



ComPac® I & ComPac® II 2 to 6 Ton Vertical Wall Mount Air Conditioners Models AVP24-30-36-42-48-60-72

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.

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.

The ComPac® I and ComPac® II air conditioners are listed by ETL. Ratings and specifications are in accordance with the Air Conditioning and Refrigeration Institute (ARI) standards and manufactured and tested to UL Standard 1995, 2nd Ed. and CAN/CSA C22.2 No. 236-95, 2nd Ed.



AVP36ACA-10C



Standard Features

Designed for Operation in Low Ambient Conditions

- Low ambient control cycles condenser fan to maintain proper refrigerant pressures.
- 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

- All units meet or exceed current NAECA** requirements.
- 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.

- Three minute delay on break 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.
- Outside air hood is standard.

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 galvalume 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.

*ComPac® II air conditioner only

** National Appliance Energy Conservation Act

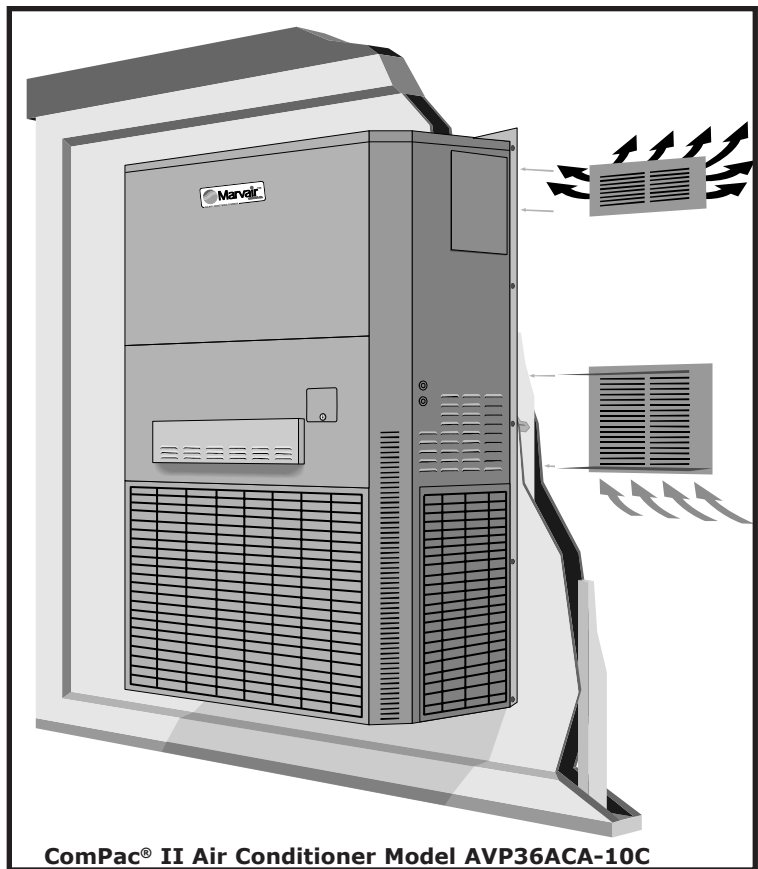
A Marvair® First – Factory Installed Economizer

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.



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.

LL357D2 Lead/Lag Controller P/N S/05579

Two stage heat and cool thermostat with solid state module for redundant operation with adjustable (2°-12°F (1.1° - 6.7°C)) interstage differential. (See the LL357D2 Product Data Sheet for details.)

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.

Accessories

Supply Grilles

For AVP24	
20" x 8" (508 mm x 203 mm)	P/N 80674
For AVP30,36	
28" x 8" (711 mm x 203 mm)	P/N 80675
For AVP42,48,60,72	
30" x 10" (762 mm x 254 mm)	P/N 80676

Return Grilles

For AVP24	
20" x 12" (508 mm x 305 mm)	P/N 80677
For AVP30,36	
28" x 14" (711 mm x 356 mm)	P/N 80678
For AVP42,48,60,72	
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 AVP24	
20" x 12" (508 mm x 305 mm)	P/N 80671
For AVP30,36	
28" x 14" (711 mm x 356 mm)	P/N 80672
For AVP42,48,60,72	
30" x 16" (762 mm x 406 mm)	P/N 80673

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.)

Extreme Duty Package - ComPac® I and ComPac® II A/C - The Extreme Duty Package allows selected Marvair® ComPac I & ComPac II air conditioners to operate in extremely cold and hot ambient conditions. The Extreme Duty Kit is always factory installed and is available on all ComPac air conditioners.

ComPac® I air conditioners (non-economizer units) will operate from 0°F to 130°F (-18° to 54°C). ComPac® II air conditioners (economizer units) 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°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.

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 Dacromet® fasteners, sealed condenser fan motor, sealed control box, protective coating applied to all exposed internal copper in the condenser section and a phenolic or impregnated polyurethane coating on the condenser coil.

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

Options (cont'd)

operation to 20°F (-7°C). Please refer to Hot Gas Bypass Application Bulletin for details.

High Filtration – ComPac® I and ComPac® II A/C - Units are built with up to 65% efficient filters. Filters are rated according to ASHRAE Dust Spot Test. ComPac II units have a prefilter on outside air. Not to be used with HEPA or absolute filters.

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 entire cabinet can also be constructed of type 316 stainless steel. When the stainless steel cabinet is ordered, the top, sides, front panels, back panel and all internal cabinet steel are stainless.

