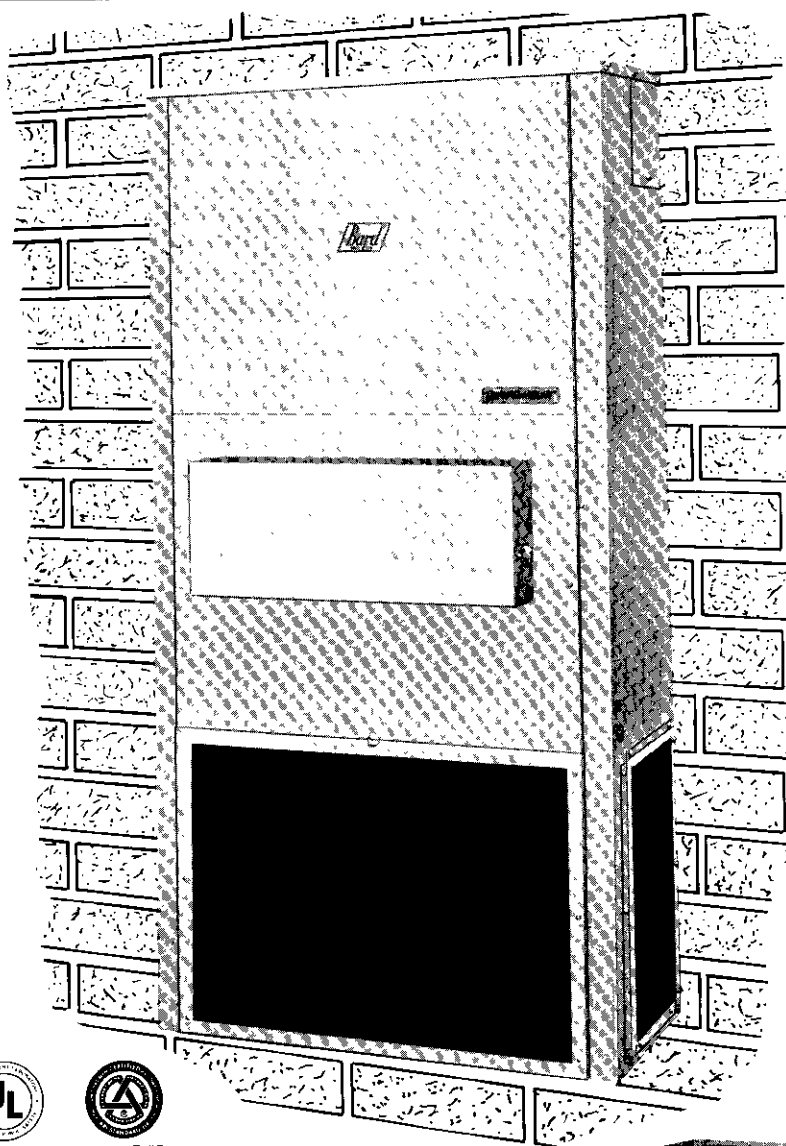


Bard
SINCE 1914

The WALL-MOUNT™ HI-BOY AIR CONDITIONERS

ELEVEN MODELS • Cooling Capacities: 19,000 to 56,000 BTUH
SEER: 9.00 to 9.30



Practical, outside wallmount installation provides versatile applications for:

- HOME IMPROVEMENT PROJECTS
- NEW CONSTRUCTION
- MODULAR FACILITIES
- SCHOOLS
- APARTMENTS
- OFFICES

Aluminum Finned Copper Coil surfaces provide maximum transfer.

Twin Blowers move air quietly. Extra built-in capacity provides maximum air delivery. Motor overload protection is standard on all models.

Totally Enclosed Compressor operates quieter than others. Equipped with crankcase heater and is protected with internal overload, pressure relief valve and anti-slug device.

Galvannealed Steel Cabinet is handsomely finished with baked-on polyester enamel.

Electrical Components are easily accessible for routine inspection and maintenance through service panel opening.

Air Filters are standard equipment. Replacement filters are easy to install.

Built-in Circuit Breakers — Optional. See Supplement sheet for electrical ratings.

