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SUBMITTAL

22 SERIES

Specifications

Single Zone Mini-Split Inverter System

M4MHW2212A9N0B

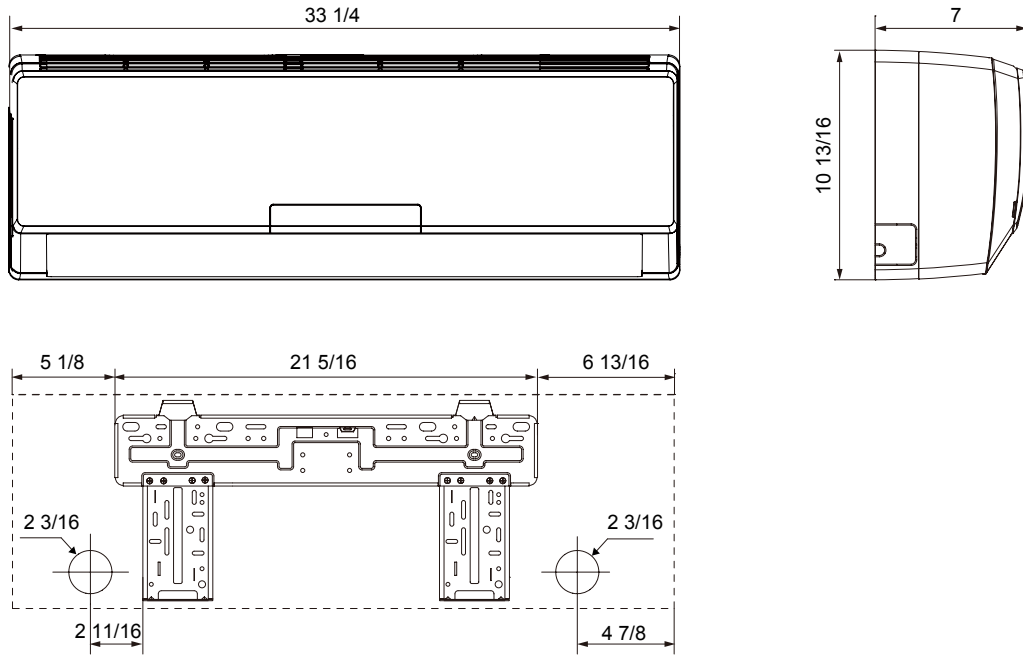
M4THS2212A91NB

MODEL – Heat Pump Only	M4MHW2212A9 / M4THS2212A9	
	Cooling	Heating
RATED Volts/PH	115 / 1	
Frequency (Hz)	60Hz	
Rated Cooling / Heating Capacity (Btu/h):	12000	13000
Minimum Cooling Capacity (@95°F) (Btu/h):	2600	0
Maximum Cooling Capacity (@95°F) (Btu/h):	13300	0
Minimum Heating Capacity (@47°F) (Btu/h):	0	2900
Maximum Heating Capacity (@47°F) (Btu/h):	0	13900
Maximum Heating Capacity (@17°F) (Btu/h):	0	xxxx
Maximum Heating Capacity (@ 5°F) (Btu/h):	0	7700
Total Capacity (W) (High/Standard/Low):	3900 / 3510 / 780	4080 / 3810 / 840
Rated Power Input (W)	1000	1200
Nominal Input Current (A)	12.0	14.5
SEER / HSPF	20.0	9.6
Air Flow Volume (CFM) (H/M/L)	335 / 282 / 247 / 206	
Dehumidifying Volume (pt./h)	2.96	
EER / COP (@95°F)	12.0	10.8
Indoor Unit		
M4MHW2212A9N0		
Fan Motor Speed (r/min) (SH/H/M/L/Q)	1290/1100/950/750	1320/1200/1050/950
Fan Motor RLA(A)	0.3	
Evaporator	Aluminum Fin-Copper Tube	
Pipe Diameter (inch)	0.28	
Row Fin Gap (inch)	2 - 1/16	
Coil length (L) x depth (D) x coil width (W) (inch)	25.4 x 1 x 10.5	
Output of Swing Motor (W)	2.0	
Fuse (A)	3.15	
Sound Power Level dB (A)(SH/H/M/L)	52 / 49 / 46 / 43	
Sound PRESSURE Level dB (A)(SH/H/M/L) ①	42 / 39 / 36 / 33	
Uncrated Dimension (W/H/D) (inch)	33.3 x 10.8 x 7.1	
Crated Dimension of Package (L/W/H) (inch)	36.1 x 10.2 x 14.6	
Net Weight /Gross Weight (lbs)	20.9 / 27.6	
Outdoor Unit		
M4THS2212A91N		
Compressor Type	Variable Speed Rotary	
Compressor Oil	RB68EP (POE Oil)	
Compressor RLA(A)	15.0	
Compressor Power Input(W)	942	
Throttling Method	EEV	
Working Temp Range (°F)	0 - 109	5 - 75
Condenser	Aluminum Fin-Copper Tube	
Pipe Diameter (inch)	Ø3/8	
Row Fin Gap (inch)	2 - 1/16	
Coil length (L) x depth (D) x coil width (W) (inch)	29.4 x 1.75 x 22	
Fan Motor Speed (rpm)	900	
Output of Fan Motor (W)	15	
Fan Motor RLA (A)	0.46	
Air Flow Volume of Outdoor Unit (CFM)	1177	
Fan Diameter (inch)	15.8	
Defrosting Method	Automatic Defrosting	
Sound Power Level dB (A)	62	
Sound PRESSURE Level dB (A) ①	52	
Uncrated Dimension (W/H/D) (inch)	33.4 x 23.3 x 12.6	
Crated Dimension of Package (L/W/H) (inch)	34.7 x 14.3 x 25.4	
Net Weight /Gross Weight (lbs)	76.1 / 84.9	
Refrigerant Charge (oz)	45.9	
MCA	20.0	
MOP	30.0	
Connection Pipe		
Gas additional charge(oz/ft)	0.2	
Outer Diameter Liquid Pipe (inch)	1/4	
Outer Diameter Gas Pipe (inch)	3/8	
Max Height Distance (ft)	33	
Max Length Distance (ft)	66	

