THE WALL-MOUNT™ "Quiet Climate" A/C – 10.0 EER

Models W38A1, W49A1, W61A1
3 to 5 Ton (35,600 to 57,500 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. All models feature multispeed ECM blower motors providing airflow adjustment for high and low static operation. Motor overload protection is standard on all models.

ECM Indoor Blower Motor:
Features a variable speed motor providing super-high efficiency, low sound levels and soft-start capabilities. The motor is self-adjusting to provide the proper airflow rate for the staged capacity, and for higher static pressure in ducted installations without user adjustment or wiring changes.

Air Conditioner Compressor:
Copeland scroll compressors are designed for increased efficiency, quieter operation and improved reliability for longer life. Eliminates need for crankcase heater.

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. Rotary disconnects are standard on all electric heat versions of three phase (460 volt) equipment.

PTCR Start Assist:
Standard on 1-phase models.

Slope Top:
Standard feature for water run-off.

Top Rain Flashing:
Standard feature on all models.

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 ANSI/ASHRAE/IESNA 90.1-2010.
- 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, Fourth Edition.
- Commercial Product - Not intended for Residential application.

Capacity and Efficiency Ratings

MODELS	W38A1	W49A1	W61A1
Cooling Capacity BTUH ①	35,600	46,500	57,500
EER ②	10.00	10.00	10.00

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 3 Ton through 5 Ton

MODELS	W38A1-A	W38A1-B	W38A1-C	W49A1-A	W49A1-B	W49A1-C	W61A1-A	W61A1-B	W61A1-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	14.3/15.6	10.6/11.6	5.3	18.9/20.4	13.1/14.2	6.3	24.2/26.9	16.5/18.4	8.6
Branch Circuit Selection Current	18.0	13.3	6.0	23.1	16.1	7.1	30.2	20.6	9.7
Lock Rotor Amps	112/112	88/88	44	134/134	91/91	46	158/158	155/155	75
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 Variable	1/2 Variable	1/2 Variable	1/2 Variable	1/2 Variable	1/2 Variable	3/4 Variable	3/4 Variable	3/4 Variable
Blower Motor--Amps	4.5	4.5	4.5	5.0	5.0	5.0	5.0	5.0	5.0
CFM Cooling & E.S.P. w/Filter (Rated-Wet Coil)	1100 - .15	1100 - .15	1100 - .15	1300 - .20	1300 - .20	1300 - .20	1450 - .20	1450 - .20	1450 - .20
Filter Sizes (inches) STD.	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1
Shipping Weight --LBS.	525	525	525	525	525	525	575	575	575

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.

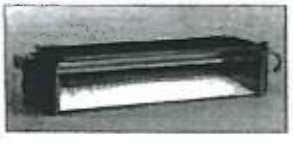
Barometric Fresh Air Damper

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

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

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

ECONOMIZER - ECONWM-Series — 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.

- ECONWMT Equipment Building versions have extended air intake hood to deliver up to 100% of cooling rated airflow
  - 16" for ECONWMT-E2 or T2, and E3 or T3
  - 18" for ECONWMT-E5 or T5
- ECONWMS Classroom versions have 3" air intake hood to deliver up to 75% of cooling rated airflow.

Standard Features:

- Fully modulating
- Honeywell Direct Drive Hi-Torque Actuator
- No linkage required
- Simple single blade design
- Positive shut-off with non-stick gaskets
- Electronic DB and/or Enthalpy sensors depending upon version
- Honeywell JADE electronic economizer module with precision settings and diagnostics
- DB or Enthalpy economizer versions available

Energy Recovery Ventilator

WALL-MOUNT ENERGY RECOVERY VENTILATOR - ERVF — OPTIONAL

The wall-mount energy recovery ventilator (ERVF) is a highly innovative approach to meeting indoor air quality ventilation requirements as established by ANSI/ASHRAE Standard 62.1. The ERVF allows from 300 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 ERVF 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 ERVF 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.

