	26.4	40	26.4	40	28.8	40	34.1	40	44.4	45			54.9	60	26.4	40	41.6	45	28.8	40	52.1	60
HVEA42ACA	208-230/1	30.4	50			30.4	50							54.9	60	30.4	50	41.6	45	30.4	50	52.1	60
HVEA49ACA	208-230/1	34.4	50			34.4	50							56.4	60	34.4	50	41.6	45	34.4	50	52.1	60
HVEA60ACA	208-230/1	40.1	60			40.1	60							56.4	60	40.1	60	41.6	45	40.1	60	52.1	60
HVEA24ACC	208-230/3	14.2	20					20.8	25			29.9	30			38.9	40						
HVEA30ACC	208-230/3	16.0	20					20.8	25			29.9	30			38.9	40			47.9	50		
HVEA36ACC	208-230/3	18.6	25					20.8	25			29.9	30			38.9	40			47.9	50		
HVEA42ACC	208-230/3	22.6	35					22.6	35			29.9	35			38.9	40			47.9	50		
HVEA49ACC	208-230/3	24.2	35					24.2	35			31.4	35			40.4	45			49.4	50		
HVEA60ACC	208-230/3	27.0	40					27.0	40			31.4	40			40.4	45			49.4	50		
HVEA24ACD	460/3	7.3	15					10.4	15			14.9	15			19.4	20			23.9	25		
HVEA30ACD	460/3	9.2	15					10.4	15			14.9	15			19.4	20			23.9	25		
HVEA36ACD	460/3	10.1	15					10.4	15			14.9	15			19.4	20			23.9	25		
HVEA42ACD	460/3	10.4	15					10.4	15			14.9	15			19.4	20			23.9	25		
HVEA49ACD	460/3	11.3	15					11.3	15			15.7	20			20.2	25			24.7	25		
HVEA60ACD	460/3	13.2	20					13.2	20			15.7	20			20.2	25			24.7	25		

[1]MCA = Minimum Circuit Ampacity (Wiring Size Amps) [2]MFS = Maximum Fuse Size or HACR Breaker
This chart should only be used as a guideline for estimating conductor size and overcurrent protection. Always refer to the data label on the unit for the requirements of the specific unit. MCA & MFS are calculated at 230v. for the 208-230v units (A & C models) and at 460 volt for the 460v. units (D models).
The 460 v. units (D models) have a step down transformer for the 230v. motors.

Reviewed for Code Compliance
Inspections Division
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Summary Ratings (Wire Sizing) - HVEA Air Conditioner with Reheat ("R") and Single Stage Compressor

Manual Damper ("N") or Economizer ("C")

ELECT. HEAT		050 = 5 kw		060 = 6 kw		090 = 9 kw		120 = 12 kw (8 kw Reheat on 1ø models)				150 = 15 kw (10 kw Reheat on 1ø models)			
BASIC MODEL	VOLTAGE PHASE	CKT #1		CKT #1		CKT #1		CKT #1		CKT #2		CKT #1		CKT #2	
		MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]
HVEA24ACA	208-230/1	46.6	50												
HVEA30ACA	208-230/1			52.9	60										
HVEA36ACA	208-230/1							26.4	40	41.6	45				
HVEA42ACA	208-230/1											30.4	50	52.1	60
HVEA49ACA	208-230/1											34.4	50	52.1	60
HVEA60ACA	208-230/1											40.1	60	52.1	60
HVEA24ACC	208-230/3			32.2	35										
HVEA30ACC	208-230/3			34.0	35										
HVEA36ACC	208-230/3			36.6	40										
HVEA42ACC	208-230/3					49.7	50								
HVEA49ACC	208-230/3					51.4	60								
HVEA60ACC	208-230/3							27.0	40	36.1	40				
HVEA24ACD	460/3			16.3	20										
HVEA30ACD	460/3			18.2	20										
HVEA36ACD	460/3			19.1	20										
HVEA42ACD	460/3					23.9	25								
HVEA49ACD	460/3					24.8	25								
HVEA60ACD	460/3							31.2	35						

[1]MCA = Minimum Circuit Ampacity (Wiring Size Amps) [2]MFS = Maximum Fuse Size
The 460 volt ACD models are calculated at 460 volts. All 460 units will have a step down transformer for the 230 volts motors. This chart should only be used as a guideline for estimating conductor size and overcurrent protection.
For the requirements of specific units, always refer to the data label on the unit.

