



The WALL-MOUNT[™] HI-BOY HEAT PUMPS

ELEVEN MODELS • Heating Capacities: 19,000 to 59,500 BTUH

Cooling Capacities: 19,700 to 55,000 BTUH

COP: 2.76-3.00 SEER: 8.50-9.50

Practical, outside wallmount installation provides versatile applications for:

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

Aluminum Finned Copper Coil surfaces expel heat efficiently as required by system.

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.

Heat Pump Compressor is totally enclosed for quieter operation. Is specially designed to withstand higher compression ratios and longer operation than ordinary air conditioner compressors. Equipped with crankcase heater which prevents dilution of oil by refrigerant during shutdown periods and internal overload.

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

Electrical Components are easily accessible for service and routine inspection.

Compressor Malfunction Relay energizes system warning light located on the indoor thermostat. Standard on all 1-phase.

Air Filters are standard on all models. Replacement filters are easy to install.

High Pressure Switch provides additional protection for the heat pump system.

Time-Temperature Defrost assures positive, quick removal of frost at all operating temperatures. Has 7-minute, time-safe override.

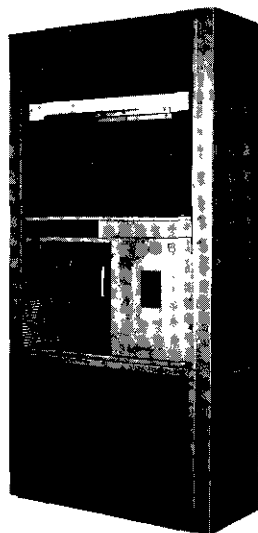
Suction Accumulator protects the compressor from refrigerant floodback and prevents damage to the compressor bearing surfaces.

Emergency Heat Circuit permits continuous operation of the system.

Built-in Circuit Breakers — Optional.

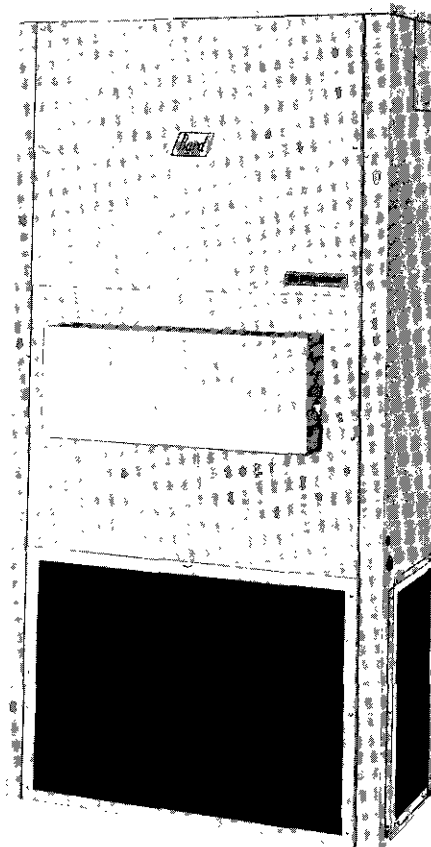
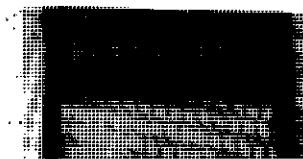
Fresh Air Damper Assembly — Standard equipment with **The WALL-MOUNT[™]**.

Economizer — Optional. Reduces operating costs and prolongs life of compressor. See Form S3115.



Model 36WH*

*On Models 42WH, 48WH and 60WH, 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.



