

AIR CONDITIONER

Duct type

DESIGN & TECHNICAL MANUAL

INDOOR

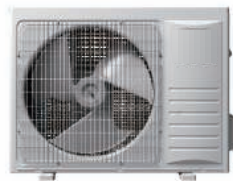


WHM24DMA21S
WHM36DMA21S



WHM48DMA21S
WHM60DMA21S

OUTDOOR




WHM24SZA21S



WHM36SZA21S



WHM48SZA21S
WHM60SZA21S

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For more information go to www.P65Warnings.ca.gov.

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Part 1. INDOOR UNIT

DUCT TYPE:

WHM24DMA21S

WHM36DMA21S

WHM48DMA21S

WHM60DMA21S

1. Specifications

Type			Duct					
			Inverter heat pump					
Model name			WHM24DMA21S	WHM36DMA21S	WHM48DMA21S	WHM60DMA21S		
Power supply			208/230 V ~ 60 Hz					
Power supply intake			Outdoor unit					
Available voltage range			198—253 V					
Capacity	Cooling	Rated	kW	7.03	10.56	14.07	16.41	
			Btu/h	24,000	36,000	48,000	56,000	
		Min.—Max.	kW	2.23—7.33	2.81—10.70	5.36—15.24	5.36—17.41	
			Btu/h	6,700—26,000	11,800—36,800	18,300—52,000	18,300—59,400	
	Heating	Rated	kW	7.03	10.56	14.07	16.41	
			Btu/h	24,000	36,000	48,000	56,000	
		Min.—Max.	kW	2.23—7.33	2.61—11.20	5.16—15.24	5.16—16.85	
			Btu/h	6,700—26,000	8,900—38,200	17,600—52,000	17,600—57,500	
Input power	Cooling	Rated	kW	2.200	3.770	4.690	6.560	
				0.560—2.900	1.122—3.981	1.423—5.708	1.490—7.569	
		Min.—Max.	2.000	3.200	4.260	5.290		
			0.725—3.960	0.725—3.960	1.228—5.080	1.323—6.019		
	Heating	Rated	kW	9.6	16.5	21.0	26.8	
				8.7	14.1	19.0	21.0	
		Min.—Max.	3.2	2.8	2.99	2.5		
			10.90	9.55	10.20	8.50		
COP	Heating	Btu/hW	3.5	3.3		3.1		
			11.95	11.26		10.58		
SEER	Cooling	Btu/hW	18.0			17.5		
			10.0			11.0	10.0	
HSPF	Heating	Btu/hW	99					
			99					
Power factor	Cooling	%	99					
			Heating	99				
Moisture removal				pints/h (L/h)		4.6 (2.2)	9.5 (4.5)	11.6 (5.5)
Maximum operating current*1	Cooling	A	25.0		35.0	50.0		
			25.0		35.0	50.0		
Fan	Airflow rate	Cooling	CFM (m ³ /h)	800 (1,360)		1,120 (1,905)	1,588 (2,700)	1,706 (2,900)
				Heating	800 (1,360)		1,120 (1,905)	1,588 (2,700)
	Type × Q'ty	Sirocco × 1						
		Motor output			W		249	373
Static pressure range			inWG (Pa)		0 to 0.8 (0 to 200)			
Sound pressure level*2	Cooling	HIGH	dB (A)	55		57	64	65
				55		57	64	65
Heat exchanger type	Dimensions (H × W × D)		in (mm)	17-1/2 × 16-1/2 × 1-1/16 (444 × 420 × 27.2)		20 × 21-1/2 × 1-5/16 (509 × 546 × 34)		
	Fin pitch			FPI	18		17	
	Rows × Stages		4 × 20		5 × 26			
	Pipe type		Copper					
	Fin type		Aluminum					
Dimensions (H × W × D)	Net		in (mm)	46-1/8 × 19-5/8 × 21-5/8 (1,170 × 500 × 550)		53-7/8 × 22 × 24 (1,370 × 560 × 610)		
	Gross			49-5/8 × 22-1/2 × 25-3/8 (1,260 × 570 × 645)		55-1/2 × 25-1/4 × 28 (1,410 × 640 × 710)		
Weight	Net		lb (kg)	135.5 (61.5)		140.0 (63.5)		
	Gross			158.6 (72)		163.1 (74)		
Connection pipe	Size	Liquid Gas	in (mm)	Ø3/8 (Ø9.52)				
				Ø5/8 (Ø15.88)		Ø3/4 (Ø19.05)		Ø7/8 (Ø22.22)
	Method			Flare				
Drain hose	Material		ABS					
	Tip diameter		in (mm)		Ø15/16 (Ø24.5) (I.D.), Ø1-1/16 (Ø26.5) (O.D.)			
Operation range	Cooling	°F (°C)	61 to 86 (16 to 30)					
			%RH		80 or less			
	Heating	°F (°C)	61 to 86 (16 to 30)					
Remote controller type			Wired [locally purchased]					
Option			Heater kit					

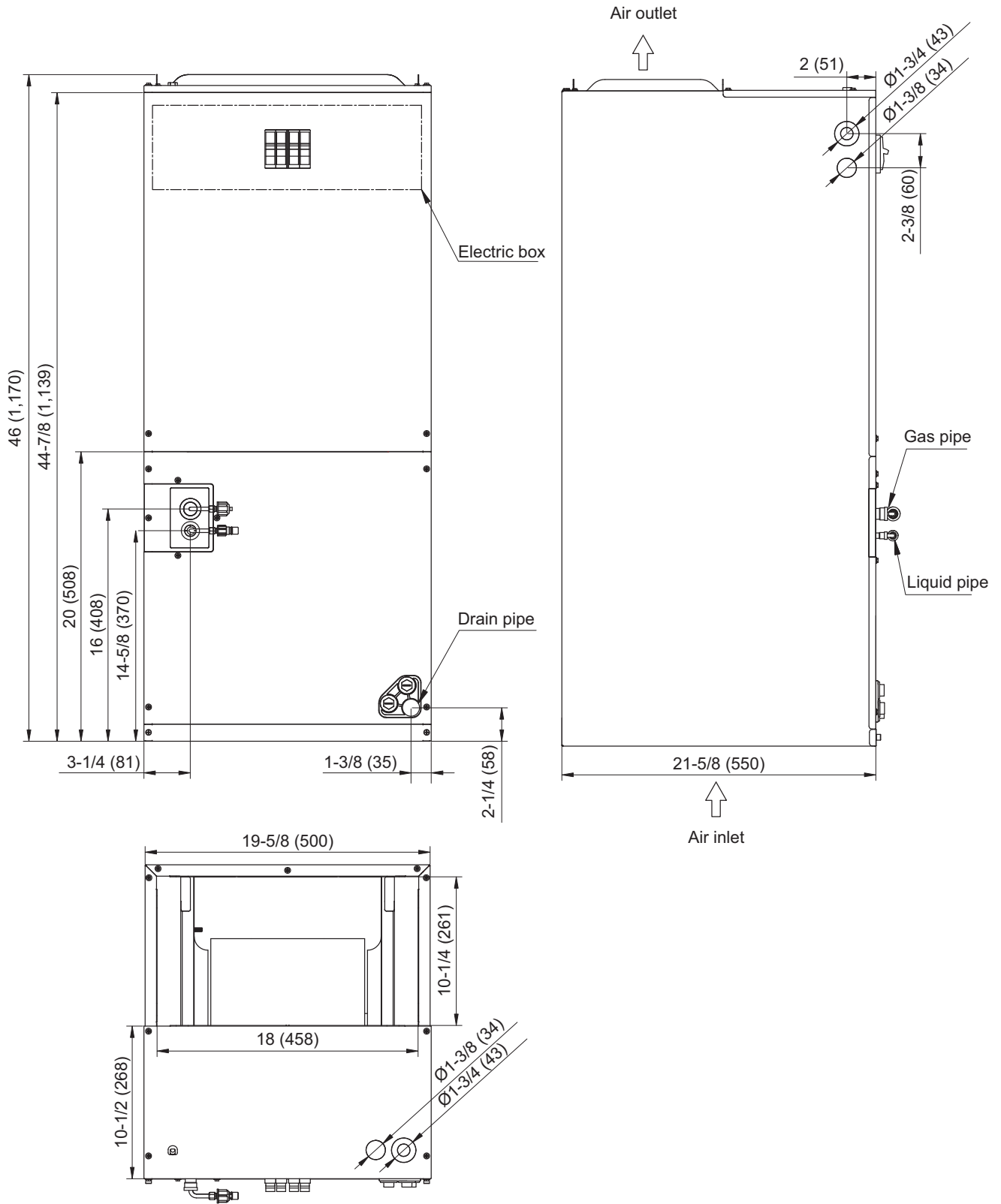
NOTES:

- Specifications are based on the following conditions:
 - Cooling: Indoor temperature of 80 °FDB (26.67 °CDB)/67 °FWB (19.44 °CWB), and outdoor temperature of 95 °FDB (35 °CDB)/75 °FWB (23.9 °CWB).
 - Heating: Indoor temperature of 70 °FDB (21.11 °CDB)/59 °FWB (15.56 °CWB), and outdoor temperature of 47 °FDB (8.33 °CDB)/43 °FWB (6.11 °CWB).
 - Pipe length: 25 ft (7.5 m), Height difference: 0 ft (0 m). (Between outdoor unit and indoor unit.)
- Protective function might work when using it outside the operation range.
- *1: Maximum current is maximum value when operated within the operation range.
- *2: Sound pressure level:
 - Measured values in manufacturer's anechoic chamber.
 - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

