



THE WALL-MOUNT™ AIR CONDITIONERS - WA (60HZ)

WA-SERIES Refrigerant 22 60Hz
1.5 to 5 Ton (18,300 to 57,500 Btuh)
Right Side Control Panel

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:

Reciprocating compressors are designed for high compression ratios. Equipped with crankcase heater and dual discharge muffler. Standard on 1.5 and 2 ton models.

Scroll Compressors are designed for increased efficiency, quieter operation and improved reliability for longer life. Eliminates need for crankcase heater. Standard on 2.5 to 5 ton, and available on 2 ton models.

Phase Rotation Monitor:

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

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 exposure.

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 pull 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 1.5 through 5 ton models.

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.

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.

Full Length Mounting Brackets:

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

Top Rain Flashing:

Standard feature on all models.



Economizer

Unit shown with optional Economizer.

Ventilation System Packages

All packages are designed to meet your specific ventilation requirements utilizing one of five ventilation options for the product. The ventilation package is mounted within the unit eliminating the need for an exterior mounted hood or damper assembly on the unit. All assemblies can be factory installed, installed in the field at time of installation or as a retrofit system after installation.

- Standard - Barometric Fresh Air Damper
- Optional - Motorized Fresh Air Damper
- Optional - Blank off Plate
- Optional - Commercial Room Ventilator w/Exhaust
 - CRV - Spring Return
 - CRVP - Power Return
- Optional - Economizer w/ Exhaust
- Optional - Energy Recovery Ventilator

Capacity and Efficiency Ratings

MODELS	WA182	WA242	WA253	WA302	WA372	WA423	WA484	WA602
Cooling Capacity BTUH ①	18,300	23,400	23,000	30,000	36,000	42,000	47,500	57,500
EER ②	9.20	9.20	9.80	9.30	9.20	9.20	9.60	8.70
SEER ③	10.20	10.50	11.00	10.60	10.00	10.60	11.00	10.20

① Capacity is certified in accordance with ARI Standard 210/240-2003 and ARI Standard 390-2003.

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

③ SEER = Seasonal Energy Efficiency Ratio and is certified in accordance with ARI Standard 210/240-2003.

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

Specifications 1-1/2 Ton through 3 Ton

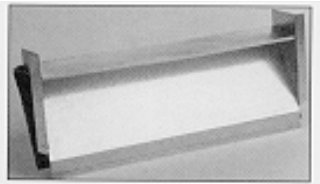
MODELS	WA182-A	WA242-A	WA242-B	WA242-C	WA253-A	WA253-B	WA302-A	WA302-B	WA302-C	WA372-A	WA372-B	WA372-C
Electrical Rating--60 Hz	230/208 - 1	230/208 - 1	230/208 - 3	460 - 3	230/208 - 1	230/208 - 3	230/208 - 1	230/208 - 3	460 - 3	230/208 - 1	230/208 - 3	460 - 3
Operating Voltage Range	197-253	197-253	197-253	414-506	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	460	230/208	230/208	230/208	230/208	460	230/208	230/208	460
Rated Load Amps	7.0/8.0	9.5/10.0	6.6/6.9	3.6	8.6/9.5	6.5/7.0	12.2/12.9	8.4/8.4	4.2	16.5/17.3	10.5/11.0	5.2
Branch Circuit Selection Current	9.0	10.0	7.0	4.0	10.3	7.1	14.1	9.0	4.5	17.3	11.0	5.5
Lock Rotor Amps	49/49	56/56	51/51	25	54/54	45/45	73/73	63/63	31	100/100	77/77	37
Compressor Type	Recip.	Recip.	Recip.	Recip.	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	1/5 - 1075	1/5 - 1075	1/5 - 1075
Fan Motor--Amps	1.2	1.2	1.2	1.4	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	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	1/6-1100-1	1/6-1100-1	1/6-1100-1	1/3-1100-2	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	1.1	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)	650 - .40	800 - .20	800 - .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	16x25x1	16x25x1	16x30x1	16x30x1	16x30x1	16x30x1	16x30x1	16x30x1
Shipping Weight --LBS.	300	300	300	300	300	300	355	355	355	355	355	355

Specifications 3-1/2 Ton through 5 Ton

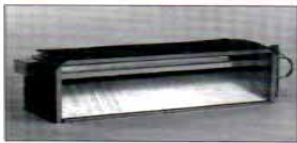
MODELS	WA423-A	WA423-B	WA423-C	WA484-A	WA484-B	WA484-C	WA602-A	WA602-B	WA602-C
Electrical Rating--60 Hz	230/208-1	230/208-3	460-3	230/208-1	230/208-3	460-3	230/208-1	230/208-3	460-3
Operating Voltage Range	197-253	197-253	414-506	197-253	197-253	414-506	197-253	197-253	414-506
Compressor--Circuit A									
Voltage	230/208	230/208	460	230/208	230/208	460	230/208	230/208	460
Rated Load Amps	19.3/21	11.8/11.8	6.1	20.2/20.8	11.9/12.3	6.2	26.0/28.5	18.1/18.4	6.8
Branch Circuit Selection Current	21	12.5	6.5	21.8	12.9	6.5	29.0	19.0	9.0
Lock Rotor Amps	127/127	88/88	42	131/131	91/91	46	148/148	137/137	62
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Fan Motor & Condenser									
Fan Motor--HP--RPM-SPD	1/3-850-2	1/3-850-2	1/3-850-2	1/3-850-2	1/3-850-2	1/3-850-2	1/3-850-2	1/3-850-2	1/3-850-2
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.	500	500	500	500	500	500	500	500	500

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

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.

STANDARD

BLANK OFF PLATE - BOP

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.

OPTIONAL

MOTORIZED FRESH AIR DAMPER - MFAD

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.

OPTIONAL

NOTE: The above vent systems are without exhaust capability. May require separate field installed barometric relief and/or mechanical exhaust elsewhere within the conditioned space.

COMMERCIAL ROOM VENTILATOR - CRV

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.

OPTIONAL

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 ASHRAE Standard 62.1 "Ventilation for Acceptable Indoor Air Quality".

ECONOMIZER - EIFM

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.

OPTIONAL

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 - WERV

OPTIONAL

The wall-mount energy recovery ventilator (WERV) is a highly innovative approach to meeting indoor air quality ventilation requirements as established by ASHRAE Standard 62.1. The WERV 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.

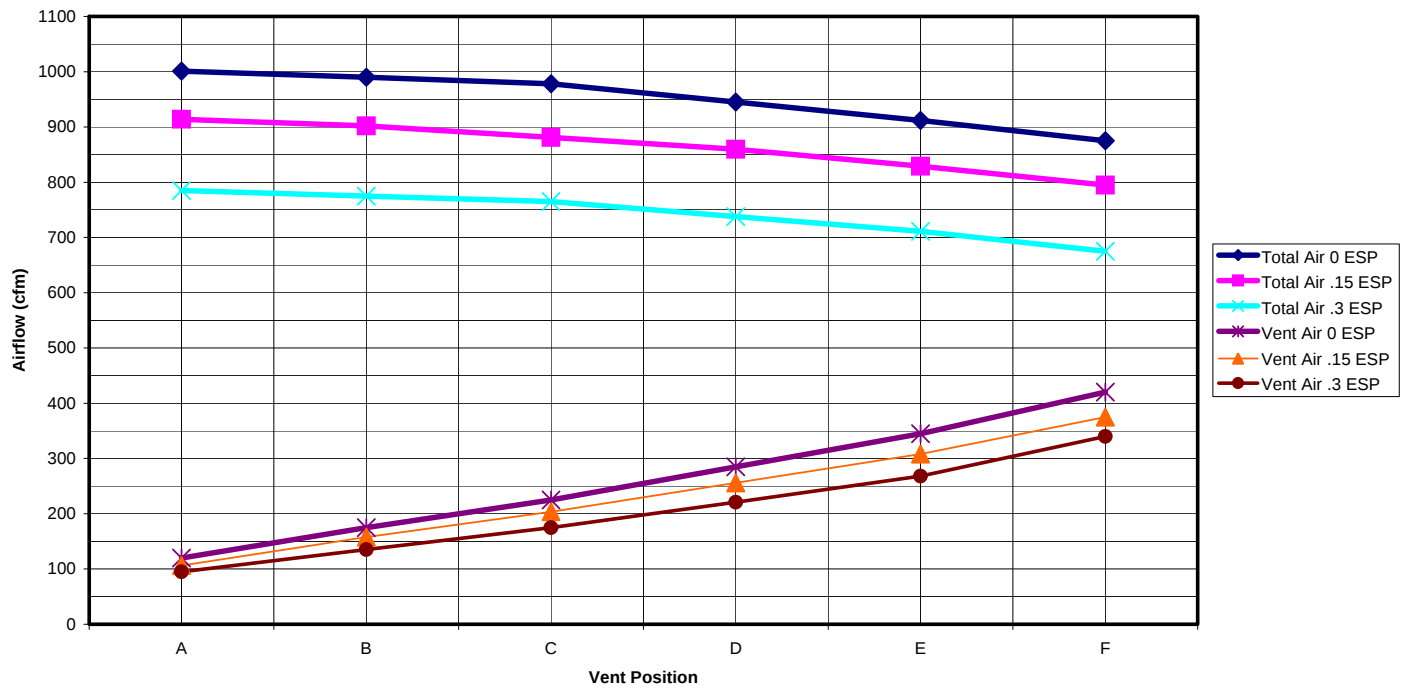
The WERV consists of a unique "rotary energy recovery cassette" that provides effective sensible and latent heat transfer capabilities during summer and winter conditions. Various control schemes are addressed including limiting ventilation during building occupancy only.