Unit Load Amps - HVEA Air Conditioner with Single Stage Compressor

BASIC MODEL NUMBER	VOLTAGE PHASE HERTZ	CURRENT AMPS		LOAD OF RESISTIVE ELEMENTS HEATING ELEMENTS ONLY (AMPS)								TOTAL MAXIMUM HEATING AMPS (STANDARD UNIT)							
		AC[1]	IBM[2]	04 kW	05 kW	06 kW	08 kW	09 kW	10 kW	12 kW	15 kW	04 Kw	05 Kw	06 Kw	08 Kw	09 Kw	10 Kw	12 Kw	15 Kw
HVEA24ACA	208-230/1/60	17.4	2.8	16.7	20.8	25.0	33.3		41.7			19.5	23.6	27.8	36.1		44.5		
HVEA30ACA	208-230/1/60	18.4	2.8	16.7	20.8	25.0	33.3		41.7	50.0	62.5	19.5	23.6	27.8	36.1		44.5	52.8	65.3
HVEA36ACA	208-230/1/60	22.2	2.8	16.7	20.8	25.0	33.3		41.7	50.0	62.5	19.5	23.6	27.8	36.1		44.5	52.8	65.3
HVEA42ACA	208-230/1/60	25.4	2.8		20.8				41.7	50.0	62.5		23.6				44.5	52.8	65.3
HVEA49ACA	208-230/1/60	28.9	4.3		20.8				41.7	50.0	62.5		25.1				46.0	54.3	66.8
HVEA60ACA	208-230/1/60	33.5	4.3		20.8				41.7	50.0	62.5		25.1				46.0	54.3	66.8
HVEA24ACC	208-230/3/60	12.3	2.8			14.4		21.7		28.9	36.1			17.2		24.5		31.7	38.9
HVEA30ACC	208-230/3/60	13.9	2.8			14.4		21.7		28.9	36.1			17.2		24.5		31.7	38.9
HVEA36ACC	208-230/3/60	16.0	2.8			14.4		21.7		28.9	36.1			17.2		24.5		31.7	38.9
HVEA42ACC	208-230/3/60	19.2	2.8			14.4		21.7		28.9	36.1			17.2		24.5		31.7	38.9
HVEA49ACC	208-230/3/60	20.8	4.3			14.4		21.7		28.9	36.1			18.7		26.0		33.2	40.4
HVEA60ACC	208-230/3/60	23.0	4.3			14.4		21.7		28.9	36.1			18.7		26.0		33.2	40.4
HVEA24ACD	460/3/60	6.3	1.4			7.2		10.8		14.4	18.0			8.6		12.2		15.8	19.4
HVEA30ACD	460/3/60	7.9	1.4			7.2		10.8		14.4	18.0			8.6		12.2		15.8	19.4
HVEA36ACD	460/3/60	8.6	1.4			7.2		10.8		14.4	18.0			8.6		12.2		15.8	19.4
HVEA42ACD	460/3/60	8.9	1.4			7.2		10.8		14.4	18.0			8.6		12.2		15.8	19.4
HVEA49ACD	460/3/60	9.8	2.2			7.2		10.8		14.4	18.0			9.4		13.0		16.6	20.2
HVEA60ACD	460/3/60	11.3	2.2			7.2		10.8		14.4	18.0			9.4		13.0		16.6	20.2

[1]AC = Air Conditioner (Includes Indoor Blower Motor amps) [2]IBM = Indoor Blower Motor
Heating kW rated at 240v. for 208-230v. units (A & C models). Derate heat by 25% for operation on 208v. Heating kW rated at 480v. for 460v. units (D models). Total heating amps for all 1ø units with 15 kW of heat includes both circuits (#1 & #2). Note: 3ø units contain 1ø motor loads. Values shown are maximum phase loads. Loads are not equally balanced on each phase. Total maximum heating and cooling amps include motor loads.

