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## SUBMITTAL

### 23 SERIES

### Specifications – IP

### Single Zone Mini-Split Inverter System

M4MHW2324A1N0A

M4THS2324A11NA

<b>MODEL - Heat Pump Only</b>	<b>M4MHW2324A1N0A / M4THS2324A11NA</b>	
	<b>Cooling</b>	<b>Heating</b>
RATED Volts/PH	208 / 230 / 1	
Frequency (Hz)	60Hz	
Rated Cooling / Heating Capacity (Btu/h):	22000	24000
Minimum Cooling Capacity (@95°F) (Btu/h): ②	3400	-
Maximum Cooling Capacity (@95°F) (Btu/h): ②	28500	-
Minimum Heating Capacity (@47°F) (Btu/h): ②	-	4300
Maximum Heating Capacity (@47°F) (Btu/h): ②	-	33600
Rated Heating Capacity (@17°F) (Btu/h): ②	-	-
Total Capacity (W) (High/Standard/Low):	8350/6450/1000	9850/7040/1250
Nominal Power Input (W)	1692	1846
Nominal Input Current (A)	13	14.5
SEER / HSPF	23	11
EER (Btu/h)/W / COP	13	3.81
Air Flow Volume (CFM) ③	824/588/571/500/471/441/400	
Dehumidifying Volume (pt./h)	5.1	
<b>Indoor Unit</b>	<b>M4MHW2324A1N0A</b>	
Fan Motor Speed (r/min)	1500/1150/1100/1000/ 950/900/850	1500/1200/1100/1050/ 1000/950/900
Fan Motor RLA(A)	0.4	
Evaporator	Aluminum Fin-Copper Tube	
Pipe Diameter (inch)	2/7	
Rows - Fin Gap (inch)	2-1/18	
Coil length (L) x depth (D) x coil width (W) (inch)	33.27x1x13.5	
Output of Swing Motor (W)	1.5	
Fuse (A)	3.15	
Sound PRESSURE Level dB (A) ① ③	53/45/44/41/39/37/35	
Uncrated Dimension (W/H/D) (inch)	42 21/64x13 7/64x9 44/64	
Crated Dimension of Package (L/W/H) (inch)	44 39/64x16 19/64x13 7/64	
Net Weight /Gross Weight (lbs)	35.3 / 41.9	
<b>Outdoor Unit</b>	<b>M4THS2324A11NA</b>	
Compressor Type	Twin Rotary	
Compressor Oil Type	FW68DA	
Compressor RLA(A)	10.68	
Compressor Power Input(W)	1610	
Throttling Method	EEV	
Working Temp Range (°F)	-20 ~ 122	-22 ~ 86
Condenser	Aluminum Fin-Copper Tube	
Pipe Diameter (inch)	18/64	
Rows - Fin Gap (inch)	2-4/64	
Coil length (L) x depth (D) x coil width (W) (inch)	37 31/64 x 1 32/64 x 29 29/64	
Fan Motor Speed (rpm)	800	
Output of Fan Motor (W)	90	
Fan Motor RLA (A)	0.7	
Air Flow Volume of Outdoor Unit (CFM)	2353	
Fan Diameter (inch)	21 42/64	
Defrosting Method	Automatic Defrosting	
Sound PRESSURE Level dB (A) ①	59	
Uncrated Dimension (W/H/D) (inch)	39 31/64 x 31 7/64 x 16 52/64	
Crated Dimension of Package (L/W/H) (inch)	42 41/64 x 19 14/64 x 33 42/64	
Net Weight /Gross Weight (lbs)	124.6 / 135.6	
Refrigerant Charge (oz)	63.5	
MCA	16	
MOP	25	
<b>Connection Pipe</b>		
Gas additional charge(oz/ft)	0.5	
Outer Diameter Liquid Pipe (inch)	1/4	
Outer Diameter Gas Pipe (inch)	5/8	
Max Height Distance (ft)	65.6	
Max Length Distance (ft)	98.4	

- ① Sound PRESSURE Level @ 3.3 ft. dB(A)
- ② Capacities based on fixed compressor speed AHRI validation testing
- ③ At noted fan motor speeds