The WERV is designed to be internally mounted behind the service door in the WA, WH or WL model wall-mount units. It can be built-in at the factory or field installed as an option. (See Form F1403 for complete performance and application details.

Manufactured under U.S. Patent Nos. 5,485,878; 5,301,744;
5,002,116; 4,924,934; 4,875,520; 4,825,936; 4,432,409.

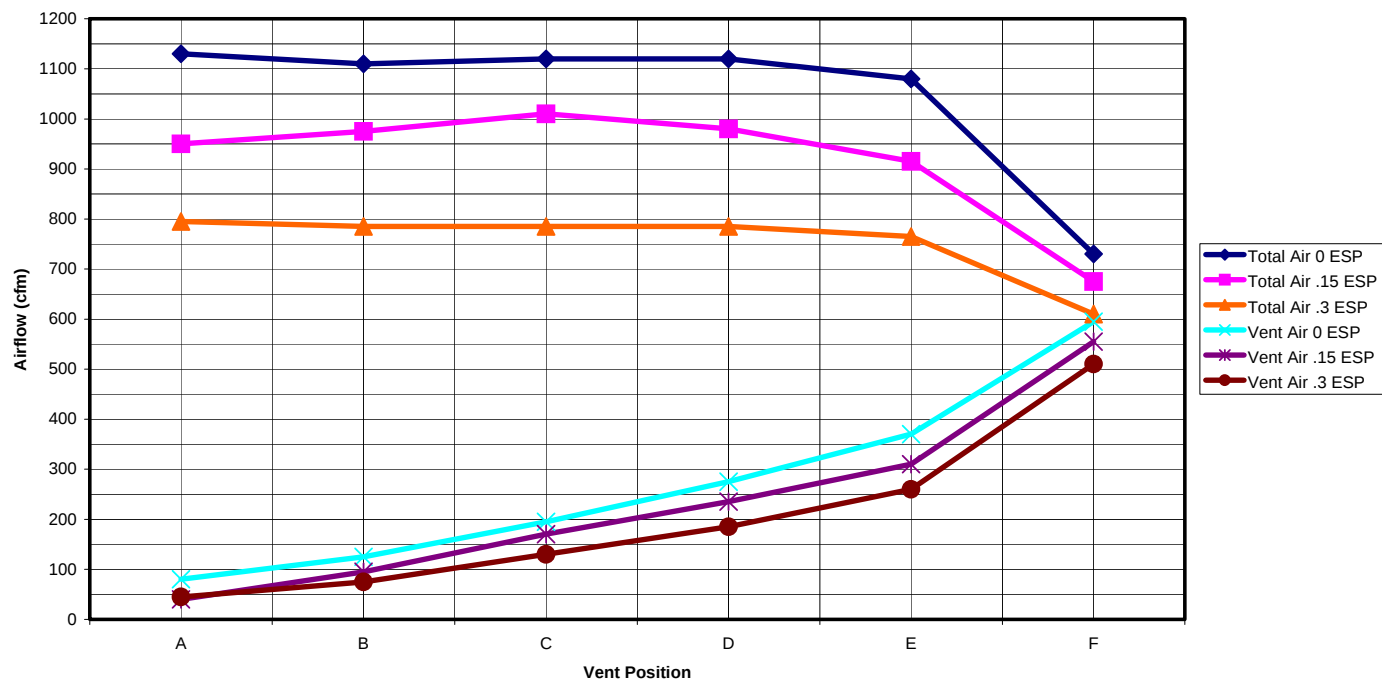
Commercial Room Ventilator Performance Data - CRV-2