2. Dimensions

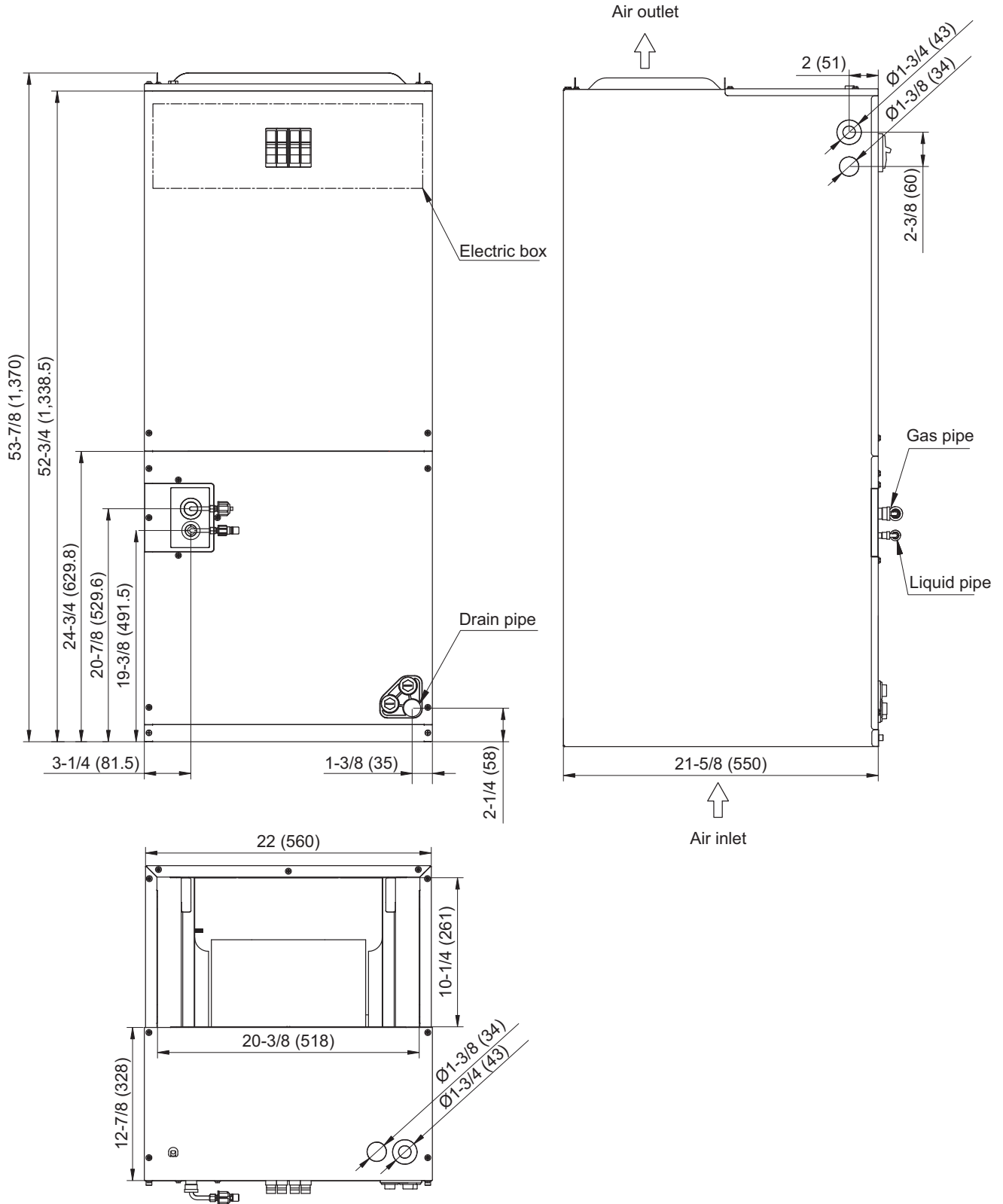
2-1. Models: WHM24DMA21S and WHM36DMA21S

Unit: in (mm)



2-2. Models: WHM48DMA21S and WHM60DMA21S

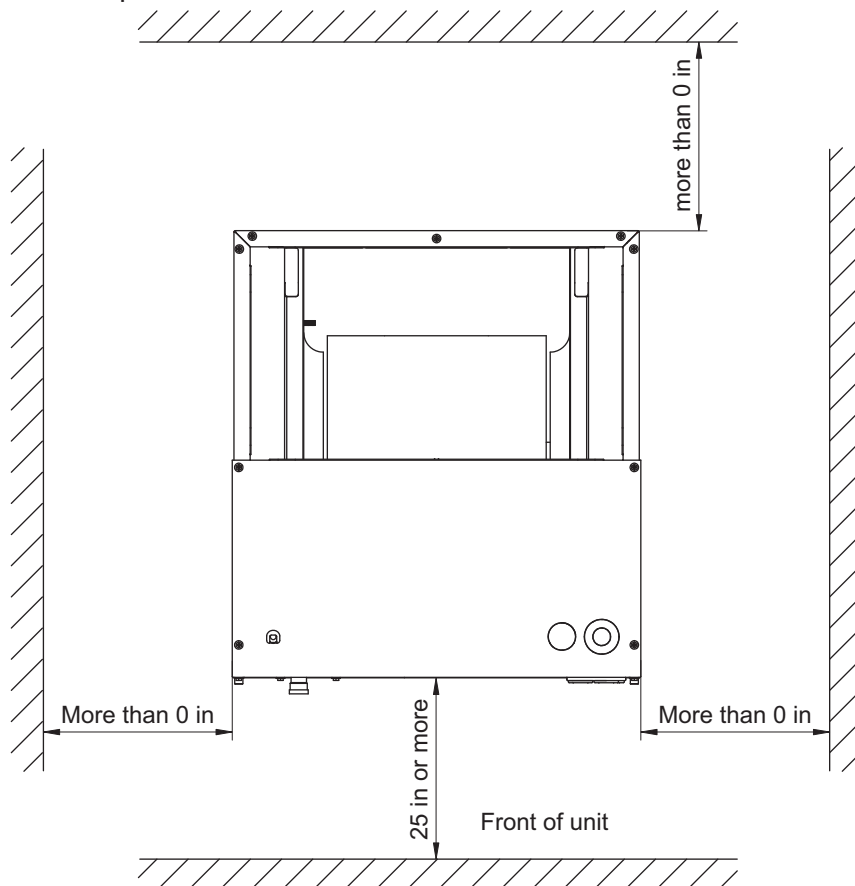
Unit: in (mm)



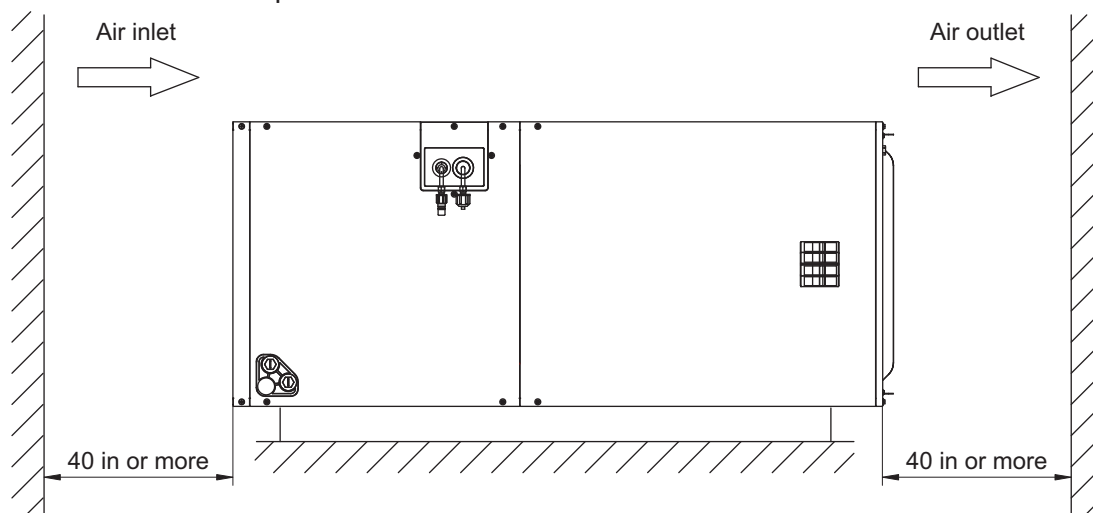
2-3. Installation space requirement

Provide sufficient installation space for product safety.

- Clearance in the vertical position

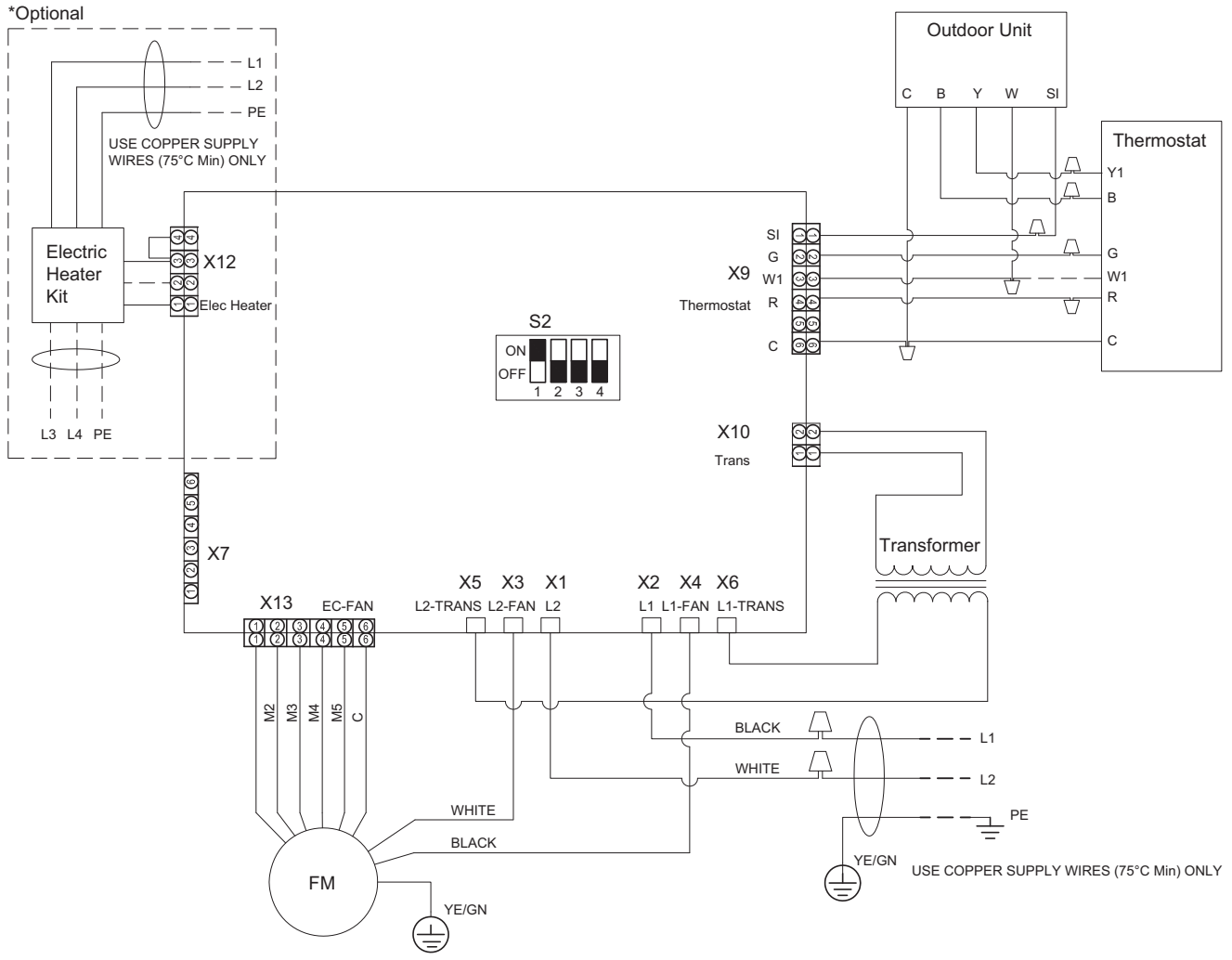


- Clearance in the horizontal position



3. Wiring diagrams

3-1. Models: WHM24DMA21S, WHM36DMA21S, WHM48DMA21S, and WHM60DMA21S



Fan motor

Pin No.	Terminal code	Function of terminal	Lead wire color
1	M1	Fan speed	Brown
2	M2	Fan speed	Blue
3	M3	Fan speed	Yellow
4	M4	Fan speed	Gray
5	M5	Fan speed	Red
6	C	Common	White
7	N	Fan input neutral	White
8	L	Fan input live	Black
9	YE/GN	GND	—

4. Capacity table

Capacity tables show each of following values calculated based on the outdoor temperature and the indoor temperature, under given Airflow Rate (AFR):

For cooling capacity: Total Capacity (TC), Sensible Heat Capacity (SHC), and Input Power (IP)

For heating capacity: Total Capacity (TC) and Input Power (IP)

