

**Models MAH1018A - MAH1060A, MGH1072A-3150A**

Example	M	A	H	1	0	3	6	A	E	0	5	0	C	+	+	+	+	1	E	A	+	A	1	1	+	+	+	+	+	+
Position	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

1	Unit Designation/Family	M = Marvair Wall Mount
2	Energy Efficiency Ratio (EER)	A = 11 G = 10
3	Refrigerant Type	H = R-454B
4	Compressor Type/Quantity	1 = Single   3 = Dual Compressors
5	Unit Capacity/Nominal Cooling (BTUH)	018 = 18,000   048 = 48,000
6		020 = 20,000   060 = 60,000
7		024 = 24,000   072 = 72,000
8		030 = 30,000   090 = 90,000
9	System Type	A = Air Conditioner
10	Power Supply (Volts-Hz-Phase)	E = 380-50-3 - 4 Wire   G = 200/220-50-3 K = 400-50-3 - 3 Wire   F = 220-50-1
11	Heat Designation @ Rated Voltage	000 = No Heat   090 = 9KW
12		050 = 5KW   120 = 12KW 060 = 6KW   150 = 15KW
13	Ventilation Configuration	A = Solid Front Door C = Economizer D = Motorized Damper w/Pressure Relief E = Motorized Damper w/Pressure Relief & Independent Motorized Damper Control F = No Free Cooling, 100% Emergency Ventilation Only w/Independent Control K = Economizer w/Factory Installed CO2 Control N = Barometric Damper w/15% OSA + = None \$ = Special
14	Dehumidification	G = Hot Gas Reheat R = Electric Reheat T = Electric Reheat w/Humidity Control + = None \$ = Special
15	Controls	A = Power Fail Alarm w/Additional Lockouts C = 24V EMS Relay Kit D = 24V EMS Relay Kit w/Factory Installed T-Stat E = Factory Installed T-Stat + = None \$ = Special
16	Operating Condition	A = Evaporator Freeze Sensor (EFS) C = EFS w/Hot Gas Bypass D = Desert Duty F = Desert Duty w/Hard Start G = Desert Duty w/EFS H = Desert Duty w/Hard Start & EFS N = Hard Start P = Hard Start w/Low Ambient & CCH Q = Hard Start w/Low Ambient & Fan Cycle Control (FCC) R = Crank Case Heater (CCH) T = Hard Start w/EFS U = Hard Start w/Hot Gas Bypass V = Hard Start w/Low Ambient & CCH & EFS W = Low Ambient w/CCH Y = Low Ambient w/CCH & FCC Z = Low Ambient w/CCH & EFS 1 = Low Ambient w/FCC 2 = Low Ambient w/FCC & EFS + = None \$ = Special

17	Indoor Air Quality Features	D = Dry Bulb Sensor E = Dry Bulb Sensor w/Dirty Filter G = Dirty Filter Sensor M = Dry Bulb Sensor & CO2 Sensor (Only w/Economizer) + = None \$ = Special
18	Air Flow	1 = Top Supply/Bottom Return 2 = Center Supply (Reverse) 3 = Bottom Supply/Top Return (Counter) 4 = Top Panel Discharge 5 = Centrifugal Blowers 6 = 3T3 7 = 3T5 8 = 4T2 9 = 4T3 A = 3T2 \$ = Special
19	Compressor Location	C = Center - All 6 ton units and above D = Left Hand - All 3 1/2 to 5 ton units E = Right Hand - All 1 1/2 to 3 ton units
20	Filter Option	A = 2" Pleated (MERV 8, AC/HP-C) C = 2" Charcoal D = MERV 11 High Filtration Package E = MERV 13 High Filtration Package F = Filter Access Through Return Air Grille W = Aluminum Washable + = None \$ = Special
21	Corrosion Protection	A = Condenser Coil Only C = Evaporator Coil Only D = Both Coils Condenser & Evaporator E = All Coils Cond/Evap/Reheat F = Coat All G = Coastal Package & Evaporator Coil K = Coastal Package + = None \$ = Special
22	Engineering Revision Level	A1
23		B1
24	Cabinet Color	1 = Marvair Beige 2 = Gray 3 = Carlsbad Canyon 4 = White 5 = Stainless Steel Exterior 6 = Dark Bronze 8 = Mesa Tan 9 = Pebble Gray A = Stainless Steel - Unit \$ = Custom Color (Powder Coat)
25	Sound Attenuation	2 = Compressor Blanket + = None
26	Security Option	A = Lockable Access Plate/Tamper Proof C = Tamper Proof Screws D = Lockable Access Plate w/Tamper Proof + = None \$ = Special
27	Fastener/Drain Pan Option	A = Stainless Steel Fasteners C = Stainless Steel Drain Pan D = Stainless Steel Fasteners & Drain Pan + = None \$ = Special
28	Unused	+ = None \$ = Special
29	Unused	+ = None \$ = Special
30	Special Variation	+ = None \$ = Special Configuration Not Covered by Model Nomenclature

