



ComPac® I & ComPac® II 2 to 6 Ton Vertical Wall Mount Air Conditioners

**Models AVPA24-30-36-42-48-60-72 and
Models AVPSA36-42-48-60**

**R-410A
Refrigerant**

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. All models use the non-ozone depleting R-410A refrigerant.

The primary difference between the two models 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.

Models AVPSA36-42-48-60 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. See page 3 for a description of the operation of the 2-stage units when they are used with the CommStat 3 SC™ thermostat/controller in a lead/lag installation.

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 AVPA 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.



AVPA36ACA-100C



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 0°F (-18°C). 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 and rifled tubing on many condenser & evaporator coils.

Built-in Reliability

- High pressure switch and low pressure switch with lockout protects refrigerant circuit.

*ComPac® II air conditioner only

- Three 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 208/230v units, optional 460V units.

Rugged Construction

- Copper tube, aluminum fin evaporator & condenser coils.
- Factory installed heaters on discharge side of evaporator coil (optional)
- Baked on neutral beige finish over

galvanneal steel for maximum cabinet life. (Other finishes are available.)

Ease of Service

- Service access valves are standard.
- Standard 2" (50 mm) pleated filter 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.

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 53°F (12°C) at 50% Relative Humidity to 78°F (26°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 50-56°F (10 - 13°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.

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 2.7m) shelter in nine cities in the US. Costs are shown for an air conditioner without an economizer (ComPac I 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 Economizer (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 Economizer (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): 75°F

Air Conditioner Metrics:

- ComPac II Economizer setting: 57°F (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 3 SC™ Lead/Lag Thermostat Controller

Marvair offers selected models of air conditioners with 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 3 SC 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.

Controllers and Thermostats

Controllers

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 CommStat 3™ Controller Product Data Sheet for details on 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.)

CommStat 3 SC Lead/Lag Controller

Used with Marvair air conditioners with two-stage compressors. See page 3 for a description on the operation of the CommStat 3 SC.

Accessories

Supply Grilles

For AVPA24 20" x 8" (508 mm x 203 mm)	P/N 80674
For AVPA30,36 28" x 8" (711 mm x 203 mm)	P/N 80675
For AVPA42,48,60,72 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 28" x 14" (711 mm x 356 mm)	P/N 80678
For AVPA42,48,60,72 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 28" x 14" (711 mm x 356 mm)	P/N 80672
For AVPA42,48,60,72 30" x 16" (762 mm x 406 mm)	P/N 80673

Thermostats & Thermostat Guards

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 50186

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

WebStat P/N S/06696

Internet enable thermostat/controller. Provides real time system status from a web page or a password protected OPC enabled computer running MS Excel®. The WebStat allows remote users to view or change set points. See the WebStat Product Data Sheet.

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 - Humidity controller overrides thermostat and allows 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 or a phenolic coating 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, a centrifugal blower, 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. Curb transitions supply and return openings of the 3-1/2, 4 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. Field or 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 and 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 where the unit will be exposed to salt water, the coil should be coated with either an impregnated polyurethane or a phenolic. The coatings are sprayed on and pass 3,000 hours of B117 salt fog test. Note: Cooling capacity may be reduced by up to 5% on units with coated coils.

Factory Installed Disconnects on 460V Units - Factory installed disconnects are standard on all 208-230V, 2 through 6 ton units. As an option, all 460V units may be ordered with a disconnect.

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 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. Allows operation in hot ambient temperatures,

Sealed Condenser Fan Motors - Recommended on units to be installed 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.

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

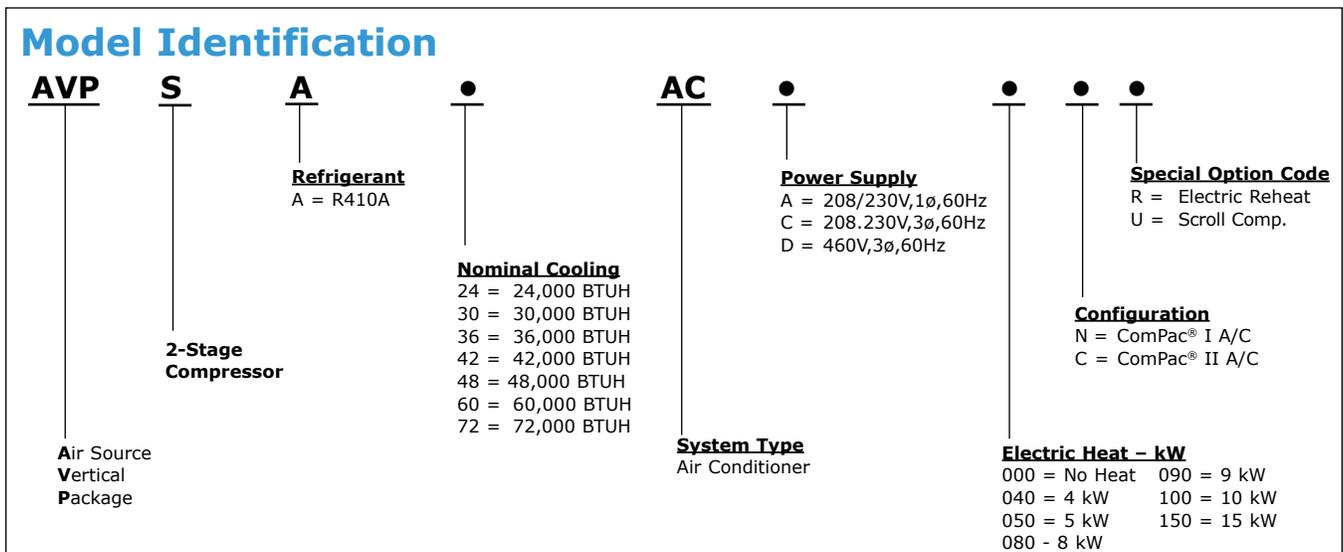
COLOR	TYPE	STATUS	DESCRIPTION
Green	Power	Constant On	24 VAC power has been applied
Red	Status	Constant On	Normal operation
		1 Blink	High pressure switch has opened twice
		2 Blinks	Low pressure switch has opened twice
		3 Blinks	Freeze stat (optional) - indoor coil temperature is below 35°F (1°C)

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 ComPac® air conditioners are 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.



AVPA Summary Ratings (Wire Sizing) - Scroll Compressor

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 #2		CKT #1		CKT #2											
		MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS										
AVPA24ACA	208-230/1	18.9	30	22.3	30	27.4	30	32.7	35	43.0	45			53.5	60								
AVPA30ACA	208-230/1	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	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	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	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	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	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	13.3	20					19.4	20			28.5	30			37.5	40						
AVPA30ACC	208-230/3	15.6	20					20.5	25			29.6	30			38.6	40			47.6	50		
AVPA36ACC	208-230/3	20.8	30					20.8	30			29.6	30			38.6	40			47.6	50		
AVPA42ACC	208-230/3	22.9	35					22.9	35			30.2	35			39.2	40			48.2	50		
AVPA48ACC	208-230/3	23.0	35					23.0	35			30.2	35			39.2	40			48.2	50		
AVPA60ACC	208-230/3	27.5	40					27.5	40			32.3	40			41.3	45			50.3	60		
AVPA72ACC	208-230/3	36.1	50					36.1	50			36.1	50			41.3	50			50.3	60		
AVPA24ACD	460/3	7.8	15					9.7	15			14.2	15			18.7	20			23.2	25		
AVPA30ACD	460/3	9.2	15					10.3	15			14.8	15			19.3	20			23.8	25		
AVPA36ACD	460/3	9.7	15					10.3	15			14.8	15			19.3	20			23.8	25		
AVPA42ACD	460/3	10.6	15					10.6	15			15.1	20			19.6	20			24.1	25		
AVPA48ACD	460/3	10.7	15					10.6	15			15.1	20			19.6	20			24.1	25		
AVPA60ACD	460/3	13.6	20					13.6	20			16.1	20			20.6	25			25.1	30		
AVPA72ACD	460/3	17.3	25					17.3	25			17.3	25			20.6	25			25.1	30		

MCA = Minimum Circuit Ampacity (Wire Size Amps). MFS = Maximum Fuse Size or HACR circuit breaker. MCA and MFS calculated at 240V for "A" & "C" models. For 460V units ("D" models), MCA & MFS calculated at 460V. All 460V units have a step down transformer for 230V motors.