① Sound PRESSURE Level @ 3.3 ft. dB(A)

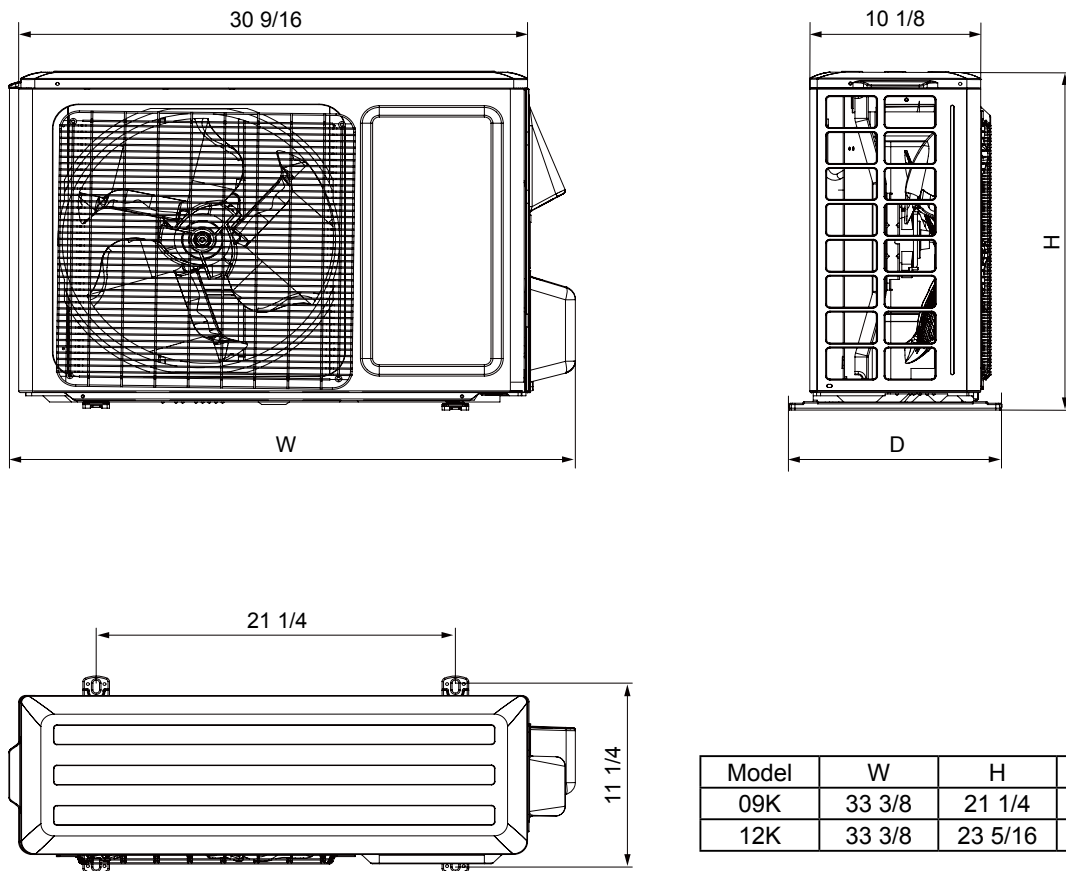
Unit Dimensions

Indoor Unit



Unit: inch

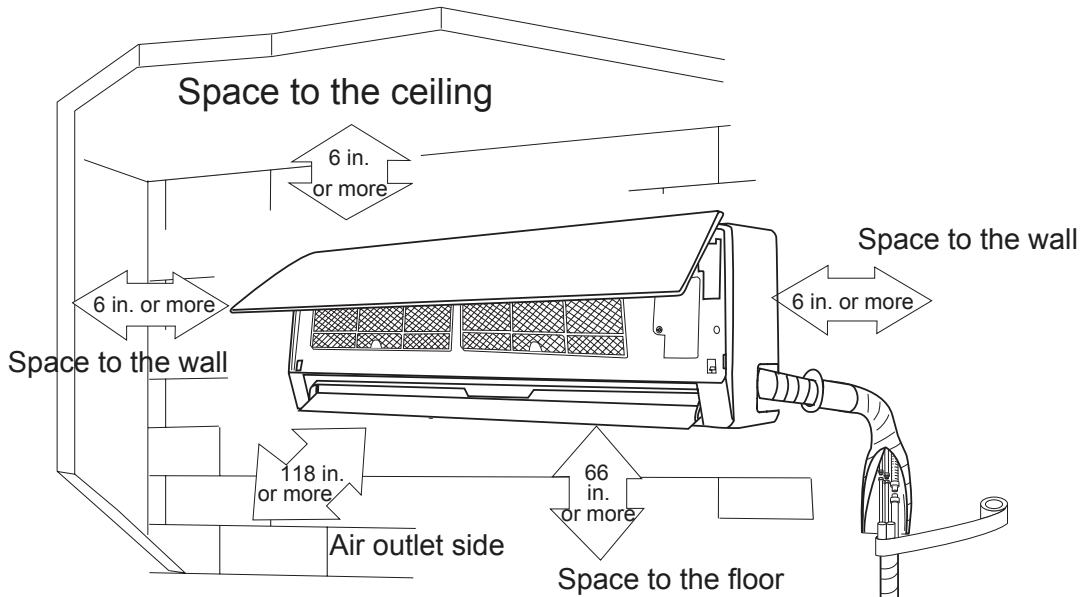
Outdoor Unit



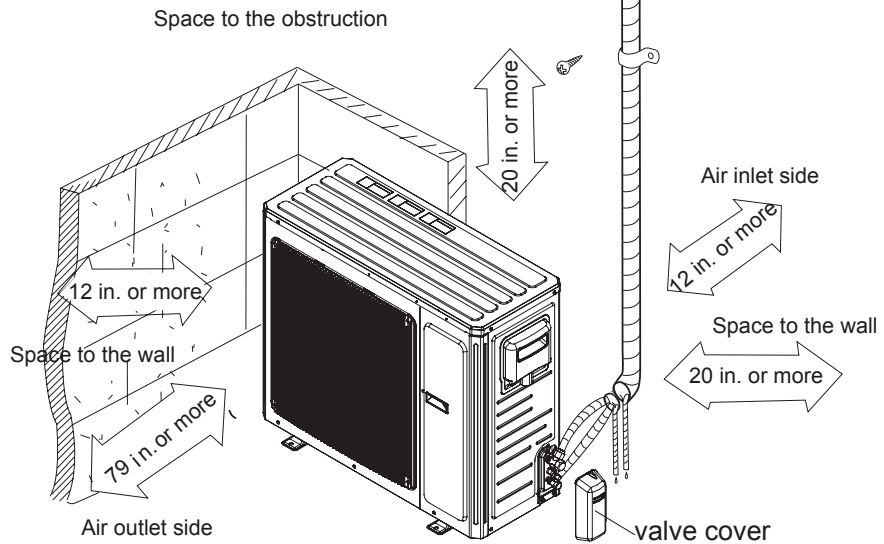
Unit: inch

Model	W	H	D
09K	$33 \frac{3}{8}$	$21 \frac{1}{4}$	$12 \frac{5}{8}$
12K	$33 \frac{3}{8}$	$23 \frac{5}{16}$	$12 \frac{5}{8}$

Clearance Requirements



The dimensions of the space necessary for correct installation of the appliance including the minimum permissible distances to adjacent structures



NOTE:

The maximum recommended height from the floor to the bottom of the indoor unit is 11.5 ft. (3.5 m).