Manufactured under U.S. Patent Nos. 5,485,878; 5,301,744

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
W38A1 - A0Z	230/208-1	1	32	45	8	10								
A05		1	35	45	8	10								
A08		1	50	50	8	10								
A10		1 or 2	61	70	6	8	35	26	45	30	8	10	10	10
A15		1 or 2	87	90	3	8	35	52	45	60	8	6	10	10
W38A1 - B0Z	230/208-3	1	26	35	8	10								
B06		1	27	35	8	10								
B09		1	36	40	8	10								
B15		1	54	60	6	10								
W38A1 - C0Z	460-3	1	14	15	14	14								
C06		1	15	15	14	14								
C09		1	19	20	12	12								
C15		1	28	30	10	10								
W49A1 - A0Z	230/208-1	1	39	50	8	10								
A05		1	39	50	8	10								
A08		1	51	60	6	10								
A10		1 or 2	61	70	6	8	39	26	50	30	8	10	10	10
A15		1 or 2	87	90	3	8	39	52	50	60	8	6	10	10
W49A1 - B0Z	230/208-3	1	30	45	8	10								
B06		1	30	45	8	10								
B09		1	37	45	8	10								
B15		1	55	60	6	10								
W49A1 - C0Z	460-3	1	15	20	12	12								
C06		1	15	20	12	12								
C09		1	19	20	12	12								
C15		1	28	30	10	10								
W61A1 - A0Z	230/208-1	1	48	60	8	10								
A05		1	48	60	8	10								
A08		1	51	60	6	8								
A10		1 or 2	61	70	6	8	48	26	60	30	6	10	10	10
A15		1 or 2	87	90	3	8	48	52	60	60	6	6	10	10
W61A1- B0Z	230/208-3	1	36	50	8	10								
B09		1	37	50	8	10								
B15		1	55	60	6	10								
W61A1 - C0Z	460-3	1	18	25	10	10								
C09		1	19	25	10	10								
C15		1	28	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

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.

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.

Data Pending

Performance and Application Data - ERVF-*5C

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
	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	0
	65	14580	14580	0	9477	9477	0	12150	12150	0	8018	8018	0	9720	9720	0	6512	6512	0
	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
	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
	75	21465	9720	11744	13952	6318	7634	17887	8100	9787	11805	5345	6459	14310	6480	7830	9587	4341	5246
95	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
	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	11812	11805	4009	7796	14310	4860	9450	9587	3256	6331
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
	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
85	70	12352	4860	7492	8029	3159	4870	10293	4050	6243	6793	2672	4120	8235	3240	4995	5517	2170	3346
	65	4860	4860	0	3159	3159	0	4050	4050	0	2672	2672	0	3240	3240	0	2170	2170	0
	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	12690	9587	1085	8502
80	70	12352	2430	9922	8029	1579	6449	10293	2025	8268	6793	1336	5457	8235	1620	6615	5517	1085	4432
	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
	70	12352	0	12352	8029	0	8029	10293	0	10293	6793	0	6793	8235	0	8235	5517	0	5517
75	65	4252	0	4252	2764	0	2764	3543	0	3543	2338	0	2338	2835	0	2835	1899	0	1899
	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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

ERVF-*5C WINTER HEATING PERFORMANCE
(INDOOR DESIGN CONDITIONS 70°F DB)

Ambient O.D.	VENTILATION RATE 450 CFM 80% EFFICIENCY		375 CFM 81% EFFICIENCY		300 CFM 82% EFFICIENCY	
DB/°F	WVL	WHR	WVL	WHR	WVL	WHR
65	2430	1944	2025	1640	1620	1328
60	4860	3888	4050	3280	3240	2656
55	7290	5832	6075	4920	4860	3985
50	9720	7776	8100	6561	6480	5313
45	12150	9720	10125	8201	8100	6642
40	14580	11664	12150	9841	9720	7970
35	17010	13608	14175	11481	11340	9298
30	19440	15552	16200	13122	12960	10627
25	21870	17496	18225	14762	14580	11955
20	24300	19440	20250	16402	16200	13284
15	26730	21384	22275	18042	17820	14612

NOTE: Sensible performance only is shown for winter application.