4-1. Cooling capacity

Model: WHM24DMA21S

AFR		CFM		800															
Airflow (CFM)	Outdoor DB	IWB (°F)	59				63				67				71				
		IDB (°F)	70	75	80	85	70	75	80	85	70	75	80	85	70	75	80	85	
600	65	TC	20.5	20.7	21.1	21.4	21.1	21.4	21.6	21.8	22.5	22.7	23.0	23.1	—	27.5	27.7	27.9	
		S/T	0.99	1.00	1.00	1.00	0.61	0.83	1.00	1.00	0.39	0.57	0.73	0.90	—	0.39	0.53	0.67	
		KW	1.22	1.23	1.24	1.24	1.24	1.26	1.27	1.28	1.28	1.29	1.31	1.32	—	1.61	1.63	1.65	
	75	TC	20.5	20.7	21.1	21.4	21.1	21.4	21.6	21.8	22.6	22.8	23.0	23.2	—	27.2	27.4	27.6	
		S/T	1.00	1.00	0.99	1.00	0.62	0.83	1.00	1.00	0.39	0.56	0.73	0.90	—	0.39	0.53	0.67	
		KW	1.35	1.37	1.38	1.38	1.38	1.40	1.42	1.42	1.42	1.44	1.46	1.47	—	1.78	1.80	1.81	
	85	TC	20.2	20.4	20.8	21.1	20.8	21.1	21.3	21.5	22.3	22.5	22.7	22.8	—	26.7	26.9	27.1	
		S/T	1.00	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.74	0.91	—	0.39	0.53	0.67	
		KW	1.53	1.54	1.56	1.56	1.56	1.57	1.59	1.61	1.61	1.62	1.64	1.65	—	2.02	2.04	2.06	
	95	TC	19.8	20.0	20.5	20.7	20.5	20.7	20.9	21.1	21.9	22.1	22.3	22.5	—	26.1	26.3	26.4	
		S/T	1.00	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.74	0.92	—	0.39	0.53	0.68	
		KW	1.84	1.85	1.88	1.88	1.88	1.89	1.92	1.93	1.94	1.95	1.97	1.99	—	2.41	2.42	2.45	
	105	TC	19.4	19.7	20.1	20.3	20.1	20.3	20.5	20.7	21.5	21.7	21.8	22.0	—	25.2	25.3	25.4	
		S/T	0.99	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.75	0.93	—	0.39	0.54	0.69	
		KW	2.18	2.21	2.23	2.23	2.23	2.26	2.28	2.30	2.30	2.33	2.34	2.37	—	2.79	2.79	2.80	
	115	TC	17.4	17.6	18.0	18.2	18.0	18.2	18.4	18.6	19.3	19.5	19.5	19.7	—	20.9	21.1	21.1	
		S/T	1.00	1.00	1.00	1.00	0.62	0.85	1.00	1.00	0.40	0.60	0.79	0.99	—	0.39	0.58	0.76	
		KW	2.22	2.25	2.27	2.27	2.27	2.30	2.33	2.35	2.37	2.38	2.40	2.41	—	2.48	2.49	2.50	
	800	65	TC	22.0	22.2	22.7	23.0	22.7	23.0	23.2	23.4	24.3	24.5	24.7	24.9	—	29.4	29.6	29.8
			S/T	0.99	1.00	1.00	1.00	0.63	0.86	1.00	1.00	0.39	0.58	0.76	0.94	—	0.39	0.54	0.69
			KW	1.42	1.44	1.46	1.46	1.46	1.47	1.49	1.50	1.50	1.52	1.54	1.55	—	1.85	1.88	1.89
		75	TC	22.0	22.3	22.7	23.0	22.7	23.0	23.2	23.5	24.3	24.6	24.7	24.9	—	29.1	29.4	29.6
			S/T	1.00	1.00	1.00	1.00	0.62	0.85	1.00	1.00	0.39	0.58	0.76	0.94	—	0.39	0.54	0.69
			KW	1.56	1.57	1.59	1.59	1.59	1.61	1.62	1.64	1.64	1.65	1.68	1.69	—	1.95	1.97	1.99
85		TC	21.6	21.8	22.3	22.6	22.3	22.6	22.8	23.1	23.9	24.1	24.3	24.5	—	28.4	28.6	28.8	
		S/T	1.00	1.00	1.00	1.00	0.63	0.86	1.00	1.00	0.39	0.58	0.76	0.95	—	0.39	0.54	0.70	
		KW	1.72	1.73	1.76	1.76	1.76	1.77	1.79	1.81	1.81	1.83	1.84	1.87	—	2.25	2.26	2.29	
95		TC	21.4	21.6	22.1	22.3	22.1	22.3	22.5	22.8	23.4	23.8	24.0	24.1	—	27.7	27.8	28.0	
		S/T	1.00	1.00	0.99	1.00	0.63	0.87	1.00	1.00	0.39	0.58	0.76	1.00	—	0.39	0.55	0.71	
		KW	2.04	2.07	2.09	2.09	2.09	2.11	2.13	2.15	2.16	2.18	2.20	2.22	—	2.64	2.67	2.68	
105		TC	20.8	21.1	21.6	21.8	21.6	21.8	22.0	22.3	23.0	23.2	23.4	23.6	—	25.7	25.7	25.8	
		S/T	0.99	1.00	0.99	1.00	0.63	0.87	1.00	1.00	0.39	0.59	0.78	1.00	—	0.39	0.57	0.74	
		KW	2.41	2.44	2.46	2.46	2.46	2.49	2.52	2.54	2.55	2.57	2.60	2.61	—	2.86	2.84	2.86	
115		TC	17.3	17.5	17.8	18.0	17.8	18.0	18.2	18.4	19.6	19.7	19.4	19.5	—	20.2	20.3	20.4	
		S/T	1.00	1.00	1.00	1.00	0.64	0.88	1.00	1.00	0.40	0.62	0.86	1.00	—	0.40	0.62	0.84	
		KW	2.26	2.29	2.31	2.31	2.31	2.33	2.36	2.38	2.42	2.44	2.43	2.45	—	2.47	2.48	2.48	
1,000		65	TC	23.4	23.7	24.1	24.4	24.1	24.4	24.7	25.0	25.9	26.1	26.2	26.4	—	31.0	31.2	31.7
			S/T	0.99	1.00	1.00	1.00	0.64	0.88	1.00	1.00	0.39	0.59	0.78	0.99	—	0.38	0.55	0.71
			KW	1.67	1.69	1.70	1.70	1.70	1.73	1.74	1.76	1.76	1.77	1.80	1.81	—	2.12	2.14	2.03
		75	TC	23.4	23.7	24.3	24.5	24.3	24.5	24.8	25.0	26.0	26.2	26.4	26.6	—	31.7	31.9	31.9
			S/T	0.99	1.00	1.00	1.00	0.63	0.88	1.00	1.00	0.39	0.59	0.78	1.00	—	0.38	0.55	0.71
			KW	1.72	1.73	1.76	1.76	1.76	1.77	1.79	1.81	1.81	1.83	1.84	1.87	—	2.33	2.34	2.34
	85	TC	23.0	23.2	23.7	24.0	23.7	24.0	24.2	24.5	25.5	25.6	25.8	25.9	—	29.9	30.1	30.3	
		S/T	0.99	1.00	1.00	1.00	0.64	0.89	1.00	1.00	0.39	0.59	0.79	1.00	—	0.39	0.56	0.73	
		KW	1.94	1.95	1.98	1.98	1.98	2.00	2.02	2.04	2.05	2.07	2.08	2.10	—	2.49	2.52	2.53	
	95	TC	22.4	22.6	23.1	23.4	23.1	23.4	23.7	23.9	24.8	25.0	25.1	25.3	—	28.5	28.6	28.6	
		S/T	1.00	1.00	1.00	1.00	0.64	0.90	1.00	1.00	0.39	0.60	0.80	1.00	—	0.39	0.57	0.75	
		KW	2.28	2.30	2.33	2.33	2.33	2.35	2.37	2.40	2.41	2.43	2.45	2.46	—	2.82	2.83	2.83	
	105	TC	21.8	22.0	22.5	22.7	22.5	22.7	23.0	23.2	24.1	24.3	24.4	24.6	—	26.0	26.2	26.0	
		S/T	1.00	1.00	1.00	1.00	0.65	0.90	1.00	1.00	0.39	0.60	0.81	1.00	—	0.39	0.59	0.79	
		KW	2.66	2.68	2.71	2.71	2.71	2.75	2.77	2.80	2.82	2.84	2.86	2.88	—	2.96	2.98	2.93	
	115	TC	17.4	17.5	17.9	18.2	17.9	18.2	18.4	18.5	19.3	19.4	19.5	19.6	—	20.7	20.8	20.9	
		S/T	1.00	1.00	1.00	1.00	0.66	1.00	1.00	1.00	0.40	0.66	0.93	1.00	—	0.40	0.65	0.90	
		KW	2.35	2.37	2.41	2.41	2.41	2.43	2.45	2.48	2.51	2.52	2.53	2.54	—	2.62	2.63	2.64	