Air Velocity Patterns for High Wall		
Max Horizontal Distance		
Unit: ft. (m)		
Model	Cooling Mode	Heating Mode
M4MHW2212A9	29.5 (9)	19.7 (6)

Unit Capacities 12K Cooling

Cooling 12K

Outdoor		Indoor Coil Temperature																	
		65F DB (18C)		68F DB (20C)		73F DB (23C)		79F DB (26C)		80F DB (27C)		82F DB (28C)		86F DB (30C)		90F DB (32C)			
DB (°F)	DB (°C)	55F WB (13C)	57F WB (14C)	61F WB (16C)	64F WB (18C)	67F WB (19C)	68F WB (20C)	70F WB (21C)	71F WB (21.5C)	72F WB (22C)	74F WB (23C)	76F WB (24C)	78F WB (25C)	80F WB (26C)	82F WB (27C)	84F WB (28C)	86F WB (29C)	88F WB (30C)	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
0	-18	5900	4600	6500	5100	6800	5300	7300	5700	7700	6000	7800	6100	8000	6300	8700	6600	9100	6800
5	-15	6200	4800	6800	5300	7200	5600	7700	6000	8100	6300	8200	6500	8400	6600	9000	6800	9400	7100
10	-12	6600	5200	7200	5700	7600	6000	8200	6400	8600	6800	8800	6900	9000	7000	9400	7100	9700	7600
15	-9	7000	5500	7700	6000	8100	6400	8700	6800	9200	7200	9400	7300	9600	7500	9900	7600	10100	8100
20	-7	7500	5900	8100	6300	8600	6800	9200	7200	9800	7700	10000	7800	10300	8000	10600	8100	10900	8600
25	-4	7800	6100	8400	6600	9000	7100	9600	7500	10300	8100	10500	8200	10800	8500	11100	8600	11400	8900
30	-1	8100	6300	8700	6800	9300	7300	9900	7700	10600	8300	10800	8500	11100	8700	11400	8800	11700	9200
35	2	8300	6500	8900	7000	9500	7500	10200	8000	10900	8600	11100	8700	11400	8900	11700	9000	12000	9400
40	4	8500	6700	9200	7200	9800	7700	10400	8200	11200	8800	11400	9000	11700	9200	12000	9300	12400	9700
45	7	8800	6900	9400	7400	10100	7900	10700	8400	11500	9000	11700	9200	12000	9400	12300	9500	12700	10000
50	10	9000	7000	9700	7600	10300	8100	11000	8600	11900	9300	12000	9400	12400	9700	12500	9800	13000	10200
55	13	9200	7200	9900	7800	10600	8300	11300	8900	12200	9600	12300	9700	12700	10000	12600	10100	13400	10500
60	16	9600	7500	10300	8000	11000	8600	11700	9100	12600	9900	12700	10100	13100	10200	13000	10200	13800	10800
65	18	10300	8100	11000	8600	11700	9200	12300	9600	13300	10400	13400	10300	14000	10700	13700	10400	14500	11400
70	21	10700	8400	11400	9000	12200	9500	12600	9900	13700	10700	13800	10400	14400	10900	14100	10500	14900	11700
75	24	10600	8300	11400	8900	12100	9500	12600	9900	13700	10700	13800	10400	14400	10900	14100	10500	14900	11600
80	27	10400	8200	11100	8700	11900	9300	12400	9700	13500	10500	13700	10200	14300	10700	14000	10300	14700	11500
85	29	10100	7900	10800	8500	11600	9100	12100	9500	13300	10300	13500	10000	14100	10600	13900	10100	14400	11300
90	32	9800	7700	10500	8200	11200	8800	11900	9300	13000	10100	13300	9800	13800	10400	13700	9900	14100	11000
95	35	9500	7400	10200	8000	10900	8500	11600	9100	12700	9900	13200	9500	13500	10200	13400	9600	13800	10800
100	38	9200	7200	9900	7800	10600	8300	11300	8900	12400	9700	13100	9400	13200	10000	13100	9400	13500	10600
105	41	8900	7000	9600	7600	10400	8100	11100	8700	12100	9500	13000	9200	12900	9800	12800	9200	13200	10300
110	43	8600	6800	9400	7300	10100	7900	10800	8500	11800	9100	12800	9000	12700	9600	12600	9000	12900	10100
115	46	8400	6600	9100	7200	9800	7700	10500	8300	11600	8900	12600	8800	12500	9400	12400	8800	12700	9900
120	49	8300	6500	9000	7100	9600	7500	10300	8100	11400	8800	12400	8600	12300	9200	12200	8600	12400	9700
122	50	8200	6400	9000	7000	9600	7500	10300	8000	11400	8800	12400	8600	12300	9100	12200	8600	12300	9600