**Note:** Not all options are available with all configurations. Contact your Marvair sales representative for configuration details and feature compatibility.

# Marvair High Efficiency Wall Mount Air Conditioners Performance Data

## Efficiency and Capacity Ratings for Air Conditioners with 50Hz Power Supply

Model Number	MAH1018	MAH1020	MAH1024	MAH1030	MAH1036	MAH1042	MAH1048	MAH1060	MGH1072	MGH3090	MGH3120	MGH3150
Cooling BTUH <sup>1</sup>	14,000	16,000	19,900	24,000	29,000	34,000	37,300	45,300	58,100	73,800	97,900	121,200
EER <sup>2</sup>	11.00	11.00	11.00	11.00	11.00	11.50	11.00	11.00	10.00	10.00	10.00	10.00
Rated Air Flow (CFM <sup>3</sup> )	540	630	850	1,070	1,200	1,250	1,400	1,750	1,925	3,500	4,000	4,500

<sup>1</sup>Cooling rated at 95°F (35°C) outdoor and 80°F DB/67° WB (26.5°C DB/19.5°C WB) return air      <sup>2</sup>EER=Energy Efficiency Ratio      <sup>3</sup>CFM=Cubic Feet per Minute  
Ratings are with no outside air. Performance will be affected by altitude.  
Ratings are at 400 volts for 380/420 volt units ("E" & "K" models) and 220 volts for 200/220 volt units ("F" & "G" models).

## Electrical Characteristics - Compressor, Fan & Blower Motors

BASIC MODEL	COMPRESSOR			OUTDOOR FAN MOTOR		INDOOR BLOWER MOTOR	
	VOLTS-HZ-PH	RLA <sup>1</sup>	LRA <sup>2</sup>	HP <sup>3</sup>	FLA <sup>4</sup>	HP <sup>3</sup>	FLA <sup>4</sup>
MAH1024AE	380/420-50-3	4.0	38	1/5	1.1	1/3	2.5
MAH1030AE	380/420-50-3	5.4	38	1/2	2.4	1/2	3.0
MAH1036AE	380/420-50-3	5.6	36	1/2	2.4	1/2	3.0
MAH1042AE	380/420-50-3	6.0	43	1/2	2.4	1/3	2.1
MAH1048AE	380/420-50-3	6.1	43	1/2	2.4	3/4	4.0
MAH1060AE	380/420-50-3	7.8	51.5	1/2	2.4	3/4	4.0
MGH1072AE	380/420-50-3	10.6	74	1/2	2.4	3/4	4.0
MGH3090AE/K	380/420-50-3	6.1 (12.2)	43 (86)	1/3	2.7	1	3.3
MGH3120AE/K - A	380/420-50-3	6.9 (13.8)	52 (104)	3/4	6.3	4	5.2
MGH3120AE/K - B	380/420-50-3	6.9 (13.8)	52 (104)	3/4	6.3	4	5.2
MGH3150AE	380/420-50-3	9.9 (19.8)	69 (138)	3/4	6.3	4	5.2
MAH1018AF	220/240-50-1	7.1	44	1/5	1.1	1/3	1.6
MAH1020AF	220/240-50-1	9.0	52	1/5	1.1	1/3	2.5
MGH3090AF	220/240-50-1	15.5 (31.0)	99 (198)	1/3	2.7	1	3.3
MGH3120AF - B	220/240-50-1	21.5 (43.0)	126 (252)	3/4	6.3	2	6.7
MAH1024AG	200/220-50-3	8.2	59	1/5	1.1	1/3	2.5
MAH1030AG	200/220-50-3	9.3	78	1/2	2.4	1/2	3.0
MAH1036AG	200/220-50-3	10.5	80	1/2	2.4	1/2	3.0
MAH1042AG	200/220-50-3	13.4	80.7	1/2	2.4	1/3	2.1
MAH1048AG	200/220-50-3	14	80.7	1/2	2.4	3/4	4.0
MAH1060AG	200/220-50-3	15.3	110	1/2	2.4	3/4	4.0
MGH1072AG	200/220-50-3	22.4	149	1/2	2.4	3/4	4.0
MGH3090AG	200/220-50-3	14.0 (28.0)	83 (166)	1/3	2.7	1	3.3
MGH3120AG - A	200/220-50-3	14.7 (29.4)	110 (220)	3/4	6.3	2	6.7
MGH3120AG - B	200/220-50-3	14.7 (29.4)	110 (220)	3/4	6.3	2	6.7

