TAG: _____

SUBMITTAL

23 SERIES

Single Zone Mini-Split Inverter System

M4MHW2312A1N0AA
M4THS2312A11NAA

Specifications – IP

MODEL - Heat Pump Only	M4MHW2312A1N0A / M4THS2312A11NA	
	Cooling	Heating
RATED Volts/PH	208 / 230 / 1	
Frequency (Hz)	60Hz	
Rated Cooling / Heating Capacity (Btu/h):	12000	12000
Minimum Cooling Capacity (@95°F) (Btu/h): ②	3070.8	-
Maximum Cooling Capacity (@95°F) (Btu/h): ②	14100	-
Minimum Heating Capacity (@47°F) (Btu/h): ②	-	3070.8
Maximum Heating Capacity (@47°F) (Btu/h): ②	-	15500
Rated Heating Capacity (@17°F) (Btu/h): ②	-	-
Total Capacity (W) (High/Standard/Low):	4132/3517/900	4543/3517/900
Nominal Power Input (W)	923	974
Nominal Input Current (A)	5.75	7.5
SEER / HSPF	23	11.5
EER (Btu/h)/W / COP	13	3.61
Air Flow Volume (CFM) ③	400.18/364.87/329.56/288.365/264.825/247.17/229.515	
Dehumidifying Volume (pt./h)	3.0	

Indoor Unit	M4MHW2312A1N0AA	
Fan Motor Speed (r/min)	1450/1200/1120/1050/ 980/920/750/500	1450/1200/1140/1080/ 1020/960/900
Fan Motor RLA(A)	0.2	
Evaporator	Aluminum Fin-Copper Tube	
Pipe Diameter (inch)	1/5	
Rows - Fin Gap (inch)	2-1/18	
Coil length (L) x depth (D) x coil width (W) (inch)	24 61/64 × 57/64 × 11 62/64	
Output of Swing Motor (W)	1.5	
Fuse (A)	3.15	
Sound PRESSURE Level dB (A) ① ③	43/38/35/33/31/29/27	
Uncrated Dimension (W/H/D) (inch)	32 31/64 × 11 34/64 × 7 46/64	
Crated Dimension of Package (L/W/H) (inch)	34 29/64 × 14 24/64 × 10 35/64	
Net Weight /Gross Weight (lbs)	20.1 / 25.4	

Outdoor Unit	M4THS2312A11NAA	
Compressor Type	Rotary	
Compressor Oil Type	FW68DA	
Compressor RLA(A)	6.6	
Compressor Power Input(W)	800	
Throttling Method	EEV	
Working Temp Range (°F)	-20 ~ 122	-22 ~ 86
Condenser	Aluminum Fin-Copper Tube	
Pipe Diameter (inch)	ϕ 18/64	
Rows - Fin Gap (inch)	2-4/64	
Coil length (L) x depth (D) x coil width (W) (inch)	28.86 x 2.24 x 21.65	
Fan Motor Speed (rpm)	900	
Output of Fan Motor (W)	30	
Fan Motor RLA (A)	0.37	
Air Flow Volume of Outdoor Unit (CFM)	1412	
Fan Diameter (inch)	17 16/64	
Defrosting Method	Automatic Defrosting	
Sound PRESSURE Level dB (A)①	52	
Uncrated Dimension (W/H/D) (inch)	35 25/64 × 23 30/64 × 14 56/64	
Crated Dimension of Package (L/W/H) (inch)	37 21/64 × 16 34/64 × 25 25/64	
Net Weight /Gross Weight (lbs)	83.8 / 90.4	
Refrigerant Charge (oz)	47.3	
MCA	10	
MOP	15	

Connection Pipe	
Gas additional charge(oz/ft)	0.22
Outer Diameter Liquid Pipe (inch)	1/4
Outer Diameter Gas Pipe (inch)	1/2
Max Height Distance (ft)	32.8
Max Length Distance (ft)	65.6

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

MODEL - Heat Pump Only	M4MHW2312A1N0A / M4THS2312A11NA	
	Cooling	Heating
RATED Volts/PH	208 / 230 / 1	
Frequency (Hz)	60Hz	
Rated Cooling / Heating Capacity (Btu/h):	12000	12000
Minimum Cooling Capacity (@35°C) (Btu/h): ②	3070.8	-
Maximum Cooling Capacity (@35°C) (Btu/h): ②	14100	-
Minimum Heating Capacity (@8.3°C) (Btu/h): ②	-	3070.8
Maximum Heating Capacity (@8.3°C) (Btu/h): ②	-	15500
Rated Heating Capacity (@-8.3°C) (Btu/h): ②	-	-
Total Capacity (W) (High/Standard/Low):	4132/3517/900	4543/3517/900
Nominal Power Input (W)	923	974
Nominal Input Current (A)	5.75	7.5
SEER / HSPF	23	11.5
EER (Btu/h)/W / COP	13	3.61
Air Flow Volume (m^3/h) ③	680/620/560/490/450/420/390	
Dehumidifying Volume (L/h)	1.4	

