



THE WALL-MOUNT™ AIR CONDITIONERS - 9.0 EER, (60HZ) with LEFT SIDE CONTROL PANEL

Models W18L to W60L
1.5 to 5 Ton (16,400 to 55,000 Btuh)
Left 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 left 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 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	W18L1	W24L1	W30L1	W36L1	W42L1	W48L1	W60L1
Cooling Capacity BTUH ①	16,400	24,000	29,400	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	W18L1-A	W24L1-A	W24L1-B	W30L1-A	W30L1-B	W30L1-C	W36L1-A	W36L1-B	W36L1-C
Electrical Rating--60 Hz	230/208 - 1	230/208 - 1	230/208 - 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	197-253	197-253	414-506	197-253	197-253	414-506
Compressor--Circuit A									
Voltage	230/208	230/208	230/208	230/208	230/208	460	230/208	230/208	460
Rated Load Amps	6.5/7.2	11./12.4	7.2/8.1	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	14.2	9.0	5.7	18	13.3	6.0
Lock Rotor Amps	48/48	64/64	58/58	78/78	71/71	38	112/112	88/88	44
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Fan Motor & Condenser									
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
Fan Motor--Amps	1.2	1.2	1.2	1.5	1.5	1.4	1.5	1.5	1.4
Fan--DIA/CFM	18" - 1600	18" - 1600	18" - 1600	20" - 2100	20" - 2100	20" - 2100	20" - 1900	20" - 1900	20" - 1900
Blower Motor & Evap.									
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
Blower Motor--Amps	1.0	1.0	1.0	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	1000 - .40	1000 - .40	1000 - .40	1100 - .30	1100 - .30	1100 - .30
Filter Sizes (inches) STD.	16x25x1	16x25x1	16x25x1	16x30x1	16x30x1	16x30x1	16x30x1	16x30x1	16x30x1
Shipping Weight --LBS.	335	335	335	375	375	375	375	375	375

Specifications 3-1/2 Ton through 5 Ton

MODELS	W42L1-A	W42L1-B	W42L1-C	W48L1-A	W48L1-B	W48L1-C	W60L1-A	W60L1-B	W60L1-C
Electrical Rating--60 Hz	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
Compressor--Circuit A									
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
Fan Motor & Condenser									
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
Blower Motor & Evap.									
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
Shipping Weight --LBS.	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

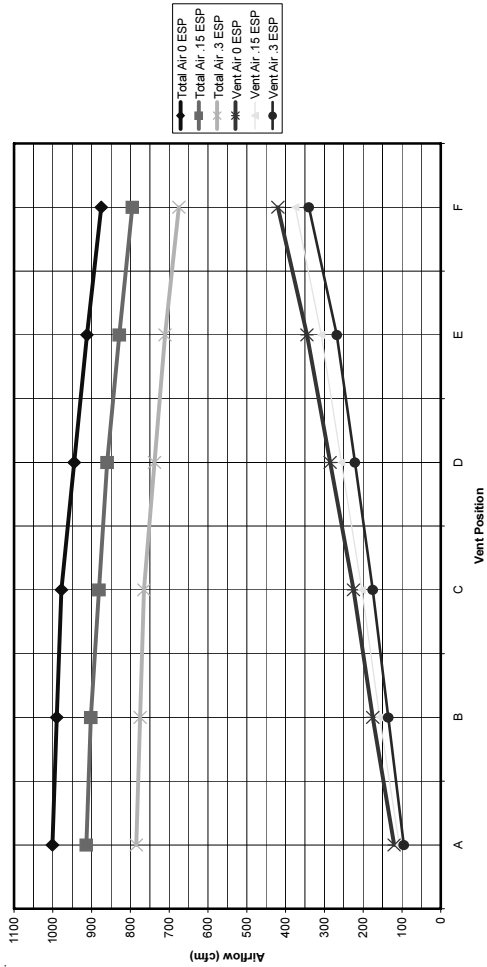
The wall-mount energy recovery ventilator (ERV) is a highly innovative approach to meeting indoor air quality ventilation requirements as established by ANSI/ASHRAE Standard 62.1. The ERV allows from 200 to 450 CFM (depending upon model) of fresh air and exhaust through the unit while maintaining superior 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.