CERTIFIED



LISTED

Capacity and Efficiency Ratings

MODEL	PHASE	COOLING CAPACITY			HEATING 47°			HEATING 17°	
		BTUH	EER	SEER	BTUH	COP	HSPF**	BTUH	COP
18WH6-A	1	19,700	—	9.30	19,000	2.90	6.60	11,000	1.90
24WH6-A	1	23,800	—	9.20	23,800	3.00	6.60	13,200	1.90
30WH6-A	1	29,400	—	9.50	29,200	2.90	7.00	17,600	2.00
30WH6-B,-C	3	31,000	8.30	9.00	31,000	2.90	6.80	18,600	2.00
36WH7-A	1	35,400	—	9.00	36,800	2.90	6.80	22,600	2.00
36WH7-B,-C	3	35,400	8.10	9.00	36,400	2.90	6.80	21,000	2.00
45WH1-A	1	45,000	—	9.00	43,000	2.90	6.60	24,400	1.90
45WH1B,-C	3	44,500	8.10	9.00	42,500	2.80	6.60	23,000	1.80
48WH5-A	1	48,000	—	8.70	49,000	2.94	6.80	28,600	2.00
48WH5-B,-C	3	48,000	8.00	9.00	49,000	3.00	6.80	27,200	1.96
60WH-A	1	55,000	—	8.00	59,500	2.80	6.55	35,000	1.96
60WH-B,-C	3	55,000	7.50	8.00	59,500	2.80	6.55	33,000	1.86

* Efficiency ratings with optional field installed 8620-003 kit (ordered separately).

** Heating Seasonal Performance Factor at Region IV minimum design heating requirement per DOE test procedures in effect at time of printing.

All capacity and efficiency ratings are based on high speed operation 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.

501070

Specifications+

MODEL	18WH-A	24WH-A	36WH-A	36WH-B	36WH-C	36WH7-A	36WH7-B	36WH7-C	48WH-A	48WH-B	48WH-C	48WH7-A	48WH7-B	48WH7-C	60WH-A	60WH-B	60WH-C
Cooling Capacity Btuh	19,700	23,800	29,400	31,000	31,000	35,400	35,400	35,400	45,000	44,500	44,500	48,000	48,000	48,000	55,000	55,000	55,000
*Hi-Temp Htg. BTUH (47)	19,000	23,800	29,200	31,000	31,000	36,800	36,400	36,400	43,000	42,500	42,500	49,000	49,000	49,000	59,500	59,500	59,500
*Lo-Temp Htg. BTUH (17)	11,000	13,200	17,600	18,600	18,600	22,600	21,000	21,000	24,400	23,000	23,000	28,600	27,200	27,200	35,000	33,000	33,000
Electrical Rating—60Hz	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	230/208-1	230/208-3	230/208-3
Operating Voltage Range	197-253	197-253	197-253	187-253	414-506	197-253	187-253	414-506	197-253	187-253	414-506	197-253	187-253	414-506	197-253	187-253	460-3
Compressor—Circuit A																	
Volts	230/208	230/208	230/208	230/200	460	230/208	230/200	460	230/208	230/200	460	230/208	230/200	460	230/208	230/200	460
Rated Load Amps 230/208	8/9	10/11.5	12.5/14.5	11	6	19/21.5	15/17	7.5	19.5/22.5	12/15	7	23/26	16/18	9	27/32	18/20	10
Branch Circuit Selection Current	9.0	12.5	15	11	6	21.5	17	7.5	22.5	15	7	26	18	9	32	20	10
Lock Rotor Amps 230/208	49/49	57/57	76/76	65	32	97/97	74/74	41	108/108	74/74	37	116/116	92/92	46	180/180	158/158	62
Fan Motor & Condenser																	
Fan Motor—HP/RPM	1/5/1075		1/5/1100						1/3/825								
Fan Motor—Amps	1.2	1.2	1.2	1.2	.8	1.5	1.5	.8	2.8	2.8	1.3	2.8	2.8	1.3	2.8	2.8	1.3
Fan—DIA/CFM	18/1500		20/2140	20/2140	20/2140	20/2140	20/2140	20/2140	24/3000	24/3000	24/3000	24/300	24/3000	24/3000	24/3000	24/3000	24/3000
Motor and Evaporator																	
Blower Motor—HP/RPM	1/6/1050		1/3/1100/2 Spd.						1/2/1075/2 Spd.								
Blower Motor—AMPS	1.3	1.3	2.2	2.2	1.0	2.2	2.2	1.0	4.0	4.0	1.5	4.0	4.0	1.5	4.0	4.0	1.5
CFM Cooling & E.S.P. w/Filter (Rated)	650@.35	815@.15	1000@.30			1100@.15			1400@.20			1600@.20			1760@.20		
Filter Sizes	14x28x1		15x30-5/8x1						20x30x1			20x30x1			20x30x1		
Shipping Weight—Lbs.	305	325	390	390	390	390	390	390	525	525	525	530	530	530	545	545	545
For additional heating capacity, add the KW from Electric Heat Table.																	