Model: WHM36DMA21S

AFR	CFM	1,120
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Airflow (CFM)	Outdoor DB	IWB (°F)	59				63				67				71			
			70	75	80	85	70	75	80	85	70	75	80	85	70	75	80	85
600	65	TC	30.7	31.0	31.6	32.0	31.6	32.0	32.3	32.7	33.8	34.1	34.4	34.6	—	41.2	41.5	41.8
		S/T	0.99	1.00	1.00	1.00	0.61	0.83	1.00	1.00	0.39	0.57	0.73	0.90	—	0.39	0.53	0.67
		KW	2.06	2.09	2.10	2.10	2.10	2.13	2.14	2.17	2.17	2.18	2.21	2.23	—	2.73	2.76	2.80
	75	TC	30.7	31.1	31.7	32.0	31.7	32.0	32.5	32.8	33.9	34.2	34.5	34.7	—	40.8	41.1	41.4
		S/T	1.00	1.00	0.99	1.00	0.62	0.83	1.00	1.00	0.39	0.56	0.73	0.90	—	0.39	0.53	0.67
		KW	2.29	2.31	2.34	2.34	2.34	2.37	2.40	2.41	2.40	2.44	2.46	2.49	—	3.01	3.04	3.06
	85	TC	30.3	30.6	31.2	31.6	31.2	31.6	31.9	32.2	33.4	33.7	34.0	34.2	—	40.1	40.4	40.6
		S/T	1.00	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.74	0.91	—	0.39	0.53	0.67
		KW	2.58	2.61	2.64	2.64	2.64	2.66	2.69	2.72	2.72	2.74	2.77	2.80	—	3.41	3.45	3.48
	95	TC	29.7	30.1	30.7	31.1	30.7	31.1	31.4	31.7	32.9	33.2	33.4	33.7	—	39.1	39.4	39.7
		S/T	1.00	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.74	0.92	—	0.39	0.53	0.68
		KW	3.10	3.13	3.17	3.17	3.17	3.20	3.24	3.27	3.28	3.31	3.33	3.37	—	4.07	4.09	4.13
	105	TC	29.1	29.5	30.2	30.5	30.2	30.5	30.8	31.1	32.2	32.6	32.8	33.0	—	37.8	37.9	38.1
		S/T	0.99	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.75	0.93	—	0.39	0.54	0.69
		KW	3.69	3.73	3.77	3.77	3.77	3.81	3.85	3.89	3.89	3.93	3.96	4.00	—	4.71	4.72	4.74
	115	TC	26.1	26.4	27.0	27.2	27.0	27.2	27.5	27.9	29.0	29.2	29.3	29.5	—	31.4	31.6	31.7
		S/T	1.00	1.00	1.00	1.00	0.62	0.85	1.00	1.00	0.40	0.60	0.79	0.99	—	0.39	0.58	0.76
		KW	3.76	3.80	3.84	3.84	3.84	3.89	3.93	3.97	4.00	4.03	4.05	4.07	—	4.19	4.22	4.23
800	65	TC	33.0	33.3	34.1	34.4	34.1	34.4	34.9	35.2	36.5	36.7	37.0	37.4	—	44.0	44.3	44.7
		S/T	0.99	1.00	1.00	1.00	0.63	0.86	1.00	1.00	0.39	0.58	0.76	0.94	—	0.39	0.54	0.69
		KW	2.41	2.44	2.46	2.46	2.46	2.49	2.52	2.54	2.53	2.57	2.60	2.62	—	3.13	3.17	3.20
	75	TC	33.0	33.4	34.1	34.4	34.1	34.4	34.9	35.3	36.5	36.8	37.0	37.4	—	43.7	44.0	44.3
		S/T	1.00	1.00	1.00	1.00	0.62	0.85	1.00	1.00	0.39	0.58	0.76	0.94	—	0.39	0.54	0.69
		KW	2.64	2.66	2.69	2.69	2.69	2.72	2.74	2.77	2.77	2.80	2.84	2.86	—	3.29	3.33	3.36
	85	TC	32.5	32.8	33.5	33.9	33.5	33.9	34.2	34.6	35.9	36.2	36.4	36.7	—	42.6	42.9	43.2
		S/T	1.00	1.00	1.00	1.00	0.63	0.86	1.00	1.00	0.39	0.58	0.76	0.95	—	0.39	0.54	0.70
		KW	2.90	2.93	2.97	2.97	2.97	3.00	3.02	3.06	3.06	3.09	3.12	3.16	—	3.80	3.83	3.87
	95	TC	32.0	32.5	33.2	33.5	33.2	33.5	33.8	34.2	35.2	35.7	36.0	36.2	—	41.5	41.7	41.9
		S/T	1.00	1.00	0.99	1.00	0.63	0.87	1.00	1.00	0.39	0.58	0.76	1.00	—	0.39	0.55	0.71
		KW	3.45	3.49	3.53	3.53	3.53	3.56	3.60	3.64	3.65	3.68	3.72	3.75	—	4.47	4.51	4.54
	105	TC	31.2	31.6	32.3	32.7	32.3	32.7	33.0	33.4	34.4	34.9	35.1	35.4	—	38.5	38.5	38.7
		S/T	0.99	1.00	0.99	1.00	0.63	0.87	1.00	1.00	0.39	0.59	0.78	1.00	—	0.39	0.57	0.74
		KW	4.08	4.12	4.16	4.16	4.16	4.22	4.26	4.30	4.31	4.35	4.39	4.42	—	4.83	4.80	4.83
	115	TC	25.9	26.2	26.7	27.0	26.7	27.0	27.3	27.7	29.4	29.5	29.1	29.2	—	30.4	30.5	30.6
		S/T	1.00	1.00	1.00	1.00	0.64	0.88	1.00	1.00	0.40	0.62	0.86	1.00	—	0.40	0.62	0.84
		KW	3.83	3.87	3.91	3.91	3.91	3.95	3.99	4.03	4.09	4.12	4.11	4.13	—	4.17	4.19	4.20
1,000	65	TC	35.1	35.5	36.2	36.6	36.2	36.6	37.0	37.5	38.8	39.1	39.3	39.7	—	46.4	46.7	47.5
		S/T	0.99	1.00	1.00	1.00	0.64	0.88	1.00	1.00	0.39	0.59	0.78	0.99	—	0.38	0.55	0.71
		KW	2.82	2.85	2.88	2.88	2.88	2.92	2.94	2.97	2.97	3.00	3.04	3.06	—	3.59	3.61	3.43
	75	TC	35.2	35.6	36.4	36.7	36.4	36.7	37.1	37.6	39.0	39.2	39.5	39.9	—	47.6	47.8	47.9
		S/T	0.99	1.00	1.00	1.00	0.63	0.88	1.00	1.00	0.39	0.59	0.78	1.00	—	0.38	0.55	0.71
		KW	2.90	2.93	2.97	2.97	2.97	3.00	3.02	3.06	3.06	3.09	3.12	3.16	—	3.95	3.96	3.96
	85	TC	34.4	34.9	35.6	36.0	35.6	36.0	36.3	36.7	38.2	38.4	38.7	38.9	—	44.9	45.1	45.4
		S/T	0.99	1.00	1.00	1.00	0.64	0.89	1.00	1.00	0.39	0.59	0.79	1.00	—	0.39	0.56	0.73
		KW	3.28	3.31	3.35	3.35	3.35	3.39	3.41	3.45	3.47	3.49	3.52	3.55	—	4.22	4.26	4.28
	95	TC	33.6	33.9	34.6	35.1	34.6	35.1	35.5	35.8	37.3	37.5	37.7	38.0	—	42.7	42.9	42.9
		S/T	1.00	1.00	1.00	1.00	0.64	0.90	1.00	1.00	0.39	0.60	0.80	1.00	—	0.39	0.57	0.75
		KW	3.85	3.89	3.93	3.93	3.93	3.97	4.01	4.05	4.08	4.11	4.13	4.16	—	4.76	4.78	4.78
	105	TC	32.7	33.0	33.7	34.1	33.7	34.1	34.4	34.9	36.2	36.4	36.6	36.9	—	39.0	39.2	39.0
		S/T	1.00	1.00	1.00	1.00	0.65	0.90	1.00	1.00	0.39	0.60	0.81	1.00	—	0.39	0.59	0.79
		KW	4.50	4.54	4.59	4.59	4.59	4.64	4.68	4.74	4.76	4.80	4.83	4.87	—	5.00	5.03	4.95
	115	TC	26.1	26.3	26.9	27.2	26.9	27.2	27.5	27.8	29.0	29.1	29.2	29.4	—	31.1	31.2	31.3
		S/T	1.00	1.00	1.00	1.00	0.66	1.00	1.00	1.00	0.40	0.66	0.93	1.00	—	0.40	0.65	0.90
			KW	3.97	4.01	4.07	4.07	4.07	4.11	4.15	4.19	4.24	4.26	4.28	—	4.43	4.44	4.46

Model: WHM48DMA21S

AFR	CFM	1,588
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Airflow (CFM)	Outdoor DB	IWB (°F)	59				63				67				71			
			70	75	80	85	70	75	80	85	70	75	80	85	70	75	80	85
1,360	65	TC	40.9	41.3	42.2	42.7	42.2	42.7	43.1	43.5	45.1	45.5	45.9	46.2	—	55.0	55.4	55.8
		S/T	0.99	1.00	1.00	1.00	0.61	0.83	1.00	1.00	0.39	0.57	0.73	0.90	—	0.39	0.53	0.67
		KW	2.60	2.63	2.65	2.65	2.65	2.68	2.70	2.73	2.73	2.75	2.78	2.82	—	3.44	3.48	3.53
	75	TC	40.9	41.5	42.3	42.7	42.3	42.7	43.3	43.7	45.2	45.6	46.1	46.3	—	54.4	54.8	55.2
		S/T	1.00	1.00	0.99	1.00	0.62	0.83	1.00	1.00	0.39	0.56	0.73	0.90	—	0.39	0.53	0.67
		KW	2.88	2.92	2.95	2.95	2.95	2.99	3.02	3.04	3.02	3.07	3.10	3.14	—	3.80	3.83	3.86
	85	TC	40.3	40.8	41.6	42.2	41.6	42.2	42.6	43.0	44.5	44.9	45.4	45.6	—	53.4	53.8	54.1
		S/T	1.00	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.74	0.91	—	0.39	0.53	0.67
		KW	3.26	3.29	3.32	3.32	3.32	3.36	3.39	3.42	3.42	3.46	3.49	3.53	—	4.30	4.35	4.39
	95	TC	39.7	40.1	40.9	41.5	40.9	41.5	41.9	42.3	43.8	44.2	44.5	44.9	—	52.2	52.6	52.9
		S/T	1.00	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.74	0.92	—	0.39	0.53	0.68
		KW	3.91	3.95	4.00	4.00	4.00	4.03	4.08	4.12	4.13	4.17	4.20	4.25	—	5.13	5.16	5.21
	105	TC	38.8	39.4	40.2	40.6	40.2	40.6	41.0	41.5	43.0	43.4	43.7	44.0	—	50.4	50.5	50.8
		S/T	0.99	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.75	0.93	—	0.39	0.54	0.69
		KW	4.66	4.71	4.76	4.76	4.76	4.81	4.86	4.91	4.96	4.99	5.04	5.04	—	5.94	5.96	5.97
	115	TC	34.8	35.2	36.0	36.3	36.0	36.3	36.7	37.1	38.7	39.0	39.1	39.4	—	41.9	42.2	42.3
		S/T	1.00	1.00	1.00	1.00	0.62	0.85	1.00	1.00	0.40	0.60	0.79	0.99	—	0.39	0.58	0.76
		KW	4.74	4.79	4.84	4.84	4.84	4.91	4.96	5.01	5.04	5.08	5.11	5.13	—	5.28	5.31	5.33
1,560	65	TC	44.0	44.4	45.5	45.9	45.5	45.9	46.5	46.9	48.7	49.0	49.4	49.8	—	58.7	59.1	59.5
		S/T	0.99	1.00	1.00	1.00	0.63	0.86	1.00	1.00	0.39	0.58	0.76	0.94	—	0.39	0.54	0.69
		KW	3.04	3.07	3.10	3.10	3.10	3.14	3.17	3.21	3.19	3.24	3.27	3.31	—	3.95	4.00	4.03
	75	TC	44.0	44.5	45.5	45.9	45.5	45.9	46.5	47.0	48.7	49.1	49.4	49.8	—	58.3	58.7	59.1
		S/T	1.00	1.00	1.00	1.00	0.62	0.85	1.00	1.00	0.39	0.58	0.76	0.94	—	0.39	0.54	0.69
		KW	3.32	3.36	3.39	3.39	3.39	3.42	3.46	3.49	3.49	3.53	3.58	3.61	—	4.15	4.20	4.23
	85	TC	43.3	43.7	44.7	45.2	44.7	45.2	45.6	46.2	47.9	48.3	48.6	49.0	—	56.8	57.2	57.6
		S/T	1.00	1.00	1.00	1.00	0.63	0.86	1.00	1.00	0.39	0.58	0.76	0.95	—	0.39	0.54	0.70
		KW	3.66	3.69	3.75	3.75	3.75	3.78	3.81	3.86	3.86	3.90	3.93	3.98	—	4.79	4.82	4.88
	95	TC	42.7	43.3	44.2	44.7	44.2	44.7	45.1	45.6	46.9	47.6	48.0	48.3	—	55.4	55.7	55.9
		S/T	1.00	1.00	0.99	1.00	0.63	0.87	1.00	1.00	0.39	0.58	0.76	1.00	—	0.39	0.55	0.71
		KW	4.35	4.40	4.45	4.45	4.45	4.49	4.54	4.59	4.61	4.64	4.69	4.72	—	5.63	5.69	5.72
	105	TC	41.6	42.2	43.1	43.5	43.1	43.5	44.0	44.5	46.5	46.5	46.7	47.2	—	51.3	51.3	51.6
		S/T	0.99	1.00	0.99	1.00	0.63	0.87	1.00	1.00	0.39	0.59	0.78	1.00	—	0.39	0.57	0.74
		KW	5.15	5.20	5.25	5.25	5.25	5.31	5.36	5.42	5.43	5.48	5.53	5.57	—	6.09	6.06	6.09
	115	TC	34.5	34.9	35.6	36.0	35.6	36.0	36.5	36.9	39.2	39.4	38.8	39.0	—	40.5	40.6	40.8
		S/T	1.00	1.00	1.00	1.00	0.64	0.88	1.00	1.00	0.40	0.62	0.86	1.00	—	0.40	0.62	0.84
		KW	4.82	4.88	4.93	4.93	4.93	4.98	5.03	5.08	5.16	5.20	5.18	5.21	—	5.26	5.28	5.30
1,760	65	TC	46.7	47.3	48.3	48.8	48.3	48.8	49.4	49.9	51.8	52.2	52.5	52.9	—	61.9	62.3	63.3
		S/T	0.99	1.00	1.00	1.00	0.64	0.88	1.00	1.00	0.39	0.59	0.78	0.99	—	0.38	0.55	0.71
		KW	3.56	3.59	3.63	3.63	3.63	3.68	3.71	3.75	3.75	3.78	3.83	3.86	—	4.52	4.56	4.32
	75	TC	46.9	47.4	48.6	49.0	48.6	49.0	49.5	50.1	52.0	52.3	52.7	53.1	—	63.4	63.7	63.9
		S/T	0.99	1.00	1.00	1.00	0.63	0.88	1.00	1.00	0.39	0.59	0.78	1.00	—	0.38	0.55	0.71
		KW	3.66	3.69	3.75	3.75	3.75	3.78	3.81	3.86	3.86	3.90	3.93	3.98	—	4.98	4.99	4.99
	85	TC	45.9	46.5	47.4	48.0	47.4	48.0	48.4	49.0	50.9	51.2	51.6	51.9	—	59.8	60.1	60.5
		S/T	0.99	1.00	1.00	1.00	0.64	0.89	1.00	1.00	0.39	0.59	0.79	1.00	—	0.39	0.56	0.73
		KW	4.13	4.17	4.22	4.22	4.22	4.27	4.30	4.35	4.37	4.40	4.44	4.47	—	5.31	5.36	5.40
	95	TC	44.8	45.2	46.2	46.7	46.2	46.7	47.3	47.7	49.7	49.9	50.2	50.6	—	56.9	57.2	57.2
		S/T	1.00	1.00	1.00	1.00	0.64	0.90	1.00	1.00	0.39	0.60	0.80	1.00	—	0.39	0.57	0.75
		KW	4.86	4.91	4.96	4.96	4.96	5.01	5.06	5.11	5.15	5.18	5.21	5.25	—	6.01	6.02	6.02
	105	TC	43.5	44.0	44.9	45.5	44.9	45.5	45.9	46.5	48.3	48.6	48.8	49.3	—	52.0	52.3	52.0
		S/T	1.00	1.00	1.00	1.00	0.65	0.90	1.00	1.00	0.39	0.60	0.81	1.00	—	0.39	0.59	0.79
		KW	5.67	5.72	5.79	5.79	5.79	5.85	5.90	5.97	6.01	6.06	6.09	6.14	—	6.31	6.34	6.24
	115	TC	34.8	35.1	35.9	36.3	35.9	36.3	36.7	37.0	38.7	38.8	39.0	39.2	—	41.5	41.6	41.7
		S/T	1.00	1.00	1.00	1.00	0.66	1.00	1.00	1.00	0.40	0.66	0.93	1.00	—	0.40	0.65	0.90
			KW	5.01	5.06	5.13	5.13	5.13	5.18	5.23	5.28	5.35	5.36	5.40	5.42	—	5.58	5.60

