



# THE WALL-MOUNT™ AIR CONDITIONERS - 9.0 EER, (60HZ)

**Models W17A to W60A**  
**1.5 to 5 Ton (16,400 to 55,000 Btuh)**  
**Right Side Control Panel 60Hz**

**GREEN REFRIGERANT**  
**R-410A**

The Bard Wall-Mount Air Conditioner is a self contained energy efficient system, which is designed to offer maximum indoor comfort at a minimal cost without using valuable indoor floor space or outside ground space. This unit is the ideal product for versatile applications such as: new construction, modular offices, school modernization, telecommunication structures, portable structures or correctional facilities. Factory or field installed accessories are available to meet specific job requirements.

## Engineered Features

### Aluminum Finned Copper Coils:

Grooved tubing and enhanced louvered fin for maximum heat transfer and energy efficiency.

### Twin Blowers:

Move air quietly. Most models feature multispeed blower motors providing airflow adjustment for high and low static operation. Motor overload protection is standard on all models.

### Air Conditioner Compressor:

Scroll Compressors eliminate need for crankcase heater. Standard on 1½ to 5 ton.

### R-410A Refrigerant:

Designed with R-410A (HFC) non-ozone depleting refrigerant in compliance with the Montreal protocol and 2010 EPA requirements.

### Phase Rotation Monitor:

Standard on all 3 phase scroll compressors. Protects against reverse rotation if power supply is not properly connected.

### Galvanized 20 Gauge Zinc Coated Steel Cabinet:

Cleaned, rinsed, sealed and dried before the polyurethane primer is applied. The cabinet is handsomely finished with a baked on textured enamel, which allows it to withstand 1000 hours of salt spray tests per ASTM B117-03.

### Foil Faced Insulation:

Standard on all units.

### Full Length Mounting Brackets:

Built into cabinet for improved appearance and easy installation. NOTE: Bottom mounting bracket included to assist in installation.

### Electrical Components:

Are easily accessible for routine inspection and maintenance through a right side, service panel opening. Features a lockable, hinged access cover to the circuit breaker or toggle disconnect switch.

### Electric Heat Strips:

Features an automatic limit and thermal cut-off safety control. Heater packages can be factory or field installed for all 1½ through 5 ton models.

### Filter Service Door:

Separate service door provides easy access for filter change.

### One Inch, Disposable Air Filters:

Are standard equipment. Optional one inch washable filters available and filter racks permit the addition of 2" pleated filter. Factory or field installed.

### Condenser Fan and Motor Shroud Assembly:

Slides out for easy access.

### Barometric Fresh Air Damper:

Standard on all units. Allows up to 25% outside fresh air. Optional ventilation packages available.

### Built-in Circuit Breakers:

Standard on all electric heat versions of single (230/208 volt) and three phase (230/208 volt) equipment. Toggle disconnects are standard on all electric heat versions of three phase (460 volt) equipment.

### Slope Top:

Standard feature for water run-off.

### Top Rain Flashing:

Standard feature on all models.



MEA # 357-93-E

### Liquid Line Filter Drier:

Standard on all units. Protects system against moisture.

### Compressor Control Module:

Standard on all units. Built-in off-delay timer adjustable from 30 seconds to 5 minutes. 2-minute on-delay if power interrupt. 120-second bypass for low pressure control, and both soft and manual lockouts for high and low pressure controls. Alarm output for alarm relay.

### High & Low Pressure Switches are Auto-Reset:

Standard on all units. Built-in lockout circuit resets from the room thermostat. Provides commercial quality protection to the compressor.



- Complies with efficiency requirements of ASHRAE/IESNA 90.1-2007.
- Certified to ANSI/ARI Standard 390-2003 for SPVU (Single Package Vertical Units).
- Intertek ETL Listed to Standard for Safety Heating and Cooling Equipment ANSI/UL 1995/CSA 22.2 No. 236-05, Third Edition.
- Commercial Product - Not intended for Residential application.

## Capacity and Efficiency Ratings

MODELS	W17A1 / W18A1	W24A1	W30A1	W36A1	W42A1	W48A1	W60A1
Cooling Capacity BTUH ①	16,400	24,000	29,600	35,400	41,000	47,000	55,000
EER ②	9.00	9.00	9.00	9.00	9.20	9.00	9.00

① Capacity is certified in accordance with ANSI/ARI Standard 390-2003.

② EER = Energy Efficiency Ratio and is certified in accordance with ANSI/ARI Standard 390-2003.

All ratings based on fresh air intake being 100% closed (no outside air introduction).

## Specifications 1-1/2 Ton through 3 Ton

MODELS	W17A1-A W18A1-A	W24A1-A	W24A1-B	W24A1-C	W30A1-A	W30A1-B	W30A1-C	W36A1-A	W36A1-B	W36A1-C
<b>Electrical Rating--60 Hz</b>	230/208 - 1	230/208 - 1	230/208 - 3	460 - 3	230/208 - 1	230/208 - 3	460 - 3	230/208 - 1	230/208 - 3	460 - 3
Operating Voltage Range	197-253	197-253	197-253	414-506	197-253	197-253	414-506	197-253	197-253	414-506
<b>Compressor--Circuit A</b>										
Voltage	230/208	230/208	230/208	460	230/208	230/208	460	230/208	230/208	460
Rated Load Amps	6.5/7.2	11./12.4	7.2/8.1	5.0	11.7/13.3	7.5/8.5	5.3	15.9/17.7	11.8/13.1	6.0
Branch Circuit Selection Current	9.0	12.9	8.4	5.2	14.2	9.0	5.7	18	13.3	6.0
Lock Rotor Amps	48/48	64/64	58/58	28	78/78	71/71	38	112/112	88/88	44
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
<b>Fan Motor &amp; Condenser</b>										
Fan Motor--HP--RPM	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075
Fan Motor--Amps	1.2	1.2	1.2	1.4	1.5	1.5	1.4	1.5	1.5	1.4
Fan--DIA/CFM	18" - 1600	18" - 1600	18" - 1600	18" - 1600	20" - 2100	20" - 2100	20" - 2100	20" - 1900	20" - 1900	20" - 1900
<b>Blower Motor &amp; Evap.</b>										
Blower Motor--HP-RPM-SPD	1/6-1100-2	1/6-1100-1	1/6-1100-1	1/3-1100-2	1/3-1100-2	1/3-1100-2	1/3-1100-2	1/3-1100-2	1/3-1100-2	1/3-1100-2
Blower Motor--Amps	1.0	1.0	1.0	1.1	2.2	2.2	1.1	2.2	2.2	1.1
CFM Cooling & E.S.P. w/Filter (Rated-Wet Coil)	600 - .20	800 - .20	800 - .20	800 - .20	1000 - .40	1000 - .40	1000 - .40	1100 - .30	1100 - .30	1100 - .30
Filter Sizes (inches) STD.	16x25x1	16x25x1	16x25x1	16x25x1	16x30x1	16x30x1	16x30x1	16x30x1	16x30x1	16x30x1
<b>Shipping Weight --LBS.</b>	335	335	335	335	375	375	375	375	375	375