WA18, WA24 & WA25 TOTAL AND VENTILATION AIRFLOW

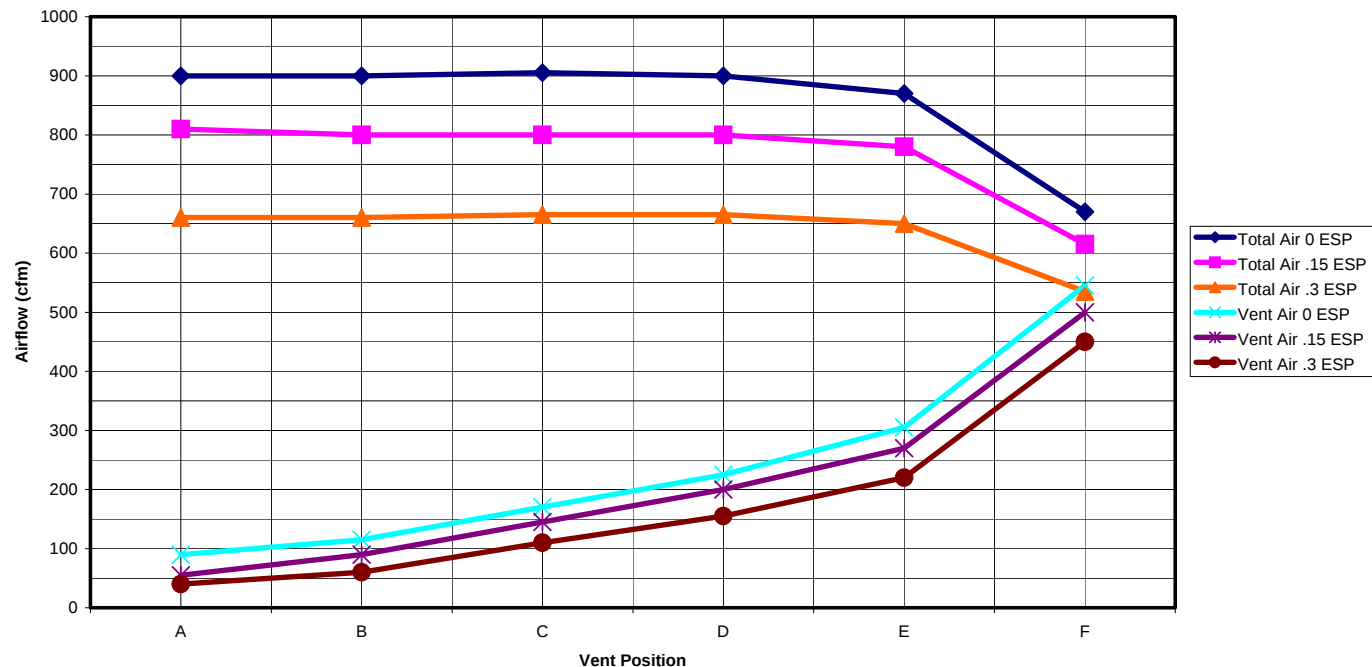


Commercial Room Ventilator Performance Data - CRV-3

WA30 & WA37 HIGH SPEED TOTAL AND VENTILATION AIRFLOW

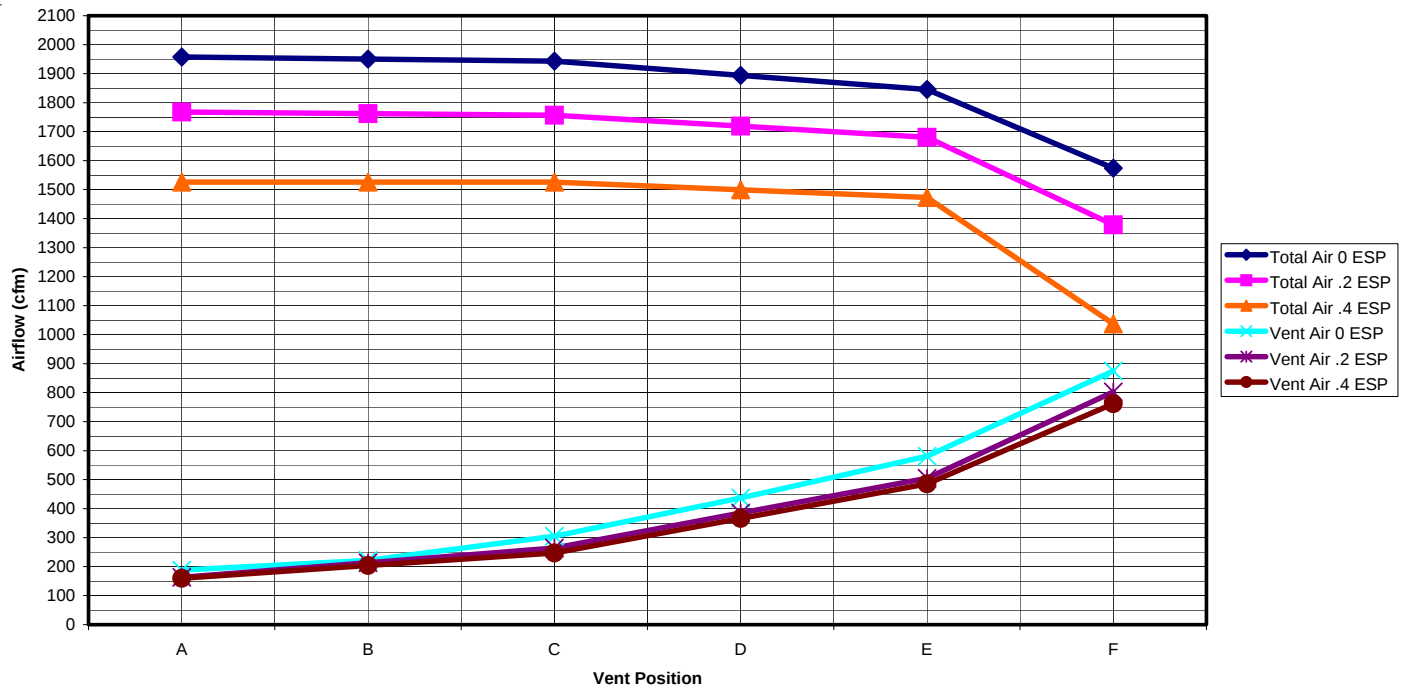


WA30 & WA37 LOW SPEED TOTAL AND VENTILATION AIRFLOW

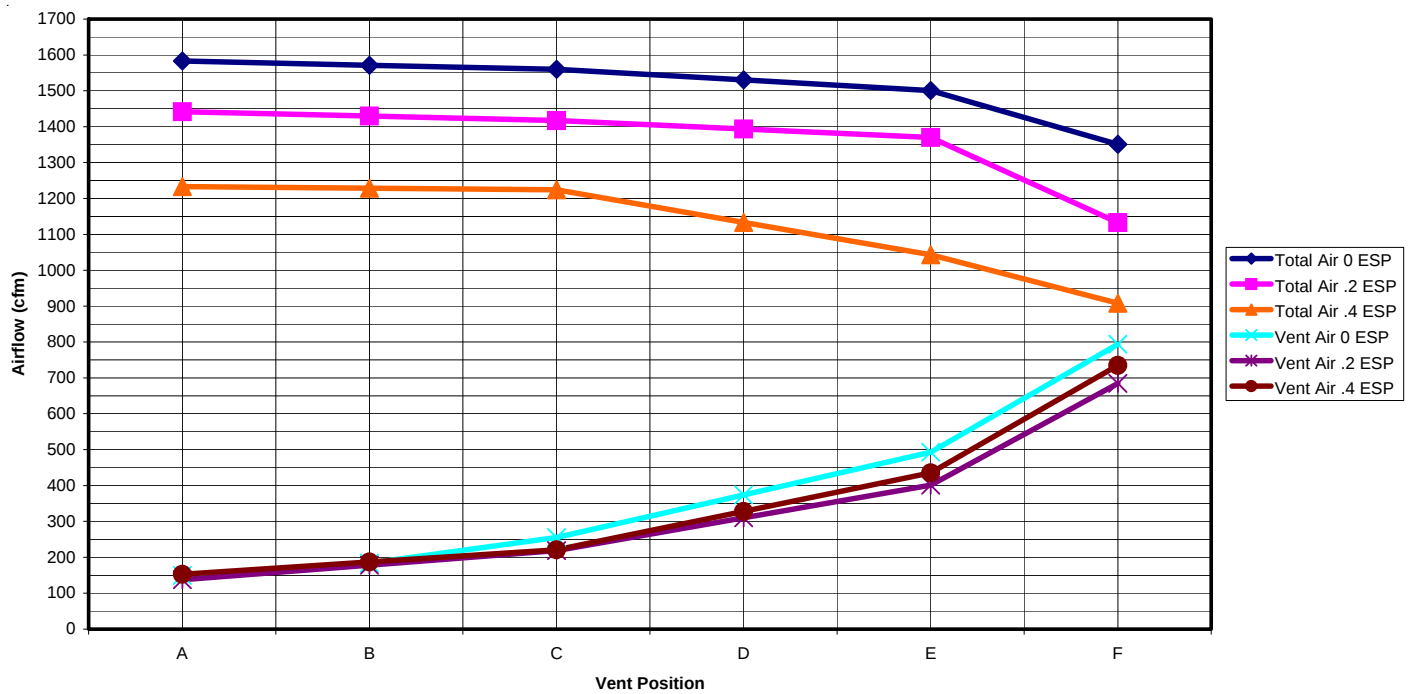


Commercial Room Ventilator Performance Data - CRV-5

WA42 & WA48 HIGH SPEED TOTAL AND VENTILATION AIRFLOW

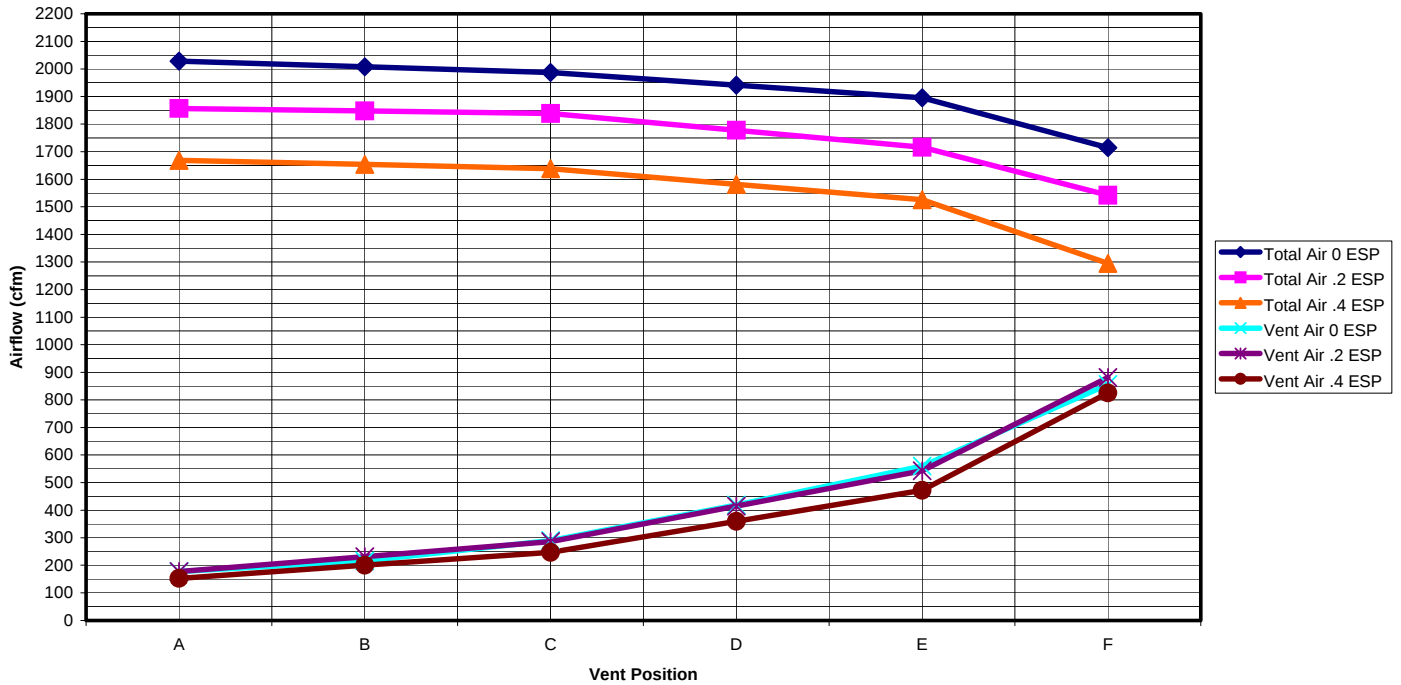


WA42 & WA48 LOW SPEED TOTAL AND VENTILATION AIRFLOW

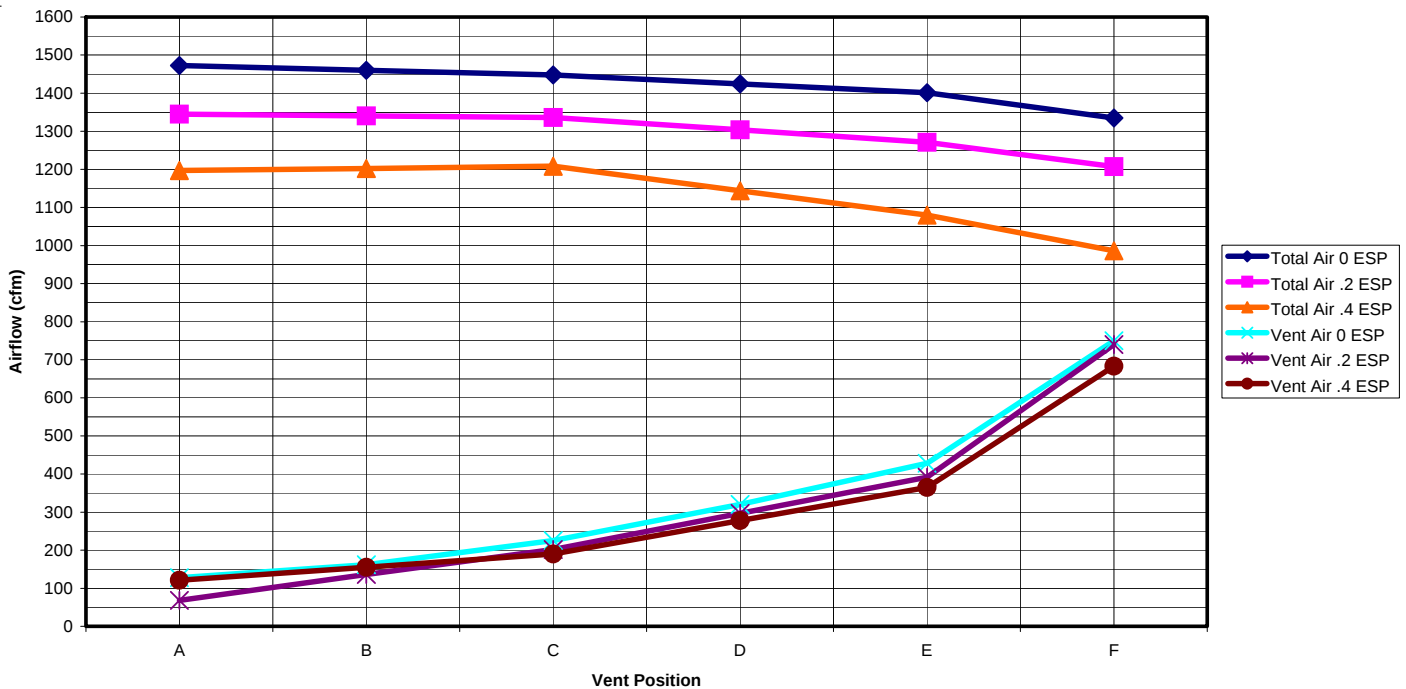


Commercial Room Ventilator Performance Data - CRV-5

WA60 HIGH SPEED TOTAL AND VENTILATION AIRFLOW



WA60 LOW SPEED TOTAL AND VENTILATION AIRFLOW



Performance and Application Data- WERV-*2B

SUMMER COOLING PERFORMANCE (INDOOR DESIGN CONDITIONS 75°FDB/62°FWB)																	
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
75	11925	8100	1325	7394	5022	822	10727	7287	3441	6758	4591	2168	9540	6480	3060	6010	4082
105	70	8100	8100	0	5022	5022	0	7287	7287	0	4591	4591	0	6480	6480	0	4082
65	8100	8100	0	5022	5022	0	7287	7287	0	4591	4591	0	6480	6480	0	4082	0
80	17550	6750	10881	4185	6696	6072	9716	9946	3826	6121	14040	5400	8845	3402	5443	2608	56
75	11925	6750	5175	7394	4185	3209	10727	6072	4855	6758	3826	2933	9540	5400	4140	6010	3402
100	70	6863	6750	113	4255	4185	70	6173	6072	101	3889	3826	64	5490	5400	90	3458
65	6750	6750	0	4185	4185	0	6072	6072	0	3826	3826	0	5400	5400	0	3402	0
60	6750	6750	0	4185	4185	0	6072	6072	0	3826	3826	0	5400	5400	0	3402	0
80	17550	5400	12150	10881	3348	7533	15788	4858	10930	9946	3060	6886	14040	4320	9720	8845	2722
75	11925	5400	6525	7394	3348	4046	10727	4858	5870	6758	3060	3698	9540	4320	5220	6010	2722
95	70	6863	5400	1463	4255	3348	907	6173	4858	1315	3889	3060	829	5490	4320	1170	3458