Indoor Blower Performance *CFM—DRY COIL

E.S.P. IN H ₂ O	18WH 24WH **	36WH 36WH		48WH		48WH		60WH	
		LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
.0	1000	970	1435	1485	1820	1450	1940	1460	2000
.10	935	925	1350	1420	1740	1395	1865	1415	1890
.20	870	900	1260	1355	1655	1340	1780	1375	1840
.30	800	—	1150	—	1555	—	1690	—	1765
.40	715	—	1050	—	1450	—	1610	—	1670
.50	630	—	940	—	1275	—	1510	—	1560

*Filter included. See specifications for unit CFM rating.

**Single speed.

Electric Heat Table at 240 Volts

MODEL	BTUH	AMP
4KW	13,650	16.7
5KW	17,065	20.8
8KW	27,304	33.3
10KW	34,130	41.7
15KW	51,195	62.5
20KW	68,260	83.4
9KW-3ph	30,600	21.7
15KW-3ph	51,195	36.2
18KW-3ph	61,200	43.4

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.



Underwriters' Listed for outdoor installation. 460V Models not U.L. listed except for model 36WH7-C00NF and 36WH7-C09NF.

Specifications subject to change without notice.

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

Dimensions of Basic Unit for Architectural and Installation Requirements (NOMINAL)

MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	FRESH AIR INTAKE
																			Standard
18WH, 24WH	32 $\frac{3}{8}$	14 $\frac{1}{8}$	69 $\frac{3}{8}$	23 $\frac{1}{2}$	19 $\frac{7}{8}$	7 $\frac{7}{8}$	20 $\frac{3}{4}$	11 $\frac{1}{8}$	27 $\frac{1}{2}$	NA	NA	4	6 $\frac{1}{4}$	NA	22 $\frac{3}{8}$	28 $\frac{3}{8}$	NA	21 $\frac{1}{8}$	0-10%
30WH, 36WH	38	16 $\frac{1}{2}$	74	24 $\frac{3}{4}$	27 $\frac{7}{8}$	7 $\frac{7}{8}$	18	13 $\frac{7}{8}$	32 $\frac{7}{8}$	32	8	2 $\frac{3}{8}$	5 $\frac{3}{4}$	6 $\frac{1}{4}$	24 $\frac{7}{8}$	34 $\frac{1}{2}$	27	23 $\frac{3}{8}$	0-25%
45WH, 48WH, 60WH	42	23	84	21 $\frac{1}{2}$	29 $\frac{7}{8}$	9 $\frac{7}{8}$	30	15 $\frac{7}{8}$	26 $\frac{7}{8}$	NA	NA	NA	8	NA	32 $\frac{3}{8}$	32 $\frac{3}{8}$	NA	31 $\frac{3}{4}$	0-25%

Dimensions and filter sizes are in inches.

Clearances Required for Service Access and Adequate Condenser Air Flow

MODEL	LEFT SIDE	RIGHT SIDE
18WH, 24WH	13"	30"
30WH, 36WH	15"	30"
45WH, 48WH, 60WH	24"	30"

Indoor Thermostat Options

These Bard Systems feature the option of either using a thermostat with a non-cycling reversing valve or automatic changeover.