## Specifications 3-1/2 Ton through 5 Ton

MODELS	W42A1-A	W42A1-B	W42A1-C	W48A1-A	W48A1-B	W48A1-C	W60A1-A	W60A1-B	W60A1-C
<b>Electrical Rating--60 Hz</b>	230/208-1	230/208-3	460-3	230/208-1	230/208-3	460-3	230/208-1	230/208-3	460-3
Operating Voltage Range	197-253	197-253	414-506	197-253	197-253	414-506	197-253	197-253	414-506
<b>Compressor--Circuit A</b>									
Voltage	230/208	230/208	460	230/208	230/208	460	230/208	230/208	460
Rated Load Amps	16.7/18.9	11/12.5	5.8	20/21.9	13.9/15.2	6.8	22.6/25.5	13.5/15.2	7.6
Branch Circuit Selection Current	19.9	13.2	6.1	23.1	16.1	7.1	26.3	15.7	7.8
Lock Rotor Amps	109/109	83.1/83.1	41	134/134	91/91	46	134/134	110/110	52
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
<b>Fan Motor &amp; Condenser</b>									
Fan Motor--HP-RPM-SPD	1/3-825-2	1/3-825-2	1/3-825-1	1/3-825-2	1/3-825-2	1/3-825-1	1/3-825-2	1/3-825-2	1/3-825-1
Fan Motor--Amps	2.5	2.5	1.3	2.5	2.5	1.3	2.5	2.5	1.3
Fan--DIA/CFM	24" - 2600	24" - 2600	24" - 2600	24" - 2600	24" - 2600	24" - 2600	24" - 2600	24" - 2600	24" - 2600
<b>Blower Motor &amp; Evap.</b>									
Blower Motor--HP-RPM-SPD	1/2-1070-2	1/2-1070-2	1/2-1070-2	1/2-1070-2	1/2-1070-2	1/2-1070-2	1/2-1070-2	1/2-1070-2	1/2-1070-2
Blower Motor--Amps	3.3	3.3	1.9	3.3	3.3	1.9	3.3	3.3	1.9
CFM Cooling & E.S.P. w/Filter (Rated-Wet Coil)	1400 - .30	1400 - .30	1400 - .30	1550 - .20	1550 - .20	1550 - .20	1700 - .30	1700 - .30	1700 - .30
Filter Sizes (inches) STD.	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1
<b>Shipping Weight --LBS.</b>	525	525	525	525	525	525	525	525	525

## Ventilation System Packages

Bard Wall-Mounts are designed to provide optional ventilation packages to meet all of your ventilation and indoor air quality requirements. All units are equipped with a barometric fresh air damper as the standard ventilation package. All ventilation packages can be built-in at the factory or field-installed at a later date.



**Barometric Fresh Air Damper**



**Motorized Fresh Air Damper**



**Commercial Room Ventilator**



**Economizer**



**Energy Recovery Ventilator**

### **BAROMETRIC FRESH AIR DAMPER - BFAD**

### **STANDARD**

The barometric fresh air damper is a standard feature on all models. It is installed on the inside of the service door and allows outside ventilation air, up to 25% of the total airflow rating of the unit, to be introduced through the air inlet openings and to be mixed with the conditioned air. The damper opens during blower operation and closes when the blower is off. Adjustable blade stops allow different amounts of outside air to be introduced into the building and can be easily locked closed if required.

### **BLANK OFF PLATE - BOP**

### **OPTIONAL**

A blank off plate is installed on the inside of the service door. It covers the air inlet openings, which restricts any outside air from entering the unit. The blank off plate should be utilized in applications where outside air is not required to be mixed with the conditioned air.

### **MOTORIZED FRESH AIR DAMPER - MFAD**

### **OPTIONAL**

The motorized fresh air damper is internally mounted behind the service door and allows outside ventilation air, up to 25% of the total airflow rating of the unit, to be introduced through the air inlet openings and to be mixed with the conditioned air. The two position damper can be fully open or closed. The damper blade is powered open by a 24VAC motor with spring return on power loss. The damper can be controlled by indoor blower operation or can be field connected to be managed based on building occupancy.

**NOTE:** The above vent systems are intake only without built-in exhaust capability. Building will likely require separate field installed barometric relief or mechanical exhaust elsewhere within the conditioned space. Balancing dampers in the return air grille may be required to achieve specified amount of outdoor air intake.

### **COMMERCIAL ROOM VENTILATOR - CRV**

### **OPTIONAL**

The built-in commercial room ventilator is internally mounted behind the service door and allows outside ventilation air, up to 50% of the total airflow rating of the unit, to be introduced through the air inlet openings. It includes a built-in exhaust air damper.

The commercial room ventilator (CRV) is a simple and innovative approach to improving the indoor air quality by providing fresh air intake and exhaust capability through the CRV. The damper can be easily adjusted to control the amount of fresh air supplied into the building. The CRV can be controlled by indoor blower operation or field controlled based on room occupancy. Two versions available (except on 1.5 and 2-Ton models). The CRV and CRVS are power open - spring return on power loss, and CRVP is power open and power close. Complies with ANSI/ASHRAE Standard 62.1 "Ventilation for Acceptable Indoor Air Quality".

### **ECONOMIZER - EIFM**

### **OPTIONAL**

The built-in economizer system is internally mounted behind the service door and allows outdoor air to be introduced through the air inlet openings. The amount of outdoor air varies in response to the system controls and settings defined by the end user. It includes a built-in exhaust air damper. The economizer is designed to provide "free cooling" when outside air conditions are cool and dry enough to satisfy cooling requirements without running the compressor. This in turn provides lower operating costs, while extending the life of the compressor.

#### **Standard Features:**

- One Piece Construction - Easy to install with no mechanical linkage adjustment required.
- Exhaust Air Damper - Built in with positive closed position. Provides exhaust air capability to prevent pressurization of tight buildings.
- Actuator Motor - 24 volt, power open, spring return with built in torque limiting switch.
- Proportioning Type Control - for maximum "free cooling" economy and comfort.
- Moisture Eliminator & Prefilter - permanent, washable aluminum construction.
- Enthalpy Control - adjustable to monitor outdoor temperature and humidity.
- Minimum Position Potentiometer - adjustable to control minimum damper blade position for ventilation purposes.
- Mixed Air Sensor - to monitor outside and return air to automatically modulate damper position.

### **WALL-MOUNT ENERGY RECOVERY VENTILATOR - ERV**

### **OPTIONAL**

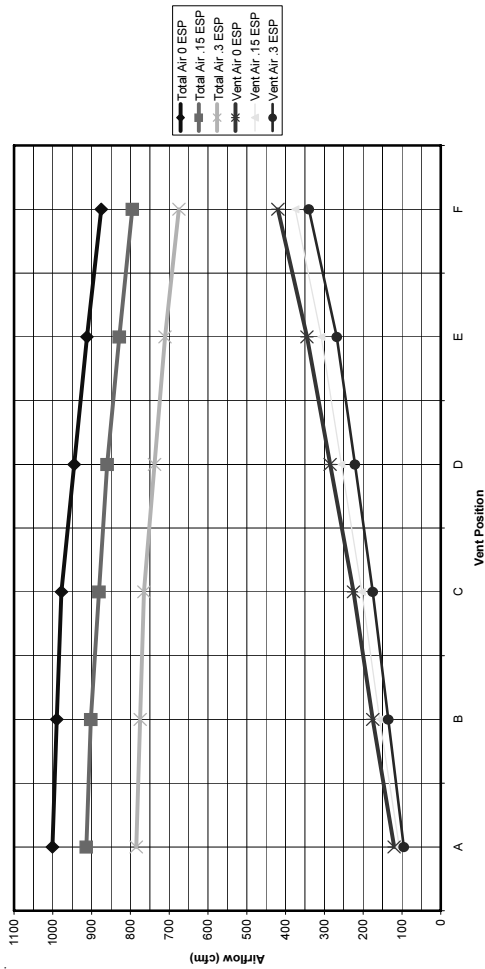
The wall-mount energy recovery ventilator (ERV) is a highly innovative approach to meeting indoor air quality ventilation requirements as established by ANSI/ASHRAE Standard 62.1. The ERV allows from 200 to 450 CFM (depending upon model) of fresh air and exhaust through the unit while maintaining superior indoor comfort and humidity levels. In most cases this can be accomplished without increasing equipment sizing or operating costs. Heat transfer efficiency is up to 67% during summer and 75% during winter conditions.