Indoor Unit	M4MHW2312A1N0AA	
Fan Motor Speed (r/min)	1450/1200/1120/1050/ 980/920/750/500	1450/1200/1140/1080/ 1020/960/900
Fan Motor RLA(A)	0.20	
Evaporator	Aluminum Fin-Copper Tube	
Pipe Diameter (mm)	ϕ 5	
Rows - Fin Gap (mm)	2 - 1.4	
Coil length (L) x depth (D) x coil width (W) (mm)	634 × 22.8 × 304.8	
Output of Swing Motor (W)	1.5	
Fuse (A)	3.15	
Sound PRESSURE Level dB (A) ① ③	43/38/35/33/31/29/27	
Uncrated Dimension (W/H/D) (mm)	825 × 293 × 196	
Crated Dimension of Package (L/W/H) (mm)	875 × 365 × 268	
Net Weight /Gross Weight (kg)	9.5/11.5	

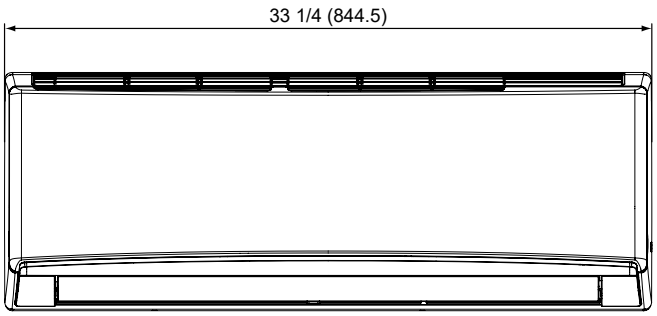
Outdoor Unit	M4THS2312A11NAA	
Compressor Type	Rotary	
Compressor Oil Type	FW68DA	
Compressor RLA(A)	6.60	
Compressor Power Input(W)	800	
Throttling Method	EEV	
Working Temp Range (°C)	-29 ~ 50	-30 ~ 30
Condenser	Aluminum Fin-Copper Tube	
Pipe Diameter (mm)	ϕ 7.94	
Rows - Fin Gap (mm)	2.5-1.5	
Coil length (L) x depth (D) x coil width (W) (mm)	733 × 57 × 550	
Fan Motor Speed (rpm)	900	
Output of Fan Motor (W)	30	
Fan Motor RLA (A)	0.37	
Air Flow Volume of Outdoor Unit (m^3h)	2400	
Fan Diameter (mm)	438	
Defrosting Method	Automatic Defrosting	
Sound PRESSURE Level dB (A) ①	52	
Uncrated Dimension (W/H/D) (mm)	899 × 596 × 378	
Crated Dimension of Package (L/W/H) (mm)	948 × 420 × 645	
Net Weight /Gross Weight (kg)	38/41	
Refrigerant Charge (kg)	1.34	
MCA	10	
MOP	15	

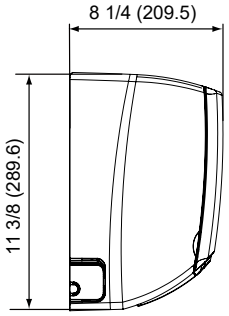
Connection Pipe	
Gas additional charge(g/m)	20
Outer Diameter Liquid Pipe (mm)	ϕ 6
Outer Diameter Gas Pipe (mm)	ϕ 12
Max Height Distance (m)	10
Max Length Distance (m)	20

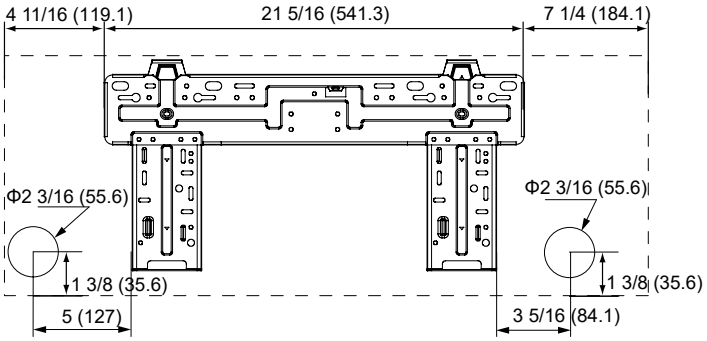
① Sound PRESSURE Level @ 1m dB(A)
② Capacities based on fixed compressor speed AHRI validation testing
③ At noted fan motor speeds