Protective Coil Coatings - Two coil coatings are offered. 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 a phenolic (trade name Heresite®) or an impregnated polyurethane (trade name BlyGold®). The phenolic and the impregnated polyurethane coatings pass 3,000 hours of B117. The phenolic coating is dipped and baked; the polyurethane coating is sprayed on. 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 closes a set of contacts when the pressure exceeds the desired difference.

Scroll Compressor - Scroll compressors are standard on the AVP42-72. As an option, ComPac® I and II air conditioners may be ordered with scroll compressors.

Single Point Power Entry - A field installed option that allows a single power entry into the air conditioner.

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, 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.

Model Identification

AVP

Air
Source
Vertical
Package

Nominal Cooling

24 = 24,000 BTUH
30 = 29,400 BTUH
36 = 35,000 BTUH
42 = 42,500 BTUH
48 = 48,000 BTUH
60 = 56,000 BTUH
72 = 72,000 BTUH

AC

System Type
Air Conditioner

Power Supply

A = 208/230V,1ø,60Hz
C = 208.230V,3ø,60Hz
D = 460V,3ø,60Hz
E = 380V,3ø,50Hz
F = 220V,1ø,50Hz
G = 220V,3ø,50Hz
H = 380V,3ø,60Hz
J = 460V,3ø,50Hz
L = 208/230V,1ø,60Hz & 200V,1ø,50Hz
M = 200V,1ø,50Hz

Special Option Code

R = Electric Reheat
U = Scroll Comp.

Configuration

N = ComPac® I A/C
C = ComPac® II A/C

Electric Heat – kW

00 04 08 10
2.2 05 09 15

Summary Ratings (Wire Sizing) - Standard Compressor

ELECT. HEAT		00 = None		04 = 4 kw		05 = 5 kw		06 = 6 kw		08 = 8 kw		09 = 9 kw		10 = 10 kw		12 = 12 kw				15 = 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	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS
AVP24ACA	208-230/1	15.2	20	22.3	25	27.4	30	32.7	35	43.1	45			53.5	60								
AVP30ACA	208-230/1	21.4	35	23.4	35	28.5	35	33.8	35	44.2	45			54.6	60	23.4	35	41.6	45	28.5	35	52.1	60
AVP36ACA	208-230/1	24.4	40	24.4	40	28.5	40	33.8	40	44.2	45			54.6	60	24.4	40	41.6	45	28.5	40	52.1	60
AVP42ACA	208-230/1	28.3	45			29.1	45							55.2	60	28.3	45	41.6	45	29.1	45	52.1	60
AVP48ACA	208-230/1	29.9	45			29.9	45							55.2	60	29.9	45	41.6	45	29.9	45	52.1	60
AVP60ACA	208-230/1	39.3	60			39.3	60							57.3	60	39.3	60	41.6	45	39.3	60	52.1	60
AVP72ACA	208-230/1	44.1	60			44.1	60							57.3	60	44.1	60	41.6	45	44.1	60	52.1	60
AVP24ACC	208-230/3	11.3	15					19.4	20			28.5	30			37.5	40						
AVP30ACC	208-230/3	15.6	20					20.5	25			29.6	30			38.6	40			47.6	50		
AVP36ACC	208-230/3	17.1	25					20.5	25			29.6	30			38.6	40			47.6	50		
AVP42ACC	208-230/3	21.4	30					21.4	30			30.2	35			39.2	40			48.2	50		
AVP48ACC	208-230/3	24.3	35					24.3	35			30.2	35			39.2	40			48.2	50		
AVP60ACC	208-230/3	29.6	45					29.6	45			32.3	45			41.3	45			50.3	60		
AVP72ACC	208-230/3	31.4	45					31.4	45			32.3	45			41.3	45			50.3	60		
AVP24ACD	460/3	5.8	15					9.7	15			14.2	15			18.7	20						
AVP30ACD	460/3	7.5	15					10.3	15			14.8	15			19.3	20			23.8	25		
AVP36ACD	460/3	7.5	15					10.3	15			14.8	15			19.3	20			23.8	25		
AVP42ACD	460/3	10.2	15					10.6	15			15.1	20			19.6	20			24.1	25		
AVP48ACD	460/3	11.7	15					11.7	15			15.1	20			19.6	20			24.1	25		
AVP60ACD	460/3	13.3	20					13.3	20			16.1	20			20.6	25			25.1	30		
AVP72ACD	460/3	15.3	20					15.3	20			16.1	20			20.6	25			25.1	30		

The above chart should be used as a general guideline for estimating conductor size and overcurrent protection for the unit models listed. For specific requirements, refer to the data label attached to the unit cabinet.

MCA = Minimum Circuit Ampacity (Wiring Size Amps) MFS = Maximum External Fuse or External HACR Circuit Breaker Size.