AVPA Summary Ratings (Wire Sizing) - Reheat with Scroll Compressor

ELECT. HEAT		000 = None		040 = 4 kw		050 = 5 kw				060 = 6 kw		090 = 9 kw		100 = 10 kw				120 = 12 kw 8 kw Reheat (ACA)				150 = 15 kw 10 kw Reheat (ACA)			
BASIC MODEL	VOLTAGE PHASE	CKT #1		CKT #1		CKT #1		CKT #2		CKT #1		CKT #1		CKT #1		CKT #2		CKT #1		CKT #2		CKT #1		CKT #2	
		MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS
AVPA24ACA	208-230/1	18.9	30	39.8	40	44.9	45			50.2	60			18.9	30	52.1	60								
AVPA30ACA	208-230/1	21.9	35	42.8	45	47.9	50			53.2	60			21.9	35	52.1	60	23.4	35	41.6	45	28.5	35	52.1	60
AVPA36ACA	208-230/1	26.7	40	47.6	50	52.7	60			57.9	60			26.7	40	52.1	60	26.7	40	41.6	45	28.5	40	52.1	60
AVPA42ACA	208-230/1	30.7	50			30.7	50	26.0	30					30.7	50	52.1	60	30.7	50	41.6	45	30.7	50	52.1	60
AVPA48ACA	208-230/1	33.2	50			33.2	50	26.0	30					33.2	50	52.1	60	33.2	50	41.6	45	33.2	50	52.1	60
AVPA60ACA	208-230/1	40.8	60			40.8	60	26.0	30					40.8	60	52.1	60	40.8	60	41.6	45	40.8	60	52.1	60
AVPA72ACA	208-230/1	45.6	60			45.6	60	26.0	30					45.6	60	52.1	60	45.6	60	41.6	45	45.6	60	52.1	60
AVPA24ACC	208-230/3	13.3	20							31.3	35	40.4	45					49.4	50			13.3	20	45.1	50
AVPA30ACC	208-230/3	15.6	20							33.6	35	42.7	45					51.7	60			15.6	20	45.1	50
AVPA36ACC	208-230/3	20.8	30							38.8	40	47.9	50					56.9	60			20.8	30	45.1	50
AVPA42ACC	208-230/3	22.9	35							40.9	40	50.0	60					22.9	35	36.1	40	23.0	35	45.1	50
AVPA48ACC	208-230/3	23.0	35							41.0	45	50.2	60					23.0	35	36.1	40	23.0	35	45.1	50
AVPA60ACC	208-230/3	27.5	40							45.5	50	54.6	60					27.5	40	36.1	40	27.5	40	45.1	50
AVPA72ACC	208-230/3	36.1	50							54.1	60							36.1	50	36.1	40	36.1	50	45.1	50
AVPA24ACD	460/3	7.8	15							16.8	20	21.3	25					25.8	30			30.3	35		
AVPA30ACD	460/3	9.2	15							18.2	20	22.7	25					27.2	30			31.7	35		
AVPA36ACD	460/3	9.7	15							18.7	20	23.2	25					27.7	30			32.2	35		
AVPA42ACD	460/3	10.6	15							19.6	20	23.3	25					28.6	30			33.1	35		
AVPA48ACD	460/3	10.7	15							19.7	20	24.2	25					28.7	30			33.2	35		
AVPA60ACD	460/3	13.6	20							22.6	25	27.1	30					31.6	35			36.1	40		
AVPA72ACD	460/3	17.3	25							26.3	30	30.8	35					35.3	40			39.8	40		

MCA = Minimum Circuit Ampacity (Wire Size Amps). MFS = Maximum Fuse Size or HACR circuit breaker. MCA and MFS calculated at 240V for "A" & "C" models. For 460V units ("D" models), MCA & MFS calculated at 460V. All 460V units have a step down transformer for 230V motors.

AVPA Electrical Characteristics

BASIC MODEL	COMPRESSOR				OUTDOOR FAN MOTOR				INDOOR FAN MOTOR			
	VOLTS	RLA	LRA	MCC	VOLTS	RPM	FLA	HP	VOLTS	RPM	FLA	HP
AVPA24ACA	208/230-60-1	12.8	64.0	20.0	208/230-60-1	1075	1.5	1/5	208/230-60-1	1075	1.4	1/4
AVPA30ACA	208/230-60-1	14.1	77.0	22.0	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	28.0	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	31.0	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	34.0	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	41.0	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	47.0	208/230-60-1	825	2.9	1/2	208/230-60-1	1075	5.2	3/4
AVPA24ACC	208/230-60-3	8.3	61.0	13.0	208/230-60-1	1075	1.5	1/5	208/230-60-1	1075	1.4	1/4
AVPA30ACC	208/230-60-3	9.0	71.0	14.0	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	20.6	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	21.2	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	21.4	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	24.4	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	35.0	208/230-60-1	825	2.9	1/2	208/230-60-1	1075	5.2	3/4
AVPA24ACD	460-60-3	5.1	28.0	8.0	208/230-60-1	825	1.5	1/5	208/230-60-1	1075	1.4	1/4
AVPA30ACD	460-60-3	5.6	38.0	8.8	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	9.3	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	9.5	208/230-60-1	1075	2.8	1/3	208/230-60-1	1075	3.1	1/2
AVPA48ACD	460-60-3	6.2	41.0	9.7	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	12.1	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	16.5	208/230-60-1	825	2.9	1/2	208/230-60-1	1075	5.2	3/4

RLA = Rated Load Amps LRA = Locked Rotor Amps MCC = Maximum Continuous Current FLA = Full Load Amps
 RPM = Revolutions per Minute HP = Horse Power
 All 460V units have a step down transformer for 230V motors.

AVPA Unit Load Amps

BASIC MODEL NUMBER	VOLTAGE PHASE HERTZ	CURRENT AMPS		LOAD OF RESISTIVE HEATING ELEMENTS ONLY (AMPS)									TOTAL MAXIMUM HEATING AMPS (STANDARD UNIT)							
		AC	IBM	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	
AVP24ACA	208-230/1/60	15.7	1.4	16.7	20.8	25.0	33.3	n/a	41.7	n/a	n/a	18.1	22.2	26.4	34.7	n/a	43.1	n/a	n/a	
AVP30ACA	208-230/1/60	18.4	2.5	16.7	20.8	25.0	33.3	n/a	41.7	50.0	62.5	19.2	23.3	27.5	35.8	n/a	44.2	52.5	65.0	
AVP36ACA	208-230/1/60	22.2	2.5	16.7	20.8	25.0	33.3	n/a	41.7	50.0	62.5	19.2	23.3	27.5	35.8	n/a	44.2	52.5	65.0	
AVP42ACA	208-230/1/60	25.7	3.1	n/a	20.8	n/a	n/a	n/a	41.7	50.0	62.5	n/a	23.9	n/a	n/a	n/a	44.8	53.1	65.6	
AVP48ACA	208-230/1/60	27.7	3.1	n/a	20.8	n/a	n/a	n/a	41.7	50.0	62.5	n/a	23.9	n/a	n/a	n/a	44.8	53.1	65.6	
AVP60ACA	208-230/1/60	34.2	5.2	n/a	20.8	n/a	n/a	n/a	41.7	50.0	62.5	n/a	26.0	n/a	n/a	n/a	46.9	55.2	67.7	
AVP72ACA	208-230/1/60	38.2	5.2	n/a	20.8	n/a	n/a	n/a	41.7	50.0	62.5	n/a	26.0	n/a	n/a	n/a	46.9	55.2	67.7	
AVP24ACC	208-230/3/60	11.2	1.4	n/a	n/a	14.4	n/a	21.7	n/a	28.9	36.1	n/a	n/a	15.8	n/a	23.1	n/a	30.3	37.5	
AVP30ACC	208-230/3/60	13.3	2.5	n/a	n/a	14.4	n/a	21.7	n/a	28.9	36.1	n/a	n/a	16.9	n/a	24.2	n/a	31.4	38.6	
AVP36ACC	208-230/3/60	17.5	2.5	n/a	n/a	14.4	n/a	21.7	n/a	28.9	36.1	n/a	n/a	16.9	n/a	24.2	n/a	31.4	38.6	
AVP42ACC	208-230/3/60	19.5	3.1	n/a	n/a	14.4	n/a	21.7	n/a	28.9	36.1	n/a	n/a	17.5	n/a	24.8	n/a	32.0	39.2	
AVP48ACC	208-230/3/60	19.6	3.1	n/a	n/a	14.4	n/a	21.7	n/a	28.9	36.1	n/a	n/a	17.5	n/a	24.8	n/a	32.0	39.2	
AVP60ACC	208-230/3/60	23.6	5.2	n/a	n/a	14.4	n/a	21.7	n/a	28.9	36.1	n/a	n/a	19.6	n/a	26.9	n/a	34.1	41.3	
AVP72ACC	208-230/3/60	30.5	5.2	n/a	n/a	14.4	n/a	21.7	n/a	28.9	36.1	n/a	n/a	19.6	n/a	26.9	n/a	34.1	41.3	
AVP24ACD	460/3/60	6.6	0.7	n/a	n/a	7.2	n/a	10.8	n/a	14.4	18.0	n/a	n/a	7.9	n/a	11.5	n/a	15.1	18.7	
AVP30ACD	460/3/60	7.8	1.3	n/a	n/a	7.2	n/a	10.8	n/a	14.4	18.0	n/a	n/a	8.5	n/a	12.1	n/a	15.7	19.3	
AVP36ACD	460/3/60	8.2	1.3	n/a	n/a	7.2	n/a	10.8	n/a	14.4	18.0	n/a	n/a	8.5	n/a	12.1	n/a	15.7	19.3	
AVP42ACD	460/3/60	9.1	1.6	n/a	n/a	7.2	n/a	10.8	n/a	14.4	18.0	n/a	n/a	8.8	n/a	12.4	n/a	16.0	19.6	
AVP48ACD	460/3/60	9.2	1.6	n/a	n/a	7.2	n/a	10.8	n/a	14.4	18.0	n/a	n/a	8.8	n/a	12.4	n/a	16.0	19.6	
AVP60ACD	460/3/60	11.7	2.6	n/a	n/a	7.2	n/a	10.8	n/a	14.4	18.0	n/a	n/a	9.8	n/a	13.4	n/a	17.0	20.6	
AVP72ACD	460/3/60	14.7	2.6	n/a	n/a	7.2	n/a	10.8	n/a	14.4	18.0	n/a	n/a	9.8	n/a	13.4	n/a	17.0	20.6	