Manual Changeover

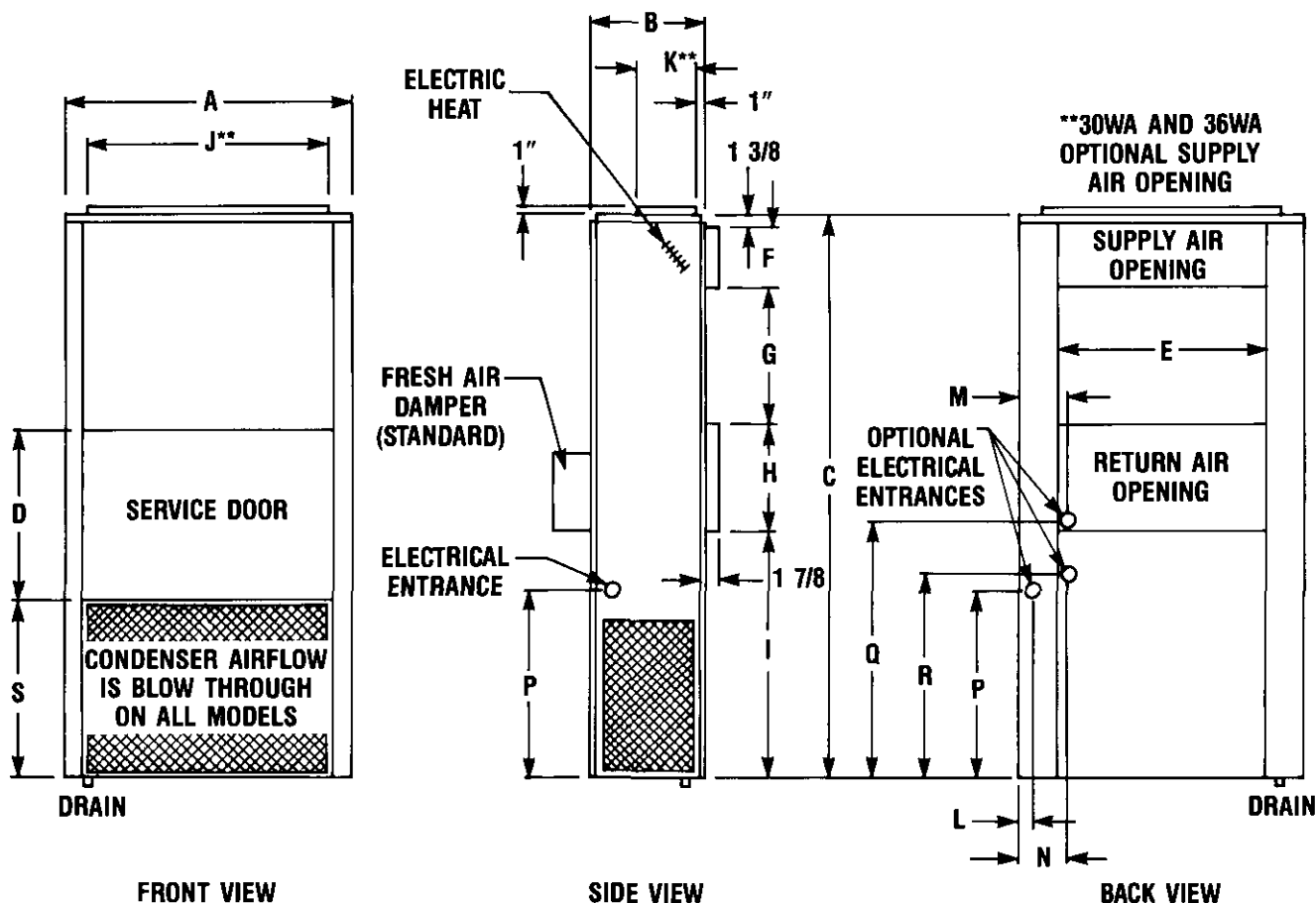
Thermostat - Part No.
8403-017
(Honeywell
T874R1129)

Subbase - Part No.
8404-009
(Honeywell
Q674L1181)

Automatic Changeover

Thermostat - Part No.
8403-018
(Honeywell
T874N1024)