The ERV consists of a unique "rotary energy recovery cassette" that provides effective sensible and latent heat transfer capabilities during summer and winter conditions. Various control schemes are addressed including limiting ventilation during building occupancy only.

The ERV is designed to be internally mounted behind the service door in the W\*\*A, W\*\*H or W\*\*L model wall-mount units. It can be built-in at the factory or field installed as an option. ERVF-\*3 and ERVF-\*5 can be independently adjusted for intake and exhaust rates.

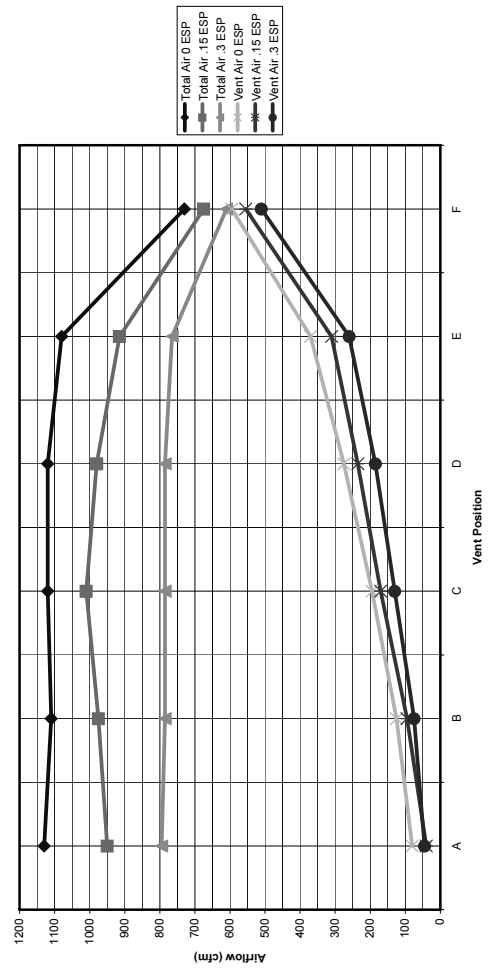
## Commercial Room Ventilator Performance Data - CRV-2

### W17A/W18A & W24A TOTAL AND VENTILATION AIRFLOW

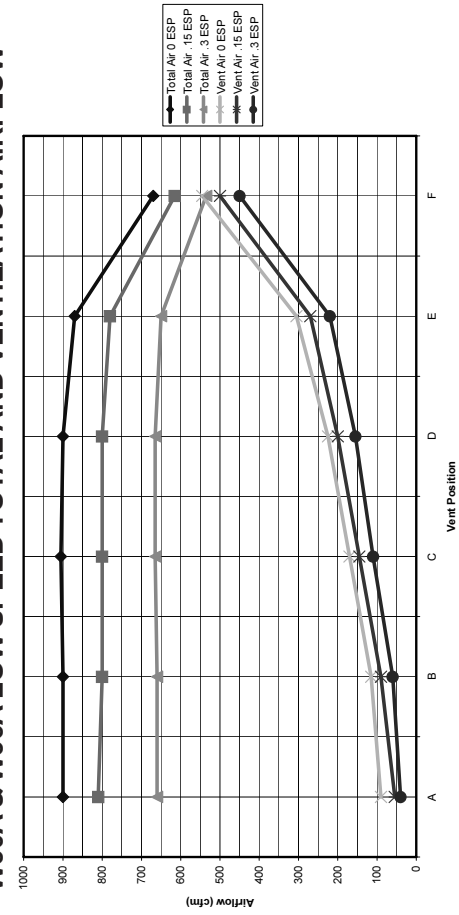


## Commercial Room Ventilator Performance Data - CRVS-3 and CRVP-3

### W30A & W36A HIGH SPEED TOTAL AND VENTILATION AIRFLOW

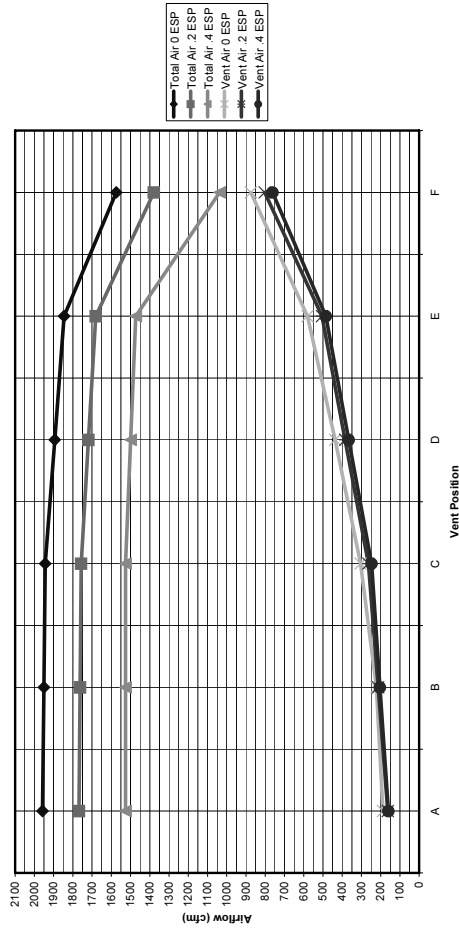


### W30A & W36A LOW SPEED TOTAL AND VENTILATION AIRFLOW

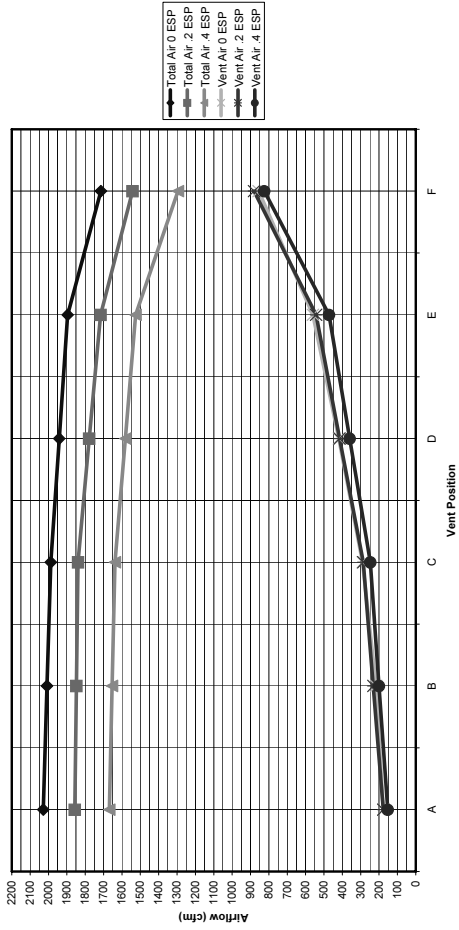


Commercial Room Ventilator Performance Data - CRVS-5 and CRVP-5

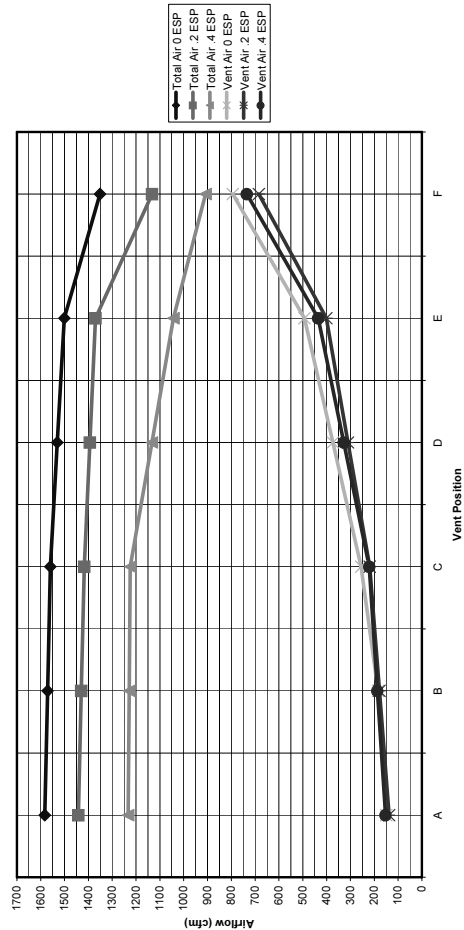
W42A & W48A HIGH SPEED TOTAL AND VENTILATION AIRFLOW