Model: WHM60DMA21S

AFR	CFM	1,706
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Airflow (CFM)	Outdoor DB	IWB (°F)	59				63				67				71				
			70	75	80	85	70	75	80	85	70	75	80	85	70	75	80	85	
																			IDB (°F)
1,500	65	TC	47.7	48.2	49.2	49.8	49.2	49.8	50.3	50.8	52.6	53.1	53.6	53.9	—	64.1	64.6	65.1	
		S/T	0.99	1.00	1.00	1.00	0.61	0.83	1.00	1.00	0.39	0.57	0.73	0.90	—	0.39	0.53	0.67	
		KW	3.68	3.73	3.76	3.76	3.76	3.80	3.83	3.88	3.88	3.90	3.95	3.99	—	4.88	4.93	5.00	
	75	TC	47.7	48.4	49.3	49.8	49.3	49.8	50.5	51.0	52.8	53.2	53.7	54.1	—	63.5	64.0	64.4	
		S/T	1.00	1.00	0.99	1.00	0.62	0.83	1.00	1.00	0.39	0.56	0.73	0.90	—	0.39	0.53	0.67	
		KW	4.09	4.14	4.19	4.19	4.19	4.23	4.28	4.31	4.28	4.35	4.40	4.45	—	5.38	5.43	5.48	
	85	TC	47.1	47.6	48.5	49.2	48.5	49.2	49.7	50.2	51.9	52.4	52.9	53.2	—	62.3	62.8	63.1	
		S/T	1.00	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.74	0.91	—	0.39	0.53	0.67	
		KW	4.62	4.66	4.71	4.71	4.71	4.76	4.81	4.86	4.86	4.90	4.95	5.00	—	6.10	6.17	6.22	
	95	TC	46.3	46.7	47.7	48.4	47.7	48.4	48.9	49.3	51.1	51.6	51.9	52.4	—	60.9	61.4	61.7	
		S/T	1.00	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.74	0.92	—	0.39	0.53	0.68	
		KW	5.55	5.60	5.67	5.67	5.67	5.72	5.79	5.84	5.86	5.91	5.96	6.03	—	7.27	7.32	7.39	
	105	TC	45.3	45.9	46.9	47.4	46.9	47.4	47.9	48.4	50.2	50.6	51.0	51.3	—	58.8	58.9	59.2	
		S/T	0.99	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.75	0.93	—	0.39	0.54	0.69	
		KW	6.60	6.67	6.75	6.75	6.75	6.82	6.89	6.96	6.96	7.03	7.08	7.15	—	8.42	8.44	8.47	
	115	TC	40.6	41.1	42.0	42.4	42.0	42.4	42.9	43.3	45.1	45.4	45.6	45.9	—	48.9	49.2	49.3	
		S/T	1.00	1.00	1.00	1.00	0.62	0.85	1.00	1.00	0.40	0.60	0.79	0.99	—	0.39	0.58	0.76	
		KW	6.72	6.79	6.87	6.87	6.87	6.96	7.03	7.10	7.15	7.20	7.25	7.27	—	7.49	7.54	7.56	
	1,700	65	TC	51.3	51.8	53.1	53.6	53.1	53.6	54.2	54.7	56.8	57.1	57.6	58.1	—	68.5	69.0	69.5
			S/T	0.99	1.00	1.00	1.00	0.63	0.86	1.00	1.00	0.39	0.58	0.76	0.94	—	0.39	0.54	0.69
			KW	4.31	4.35	4.40	4.40	4.40	4.45	4.50	4.54	4.52	4.59	4.64	4.69	—	5.60	5.67	5.72
		75	TC	51.3	51.9	53.1	53.6	53.1	53.6	54.2	54.9	56.8	57.3	57.6	58.1	—	68.0	68.5	69.0
			S/T	1.00	1.00	1.00	1.00	0.62	0.85	1.00	1.00	0.39	0.58	0.76	0.94	—	0.39	0.54	0.69
			KW	4.71	4.76	4.81	4.81	4.81	4.86	4.90	4.95	4.95	5.00	5.07	5.12	—	5.88	5.96	6.00
85		TC	50.5	51.0	52.1	52.8	52.1	52.8	53.2	53.9	55.8	56.3	56.6	57.1	—	66.2	66.7	67.2	
		S/T	1.00	1.00	1.00	1.00	0.63	0.86	1.00	1.00	0.39	0.58	0.76	0.95	—	0.39	0.54	0.70	
		KW	5.19	5.24	5.31	5.31	5.31	5.36	5.41	5.48	5.48	5.53	5.57	5.65	—	6.79	6.84	6.91	
95		TC	49.8	50.5	51.6	52.1	51.6	52.1	52.6	53.2	54.7	55.5	56.0	56.3	—	64.6	64.9	65.3	
		S/T	1.00	1.00	0.99	1.00	0.63	0.87	1.00	1.00	0.39	0.58	0.76	1.00	—	0.39	0.55	0.71	
		KW	6.17	6.24	6.32	6.32	6.32	6.36	6.43	6.51	6.53	6.58	6.65	6.70	—	7.99	8.06	8.11	
105		TC	48.5	49.2	50.3	50.8	50.3	50.8	51.3	51.9	53.6	54.2	54.5	55.0	—	59.9	59.9	60.2	
		S/T	0.99	1.00	0.99	1.00	0.63	0.87	1.00	1.00	0.39	0.59	0.78	1.00	—	0.39	0.57	0.74	
		KW	7.30	7.37	7.44	7.44	7.44	7.54	7.61	7.68	7.70	7.77	7.85	7.89	—	8.64	8.59	8.64	
115		TC	40.3	40.7	41.6	42.0	41.6	42.0	42.5	43.0	45.8	45.9	45.3	45.4	—	47.2	47.4	47.6	
		S/T	1.00	1.00	1.00	1.00	0.64	0.88	1.00	1.00	0.40	0.62	0.86	1.00	—	0.40	0.62	0.84	
		KW	6.84	6.91	6.98	6.98	6.98	7.06	7.13	7.20	7.32	7.37	7.34	7.39	—	7.46	7.49	7.51	
1,900		65	TC	54.5	55.2	56.3	57.0	56.3	57.0	57.6	58.3	60.4	60.9	61.2	61.7	—	72.2	72.7	73.9
			S/T	0.99	1.00	1.00	1.00	0.64	0.88	1.00	1.00	0.39	0.59	0.78	0.99	—	0.38	0.55	0.71
			KW	5.05	5.10	5.14	5.14	5.14	5.21	5.26	5.31	5.31	5.36	5.43	5.48	—	6.41	6.46	6.12
		75	TC	54.7	55.4	56.6	57.1	56.6	57.1	57.8	58.4	60.7	61.0	61.5	62.0	—	74.0	74.3	74.5
			S/T	0.99	1.00	1.00	1.00	0.63	0.88	1.00	1.00	0.39	0.59	0.78	1.00	—	0.38	0.55	0.71
			KW	5.19	5.24	5.31	5.31	5.31	5.36	5.41	5.48	5.48	5.53	5.57	5.65	—	7.06	7.08	7.08
	85	TC	53.6	54.2	55.4	56.0	55.4	56.0	56.5	57.1	59.4	59.7	60.2	60.5	—	69.8	70.1	70.6	
		S/T	0.99	1.00	1.00	1.00	0.64	0.89	1.00	1.00	0.39	0.59	0.79	1.00	—	0.39	0.56	0.73	
		KW	5.86	5.91	5.98	5.98	5.98	6.05	6.10	6.17	6.20	6.24	6.29	6.34	—	7.54	7.61	7.65	
	95	TC	52.3	52.8	53.9	54.5	53.9	54.5	55.2	55.7	57.9	58.3	58.6	59.1	—	66.4	66.7	66.7	
		S/T	1.00	1.00	1.00	1.00	0.64	0.90	1.00	1.00	0.39	0.60	0.80	1.00	—	0.39	0.57	0.75	
		KW	6.89	6.96	7.03	7.03	7.03	7.10	7.18	7.25	7.30	7.34	7.39	7.44	—	8.52	8.54	8.54	
	105	TC	50.8	51.3	52.4	53.1	52.4	53.1	53.6	54.2	56.3	56.6	57.0	57.5	—	60.7	61.0	60.7	
		S/T	1.00	1.00	1.00	1.00	0.65	0.90	1.00	1.00	0.39	0.60	0.81	1.00	—	0.39	0.59	0.79	
		KW	8.04	8.11	8.20	8.20	8.20	8.30	8.37	8.47	8.52	8.59	8.64	8.71	—	8.95	8.99	8.85	
	115	TC	40.6	40.9	41.9	42.4	41.9	42.4	42.9	43.2	45.1	45.3	45.4	45.8	—	48.4	48.5	48.7	
		S/T	1.00	1.00	1.00	1.00	0.66	1.00	1.00	1.00	0.40	0.66	0.93	1.00	—	0.40	0.65	0.90	
		KW	7.10	7.18	7.27	7.27	7.27	7.34	7.42	7.49	7.58	7.61	7.65	7.68	—	7.92	7.94	7.97	

4-2. Heating capacity

NOTE: Values mentioned in the table are calculated based on the maximum capacity.