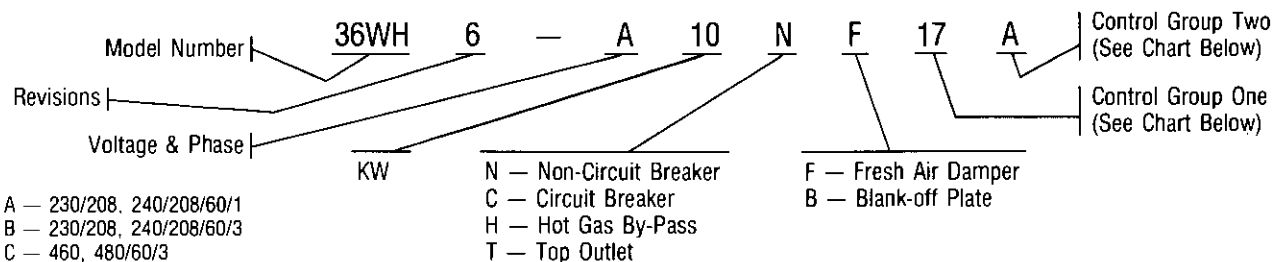
Subbase - Part No.
8404-010
(Honeywell
Q674F1261)



****MUST BE INSTALLED AT FACTORY, OPENINGS J AND K CANNOT BE PROPERLY MADE IN THE FIELD.**

501073

Heat Pump Wall-Mount Model Nomenclature



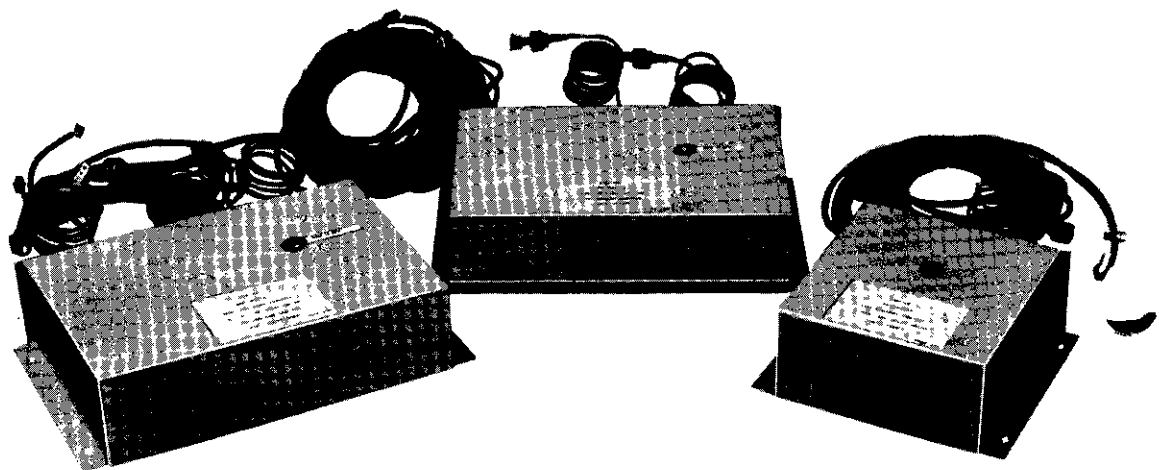
Control Module Accessories — Control group one items that can be field installed or factory installed. Control module consists of galvanized metal box (except for TDR5), controls pre-wired, wiring diagram, installation instructions, mounting brackets and hardware.

Optional Factory or Field Installed Accessories (Control Modules)

The following field installed accessories are available to provide maximum flexibility to meet specific specification and application requirements. Each accessory is designed and assembled at Bard and is available for field or factory

installation. All electrical items are pre-wired, color coded, include appropriate wire diagrams and where applicable are built into enclosures. All accessories feature detailed and easy to follow installation instructions.

Photo shows assortment of various control modules that can easily be field installed in Wall-Mount Units.