Heating kW shown at 240V for "A" & "C" models. Derate heat output by 25% for 208V service. Total heating amps for ALL ACA units with 15kW includes both circuits (#1 and #2) Heater kW shown at 480V for all "D" models.
 NOTE: Three phase equipment contains single-phase motor loads. Values shown are maximum phase loads. Loads are not equally balanced on each phase. Total cooling and total heating amps include motor loads.

AVPA Certified Efficiency and Capacity Ratings @ ARI Standard 390

MODEL	24			30			36			42			48			60			72		
	ACA	ACC	ACD	ACA	ACC	ACD															
COOLING BTUH	24,000			30,000			35,500			42,500			47,000			56,500			63,000	71,000	
EER	9.10			9.80			9.40			9.10			9.10			9.00			10.30	10.00	
RATED CFM	840			1000			1220			1520			1760			1850			2050		
ESP	0.10			0.15			.015			0.15			0.20			0.20			0.20	0.25	

Cooling rated at 95°F outdoor and 80°/67°F indoor. Air flow ratings are for unit with the "N" ventilation configuration and no outside air. Performance will be affected by altitude.

AVPA Performance Chart

Data based on 80°F(26.5°C) DB/67°F (19.5°C) Wet Bulb Return Air Temperature at Various Outdoor Temperatures at rated CFM.

Model	75°F/24°C	80°F/26.5°C	85°F/29°C	90°F/32°C	95°F/35°C	100°F/38°C	105°F/40.5°C	110°F/43.3°C	115°F/46°C
24	27,840	26,880	25,920	24,960	24,000	23,040	22,080	21,120	20,640
30	34,800	33,600	32,400	31,200	30,000	28,800	27,600	26,400	25,800
36	41,180	39,760	38,340	36,920	35,500	34,080	32,660	31,240	30,530
42	49,300	47,600	45,900	44,200	42,500	40,800	39,100	37,400	36,550
48	54,520	52,640	50,760	48,880	47,000	45,120	43,240	41,360	40,420
60	65,540	63,280	61,020	58,760	56,500	54,240	51,980	49,720	48,590
72 (10)	73,080	70,560	68,040	65,520	63,000	60,480	57,960	55,440	54,180
72 (30)	82,360	79,520	76,680	73,840	71,000	68,160	65,320	62,480	61,060

The cooling capacity of the AVPA72 three phase units is 2,000 BTUH lower when operated on 208 volts.

AVPA Sensible Total Ratio @ 95°F (35°C) Outside Air DB

MODEL	24AC	30AC	36AC	42AC	48AC	60AC	72AC (1 Ph)	72AC (3 Ph)
TOTAL CAPACITY	24,000	30,000	35,500	42,500	47,000	56,500	63,000	71,000
SENSIBLE HEAT RATIO	0.69	0.74	0.69	0.75	0.75	0.69	0.70	0.66
SENSIBLE CAPACITY	16,500	22,100	24,340	31,820	35,300	39,190	44,000	46,570
RATED CFM	840	1,000	1,220	1,520	1,760	1,850	2,050	2,050
ESP	0.10	0.15	0.15	0.15	0.20	0.20	0.20	0.25

Sensible ratios based upon ARI standard 390 return air conditions of 80°F (26.5°C) Dry Bulb/67°F (19.5°C) Wet Bulb

AVPA CFM @ ESP (Wet Coil)

MODEL	0.10	0.20	0.25	0.30	0.40	0.50
AVPA24	860	810	740	670		
AVPA30	1100	1000	960	920	810	
AVPA36	1310	1220	1185	1150	1060	
AVPA42		1650	1585	1520	1450	1360
AVPA48		1900	1830	1760	1700	1620
AVPA60		1900	1830	1760	1700	1620
AVPA72		2100	1950	1800	1730	1660

Air flow ratings of 208-230 volt units are at 230v. Air flow ratings of 460 volt units are at 460 volts. Operation of units at a voltage different from the rating point will affect air flow.

AVPSA CFM @ ESP (Wet Coil)

MODEL	0.10	0.20	0.25	0.30	0.40	0.50
AVPSA36	1310	1220	1185	1150	1060	
AVPSA42		1650	1585	1520	1450	1360
AVPSA48		1900	1830	1760	1700	1620
AVPSA60		1900	1830	1760	1700	1620

Air flow ratings of 208-230 volt units are at 230V. Air flow ratings of 460 volt units are at 460 volts. Operation of units at a voltage different from the rating point will affect air flow.

AVPSA Summary Ratings (Wire Sizing) - Scroll Compressor

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 #2		CKT #1		CKT #2											
		MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS										
AVPSA36ACA	208-230/1	25.1	40	25.1	40	28.5	40	33.8	40	44.1	45			54.6	60	25.1	40	41.6	45	28.5	40	52.1	60
AVPSA42ACA	208-230/1	26.7	40			29.1	40							55.2	60	26.7	40	41.6	45	29.1	40	52.1	60
AVPSA48ACA	208-230/1	32.3	50			32.3	50							55.2	60	32.3	50	41.6	45	32.3	50	52.1	60
AVPSA60ACA	208-230/1	40.0	60			40.0	60							57.3	60	40.0	60	41.6	45	40.0	60	52.1	60
AVPSA36ACC	208-230/3	18.2	25					22.3	25			29.6	30			38.6	40			47.6	50		
AVPSA42ACC	208-230/3	22.7	35					23.9	35			30.2	35			39.2	40			48.2	50		
AVPSA48ACC	208-230/3	22.7	35					23.9	35			30.2	35			39.2	40			48.2	50		
AVPSA60ACC	208-230/3	30.0	40					30.0	40			32.3	40			41.3	45			50.3	60		
AVPSA36ACD	460/3	7.8	15					10.3	15			14.8	15			19.3	20			23.8	25		
AVPSA42ACD	460/3	10.6	15					10.6	15			15.1	20			19.6	20			24.1	25		
AVPSA48ACD	460/3	11.0	15					10.6	15			15.1	20			19.6	20			24.1	25		
AVPSA60ACD	460/3	15.3	20					15.3	20			16.1	20			20.6	25			25.1	30		

MCA = Minimum Circuit Ampacity (Wire Size Amps). MFS = Maximum Fuse Size or HACR circuit breaker. MCA and MFS calculated at 240V for "A" & "C" models. For 460V units ("D" models), MCA & MFS calculated at 460V. All 460V units have a step down transformer for 230V motors.