Summary Ratings (Wire Sizing) - Optional Scroll Compressor

ELECT. HEAT		00 = None		04 = 4 kw		05 = 5 kw		06 = 6 kw		08 = 8 kw		09 = 9 kw		10 = 10 kw		12 = 12 kw				15 = 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	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS
AVP24ACA	208-230/1	18.2	30	22.3	25	27.4	30	32.8	35	43.2	45			53.5	60								
AVP30ACA	208-230/1	21.1	30	23.4	25	28.5	30	32.8	35	44.2	45			54.6	60	23.4	30	41.6	45	28.5	30	52.1	60
AVP36ACA	208-230/1	24.3	40	24.4	25	28.5	40	32.8	35	44.2	45			54.6	60	24.3	40	41.6	45	28.5	40	52.1	60
AVP24ACC	208-230/3	12.5	20					19.4	20			28.5	30			37.5	40						
AVP30ACC	208-230/3	16.3	25					20.5	25			29.6	30			38.6	40			47.6	50		
AVP36ACC	208-230/3	17.1	25					20.5	25			29.6	30			38.6	40			47.6	50		
AVP24ACD	460/3	6.2	15					9.7	15			14.2	15			18.7	20						
AVP30ACD	460/3	7.8	15					10.3	15			14.8	15			19.3	20			23.8	25		
AVP36ACD	460/3	8.5	15					10.3	15			14.8	15			19.3	20			23.8	25		

The above chart should be used as a general guideline for estimating conductor size and overcurrent protection for the unit models listed. For specific requirements, refer to the data label attached to the unit cabinet.
MCA = Minimum Circuit Ampacity (Wiring Size Amps) MFS = Maximum External Fuse or External HACR Circuit Breaker Size.

Summary Ratings (Wire Sizing) - Reheat with Standard Compressor

ELECT. HEAT		00 = None		04 = 4 kw		05 = 5 kw				06 = 6 kw		10 = 10 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 #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
AVP24ACA	208-230/1	15.2	20	36.0	40					46.4	50	15.2	20	52.1	60								
AVP30ACA	208-230/1	21.4	35	42.3	45	47.4	50			52.7	60	21.4	35	52.1	60	23.4	35	41.6	45	28.5	35	52.1	60
AVP36ACA	208-230/1	24.4	40	45.3	50	50.4	60			52.7	60	24.4	40	52.1	60	24.4	40	41.6	45	28.5	40	52.1	60
AVP42ACA	208-230/1	28.3	45			28.3	45	26.0	30			28.3	45	52.1	60	28.3	45	41.6	45	29.1	45	52.1	60
AVP48ACA	208-230/1	29.9	45			29.9	45	26.0	30			29.9	45	52.1	60	29.9	45	41.6	45	29.9	45	52.1	60
AVP60ACA	208-230/1	39.3	60			39.3	60	26.0	30			39.3	60	52.1	60	39.3	60	41.6	45	39.3	60	52.1	60
AVP72ACA	208-230/1	44.1	60			44.1	60	26.0	30			44.1	60	52.1	60	44.1	60	41.6	45	44.1	60	52.1	60

ELECT. HEAT		00 = None		06 = 6 kw		09 = 9 kw		12 = 12 kw				15 = 15 kw			
BASIC MODEL	VOLTAGE PHASE	CKT #1		CKT #1		CKT #1		CKT #1		CKT #2		CKT #1		CKT #2	
		MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS
AVP24ACC	208-230/3	11.3	15	29.3	30	38.4	40	47.4	50			11.3	15	45.1	50
AVP30ACC	208-230/3	15.6	20	33.6	35	42.7	45	51.7	60			15.6	20	45.1	50
AVP36ACC	208-230/3	17.1	25	35.1	40	44.2	45	53.2	60			17.1	25	45.1	50
AVP42ACC	208-230/3	21.4	30	39.4	40	48.5	50	21.4	30	36.1	40	21.4	30	45.1	50
AVP48ACC	208-230/3	24.3	35	42.3	45	51.4	60	24.3	35	36.1	40	24.3	35	45.1	50
AVP60ACC	208-230/3	29.6	40	47.6	50	56.8	60	29.6	40	36.1	40	29.6	40	45.1	50
AVP72ACC	208-230/3	31.4	45	49.4	50	58.5	60	31.4	45	36.1	40	31.4	45	45.1	50
AVP24ACD	460/3	5.8	15	14.8	15	19.3	20	23.8	25			28.3	30		
AVP30ACD	460/3	7.5	15	16.5	20	21.0	25	25.5	30			30.0	35		
AVP36ACD	460/3	7.5	15	16.5	20	21.0	25	25.5	30			30.0	35		
AVP42ACD	460/3	10.2	15	19.2	20	23.7	25	28.2	30			32.7	35		
AVP48ACD	460/3	11.7	15	20.7	25	25.2	30	29.7	30			34.2	35		
AVP60ACD	460/3	13.3	20	22.3	25	28.8	30	31.3	35			35.8	40		
AVP72ACD	460/3	15.3	20	24.3	25	28.8	30	33.3	35			37.8	40		

The above chart should be used as a general guideline for estimating conductor size and overcurrent protection for the unit models listed. For specific requirements, refer to the data label attached to the unit cabinet.
MCA = Minimum Circuit Ampacity (Wiring Size Amps) MFS = Maximum External Fuse or External HACR Circuit Breaker Size.