Fresh Air Damper Assembly — Standard equipment with **The WALL-MOUNT™**



CAPACITY AND EFFICIENCY RATINGS

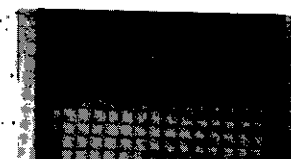
MODEL	PHASE	COOLING CAPACITY BTUH	EER	SEER
20WA2	1	19,000	—	9.00
24WA5	1	24,000	—	9.00
30WA4	1	31,000	—	9.00
36WA5	1	36,600	—	9.00
36WA5-3	3	36,600	8.30	9.00
42WA	1	42,500	—	9.20
42WA-3	3	42,500	8.30	9.10
49WA	1	46,500	—	9.30
49WA-3	3	46,500	8.30	9.30
60WA	1	56,000	—	9.20
60WA-3	3	56,000	8.50	9.00

All capacity, efficiency and cost of operation information is with fresh air cover plate. Cover plate must be ordered separately and is recommended for use to obtain maximum energy efficiency where fresh air opening is not required.



Model 36WA*

* On Models 42WA, 49WA and 60WA, compressor is located on bottom base pan and serviced from left-hand side of cabinet.



ELECTRIC HEAT STRIPS with automatic limit and thermo cut-off are available as a built-in option. Accessible from side outlet without removing unit from wall.

500002

SPECIFICATIONS															
MODEL	20WA2	24WA5	30WA4	36WA5	36WA5-3	36WA5-3	42WA	42WA-3	42WA-3	49WA	49WA-3	49WA-3	60WA	60WA-3	60WA-3
Cooling Capacity Btuh	19,000	24,000	31,000	36,600	36,600	36,600	42,500	42,500	42,500	46,500	46,500	46,500	56,000	56,000	56,000
Heating Capacity Btuh	SEE ELECTRIC HEAT TABLES NO. 1 and 2														
Electrical Rating—60Hz	230/208-1	230/208-1	230/208-1	230/208-1	230/208-3	460-3	230/208-1	230/208-3	460-3	230/208-1	230/208-3	460-3	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	197-253	197-253	414-506	197-253	197-253	414-506
Minimum Circuit Ampacity	15	19	23	30	22	15	33	24	15	35	25	15	44	29	15
*Field Wire Size	#14	#12	#10	#10	#10	#14	#8	#10	#14	#8	#10	#14	#6	#8	#14
*Delay Fuse—Max.	20	30	35	45	35	15	50	35	20	50	35	20	60	45	20
Total Unit Amps 230/208	9 5/10.5	13.5/14.5	17 7/19.2	20 7/24.2	16 7/17.7	9.5	25 3/27.3	19.8/19.8	11.4	27 3/28.8	20.8/20.8	11.4	30 3/32.8	22 3/24.3	12.4
Compressor—Circuit A															
Volts	230/208	230/208	230/208	230/208	230/208	460	230/208	230/208	460	230/208	230/208	460	230/208	230/200	460
Rated Load Amps 230/208	7/8	11/12	14/15.5	17/20.5	13/14	7	18.5/20.5	13/13	8	20.5/22	14/14	8	23.5/26	15.5/17.5	9
Branch Circuit Selection Current	8.5	13	15.5	20.5	14	7	20.5	13	8	22	14	8	29	17.5	9
Lock Rotor Amps	50/50	65/65	75/75	93/93	74/74	41	93/93	74/74	41	95.4/95.4	82/82	41	138/138	103/103	54
Fan Motor & Condenser															
Fan Motor—HP/RPM	1/5/1075	1/5/1075	1/5/1075	1/5/1075	1/5/1075	1/3/825	1/5/1075	1/5/1075	1/3/825	1/5/1075	1/5/1075	1/3/825	1/5/1075	1/5/1075	1/3/825
Fan Motor—AMPS	1.2	1.2	1.5	1.5	1.5	1.4	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Fan—DIA/CFM	18/1600	18/1600	20/2060	20/2060	20/2060	20/2060	24/2950	24/2950	24/2950	24/2950	24/2950	24/2950	24/2950	24/2950	24/2950
Face Area Sq Ft./Row/Fins per in.	3.75/2/14	3.75/2/14	5.04/2/13	5.04/2/13	5.04/2/13	7.71/2/18	7.71/2/18	7.71/2/18	7.71/2/18	7.71/2/18	7.71/2/18	7.71/2/18	7.71/2/18	7.71/2/18	7.71/2/18
Motor and Evaporator															
Blower Motor—HP/RPM	1/6/1050	1/6/1050	1/3/1100	1/3/1100	1/3/1100	1/2/1075	1/2/1075	1/2/1075	1/2/1075	1/2/1075	1/2/1075	1/2/1075	1/2/1075	1/2/1075	1/2/1075
Blower Motor—AMPS	1.3	1.3	2.2	2.2	2.2	1.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
CFM Cooling & E.S.P. w/Filter (Rated)	710@ 35	815@ 15	1140@ 17	1140@ 15	1140@ 15	1140@ 15	1575@ 40	1575@ 40	1575@ 40	1725@ 20	1725@ 20	1725@ 20	1700@ 20	1700@ 20	1700@ 20
Face Area Sq Ft./Row/Fins per in.	2.72/2/14	2.72/2/14	3.21/2/13	3.21/2/13	3.21/2/13	4.62/4/14	4.62/4/14	4.62/4/14	4.62/4/14	4.62/4/14	4.62/4/14	4.62/4/14	4.62/4/14	4.62/4/14	4.62/4/14
Filter Sizes (Inches)	14x25x1	14x25x1	15 x 30 3/4 x 1	15 x 30 3/4 x 1	15 x 30 3/4 x 1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1
Refrigerant 22 — oz.	39	40	65	68 1/2	68 1/2	68 1/2	112	112	112	139	139	139	121	121	121
Shipping Weight — lbs.	280	310	375	380	380	380	500	500	500	510	510	510	510	510	510