AVPSA Summary Ratings (Wire Sizing) - Reheat with Scroll Compressor -

ELECT. HEAT		000 = None		040 = 4 kw		050 = 5 kw				060 = 6 kw		090 = 9 kw		100 = 10 kw				120 = 12 kw 8 kw Reheat (ACA)				150 = 15 kw 10 kw Reheat (ACA)			
BASIC MODEL	VOLTAGE PHASE	CKT #1		CKT #1		CKT #1		CKT #2		CKT #1		CKT #1		CKT #1		CKT #2		CKT #1		CKT #2		CKT #1		CKT #2	
		MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS
AVPSA36ACA	208-230/1	25.1	40	46.2	50	51.1	60			56.3	60			25.1	40	52.1	60	25.1	40	41.6	45	25.1	40	52.1	60
AVPSA42ACA	208-230/1	26.7	40			26.7	40	26.0	30					26.7	40	52.1	60	26.7	40	41.6	45	26.7	40	52.1	60
AVPSA48ACA	208-230/1	32.3	50			32.3	50	26.0	30					32.3	50	52.1	60	32.3	50	41.6	45	32.3	50	52.1	60
AVPSA60ACA	208-230/1	40.0	60			40.0	60	26.0	30					40.0	60	52.1	60	40.0	60	41.6	45	40.0	60	52.1	60
AVPSA36ACC	208-230/3	18.2	25							36.2	40	45.3	50					54.3	60			18.2	25	45.1	50
AVPSA42ACC	208-230/3	22.7	35							40.7	45	49.8	50					22.7	35	36.1	40	22.7	35	45.1	50
AVPSA48ACC	208-230/3	22.7	35							40.7	45	49.8	50					22.7	35	36.1	40	22.7	35	45.1	50
AVPSA60ACC	208-230/3	30.0	40							48.0	50	57.1	60					30.0	40	36.1	40	30.0	40	45.1	50
AVPSA36ACD	460/3	7.8	15							16.8	20	21.3	25					25.8	30			30.3	35		
AVPSA42ACD	460/3	10.6	15							19.6	20	24.1	25					28.6	30			33.1	35		
AVPSA48ACD	460/3	11.0	15							20.0	25	24.5	25					29.0	30			33.5	35		
AVPSA60ACD	460/3	15.3	20							24.3	25	28.8	30					33.3	35			37.8	40		

MCA = Minimum Circuit Ampacity (Wire Size Amps). MFS = Maximum Fuse Size or HACR circuit breaker. MCA and MFS calculated at 240V for "A" & "C" models. For 460V units ("D" models), MCA & MFS calculated at 460V. All 460V units have a step down transformer for 230V motors.

AVPSA Electrical Characteristics

BASIC MODEL	COMPRESSOR				OUTDOOR FAN MOTOR				INDOOR FAN MOTOR			
	VOLTS	RLA	LRA	MCC	VOLTS	RPM	FLA	HP	VOLTS	RPM	FLA	HP
AVPSA36ACA	208/230-60-1	16.6	82.0	26.0	208/230-60-1	825	1.8	1/3	208/230-60-1	1075	2.5	1/4
AVPSA42ACA	208/230-60-1	16.6	96.0	26.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	3.1	1/2
AVPSA48ACA	208/230-60-1	21.1	96.0	33.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	3.1	1/2
AVPSA60ACA	208/230-60-1	25.6	118.0	40.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	5.2	3/4
AVPSA36ACC	208/230-60-3	11.1	58.0	17.4	208/230-60-1	825	1.8	1/3	208/230-60-1	1075	2.5	1/4
AVPSA42ACC	208/230-60-3	13.4	88.0	21.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	3.1	1/2
AVPSA48ACC	208/230-60-3	13.4	88.0	21.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	3.1	1/2
AVPSA60ACC	208/230-60-3	17.6	123.0	27.5	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	5.2	3/4
AVPSA36ACD	460-60-3	4.5	29.0	7.0	208/230-60-1	825	1.8	1/3	208/230-60-1	1075	2.5	1/4
AVPSA42ACD	460-60-3	6.1	44.0	9.5	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	3.1	1/2
AVPSA48ACD	460-60-3	6.4	41.0	10.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	3.1	1/2
AVPSA60ACD	460-60-3	9.0	62.0	14.0	208/230-60-1	825	2.8	1/3	208/230-60-1	1075	5.2	3/4

RLA = Rated Load Amps LRA = Locked Rotor Amps MCC = Maximum Continuous Current FLA = Full Load Amps
RPM = Revolutions per Minute HP = Horse Power
All 460V units have a step down transformer for 230V motors.

AVPSA Unit Load Amps

BASIC MODEL NUMBER	VOLTAGE PHASE HERTZ	CURRENT AMPS		LOAD OF RESISTIVE HEATING ELEMENTS ONLY (AMPS)										TOTAL MAXIMUM HEATING AMPS (STANDARD UNIT)					
		AC	IBM	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
AVPSA36ACA	208-230/1/60	20.9	2.5	16.7	20.8	25.0	33.3	n/a	41.7	50.0	62.5	19.2	23.3	27.5	35.8	n/a	44.2	52.5	65.0
AVPSA42ACA	208-230/1/60	22.5	3.1	n/a	20.8	n/a	n/a	n/a	41.7	50.0	62.5	n/a	23.9	n/a	n/a	n/a	44.8	53.1	65.6
AVPSA48ACA	208-230/1/60	27.0	3.1	n/a	20.8	n/a	n/a	n/a	41.7	50.0	62.5	n/a	23.9	n/a	n/a	n/a	44.8	53.1	65.6
AVPSA60ACA	208-230/1/60	33.6	5.2	n/a	20.8	n/a	n/a	n/a	41.7	50.0	62.5	n/a	26.0	n/a	n/a	n/a	46.9	55.2	67.7
AVPSA36ACC	208-230/3/60	15.4	2.5	n/a	n/a	14.4	n/a	21.7	n/a	28.9	36.1	n/a	n/a	16.9	n/a	24.2	n/a	31.4	38.6
AVPSA42ACC	208-230/3/60	19.3	3.1	n/a	n/a	14.4	n/a	21.7	n/a	28.9	36.1	n/a	n/a	17.5	n/a	24.8	n/a	32.0	39.2
AVPSA48ACC	208-230/3/60	19.3	3.1	n/a	n/a	14.4	n/a	21.7	n/a	28.9	36.1	n/a	n/a	17.5	n/a	24.8	n/a	32.0	39.2
AVPSA60ACC	208-230/3/60	25.6	5.2	n/a	n/a	14.4	n/a	21.7	n/a	28.9	36.1	n/a	n/a	19.6	n/a	26.9	n/a	34.1	41.3
AVPSA36ACD	460/3/60	6.7	1.3	n/a	n/a	7.2	n/a	10.8	n/a	14.4	18.0	n/a	n/a	8.5	n/a	12.1	n/a	15.7	19.3
AVPSA42ACD	460/3/60	9.1	1.6	n/a	n/a	7.2	n/a	10.8	n/a	14.4	18.0	n/a	n/a	8.8	n/a	12.4	n/a	16.0	19.6
AVPSA48ACD	460/3/60	9.4	1.6	n/a	n/a	7.2	n/a	10.8	n/a	14.4	18.0	n/a	n/a	8.8	n/a	12.4	n/a	16.0	19.6
AVPSA60ACD	460/3/60	13.0	2.6	n/a	n/a	7.2	n/a	10.8	n/a	14.4	18.0	n/a	n/a	9.8	n/a	13.4	n/a	17.0	20.6

Heating kW shown at 240V for "A" & "C" models. Derate heat output by 25% for 208V service. Total heating amps for ALL ACA units with 15kW includes both circuits (#1 and #2) Heater kW shown at 480V for all "D" models.
NOTE: Three phase equipment contains single-phase motor loads. Values shown are maximum phase loads. Loads are not equally balanced on each phase. Total cooling and total heating amps include motor loads.

