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SUBMITTAL

22 SERIES

Single Zone Mini-Split Inverter System

M4MHW2209A9N0B

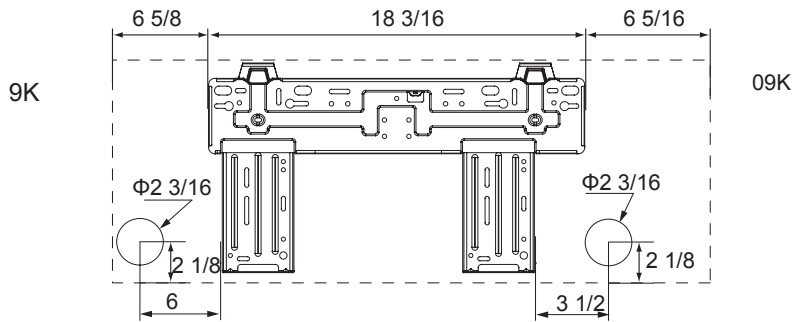
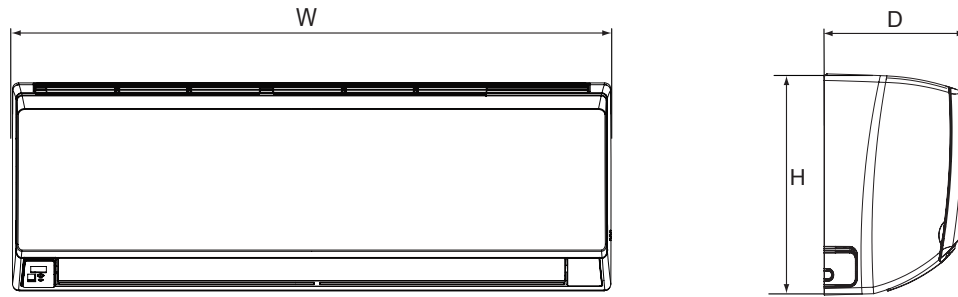
M4THS2209A91NB

Specifications

MODEL – Heat Pump Only	M4MHW2209A / M4THS2209A	
	Cooling	Heating
RATED Volts/PH	115 / 1	
Frequency (Hz)	60Hz	
Rated Cooling / Heating Capacity (Btu/h):	9000	9500
Minimum Cooling Capacity (@95°F) (Btu/h):	2500	0
Maximum Cooling Capacity (@95°F) (Btu/h):	11600	0
Minimum Heating Capacity (@47°F) (Btu/h):	0	2400
Maximum Heating Capacity (@47°F) (Btu/h):	0	12900
Maximum Heating Capacity (@17°F) (Btu/h):	0	xxxx
Maximum Heating Capacity (@ 5°F) (Btu/h):	0	5700
Total Capacity (W) (High/Standard/Low):	3390 / 2610 / 750	3780 / 2760 / 690
Rated Power Input (W)	680	700
Nominal Input Current (A)	8.2	8.5
SEER / HSPF	22.0	9.8
Air Flow Volume (CFM) (H/M/L)	335 / 282 / 247 / 206	
Dehumidifying Volume (pt./h)	1.69	
EER / COP (@95°F)	13.2	13.6
Indoor Unit		
M4MHW2209A9N0		
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)	50 / 47 / 45 / 42	
Sound PRESSURE Level dB (A)(SH/H/M/L) ①	40 / 37 / 35 / 32	
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		
M4THS2209A91N		
Compressor Type	Variable Speed Rotary	
Compressor Oil	RB68EP (POE Oil)	
Compressor RLA(A)	14.0	
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 20	
Fan Motor Speed (rpm)	900	
Output of Fan Motor (W)	15	
Fan Motor RLA (A)	0.46	
Air Flow Volume of Outdoor Unit (CFM)	1060	
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 21.3 x 12.6	
Crated Dimension of Package (L/W/H) (inch)	34.7 x 14.3 x 23.4	
Net Weight /Gross Weight (lbs)	73.9 / 82.7	
Refrigerant Charge (oz)	41.3	
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)	49	