Model: WHM24DMA21S

AFR		CFM										800							
Airflow (CFM)	ID (°F)	OD (°F)	72	67	62	57	52	47	42	37	32	27	22	17	12	7	2	-4	
600	60	TC	28.3	28.3	28.2	28.2	28.1	27.1	24.9	23.0	21.4	21.4	20.1	19.2	18.0	16.7	15.6	14.6	
		KW	1.64	1.75	1.90	2.06	2.23	2.24	2.16	2.08	2.02	2.02	2.17	2.11	2.00	1.99	1.93	1.89	
	70	TC	21.9	21.7	21.9	21.8	21.6	21.5	21.5	21.5	21.0	21.0	19.6	19.0	17.7	16.4	15.4	14.3	
		KW	1.23	1.29	1.42	1.52	1.63	1.77	1.95	2.13	2.21	2.42	2.35	2.28	2.20	2.14	2.08	2.02	
	75	TC	18.4	18.3	18.3	18.3	18.3	18.3	18.1	18.1	18.1	18.1	18.1	18.1	18.0	16.7	15.4	14.1	13.0
		KW	1.02	1.10	1.19	1.28	1.40	1.51	1.61	1.76	1.88	2.06	2.22	2.38	2.30	2.23	2.17	2.11	
	80	TC	15.1	15.1	15.1	15.1	15.0	15.0	15.0	15.0	15.0	15.0	14.8	14.8	14.8	14.8	14.8	13.9	12.8
		KW	0.85	0.90	0.98	1.06	1.14	1.23	1.32	1.47	1.56	1.65	1.78	1.92	2.08	2.26	2.26	2.26	2.20
800	60	TC	31.6	31.6	31.5	30.7	29.0	27.4	25.3	23.4	21.9	21.8	20.2	19.7	18.3	17.0	15.9	14.8	
		KW	1.94	2.05	2.22	2.28	2.22	2.20	2.13	2.06	2.02	2.21	2.15	2.10	2.05	1.99	1.94	1.90	
	70	TC	24.5	24.3	24.1	24.1	24.1	24.0	23.9	22.8	21.4	21.3	19.9	19.4	17.9	16.6	15.6	14.5	
		KW	1.41	1.51	1.60	1.74	1.89	2.00	2.26	2.25	2.19	2.39	2.33	2.26	2.20	2.14	2.08	2.04	
	75	TC	20.6	20.6	20.4	20.6	20.5	20.2	20.2	20.3	20.3	20.3	19.7	18.3	17.0	15.6	14.2	13.2	
		KW	1.19	1.26	1.35	1.48	1.56	1.68	1.85	2.02	2.16	2.37	2.43	2.36	2.29	2.23	2.17	2.11	
	80	TC	16.9	16.9	16.9	16.9	16.9	16.8	16.8	16.8	16.6	16.6	16.6	16.6	16.6	16.6	15.4	14.0	13.0
		KW	0.98	1.04	1.13	1.21	1.30	1.40	1.54	1.63	1.74	1.89	2.05	2.20	2.38	2.32	2.25	2.20	
1,000	60	TC	35.2	34.6	32.7	31.2	29.4	27.9	25.7	23.7	22.2	22.1	20.7	19.9	18.6	17.3	16.2	15.1	
		KW	2.28	2.33	2.28	2.26	2.21	2.20	2.13	2.08	2.03	2.23	2.17	2.13	2.08	2.03	1.98	1.95	
	70	TC	27.0	27.0	27.0	27.0	26.9	26.9	25.1	23.2	21.7	21.7	20.3	19.6	18.3	17.0	15.9	14.8	
		KW	1.62	1.73	1.88	2.03	2.19	2.36	2.32	2.26	2.20	2.41	2.35	2.29	2.23	2.18	2.12	2.08	
	75	TC	23.0	23.0	23.0	22.7	22.7	22.6	22.7	22.6	21.4	21.4	20.0	18.6	17.2	15.9	14.6	13.6	
		KW	1.38	1.47	1.59	1.67	1.80	1.95	2.14	2.32	2.30	2.51	2.44	2.38	2.32	2.26	2.20	2.16	
	80	TC	19.0	18.9	18.9	18.9	18.9	18.8	18.6	18.6	18.6	18.6	18.6	18.3	17.0	15.7	14.3	13.3	
		KW	1.15	1.22	1.32	1.40	1.52	1.63	1.74	1.89	2.01	2.19	2.35	2.48	2.41	2.35	2.29	2.23	

Model: WHM36DMA21S

AFR		CFM										1,120						
Airflow (CFM)	ID (°F)	OD (°F)	72	67	62	57	52	47	42	37	32	27	22	17	12	7	2	-4
600	60	43.0	43.0	42.9	42.9	42.8	41.2	37.9	35.0	32.5	32.6	30.6	29.3	27.4	25.4	23.7	22.1	43.0
		2.62	2.80	3.04	3.30	3.56	3.58	3.45	3.33	3.24	3.56	3.46	3.37	3.30	3.19	3.09	3.03	2.62
	70	33.2	33.0	33.2	33.1	32.8	32.7	32.7	32.7	32.0	32.0	29.8	28.8	26.9	25.0	23.4	21.7	33.2
		1.96	2.07	2.27	2.43	2.61	2.84	3.13	3.40	3.54	3.87	3.75	3.65	3.52	3.43	3.32	3.24	1.96
	75	28.0	27.9	27.9	27.9	27.9	27.9	27.5	27.5	27.5	27.5	27.5	27.4	25.4	23.4	21.4	19.8	28.0
		1.64	1.76	1.90	2.05	2.24	2.42	2.57	2.82	3.01	3.30	3.55	3.80	3.68	3.57	3.46	3.37	1.64
	80	23.0	23.0	23.0	22.9	22.9	22.8	22.8	22.9	22.6	22.6	22.6	22.6	22.6	22.6	21.1	19.5	23.0
		1.36	1.44	1.56	1.70	1.82	1.97	2.12	2.35	2.49	2.65	2.85	3.08	3.32	3.62	3.61	3.51	1.36
800	60	48.0	48.0	47.9	46.7	44.1	41.7	38.5	35.6	33.2	33.1	30.7	29.9	27.9	25.9	24.2	22.6	48.0
		3.1	3.28	3.55	3.65	3.55	3.51	3.40	3.30	3.22	3.54	3.44	3.36	3.27	3.19	3.10	3.04	3.1
	70	37.2	37.0	36.7	36.7	36.7	36.5	36.4	34.7	32.5	32.4	30.3	29.6	27.3	25.3	23.7	22.0	37.2
		2.26	2.42	2.56	2.78	3.02	3.20	3.61	3.60	3.50	3.83	3.73	3.62	3.52	3.43	3.33	3.26	2.26
	75	31.4	31.3	31.0	31.3	31.2	30.7	30.7	30.8	30.8	30.8	29.9	27.8	25.8	23.7	21.6	20.1	31.4
		1.90	2.02	2.15	2.37	2.50	2.69	2.96	3.22	3.45	3.79	3.89	3.78	3.67	3.56	3.46	3.38	1.90
	80	25.7	25.7	25.7	25.7	25.7	25.6	25.6	25.3	25.3	25.2	25.3	25.3	25.3	23.4	21.3	19.8	25.7
		1.56	1.66	1.80	1.94	2.08	2.24	2.47	2.61	2.79	3.03	3.27	3.51	3.80	3.72	3.60	3.51	1.56
1,000	60	53.5	52.7	49.7	47.5	44.8	42.5	39.0	36.1	33.8	33.7	31.5	30.3	28.3	26.3	24.6	23.0	53.5
		3.65	3.73	3.65	3.62	3.54	3.51	3.40	3.32	3.25	3.56	3.48	3.40	3.33	3.25	3.18	3.12	3.65
	70	41.1	41.0	41.0	41.0	40.9	40.9	38.2	35.2	33.0	32.9	30.8	29.8	27.8	25.8	24.1	22.4	41.1
		2.60	2.77	3.01	3.25	3.50	3.78	3.72	3.61	3.52	3.85	3.75	3.66	3.57	3.49	3.39	3.33	2.60
	75	35.0	34.9	34.9	34.5	34.5	34.4	34.5	34.4	32.6	32.5	30.4	28.3	26.2	24.1	22.2	20.7	35.0
		2.21	2.35	2.55	2.67	2.89	3.13	3.43	3.72	3.68	4.02	3.91	3.81	3.72	3.62	3.52	3.45	2.21
	80	28.8	28.7	28.7	28.7	28.7	28.6	28.2	28.2	28.3	28.2	27.9	25.9	23.8	21.8	20.2	18.8	28.8
		1.84	1.95	2.11	2.24	2.43	2.61	2.78	3.02	3.21	3.50	3.75	3.97	3.86	3.77	3.66	3.57	1.84