# Specifications – SI

<b>MODEL - Heat Pump Only</b>	<b>M4MHW2324A1N0A / M4THS2324A11NA</b>	
	<b>Cooling</b>	<b>Heating</b>
RATED Volts/PH Frequency (Hz)	208 / 230 / 1 60Hz	
Rated Cooling / Heating Capacity (Btu/h):	22000	24000
Minimum Cooling Capacity (@35°C) (Btu/h): ②	3400	-
Maximum Cooling Capacity (@35°C) (Btu/h): ②	28500	-
Minimum Heating Capacity (@8.3°C) (Btu/h): ②	-	4300
Maximum Heating Capacity (@8.3°C) (Btu/h): ②	-	33600
Rated Heating Capacity (@-8.3°C) (Btu/h): ②	-	-
Total Capacity (W) (High/Standard/Low):	8350/6450/1000	9850/7040/1250
Nominal Power Input (W)	1692	1846
Nominal Input Current (A)	13	14.5
SEER / HSPF	23	11
EER (Btu/h)/W / COP	13	3.81
Air Flow Volume (m³/h) ③	1400/1000/970/850/800/750/680	
Dehumidifying Volume (L/h)	2.40	
<b>Indoor Unit</b>		
<b>M4MHW2324A1N0A</b>		
Fan Motor Speed (r/min)	1500/1150/1100/1000/ 950/900/850	1500/1200/1100/1050/ 1000/950/900
Fan Motor RLA(A)	0.40	
Evaporator	Aluminum Fin-Copper Tube	
Pipe Diameter (mm)	φ 7	
Rows - Fin Gap (mm)	2-1.4	
Coil length (L) x depth (D) x coil width (W) (mm)	845×25.4×342.9	
Output of Swing Motor (W)	1.5	
Fuse (A)	3.15	
Sound PRESSURE Level dB (A) ① ③	53/45/44/41/39/37/35	
Uncrated Dimension (W/H/D) (mm)	1075×333×246	
Crated Dimension of Package (L/W/H) (mm)	1133×414×333	
Net Weight /Gross Weight (kg)	16/19	
<b>Outdoor Unit</b>		
<b>M4THS2324A11NA</b>		
Compressor Type	Twin Rotary	
Compressor Oil Type	FW68DA	
Compressor RLA(A)	10.68	
Compressor Power Input(W)	1610	
Throttling Method	EEV	
Working Temp Range (°C)	-29 ~ 50	-30 ~ 30
Condenser	Aluminum Fin-Copper Tube	
Pipe Diameter (mm)	φ 7.94	
Rows - Fin Gap (mm)	2 - 1.4	
Coil length (L) x depth (D) x coil width (W) (mm)	952×38.1×748	
Fan Motor Speed (rpm)	800	
Output of Fan Motor (W)	90	
Fan Motor RLA (A)	0.7	
Air Flow Volume of Outdoor Unit (m³/h)	4000	
Fan Diameter (mm)	550	
Defrosting Method	Automatic Defrosting	
Sound PRESSURE Level dB (A)①	59	
Uncrated Dimension (W/H/D) (mm)	1003×790×427	
Crated Dimension of Package (L/W/H) (mm)	1083×488×855	
Net Weight /Gross Weight (kg)	56.5 / 61.5	
Refrigerant Charge (kg)	1.8	
MCA	16	
MOP	25	
<b>Connection Pipe</b>		
Gas additional charge(g/m)	50	
Outer Diameter Liquid Pipe (mm)	φ 6	
Outer Diameter Gas Pipe (mm)	φ 16	
Max Height Distance (m)	20	
Max Length Distance (m)	30	