*60°C Copper wire size, basic unit only—does not include supplemental heaters.
For additional heating capacity, add the KW from Electric Heat Tables 1 and 2.

†Not U.L. Listed (460V)
**Maximum time delay fuse or HACR Type circuit breaker

ELECTRIC HEAT TABLE NO. 2 at 240 VOLTS										
Model	Rated Volts & Phase	Htr. Kw @ 240V	Max. Unit Amps 240/208	No. Field Power Ckts.	Internal Fuses Ckt. A	*Req'd. Maximum External Fuses Ckt. A	Minimum Circuit Ampacity Ckt. A	**Field Power Wiring Ckt. A	**Ground Wire Size Ckt. A	
20WA2	230/208 1	5 8 10	22.1/19.4 34.6/30.1 42.9/37.5	1 1 1		30 45 60	28 44 54	10 6 6	10 10 10	
24WA5	230/208 1	5 8 10	22.1/19.4 34.6/30.1 42.9/37.5	1 1 1		30 45 60	28 44 54	10 6 6	10 10 10	
30WA4	230/208 1	5 10 15	23.0/20.3 43.8/38.4 64.7/56.3	1 1 1	60/30	35 60 90	29 55 81	10 4 2	10 10 8	
36WA5	230/208 1	5 10 15	23.0/24.2 43.8/38.4 64.7/56.3	1 1 1	60/30	45 60 90	30 55 81	10 4 2	10 10 8	
36WA5-3	230/208 3	9 15	23.9/20.9 38.4/33.4	1 1		35 50	30 48	10 6	10 10	
36WA5-3	460 3	9 15	11.9 19.1	1 1		15 25	15 24	14 10	14 10	
42WA	230/208 1	10 15 20	45.6/40.2 66.5/58.1 87.2/76.1	1 1 1	60/30 60/60	60 90 110	57 84 109	4 2 1	10 8 6	
42WA-3	230/208 3	9 15 18	25.7/22.7 40.2/35.2 47.3/41.5	1 1 1		35 50 60	33 51 60	8 6 4	10 10 10	
42WA-3	460 3	9 15 18	12.8 20.0 23.7	1 1 1		20 30 35	16 25 30	12 10 8	12 10 10	
49WA	230/208 1	10 15 20	45.6/40.2 66.5/58.1 87.2/76.1	1 1 1	60/30 60/60	60 90 110	57 84 109	4 2 1	10 8 6	
49WA-3	230/208 3	9 15 18	25.7/22.7 40.2/35.2 47.3/41.5	1 1 1		45 50 60	33 51 60	8 6 4	10 10 10	
49WA-3	460 3	9 15 18	12.8 20.0 23.7	1 1 1		20 30 35	16 25 30	12 10 8	12 10 10	
60WA	230/208 1	10 15 20	45.6/40.2 66.5/58.1 87.2/76.1	1 1 1	60/30 60/60	60 90 110	57 84 109	4 2 1	10 8 6	
60WA-3	230/208 3	9 15 18	25.7/24.3 40.2/35.2 47.3/41.5	1 1 1		45 50 60	33 51 60	8 6 4	10 10 10	
60WA-3	460 3	9 15 18	12.8 20.0 23.7	1 1 1		20 30 35	16 25 30	12 10 8	12 10 10	