65	5400	5400	0	3348	3348	0	4858	4858	0	3060	3060	0	4320	4320	0	2722	0
60	5400	5400	0	3348	3348	0	4858	4858	0	3060	3060	0	4320	4320	0	2722	0
80	17550	4050	13500	10881	2511	8370	15788	3643	12145	9946	2295	7651	14040	3240	10800	8845	2041
75	11925	4050	7875	7394	2511	4883	10727	3643	7084	6758	2295	4463	9540	3240	6300	6010	2041
90	70	6863	4050	2813	4255	2511	1744	6173	3643	2530	3889	2295	1594	5490	3240	2250	3458
65	4050	4050	0	2511	2511	0	3643	3643	0	2295	2295	0	3240	3240	0	2041	0
60	4050	4050	0	2511	2511	0	3643	3643	0	2295	2295	0	3240	3240	0	2041	0
80	17550	2700	14850	10881	1674	9207	15788	2429	13359	9946	1530	8416	14040	2160	11880	8845	1361
75	11925	2700	9225	7394	1674	5720	10727	2429	8298	6758	1530	5228	9540	2160	7380	6010	1361
80	70	6863	2700	4163	4255	1674	2581	6173	2429	3744	3889	1530	2359	5490	2160	3300	3458
65	2700	2700	0	1674	1674	0	2429	2429	0	1530	1530	0	2160	2160	0	1361	0
60	2700	2700	0	1674	1674	0	2429	2429	0	1530	1530	0	2160	2160	0	1361	0
75	11925	1350	10575	7394	837	6557	10727	1214	9513	6758	765	5993	9540	1080	8460	6010	680
70	6863	1350	5513	4255	837	3418	6173	1214	4959	3889	765	3124	1080	4410	3458	680	2778
65	2363	1350	1013	1465	837	628	2125	1214	911	1339	765	547	1890	1080	810	1190	680
60	1350	1350	0	837	837	0	1214	1214	0	765	765	0	1080	1080	0	680	0
70	6863	0	6863	4255	0	4255	6173	0	6173	6889	0	3889	5490	0	5490	3458	0
65	2363	0	2363	1465	0	1465	2125	0	2125	1339	0	1339	1890	0	1890	1190	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

WERV-*2B WINTER HEATING PERFORMANCE (INDOOR DESIGN CONDITIONS 70°F DB)

Ambient O.D.	VENTILATION RATE					
	250 CFM 74% EFF.			225 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

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

NOTE: Sensible performance only is shown for winter application.