Heat Pump Control Modules

DESCRIPTION	FIELD INSTALLED PART NO.	FACTORY INSTALLED CODE NO.
Control Group One		
(LPC) Low Pressure Control Manual Reset & Adjustable	CGAH-2	02
(TDR5) Compressor Anti-Cycle Relay	CGAH-4	04
(LAC) Low Ambient Control & Relay	CGH-6	06
LPC and TDR5	CGAH-9	09
LPC and LAC	CGH-11	11
LPC, TDR5 and LAC	CGH-13	13
LAC and TDR-5	CGH-18	18
Control Group Two		
Outdoor Thermostat (ODT)	ODT-70	A
Low Voltage Start Kit No. 1 (45WH1, 48WH5, 60WH)	SK108	B
Low Voltage Start Kit No. 2 (18WH6, 24WH6, 30WH6, 36WH7)	SK109	B
ODT-70 and SK108 (45WH1, 48WH5, 60WH)	—	C
ODT-70 and SK109 (18WH6, 24WH6, 30WH6, 36WH7)	—	C



BARD MANUFACTURING COMPANY
BRYAN, OHIO 43506
Since 1914... Moving ahead, just as planned.

Form No. S3009-488-CVR-5M
 (Supersedes S3009-587)

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Electrical Specifications

MODEL	RATED VOLTS & PHASE	MAX. UNIT AMPS @ 240/208V	"N" VERSIONS (STANDARD MODELS (LESS CIRCUIT BREAKERS))						"C" VERSIONS (CIRCUIT BREAKER MODELS)					
			NO. FIELD POWER CIRCUITS	INTERNAL FUSES		① MAX. INT. FUSE OR CIRCUIT BREAKER		① MIN. CIRCUIT AMPACITY		NO. FIELD POWER CIRCUITS	① MAX. INT. FUSE OR CIRCUIT BREAKER		① MIN. CIRCUIT AMPACITY	
				SET A	SET B	SET A	SET B	SET A	SET B		SET A	SET B	SET A	SET B
18WH6-A00* 04* 08*	230/208 1	10.5/11.5 27.2/25.9 43.8/40.3	1 1 1			20 35 60		15 35 56		1 1 1	20 35 60		15 35 56	
24WH6-A00* 04* 08*	230/208 1	12.5/14 29.2/28.4 45.8/42.8	1 1 1			30 45 60		19 40 60		1 1 1	30 45 60		19 40 60	
30WH6-A00* 05* 10* ① 15*	230/208 1	18.2/18.2 37/36.3 57.8/54.4 64.7/56.3	1 1 1 1			40 60 80 90		27 49 75 81		1 1 2 2	40 60 60 60	30 60	27 49 49 49	26 52
30WH6-B00* 09*	230/208 3	13.0/14.4 34.7/33.2	1 1			25 45		18 45		1 1	25 45		18 45	
30WH6-C00* 09*	460 3	8.5 19.3	1 1			15 25		15 22		1 1	15 25		15 22	
36WH7-A00* 05* 10* ① 15*	230/208 1	22.2/25.2 43/43.3 63.8/61.4 64.7/61.4	1 1 1 1			50 60 90 90		31 57 83 83		1 1 2 2	50 60 60 60	30 60	31 57 57 57	26 52
36WH7-B00* 09* ① 15*	230/208 3	18.7/20.7 40.4/38.4 40.4/38.4	1 1 1			40 60 60		25 53 53		1 1 1	40 60 60		25 53 53	
36WH7-C00* 09* ① 15*	460 3	10 20.8 20.8	1 1 1			15 30 30		15 29 29		1 1 1	15 30 30		15 29 29	
45WH1-A00* 10* ① 15*	230/208 1	26.3/29.3 67.9/65.5 67.9/65.5	1 1 2	50/60 50	60/30	50 90 50	80	35 87 35	79	1 2 3	50 50 50	60 60 30	35 35 35	52 52 26
45WH1-B00* 09* ① 15*	230/208 3	18.8/21.8 40.5/40.5 40.5/40.5	1 1 1			40 60 60		26 53 53		1 1 1	40 60 60		26 53 53	
45WH1-C00* 09* ① 15*	460 3	10.4 21.2 21.2	1 1 1			15 30 30		15 26 26		1 1 1	15 30 30		15 26 35	
48WH5-A00* 10* 15* ① 20*	230/208 1	29.8/32.8 71.4/69 92.3/86.9 87.2/76.1	1 1 2 2	60/60 80 60	60/30 60/60	60 100 60 60	80 110	40 93 40 40	79 104	1 2 3 3	60 60 60 60	60 60 30 60	40 40 40 40	52 52 52 52
48WH5-B00* 09* 15* ① 18*	230/208 3	22.8/24.8 44.5/43.5 59/56 47.3/43.5	1 1 1 1	45/30 45/45 45/60		45 60 80 60		30 58 76 60		1 1 2 2	45 60 45 45	50 60	30 58 30 30	46 55
48WH5-C00* 09* 15* ①	460 3	12.4 23.2 30.4	1 1 1			20 30 40		15 29 37		1 1 1	20 30 40		15 29 37	
60WH-A00* 10* 15* ① 20*	230/208 1	33.8/38.8 75.4/75 96.3/92.9 87.2/76.1	1 1 2 2	60/60 60 60	60/30 60/30	60 110 60 80	80 110	47 99 47 47	79 104	1 2 3 3	60 60 60 60	60 60 30 60	47 47 47 47	52 52 52 52
60WH-B00* 09* 15* ① 18*	230/208 3	24.8/26.8 46.5/45.5 61/58 47.3/43.5	1 1 1 1	50/30 50/45 50/60		50 60 80 80		32 59 78 59		1 1 2 2	50 60 50 50	50 60	32 59 32 32	46 55
60WH-C00* 09* 15* ②	460 3	13.4 24.2 31.4	1 1 1			25 35 40		16 34 39		1 1 1	25 35 40		16 30 39	