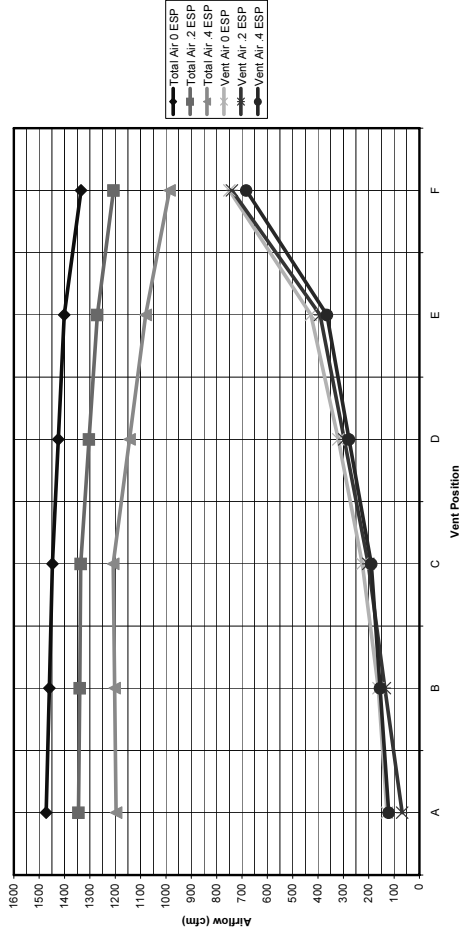
W60A HIGH SPEED TOTAL AND VENTILATION AIRFLOW



W42A & W48A LOW SPEED TOTAL AND VENTILATION AIRFLOW



W60A LOW SPEED TOTAL AND VENTILATION AIRFLOW



# Performance and Application Data- ERVF-A2

## SUMMER COOLING PERFORMANCE (INDOOR DESIGN CONDITIONS 75°DB/62°WB)

Ambient O.D.	VENTILATION RATE -- 250 CFM 62% EFFICIENCY							VENTILATION RATE -- 225 CFM 63% EFFICIENCY						VENTILATION RATE -- 200 CFM 63% EFFICIENCY					
	DB/ WB	F	VLT	VLS	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS
105	75	11925	8100	1325	7394	5022	822	10727	7287	3441	6758	4591	2168	9540	6480	3060	6010	4082	1928
	70	8100	8100	0	5022	5022	0	7287	7287	0	4591	4591	0	6480	6480	0	4082	4082	0
	65	8100	8100	0	5022	5022	0	7287	7287	0	4591	4591	0	6480	6480	0	4082	4082	0
100	80	17550	6750	10800	10881	4185	6696	15788	6072	9716	9946	3826	6121	14040	5400	8640	8845	3402	5443
	75	11925	6750	5175	7394	4185	3209	10727	6072	4655	6758	3826	2933	9540	5400	4140	6010	3402	2608
	70	6863	6750	113	4255	4185	70	6173	6072	101	3889	3826	64	5490	5400	90	3458	3402	56
	65	6750	6750	0	4185	4185	0	6072	6072	0	3826	3826	0	5400	5400	0	3402	3402	0
	60	6750	6750	0	4185	4185	0	6072	6072	0	3826	3826	0	5400	5400	0	3402	3402	0
95	80	17550	5400	12150	10881	3348	7533	15788	4858	10930	9946	3060	6886	14040	4320	9720	8845	2722	6124
	75	11925	5400	6525	7394	3348	4046	10727	4858	5870	6758	3060	3698	9540	4320	5220	6010	2722	3289
	70	6863	5400	1463	4255	3348	907	6173	4858	1315	3889	3060	829	5490	4320	1170	3458	2722	737
	65	5400	5400	0	3348	3348	0	4858	4858	0	3060	3060	0	4320	4320	0	2722	2722	0
	60	5400	5400	0	3348	3348	0	4858	4858	0	3060	3060	0	4320	4320	0	2722	2722	0
90	80	17550	4050	13500	10881	2511	8370	15788	3643	12145	9946	2295	7651	14040	3240	10800	8845	2041	6804
	75	11925	4050	7875	7394	2511	4883	10727	3643	7084	6758	2295	4463	9540	3240	6300	6010	2041	3969
	70	6863	4050	2813	4255	2511	1744	6173	3643	2530	3889	2295	1594	5490	3240	2250	3458	2041	1417
	65	4050	4050	0	2511	2511	0	3643	3643	0	2295	2295	0	3240	3240	0	2041	2041	0
	60	4050	4050	0	2511	2511	0	3643	3643	0	2295	2295	0	3240	3240	0	2041	2041	0
85	80	17550	2700	14850	10881	1674	9207	15788	2429	13359	9946	1530	8416	14040	2160	11880	8845	1361	7484
	75	11925	2700	9225	7394	1674	5720	10727	2429	8298	6758	1530	5228	9540	2160	7380	6010	1361	4649
	70	6863	2700	4163	4255	1674	2581	6173	2429	3744	3889	1530	2359	5490	2160	3300	3458	1361	2098
	65	2700	2700	0	1674	1674	0	2429	2429	0	1530	1530	0	2160	2160	0	1361	1361	0
	60	2700	2700	0	1674	1674	0	2429	2429	0	1530	1530	0	2160	2160	0	1361	1361	0
80	75	11925	1350	10575	7394	837	6557	10727	1214	9513	6758	765	5993	9540	1080	8460	6010	680	5330
	70	6863	1350	5513	4255	837	3418	6173	1214	4959	3889	765	3124	5490	1080	4410	3458	680	2778
	65	2363	1350	1013	1465	837	628	2125	1214	911	1339	765	547	1890	1080	810	1190	680	510
	60	1350	1350	0	837	837	0	1214	1214	0	765	765	0	1080	1080	0	680	680	0
75	70	6863	0	6863	4255	0	4255	6173	0	6173	6889	0	3889	5490	0	5490	3458	0	3458
	65	2363	0	2363	1465	0	1465	2125	0	2125	1339	0	1339	1890	0	1890	1190	0	1190
	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## ERVF-A2 WINTER HEATING PERFORMANCE (INDOOR DESIGN CONDITIONS 70°F DB)

Ambient O.D.	VENTILATION RATE					
	250 CFM 74% EFF.		225 CFM 75% EFF.		200 CFM 75% EFF.	
DB/°F	WVL	WHR	WVL	WHR	WVL	WHR
65	1350	999	1214	911	1080	810
60	2700	1998	2429	1822	2160	1620
55	4050	2997	3643	2733	3240	2430
50	5400	3996	4858	3643	4320	3240
45	6750	4995	6072	4554	5400	4050
40	8100	5994	7287	5465	6480	4860
35	9450	6993	8501	6376	7560	5670
30	10800	7992	9716	7287	8640	6480
25	12150	8991	10930	8198	9720	7290
20	13500	9990	12145	9108	10800	8100
15	14850	10989	13359	10019	11880	8910

NOTE: Sensible performance only is shown for winter application.