Performance and Application Data- WERV-3B

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		
105	75	19080	12960	6120	12020	8164	3855	15502	10530	4972	9921	6739	3182	11925	8100	3825	7751	5265	2486			
			105	70	12960	12960	0	8164	8164	0	10530	10530	0	6739	6739	0	8100	8100	0	5265	5265	0
			65	12960	12960	0	8164	8164	0	10530	10530	0	6739	6739	0	8100	8100	0	5265	5265	0	
100	80	28080	10800	17280	17690	6804	10886	22815	8775	14040	14601	5616	8985	17550	6750	10800	11407	4387	7019			
			75	19080	10800	8280	12020	6804	5216	15502	8775	6727	9921	5616	11925	6750	5175	4387	3363			
			100	70	10980	10800	180	6717	6804	113	8921	8775	146	5709	5616	93	6862	6750	112	4460	4387	73
	65	10800	10800	0	6804	6804	0	8775	8775	0	6750	6750	0	4387	4387	0	6750	6750	0	4387	4387	0
			60	10800	10800	0	6804	6804	0	8775	8775	0	5616	5616	0	6750	6750	0	4387	4387	0	
			80	28080	8640	19440	17690	5443	12247	22815	7020	15795	14601	4492	10108	17550	5400	12150	11407	3510	7897	
95	75	19080	8640	10440	12020	5443	6577	15502	7020	8482	9921	4492	5428	11925	5400	6525	7751	3510	10421			
			90	70	10980	8640	2340	6917	5443	1474	8921	7020	1901	5709	4492	1216	6862	5400	1462	4460	3510	950
			65	8640	8640	0	5443	5443	0	7020	7020	0	4492	4492	0	5400	5400	0	3510	3510	0	
	60	8640	8640	0	5443	5443	0	7020	7020	0	4492	4492	0	5400	5400	0	3510	3510	0			
			80	28080	6480	21600	17690	4082	13608	22815	5265	17550	14601	3369	11232	17550	4050	13500	11407	2632	8774	
			75	19080	6480	12600	12020	4082	7938	15502	5265	10237	9921	3369	6552	11925	4050	7875	7751	2632	5118	
90	70	10980	6480	4500	6917	4082	2835	8921	5265	3656	5709	3369	2340	6862	4050	2812	4460	2632	1828			
			65	6480	6480	0	4082	4082	0	5265	5265	0	3369	3369	0	4050	4050	0	2632	2632	0	
			60	6480	6480	0	4082	4082	0	5265	5265	0	3369	3369	0	4050	4050	0	2632	2632	0	
85	80	28080	4320	23760	17690	2721	14968	22815	3510	19305	14601	2246	12355	17550	2700	14850	11407	1755	9652			
			75	19080	4320	14760	12020	2721	9298	15502	3510	11992	9921	2246	7675	11925	2700	9225	7751	1755	5996	
			65	4320	4320	0	2721	2721	0	3510	3510	0	2246	2246	0	2700	2700	0	1755	1755	0	
	60	4320	4320	0	2721	2721	0	3510	3510	0	2246	2246	0	2700	2700	0	1755	1755	0			
			75	19080	2160	16920	12020	1360	10659	15502	1755	13747	9921	1123	8798	11925	1350	10575	7751	877	6873	
			80	10980	2160	8820	6917	1360	5556	8921	1755	7166	5709	1123	4586	6862	1350	5512	4460	877	3583	
60	65	3780	2160	1620	2381	1360	1020	3071	1755	1316	1965	1123	842	2362	1350	1012	1535	877	658			
			60	2160	2160	0	1360	1360	0	1755	1755	0	1123	1123	0	1350	1350	0	877	877	0	
			75	10980	0	10980	6917	0	6917	8921	0	8921	5709	0	5709	6862	0	6862	4460	0	4460	0
75	65	3780	0	3780	2381	0	2380	3071	0	3071	1965	0	1965	2362	0	2362	1535	0	1535	0		
			60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

WERV-3B WINTER HEATING PERFORMANCE
(INDOOR DESIGN CONDITIONS 70°F DB)

Ambient O.D.	VENTILATION RATE						VENTILATION RATE					
	400 CFM 75% EFF			325 CFM 76% EFF			250 CFM 77% EFF			200 CFM 78% EFF		
DB/°F	WVL	WHR	WHL	WVL	WHR	WHL	WVL	WHR	WHL	WVL	WHR	WHL
65	2160	1620	1333	1755	1333	1039	1350	1039	775	1350	1039	775
60	4320	3240	2667	3510	2667	2079	2700	2079	1535	2700	2079	1535
55	6480	4860	4001	5265	4001	3118	4050	3118	2381	4050	3118	2381
50	8640	6480	5333	7020	5333	4158	5400	4158	3118	5400	4158	3118
45	10800	8100	6669	8775	6669	5197	6750	5197	3118	6750	5197	3118
40	12960	9720	8002	10530	8002	6237	8100	6237	3118	8100	6237	3118
35	15120	11340	9336	12285	9336	7276	9450	7276	3118	9450	7276	3118
30	17280	12960	10670	14040	10670	8316	10800	8316	3118	10800	8316	3118
25	19440	14580	11995	15795	11995	9355	12150	9355	3118	12150	9355	3118
20	21600	16200	13338	17550	13338	10395	13500	10395	3118	13500	10395	3118
15	23760	17820	14671	19305	14671	11434	14850	11434	3118	14850	11434	3118

NOTE: Sensible performance only is shown for winter application.