Indoor Blower Performance - CFM (0.00" — 0.50" H_2O) ①

Model	Rated ESP	① Max ESP	② Blower Only	③ Cooling	③ Electric Heat
W38A	.15	.50	1100	1100	1100
W49A	.20	.50	1300	1300	1300
W61A	.20	.50	1450	1450	1450

NOTE: These units are equipped with a variable speed (ECM) indoor motor that automatically adjusts itself to maintain approximately the same rate of indoor airflow in both heating & cooling, dry & wet coil conditions and at both 230/208 or 460 volts.

① Maximum ESP (inches WC) shown is with 2" thick disposable filter.
② Blower only CFM is the total air being circulated during continuous fan mode.
③ CFM output on Cooling or Electric Heat.

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

(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
- Rotary Disconnect Standard on 460V Models
- ETL US & Canada 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
W38A1	EHS03A-A05 EHS03A-A08 EHS03A-A10 EHS03A-A15	5 8 10 15	EHS03A-B06 EHS03A-B09 EHS03A-B15	6 9 15	EHS03A-C06 EHS03A-C09 EHS03A-C15	6 9 15
W49A1	EHS04A-A05 EHS04A-A08 EHS03A-A10 EHS04A-A15	5 8 10 15	EHS03A-B06 EHS04A-B09 EHS04A-B15	6 9 15	EHS03A-C06 EHS04A-C09 EHS04A-C15	6 9 15
W61A1	EHS05A-A05 EHS04A-A08 EHS05A-A10 EHS05A-A15	5 8 10 15	EHS04A-B09 EHS04A-B15	9 15	EHS04A-C09 EHS04A-C15	9 15

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
W38A1	75/ 62	Total Cooling	37,700	35,900	34,200	32,600	31,000	29,600	28,200	26,900	25,700	24,400
		Sensible Cooling	28,600	27,800	27,100	26,300	25,600	24,900	24,100	23,400	22,700	22,000
	80/ 67	Total Cooling	40,200	39,100	38,000	36,800	35,600	34,500	33,300	32,100	30,900	29,600
		Sensible Cooling	27,700	27,200	26,800	26,300	25,800	25,300	24,700	24,200	23,600	23,000
	85/ 72	Total Cooling	47,900	45,700	43,700	41,600	39,600	37,800	35,900	34,200	32,500	30,800
		Sensible Cooling	28,400	27,600	26,900	26,100	25,300	24,500	23,600	22,700	21,800	20,800
W49A1	75/ 62	Total Cooling	48,900	46,500	44,400	42,400	40,500	38,800	37,200	35,600	34,200	33,000
		Sensible Cooling	36,700	35,200	33,800	32,700	31,700	31,000	30,300	29,800	29,600	29,400
	80/ 67	Total Cooling	52,200	50,700	49,300	47,900	46,500	45,200	43,900	42,500	41,200	40,000
		Sensible Cooling	35,600	34,500	33,500	32,700	32,000	31,500	31,100	30,800	30,800	30,800
	85/ 72	Total Cooling	62,200	59,300	56,600	54,100	51,700	49,500	47,300	45,200	43,300	41,600
		Sensible Cooling	36,500	35,000	33,700	32,500	31,400	30,500	29,700	28,900	28,400	27,800
W61A1	75/ 62	Total Cooling	58,900	56,900	54,900	53,000	50,900	49,000	47,000	45,000	43,000	41,100
		Sensible Cooling	41,400	40,600	39,800	39,000	38,100	37,200	36,100	35,000	33,800	32,700
	80/ 67	Total Cooling	62,900	62,000	61,000	59,000	57,500	56,500	55,500	53,700	51,800	49,800
		Sensible Cooling	40,100	39,800	39,400	39,000	38,400	37,800	37,000	36,200	35,200	34,200
	85/ 72	Total Cooling	74,900	72,500	70,100	67,600	65,000	62,500	59,800	57,100	54,400	51,800
		Sensible Cooling	41,100	40,400	39,600	38,800	37,700	36,600	35,300	34,000	32,400	30,900

① Below 65°F (18.3C), 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

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Air Conditioning Wall-Mount Model Nomenclature

W 38 A 1 — A 10 X X X X X X

SERIES — W

NOMINAL CAPACITY
38 - 3 Ton
49 - 4 Ton
61 - 5 Ton

TYPE
Air Conditioner

REVISION — 1

VOLTS & PHASE
A - 230/208/60/1
B - 230/208/60/3
C - 460/60/3

KW ① — 10

VENTILATION OPTIONS
(See Table Below)