* = N for standard models (less circuit breakers).

= C for models with circuit breakers.

① Maximum KW that can operate with heat pump on.

② Maximum size of the time delay fuse or HACR type circuit breaker for protection of field wiring conductors. (Sizes 70 amp or greater are not HACR type)

③ These "Minimum Circuit Ampacity" values are to be used for sizing the field power conductors. Refer to the National Electric Code (latest revision), article 310 for power conductor sizing. Caution: When more than one field power conductor circuit is run thru one conduit, the conductors must be derated. Pay special attention to note 8 of tables 310 regarding Ampacity Adjustment Factors when more than 3 conductors are in a raceway.

④ All wiring must conform to the National Electrical Code and all local codes.

Outdoor Temperature °F

Model	W.B. (2)	COOLING CAPACITY		Outdoor Temperature °F										
		75°	78°	80°	85°	90°	95°	100°	105°	110°	115°	120°	125°	130°
18WH6	75/62	Total Cooling	20,000	19,200	18,500	17,800	17,140	16,500	15,900	15,300	14,770	14,250	13,750	13,250
	80/67	Sensible Cooling	15,600	15,500	15,300	15,100	14,900	14,700	14,500	14,300	14,100	13,900	13,700	13,500
	85/72	Total Cooling	21,300	21,000	20,700	20,400	20,100	19,800	19,500	19,200	18,900	18,600	18,300	18,000
24WH6	75/62	Total Cooling	21,600	21,800	21,900	21,900	21,800	21,700	21,600	21,500	21,400	21,300	21,200	21,100
	80/67	Sensible Cooling	13,500	14,000	14,314	14,500	14,600	14,700	14,800	14,900	15,000	15,100	15,200	15,300
	85/72	Total Cooling	24,900	23,800	22,600	21,900	21,600	21,300	21,000	20,700	20,400	20,100	19,800	19,500
30WH6	75/62	Total Cooling	25,700	25,900	25,200	24,500	23,800	23,100	22,400	21,700	21,000	20,300	19,600	18,900
	80/67	Sensible Cooling	18,500	18,600	18,600	18,400	18,200	18,000	17,800	17,600	17,400	17,200	17,000	16,800
	85/72	Total Cooling	31,300	29,900	28,800	27,700	26,600	25,500	24,400	23,300	22,200	21,100	20,000	18,900
36WH7	75/62	Total Cooling	33,800	32,600	31,600	30,500	29,400	28,300	27,200	26,100	25,000	23,900	22,800	21,700
	80/67	Sensible Cooling	24,100	23,700	23,500	23,300	23,100	22,900	22,700	22,500	22,300	22,100	21,900	21,700
	85/72	Total Cooling	37,100	35,700	34,000	32,200	30,400	28,600	26,800	25,000	23,200	21,400	19,600	17,800
45WH1	75/62	Total Cooling	39,800	39,000	38,000	36,800	35,600	34,400	33,200	32,000	30,800	29,600	28,400	27,200
	80/67	Sensible Cooling	24,910	25,300	25,500	25,600	25,600	25,600	25,600	25,600	25,600	25,600	25,600	25,600
	85/72	Total Cooling	46,355	44,690	42,935	41,090	39,300	37,500	35,700	33,900	32,100	30,300	28,500	26,700
48WH5	75/62	Total Cooling	49,590	48,740	47,705	46,460	45,000	43,540	42,080	40,620	39,160	37,700	36,240	34,780
	80/67	Sensible Cooling	36,080	35,775	35,300	34,700	34,030	33,320	32,580	31,840	31,100	30,360	29,620	28,880
	85/72	Total Cooling	50,500	48,400	46,240	44,020	41,750	39,480	37,210	34,940	32,670	30,400	28,130	25,860
60WH	75/62	Total Cooling	54,600	53,200	51,635	50,000	48,300	46,540	44,780	43,020	41,260	39,500	37,740	35,980
	80/67	Sensible Cooling	39,840	39,155	38,510	37,910	37,350	36,800	36,300	35,800	35,300	34,800	34,300	33,800
	85/72	Total Cooling	55,985	53,850	51,535	49,150	46,700	44,250	41,800	39,350	36,900	34,450	32,000	29,550