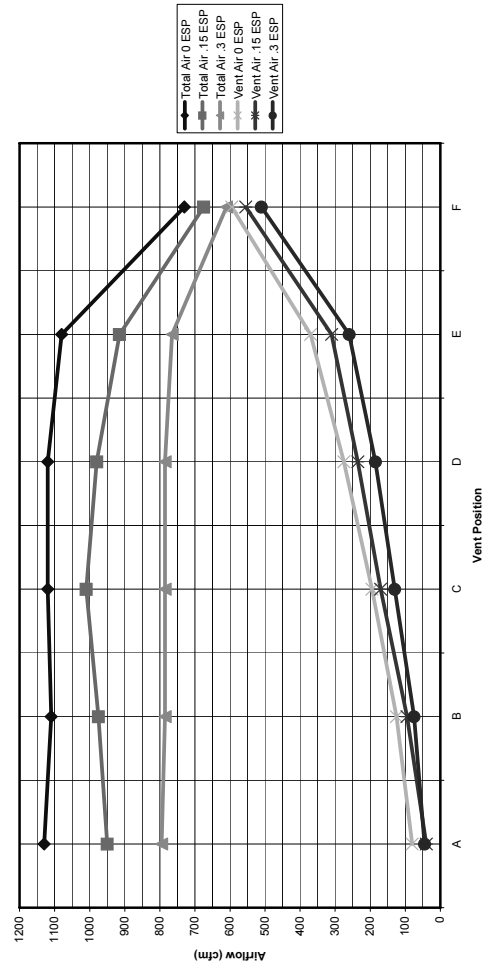
Commercial Room Ventilator Performance Data - CRV-2