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Certified Efficiency and Capacity Ratings at ANSI/AHRI Standard 390 for HVESA Air Conditioners with 2-Stage Compressors

Model Number	HVESA36			HVESA42			HVESA49			HVESA60		
	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD
Cooling BTUH[1] - 2nd Stage	35,000			39,000			47,000			56,000		
EER[2] - 2nd Stage	11.00			10.50			11.75			10.50		
Integrated Part Load Value[3]	16.0			14.1			16.0			14.8		
Rated Air Flow (CFM[4])	1,300			1,400			1,750			1,900		

[1]Cooling rated at 95°F (35°C) outdoor and 80°F DB/67° WB (26.5°C DB/19.5°C WB) return air. [2]EER=Energy Efficiency Ratio
[3]Integrated Part Load Value is an integrated efficiency measure from 1st and 2nd stage capacity modulation. [4]CFM=Cubic Feet per Minute
Ratings are with no outside air. Performance will be affected by altitude.
Ratings are at 230 volts for 208/230 volt units ("A" & "C" models) and 460 volts for "D" models. Operation of units at a different voltage from that of the rating point will affect performance and air flow.

Sensible Total Heat Ratio @ 95ºF (35ºC) Outside Air Dry Bulb - HVESA Air Conditioners with 2-Stage Compressors

Model Number	HVESA36			HVESA42			HVESA49			HVESA60		
	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD
Total Capacity	35,000			39,000			47,000			56,000		
Sensible Heat Ratio	0.70			0.71			0.79			0.77		
Sensible Capacity	24,445			27,590			36,920			43,235		
Rated Air Flow (CFM[1])	1,300			1,400			1,750			1,900		

[1]CFM=Cubic Feet per Minute
Sensible heat ratios based upon ANSI/AHRI std. 390 outdoor air conditions of 95°F (35°C) and 80°F DB/67° WB (26.5°C DB/19.5°C WB) return air.

Stage 2 Cooling Performance (BTUH) at Various Outdoor Temperatures

Model Number	Outdoor Temperature				
	75ºF / 24ºC	80ºF / 26.5ºC	85ºF / 29ºC	90ºF / 32ºC	95ºF / 35ºC
HVESA36AC	40,600	39,200	37,800	36,400	35,000
HVESA42AC	45,240	43,680	42,120	40,560	39,000
HVESA49AC	54,520	52,640	50,760	48,880	47,000
HVESA60AC	64,960	62,720	60,480	58,240	56,000

Based upon ANSI/AHRI std. 390 return air conditions of 80°F DB/67° WB (26.5°C DB/19.5°C WB) at various outdoor temperatures.

Stage 1 Cooling Performance (BTUH) at Various Outdoor Temperatures

Model Number	Outdoor Temperature				
	75ºF / 24ºC	80ºF / 26.5ºC	85ºF / 29ºC	90ºF / 32ºC	95ºF / 35ºC
HVESA36AC	30,856	29,792	28,728	27,664	26,600
HVESA42AC	34,336	33,152	31,968	30,784	29,600
HVESA49AC	44,080	42,560	41,040	39,520	38,000
HVESA60AC	51,040	49,280	47,520	45,760	44,000

Based upon ANSI/AHRI std. 390 return air conditions of 80°F DB/67° WB (26.5°C DB/19.5°C WB) at various outdoor temperatures.