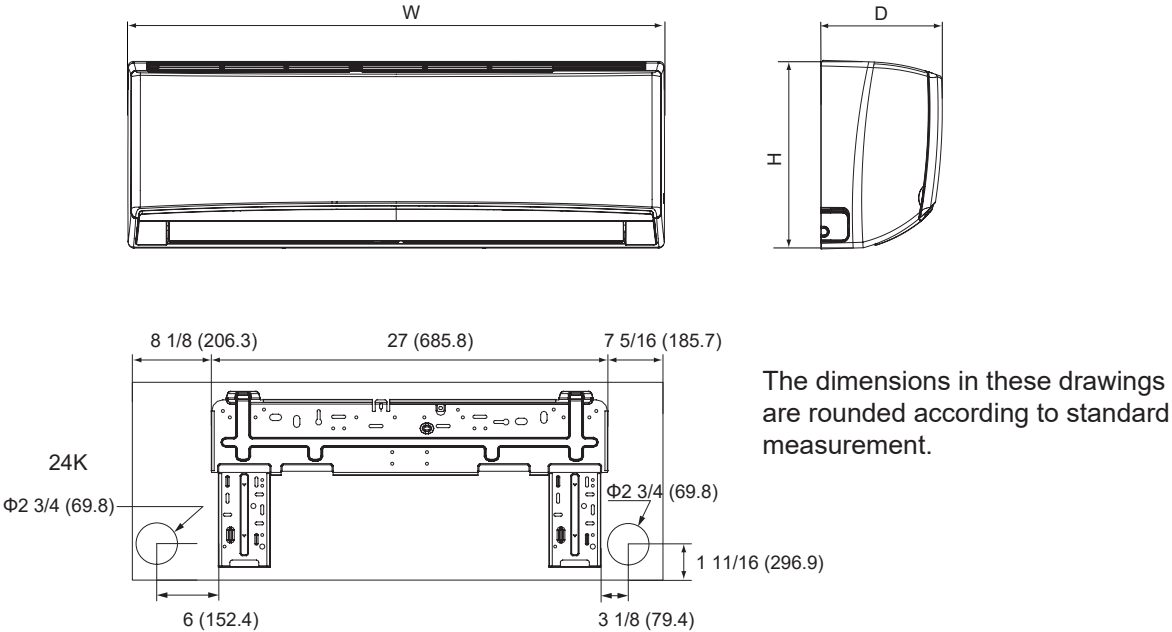
① Sound PRESSURE Level @ 1m dB(A)

② Capacities based on fixed compressor speed AHRI validation testing

③ At noted fan motor speeds

# Unit Dimensions

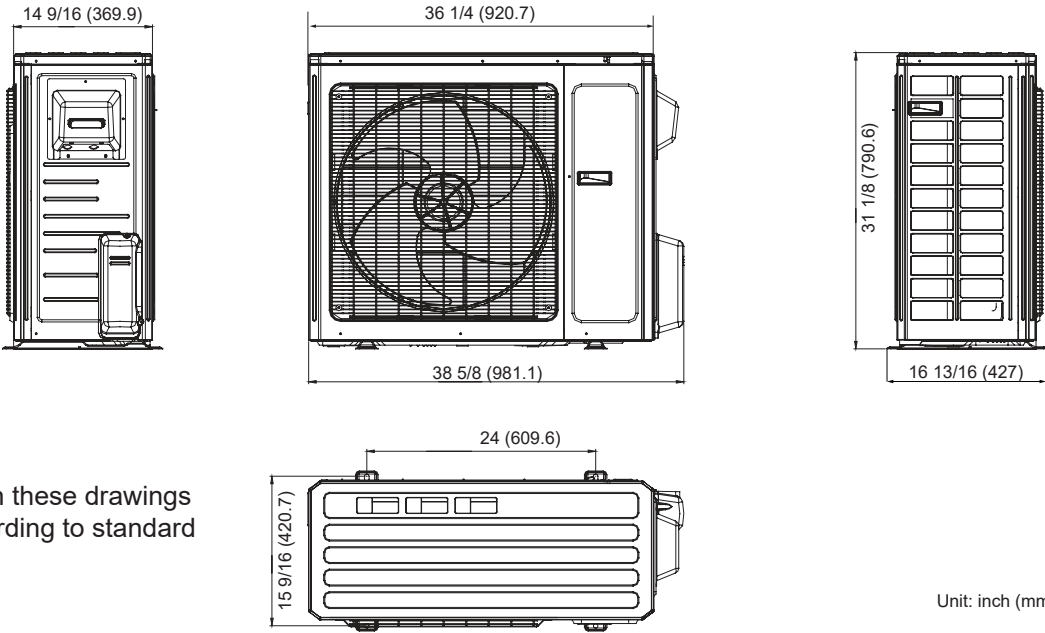
## 24K Indoor Units



Unit: inch (mm)

Model	W	H	D
24K	42 7/16 (1078)	12 13/16 (325)	9 11/16 (246)