Model: WHM48DMA21S

AFR		CFM																1,588	
Airflow (CFM)	ID (°F)	OD (°F)	72	67	62	57	52	47	42	37	32	27	22	17	12	7	2	-4	
1,360	60	TC	56.6	56.6	56.4	56.4	56.3	54.2	49.8	46.1	42.8	42.9	40.3	38.5	36.0	33.4	31.2	29.1	
		kW	3.49	3.73	4.05	4.39	4.74	4.77	4.60	4.44	4.31	4.74	4.61	4.48	4.40	4.24	4.12	4.04	
	70	TC	43.7	43.4	43.7	43.6	43.2	43.0	43.0	43.0	42.1	42.1	39.2	37.9	35.3	32.8	30.8	28.6	
		kW	2.61	2.75	3.03	3.24	3.48	3.78	4.16	4.53	4.71	5.16	5.00	4.85	4.69	4.56	4.42	4.31	
	75	TC	36.8	36.7	36.7	36.7	36.7	36.7	36.1	36.1	36.1	36.1	36.1	36.1	36.0	33.4	30.8	28.1	26.1
		kW	2.18	2.34	2.53	2.72	2.98	3.22	3.43	3.75	4.00	4.39	4.72	5.06	4.90	4.76	4.61	4.48	
	80	TC	30.2	30.2	30.2	30.2	30.1	30.1	29.9	29.9	30.1	29.9	29.7	29.7	29.7	29.7	29.7	27.7	25.7
		kW	1.81	1.92	2.08	2.26	2.42	2.63	2.82	3.12	3.32	3.52	3.80	4.10	4.42	4.82	4.80	4.68	
1,560	60	TC	63.2	63.2	63.0	61.4	57.9	54.9	50.6	46.8	43.7	43.6	40.4	39.3	36.7	34.1	31.9	29.7	
		kW	4.13	4.37	4.72	4.85	4.72	4.68	4.53	4.39	4.29	4.71	4.58	4.47	4.36	4.24	4.13	4.05	
	70	TC	49.0	48.7	48.3	48.3	48.3	48.0	47.9	45.7	42.8	42.6	39.9	38.9	35.9	33.2	31.2	29.0	
		kW	3.01	3.22	3.41	3.70	4.02	4.26	4.80	4.79	4.66	5.09	4.96	4.82	4.69	4.56	4.44	4.34	
	75	TC	41.2	41.1	40.8	41.1	41.0	40.4	40.4	40.6	40.6	39.3	36.6	33.9	31.2	28.4	26.5		
		kW	2.53	2.69	2.87	3.15	3.33	3.59	3.94	4.29	4.60	5.04	5.17	5.03	4.88	4.74	4.61	4.50	
	80	TC	33.8	33.8	33.8	33.8	33.8	33.7	33.7	33.2	33.2	33.1	33.2	33.2	33.2	30.8	28.0	26.1	
		kW	2.08	2.21	2.40	2.58	2.77	2.98	3.28	3.48	3.72	4.04	4.36	4.68	5.06	4.95	4.79	4.68	
1,760	60	TC	70.3	69.2	65.4	62.5	58.9	55.9	51.3	47.4	44.4	44.3	41.4	39.9	37.2	34.6	32.4	30.2	
		kW	4.85	4.96	4.85	4.82	4.71	4.68	4.53	4.42	4.32	4.74	4.63	4.53	4.44	4.32	4.23	4.15	
	70	TC	54.1	53.9	53.9	53.9	53.8	53.8	50.2	46.3	43.4	43.3	40.6	39.2	36.6	33.9	31.7	29.5	
		kW	3.46	3.68	4.00	4.32	4.66	5.03	4.95	4.80	4.69	5.12	5.00	4.87	4.76	4.64	4.52	4.44	
	75	TC	46.1	45.9	45.9	45.4	45.4	45.2	45.4	45.2	42.9	42.8	40.0	37.2	34.5	31.7	29.2	27.2	
		kW	2.95	3.12	3.40	3.56	3.84	4.16	4.56	4.95	4.90	5.35	5.20	5.08	4.95	4.82	4.69	4.60	
	80	TC	37.9	37.8	37.8	37.8	37.8	37.7	37.1	37.1	37.2	37.1	37.1	36.7	34.1	31.3	28.7	26.6	
		kW	2.45	2.59	2.80	2.98	3.24	3.48	3.70	4.02	4.28	4.66	5.00	5.28	5.14	5.01	4.87	4.76	

Model: WHM60DMA21S

AFR		CFM																1,706	
Airflow (CFM)	ID (°F)	OD (°F)	72	67	62	57	52	47	42	37	32	27	22	17	12	7	2	-4	
1,500	60	TC	66.0	66.0	65.8	65.8	65.7	63.2	58.1	53.7	49.9	50.0	47.0	44.9	42.0	38.9	36.4	34.0	
		kW	4.34	4.63	5.03	5.45	5.89	5.93	5.71	5.51	5.35	5.89	5.73	5.57	5.40	5.27	5.11	5.01	
	70	TC	51.0	50.7	51.0	50.9	50.4	50.2	50.2	50.2	49.1	49.1	45.7	44.3	41.2	38.3	35.9	33.3	
		kW	3.24	3.42	3.76	4.02	4.32	4.69	5.17	5.63	5.85	6.40	6.20	6.03	5.83	5.67	5.49	5.35	
	75	TC	43.0	42.8	42.8	42.8	42.8	42.8	42.2	42.2	42.2	42.2	42.2	42.0	38.9	35.9	32.8	30.4	
		kW	2.70	2.90	3.14	3.38	3.70	4.00	4.26	4.65	4.97	5.45	5.87	6.28	6.09	5.91	5.73	5.57	
	80	TC	35.2	35.2	35.2	35.2	35.1	35.1	34.9	34.9	35.1	34.6	34.6	34.6	34.6	34.6	32.3	29.9	
		kW	2.25	2.39	2.59	2.80	3.00	3.26	3.50	3.88	4.12	4.38	4.71	5.09	5.49	5.99	5.97	5.81	
1,700	60	TC	73.7	73.7	73.5	71.6	67.6	64.0	59.1	54.6	51.0	50.9	47.1	45.9	42.8	39.7	37.2	34.6	
		kW	5.13	5.43	5.87	6.03	5.87	5.81	5.63	5.45	5.33	5.85	5.69	5.55	5.41	5.27	5.13	5.03	
	70	TC	57.1	56.8	56.3	56.3	56.0	55.8	55.8	53.3	49.9	49.7	46.5	45.4	41.8	38.8	36.4	33.8	
		kW	3.74	4.00	4.24	4.59	4.99	5.29	5.97	5.95	5.79	6.32	6.17	5.99	5.83	5.67	5.51	5.39	
	75	TC	48.1	48.0	47.6	48.0	47.8	47.1	47.1	47.3	47.3	47.3	45.9	42.6	39.6	36.4	33.1	30.9	
		kW	3.14	3.34	3.56	3.92	4.14	4.45	4.89	5.33	5.71	6.26	6.42	6.24	6.07	5.89	5.73	5.59	
	80	TC	39.4	39.4	39.4	39.4	39.4	39.3	39.3	38.8	38.8	38.6	38.8	38.8	38.8	35.9	32.7	30.4	
		kW	2.59	2.74	2.98	3.20	3.44	3.70	4.08	4.32	4.61	5.01	5.41	5.81	6.28	6.15	5.95	5.81	
1,900	60	TC	82.1	80.8	76.3	72.9	68.7	65.2	59.9	55.4	51.8	51.7	48.3	46.5	43.4	40.4	37.8	35.2	
		kW	6.03	6.17	6.03	5.99	5.85	5.81	5.63	5.49	5.37	5.89	5.75	5.63	5.51	5.37	5.25	5.15	
	70	TC	63.1	62.9	62.9	62.9	62.8	62.8	58.6	54.1	50.7	50.5	47.3	45.7	42.6	39.6	37.0	34.4	
		kW	4.30	4.57	4.97	5.37	5.79	6.24	6.15	5.97	5.83	6.36	6.20	6.05	5.91	5.77	5.61	5.51	
	75	TC	53.7	53.6	53.6	52.9	52.9	52.8	52.9	52.8	50.0	49.9	46.7	43.4	40.2	37.0	34.1	31.7	
		kW	3.66	3.88	4.22	4.41	4.77	5.17	5.67	6.15	6.09	6.64	6.46	6.30	6.15	5.99	5.83	5.71	
	80	TC	44.3	44.1	44.1	44.1	44.1	43.9	43.3	43.3	43.4	43.3	43.3	42.8	39.7	36.5	33.5	31.1	
		kW	3.04	3.22	3.48	3.70	4.02	4.32	4.59	4.99	5.31	5.79	6.20	6.56	6.38	6.22	6.05	5.91	

5. Fan performance

5-1. Blower data

Airflow performance data is based on cooling performance with a coil and no filter in place. Check the performance table for appropriate unit size selection. External static pressure should stay within the minimum and maximum limits shown in the table below to ensure proper cooling, heating, and electric heating operation.

NOTES:

- Required 350-450 CFM/Ton range.
- When there is an electric heater, set the fan speed based on the air volume that the electric heater needs (not less than 350 CFM/Ton).
- Airflow based upon air handler unit operates at 230 V with no electric heater kit and no filter. Airflow at 208 V is approximately the same as 230 V.

■ Model: WHM24DMA21S

Fan speed		External static pressure in.H2O [KPa]								
		0 (0)	0.1 (0.02)	0.18 (0.045)	0.3 (0.07)	0.4 (0.1)	0.5 (0.12)	0.6 (0.15)	0.7 (0.17)	0.8 (0.20)
Tap (2) Default setting	CFM	815	792	752	709	—	—	—	—	—
	W	94	102	110	123	—	—	—	—	—
Tap (3)	CFM	862	828	792	735	705	—	—	—	—
	W	106	114	125	137	145	—	—	—	—
Tap (4)	CFM	—	—	—	859	853	803	769	735	—
	W	—	—	—	178	185	193	203	213	—
Tap (5)	CFM	—	—	—	—	—	895	864	825	779
	W	—	—	—	—	—	241	251	258	267

■ Model: WHM36DMA21S

Fan speed		External static pressure in.H2O [KPa]								
		0 (0)	0.1 (0.02)	0.18 (0.045)	0.3 (0.07)	0.4 (0.1)	0.5 (0.12)	0.6 (0.15)	0.7 (0.17)	0.8 (0.20)
Tap (2) Default setting	CFM	1,264	1,216	1,172	1,135	1,096	—	—	—	—
	W	215	222	233	238	244	—	—	—	—
Tap (3)	CFM	1,350	1,314	1,269	1,206	1,116	1,082	1,050	—	—
	W	257	264	274	282	292	297	302	—	—
Tap (4)	CFM	—	—	—	1,323	1,266	1,192	1,122	1,060	—
	W	—	—	—	304	313	323	333	340	—
Tap (5)	CFM	—	—	—	—	1,350	1,292	1,221	1,148	1,088
	W	—	—	—	—	371	381	394	401	406

■ Model: WHM48DMA21S

Fan speed		External static pressure in.H2O [KPa]								
		0 (0)	0.1 (0.02)	0.18 (0.045)	0.3 (0.07)	0.4 (0.1)	0.5 (0.12)	0.6 (0.15)	0.7 (0.17)	0.8 (0.20)
Tap (2) Default setting	CFM	1,756	1,701	1,626	1,579	1,520	1,468	1,425	—	—
	W	348	357	369	378	387	395	407	—	—
Tap (3)	CFM	1,799	1,746	1,678	1,634	1,571	1,522	1,449	1,402	—
	W	366	377	388	398	410	419	428	444	—
Tap (4)	CFM	—	1,794	1,749	1,719	1,670	1,633	1,589	1,553	1,510
	W	—	387	401	413	428	437	452	465	482
Tap (5)	CFM	—	—	—	1,782	1,735	1,701	1,665	1,626	1,585
	W	—	—	—	456	469	481	495	510	525

■ Model: WHM60DMA21S

Fan speed		External static pressure in.H2O [KPa]								
		0 (0)	0.1 (0.02)	0.18 (0.045)	0.3 (0.07)	0.4 (0.1)	0.5 (0.12)	0.6 (0.15)	0.7 (0.17)	0.8 (0.20)
Tap (2) Default setting	CFM	1,838	1,810	1,770	1,760	—	—	—	—	—
	W	376	387	401	413	—	—	—	—	—
Tap (3)	CFM	1,888	1,855	1,813	1,782	1,751	—	—	—	—
	W	415	428	445	456	469	—	—	—	—
Tap (4)	CFM	1,971	1,941	1,893	1,864	1,820	1,786	1,755	—	—
	W	472	485	501	513	530	540	558	—	—
Tap (5)	CFM	2,056	2,022	1,978	1,950	1,907	1,878	1,826	1,801	1,750
	W	533	545	562	575	592	603	619	631	638

5-2. Airflow

Conversion factor:

- $1 \text{ m}^3/\text{h} = 0.2778 \text{ l/s} = 0.5886 \text{ CFM}$
- $3.6 \text{ m}^3/\text{h} = 1 \text{ l/s}$
- $1.699 \text{ m}^3/\text{h} = 1 \text{ CFM}$

■ Model: WHM24DMA21S

● Cooling

Airflow	
m ³ /h	1,360
l/s	378
CFM	800

● Heating

Airflow	
m ³ /h	1,360
l/s	378
CFM	800

■ Model: WHM36DMA21S

● Cooling

Airflow	
m ³ /h	1,905
l/s	529
CFM	1,120

● Heating

Airflow	
m ³ /h	1,905
l/s	529
CFM	1,120

■ Model: WHM48DMA21S

● Cooling

Airflow	
m ³ /h	2,700
l/s	750
CFM	1,588

● Heating

Airflow	
m ³ /h	2,700
l/s	750
CFM	1,588

■ Model: WHM60DMA21S

● Cooling

Airflow	
m ³ /h	2,900
l/s	806
CFM	1,706

● Heating

Airflow	
m ³ /h	2,900
l/s	806
CFM	1,706

6. Electrical characteristics

If you use the optional heater kit, make sure if it is suitable for the 3-way installation of the AHU.