AVPA and AVPSA Ship Weight

BASIC MODEL	AVPA24 LBS/KG	AVPA30 LBS/KG	AVPA36 LBS/KG	AVPA42 LBS/KG	AVPA48 LBS/KG	AVPA60 LBS/KG	AVPA72 LBS/KG
COMPAC® I	274/125	355/160	355/160	495/225	521/240	535/245	600/272
COMPAC® II	286/130	365/170	365/170	527/240	552/250	565/260	640/290

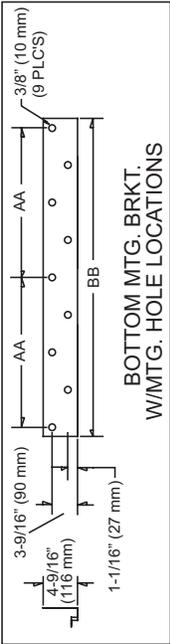
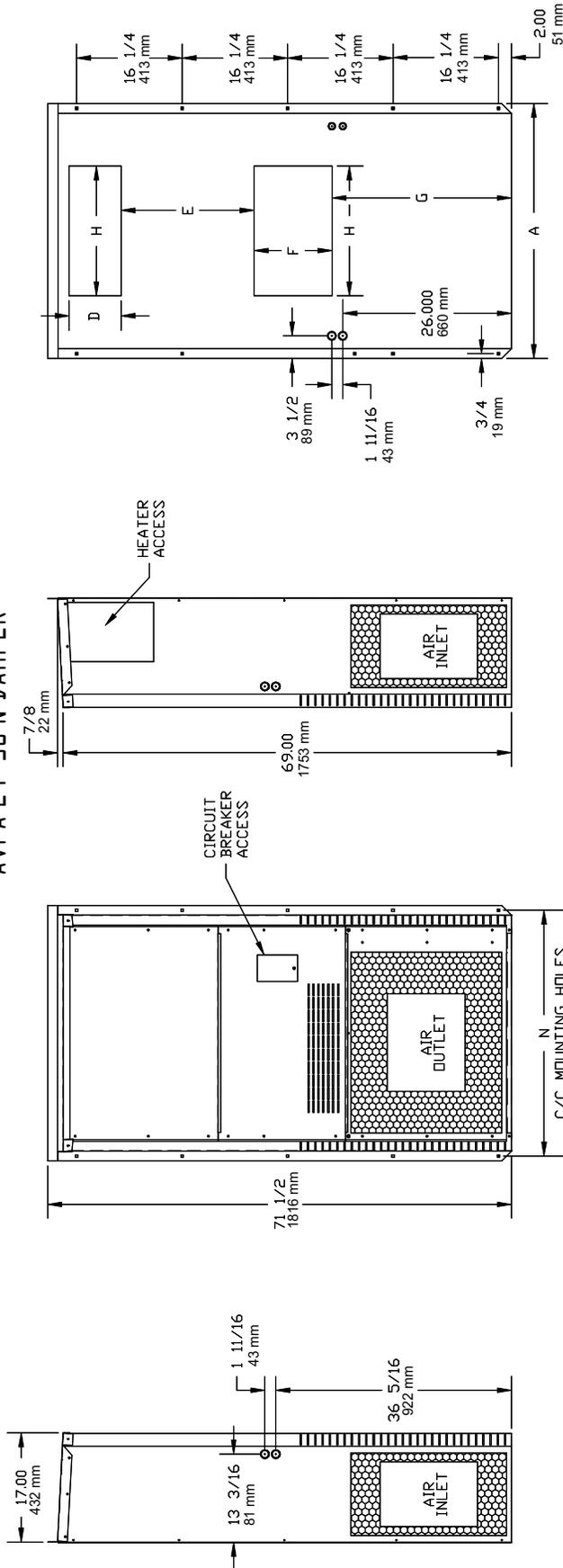
AVPA and AVPSA Filter Size

BASIC MODEL	AVPA24	AVPA30	AVPA36	AVPA42	AVPA48	AVPA60	AVPA72
FILTER SIZE (IN)	16 x 25 x 2	16 x 30 x 2		22 x 36-1/2 x 2		18 x 24 x 2*	
FILTER SIZE (MM)	406 x 635 x 51	406 x 762 x 51		559 x 927 x 51		452 x 610 x 51	

* Two filters required.

Dimensional Data - AVPA24/30/36 ComPac® I Air Conditioners

DIMENSIONS AVPA 24-36 N DAMPER

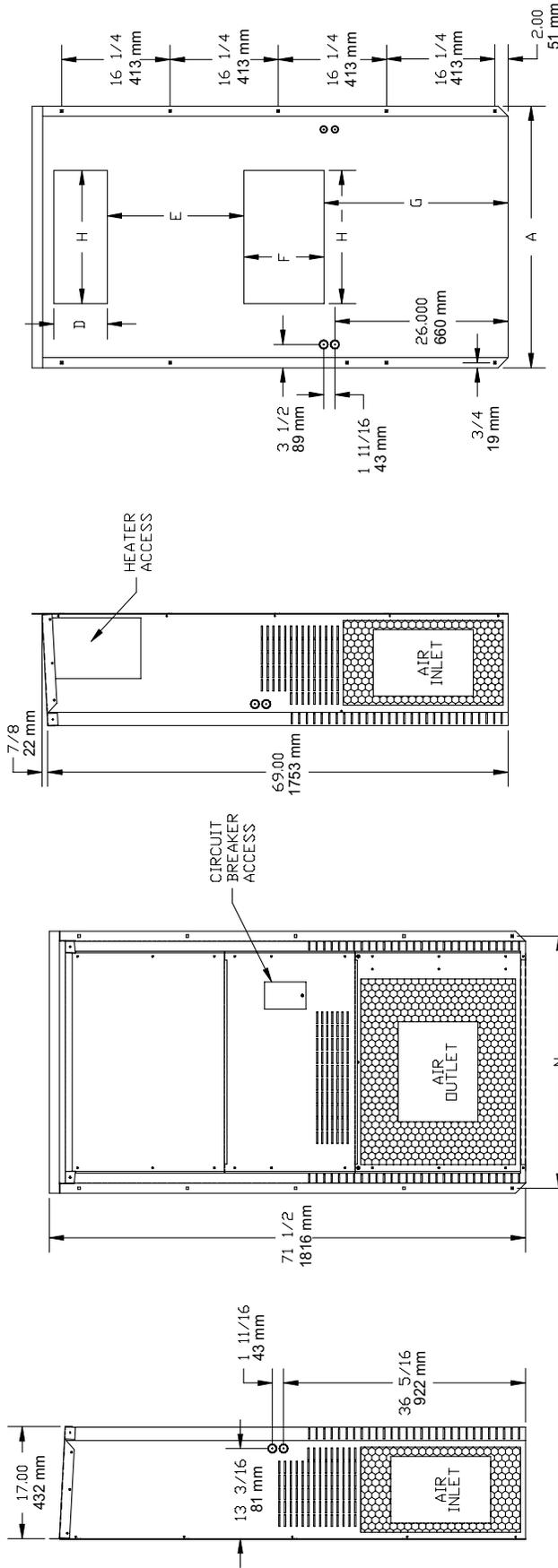


MODEL	A	D	F	F	G	H	N	AA	BB
AVPA24 IN	39-3/8	8	20-1/2	12	27-3/4	20	37-7/8	17-5/8	35-1/4
MM	1000	203	521	305	705	508	962	448	895
AVPA30-36 IN	44-9/16	8	18	14	28-1/2	28	43-1/16	20-1/4	40-1/2
MM	1132	203	457	356	724	711	1094	514	1029