W18L & W24L TOTAL AND VENTILATION AIRFLOW

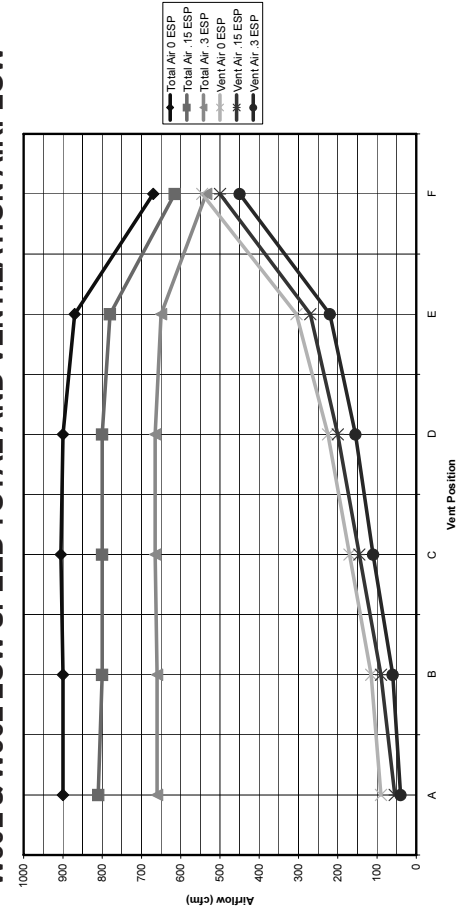


Commercial Room Ventilator Performance Data - CRVS-3 and CRVP-3

W30L & W36L HIGH SPEED TOTAL AND VENTILATION AIRFLOW

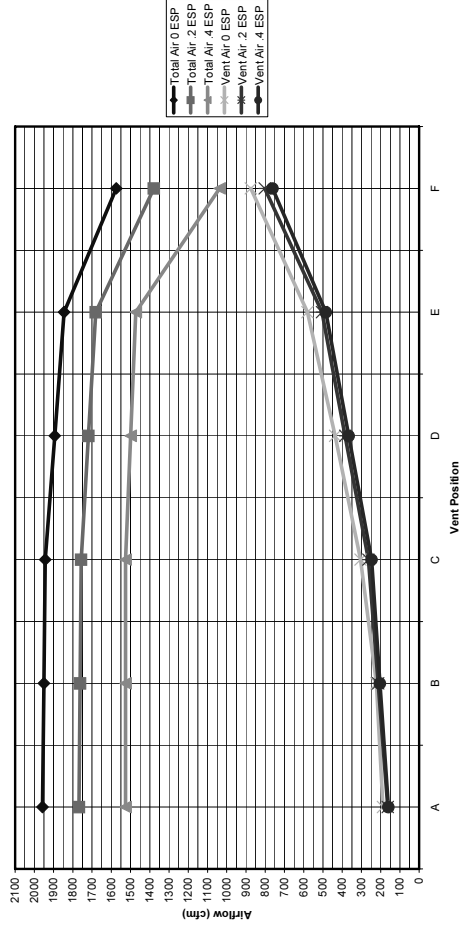


W30L & W36L LOW SPEED TOTAL AND VENTILATION AIRFLOW



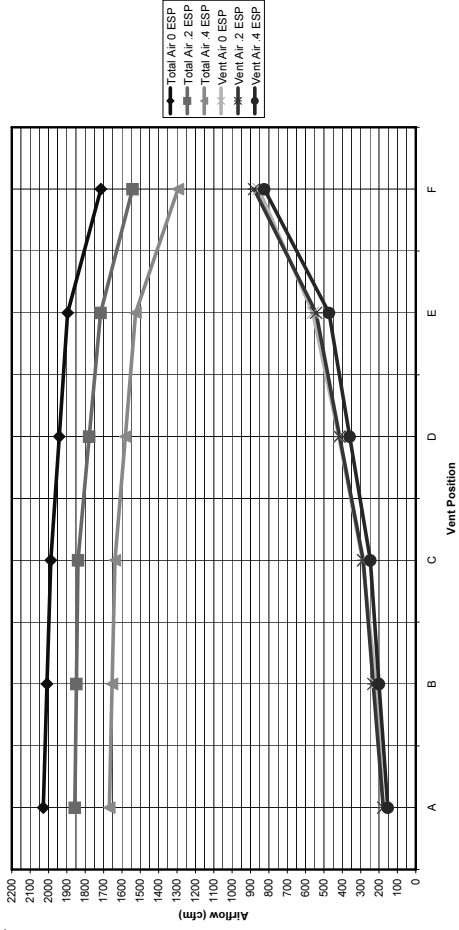
Commercial Room Ventilator Performance Data - CRVS-5 and CRVP-5

W42L & W48L HIGH SPEED TOTAL AND VENTILATION AIRFLOW

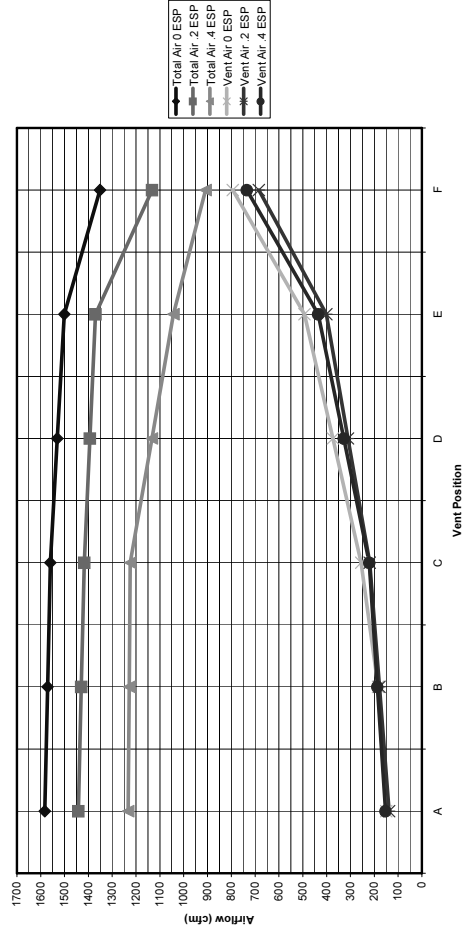


Commercial Room Ventilator Performance Data - CRVS-5 and CRVP-5

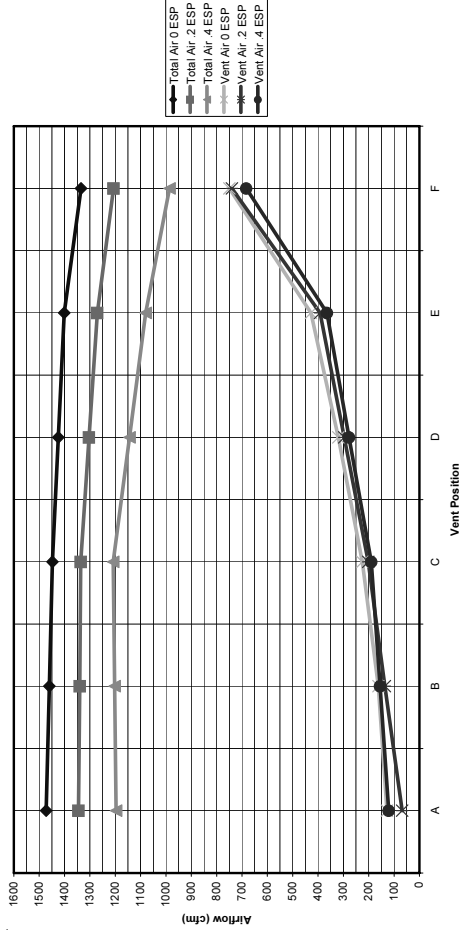
W60L HIGH SPEED TOTAL AND VENTILATION AIRFLOW