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Electrical Characteristics - Compressor, Fan & Blower Motors
HVESA Air Conditioner with 2-Stage Compressor

BASIC MODEL	Type	COMPRESSOR			OUTDOOR FAN MOTOR				INDOOR FAN MOTOR (ECM[6])			
		VOLTS-HZ-PH	RLA[1]	LRA[2]	VOLTS-HZ-PH	RPM[3]	FLA[4]	HP[5]	VOLTS-HZ-PH	RPM[3]	FLA[4]	HP[5]
HVESA36ACA	SCROLL	208/230-60-1	16.6	82.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1500	2.8	1/2
HVESA42ACA		208/230-60-1	16.6	96.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1500	2.8	1/2
HVESA49ACA		208/230-60-1	21.1	96.0	208/230-60-1	825	2.8	1/2	208/230-60-1	1500	4.3	3/4
HVESA60ACA		208/230-60-1	25.6	118.0	208/230-60-1	825	2.8	1/2	208/230-60-1	1500	4.3	3/4
HVESA36ACC	SCROLL	208/230-60-3	11.1	58.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1500	2.8	1/2
HVESA42ACC		208/230-60-3	13.4	88.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1500	2.8	1/2
HVESA49ACC		208/230-60-3	13.4	88.0	208/230-60-1	825	2.8	1/2	208/230-60-1	1500	4.3	3/4
HVESA60ACC		208/230-60-3	17.6	123.0	208/230-60-1	825	2.8	1/2	208/230-60-1	1500	4.3	3/4
HVESA36ACD	SCROLL	460-60-3	4.5	29.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1500	2.8	1/2
HVESA42ACD		460-60-3	6.1	44.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1500	2.8	1/2
HVESA49ACD		460-60-3	6.4	41.0	208/230-60-1	825	2.8	1/2	208/230-60-1	1500	4.3	3/4
HVESA60ACD		460-60-3	9.0	62.0	208/230-60-1	825	2.8	1/2	208/230-60-1	1500	4.3	3/4

[1]RLA = Rated Load Amps [2]LRA = Locked Rotor Amps [3]RPM = Revolutions per Minute [4]FLA = Full Load Amps [5]HP = Horsepower [6]ECM = Electronically Commutated Motor
The 460 volt units have a step down transformer for the 230 volt motors.

Summary Electrical Ratings (Wire Sizing) -
HVESA Air Conditioner with 2-Stage Compressor
Manual Damper ("N") or Economizer ("C")

ELECTRIC HEAT		000 = None		040 = 4 kw		050 = 5 kw		060 = 6 kw		080 = 8 kw		090 = 9 kw		100 = 10 kw		120 = 12 kw				150 = 15 kw			
BASIC MODEL	VOLTAGE PHASE	CKT #1		CKT #1		CKT #1		CKT #1		CKT #1		CKT #1		CKT #1		CKT #1		CKT #2		CKT #1		CKT #2	
		MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]
HVESA36ACA	208-230/1	26.4	40	26.4	40	28.8	40	34.1	40	44.4	45			54.9	60	26.4	40	41.6	45	28.8	40	52.1	60
HVESA42ACA	208-230/1	26.4	40			28.8	40							54.9	60	26.4	40	41.6	45	28.8	40	52.1	60
HVESA49ACA	208-230/1	33.5	50			33.5	50							56.4	60	33.5	50	41.6	45	33.5	50	52.1	60
HVESA60ACA	208-230/1	39.4	60			39.4	60							56.4	60	39.4	60	41.6	45	39.4	60	52.1	60
HVESA36ACC	208-230/3	19.5	25					20.8	25			29.9	30			38.9	40			47.9	50		
HVESA42ACC	208-230/3	22.4	30					22.4	30			29.9	30			38.9	40			47.9	50		
HVESA49ACC	208-230/3	23.9	35					23.9	35			31.4	35			40.4	45			49.4	50		
HVESA60ACC	208-230/3	29.4	45					30.0	45			31.4	45			40.4	45			49.4	50		
HVESA36ACD	460/3	8.4	15					10.4	15			14.9	15			19.4	20			23.9	25		
HVESA42ACD	460/3	10.4	15					10.4	15			14.9	15			19.4	20			23.9	25		
HVESA49ACD	460/3	11.6	15					11.6	15			15.7	20			20.2	25			24.7	25		
HVESA60ACD	460/3	14.8	20					14.8	20			15.7	20			20.2	25			24.7	25		