① Return air temperature of.
 ② Below 65°F, unit requires a field installed low ambient control.

Heating Application Ratings Outdoor Temperature °F

Outdoor Model		Outdoor Temperature °F										
		0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
18WH6	BTUH	6,660	7,700	8,800	9,900	10,300	11,000	12,000	13,000	14,100	15,100	16,100
	WATTS	1,600	1,620	1,640	1,665	1,695	1,685	1,705	1,730	1,750	1,810	1,875
24WH6	BTUH	8,400	9,500	10,700	12,000	12,400	13,200	14,400	15,600	16,700	17,700	18,800
	WATTS	1,960	1,980	2,010	2,025	2,035	2,050	2,075	2,095	2,120	2,205	2,280
30WH6	BTUH	11,700	13,200	14,600	16,000	16,600	17,400	18,800	20,200	21,600	22,700	23,800
	WATTS	2,350	2,390	2,430	2,465	2,480	2,505	2,530	2,550	2,580	2,620	2,660
36WH7	BTUH	17,000	18,200	19,600	20,950	21,400	22,200	23,450	24,900	26,200	27,400	28,600
	WATTS	2,850	2,915	2,970	3,030	3,085	3,150	3,210	3,275	3,340	3,405	3,470
45WH1	BTUH	14,300	16,800	19,400	21,900	22,900	24,500	27,000	29,600	32,200	34,800	37,400
	WATTS	3,515	3,585	3,660	3,730	3,760	3,805	3,875	3,950	4,020	4,100	4,180
48WH5	BTUH	17,250	20,000	23,000	25,750	27,250	28,500	31,500	34,250	37,250	40,250	43,250
	WATTS	3,900	3,950	4,000	4,100	4,150	4,200	4,300	4,400	4,500	4,600	4,700
60WH	BTUH	23,200	26,200	29,050	32,000	33,000	35,000	37,400	40,800	43,700	46,600	49,500
	WATTS	4,750	4,870	4,990	5,110	5,180	5,235	5,360	5,480	5,600	5,720	5,840

CAPACITY MULTIPLIER FACTORS			
% of Rated Air Flow		Total Btuh	Sensible Btuh
- 10		0.975	1.0
+ 10		1.0	1.02
+ 20		1.0	1.05

degrees F DB indoor Return Air at Rated CFM includes defrost operation below 45 degrees.