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

ELECT. HEAT		00 = None		04 = 4 kw		05 = 5 kw		06 = 6 kw		10 = 10 kw				12 = 12 kw (8 kW Reheat)				15 = 15 kw (10 kW Reheat)			
BASIC MODEL	VOLTAGE PHASE	CKT #1		CKT #1		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
AVP24ACA	208-230/1	18.2	30	39.0	40	44.2	45	49.4	50	18.2	30	52.1	60								
AVP30ACA	208-230/1	21.1	30	41.9	45	47.1	50	52.3	60	21.1	30	52.1	60	23.4	30	41.6	45	28.5	30	52.1	60
AVP36ACA	208-230/1	24.3	40	45.2	50	50.3	60	55.6	60	24.3	40	52.1	60	24.3	40	41.6	45	28.5	40	52.1	60

ELECT. HEAT		00 = None		06 = 6 kw		09 = 9 kw		12 = 12 kw		15 = 15 kw			
BASIC MODEL	VOLTAGE PHASE	CKT #1		CKT #1		CKT #1		CKT #1		CKT #1		CKT #2	
		MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS	MCA	MFS
AVP24ACC	208-230/3	12.5	20	30.5	35	39.7	40	48.7	50	12.5	20	45.1	50
AVP30ACC	208-230/3	16.3	25	34.3	35	43.4	45	52.4	60	16.3	25	45.1	50
AVP36ACC	208-230/3	17.1	25	35.1	40	44.2	45	53.2	60	17.1	25	45.1	50
AVP24ACD	460/3	6.2	15	15.2	20	19.7	20	24.2	25	28.7	30		
AVP30ACD	460/3	7.8	15	16.8	20	21.3	25	25.8	30	30.3	35		
AVP36ACD	460/3	8.5	15	17.5	20	22.0	25	26.5	30	31.0	35		

The above chart should be used as a general guideline for estimating conductor size and overcurrent protection for the unit models listed. For specific requirements, refer to the data label attached to the unit cabinet.
MCA = Minimum Circuit Ampacity (Wiring Size Amps) MFS = Maximum External Fuse or External HACR Circuit Breaker Size.

Electrical Characteristics

BASIC MODEL	COMPRESSOR								OUTDOOR FAN MOTOR					INDOOR FAN MOTOR				
	Selection	Type	VOLTS	Hz/Ph	RLA	LRA	MCC		VOLTS	Hz/Ph	RPM	FLA	HP	VOLTS	Hz/Ph	RPM	FLA	HP
AVP24ACA	Standard	Reciprocating	208-230/1/60	60/1	9.8	56.0	15.3		208/230	60/1	1075	1.5	1/5	208/230	60/1	1075	1.4	1/4
AVP24ACA	Optional	Scroll	208-230/1/60	60/1	12.2	61.0	19.0		208/230	60/1	1075	1.5	1/5	208/230	60/1	1075	1.4	1/4
AVP30ACA	Standard	Reciprocating	208-230/1/60	60/1	13.7	75.0	21.4		208/230	60/1	1075	1.8	1/4	208/230	60/1	1050	2.5	1/4
AVP30ACA	Optional	Scroll	208-230/1/60	60/1	13.4	73.0	21.0		208/230	60/1	1075	1.8	1/4	208/230	60/1	1050	2.5	1/4
AVP36ACA	Standard	Reciprocating	208-230/1/60	60/1	16.1	96.0	25.2		208/230	60/1	1075	1.8	1/4	208/230	60/1	1050	2.5	1/4
AVP36ACA	Optional	Scroll	208-230/1/60	60/1	16.0	88.0	25.0		208/230	60/1	1075	1.8	1/4	208/230	60/1	1050	2.5	1/4
AVP42ACA	Standard	Scroll	208-230/1/60	60/1	17.9	104.0	28.0		208/230	60/1	825	2.8	1/3	208/230	60/1	1075	3.1	1/2
AVP48ACA	Standard	Scroll	208-230/1/60	60/1	19.2	137.0	30.0		208/230	60/1	825	2.8	1/3	208/230	60/1	1075	3.1	1/2
AVP60ACA	Standard	Scroll	208-230/1/60	60/1	25.0	148.0	39.0		208/230	60/1	825	2.8	1/3	208/230	60/1	1075	5.2	1/2
AVP72ACA	Standard	Scroll	208-230/1/60	60/1	28.8	169.0	45.0		208/230	60/1	825	2.9	1/2	208/230	60/1	1075	5.2	3/4
AVP24ACC	Standard	Reciprocating	208-230/3/60	60/3	6.7	51.0	10.5		208/230	60/3	1075	1.5	1/5	208/230	60/1	1075	1.4	1/4
AVP24ACC	Optional	Scroll	208-230/3/60	60/3	7.7	55.0	12.0		208/230	60/1	1075	1.5	1/5	208/230	60/1	1075	1.4	1/4
AVP30ACC	Standard	Reciprocating	208-230/3/60	60/3	9.0	68.0	14.0		208/230	60/1	1075	1.8	1/4	208/230	60/1	1050	2.5	1/4
AVP30ACC	Optional	Scroll	208-230/3/60	60/3	9.6	63.0	15.0		208/230	60/1	1075	1.8	1/4	208/230	60/1	1050	2.5	1/4
AVP36ACC	Standard	Reciprocating	208-230/3/60	60/3	10.2	75.0	16.0		208/230	60/1	1075	1.8	1/4	208/230	60/1	1050	2.5	1/4
AVP36ACC	Optional	Scroll	208-230/3/60	60/3	10.2	77.0	16.0		208/230	60/1	1075	1.8	1/4	208/230	60/1	1050	2.5	1/4
AVP42ACC	Standard	Scroll	208-230/3/60	60/3	12.4	88.0	19.4		208/230	60/1	825	2.8	1/3	208/230	60/1	1075	3.1	1/2
AVP48ACC	Standard	Scroll	208-230/3/60	60/3	14.7	91.0	23.0		208/230	60/1	825	2.8	1/3	208/230	60/1	1075	3.1	1/2
AVP60ACC	Standard	Scroll	208-230/3/60	60/3	17.3	123.0	27.0		208/230	60/1	825	2.8	1/3	208/230	60/1	1075	5.2	1/2
AVP72ACC	Standard	Scroll	208-230/3/60	60/3	18.6	156.0	29.0		208/230	60/1	825	2.9	1/2	208/230	60/1	1075	5.2	3/4
AVP24ACD	Standard	Reciprocating	460/3/60	60/3	3.5	25.0	5.4		208/230	60/3	1075	1.5	1/5	208/230	60/1	1075	1.4	1/4
AVP24ACD	Optional	Scroll	460/3/60	60/3	3.8	27.0	6.0		208/230	60/1	1075	1.5	1/5	208/230	60/1	1075	1.4	1/4
AVP30ACD	Standard	Reciprocating	460/3/60	60/3	4.3	34.0	6.7		208/230	60/1	1075	1.8	1/4	208/230	60/1	1050	2.5	1/4
AVP30ACD	Optional	Scroll	460/3/60	60/3	4.5	31.0	7.0		208/230	60/1	1075	1.8	1/4	208/230	60/1	1050	2.5	1/4
AVP36ACD	Standard	Reciprocating	460/3/60	60/3	4.3	40.0	6.7		208/230	60/1	1075	1.8	1/4	208/230	60/1	1050	2.5	1/4
AVP36ACD	Optional	Scroll	460/3/60	60/3	5.1	39.0	8.0		208/230	60/1	1075	1.8	1/4	208/230	60/1	1050	2.5	1/4
AVP42ACD	Standard	Scroll	460/3/60	60/3	5.8	44.0	9.0		208/230	60/1	825	2.8	1/3	208/230	60/1	1075	3.1	1/2
AVP48ACD	Standard	Scroll	460/3/60	60/3	7.0	50.0	11.0		208/230	60/1	825	2.8	1/3	208/230	60/1	1075	3.1	1/2
AVP60ACD	Standard	Scroll	460/3/60	60/3	7.4	49.5	11.5		208/230	60/1	825	2.8	1/3	208/230	60/1	1075	5.2	1/2
AVP72ACD	Standard	Scroll	460/3/60	60/3	9.0	70.0	14.0		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