<sup>1</sup>RLA = Rated Load Amps      <sup>2</sup>LRA = Locked Rotor Amps      <sup>3</sup>HP = Horsepower      <sup>4</sup>FLA = Full Load Amps

## Summary Electrical Ratings (Wire and Circuit Breaker Sizing) -

*Air Conditioners with Single stage Compressors & Ventilation Configurations:*

*Manual Damper, up to 15% Outside Air ("N")*

*Economizer, Outside Air with Pressure Relief ("C")*

*Motorized Damper, up to 450 CFM of Outside Air with Pressure Relief ("D")*

ELECTRIC HEAT		000 = None		050 = 5 kw		060 = 6 kw		090 = 9 kw		120 = 12 kw		150 = 15 kw	
BASIC MODEL	VOLTS-HZ-PH	SPPE <sup>3</sup>		SPPE <sup>3</sup>		SPPE <sup>3</sup>		SPPE <sup>3</sup>		SPPE <sup>3</sup>		SPPE <sup>3</sup>	
		MCA <sup>1</sup>	MFS <sup>2</sup>	MCA <sup>1</sup>	MFS <sup>2</sup>	MCA <sup>1</sup>	MFS <sup>2</sup>	MCA <sup>1</sup>	MFS <sup>2</sup>	MCA <sup>1</sup>	MFS <sup>2</sup>	MCA <sup>1</sup>	MFS <sup>2</sup>
MAH1024AE	380/420-50-3	7.1	15			8.5	15	12.0	15	15.5	20	19.0	20
MAH1030AE	380/420-50-3	9.9	15			9.9	15	12.3	15	15.8	20	19.3	20
MAH1036AE	380/420-50-3	10.1	15			10.1	15	12.3	15	15.8	20	19.3	20
MAH1042AE	380/420-50-3	10.1	15			10.1	15	11.8	15	15.3	20	18.8	20
MAH1048AE	380/420-50-3	11.3	15			11.3	15	12.9	15	16.4	20	19.9	20
MAH1060AE	380/420-50-3	13.4	20			13.4	20	13.4	20	16.4	20	19.9	20
MGH1072AE	380/420-50-3	16.9	25			16.9	25	16.9	25	16.9	25	19.9	25
MGH3090AE/K	380/420-50-3	18.7	20					18.7	20	18.7	20	19.5	20
MGH3120AE/K - A	380/420-50-3	26.1	30					26.1	30	26.1	30	26.1	30
MGH3120AE/K - B	380/420-50-3	26.1	30					26.1	30	26.1	30	26.1	30
MGH3150AE	380/420-50-3	31.4	35					31.4	35	31.4	35	31.4	35
MAH1018AF	220/240-50-1	11.7	15	30.1	35			52.8	60				
MAH1020AF	220/240-50-1	15.0	20	31.0	35			53.8	60				
MGH3090AF	220/240-50-1	45.0	50	45.0	50			54.6	60				
MGH3120AF - B	220/240-50-1	67.3	80	67.3	80			67.3	80				
MAH1024AG	200/220-50-3	14.0	20			22.3	25	32.1	35	42.0	45	51.8	60
MAH1030AG	200/220-50-3	17.3	25			22.8	25	32.7	35	42.5	45	52.3	60
MAH1036AG	200/220-50-3	18.8	25			22.8	25	32.7	35	42.5	45	52.3	60
MAH1042AG	200/220-50-3	21.5	30			21.9	30	31.7	35	41.6	45	51.4	60
MAH1048AG	200/220-50-3	24.2	35			24.2	35	33.7	35	43.5	45	53.4	60
MAH1060AG	200/220-50-3	25.8	40			25.8	40	33.7	40	43.5	45	53.4	60
MGH1072AG	200/220-50-3	34.7	50			34.7	50	34.7	50	43.5	50	53.4	60
MGH3090AG	200/220-50-3	41.3	50					41.3	50	42.8	50	52.7	60
MGH3120AG - A	200/220-50-3	50.3	60					50.3	60	50.3	60	56.2	60
MGH3120AG - B	200/220-50-3	50.3	60					50.3	60	50.3	60	56.2	60