Performance and Application Data- WERV-5B

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

Ambient O.D.	VENTILATION RATE -- 450 CFM						VENTILATION RATE -- 375 CFM						VENTILATION RATE -- 300 CFM							
	DB/ WB	F	VLT	VLL	HRT	HRS	HRL	VLT	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS	HRL		
105	75	21465	14580	6884	13952	9477	4475	17887	12150	5737	11805	8018	3786	14310	9720	4590	9587	6512	3075	
	105	70	14580	14580	0	9477	9477	0	12150	12150	0	8018	8018	0	9720	9720	0	6512	6512	
	65	14580	14580	0	9477	9477	0	12150	12150	0	8018	8018	0	9720	9720	0	6512	6512	0	
100	80	31590	12150	19440	20533	7897	12635	26325	10125	16200	17374	6682	10692	21060	8100	12960	14110	5427	8683	
	75	21465	12150	9314	13952	7897	6054	17887	10125	7762	11805	6682	5123	14310	8100	6210	9587	5427	4160	
	100	70	12352	12150	202	8029	7897	131	10293	10125	168	6793	6682	111	8235	8100	135	5517	5427	90
95	65	12150	12150	0	7897	7897	0	10125	10125	0	6682	6682	0	8100	8100	0	5427	5427	0	
	60	12150	12150	0	7897	7897	0	10125	10125	0	6682	6682	0	8100	8100	0	5427	5427	0	
	80	31590	9720	21870	20533	6318	14215	26325	8100	18225	17374	5345	12028	21060	6480	14580	14110	4341	9768	
90	75	21465	9720	11744	13952	6318	7634	17887	8100	9787	11805	5345	6459	14310	6480	7830	9587	4341	5246	
	100	70	12352	9720	2632	8029	6318	1711	10293	8100	2193	6793	5345	1447	8235	6480	1755	5517	4341	1175
	65	9720	9720	0	6318	6318	0	8100	8100	0	5345	5345	0	6480	6480	0	4341	4341	0	
85	60	9720	9720	0	6318	6318	0	8100	8100	0	5345	5345	0	6480	6480	0	4341	4341	0	
	80	31590	7290	24300	20533	4738	15794	26325	6075	20250	17374	4009	13365	21060	4860	16200	14110	3256	10854	
	75	21465	7290	14175	13952	4738	9213	17887	6075	18182	11805	4009	7796	14310	4860	9450	9587	3256	6331	
80	90	70	12352	7290	5062	8029	4738	3290	10293	6075	4218	6793	4009	2784	8235	4860	3375	5517	3256	2261
	65	7290	7290	0	4738	4738	0	6075	6075	0	4009	4009	0	4860	4860	0	3256	3256	0	
	60	7290	7290	0	4738	4738	0	6075	6075	0	4009	4009	0	4860	4860	0	3256	3256	0	
75	80	31590	4860	26730	20533	3159	17374	26325	4050	22275	17374	2672	14701	21060	3240	17820	14110	2170	11939	
	75	21465	4860	16605	13952	3159	10793	17887	4050	13837	11805	2672	9132	14310	3240	11070	9587	2170	7416	
	65	4860	4860	0	3159	3159	0	4050	4050	0	2672	2672	0	3240	3240	0	2170	2170	0	
70	60	4860	4860	0	3159	3159	0	4050	4050	0	2672	2672	0	3240	3240	0	2170	2170	0	
	75	21465	2430	19035	13952	1579	12372	17887	2025	15862	11805	1336	10469	14310	1620	12890	9587	1085	8502	
	80	70	12352	2430	9922	8029	1579	6449	10293	2025	8268	6793	1336	5457	8235	1620	6615	5517	1085	4432
65	65	4252	2430	1822	2764	1579	1184	3543	2025	1518	2338	1336	1002	2835	1620	1215	1899	1085	814	
	60	2430	2430	0	1579	1579	0	2025	2025	0	1336	1336	0	1620	1620	0	1085	1085	0	
	75	12352	0	12352	8029	0	8029	10293	0	10293	6793	0	6793	8235	0	8235	5517	0	5517	0
60	65	4252	0	4252	2764	0	2764	3543	0	3543	2338	0	2338	2835	0	2835	1899	0	1899	0
	60	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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
WA182 - A00, A0Z A05 A08 A10	230/208-1	1 1 1 1	16 30 45 56	20 30 45 60	12 10 8 6	12 10 10 10								
WA242 - A00, A0Z A05 A08 A10	230/208-1	1 1 1 1	17 30 45 56	20 30 45 60	12 10 8 6	12 10 10 10								
WA242 - B00, B0Z B06	230/208-3	1 1	13 22	15 25	14 10	12 10								
WA242 - C00, C0Z C06	460-3	1 1	8 11	15 15	14 14	14 14								
WA253 - A00, A0Z A05 A08 A10	230/208-1	1 1 1 1	18 30 45 56	25 30 45 60	10 10 8 6	10 10 10 10								
WA253 - B00, B0Z B06	230/208-3	1 1	14 22	20 25	12 10	12 10								
WA302 - A00*, A0Z* A05* A08 A10* A15	230/208-1	1 1 1 1 1 or 2	24 31 47 57 83	35 35 50 60 90	8 8 8 6 4	10 10 10 10 8	57	26	60	30	6	10	10	10
WA302 - B00*, B0Z* B06 B09* B15	230/208-3	1 1 1 1	17 23 32 50	20 25 35 50	12 10 8 8	12 10 10 10								
WA302 - C00*, C0Z* C06 C09* C15	460-3	1 1 1 1	10 12 17 26	15 15 20 30	14 14 12 10	14 14 12 10								
WA372 - A00*, A0Z* A05* A08 A10* A15	230/208-1	1 1 1 1 1 or 2	28 32 47 58 84	35 35 50 60 90	8 8 8 6 4	10 10 10 10 8	57	26	60	30	6	10	10	10
WA372 - B00*, B0Z* B06 B09* B15	230/208-3	1 1 1 1	20 24 33 51	25 25 35 60	10 10 8 6	10 10 10 10								
WA372 - C00*, C0Z* C06 C09* C15	460-3	1 1 1 1	11 12 17 26	15 15 20 30	14 14 10 10	14 14 10 10								
WA423 - A00, A0Z A05 A10 A15 A20	230/208-1	1 1 1 1 or 2 1 or 2	35 35 59 85 110	50 50 60 90 110	8 8 6 4 2	10 10 10 8 6	59 59	26 52	60 60	30 60	6 6	10 6	10 10	10 10
WA423 - B00, B0Z B09 B15 B18	230/208-3	1 1 1 1	24 34 52 60	35 35 60 60	8 8 6 6	10 10 10 10								
WA423 - C00, C0Z C09 C15	460-3	1 1 1	13 17 26	15 20 30	14 12 10	14 12 10								
WA484 - A00, A0Z A05 A10 A15 A20	230/208-1	1 1 1 1 or 2 1 or 2	36 36 59 85 110	50 50 60 90 110	8 8 6 4 2	10 10 10 8 6	59 59	26 52	60 60	30 60	6 6	10 6	10 10	10 10
WA484 - B00, B0Z B09 B15 B18	230/208-3	1 1 1 1	25 34 52 60	35 35 60 60	8 8 6 6	10 10 10 10								
WA484 - C00, C0Z C09 C15	460-3	1 1 1	13 17 26	15 20 30	14 12 10	14 12 10								
WA602 - A00, A0Z A05 A10 A15 A20	230/208-1	1 1 1 1 or 2 1 or 2	44 44 59 85 110	60 60 60 90 110	8 8 6 4 2	10 10 10 8 6	59 59	26 52	60 60	30 60	6 6	10 6	10 10	10 10
WA602 - B00, B0Z B09 B15 B18	230/208-3	1 1 1 1	32 34 52 60	45 45 60 60	8 8 6 6	10 10 10 10								
WA602 - C00, C0Z C09 C15	460-3	1 1 1	16 17 26	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 230 or 460 Volts

ESP in H ₂ O	WA182 WA242 WA253	WA302 WA372		WA423 WA484		WA602	
	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	1020/975	1395/1315	950/935	1885/1800	1650/1600	2200/2000	1600/1450
.1	960/905	1340/1270	930/915	1770/1665	1550/1500	2100/1900	1525/1375
.2	865/800	1285/1190	910/885	1635/1550	1450/1400	2000/1800	1465/1200
.3	820/735	1205/1100	855/830	1500/1400	1350/1300	1875/1700	-/-
.4	735/650	1110/1000	800/755	1370/1285	1300/1175	1775/1600	-/-
.5	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.

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
- Toggle Disconnect Standard on 460V Models

- UL Listed
- CUL Listed

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
WA182	EHWA02-A05 EHWA02A-A08 EHWA02A-A10	5 8 10	N/A		N/A	
WA242 WA253	EHWA02-A05 EHWA02A-A08 EHWA02A-A10	5 8 10	EHWA24-B06	6	EHWH24B-C06①	6
WA302 WA372	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
WA423 WA484	EHWA05-A05 EHWA05-A10 EHWA05-A15 EHWA05-A20	5 10 15 20	EHWA05-B09 EHWA05-B15 EHWA05-B18	9 15 18	EHWA05A-C09 EHWA05A-C15	9 15
WA602	EHWA60-A05 EHWA05-A10 EHWA05-A15 EHWA05-A20	5 10 15 20	EHWA60-B09 EHWA05-B15 EHWA05-B18	9 15 18	EHWA05A-C09 EHWA05A-C15	9 15

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

① Model WA242 only.