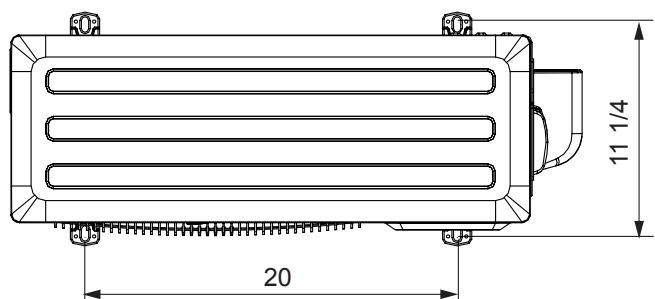
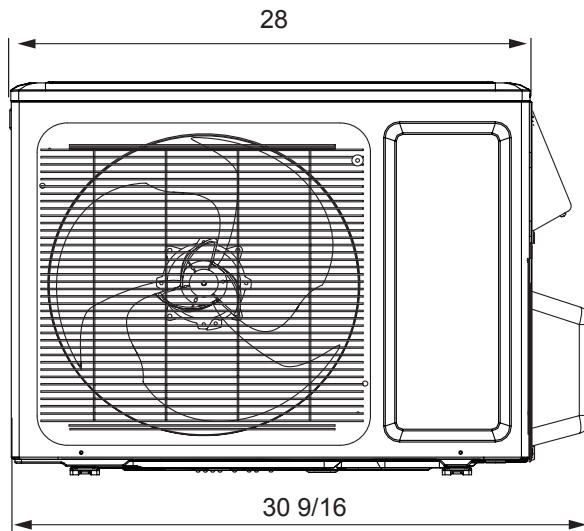
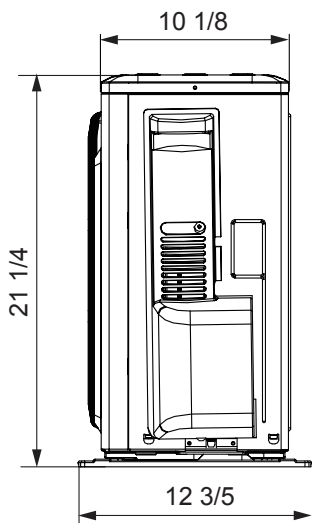
① Sound PRESSURE Level @ 3.3 ft. dB(A)