<sup>1</sup>MCA = Minimum Circuit Ampacity (Wiring Size Amps)

<sup>2</sup>MFS = Maximum Fuse or HACR Breaker Size

<sup>3</sup>SPPE = Single Point Power Entry

<sup>4</sup>Top Supply/Center Return

<sup>5</sup>Center Supply/Top Return

MCA & MFS are calculated at 240 volts on the "A" & "C" models. The 480 volts "D" models are calculated at 480 volts. This chart should only be used as a guideline for estimating conductor size and overcurrent protection. For the requirements of specific units, always refer to the data label on the unit.

1. MFS (Maximum Fuses Size) value listed is the maximum value as per UL 60335-2-40 calculations for MOCP (branch-circuit conductor sizes in this chart are based on this MOCP). The actual factory installed Overcurrent Protective Device (Circuit Breaker) in the models may be lower than the maximum UL 60335-2-40 allowable MOCP value, but still above the UL 60335-2-40 minimum calculated value or Minimum Circuit Ampacity (MCA) listed.
2. The end user shall size conductors based on the Single Point Power Entry (SPPE) - Minimum Circuit Ampacity. The service circuit breaker shall not be sized less than the minimum circuit ampacity associated to Single Point Power Entry value provided. The service circuit breaker shall also not be sized greater than the Maximum Fuse size associated to the Single Point Power Entry Value Provided.
3. 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

## Summary Electrical Ratings (Wire and Circuit Breaker Sizing) -

*Air Conditioners with Electric Reheat ("R") with Single stage Compressors and Ventilation Configurations:  
Manual Damper, up to 15% Outside Air ("N") • Economizer, Outside Air with Pressure Relief ("C")  
Motorized Damper, up to 450 CFM of Outside Air with Pressure Relief ("D")*