W42L & W48L LOW SPEED TOTAL AND VENTILATION AIRFLOW



W60L 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

Performance and Application Data- ERVF-3

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

Ambient O.D.		VENTILATION RATE - 400CFM 63% EFFICIENCY										VENTILATION RATE - 325 CFM 64% EFFICIENCY										VENTILATION RATE - 250 CFM 65% EFFICIENCY									
DB/ WB	F	VLT	VLS	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS	HRL						
75	19080	12360	12660	12960	13260	13560	13860	14160	14460	14760	15060	15360	15660	15960	16260	16560	16860	17160	17460	17760	18060	18360	18660	18960	19260	19560					
105	70	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980					
65	65	12960	12960	12960	12960	12960	12960	12960	12960	12960	12960	12960	12960	12960	12960	12960	12960	12960	12960	12960	12960	12960	12960	12960	12960	12960					
80	28080	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800					
100	70	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980					
65	65	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980	10980					
60	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800	10800					
80	28080	8640	8640	8640	8640	8640	8640	8640	8640	8640	8640	8640	8640	8640	8640	8640	8640	8640	8640	8640	8640	8640	8640	8640	8640	8640					
75	19080	8640	10440	10440	12020	12020	1443	6577	15502	7020	8482	9921	4492	5428	11925	5400	6525	7751	3510	4241	11925	5400	6525	7751	3510	4241					
95	70	10980	8640	2340	6917	5443	1474	8921	7020	1901	5709	4492	1216	6862	5400	1462	4460	3510	950	5400	5400	0	3510	3510	0	3510	3510				
65	8640	8640	0	5443	5443	0	5443	5443	0	4492	4492	0	4492	4492	0	5400	5400	0	3510	3510	0	5400	5400	0	3510	3510					
60	8640	8640	0	5443	5443	0	5443	5443	0	4492	4492	0	4492	4492	0	5400	5400	0	3510	3510	0	5400	5400	0	3510	3510					
80	28080	6480	21600	17690	4082	13608	22815	5265	17550	2700	14601	3369	11232	17550	2700	14601	3369	11232	17550	2700	14601	3369	11232	17550	2700	14601					
75	19080	6480	12600	12020	4082	7938	15502	5265	10237	9921	3369	6552	11925	4050	7875	11925	4050	7875	11925	4050	7875	11925	4050	7875	11925	4050					
90	70	10980	6480	4500	6917	4082	2835	5709	3369	3369	3369	2340	6862	4050	2812	4460	2632	1828	4460	2632	1828	4460	2632	1828	4460	2632					
65	6480	6480	0	4082	4082	0	4082	4082	0	3369	3369	0	3369	3369	0	4050	4050	0	2632	2632	0	4050	4050	0	2632	2632					
60	6480	6480	0	4082	4082	0	4082	4082	0	3369	3369	0	3369	3369	0	4050	4050	0	2632	2632	0	4050	4050	0	2632	2632					
80	28080	4320	23760	17690	2721	14968	22815	3510	19305	2700	14601	2246	12355	17550	2700	14601	2246	12355	17550	2700	14601	2246	12355	17550	2700	14601					
75	19080	4320	14760	12020	2721	9298	15502	3510	11992	9921	2246	7675	11925	2700	9225	11925	2700	9225	11925	2700	9225	11925	2700	9225	11925	2700					
85	70	10980	4320	6660	6917	2721	4195	9921	3510	5411	5411	5411	4162	4460	4162	4460	1755	2705	4460	1755	2705	4460	1755	2705	4460	1755					
65	4320	4320	0	2721	2721	0	2721	2721	0	3510	3510	0	2246	2246	0	2700	2700	0	1755	1755	0	2700	2700	0	1755	1755					
60	4320	4320	0	2721	2721	0	2721	2721	0	3510	3510	0	2246	2246	0	2700	2700	0	1755	1755	0	2700	2700	0	1755	1755					
75	19080	2160	16920	12020	1360	10659	15502	1755	13747	9921	1123	8798	11925	1350	10575	11925	1350	10575	11925	1350	10575	11925	1350	10575	11925	1350					
70	10980	2160	8820	6917	1360	5556	8921	1755	7166	5709	1123	4586	6862	1350	5512	4460	877	3683	4460	877	3683	4460	877	3683	4460	877					
80	65	3780	2160	1620	2381	1360	1020	3071	1755	1316	1965	1123	842	2362	1350	1012	1535	877	658	1350	1012	1535	877	658	1350	1012					
60	2160	2160	0	1360	1360	0	1360	1360	0	1755	1755	0	1123	1123	0	1350	1350	0	877	877	0	1350	1350	0	877	877					
70	10980	0	10980	6917	0	6917	0	6917	0	8921	5709	0	5709	6862	0	6862	4460	0	4460	4460	0	6862	4460	0	4460	4460					
75	65	3780	0	3780	2381	0	2380	3071	0	3071	1965	0	1965	2362	0	2362	1535	0	1535	1535	0	2362	1535	0	1535	1535					
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					

NOTE: Sensible performance only is shown for winter application.