### LEGEND:

VLT = Ventilation Load - Total  
VLS = Ventilation Load - Sensible  
VLL = Ventilation Load - Latent  
HRT = Heat Recovery - Total  
HRS = Heat Recovery - Sensible  
HRL = Heat Recovery - Latent  
WVL = Winter Ventilation Load  
WHR = Winter Heat Recovery



# Electrical Specifications

Model	Rated Volts and Phase	No. Field Power Circuits	Single Circuit				Dual Circuit										
			③ Minimum Circuit Ampacity	① Maximum External Fuse or Ckt. Brkr.	② Field Power Wire Size	② Ground Wire	③ Minimum Circuit Ampacity		① Maximum External Fuse or Ckt. Brkr.		② Field Power Wire Size		② Ground Wire Size				
							Ckt. A	Ckt. B	Ckt. A	Ckt. B	Ckt. A	Ckt. B	Ckt. A	Ckt. B			
W17A1/W18A1 - A00, A0Z	230/208-1	1	16	20	12	12											
A05		1	30	30	10	10											
A08		1	46	50	8	10											
A10		1	56	60	6	10											
W24A1 - A00, A0Z	230/208-1	1	21	30	10	10											
A04		1	25	25	10	10											
A05		1	30	30	10	10											
A08		1	46	50	8	10											
A10		1	56	60	6	10											
W24A1 - B00, B0Z	230/208-3	1	15	20	14	14											
B06		1	22	25	10	10											
W24A1 - C00, C0Z	460-3	1	10	15	14	14											
C06		1	12	15	14	14											
W30A1 - A00*, A0Z*	230/208-1	1	24	35	8	10											
A05*		1	32	35	8	10											
A08		1	48	50	8	10											
A10*		1	58	60	6	10											
A15		1 or 2	84	90	4	8	58	26	60	30	6	10	10	10			
W30A1 - B00*, B0Z*	230/208-3	1	18	20	12	12											
B06		1	24	25	10	10											
B09*		1	33	35	8	10											
B15		1	51	60	8	10											
W30A1 - C00*, C0Z*	460-3	1	11	15	14	14											
C06		1	12	15	14	14											
C09*		1	17	20	12	12											
C15		1	26	30	10	10											
W36A1 - A00*, A0Z*	230/208-1	1	29	35	8	10											
A05*		1	32	35	8	10											
A08		1	48	50	8	10											
A10*		1	58	60	6	10											
A15		1 or 2	84	90	4	8	58	26	60	30	6	10	10	10			
W36A1 - B00*, B0Z*	230/208-3	1	23	30	10	10											
B06		1	24	30	10	10											
B09*		1	33	35	8	10											
B15		1	51	60	6	10											
W36A1 - C00*, C0Z*	460-3	1	12	15	14	14											
C06		1	12	15	14	14											
C09*		1	17	20	10	10											
C15		1	26	30	10	10											
W42A1 - A00, A0Z ①	230/208-1	1	33	50	8	10											
A05 ①		1	33	50	8	10											
A10 ①		1	59	60	6	10											
A15		1 or 2	85	90	4	8	59	26	60	30	6	10	10	10			
A20		1 or 2	111	125	2	6	59	52	60	60	6	6	10	10			
W42A1 - B00, B0Z ①	230/208-3	1	25	35	8	10											
B09 ①		1	34	35	8	10											
B15		1	53	60	6	10											
B18 ①		2	N/A	N/A	N/A	N/A	34	28	35	30	8	10	10	10			
W42A1 - C00, C0Z ①	460-3	1	13	15	14	14											
C09 ①		1	18	20	12	12											
C15		1	27	30	10	10											
W48A1 - A00, A0Z ①	230/208-1	1	37	50	8	10											
A05 ①		1	37	50	8	10											
A10 ①		1	59	60	6	10											
A15		1 or 2	85	90	4	8	59	26	60	30	6	10	10	10			
A20		1 or 2	111	125	2	6	59	52	60	60	6	6	10	10			
W48A1 - B00, B0Z ①	230/208-3	1	29	40	8	10											
B09 ①		1	34	40	8	10											
B15		1	53	60	6	10											
B18 ①		2	N/A	N/A	N/A	N/A	34	28	40	30	8	10	10	10			
W48A1 - C00, C0Z ①	460-3	1	14	20	12	12											
C09 ①		1	18	20	12	12											
C15		1	27	30	10	10											
W60A1 - A00, A0Z ①	230/208-1	1	41	60	8	10											
A05 ①		1	41	60	8	10											
A10 ①		1	59	60	6	10											
A15		1 or 2	85	90	4	8	59	26	60	30	6	10	10	10			
A20		1 or 2	111	125	2	6	59	52	60	60	6	6	10	10			
W60A1 - B00, B0Z ①	230/208-3	1	29	40	8	10											
B09 ①		1	34	40	8	10											
B15 ①		1	53	60	6	10											
B18 ①		2	N/A	N/A	N/A	N/A	34	28	40	30	8	10	10	10			
W60A1 - C00, C0Z ①	460-3	1	15	20	12	12											
C09 ①		1	18	20	12	12											
C15		1	27	30	10	10											

① Maximum size of the time delay fuse or HACR type circuit breaker for protection of field wiring conductors.  
 ② Based on 75C copper wire. All wiring must conform to the National Electrical Code and all local codes.  
 ③ These "Minimum Circuit Ampacity" values are to be used for sizing the field power conductors. Refer to the National Electrical code (latest version), Article 310 for power conductor sizing.  
 ④ These models are available with dehumidification with hot gas reheat.

**Caution:** When more than one field power circuit is run through one conduit, the conductors must be derated. Pay special attention to note 8 of Table 310 regarding Ampacity Adjustment Factors when more than three (3) current carrying conductors are in a raceway.

\* Top outlet supply option is available only factory installed and only on the selected models.

**IMPORTANT:** While this electrical data is presented as a guide, it is important to electrically connect properly sized fuses & conductor wires in accordance with the National Electrical Code & all local codes.  
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## Indoor Blower Performance - CFM at Rated Volts

ESP in H <sub>2</sub> O	W17A1 W18A1		W24A1	W30A1 W36A1		W42A1 W48A1		W60A1	
	High Speed Dry/Wet Coil	Low Speed Dry/Wet Coil	Single Speed Dry/Wet Coil	High Speed Dry/Wet Coil	Low Speed Dry/Wet Coil	High Speed Dry/Wet Coil	Low Speed Dry/Wet Coil	High Speed Dry/Wet Coil	Low Speed Dry/Wet Coil
0	925/885	670/655	1020/975	1395/1315	950/935	1885/1800	1650/1600	2200/2000	1600/1450
.1	875/845	650/630	960/905	1340/1270	930/915	1770/1665	1550/1500	2100/1900	1525/1375
.2	825/795	625/600	865/800	1285/1190	910/885	1635/1550	1450/1400	2000/1800	1465/1200
.3	775/740	575/555	820/735	1205/1100	855/830	1500/1400	1350/1300	1875/1700	-/-
.4	710/670	525/500	735/650	1110/1000	800/755	1370/1285	1300/1175	1775/1600	-/-
.5	635/600	465/440	615/535	1005/870	-/-	1250/1150	-/-	1650/1475	-/-

Above data is with 1" standard throwaway filter and 1" washable filter.