FILTER OPTIONS
X - 1-Inch Fiberglass (MERV 2)
P - 2-Inch Pleated (MERV 8)
W - 1-Inch Washable

COLOR OPTIONS
X - Beige (Standard)
1 - White
4 - Buckeye Gray
5 - Desert Brown
8 - Dark Bronze
A - Aluminum
S - Stainless Steel

OUTLET OPTIONS
X - Front (Standard)

COIL OPTIONS
X - Standard
1 - Phenolic Coated Evaporator
2 - Phenolic Coated Condenser
3 - Phenolic Coated Evaporator and Condenser

CONTROL MODULES
(See Chart Below)

① For 0KW and circuit breakers (230/208 Volt) or pull disconnects (460 Volt) applications, insert 0Z in the KW field of the model number.

Ventilation Options

Models	W38A1, W49A1, W61A1	
Description	Factory Installed Code No.	Field Installed Part No.
Barometric Fresh Air Damper - Standard	X	BFAD-5
Blank-Off Plate	B	BOP-5
Motorized Fresh Air Damper	M	MFAD-5
Commercial Ventilator - Spring Return w/Exhaust	V	CRVS-5
Commercial Ventilator - Power Return w/Exhaust	P	CRVP-5
Economizer - School Versions, Enthalpy ④	S	ECONWMS-E5 ②④
Economizer - Equipment Bldg., Enthalpy ⑤	W	ECONWMT-E5 ②
Economizer - Equipment Bldg., DB Temp ⑤	T	ECONWMT-T5 ②
Energy Recovery Ventilator - 230 Volt ③	R	ERVF-A5 ①
Energy Recovery Ventilator - 460 Volt ③	R	ERVF-C5 ①
Door Kit for ERVF (Required)	N/A	WMDK5- ③

① Intake and exhaust can be independently adjusted.
② Insert color to match unit ("X" = Beige; "4" = Buckeye Gray; etc.)
③ WMDK Door Kit must be ordered in addition to ERVF Assembly and ECONWMS & color matched to unit ("X" = Beige; "4" = Buckeye Gray; etc.)
④ Partial Full Flow (75% of Rated Cooling CFM). All ECONWMS versions have 3" deep intake hood.
⑤ Full Flow (100% of Rated Cooling CFM). ECONWMT✱5 has 18" deep intake hood.

Air Conditioning Control Modules

AVAILABLE CONTROL OPTIONS								W38A1, W49A1, W61A1 Models with Scroll Compressors	
HPC ①	LPC ②	CCM ③	LAC ④	ALR ⑤	SK ⑥	ODT ⑧	DDC ⑨	Factory Installed Code	Field Installed Part
STD	STD	STD			STD			X	N/A
STD	STD	STD	●		STD			E	CMA-28
STD	STD	STD	●	●	STD			J	Factory Only
STD	STD	STD			STD			Field Installed Only	SK111 ⑦ W38A1-A, W49A1-A
STD	STD	STD			STD			Field Installed Only	SK113 ⑦ W61A1-A
STD	STD	STD			STD	●		Field Installed Only	CMA-14
STD	STD	STD	●	●	STD		●	V ⑩	Factory Only
STD	STD	STD			STD		●	Field Installed Only	CMA-24

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 is standard with all -A single phase models only. Increases starting torque 2-3x. Must be disconnected if SK111 or SK113 is used. Is not used or available for -B or -C three phase models.

⑦ 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. Use SK111 for W61A1-A only. Use SK113 for W38A1-A and W49A1-A only.

⑧ ODT. Outdoor thermostat is adjustable from 0 to 50°F. It is suitable for use as a compressor cutoff 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 w/direct digital controller (DDC) model TCS24. Refer to DDC specification sheet S3280 for more information.