Performance and Application Data- ERVF-5

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

Ambient O.D.		VENTILATION RATE - 450 CFM 65% EFFICIENCY										VENTILATION RATE - 375 CFM 66% EFFICIENCY										VENTILATION RATE - 300 CFM 67% EFFICIENCY									
DB/ WB	F	VLT	VLS	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS	HRL						
75	21465	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580						
105	70	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580						
65	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580	14580						
80	31590	12150	19440	20533	7897	12635	26325	8100	10250	16200	17374	6682	10892	21060	8100	12960	14110	5427	8683	14110	5427	8683	14110	5427	8683						
75	21465	12150	9314	13952	7897	6054	17887	10125	7762	11805	6682	5123	14310	8100	6210	9587	5427	4160	9587	5427	4160	9587	5427	4160	9587						
100	70	12352	12150	202	8029	7897	131	10293	10125	168	6793	6682	111	8235	8100	135	5517	5427	90	5517	5427	90	5517	5427	90						
65	12150	12150	0	7897	7897	0	7897	7897	0	10125	10125	0	6682	6682	0	8100	8100	0	5427	5427	0	5427	5427	0	5427						
60	12150	12150	0	7897	7897	0	7897	7897	0	10125	10125	0	6682	6682	0	8100	8100	0	5427	5427	0	5427	5427	0	5427						
80	31590	9720	21870	20533	6318	14215	26325	8100	18225	8100	17374	5345	12028	21060	6480	14580	14110	4341	9768	14110	4341	9768	14110	4341	9768						
75	21465	9720	11744	13952	6318	7634	17887	8100	9787	11812	11805	5345	6459	14310	6480	7630	9587	4341	5246	9587	4341	5246	9587	4341	5246						
95	70	12352	9720	2632	8029	6318	1711	10293	8100	2193	6793	5345	1447	8235	6480	1755	5517	4341	1175	5517	4341	1175	5517	4341	1175						
65	9720	9720	0	6318	6318	0	6318	6318	0	8100	8100	0	5345	5345	0	6480	6480	0	4341	4341	0	4341	4341	0	4341						
60	9720	9720	0	6318	6318	0	6318	6318	0	8100	8100	0	5345	5345	0	6480	6480	0	4341	4341	0	4341	4341	0	4341						
80	31590	7290	24300																												

Electrical Specifications

Model	Rated Volts and Phase	No. Field Power Circuits	Single Circuit				Dual Circuit									
			Ⓞ Minimum Circuit Ampacity	Ⓞ Maximum External Fuse or Ckt. Brkr.	Ⓞ Field Power Wire Size	Ⓞ Ground Wire	Ⓞ Minimum Circuit Ampacity		Ⓞ Maximum External Fuse or Ckt. Brkr.		Ⓞ Field Power Wire Size		Ⓞ Ground Wire Size			
							Ckt. A	Ckt. B	Ckt. A	Ckt. B	Ckt. A	Ckt. B	Ckt. A	Ckt. B		
W18L1 - A00, A0Z A05 A08 A10	230/208-1	1 1 1 1	16 30 46 56	20 30 50 60	12 10 8 6	12 10 10 10										
W24L1 - A00, A0Z A05 A08 A10	230/208-1	1 1 1 1	21 30 46 56	30 30 50 60	10 10 8 6	10 10 10 10										
W24L1 - B00, B0Z B06	230/208-3	1 1	15 22	20 25	14 10	14 10										
W30L1 - A00*, A0Z* A05* A08 A10* A15	230/208-1	1 1 1 1 1 or 2	24 32 48 58 84	35 35 50 60 90	8 8 8 6 4	10 10 10 10 8	58	26	60	30	6	10	10	10		
W30L1 - B00*, B0Z* B09* B15	230/208-3	1 1 1	18 33 51	20 35 60	12 8 8	12 10 10										
W30L1 - C00*, C0Z* C09* C15	460-3	1 1 1	11 17 26	15 20 30	14 12 10	14 12 10										
W36L1 - A00*, A0Z* A05* A10* A15	230/208-1	1 1 1 1 or 2	29 32 58 84	35 35 60 90	8 8 6 4	10 10 10 8	58	26	60	30	6	10	10	10		
W36L1 - B00*, B0Z* B09* B15	230/208-3	1 1 1	23 33 51	30 35 60	10 8 6	10 10 10										
W36L1 - C00*, C0Z* C09* C15	460-3	1 1 1	12 17 26	15 20 30	14 10 10	14 10 10										
W42L1 - A00, A0Z A05 A10 A15	230/208-1	1 1 1 1 or 2	33 33 59 85	50 50 60 90	8 8 6 4	10 10 10 8	59	26	60	30	6	10	10	10		
W42L1 - B00, B0Z B09 B15	230/208-3	1 1 1	25 34 53	35 35 60	8 8 6	10 10 10										
W42L1 - C00, C0Z C09 C15	460-3	1 1 1	13 18 27	15 20 30	14 12 10	14 12 10										
W48L1 - A00, A0Z A05 A10 A15	230/208-1	1 1 1 1 or 2	37 37 59 85	50 50 60 90	8 8 6 4	10 10 10 8	59	26	60	30	6	10	10	10		
W48L1 - B00, B0Z B09 B15	230/208-3	1 1 1	29 34 53	40 40 60	8 8 6	10 10 10										
W48L1 - C00, C0Z C09 C15	460-3	1 1 1	14 18 27	20 20 30	12 12 10	12 12 10										
W60L1 - A00, A0Z A05 A10 A15	230/208-1	1 1 1 1 or 2	41 41 59 85	60 60 60 90	8 8 6 4	10 10 10 8	59	26	60	30	6	10	10	10		
W60L1 - B00, B0Z B09 B15	230/208-3	1 1 1	28 34 53	40 40 60	8 8 6	10 10 10										
W60L1 - C00, C0Z C09 C15	460-3	1 1 1	15 18 27	20 20 30	12 12 10	12 12 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.