ELECTRIC HEAT		000 = None		050 = 5 kw		060 = 6 kw		090 = 9 kw		120 = 12 kw		150 = 15 kw	
BASIC MODEL	VOLTS-HZ-PH	SPPE <sup>3</sup>		SPPE <sup>3</sup>		SPPE <sup>3</sup>		SPPE <sup>3</sup>		SPPE <sup>3</sup>		SPPE <sup>3</sup>	
		MCA <sup>1</sup>	MFS <sup>2</sup>	MCA <sup>1</sup>	MFS <sup>2</sup>	MCA <sup>1</sup>	MFS <sup>2</sup>	MCA <sup>1</sup>	MFS <sup>2</sup>	MCA <sup>1</sup>	MFS <sup>2</sup>	MCA <sup>1</sup>	MFS <sup>2</sup>
MAH1024AE	380/420-50-3	7.1	15			17.9	20	23.3	25	28.7	30	34.1	35
MAH1030AE	380/420-50-3	9.9	15			20.7	25	26.1	30	31.5	35	36.9	40
MAH1036AE	380/420-50-3	10.1	15			20.9	25	26.3	30	31.8	35	37.2	40
MAH1042AE	380/420-50-3	10.1	15			20.9	25	26.3	30	31.7	35	37.2	40
MAH1048AE	380/420-50-3	11.3	15			22.1	25	27.5	30	33.0	35	38.4	40
MAH1060AE	380/420-50-3	13.4	20			24.3	25	29.7	30	35.1	40	40.5	45
MGH1072AE	380/420-50-3	16.9	25			27.8	35	33.2	40	38.6	40	44.0	45
MGH3090AE/K	380/420-50-3	20.3	25					36.5	40	41.9	45	47.3	50
MGH3120AE/K - A	380/420-50-3	29.7	30					45.9	50	51.3	60	56.8	60
MGH3120AE/K - B	380/420-50-3	29.7	30					45.9	50	51.3	60	56.8	60
MGH3150AE	380/420-50-3	35.0	40					51.2	60	56.6	60	62.0	70
MAH1018AF	220/240-50-1	11.7	15	40.1	45			62.8	70				
MAH1020AF	220/240-50-1	15.0	20	43.4	45			66.2	70				
MGH3090AF	220/240-50-1	47.8	50	76.3	80			99.0	100				
MGH3120AF - B	220/240-50-1	73.9	90	102.3	110			125.1	150				
MAH1024AG	200/220-50-3	14.0	20			33.7	35	43.5	45	53.4	60	63.2	70
MAH1030AG	200/220-50-3	17.3	25			37.0	40	46.8	50	56.6	60	66.5	70
MAH1036AG	200/220-50-3	18.8	25			38.5	45	48.3	50	58.1	60	68.0	70
MAH1042AG	200/220-50-3	21.5	30			41.1	50	51.0	60	60.8	70	70.7	80
MAH1048AG	200/220-50-3	24.2	35			43.9	50	53.7	60	63.6	70	73.4	80
MAH1060AG	200/220-50-3	25.8	40			45.5	50	55.3	60	65.2	70	75.0	80
MGH1072AG	200/220-50-3	34.7	50			54.4	70	64.2	80	74.1	80	83.9	90
MGH3090AG	200/220-50-3	44.1	50					73.6	80	83.5	90	93.3	100
MGH3120AG - A	200/220-50-3	56.9	60					86.5	90	96.3	100	106.1	110
MGH3120AG - B	200/220-50-3	56.9	60					86.5	90	96.3	100	106.1	110

<sup>1</sup>MCA = Minimum Circuit Ampacity (Wiring Size Amps)

<sup>2</sup>MFS = Maximum Fuse or HACR Breaker Size

<sup>3</sup>SPPE = Single Point Power Entry

<sup>4</sup>Top Supply/Center Return

<sup>5</sup>Center Supply/Top Return

MCA & MFS are calculated at 240 volts on the "A" & "C" models. The 480 volts "D" models are calculated at 480 volts. This chart should only be used as a guideline for estimating conductor size and overcurrent protection. For the requirements of specific units, always refer to the data label on the unit.

- MFS (Maximum Fuses Size) value listed is the maximum value as per UL 60335-2-40 calculations for MOCP (branch-circuit conductor sizes in this chart are based on this MOCP). The actual factory installed Overcurrent Protective Device (Circuit Breaker) in the models may be lower than the maximum UL 60335-2-40 allowable MOCP value, but still above the UL 60335-2-40 minimum calculated value or Minimum Circuit Ampacity (MCA) listed.
- The end user shall size conductors based on the Single Point Power Entry (SPPE) - Minimum Circuit Ampacity. The service circuit breaker shall not be sized less than the minimum circuit ampacity associated to Single Point Power Entry value provided. The service circuit breaker shall also not be sized greater than the Maximum Fuse size associated to the Single Point Power Entry Value Provided.
- 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