For optional 2" pleated filter - reduce ESP by .15 in.

See installation instructions for maximum ESP information on various KW application.

Speeds marked "bold" above  
are **Factory Connected**.

## Electric Heat Table - Refer to Electrical Specifications for Availability by Unit Model

Nominal KW	At 240V (1)				At 208V (1)				At 480V (2)			At 460V (2)		
	Kw	1-Ph Amps	3-Ph Amps	Btuh	Kw	1-Ph Amps	3-Ph Amps	Btuh	Kw	3-Ph Amps	Btuh	Kw	3-Ph Amps	Btuh
5.0	5.0	20.8		17,065	3.75	18.0		12,799						
6.0	6.0		14.4	20,478	4.50		12.5	15,359	6.0	7.2	20,478	5.52	6.9	18,840
8.0	8.0	33.3		27,304	6.00	28.8		20,478						
9.0	9.0		21.7	30,717	6.75		18.7	23,038	9.0	10.8	30,717	8.28	10.4	28,260
10.0	10.0	41.7		34,130	7.50	36.1		25,598						
15.0	15.0	62.5	36.1	51,195	11.25	54.1	31.2	38,396	15.0	18.0	51,195	13.80	17.3	47,099
18.0	18.0		43.3	61,434	13.50		37.5	46,076	18.0	21.7	61,434	16.56	20.8	56,519
20.0	20.0	83.3		68,260	15.00	72.1		51,195						

(1) These electric heaters are available in 230/208V units only.

(2) These electric heaters are available in 480V units only.

## Heater Packages - Field Installed

- Designed for adding Electric Heat to 0 KW Units
- Circuit Breaker Standard on 230/208V Models

- ETL US & Canada Listed
- Toggle Disconnect Standard on 460V Models

Air Conditioner Models	-A00 Models 230/208-1		-B00 Models 230/208-3		-C00 Models 460-3	
	Heater Model #	KW	Heater Model #	KW	Heater Model #	KW
W17A1 W18A1	EHWA02-A05 EHW02A-A08 EHWA02A-A10	5 8 10	N/A		N/A	
W24A1	EHWA02-A05 EHW02A-A08 EHWA02A-A10	5 8 10	EHWA24-B06	6	EHWH24B-C06	6
W30A1	EHWA03-A05 EHWA03-A08 EHWA03-A10 EHWA03-A15	5 8 10 15	EHWA03-B06 EHWA03-B09 EHWA37-B15	6 9 15	EHWC03A-C06 EHWC03A-C09 EHWA03A-C15	6 9 15
W36A1	EHWA03-A05 EHWA03-A08 EHWA03-A10 EHWA03-A15	5 8 10 15	EHW36A-B06 EHWA03-B09 EHWA37-B15	6 9 15	EHWC03A-C06 EHWC03A-C09 EHWA03A-C15	6 9 15
W42A1 W48A1	EHWA05-A05 ① EHWA05-A10 ① EHWA05-A15 EHWA05-A20	5 10 15 20	EHWA05-B09 ① EHWA05-B15 EHW05A-B18 ①	9 15 18	EHWA05A-C09 ① EHWA05A-C15	9 15
W60A1	EHWA60-A05 ① EHWA05-A10 ① EHWA05-A15 EHWA05-A20	5 10 15 20	EHW60A-B09 ① EHWA05-B15 ① EHW05A-B18 ①	9 15 18	EHWA05A-C09 ① EHWA05A-C15	9 15

**NOTE:** Field installed Heater Packages are not approved for use with top supply opening models.

① These heater packages approved for use in dehumidification versions with hot gas reheat.

## Cooling Application Data - Outdoor Temperature ①

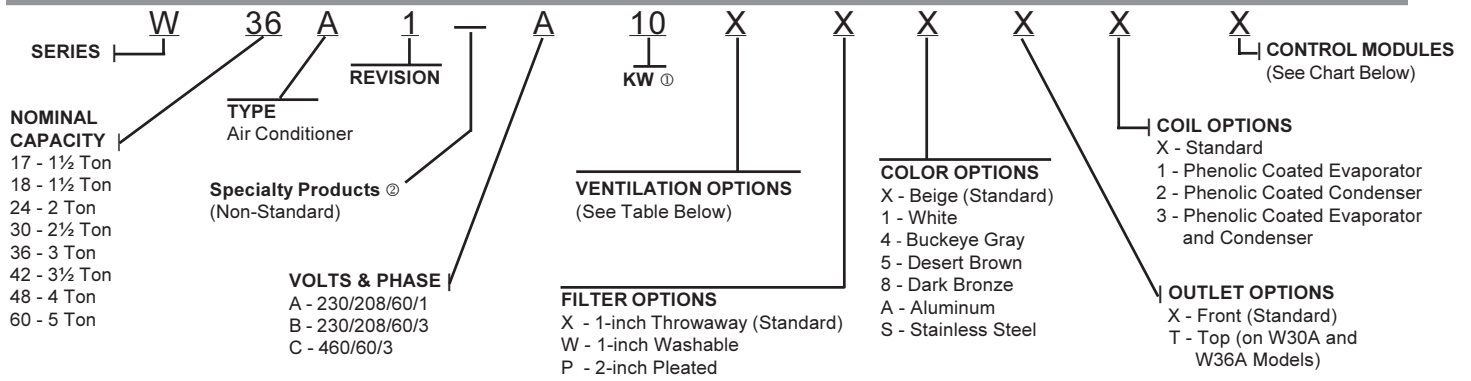
Model	D.B./W.B. ②	Cooling Capacity	75°F	80°F	85°F	90°F	95°F	100°F	105°F	110°F	115°F	120°F
W17A1 W18A1	75/ 62	Total Cooling	17,500	16,700	15,900	15,100	14,300	13,600	12,900	12,200	11,600	10,800
		Sensible Cooling	13,900	13,500	13,200	12,800	12,500	12,200	11,800	11,500	11,100	10,700
	80/ 67	Total Cooling	18,600	18,100	17,600	17,000	16,400	15,800	15,200	14,500	13,900	13,100
		Sensible Cooling	13,400	13,200	13,000	12,800	12,600	12,400	12,100	11,800	11,500	11,200
	85/ 72	Total Cooling	22,200	21,200	20,200	19,200	18,300	17,300	16,400	15,500	14,600	13,700
		Sensible Cooling	13,800	13,400	13,100	12,800	12,400	12,000	11,600	11,100	10,600	10,200
W24A1	75/ 62	Total Cooling	26,000	24,500	23,300	22,100	20,900	20,000	19,100	18,400	17,600	17,100
		Sensible Cooling	20,100	19,700	19,200	18,800	18,400	17,900	17,400	16,900	16,400	15,900
	80/ 67	Total Cooling	27,700	26,700	25,800	24,900	24,000	23,300	22,500	21,900	21,200	20,700
		Sensible Cooling	19,500	19,300	19,000	18,800	18,500	18,200	17,800	17,400	17,000	16,600
	85/ 72	Total Cooling	33,000	31,200	29,700	28,100	26,700	25,500	24,300	23,300	22,300	21,500
		Sensible Cooling	20,000	19,600	19,100	18,700	18,200	17,600	17,000	16,300	15,700	15,000
W30A1	75/ 62	Total Cooling	31,100	29,700	28,300	27,000	25,800	24,700	23,700	22,700	21,700	20,900
		Sensible Cooling	24,500	24,000	23,500	22,900	22,400	21,800	21,300	20,700	20,100	19,500
	80/ 67	Total Cooling	33,200	32,300	31,400	30,400	29,400	28,600	27,800	27,000	26,100	25,300
		Sensible Cooling	23,700	23,500	23,200	22,900	22,600	22,200	21,800	21,400	20,900	20,400
	85/ 72	Total Cooling	39,600	37,800	36,100	34,500	32,900	31,500	30,100	28,800	27,500	26,300
		Sensible Cooling	24,300	23,900	23,300	22,800	22,200	21,500	20,800	20,100	19,300	18,500
W36A1	75/ 62	Total Cooling	38,100	35,900	34,100	32,300	30,800	29,600	28,600	27,700	26,900	26,400
		Sensible Cooling	28,500	27,800	27,100	26,400	25,800	25,200	24,700	24,200	23,700	23,200
	80/ 67	Total Cooling	40,600	39,100	37,800	36,500	35,400	34,500	33,700	33,000	32,400	32,000
		Sensible Cooling	27,600	27,200	26,800	26,400	26,000	25,600	25,300	25,000	24,600	24,300
	85/ 72	Total Cooling	48,400	45,700	43,400	41,200	39,300	37,800	36,400	35,100	34,100	33,300
		Sensible Cooling	28,300	27,600	26,900	26,200	25,500	24,800	24,100	23,500	22,700	22,000
W42A1	75/ 62	Total Cooling	43,600	41,500	39,600	37,600	35,700	33,900	32,100	30,400	28,700	27,000
		Sensible Cooling	35,500	34,500	33,600	32,700	31,800	31,000	30,100	29,200	28,400	27,000
	80/ 67	Total Cooling	46,500	45,200	43,900	42,500	41,000	39,500	37,900	36,200	34,500	32,700
		Sensible Cooling	34,400	33,800	33,300	32,700	32,100	31,500	30,900	30,200	29,500	28,800
	85/ 72	Total Cooling	55,400	52,900	50,400	48,000	45,600	43,200	40,900	38,500	36,300	34,000
		Sensible Cooling	35,200	34,300	33,500	32,500	31,500	30,500	29,500	28,300	27,200	26,000
W48A1	75/ 62	Total Cooling	49,600	47,300	45,100	43,000	40,900	39,000	37,100	35,100	33,300	31,400
		Sensible Cooling	39,900	39,100	38,200	37,300	36,400	35,500	34,500	33,600	32,700	31,400
	80/ 67	Total Cooling	52,900	51,500	50,100	48,600	47,000	45,400	43,700	41,900	40,000	38,100
		Sensible Cooling	38,700	38,300	37,800	37,300	36,700	36,100	35,400	34,700	34,000	33,100
	85/ 72	Total Cooling	63,000	60,200	57,500	54,900	52,200	49,700	47,100	44,600	42,000	39,600
		Sensible Cooling	39,600	38,900	38,000	37,100	36,000	34,900	33,800	32,500	31,300	29,900
W60A1	75/ 62	Total Cooling	59,200	56,200	53,300	50,500	47,900	45,400	43,100	40,800	38,600	36,600
		Sensible Cooling	45,200	43,800	42,300	41,000	39,700	38,500	37,300	36,100	35,000	33,900
	80/ 67	Total Cooling	63,200	61,200	59,200	57,100	55,000	52,900	50,800	48,700	46,500	44,300
		Sensible Cooling	43,800	42,900	41,900	41,000	40,100	39,200	38,300	37,300	36,400	35,500
	85/ 72	Total Cooling	75,300	71,600	68,000	64,500	61,100	57,900	54,800	51,800	48,900	46,000
		Sensible Cooling	44,900	43,600	42,100	40,700	39,300	37,900	36,500	35,000	33,500	32,100