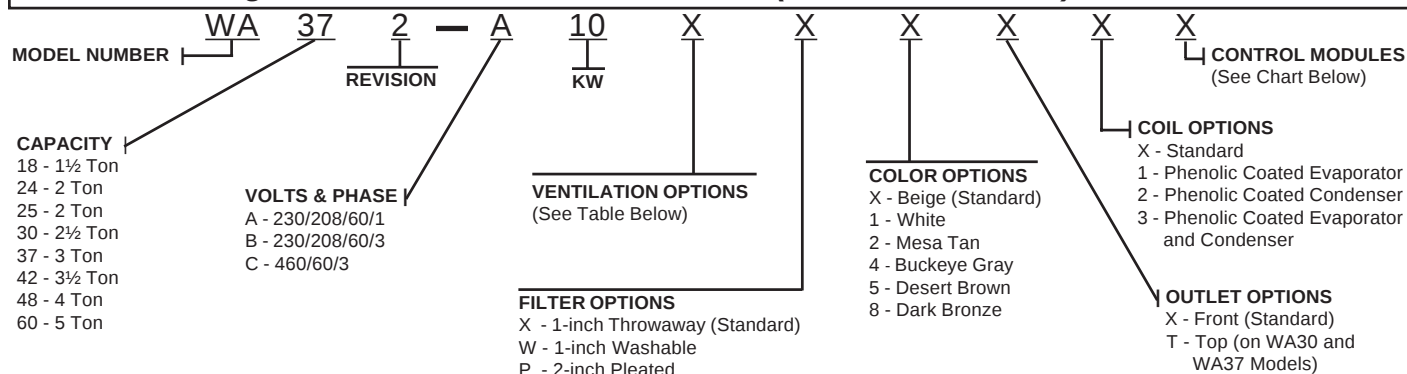
Cooling Application Data - Outdoor Temperature ①

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	125°F
WA182	75/ 62	Total Cooling Sensible Cooling	19,600 14,825	18,675 14,700	17,725 14,475	16,825 14,190	15,925 13,830	15,050 13,390	14,175 12,880	13,325 12,300	12,500 11,640	11,700 10,700	11,100 10,150
	80/ 67	Total Cooling Sensible Cooling	20,975 14,625	20,360 14,465	19,710 14,300	19,020 14,135	18,300 13,970	17,540 13,640	16,750 13,230	15,920 12,720	15,060 12,125	14,400 11,600	13,800 11,000
	85/ 72	Total Cooling Sensible Cooling	24,950 14,750	23,780 14,620	22,620 14,400	21,460 14,090	20,315 13,690	19,180 13,190	18,050 12,610	16,930 11,930	15,815 11,155	14,700 10,400	13,600 9,650
WA242	75/ 62	Total Cooling Sensible Cooling	24,900 19,900	23,880 19,530	22,870 19,140	21,670 18,720	20,880 18,275	19,900 17,800	18,920 17,300	17,960 16,770	17,000 16,215	16,050 15,300	15,050 14,300
	80/ 67	Total Cooling Sensible Cooling	26,600 19,300	26,040 19,160	25,420 18,970	24,740 18,740	24,000 18,460	23,210 18,140	22,350 17,770	21,450 17,350	20,480 16,890	19,000 15,700	17,550 14,400
	85/ 72	Total Cooling Sensible Cooling	31,300 19,775	30,350 19,430	29,260 19,040	28,020 18,590	26,640 18,090	25,110 17,530	23,440 16,920	21,620 16,260	20,600 15,540	19,475 14,700	18,400 13,900
WA253	75/ 62	Total Cooling Sensible Cooling	23,400 19,100	22,600 18,700	21,800 18,400	21,000 17,900	20,100 17,600	19,200 17,100	18,300 16,600	17,400 16,200	16,400 15,600	15,400 15,100	14,300 14,600
	80/ 67	Total Cooling Sensible Cooling	24,900 18,500	24,600 18,300	24,200 18,200	23,700 17,900	23,000 17,700	22,300 17,400	21,500 17,000	20,700 16,700	19,700 16,200	18,600 15,800	17,400 15,300
	85/ 72	Total Cooling Sensible Cooling	29,700 19,000	28,800 18,600	27,800 18,300	26,800 17,800	25,600 17,400	24,400 16,900	23,200 16,200	22,100 15,700	20,700 15,000	19,400 14,300	17,900 13,600
WA302	75/ 62	Total Cooling Sensible Cooling	30,900 25,700	29,700 25,300	28,500 24,900	27,400 24,400	26,100 23,900	25,100 23,300	24,000 22,700	22,900 22,200	21,900 21,500	20,800 20,800	19,700 20,100
	80/ 67	Total Cooling Sensible Cooling	33,000 24,900	32,300 24,800	31,600 24,600	30,900 24,400	30,000 24,100	29,200 23,700	28,300 23,300	27,300 22,900	26,300 22,300	25,200 21,700	24,000 21,100
	85/ 72	Total Cooling Sensible Cooling	39,300 25,500	37,800 25,200	36,300 24,700	34,900 24,300	33,400 23,700	32,000 23,000	30,500 22,200	29,100 21,500	27,700 20,600	26,200 19,600	24,700 18,700
WA372	75/ 62	Total Cooling Sensible Cooling	37,300 28,100	35,700 27,700	34,200 27,300	32,800 26,800	31,400 26,400	30,100 25,800	28,900 25,200	27,800 24,500	26,700 23,800	25,700 22,900	24,600 22,100
	80/ 67	Total Cooling Sensible Cooling	39,800 27,200	38,900 27,100	38,000 27,000	37,000 26,800	36,000 26,600	35,100 26,200	34,100 25,800	33,100 25,300	32,100 24,700	31,100 24,000	30,000 23,200
	85/ 72	Total Cooling Sensible Cooling	47,400 27,900	45,500 27,500	43,700 27,200	41,800 26,600	40,000 26,100	38,400 25,400	36,800 24,600	35,200 23,700	33,800 22,800	32,300 21,700	30,900 20,600
WA423	75/ 62	Total Cooling Sensible Cooling	43,200 35,000	41,700 34,300	40,100 33,500	38,400 32,800	36,600 32,000	34,800 31,200	33,000 30,200	31,000 29,300	29,000 28,300	26,900 27,200	24,700 26,100
	80/ 67	Total Cooling Sensible Cooling	46,100 33,900	45,400 33,600	44,500 33,200	43,400 32,800	42,000 32,300	40,500 31,700	38,900 31,000	37,000 30,300	34,900 29,400	32,600 28,500	30,100 27,500
	85/ 72	Total Cooling Sensible Cooling	54,900 34,700	53,100 34,100	51,100 33,400	49,000 32,600	46,700 31,700	44,300 30,700	42,000 29,600	39,400 28,400	36,700 27,100	33,900 25,800	31,000 24,400
WA484	75/ 62	Total Cooling Sensible Cooling	48,200 39,120	46,300 38,520	44,650 37,680	43,070 37,510	41,300 37,000	39,340 36,130	37,190 34,910	34,840 33,330	32,300 31,400	30,900 30,000	29,500 28,700
	80/ 67	Total Cooling Sensible Cooling	51,440 37,950	50,440 37,800	49,640 37,600	48,750 37,400	47,500 37,300	45,890 36,740	43,920 35,800	41,590 34,490	38,900 32,800	38,100 32,050	37,250 31,350
	85/ 72	Total Cooling Sensible Cooling	59,900 38,750	58,650 38,250	57,240 37,450	55,350 37,230	52,700 36,600	49,700 35,570	46,700 34,150	43,800 32,320	40,850 30,100	39,100 28,700	37,450 27,500
WA602	75/ 62	Total Cooling Sensible Cooling	60,350 45,170	57,500 43,700	54,630 42,180	52,320 41,110	50,000 40,000	47,660 38,840	45,290 37,640	42,910 36,390	40,500 35,100	N/A N/A	N/A N/A
	80/ 67	Total Cooling Sensible Cooling	64,600 43,950	62,750 42,960	60,690 41,830	59,190 41,150	57,500 40,400	55,610 39,570	53,540 38,660	51,260 37,670	48,800 36,600	N/A N/A	N/A N/A
	85/ 72	Total Cooling Sensible Cooling	76,800 44,900	73,300 43,470	69,610 41,970	66,740 40,840	63,800 39,600	60,780 38,260	57,700 36,810	54,530 35,260	51,300 33,600	N/A N/A	N/A N/A

① Below 65°F (18.3°C), unit requires a factory or field installed low ambient control.
 ② Return air temperature.