## 24K Outdoor Units



Unit: inch (mm)

# Performance Data

## M4MHW2324A1N0A / M4THS2324A11NA - Cooling Mode Performance Data

Outdoor Ambient Air Temperature		Indoor Entering Air Temperature (Dry Bulb/Wet Bulb)							
		68F DB (20C)		73F DB (23C)		80F DB (27C)		82F DB (28C)	
Coil air		57F WB (14C)		61F WB (16C)		67F WB (19C)		68F WB (20C)	
DB F	DB C	TC*	SHC**	TC	SHC	TC	SHC	TC	SHC
-20	-29	8386	6215	10941	7909	13274	9662	14844	10759
-13	-25	8738	6307	11107	7997	13486	9809	15052	10930
-4	-20	8836	6346	11148	8107	13636	9879	15174	11011
0	-18	8903	6455	11359	8235	13815	10016	15350	11129
5	-15	11666	8516	14122	10309	16578	12102	17192	12550
14	-10	13201	9703	15657	11508	18113	13313	18727	13764
23	-5	13815	10223	16271	12041	18727	13858	19648	14540
32	-0	14429	10750	16885	12579	19341	14409	20569	15324
41	5	16271	12203	18727	14045	21183	15887	22104	16578
50	10	18113	13675	20569	15530	23025	17384	23946	18079
59	15	19341	14699	21797	16566	24253	18432	24560	18666
68	20	20262	15500	22718	17379	25174	19258	25481	19493
77	25	25788	19857	28244	21748	30700	23639	31007	23875
86	30	27937	21651	30393	23555	32849	25458	31621	24506
95	35	25788	20115	28244	22030	30700	23946	32542	25383
104	40	22411	17593	24867	19521	27323	21449	30393	23859
113	45	20569	16250	23025	18190	25481	20130	27937	22070
122	50	17499	13912	19955	15864	22411	17817	24867	19769
129	54	13201	10561	15657	12526	18113	14490	23946	19157

\*Total Capacity \*\*Sensible Heat Capacity

## M4MHW2324A1N0A / M4THS2324A11NA - Heating Mode Performance Data

Outdoor Ambient Air Temperature		Indoor Entering Air Temperature (Dry Bulb/Wet Bulb)							
		68F DB (20C)		73F DB (23C)		80F DB (27C)		82F DB (28C)	
Coil air		57F WB (14C)		61F WB (16C)		67F WB (19C)		68F WB (20C)	
DB F	DB C	TC*	TC	TC	TC	TC	TC	TC	TC
-22	-30	15311	14648	13984	12658				
-13	-25	16250	15587	14924	13597				
-4	-20	17909	17245	16582	15255				
0	-18	20230	19567	18904	17577				
6	-14	21225	20562	19898	18572				
10	-12	21888	21225	20562	19235				
16	-9	24099	23436	22773	21446				
19	-7	25205	24541	23878	22552				
24	-4	28521	27858	27195	25868				
32	0	31174	30511	29848	28521				
41	5	33496	32832	32169	30843				
43	6	34491	33827	33164	31837				
47	8	35154	34491	33827	32501				
53	12	35486	34822	34159	32832				
59	15	35817	35154	34491	33164				
64	18	36812	36149	35486	34159				
70	21	37807	37144	36480	35154				
75	24	38802	38139	37475	36149				
78	26	40128	39465	38802	37475				

\*Total Capacity

Capacities in these performance tables reflect normal operation at the temperatures indicated. See specification tables above for certified values under prescribed test conditions.

# Mechanical Specifications

## Single Zone Outdoor Unit

### General

This unit shall be fully charged from the factory for 25 feet (7.6m) of piping. This unit is designed to operate at outdoor ambient temperatures as high as 115°F (46°C). 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 shall be 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 airflow resistance and efficient heat transfer. The coil is protected by the casing.

### Low Ambient Cooling

Matched 23 Series Energy Star® ductless products, have a cooling capability to -20°F (-29°C) and heating capability to -22° F (-30°C).

## Single Zone 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 a 18 Series Energy Star® 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.

### Remote Controller

The unit shall have an optional wireless infrared remote controller with an easily readable 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 one combined active carbon and catechin filter with the unit. The filter needs to be cleaned at least once a year.

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