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 and conductor wires in accordance with the National Electrical Code and all local codes.

Indoor Blower Performance - CFM at Rated Volts

ESP in H ₂ O	W18L1		W24L1	W30L1 W36L1		W42L1 W48L1		W60L1	
	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**.

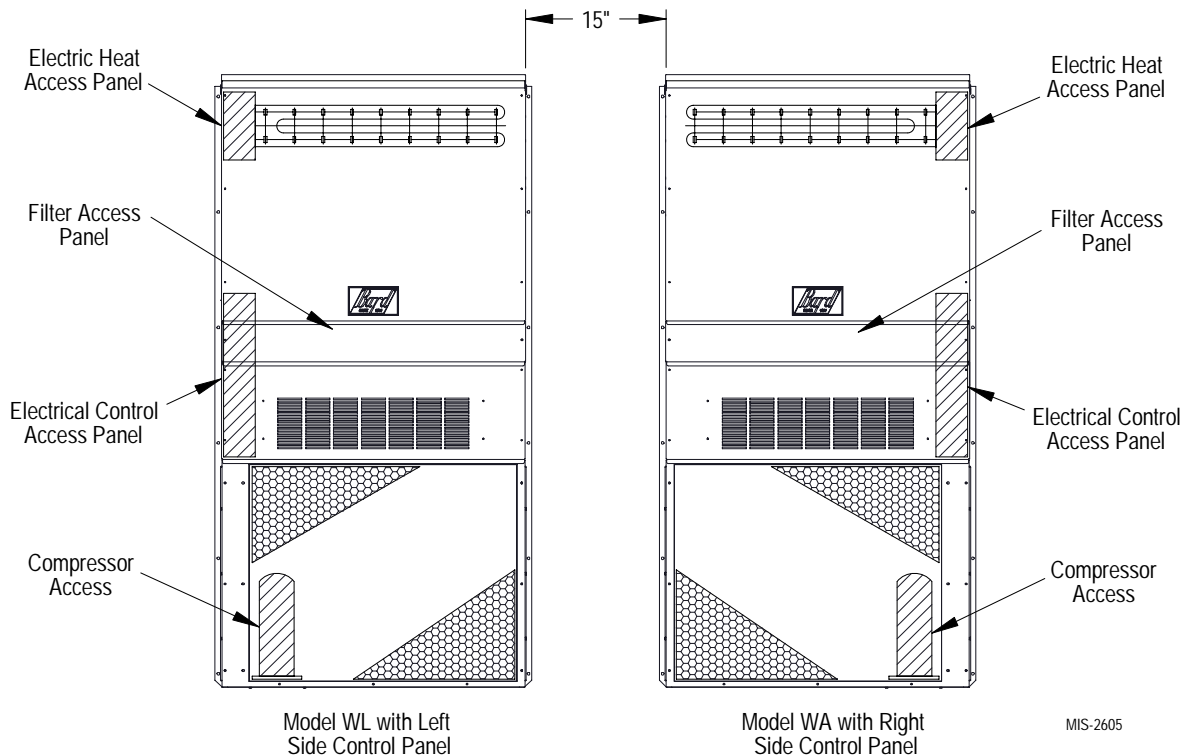
Electric Heat Table - Refer to Electrical Specifications for Availability by Unit Model

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						
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

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

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

Unit Service Access Overview



NOTE: A 15-inch clearance between units is required when model WL and model WA are mounted side by side. This provides for proper service access to condenser fan and motor shroud assembly and adequate condenser airflow.