TC = Total Capacity

SHC = Sensible Heat Capacity

Unit Capacities 12K Heating

Heating 12K

		Indoor Coil Temperature											
Outdoor		65F DB (18C)	68F DB (20C)	73F DB (23C)	79F DB (26C)	80F DB (27C)	82F DB (28C)	86F DB (30C)					
Coil air		55F WB (13C)	57F WB (14C)	61F WB (16C)	64F WB (18C)	67F WB (19C)	68F WB (20C)	72F WB (22C)					
DB (°F)	DB (°C)	TC	TC	TC	TC	TC	TC	TC	TC	TC	TC	TC	TC
-4	-20	6800	6700	6600	6800	6800	6900	6300					
0	-18	7300	7300	7100	7400	7400	7500	6900					
5	-15	7700	7600	7500	7700	7700	7800	7200					
10	-12	8100	8000	7900	8100	8100	8200	7500					
15	-9	8300	8200	8100	8300	8400	8400	7700					
20	-7	8700	8600	8400	8700	8800	8900	8100					
25	-4	9600	9500	9300	9600	9700	9800	9000					
30	-1	10300	10200	10000	10300	10400	10500	9700					
35	2	11000	10900	10700	11100	11100	11200	10400					
40	4	11700	11600	11400	11800	11900	12000	11100					
45	7	12700	12600	12400	12800	12800	13000	11900					
50	10	13300	13100	12900	13300	13400	13500	12400					
55	13	13400	13300	13100	13500	13600	13700	12500					
60	16	13700	13600	13300	13700	13800	14000	12800					
65	18	14000	13800	13600	14000	14100	14300	13000					
70	21	14200	14100	13800	14200	14300	14500	13200					
75	24	14400	14300	14000	14400	14500	14700	13400					
78	26	14500	14400	14100	14600	14700	14800	13500					

TC = Total Capacity

Mechanical Specifications

Mini-Split Outdoor Unit

General

This unit is fully charged from the factory for up to 25 feet of piping. This unit is designed to operate at outdoor ambient temperatures as high as 115°F. Cooling capacities with the mini-split air handler shown in the catalog are AHRI certified. The unit is ETL listed for outdoor application.

Unit Casing

The unit casing is constructed of heavy gauge, galvanized steel and painted with a weather-resistant powder paint.

Refrigerant Controls

Refrigeration system controls include condenser fan and compressor relay. High and low pressure controls are inherent to the compressor. A suction line multi function service valve is standard

Compressor

The compressor features internal over temperature and pressure protection; total dipped hermetic motor windings. Other features include: centrifugal oil pump and low vibration and noise.

Condenser Coil

The coil shall consist of aluminum finned coils brazed to copper tubing. The coil provides air flow resistance and efficient heat transfer. The coil is protected by the casing.

Low Ambient Cooling

Matched ductless products, have cooling capabilities at outdoor ambient temperatures as low as 0° F.

Mini-Split Indoor High Wall

General

The High Wall mounted type air handler shall be completely factory assembled including coil, condensate drain pan, fan motor, washable filter, air purifying filter and electric controls to be used with a wireless remote controller. Unit shall be shipped with a unit mounting plate. Unit shall be matched with an outdoor unit, rated and tested in accordance with AHRI standard. Unit shall be ETL listed.

Unit Casing

Casing shall be provided with knockouts on the right, and left of the unit to facilitate piping and electrical connection on either side of the unit. An electrical service cover shall be provided to permit easy access to the electrical terminal strip.

Discharge Airflow and Distribution System

Unit shall have auto swing, dual horizontal blades to optimize the aperture outlet for vertical airflow and air distribution. Blade shall close automatically when the air conditioner is turned off to minimize dust entering the unit. Five-Step preset program on the remote controller shall be available to control the blade angle.

Manually adjusted wide-angle louvers shall be provided to adjust the coverage and direction of airflow.

Controls

Units shall have the capability to be controlled remotely through wall-mounted wired options (**sold separately**) as well as a wireless remote option.

Remote Controller

The unit shall have a wireless infrared remote controller with easy reading digital display panel to start, stop and regulate the air conditioner from a distance.

The wireless controller is included with all units.

Healthy Filters

The unit shall have an active carbon and catechin filter with the unit. The filters need to be cleaned at least once a year.

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