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	12.7	1.4	16.7	n/a	25.0	33.3	n/a	41.7	n/a	n/a	18.1	22.2	n/a	34.7	n/a	43.1	n/a	n/a
AVP30ACA	208-230/1/60	18.0	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	20.4	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
AVP42ACA	208-230/1/60	23.8	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	25.1	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	33.0	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	36.9	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	9.6	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	14.5	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	18.3	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
AVP48ACC	208-230/3/60	20.6	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	25.3	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	26.7	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	5.0	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	6.5	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	6.5	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	8.8	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	10.0	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	11.4	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	13.1	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 for 240V. 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 for 480V.
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.

Efficiency and Capacity Ratings in accordance with ARI Standard 210

MODEL	24			30			36			42			48			60			72		
	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD
COOLING BTUH	24,000			29,400			35,000			42,500			48,000			56,000			64,000	71,000	71,000
SERIES	C1			C1			B1			B1			B1			C1			A1	A1	A1
SEER	10.1			10.2			10.0			10.2			10.2			10.0			11.1	N/A	N/A
EER	N/A			N/A			N/A			N/A			N/A			N/A			9.9	9	9
RATED CFM	840			1000			1220			1520			1760			1850			2200	1950	1950
ESP	0.1			0.15			0.15			0.15			0.20			0.20			0.2	0.25	0.25

Note: All performance and capacity ratings are for a 60 Hz power supply. Please see SI Product Data Sheet for ratings at 50 Hz. Ratings are also affected by altitude.

Certified Efficiency and Capacity Ratings @ ARI Standard 390

MODEL	24			30			36			42			48			60			72		
	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD	ACA	ACC	ACD
COOLING BTUH 208V	n/a			n/a			n/a			n/a			n/a			n/a			n/a	69,000	69,000
COOLING BTUH 230V	24,000			29,400			35,000			42,500			48,000			56,000			64,000	71,000	71,000
EER 208V	n/a			n/a			n/a			n/a			n/a			n/a			n/a	9.00	9.00
EER 230V	9.00			9.00			9.00			9.00			9.00			9.00			9.60	9.00	9.00
SCFM (OUTDOOR)	1800			2200			2200			2700			2700			2800			4250	4250	4250
SCFM (INDOOR)	840			1000			1220			1520			1760			1850			2050	2200	2200

Performance Chart

Data based on 80°F(26.5°C) DB/67°F (19.5°C) WB Return Air AT VARIOUS OUTDOOR TEMPERATURES AT RATED CFM