Cooling Application Data - Outdoor Temperature ①

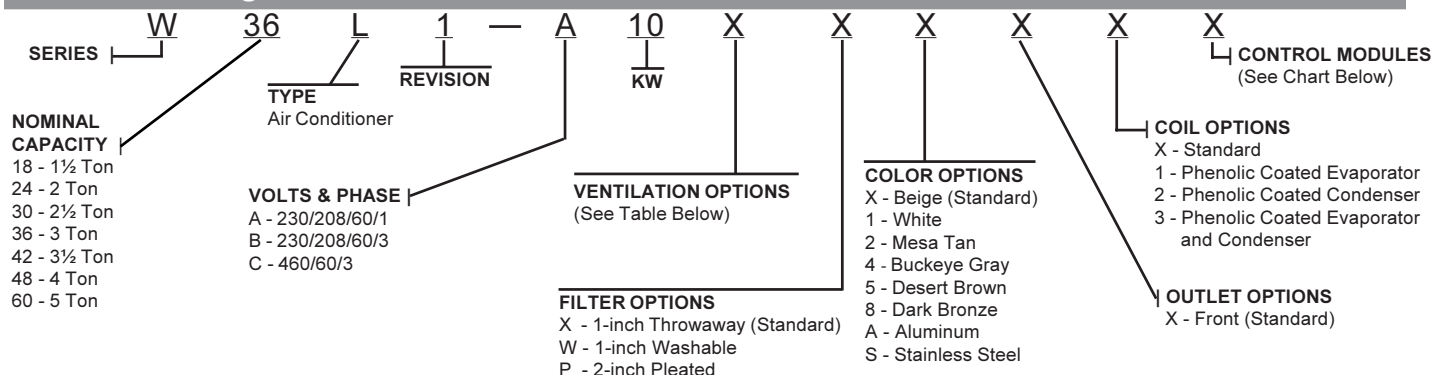
Model	D.B./W.B. ②	Cooling Capacity	75°F	80°F	85°F	90°F	95°F	100°F	105°F	110°F	115°F	120°F
W18L1	75/62	Total Cooling	17,500	16,700	15,900	15,100	14,300	13,600	12,900	12,200	11,600	10,800
		Sensible Cooling	13,900	13,500	13,200	12,800	12,500	12,200	11,800	11,500	11,100	10,700
	80/67	Total Cooling	18,600	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
W24L1	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
W30L1	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
W36L1	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
W42L1	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
W48L1	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
W60L1	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



Note: For 0KW and circuit breakers (230/208 Volt) or toggle disconnects (460 Volt) applications, insert 0Z in the KW field of the model number.

Ventilation Options

Models Description	W18L1, W24L1		W30L1, W36L1		W42L1, W48L1, W60L1	
	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	ERVFA-2	R	ERVFA-3 ③	R	ERVFA-5 ③
Energy Recovery Ventilator - 460 Volt *	N/A	N/A	R	ERVFC-3 ③	R	ERVFC-5 ③
Door Kit for ERV (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.

* WMDK Door Kit must be ordered in addition to ERV Assembly and color matched to unit ("X" = Beige; "4" = Buckeye Gray; "8" = Dark Bronze)

Air Conditioning Control Modules

									All Models Except As Noted	
HPC ①	LPC ②	CCM ③	LAC ④⑪	ALR ⑤	SK ⑥	SK ⑦	ODT ⑧	DDC ⑨	Factory Installed Code	Field Installed Part
STD	STD	STD							X	N/A
STD	STD	STD	●						E ⑪	CMA-28
STD	STD	STD	●	●					J ⑪	Factory Only
STD	STD	STD	●		●				K ⑪	CMC-15 and CMA-28
STD	STD	STD	●	●	●				M ⑪	Factory Only
STD	STD	STD		●					N, W18L Only ⑫	N/A
STD	STD	STD			●				Field Installed Only	CMC-15
STD	STD	STD					●		Field Installed Only	CMA-14
STD	STD	STD	●	●				●	V ⑩ ⑪	Factory Only
STD	STD	STD						●	Field Installed Only	CMA-23 for W18-36L CMA-24 for W42-60L
STD	STD	STD				●			Field Installed Only	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

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 W18L.

⑫ Use option N for Alarm Relay on Model W18L only.

Clearances Required for Service Access and Adequate Condenser Inlet Airflow

MODELS	LEFT SIDE	RIGHT SIDE
W18L, W24L, W30L, W36L	15"	20"
W42L, W48L, W60L	20"	20"

NOTE: For side by side installation of two (2) WL 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.