* H DIM IS CENTERED BETWEEN A DIM

Dimensional Data - AVPA24/30/36 & AVPSA36 ComPac® II Air Conditioners

DIMENSIONS AVPA 24-36 C, B, Y, & Z DAMPERS

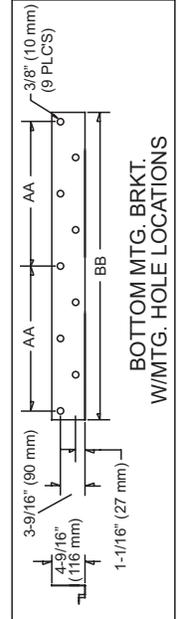


BACK

R.H. SIDE

FRONT

L.H. SIDE

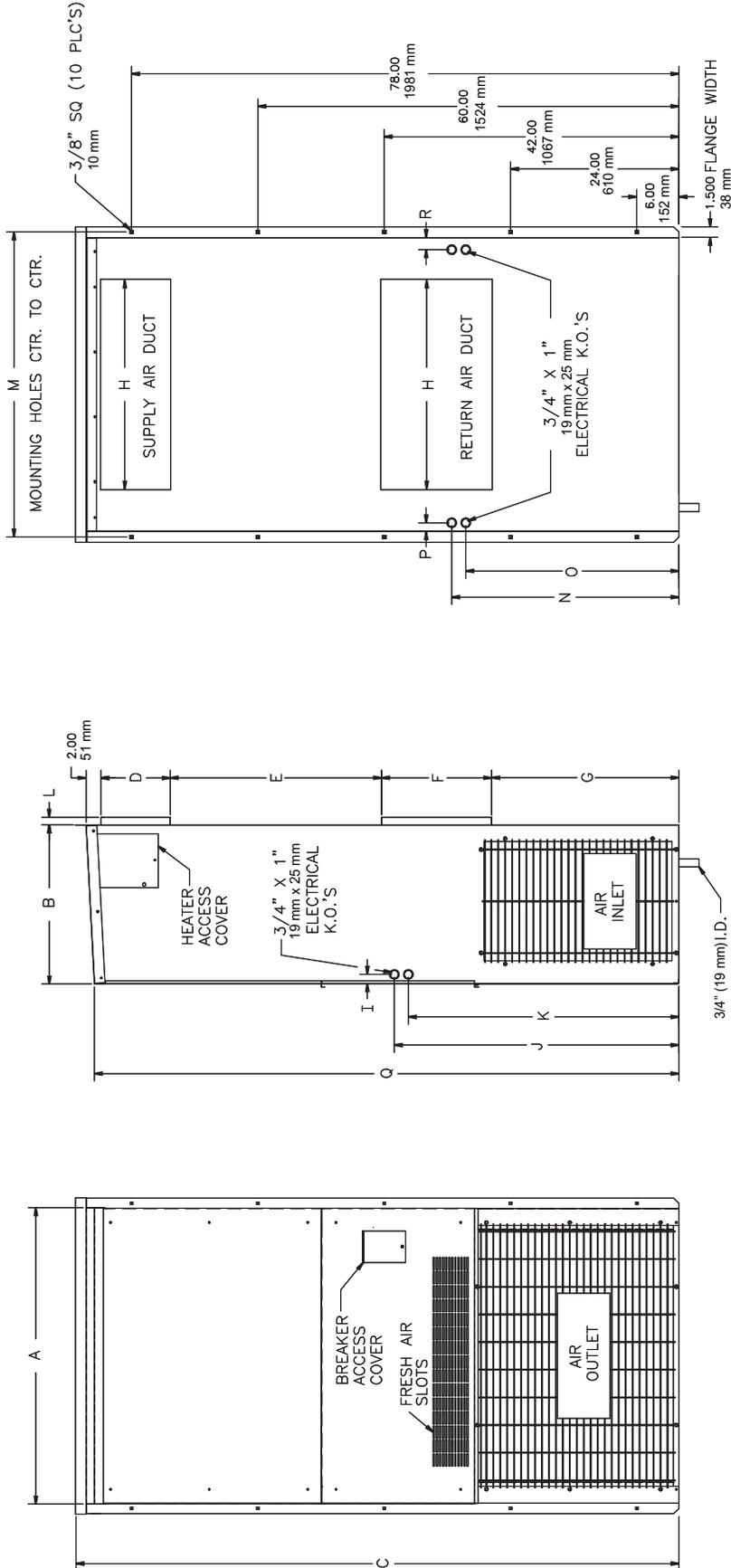


MODEL	A	D	F	F	G	H	N	AA	BB
AVPA24	39-3/8	8	20-1/2	12	27-3/4	20	37-7/8	17-5/8	35-1/4
	MM	MM	MM	MM	MM	MM	MM	MM	MM
AVPA30-36	44-9/16	8	18	14	28-1/2	28	43-1/16	20-1/4	40-1/2
	MM	MM	MM	MM	MM	MM	MM	MM	MM

* H DIM IS CENTERED BETWEEN A DIM

Dimensional Data - AVPA42/48/60 & AVPSA 42/48/60 ComPac® I Air Conditioners

DIMENSIONS
AVPA42-60 N DAMPER

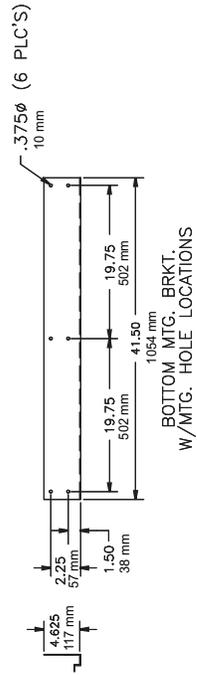


FRONT VIEW

R.H. SIDE VIEW

BACK VIEW

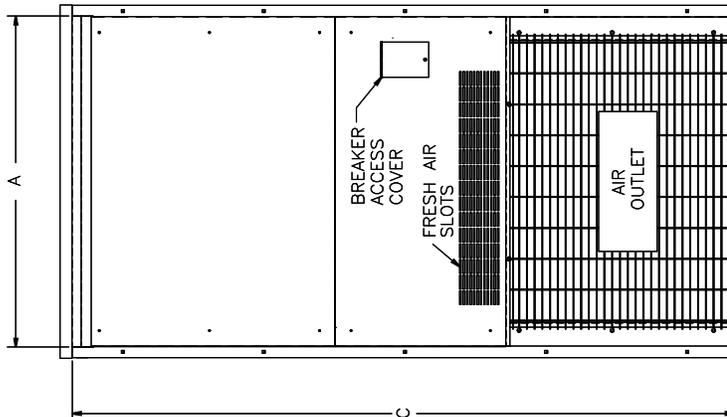
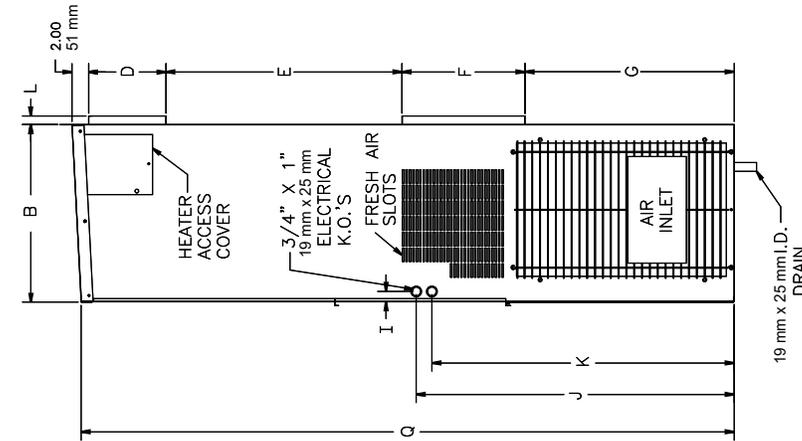
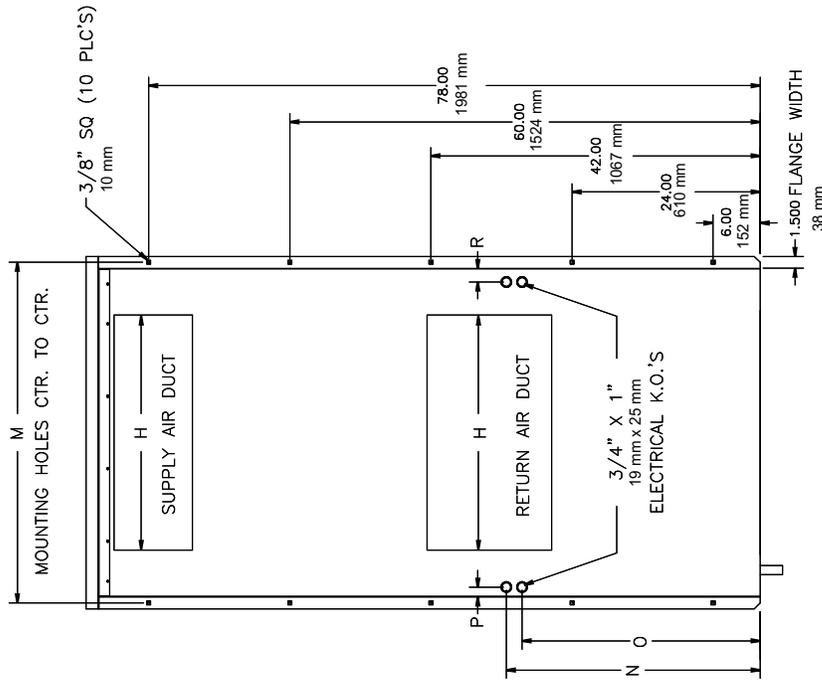
MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
IN	42-118	22-518	86.00	10.00	30.00	16.00	26-112	30.00	1.5-116	40-9-116	38-9-116	1-1-18	43-1-12	32-3-18	30-3-18	1-1-14	83.30	1.725
MM	1070	575	2184	254	762	406	673	762	33	1030	979	29	1105	822	772	32	2116	44