[1]MCA = Minimum Circuit Ampacity (Wiring Size Amps) [2]MFS = Maximum Fuse Size or HACR breaker
This chart should only be used as a guideline for estimating conductor size and overcurrent protection. Always refer to the data label on the unit for the requirements of the specific unit. MCA & MFS are calculated at 230v. for the 208-230v units (A & C models) and at 460 volt for the 460v. units (D models).
All 460 units will have a step down transformer for the 230 volts motors.

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Summary Ratings (Wire sizing) - HVESA Air Conditioner with Reheat ("R") and 2-Stage Compressor

Manual Damper ("N") or Economizer ("C")

ELECTRIC HEAT		060 = 6 kw		090 = 9 kw		12 = 12 kw (8 kw Reheat)				15 = 15 kw (10 kw Reheat)			
BASIC MODEL	VOLTAGE PHASE	CKT #1		CKT #1		CKT #1		CKT #2		CKT #1		CKT #2	
		MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]
HVESA36ACA	208-230/1					26.4	40	41.6	45				
HVESA42ACA	208-230/1									26.4	40	52.1	60
HVESA49ACA	208-230/1									33.5	50	52.1	60
HVESA60ACA	208-230/1									39.4	60	52.1	60
HVESA36ACC	208-230/3	37.5	40										
HVESA42ACC	208-230/3			49.5	50								
HVESA49ACC	208-230/3			51.0	60								
HVESA60ACC	208-230/3					29.4	45	36.1	40				
HVESA36ACD	460/3	17.4	20										
HVESA42ACD	460/3			23.9	25								
HVESA49ACD	460/3			25.1	30								
HVESA60ACD	460/3					32.8	35						

[1]MCA = Minimum Circuit Ampacity (Wiring Size Amps) [2]MFS = Maximum Fuse Size
The 460 volt ACD models are calculated at 460 volts. All 460 units will have a step down transformer for the 230 volts motors. This chart should only be used as a guideline for estimating conductor size and overcurrent protection. For the requirements of specific units, always refer to the data label on the unit.

Unit Load Amps - HVESA Air Conditioner with 2-Stage Compressor

BASIC MODEL NUMBER	VOLTAGE PHASE HERTZ	CURRENT AMPS		LOAD OF RESISTIVE HEATING ELEMENTS ONLY (AMPS)								TOTAL MAXIMUM HEATING AMPS (STANDARD UNIT)							
		AC[1]	IBM[2]	04 kW	05 kW	06 kW	08 kW	09 kW	10 kW	12 kW	15 kW	04 Kw	05 Kw	06 Kw	08 Kw	09 Kw	10 Kw	12 Kw	15 Kw
HVESA36ACA	208-230/1/60	22.4	2.8	16.7	20.8	25.0	33.3		41.7	50.0	62.5	19.5	23.6	27.8	36.1		44.5	52.8	65.3
HVESA42ACA	208-230/1/60	22.4	2.8		20.8				41.7	50.0	62.5		23.6				44.5	52.8	65.3
HVESA49ACA	208-230/1/60	28.2	4.3		20.8				41.7	50.0	62.5		25.1				46.0	54.3	66.8
HVESA60ACA	208-230/1/60	32.7	4.3		20.8				41.7	50.0	62.5		25.1				46.0	54.3	66.8
HVESA36ACC	208-230/3/60	16.7	2.8			14.4		21.7		28.9	36.1			17.2		24.5		31.7	38.9
HVESA42ACC	208-230/3/60	19.0	2.8			14.4		21.7		28.9	36.1			17.2		24.5		31.7	38.9
HVESA49ACC	208-230/3/60	20.5	4.3			14.4		21.7		28.9	36.1			18.7		26.0		33.2	40.4
HVESA60ACC	208-230/3/60	24.7	4.3			14.4		21.7		28.9	36.1			18.7		26.0		33.2	40.4
HVESA36ACD	460/3/60	7.3	1.4			7.2		10.8		14.4	18.0			8.6		12.2		15.8	19.4
HVESA42ACD	460/3/60	8.9	1.4			7.2		10.8		14.4	18.0			8.6		12.2		15.8	19.4
HVESA49ACD	460/3/60	10.0	2.2			7.2		10.8		14.4	18.0			9.4		13.0		16.6	20.2
HVESA60ACD	460/3/60	12.6	2.2			7.2		10.8		14.4	18.0			9.4		13.0		16.6	20.2