Model	70°F/21°C	75°F/24°C	80°F/26.5°C	85°F/29.5°C	90°F/32°C	95°F/35°C	100°F/38°C	105°F/40.5°C	110°F / 43.5°C	115°F / 46°C	120°F / 49°C
24	28,800	27,840	26,880	25,920	24,960	24,000	23,040	22,080	21,120	20,640	20,160
30	35,280	34,104	32,928	31,752	30,576	29,400	28,224	27,048	25,872	25,284	24,696
36	42,720	41,296	39,872	38,448	37,024	35,600	34,176	32,752	31,328	30,616	29,904
42	49,800	48,140	46,480	44,820	43,160	41,500	39,840	38,180	36,520	35,690	34,860
48	57,600	55,680	53,760	51,840	49,920	48,000	46,080	44,160	42,240	41,280	40,320
60	68,400	66,120	63,840	61,560	59,280	57,000	54,720	52,440	50,160	49,020	47,880
72 (10)	76,800	74,240	71,680	69,120	66,560	64,000	61,440	58,880	56,320	55,040	53,760
72 (30)	85,200	82,360	79,520	76,680	73,840	71,000	68,160	65,320	62,480	61,060	59,640

Note: The capacity of the AVP72ACC (3 phase) air conditioner will be 2,000 Btu/Hr lower at 208 volts.

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	29,400	35,600	41,500	48,000	57,000	64,000	71,000
SENSIBLE HEAT RATIO	0.76	0.78	0.76	0.8	0.8	0.8	0.8	0.72
SENSIBLE CAPACITY	18,120	22,785	27,056	33,200	38,400	45,600	51,200	51,100
RATED CFM	840	1,000	1,220	1,520	1,760	1,850	2,200	1,950
ESP	0.10	0.15	0.15	0.15	0.20	0.20	0.20	0.25

Sensible ratios based on ARI Standard 210 Indoor Conditions of 80°F (27°C) DB/67°F (19.5°C) WB.

CFM @ ESP (Wet Coil)

MODEL	0.10	0.20	0.25	0.30	0.40	0.50
AVP24	860	810	740	670		
AVP30	1100	1000	960	920	810	
AVP36	1310	1220	1185	1150	1060	
AVP42		1650	1585	1520	1450	1360
AVP48		1900	1830	1760	1700	1620
AVP60		1900	1830	1760	1700	1620
AVP72		2100	1950	1800	1730	1660

Ship Weight

BASIC MODEL	AVP24 LBS/KG	AVP30 LBS/KG	AVP36 LBS/KG	AVP42 LBS/KG	AVP48 LBS/KG	AVP60 LBS/KG	AVP72 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

Filter Size

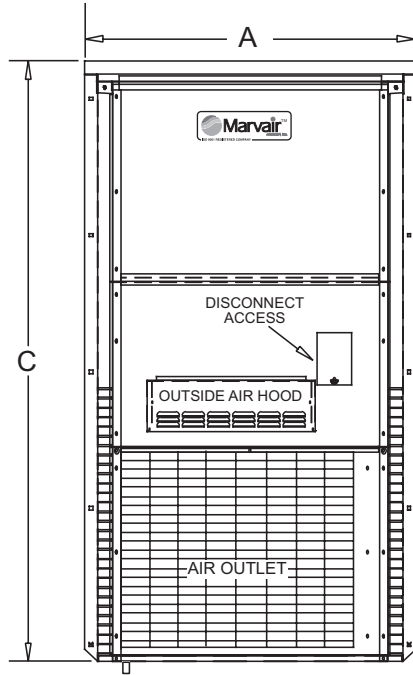
BASIC MODEL	AVP24	AVP30	AVP36	AVP42	AVP48	AVP60	AVP72
FILTER SIZE (IN)	16 x 25 x 2	16 x 30 x 2		22 x 36-1/2 x 2			18 x 24 x 2*
FILTER SIZE (MM)	406 x 635 x 51	406 x 762 x 51		559 x 927 x 51			452 x 610 x 51

* Two filters required.

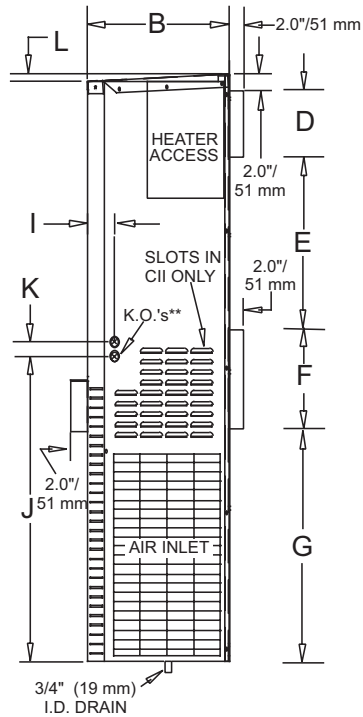
Dimensional Data - AVP24-36 ComPac® I & ComPac® II Air Conditioners

MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	AA	BB
24 (in.)	39 1/2	17 1/4	71 1/2	8	20 1/2	12	27 11/16	20	3 3/4	36 5/16	1 11/16	7/8	38	27 11/16	26	3 5/8	17 5/8	35 1/4
24 (mm)	1003	438	1816	203	521	305	703	508	95	922	43	22	965	703	660	92	448	895
30/36 (in.)	44 9/16	17 1/4	71 1/2	8	18	14	28 7/16	28	3 3/4	36 5/16	1 11/16	7/8	43 1/8	27 11/16	26	3 5/8	20 1/4	40 1/2
30/36 (mm)	1132	438	1816	203	457	356	722	711	95	922	43	22	1095	703	660	92	514	1029