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

Air Conditioning Wall-Mount Model Nomenclature (10.00 - 11.00 SEER)



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

Ventilation Options

Models	WA182, WA242, WA253		WA302, WA372		WA423, WA484, WA602	
Description	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	WERV-A2B	R	WERV-A3B	R	WERV-A5B
Energy Recovery Ventilator - 460 Volt	N/A	N/A	R	WERV-C3B	R	WERV-C5B

① Low ambient control is required with economizer for low temperature compressor operation.

② For use only with "V" Control Module and TCS22 Controller.

Air Conditioning Control Modules

AVAILABLE CONTROL OPTIONS									WA182, WA242, WA302, WA372, WA423 Models	
TDR ①	HPC ②	LPC ③	CCM ④	LAC ⑤	ALR ⑥	SK ⑦	ODT ⑧	DDC ⑨	Factory Installed Code	Field Installed Part
●				●					D	CMA-5
				●					E	CMA-6
	●	●	●	●					G	CMA-10A
	●	●	●	●					H	CMA-13A
●				●					I	CMA-12
	●	●	●	●	●				J	Factory Only
	●	●	●	●	●	●			K	CMA-13A & CMC-15
	●	●	●	●	●	●			M	Factory Only
						●			Field Installed Only	CMC-15
							●		Field Installed Only	CMA-14
	●	●	●	●	●			●	V ⑩	Factory Only
								●	Field Installed Only	CMA-23 ■

Air Conditioning Control Modules

AVAILABLE CONTROL OPTIONS									WA253, WA484, WA602 Models	
TDR ①	HPC ②	LPC ③	CCM ④	LAC ⑤	ALR ⑥	SK ⑦	ODT ⑧	DDC ⑨	Factory Installed Code	Field Installed Part
Does Not Apply To These Models	STD	●	STD						G	CMA-16A
	STD	●	STD	●					H	CMA-18A
	STD	●	STD	●					I	CMA-6
	STD	●	STD	●	●				J	Factory Only
	STD	●	STD	●		●			K	CMA-13A & CMC-15
	STD	●	STD	●	●	●			M	Factory Only
	STD		STD			●			Field Installed Only	CMC-15
	STD		STD				●		Field Installed Only	CMA-14
	STD	●	STD	●	●			●	V ⑩	Factory Only
	STD		STD					●	Field Installed Only	CMA-24 ▲

STD = Standard equipment for these specified models.

① TDR. Time delay relay only for compressor is fixed 5-minute delay-on-break to prevent short cycling. Not needed if HPC or LPC are used. See notes ②, ③ and ④.

② HPC. High pressure control is auto reset. Always used with compressor control module (CCM) which is included. See note ④.

③ LPC. Low pressure control is auto reset. Always used with compressor control module (CCM) which is included. See note ④.

④ 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.

⑤ LAC. Low ambient control permits cooling operation down to 0°F

⑥ 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.

⑦ SK. Start kit can be used with all -A single phase models only. Is not used or available for -B or -C three phase models.

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 air flow, compressor status or filter status.

⑩ "V" control module should be ordered in conjunction with direct digital controller (DDC) model TCS22. Refer to DDC specification sheet S3280 for more information.

■ Use CMA-24 for Model WA423. ▲ Use CMA-23 for Models WA253.

Clearances Required for Service Access and Adequate Condenser Air Flow

MODELS	LEFT SIDE	RIGHT SIDE
WA18, WA24, WA25, WA37	15"	20"
WA42, WA48, WA60	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 S3279.

Minimum Clearances Required to Combustible Materials

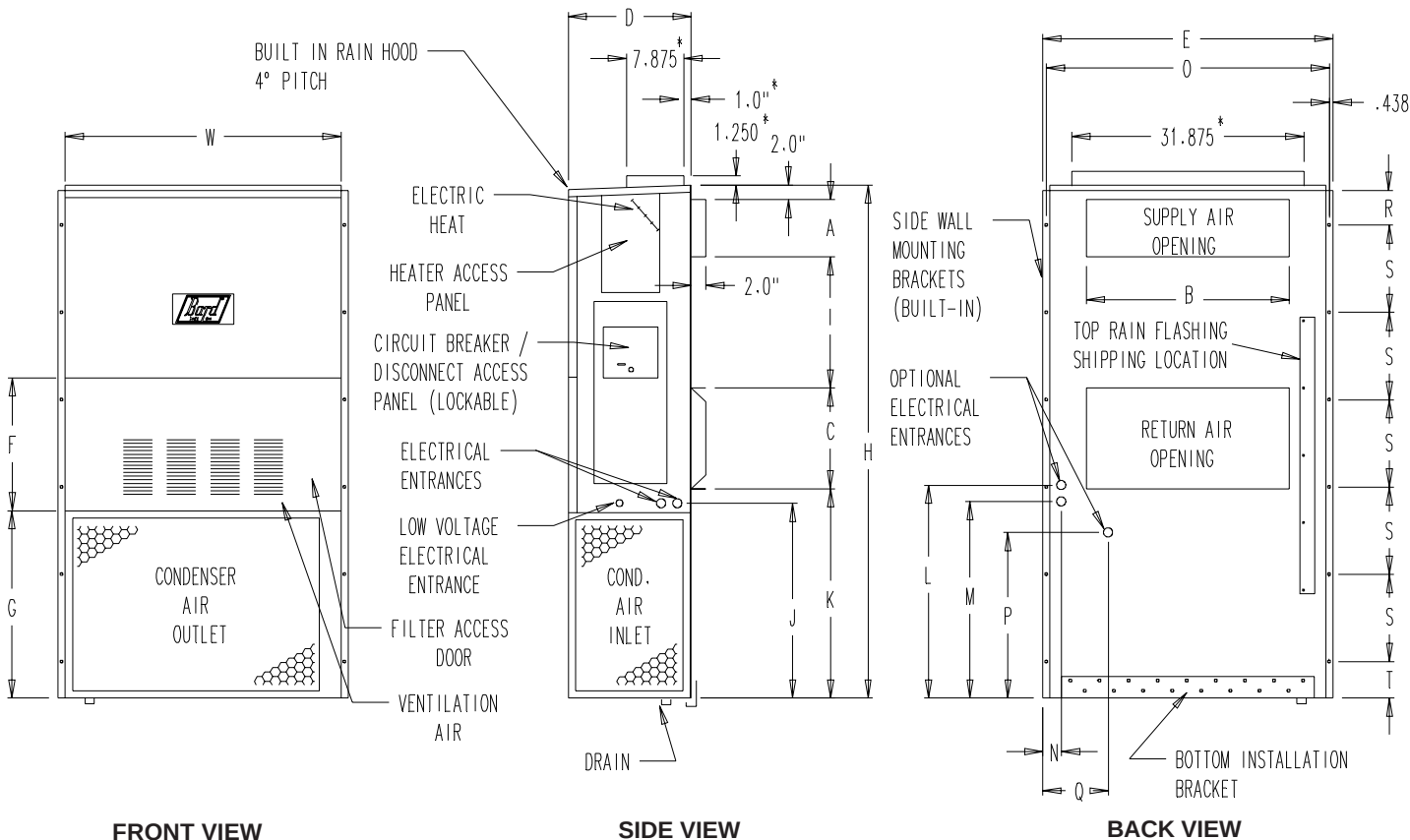
MODELS ①	SUPPLY AIR DUCT FIRST THREE FEET	CABINET
WA18, WA24, WA25	0"	0"
WA30, WA37	1/4"	0"
WA42, WA48, WA60	1/4"	0"

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
WA18 WA24 WA25	33.300	17.125	70.563	7.88	19.88	11.88	19.88	35.00	18.50	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
WA30 WA37	38.200	17.125	70.563	7.88	27.88	13.88	27.88	40.00	18.50	25.75	17.93	26.75	28.75	29.25	27.00	2.75	39.19	22.75	9.14	4.19	12.00	5.00
WA42 WA48 WA60	42.075	22.432	84.875	9.88	29.88	15.88	29.88	43.88	19.10	31.66	30.00	32.68	26.94	34.69	32.43	3.37	42.88	23.88	10.00	2.00	16.00	1.88

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



*Optional top outlet (factory installed only) for WA30 and WA37 models only.