[1]AC = Air Conditioner (Includes Indoor Blower Motor amps) [2]IBM = Indoor Blower Motor
Heating kW is rated at 240 volts for the 208-230v. (A&C) models. Derate heater output by 25% for operation at 208 volts.
Heating kW is rated at 480 volts for the 460v. units (D models).
Total heating amps for single phase units with two circuits (#1 and #2) includes both circuits. Total heating and cooling amps includes all motor loads.
Three phase models contain single phase motor loads. Values shown are maximum phase loads. Loads are not equally balanced on each phase.

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 08/03/16

Dimensional Data - AVPA24 ComPac® I & II Air Conditioners

Shipping Weight (pounds/kilograms)

AVPA24	LBS/KGS
COMPAC I	275/125
COMPAC II	286/130

Filter Size

AVPA24	INCHES	MILLIMETERS	PART NUMBER	FILTERS PER UNIT	MERV RATING
RETURN AIR FILTER	25" x 16" x 2"	635 x 406 x 51	80137	1	7

Dimensional Data - AVPA30/36, and HVEA24 ComPac® I & II Air Conditioners

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Shipping Weight (pounds/kilograms)

AVPA30/36 & HVEA24	LBS/KGS
COMPAC I	355/160
COMPAC II	375/170

Filter Size

AVPA30/36 & HVEA24	INCHES	MILLIMETERS	PART NUMBER	FILTERS PER UNIT	MERV RATING
RETURN AIR FILTER	30 x 16 x 2	762 x 406 x 51	80138	1	7

Dimensional Data - AVPA42/48/60, and HVEA30/36/42, HVESA30/36/42 ComPac® I & II Air Conditioners

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Shipping Weight (pounds/kilograms)

AVPA42/48/60 and HVEA30/36 & HVESA36	LBS/KGS
COMPAC I	535/245
COMPAC II	590/268

Filter Size

AVPA42/48/60, HVEA30/36/42, & HVESA36/42	INCHES	MILLIMETERS	PART NUMBER	FILTERS PER UNIT	MERV RATING
RETURN AIR FILTER	36½ x 22 x 2	927 x 559 x 51	80162	1	7

Dimensional Data - AVPA72, and HVEA49/60, HVESA49/60 ComPac® I & ComPac® II Air Conditioners

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Shipping Weight (pounds/kilograms)

HVEA49/60 & HVESA49/60	LBS/KGS
COMPAC I	625/284
COMPAC II	640/291

Filter Size

HVEA49/60 & HVESA49/60	INCHES	MILLIMETERS	PART NUMBER	FILTERS PER UNIT	MERV RATING
RETURN AIR FILTER	18 x 24 x 2	457 x 610 x 51	81257	2	7

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Notes

Please consult the Marvair® website at www.marvair.com for the latest product literature. Detailed dimensional data is available upon request. A complete warranty statement can be found in each product's Installation/Operation Manual, on our website or by contacting Marvair at 229-273-3636. As part of the Marvair continuous improvement program, specifications are subject to change without notice.

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