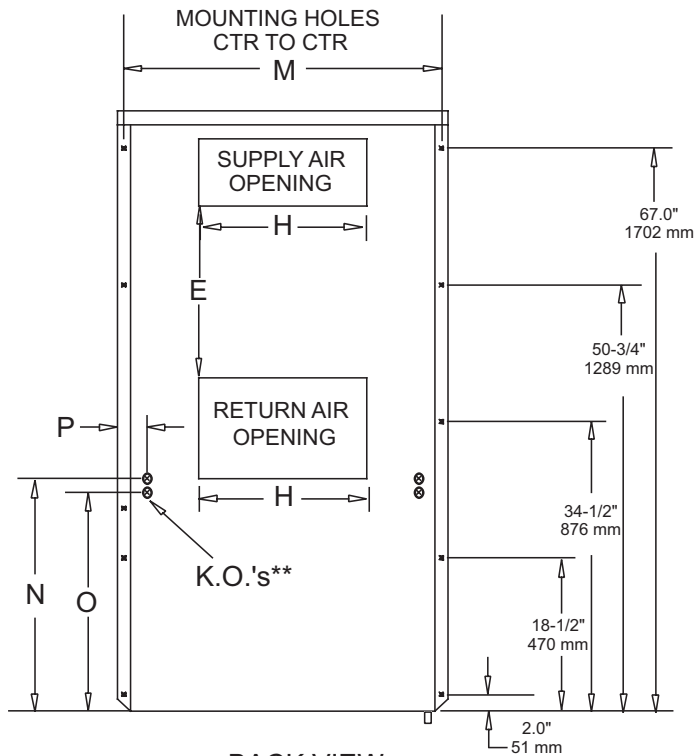
NOTE: Dimensional tolerance $\pm 1/16"$



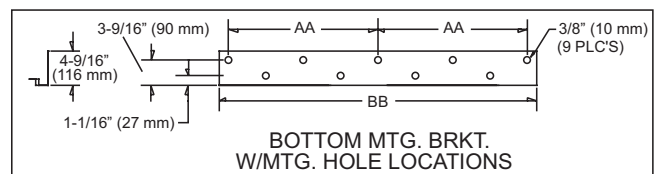
FRONT VIEW



R.H. SIDE VIEW



BACK VIEW



BOTTOM MTG. BRKT.
W/MTG. HOLE LOCATIONS

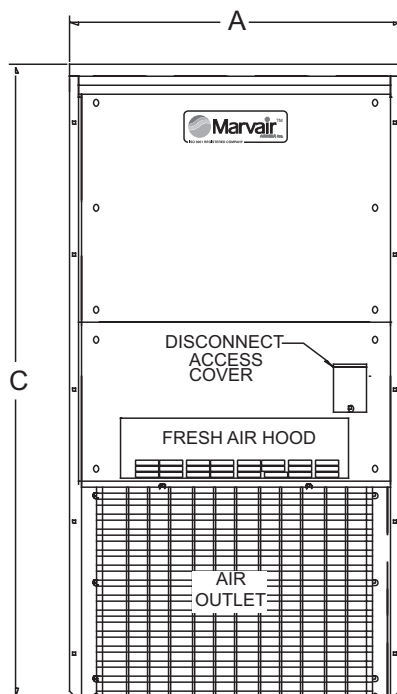
* CI does not have side louvers

** KO=knockouts-sized to accept 3/4" (19 mm) x 1" (25 mm) electrical conduit
"H" dimension centered between "A" dimension

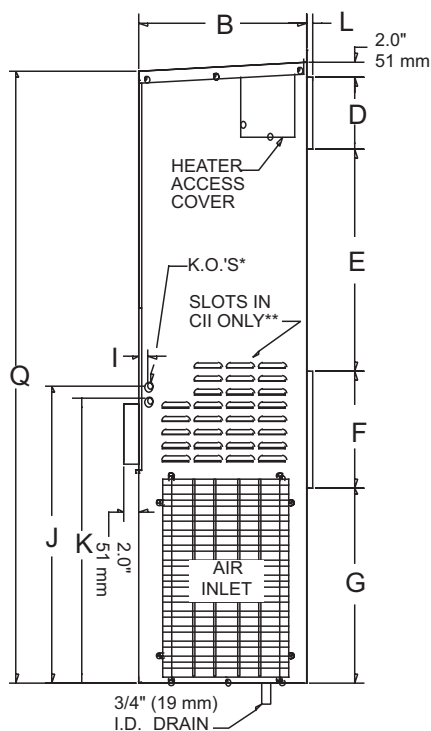
Dimensional Data - AVP42-60 ComPac® I & ComPac® II Air Conditioners

MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
42/48/60 (in.)	45	22 5/8	86	10	30	16	26 1/2	30	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 5/16	1 3/4
42/48/60 (mm)	1143	575	2184	254	762	406	673	762	33	1030	979	29	1105	822	772	32	2116	44