*Maximum time delay fuse or HACR Type circuit breaker.
**Based on 60°C copper wire.

Sizes 70A or greater are not HACR type.

INDOOR BLOWER PERFORMANCE *CFM — DRY COIL					
E.S.P. in H ₂ O	20WA2 24WA5	30WA4 36WA5	42WA 49WA	60WA	
.0	1085	1435	2000	2020	
.10	1040	1350	1875	1915	
.20	970	1260	1760	1810	
.30	910	1150	1635	1700	
.40	830	1050	1460	1560	
.50	730	940	1280	1415	
.60			1100	1270	

ELECTRIC HEAT TABLE NO. 1 at 240/208 VOLTS		
MODEL	KW @ 240/208	*RATED BTUH @ 240/208
20WA2 and 24WA5	5/3.75 8/6 10/7.5	18,000/14,000 28,000/21,000 34,000/26,000
30WA4 and 36WA5	5/3.75 10/7.5 15/11.25	18,000/14,000 35,000/26,000 52,000/39,000
36WA5-3	9/6.75 15/11.25	32,000/24,000 52,000/39,000
42WA	10/7.5 15/11.25 20/15	36,000/27,000 54,000/41,000 71,000/53,000
42WA-3	9/6.75 15/11.25 18/13.5	33,000/25,000 53,000/40,000 64,000/48,000
49WA and 60WA	10/7.5 15/11.25 20/15	37,000/28,000 54,000/41,000 71,000/53,000
49WA-3 and 60WA-3	9/6.75 15/11.25 18/13.5	33,000/25,000 54,000/41,000 64,000/48,000

*Includes Indoor Blower Motor

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 existing local codes.



CERTIFIED



LISTED

Underwriters' Listed for outdoor installation.
460V Models not U.L. listed.