Unit Dimensions

12K Indoor Units



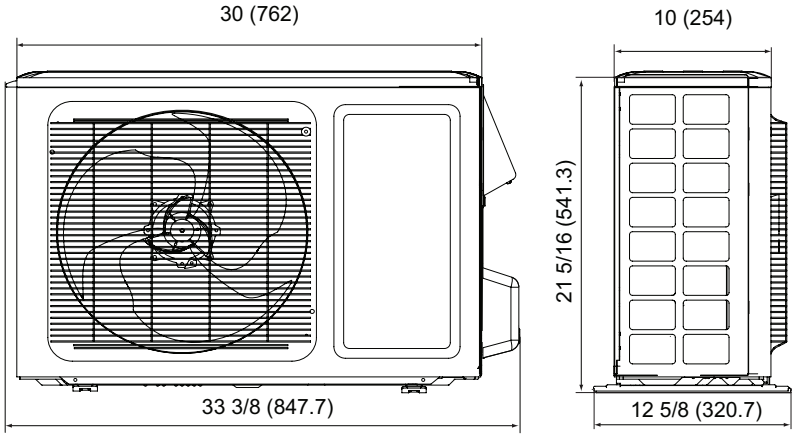


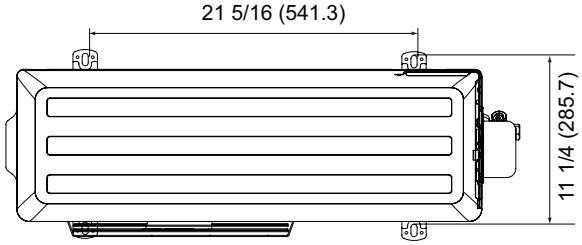


The dimensions in these drawings are rounded according to standard measurement.

Unit: inch (mm)

12K Outdoor Units





The dimensions in these drawings are rounded according to standard measurement.

Performance Data

M4MHW2312A1N0AA / M4THS2312A11NAA - 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	2806	2109	3650	2533	4216	3166	4309	2412
-13	-25	3658	2538	4419	3218	5181	3806	5263	3181
-4	-20	4211	3320	5124	4130	6051	4720	6219	4226
0	-18	4779	3465	5904	4280	7028	5095	7115	5158
5	-15	5482	4002	6606	4823	7731	5644	7827	5713
14	-10	6185	4546	7309	5372	8434	6199	8538	6275
23	-5	6466	4785	7590	5617	8715	6449	8823	6529
32	-0	6747	5026	7871	5864	8996	6702	9107	6785
41	5	7590	5693	8715	6536	9839	7379	9961	7471
50	10	8434	6367	9558	7216	10683	8065	10815	8165
59	15	8996	6837	10120	7691	11245	8546	11384	8652
68	20	9418	7204	10542	8065	11667	8925	11811	9035
77	25	11807	9091	12932	9957	14056	10823	14230	10957
86	30	13072	10131	14197	11002	15321	11874	15511	12021
95	35	11807	9210	12932	10087	14056	10964	14230	11099
104	40	10401	8165	11526	9048	12650	9931	12807	10054
113	45	9558	7551	10683	8439	11807	9328	11953	9443
122	50	8153	6481	9277	7375	10401	8269	10530	8372
129	54	6185	4948	7309	5847	8434	6747	8538	6830

*Total Capacity **Sensible Heat Capacity

M4MHW2312A1N0AA / M4THS2312A11NAA - 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
-22	-30	6380	6150	5921	5881
-13	-25	6814	6584	6355	6312
-4	-20	7794	7350	7120	7073
0	-18	8651	8422	8192	8137
6	-14	9894	9581	9351	9048
10	-12	11017	10187	9958	9726
16	-9	11893	11208	11078	10852
19	-7	12035	11718	11489	10933
24	-4	12479	12250	12020	11940
32	0	13704	13475	13145	13157
41	5	14776	14546	14317	14221
43	6	15848	15618	15389	15283
47	8	15505	15312	15180	15089
53	12	14987	14791	14661	14564
59	15	14534	14354	14241	14149
64	18	13820	13691	13496	13406
70	21	13028	12875	12731	12646
75	24	12262	12101	11969	11890
78	26	11908	11631	11438	11362

*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 23 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.

About Trane and American Standard Heating and Air Conditioning
Trane and American Standard create comfortable, energy efficient indoor environments for residential applications. For more information, please visit www.trane.com or www.americanstandardair.com

The AHRI Certified mark indicates company participation in the AHRI Certification program. For verification of individual certified products, go to ahridirectory.org.

The manufacturer has a policy of continuous data improvement and it reserves the right to change design and specifications without notice. We are committed to using environmentally conscious print practices.

M4THS2312A-SUB-1C-EN 19 Jul 2023
Supersedes M4THS2312A-SUB-1B-EN 05 August 2022
© 2023