## Unit Load Amps -

*Air Conditioners with with Single stage Compressors and Ventilation Configurations:  
Manual Damper, up to 15% Outside Air ("N") • Economizer, Outside Air with Pressure Relief ("C")  
Motorized Damper, up to 450 CFM of Outside Air with Pressure Relief ("D")*

BASIC MODEL	VOLTS-HZ-PH	Current Amps		Load of Resistive Heating - Elements Only (Amps)					Total Maximum Heating Amps				
		AC <sup>1</sup>	IBM <sup>2</sup>	5 kW	6 kW	9 kW	12 kW	15 kW	5 kW	6 kW	9 kW	12 kW	15 kW
MAH1024AE/K	380/420-50-3	6.1	1.4		8.7	13.0	17.3	21.7		10.1	14.4	18.7	23.1
MAH1030AE/K	380/420-50-3	8.5	1.7		8.7	13.0	17.3	21.7		10.4	14.7	19.0	23.4
MAH1036AE/K	380/420-50-3	8.7	1.7		8.7	13.0	17.3	21.7		10.4	14.7	19.0	23.4
MAH1042AE/K	380/420-50-3	8.6	1.2		8.7	13.0	17.3	21.7		9.9	14.2	18.5	22.9
MAH1048AE/K	380/420-50-3	9.8	2.3		8.7	13.0	17.3	21.7		11.0	15.3	19.6	24.0
MAH1060AE/K	380/420-50-3	11.5	2.3		8.7	13.0	17.3	21.7		11.0	15.3	19.6	24.0
MGH1072AE/K	380/420-50-3	14.3	2.3		8.7	13.0	17.3	21.7		11.0	15.3	19.6	24.0
MGH3090AE/K	380/420-50-3	17.2	1.9			13.0	17.3	21.7			14.9	19.2	23.6
MGH3120AE/K - A	380/420-50-3	26.2	5.2			13.0	17.3	21.7			18.2	22.5	26.9
MGH3120AE/K - B	380/420-50-3	26.2	5.2			13.0	17.3	21.7			18.2	22.5	26.9
MGH3150AE/K - B	380/420-50-3	30.0	3.0			13.0	17.3	21.7			16.0	20.3	24.7
MAH1018AF	220/240-50-1	9.9	1.7	22.7		40.9			24.4		42.6		
MAH1020AF	220/240-50-1	12.8	2.6	22.7		40.9			25.3		43.5		
MGH3090AF	220/240-50-1	40.1	3.5	22.7		40.9			26.2		44.4		
MGH3120AF - B	220/240-50-1	63.2	7.0	22.7		40.9			29.7		47.9		
MAH1024AG	200/220-50-3	12.0	2.6		15.7	23.6	31.5	39.4		18.3	26.2	34.1	42.0
MAH1030AG	200/220-50-3	14.9	3.1		15.7	23.6	31.5	39.4		18.8	26.7	34.6	42.5
MAH1036AG	200/220-50-3	16.1	3.1		15.7	23.6	31.5	39.4		18.8	26.7	34.6	42.5
MAH1042AG	200/220-50-3	18.1	2.2		15.7	23.6	31.5	39.4		17.9	25.8	33.7	41.6
MAH1048AG	200/220-50-3	20.7	4.2		15.7	23.6	31.5	39.4		19.9	27.8	35.7	43.6
MAH1060AG	200/220-50-3	22.0	4.2		15.7	23.6	31.5	39.4		19.9	27.8	35.7	43.6
MGH1072AG	200/220-50-3	29.1	4.2		15.7	23.6	31.5	39.4		19.9	27.8	35.7	43.6
MGH3090AG	200/220-50-3	37.1	3.5			23.6	31.5	39.4			27.1	35.0	42.9
MGH3120AG - A	200/220-50-3	49.6	7.0			23.6	31.5	39.4			30.6	38.5	46.4
MGH3120AG - B	200/220-50-3	49.6	7.0			23.6	31.5	39.4			30.6	38.5	46.4