COOLING APPLICATION DATA

Below 65°F, unit requires
Low Ambient Control, Part No. LAC-1

Outdoor Model		OUTDOOR TEMPERATURE °F*									
		70°	75°	80°	85°	90°	95°	100°	105°	110°	115°
20WA2	Total Btuh	21,400	21,000	20,550	20,100	19,650	19,000	18,650	18,150	17,700	17,250
	Sensible Btuh	15,000	15,050	15,075	15,000	15,100	15,125	15,050	14,900	14,650	14,300
	Latent Btuh	6,400	5,950	5,475	5,100	4,550	3,875	3,600	3,250	3,050	2,950
24WA5	Total Btuh	26,800	26,300	25,700	25,150	24,600	24,000	23,500	22,900	22,350	21,750
	Sensible Btuh	18,500	18,450	18,400	18,325	18,250	18,125	17,975	17,750	17,450	17,075
	Latent Btuh	8,300	7,850	7,300	6,825	6,350	5,875	5,525	5,150	4,900	4,675
30WA4	Total Btuh	34,000	33,750	33,000	32,500	31,800	31,000	30,000	28,900	27,000	24,800
	Sensible Btuh	24,400	24,200	23,950	23,650	23,300	22,950	22,550	22,150	21,700	21,200
	Latent Btuh	9,600	9,550	9,050	8,850	8,500	8,050	7,450	6,750	5,300	3,600
36WA5	Total Btuh	41,000	40,500	39,750	39,000	37,900	36,600	35,000	33,200	31,100	28,800
	Sensible Btuh	28,600	28,100	27,600	27,100	26,600	26,150	25,650	25,150	24,700	24,200
	Latent Btuh	12,400	12,400	12,150	11,900	11,300	10,450	9,350	8,050	6,400	4,600
42WA	Total Btuh	46,600	46,200	45,600	44,900	43,700	42,500	41,100	39,500	37,900	36,200
	Sensible Btuh	33,500	33,400	33,300	33,200	32,800	32,500	32,100	31,800	30,700	30,250
	Latent Btuh	13,100	12,800	12,300	11,700	11,000	10,000	9,000	7,700	7,200	6,700
49WA	Total Btuh	51,900	51,400	50,600	49,500	48,100	46,500	44,700	42,700	40,700	38,500
	Sensible Btuh	37,000	36,850	36,600	36,200	35,700	35,200	34,600	34,000	33,300	32,550
	Latent Btuh	14,900	14,550	14,000	13,300	12,400	11,300	10,100	8,700	7,400	5,950
60WA	Total Btuh	62,200	61,100	60,000	58,800	57,600	56,000	54,700	52,100	49,500	47,050
	Sensible Btuh	43,800	43,350	42,950	42,500	42,050	41,700	40,800	40,000	39,100	38,350
	Latent Btuh	18,400	17,750	17,050	16,300	15,550	14,300	13,900	12,100	10,400	8,700

DIMENSIONS OF BASIC UNIT FOR ARCHITECTURAL AND INSTALLATION REQUIREMENTS (NOMINAL)

MODEL	A	B	C	D	E	F	G	H	I	J	K	W	X	FRESH AIR INTAKE	
														Standard	Optional
20WA, 24WA	32 1/4	13 1/2	69 1/2	23 1/4	20	8	20 1/2	12	27 1/8	NA	NA	22 1/8	1 1/2	0-10%	0-25%
30WA, 36WA	38 1/4	15 1/4	74	22 1/2	28	8	18	14	32 1/8	32	8	24 1/8	2	0-25%	NA
42WA, 49WA, 60WA	42	22	84	21 1/2	30	10	30	16	26 1/8	NA	NA	33	NA	0-25%	0-50%

Dimensions and filter sizes are in inches

DIMENSIONS — OPTIONAL ECONOMIZER

BASIC MODEL	L*	M*	N*	P†	Q†	R†	S	T†	Moisture Eliminator	OD Air Filter
20WA, 24WA	9	12	6 1/2	16 1/8	15 1/2	16 1/8	20 1/8	12 1/4	8 1/8x24 1/2	10x25
30WA, 36WA	12	12	8 1/2	14 7/8	17	18 1/2	23 1/4	19	12 1/4x29	16x25
42WA, 49WA, 60WA	7 1/2	12	7	16 5/8	21 1/2	14	31 5/8	19	12 1/4x32 1/2	16x34