Capacity Multiplier Factors			
% of Rated Airflow	-10	Rated	+10
Total BTUH	0.975	1.0	1.02
Sensible BTUH	0.950	1.0	1.05

① Below 65°F (18.3C), unit requires a factory or field installed low ambient control.

② Return air temperature.

## Air Conditioning Wall-Mount Model Nomenclature



- ① For 0KW and circuit breakers (230/208 Volt) or toggle disconnects (460 Volt) applications, insert 0Z in the KW field of the model number.  
 ② Insert "D" for dehumidification with hot gas reheat — Models W42 - 60 only. See Form 7960-572 for complete details.

## Ventilation Options

Models	W17A1, W18A1, W24A1		W30A1, W36A1		W42A1, W48A1, W60A1	
	Factory Installed Code No.	Field Installed Part No.	Factory Installed Code No.	Field Installed Part No.	Factory Installed Code No.	Field Installed Part No.
Barometric Fresh Air Damper - Standard	X	BFAD-2	X	BFAD-3	X	BFAD-5
Blank-Off Plate	B	BOP-2	B	BOP-3	B	BOP-5
Motorized Fresh Air Damper	M	MFAD-2	M	MFAD-3	M	MFAD-5
Commercial Ventilator - Spring Return w/Exhaust	V	CRV-2	V	CRVS-3	V	CRVS-5
Commercial Ventilator - Power Return w/Exhaust	---	---	P	CRVP-3	P	CRVP-5
Economizer - Fully Modulating ①	E	EIFM-2B	E	EIFM-3C	E	EIFM-5C
Economizer - Fully Modulating ①②	D	N/A	D	N/A	D	N/A
Energy Recovery Ventilator - 230 Volt *	R	ERVF-A2	R	ERVF-A3 ③	R	ERVF-A5 ③
Energy Recovery Ventilator - 460 Volt *	N/A	ERVF-C2 ④	R	ERVF-C3 ④	R	ERVF-C5 ④
Door Kit for ERVF (Required)	N/A	WMDK2-*	N/A	WMDK3-*	N/A	WMDK5-*

- ① Low ambient control is required with economizer for low temperature compressor operation.  
 ② For use only with "V" Control Module and TCS23 Controller.  
 ③ Intake and exhaust can be independently adjusted.  
 ④ Model W24A1-C only.  
 \* WMDK Door Kit must be ordered in addition to ERVF Assembly and color matched to unit ("X" = Beige; "4" = Buckeye Gray; "8" = Dark Bronze)

## Air Conditioning Control Modules

									All Models Except As Noted		W17A1 Factory Only
HPC ①	LPC ②	CCM ③	LAC ④⑤	ALR ⑥	SK ⑦	SK ⑧	ODT ⑨	DDC ⑩	Factory Installed Code	Field Installed Part	
STD	STD	STD							X	N/A	N/A
STD	STD	STD	●						E ⑪	CMA-28	N/A
STD	STD	STD	●	●					J ⑫	Factory Only	J
STD	STD	STD	●		●				K ⑬	CMC-15 and CMA-28	N/A
STD	STD	STD	●	●	●				M ⑭	Factory Only	N/A
STD	STD	STD	●		●				N, W18A Only ⑮	N/A	N/A
STD	STD	STD			●				Field Installed Only	CMC-15	CMC-15
STD	STD	STD					●		Field Installed Only	CMA-14	N/A
STD	STD	STD	●	●				●	V ⑯⑰	Factory Only	N/A
STD	STD	STD						●	Field Installed Only	CMA-23 for W18-36A CMA-24 for W42-60A	N/A
STD	STD	STD				●			Field Installed Only	SK111	SK111