BOTTOM MTG. BRKT.
W/MTG. HOLE LOCATIONS

Dimensional Data - AVPA42/48/60 & AVPSA 42/48/60 ComPac® II Air Conditioners

DIMENSIONS
AVPA42-60 C, B, Y, & Z DAMPERS

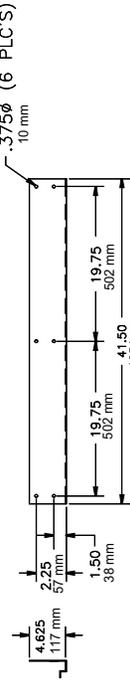


BACK VIEW

R.H. SIDE VIEW

FRONT VIEW

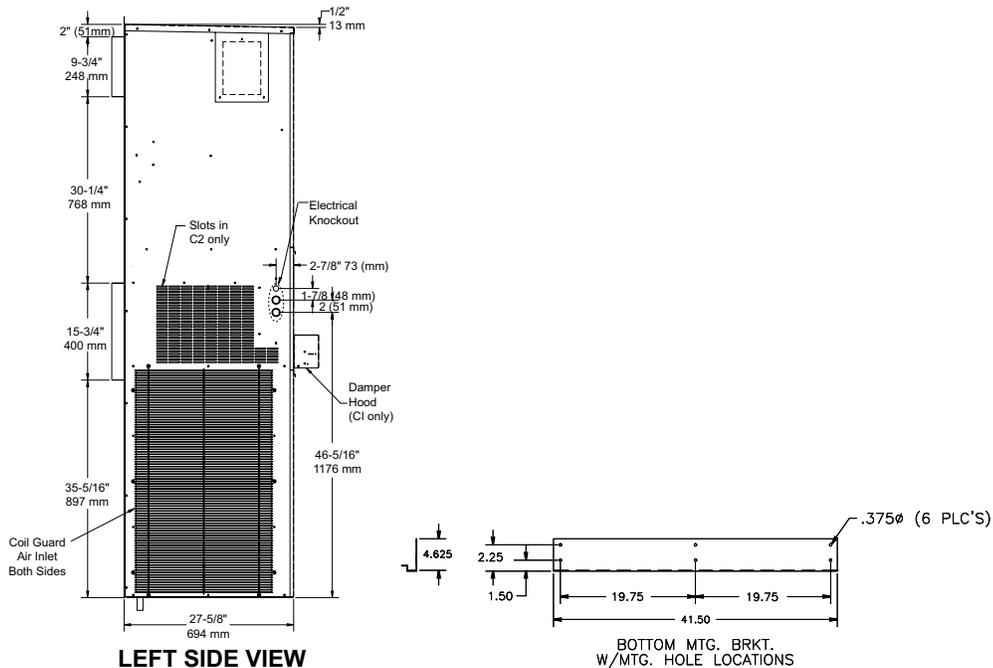
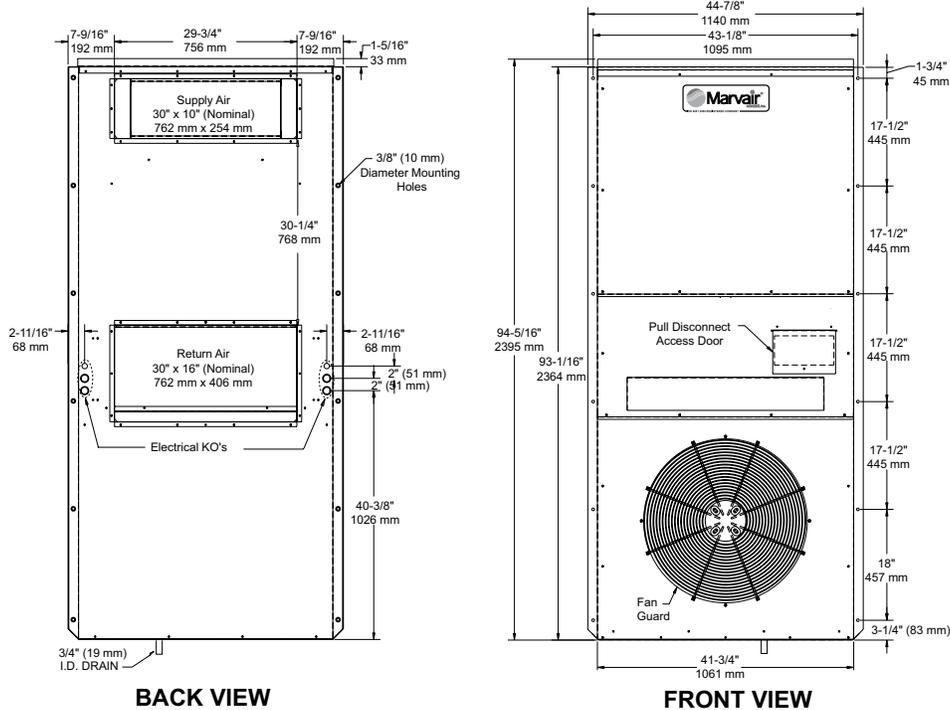
MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
AVPA42-60	42-1/8	22-5/8	86.00	10.00	30.00	16.00	26-1/2	30.00	1-5/16	40-9/16	38-9/16	1-1/8	43-1/2	32-3/8	30-3/8	1-1/4	83.30	1.725
	1070	575	2184	254	762	406	673	762	33	1030	979	29	1105	822	772	32	2116	44



BOTTOM MITG. BRKT.
W/MITG. HOLE LOCATIONS



Dimensional Data - AVPA72 ComPac® I & ComPac® II Air Conditioners



Please consult the Marvair® website at www.marvair.com for the latest product literature. Complete installation instructions are in the ComPac® Air Conditioners I&O Manual. 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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TRION[®]

air purification systems

MODEL M750 • M1100**MEDIA AIR CLEANERS****ENGINEERED SOLUTIONS FOR CLEAN AIR**

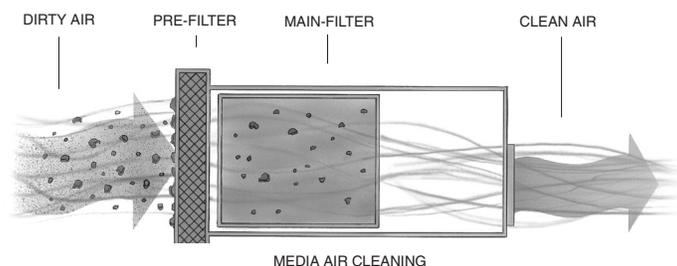
Trion's Models M750 and M1100 commercial air cleaners have been especially designed for large rooms or multi-room facilities. They have the capacity to help remove up to 99.97% of tobacco smoke, dust, pollen, lint, bacteria and mold spores from recirculated indoor air. Nuisance odor control is also possible with an optional adsorption module.

They are easy to install on a wall or suspend from a ceiling and feature variable speed control, non-electrostatic, high efficiency micro-glass filters (optional HEPA filter or 14 lb. charcoal filter), a commercial duty cabinet, and adjustable outlet grille.

The Model M750 and M1100 air cleaners can be used in cocktail lounges, clubs, bingo halls, meeting rooms, bowling centers, computer rooms, conference rooms, designated smoking areas, or wherever people gather to work or relax.