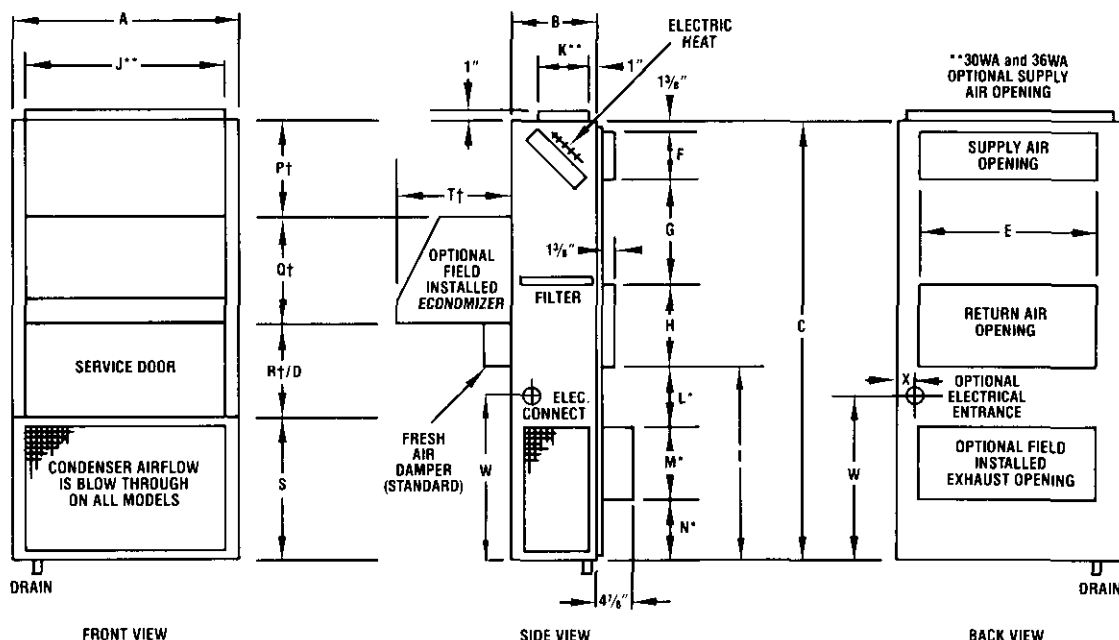
Dimensions and filter sizes are in inches

†Only applicable if Economizer is installed

*Optional For exhaust air damper assembly

CLEARANCES REQUIRED FOR SERVICE ACCESS AND ADEQUATE CONDENSER AIR FLOW

MODEL	Left Side	Right Side
20WA, 24WA	13"	30"
30WA, 36WA	15"	30"
42WA, 49WA, 60WA	24"	30"



**Must be installed at factory. Openings J and K cannot be properly made in the field.

†Applies to economizer only.

500894

Economizer Sequence of Operation

CONDITION A — COOL OUTDOORS

1st stage cooling closes and powers the economizer dampers to economizer mode and the indoor blower starts. Mixed Air Sensor (thermistors) senses a mixture of return air and outdoor air and modulates the dampers accordingly. Compressor operation is inhibited.

If second stage closes on the thermostat, the dampers return to the closed or

minimum position setting and the compressor starts for mechanical cooling.

Compressor lockout thermostat is factory set at 50°F outdoor temperature (adjustable).

CONDITION B — WARM OUTDOORS

1st stage cooling cycles the compressor and dampers remain in the mechanical cooling mode.