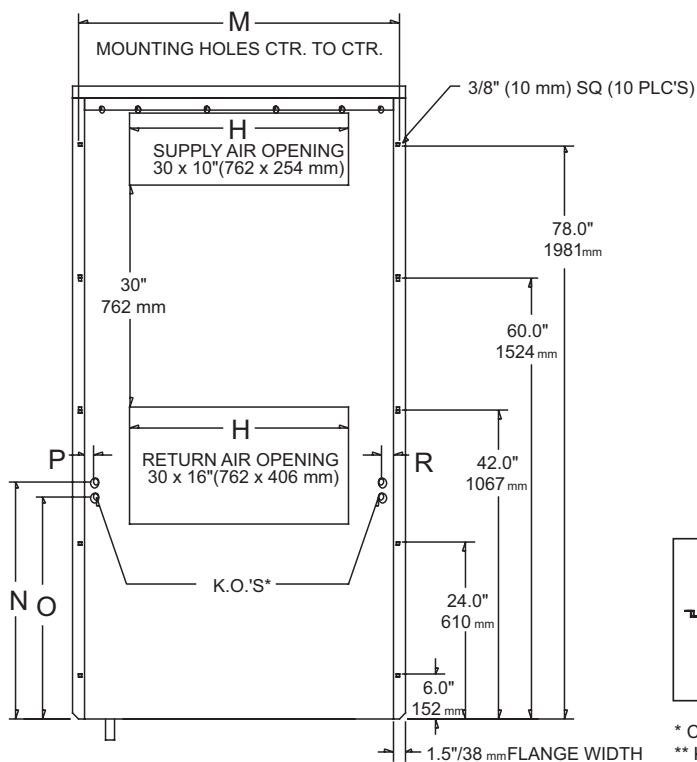
NOTE: Dimensional tolerance $\pm 1/16"$



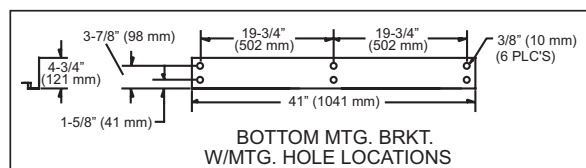
FRONT VIEW



R.H. SIDE VIEW



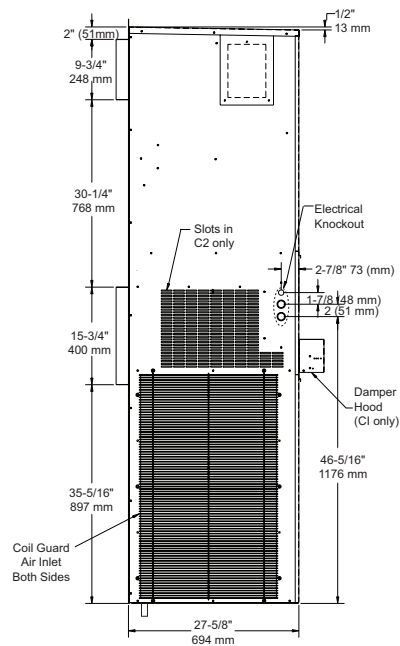
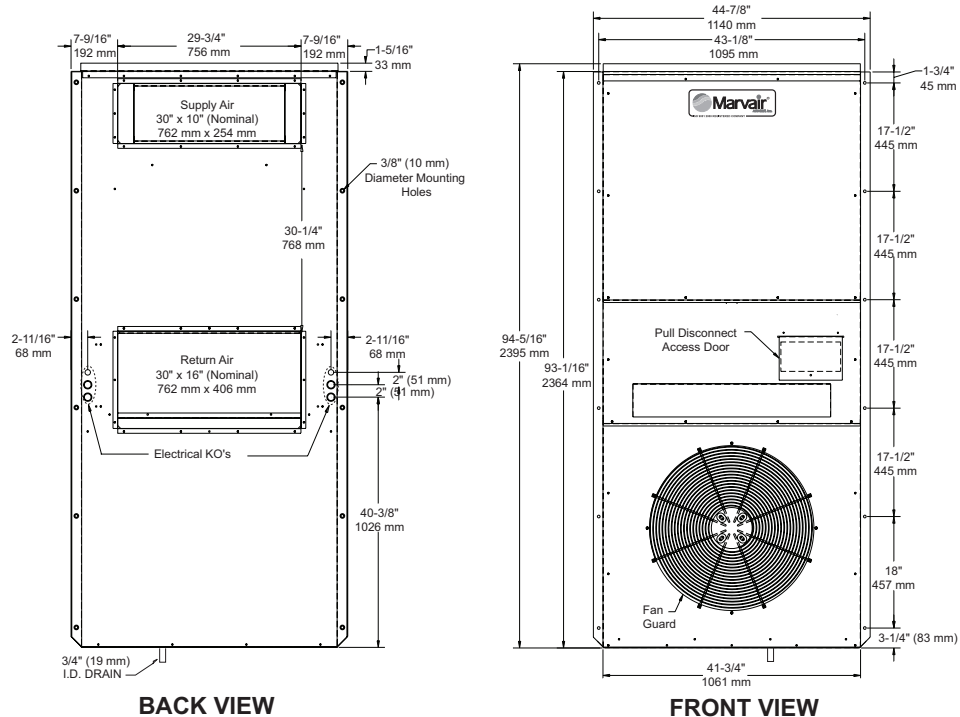
BACK VIEW



* CI does not have side louvers

** KO=knockouts-sized to accept 3/4\" (19 mm) x 1\" (25 mm) electrical conduit
"H" dimension centered between "A" dimension

Dimensional Data - AVP72 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.



P.O. Box 400 • Cordele, GA 31010
156 Seedling Drive • Cordele, GA 31015
Ph: 229-273-3636 • Fax: 229-273-5154
Email: marvair@airxcel.com • Internet: www.marvair.com