Minimum Clearances Required to Combustible Materials

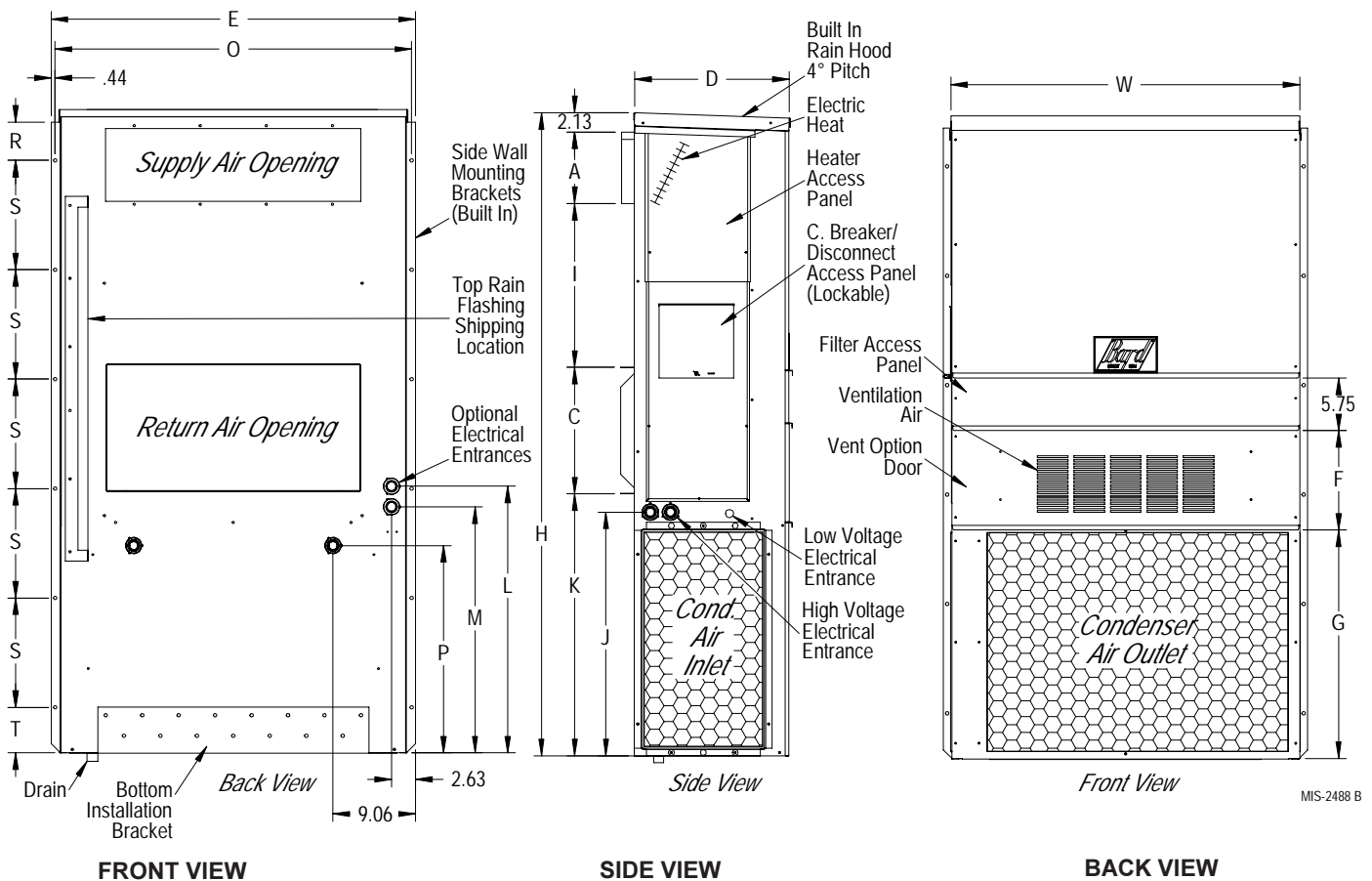
MODELS ①	SUPPLY AIR DUCT FIRST THREE FEET	CABINET
W18L, W24L	0"	0"
W30L, W36L	1/4"	0"
W42L, W48L, W60L	1/4"	0"

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
W18L W24L	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
W30L W36L	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
W42L W48L W60L	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.



Bard Manufacturing Company, Inc.
 Bryan, Ohio 43506
 www.bardhvac.com
 CLIMATE CONTROL SOLUTIONS Since 1914... Moving ahead, just as planned.

Due to our continuous product improvement policy, all specifications subject to change without notice.

Before purchasing this appliance, read important energy cost and efficiency information available from your retailer.

Form No. S3400
 April, 2010
 Supersedes: S3400-609