Clearances Required for Service Access and Adequate Condenser Airflow

MODELS	LEFT SIDE	RIGHT SIDE
W38A1, W49A1, W61A1	20"	20"

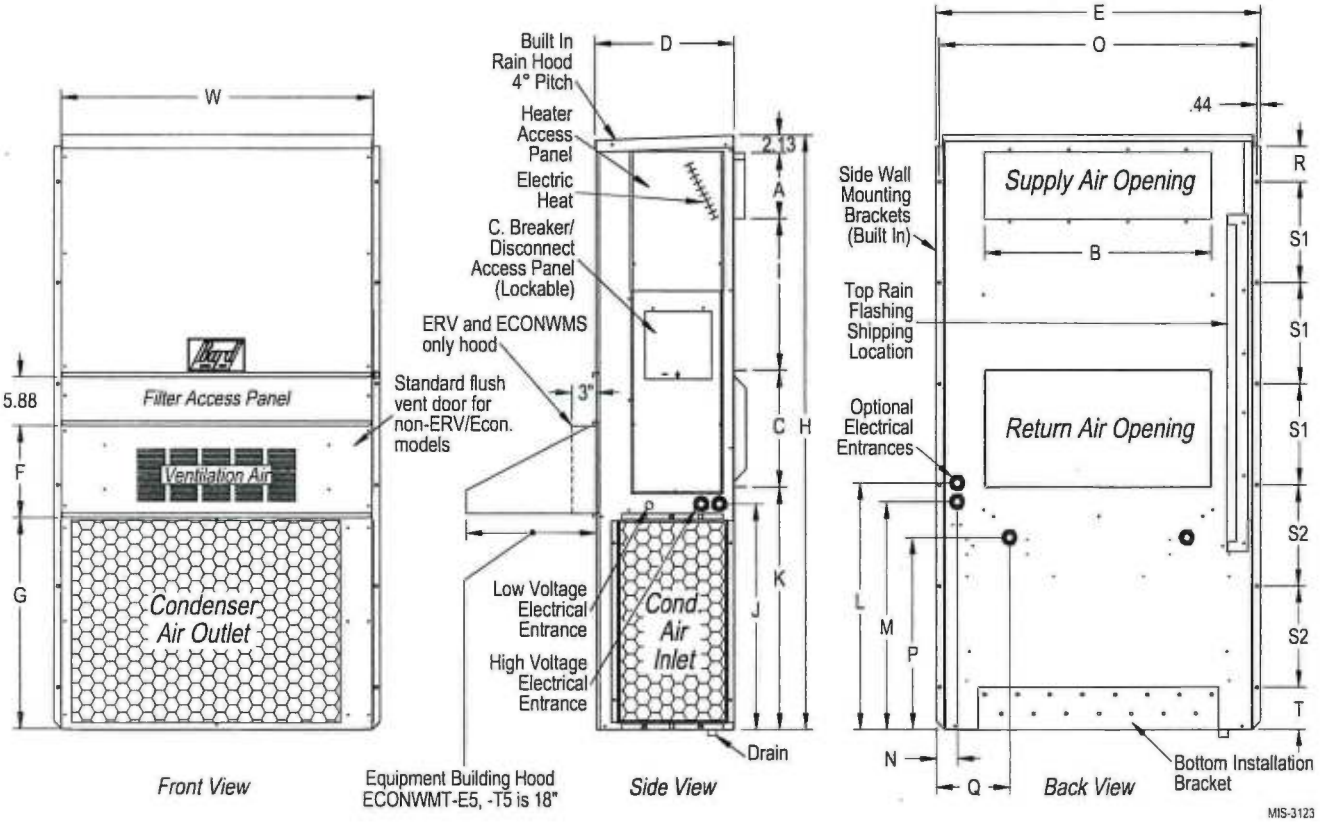
NOTE: For side by side installation of two (2) W**A models there must be 20" between units.

Minimum Clearances Required to Combustible Materials

MODELS ①	SUPPLY AIR DUCT FIRST THREE FEET	CABINET
W38A1, W49A1, W61A1	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 A	SUPPLY B	RETURN C	RETURN B	E	F	G	I	J	K	L	M	N	O	P	Q	R	S1	S2	T
W38A1 W49A1	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	16.00	1.88
W61A1	42.075	22.432	94.875	9.88	29.88	15.88	29.88	43.88	13.56	41.66	30.00	42.68	36.94	44.69	42.43	3.37	43.00	33.88	10.00	2.00	16.00	21.00	1.88

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