- STD = Standard equipment for these specified models.  
 ① HPC. High pressure control is auto reset. Always used with compressor control module (CCM) which is included. See note ③.  
 ② LPC. Low pressure control is auto reset. Always used with compressor control module (CCM) which is included. See note ③.  
 ③ CCM. Compressor control module has adjustable 30-second to 5-minute delay-on-break timer. On initial power-up, or any time the power is interrupted, the delay-on-make will be 2-minutes plus 10% of the delay-on-break setting. There is no delay-on-make during routine operation of the unit. The module also provides the lockout feature (with 1 retry) for high and/or low-pressure controls, and a 2-minute timed bypass for low-pressure control.  
 ④ LAC. Low ambient control permits cooling operation down to 0°F. LAC is fan-cycling control for outdoor fan motor on all models except W17A1, which is modulating control.  
 ⑤ ALR. The alarm relay has a set of normally open and normally closed dry contacts to provide the ability to signal a condition of shutdown on either high or low pressure controls.  
 ⑥ SK. PTCR start kit can be used with all -A single phase models. Increases starting torque 2-3x. Not used for -B or -C three phase models. Do not use if SK111 is used.  
 ⑦ SK. Start capacitor and potential relay start kit can be used with all -A single phase models. Increases starting torque 9x. Not used for -B or -C three phase models. Do not use if CMC-15 is used.  
 ⑧ ODT. Outdoor thermostat is adjustable from 0 to 50°F. It is suitable for use as a compressor cut-off thermostat.  
 ⑨ DDC. Incorporates 4 additional sensors: discharge air temperature, indoor blower airflow, compressor current, and dirty filter. These sensing devices function to input analog data such as temperature, as well as digital data such as airflow, compressor status or filter status.  
 ⑩ "V" control module should be ordered in conjunction with direct digital controller (DDC) model TCS23. Refer to DDC specification sheet S3280 for more information.  
 ⑪ Option not available for Model W18A.  
 ⑫ Use option N for Alarm Relay on Model W18A only.

### Clearances Required for Service Access and Adequate Condenser Inlet Airflow

MODELS	LEFT SIDE	RIGHT SIDE
W17A, W18A, W24A, W30A, W36A	15"	20"
W42A, W48A, W60A	20"	20"

NOTE: For side by side installation of two (2) WA models there must be 20" between units. This can be reduced to 15" by using a WL model (left side compressor and controls) for the left unit and WA (right side compressor and controls) for right unit. See WL Specifications S3400.

### Minimum Clearances Required to Combustible Materials

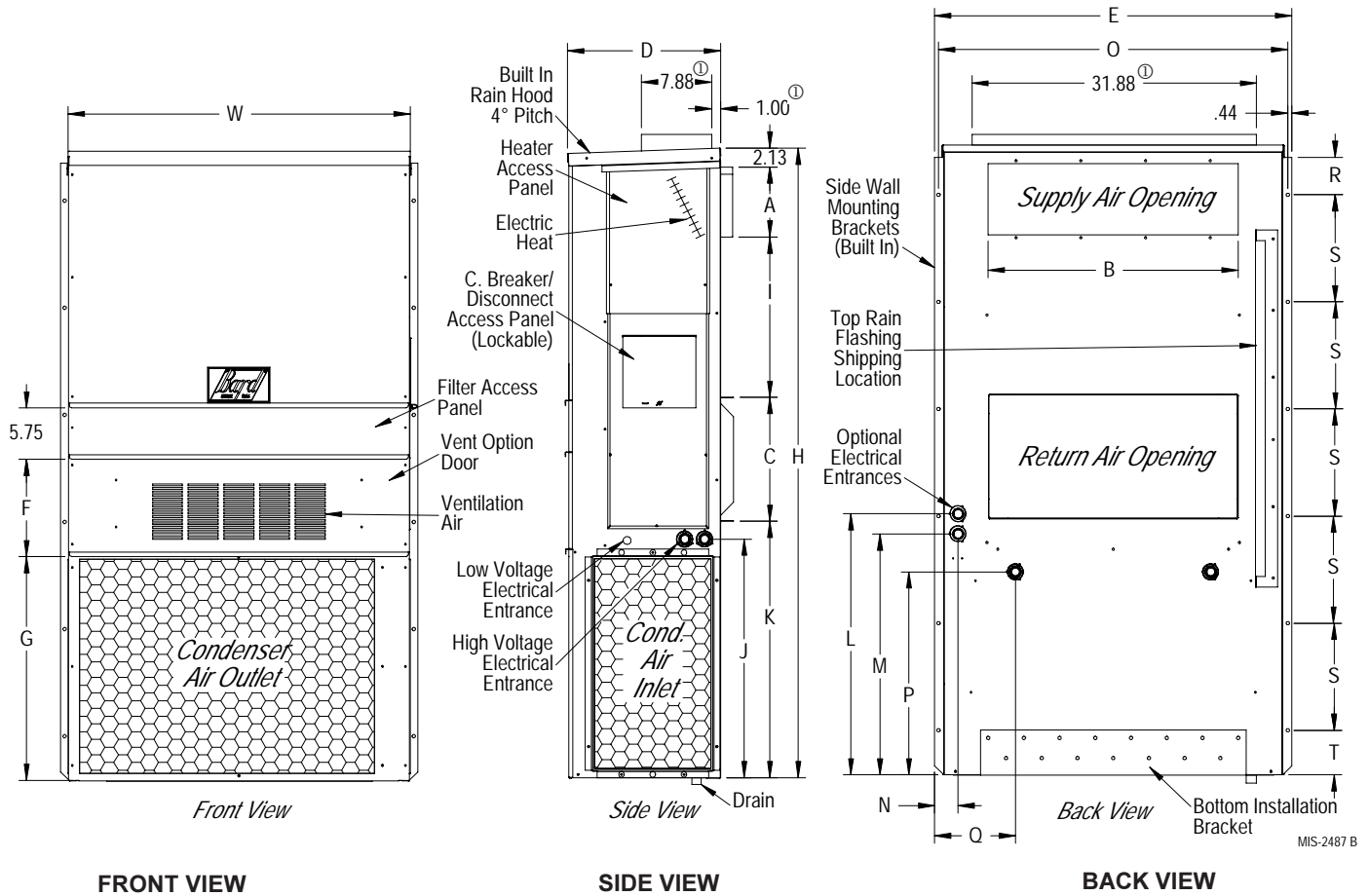
MODELS ①	SUPPLY AIR DUCT FIRST THREE FEET	CABINET
W17A, W18A, W24A	0"	0"
W30A, W36A	1/4"	0"
W42A, W48A, W60A	1/4"	0"

① Refer to the Installation Manual for more detailed information.

### Dimensions of Basic Unit for Architectural and Installation Requirements (Nominal)

MODEL	WIDTH (W)	DEPTH (D)	HEIGHT (H)	SUPPLY		RETURN																
				A	B	C	B	E	F	G	I	J	K	L	M	N	O	P	Q	R	S	T
W17A W18A W24A	33.300	17.125	70.563	7.88	19.88	11.88	19.88	35.00	10.88	25.75	20.56	26.75	28.06	29.25	27.00	2.63	34.13	22.06	10.55	4.19	12.00	5.00
W30A W36A	38.200	17.125	70.563	7.88	27.88	13.88	27.88	40.00	10.88	25.75	17.93	26.75	28.75	29.25	27.00	2.75	39.13	22.75	9.14	4.19	12.00	5.00
W42A W48A W60A	42.075	22.432	84.875	9.88	29.88	15.88	29.88	43.88	13.56	31.66	30.00	32.68	26.94	34.69	32.43	3.37	43.00	23.88	10.00	1.44	16.00	1.88

All dimensions are in inches. Dimensional drawings are not to scale.



① Optional top outlet (factory installed only) for W30A and W36A models only.



Bard Manufacturing Company, Inc.  
Bryan, Ohio 43506  
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Before purchasing this appliance, read important energy cost and efficiency information available from your retailer.

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S3397  
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