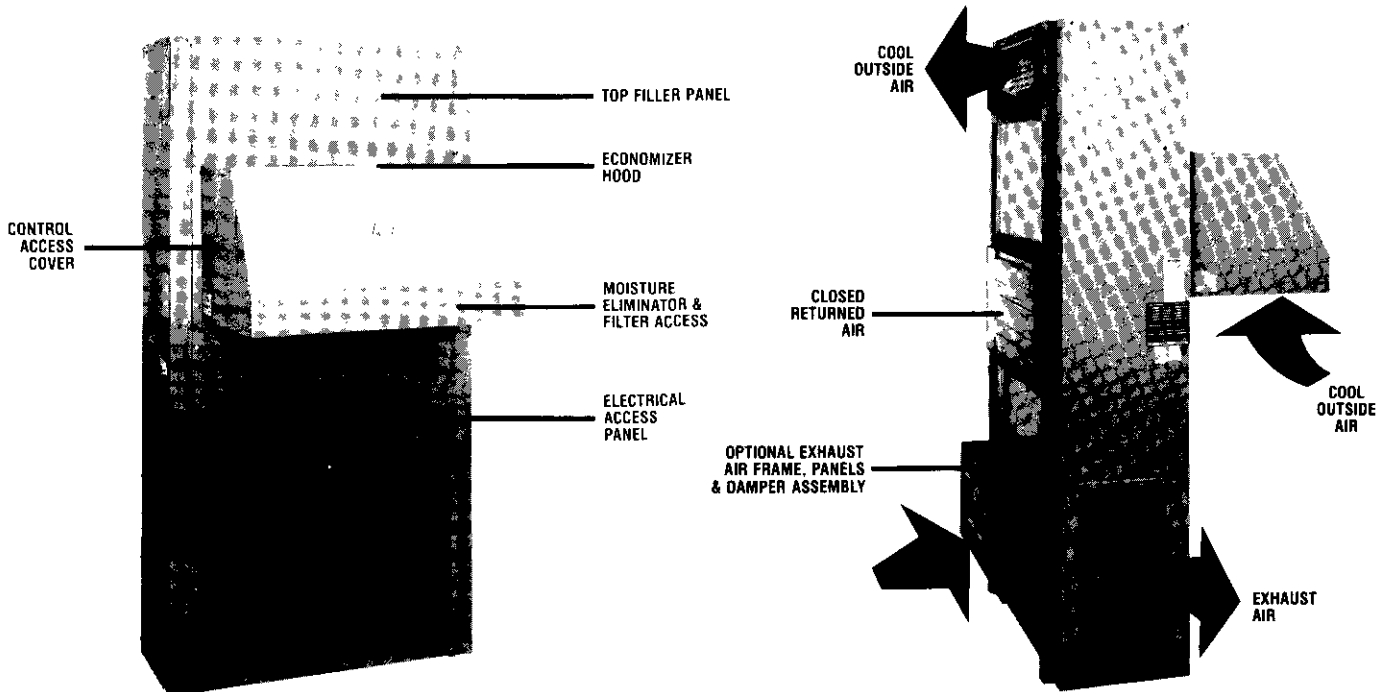
Wall Thermostats

For Air Conditioning with Economizer

Thermostat, Part No. 8403-021 (Honeywell T874D1009)
Subbase, Part No. 8404-012 (Honeywell Q674A1001)

2 Stage Cool/2 Stage Heat

OPTIONAL ECONOMIZER — Field Installed For Bard Wall Mount Air Conditioners



The above illustration shows Economizer in operation and optional exhaust damper in open position.

STANDARD FEATURES FOR ECONOMIZER OPTION

PROPORTIONING TYPE CONTROL for maximum "Free Cooling" economy and comfort with up to 100% outdoor air.

PLEATED AIR FILTER to provide maximum filtration of outside air.

MOISTURE ELIMINATOR AND PRE-FILTER — permanent, washable aluminum construction.

ADJUSTABLE LOW TEMPERATURE COMPRESSOR CUTOFF built in at factory. Eliminates need for field added low ambient control.

ENTHALPY CONTROL to monitor outdoor temperature and humidity — adjustable.

MINIMUM POSITION POTENTIOMETER — adjustable to control minimum damper blade position.

MIXED AIR SENSOR to monitor outdoor and return air to automatically modulate damper position.

"PLUG-IN" WIRING HARNESS for easy installation and service.

New DAMPER ACTUATOR MOTOR with spring return. Low current draw — eliminates need to change to larger 24-volt transformer.

GASKETED DAMPERS for minimum air leakage. This saves energy by minimizing outside air leakage into the unit when the dampers are closed.

EASY TO SERVICE

- Economizer controls — easily accessible for adjustment and service.
- Basic air conditioner unit controls and compressor remain unobstructed and accessible.

OPTIONAL FEATURES

EXHAUST AIR DAMPER ASSEMBLY — damper assembly — field installed; provides exhaust air capability to prevent pressurization of tight buildings. **Exhaust damper kit must be installed before mounting unit to the wall.**

ORDERING INFORMATION		
BASIC MODEL	Economizer Package	Optional Exhaust Damper Assembly
20WA, 24WA	ECW-2	ED-2
30WA, 36WA	ECW-3	ED-3
42WA, 49WA, 60WA	ECW-4	ED-4

BEFORE PURCHASING THIS APPLIANCE, READ IMPORTANT ENERGY COST AND EFFICIENCY INFORMATION AVAILABLE FROM YOUR RETAILER.

Specifications subject to change without notice.



BARD MANUFACTURING COMPANY
BRYAN, OHIO 43506

Since 1914 . . . Moving ahead, just as planned.

500895

S3021-186-CVR-10M
(Supersedes S3021-885)

Litho in U.S.A.

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