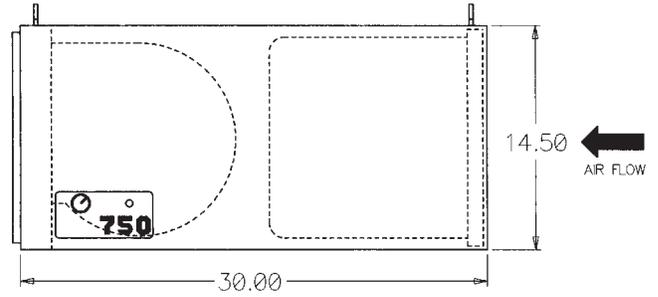
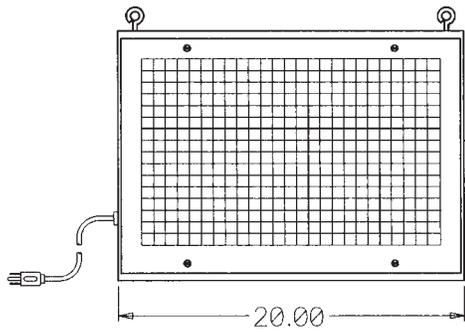
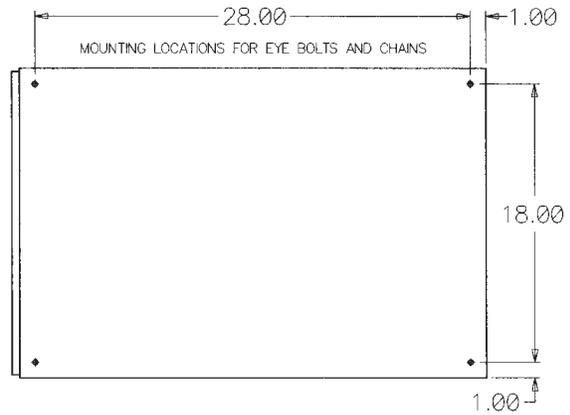
**FEATURES / BENEFITS**

- High Efficiency Filters - removal of sub-micron particles
- Recirculates Indoor Air - less expense to heat or cool air
- Front Access - no tools required to change filters
- 4-Way Adjustable Outlet Diffuser - ability to better control air pattern

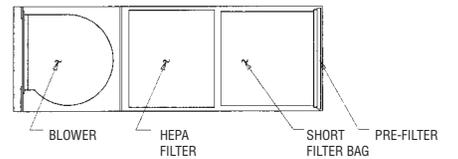
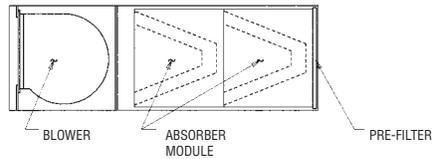
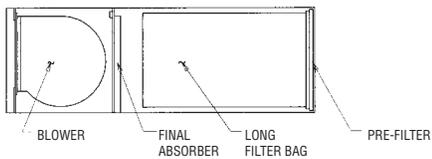
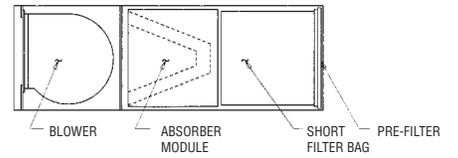
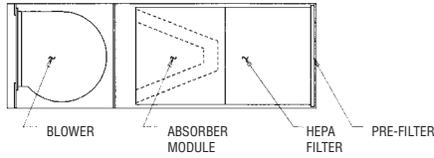
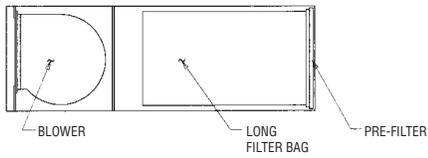
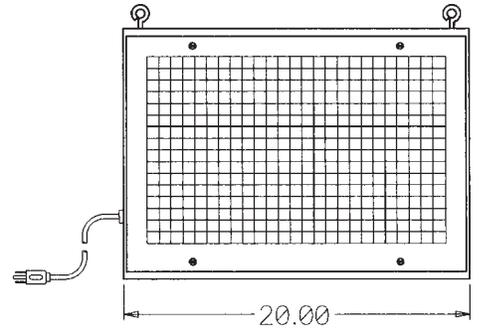
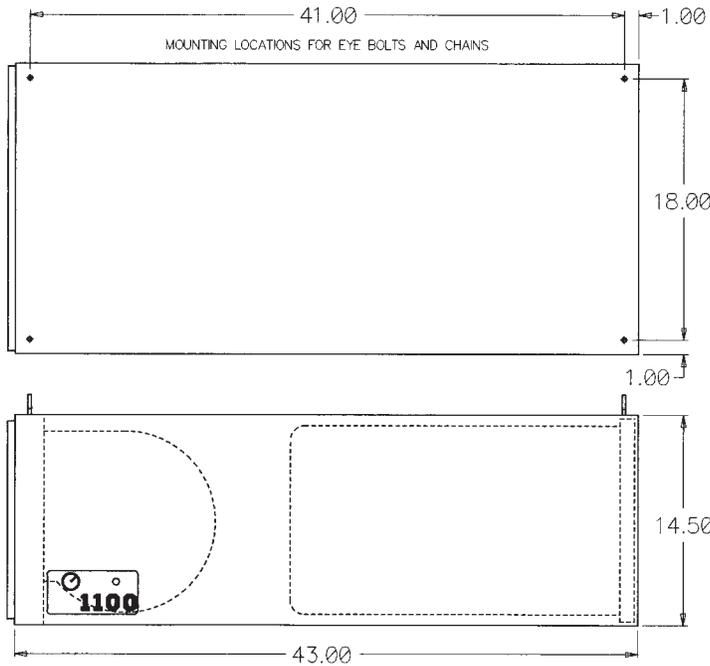
**HOW IT WORKS**

Trion's Models M750 and M1100 uses a principle called Interception Filtration. Dirty, polluted air is drawn through the pre-filter to remove larger dust particles. The second stage, micro-glass deep pocket media filter strips submicron particles from the air stream by interception. The small diameter fibers in the filter intercept and retain these small particles while the large surface area of the filter gives long life and low pressure drop. The blower is designed specifically to handle the filtration system at rated CFM over the useful life of the filter. The Trion units work independently of any HVAC system.

SPECIFICATIONS MODEL M750



SPECIFICATIONS MODEL M1100



SPECIFICATIONS**MODEL M750****MODEL M1100**

DIMENSIONS	30" L x 20" W x 14.5" H	43"L x 20" W x 14.5" H
INSTALLATION	Wall or Ceiling mount	Wall or Ceiling mount
WEIGHT	70 lbs., Shipping Wt. 111 lbs.	95 lbs., Shipping Wt. 125 lbs.
ELECTRICAL INSTALLATION	8' power cord with 3 prong plug included	8' power cord with 3 prong plug included
MOTOR	1/8 HP Thermally protected	1/2 HP Thermally protected
BLOWERS	Direct drive squirrel cage forward curved	Direct drive squirrel cage forward curved
POWER CONSUMPTION	3.8 Amps Max, 349 Watts Max	7.2 Amps Max, 778 Watts
INPUT POWER	120 VAC, 60 Hz, 1 Ph U.L. recognized and listed components throughout	120 VAC, 60 Hz, 1 Ph U.L. recognized and listed components throughout
CONTROLS	Variable speed control and indicator light	Variable speed control and indicator light
GENERAL	Throw Distance: to 45 ft. 4-way adjustable air outlet louvers 200 CFM to 750 CFM	Throw Distance: to 45 ft. 4-way adjustable air outlet louvers 600 CFM to 1025 CFM
SOUND RATING	41-62 dBA	43-64 dBA
PRE-FILTER	1" thick polyester foam, washable	1" thick polyester foam, washable
MAIN FILTER	95% Multi-pocket bag (ASHRAE 52.1)	95% Multi-pocket filter bag
MAIN FILTER OPTIONS	95% HEPA (0.3 micron or larger) 99.97% HEPA	95% efficiency filter bag and 95% HEPA 95% filter bag and 99.97% HEPA HEPA mounts on the clean air side of main filter
GAS / ODOR ADSORBER MODULE OPTION	2" thick VEE bank Dimensions: 11.75" H x 17.75" W x 11.75" D Refillable Capacity: 14 lbs. activated charcoal or 21 lbs. activated alumina	2" thick VEE bank module and filter bag Dimensions: 11.75" H x 17.75" W x 11.75" D Refillable Capacity: 14 lbs. activated charcoal or 21 lbs. activated alumina
FINAL ADSORBER OPTION	Final adsorber with 4 lbs. activated charcoal capacity or 6 lbs. of activated alumina Use on the clean air side of filter bag or HEPA	Final adsorber with 4 lbs. activated charcoal capacity or 6 lbs. of activated alumina

STANDARD SPECIFICATIONS FOR EACH UNIT

CABINET	18 gauge welded galvanized steel
FINISH	Epoxy powder coat brown paint
AIR FLOW	Horizontal - right to left or left to right
FILTER ACCESS	End-load—no tools required
ACCESSORIES	Filter change indicator gauge
MOUNTING HARDWARE INCLUDED	4 eyebolts Optional wall mounting brackets

Local Distributor

A FEEDERS ENGINEERED PRODUCTS COMPANY

Corporate Office: 101 McNeill Road · Sanford, NC 27330

Phone: 800-884-0002 · Fax: 800-458-2379 · www.trioninc.com · email: sales@trioninc.com