Unit Dimensions

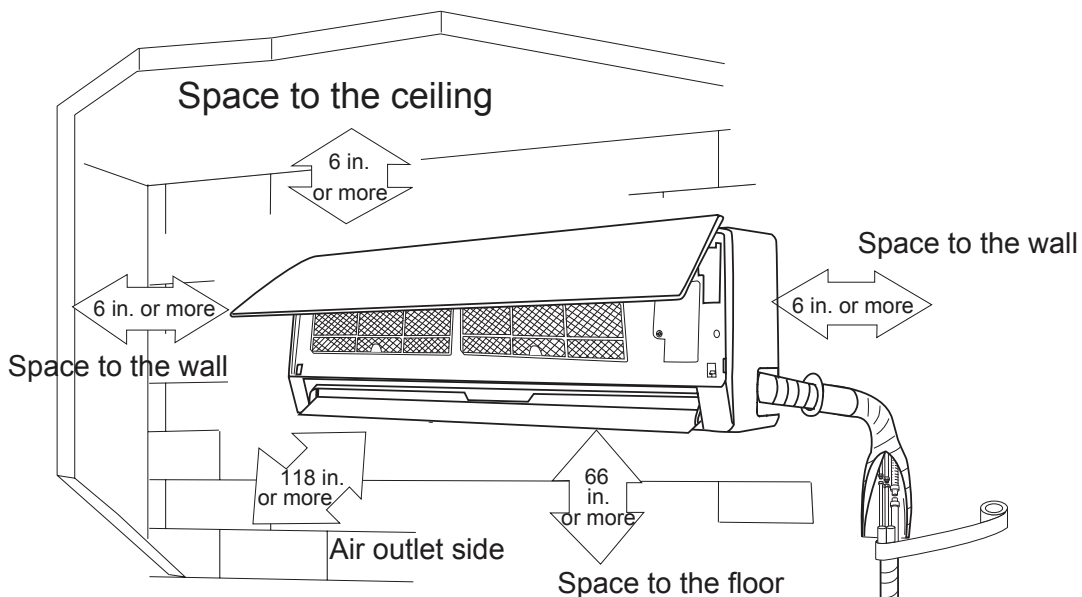


Unit: inch

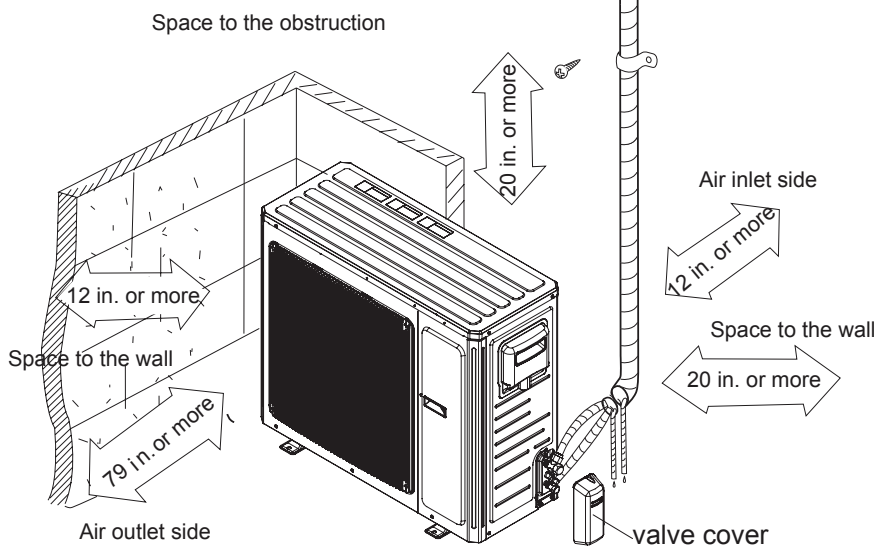
MODEL	W	H	D
09K	$31 \frac{1}{8}$	$10 \frac{5}{6}$	$7 \frac{7}{8}$
12K	$33 \frac{1}{4}$	$11 \frac{3}{8}$	$8 \frac{1}{4}$



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
M4MHW2209A	13.1 (4)	13.1 (4)

Unit Capacities 9K Cooling

Cooling 9K

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)				
Coil air	DB (°F)	55F WB (13C)	57F WB (14C)	61F WB (16C)	64F WB (18C)	67F WB (19C)	68F WB (20C)	71F WB (21C)	72F WB (22C)	75F WB (24C)	77F WB (25C)	78F WB (26C)	80F WB (27C)	81F WB (28C)	83F WB (29C)	85F WB (30C)	87F WB (31C)	89F WB (32C)		
DB (°C)	DB (°F)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	
0	-18	5100	4000	5600	4400	5900	4700	6400	5000	6700	5300	6800	5500	7100	6800	7000	5300	6800	5500	7600
5	-15	5200	4000	5800	4500	6100	4800	6500	5100	7100	5500	7100	5500	7300	7000	7300	5600	7100	5800	7900
10	-12	5500	4300	6000	4700	6400	5000	6800	5300	7400	5800	7500	5800	7700	7400	7700	5900	7500	6000	8200
15	-9	5900	4600	6300	4900	6800	5300	7200	5600	7800	6100	7900	6100	8000	7800	8200	6200	7900	6400	8600
20	-7	6600	5100	7100	5500	7500	5900	8000	6300	8500	6600	8600	6600	8700	8500	9100	6700	8600	7200	9600
25	-4	7200	5600	7700	6000	8200	6500	8700	6800	9100	7100	9200	7100	9200	9100	9900	7200	9200	7700	10500
30	-1	7700	6100	8300	6500	8800	6900	9200	7200	9600	7500	9700	7500	9700	9600	10300	7600	9700	8100	11000
35	2	7900	6200	8500	6600	9000	7000	9400	7300	9700	7600	9800	7600	9800	9700	10400	7700	9800	8200	11200
40	4	7900	6200	8400	6600	8900	7000	9300	7300	9700	7600	9800	7600	9800	9700	10400	7700	9800	8100	11100
45	7	7800	6100	8300	6500	8800	6900	9200	7200	9600	7500	9700	7500	9700	9600	10300	7600	9700	8100	11000
50	10	7700	6000	8200	6400	8700	6800	9100	7100	9600	7500	9700	7500	9700	9600	10200	7600	9700	8000	10900
55	13	7500	5900	8100	6300	8600	6700	9000	7100	9500	7400	9600	7400	9600	9500	10100	7500	9600	7900	10800
60	16	7400	5800	8000	6200	8500	6600	8900	7000	9400	7300	9500	7300	9500	9400	10100	7400	9500	7900	10700
65	18	7300	5700	7800	6100	8400	6600	8800	6900	9300	7300	9400	7300	9400	9300	10000	7300	9400	7800	10600
70	21	7200	5600	7700	6000	8300	6500	8700	6800	9200	7200	9300	7200	9300	9200	9900	7300	9300	7800	10500
75	24	7100	5500	7600	5900	8100	6400	8600	6800	9000	7100	9100	7100	9100	9000	9800	7100	9100	7700	10400
80	27	7000	5400	7500	5900	8000	6300	8500	6700	8900	7000	9000	7000	9000	8900	9700	7100	9000	7600	10200
85	29	6900	5400	7400	5800	7900	6200	8400	6600	8800	6900	8900	6900	8900	8800	9600	7000	8900	7500	10100
90	32	6800	5300	7300	5700	7800	6100	8300	6500	8700	6900	8800	6900	8800	8700	9500	7000	8900	7400	10000
95	35	6600	5200	7200	5600	7700	6000	8200	6400	8600	6800	8700	6800	8700	8600	9400	6900	8800	7400	9900
100	38	6500	5100	7100	5500	7600	6000	8100	6400	8500	6700	8600	6700	8600	8500	9300	6800	8700	7300	9800
105	41	6400	5000	7000	5500	7500	5900	8000	6300	8400	6700	8500	6700	8500	8400	9200	6700	8600	7200	9700
110	43	6300	5000	6900	5400	7400	5800	7900	6200	8300	6600	8400	6600	8400	8300	9100	6700	8500	7100	9600
115	46	6200	4900	6800	5300	7300	5700	7800	6100	8200	6500	8300	6500	8300	8200	9000	6600	8400	7000	9500
120	49	6100	4800	6700	5200	7100	5600	7700	6000	8100	6400	8200	6400	8200	8100	8900	6400	8300	6900	9300
122	50	6100	4800	6600	5200	7100	5500	7600	6000	8100	6300	8100	6300	8100	8000	8800	6400	8300	6800	9200

TC = Total Capacity

SHC = Sensible Heat Capacity

Unit Capacities 9K Heating

Heating 9K

Outdoor		Indoor Coil Temperature											
		65F DB (18C) 55F WB (13C)	68F DB (20C) 57F WB (14C)	73F DB (23C) 61F WB (16C)	79F DB (26C) 64F WB (18C)	80F DB (27C) 67F WB (19C)	82F DB (28C) 68F WB (20C)	86F DB (30C) 72F WB (22C)					
DB (°F)	DB (°C)	TC	TC	TC	TC	TC	TC	TC	TC	TC	TC	TC	TC
-4	-20	5100	4900	4900	4800	4800	4800	4800	4800	4800	4700	4700	4600
0	-18	5500	5400	5300	5200	5200	5200	5200	5200	5200	5100	5100	5000
5	-15	5800	5600	5500	5500	5500	5500	5500	5500	5500	5300	5300	5200
10	-12	6100	5900	5800	5800	5800	5800	5800	5800	5700	5600	5600	5500
15	-9	6200	6000	6000	5900	5900	5900	5900	5900	5900	5800	5800	5600
20	-7	6500	6300	6300	6100	6100	6100	6200	6200	6200	6000	6000	5900
25	-4	7200	7000	6900	6800	6800	6800	6800	6800	6800	6700	6700	6600
30	-1	7700	7500	7400	7300	7300	7300	7300	7300	7300	7200	7200	7100
35	2	8200	8000	7900	7800	7800	7800	7800	7800	7800	7700	7700	7600
40	4	8700	8500	8400	8300	8300	8300	8300	8300	8300	8200	8200	8100
45	7	9500	9200	9200	9000	9000	9000	9000	9000	9000	8900	8900	8700
50	10	10000	9700	9600	9500	9500	9500	9500	9400	9400	9200	9200	9000
55	13	10100	9800	9700	9600	9600	9600	9600	9500	9500	9400	9400	9100
60	16	10300	10000	9900	9800	9800	9800	9800	9700	9700	9500	9500	9300
65	18	10500	10200	10100	10000	10000	10000	10000	9900	9900	9700	9700	9500
70	21	10700	10400	10300	10200	10200	10200	10200	10100	10100	9900	9900	9600
75	24	10800	10500	10400	10300	10300	10300	10300	10200	10200	10000	10000	9800
78	26	10900	10600	10500	10400	10400	10400	10400	10300	10300	10100	10100	9900

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 Remote Controller 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.

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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