Air handler model	Heater kit model name	Electric heat (kW)	MCA* ¹ (A)		MAX. CKT. BKR* ² (A)		Fan speed tap			
			AC 230 V	AC 208 V	AC 230 V	AC 208 V	2	3	4	5
24K	2105340	5	28.3	25.9	30	30	●	●	●	●
	2105342	7.5	40.7	37.2	45	40	—	●	●	●
	2105343	10	53.2	48.5	60	50	—	—	●	●
36K	2105340	5	29.8	27.4	30	30	●	●	●	●
	2105342	7.5	42.2	38.7	45	40	—	●	●	●
	2105343	10	54.7	49.9	60	50	—	—	●	●
	2105344	15	42.2 + 36.9	38.6 + 33.8	45 + 40	40 + 35	—	—	—	●
48K, 60K	2105340	5	31.8	29.4	35	30	●	●	●	●
	2105342	7.5	44.8	40.7	45	45	—	●	●	●
	2105343	10	56.7	51.9	60	55	—	—	●	●
	2105344	15	44.8 + 36.9	40.7 + 33.8	50 + 40	50 + 35	—	—	●	●
	2105345	20	56.7 + 49.9	51.9 + 45.2	60 + 50	60 + 50	—	—	—	●

- : available
- : unavailable

NOTES:

- As the wire size and circuit breaker regulations differ in each country or region, select appropriate devices comply with the regional standard.
- Fan speed selection:
 - 2: Medium-low
 - 3: Medium
 - 4: Medium-high
 - 5: High
- Connect the heater kit to the power supply separately.
- Ampacities for MCA*¹ and MAX. CKT. BKR*² include the blower motor.
- Heat pump systems require specified airflow. Each ton of cooling requires between 350 and 450 CFM/Ton, or 400 CFM/Ton usually.

*1: Minimum Circuit Ampacity (Calculation based on UL60335-2-40)

*2: Maximum Circuit Breaker

7. Accessories

Part name	Q'ty	Part name	Q'ty
Use and installation instructions	1	Warranty card	1

Part 2. OUTDOOR UNIT

SINGLE TYPE:

WHM24SZA21S

WHM36SZA21S

WHM48SZA21S

WHM60SZA21S

1. Specifications

OUTDOOR UNIT
WHM24-60SZA21S

OUTDOOR UNIT
WHM24-60SZA21S

Type		Inverter heat pump				
Model name		WHM24SZA21S	WHM36SZA21S	WHM48SZA21S	WHM60SZA21S	
Power supply		208/230 V ~ 60 Hz				
Available voltage range		198—253 V				
Fan	Airflow rate	CFM (m ³ /h)	1,825 (3,150)	2,350 (3,995)	3,525 (6,000)	
	Type × Q'ty		Propeller fan × 1		Propeller fan × 2	
	Motor output	W	60	121		
Sound pressure level *1		dB (A)	54	57	59	60
Heat exchanger type	Dimensions (H × W × D)	in (mm)	35-5/8 × 25-1/4 × 7/8 (900 × 630 × 21.7) 34 × 25-1/4 × 7/8 (866 × 630 × 21.7)	38-3/16 × 31-3/8 × 1-11/16 (970 × 798 × 43.3)	38-3/16 × 53 × 1-7/16 (970 × 1,344 × 36.4)	38-3/16 × 53 × 1-11/16 (970 × 1,344 × 43.3)
	Fin pitch	FPI	18	19	17	18
	Rows × Stages		2 × 30	2 × 38	2 × 64	
	Pipe type		Copper			
	Fin type	Type (Material) Surface treatment	Aluminum Blue fin			
Compressor	Type	Rotary				
Refrigerant	Type	R410A				
	Charge	lb oz	4 lb 7 oz	6 lb 3 oz	8 lb 15 oz	
		g	2,000	2,800	4,050	
Refrigerant oil	Type	VG74				
Enclosure	Material	Steel sheet				
	Color	White				
Dimensions (H × W × D)	Net	in (mm)	26-3/8 × 33-7/8 × 12-1/4 (670 × 860 × 310)	33 × 37-3/8 × 13-3/8 (840 × 950 × 340)	54-5/8 × 37-3/8 × 13-3/8 (1,386 × 950 × 340)	
	Gross		28-3/4 × 39 × 1-3/4 (730 × 990 × 450)	36-1/4 × 43-3/4 × 18-1/8 (920 × 1,110 × 460)	60-1/4 × 43-3/4 × 18-1/8 (1,530 × 1,110 × 460)	
Weight	Net	lb (kg)	112.4 (51)	147.7 (67)	227.1 (103)	251.3 (114)
	Gross		121.3 (55)	158.7 (72)	253.5 (115)	277.5 (126)
Connection pipe	Size	Liquid Gas	in (mm)	Ø3/8 (Ø9.52)		
	Method			Flare		
	Pre-charge length			24.6 (7.5)		
	Max. length		ft (m)	164 (50)	246 (75)	
	Max. height difference			Indoor unit higher than outdoor unit: 98 (30) Outdoor unit higher than indoor unit: 98 (30)		
Operation range	Cooling	°F (°C)	5 to 122 (-15 to 50)			
	Heating		-13 to 75 (-25 to 24)			
NOTES:						
<ul style="list-style-type: none"> • Specifications are based on the following conditions: <ul style="list-style-type: none"> – Cooling: Indoor temperature of 80 °FDB (26.67 °CDB)/67 °FWB (19.44 °CWB), and outdoor temperature of 95 °FDB (35 °CDB)/75 °FWB (23.9 °CWB). – Heating: Indoor temperature of 70 °FDB (21.11 °CDB)/59 °FWB (15 °CWB), and outdoor temperature of 47 °FDB (8.33 °CDB)/43 °FWB (6.11 °CWB). – Pipe length: 24 ft 6 in (7.5 m), Height difference: 0 ft (0 m). (Between outdoor unit and indoor unit.) • Protective function might work when using it outside the operation range. • *1: Sound pressure level <ul style="list-style-type: none"> – Measured values in manufacturer's anechoic chamber. – Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here. 						

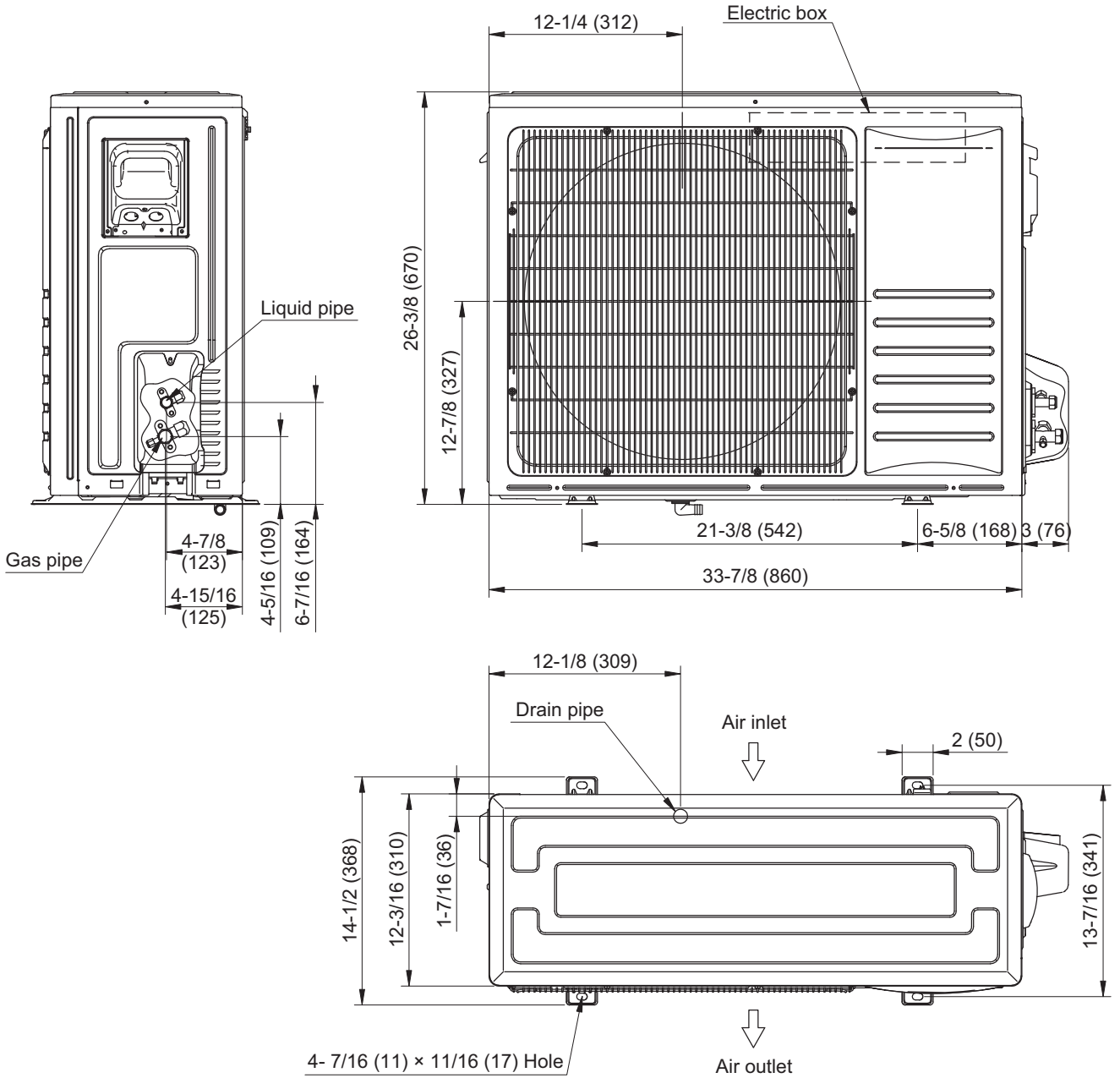
2. Dimensions

2-1. Model: WHM24SZA21S

Unit: in (mm)

OUTDOOR UNIT
WHM24-60SZA21S

OUTDOOR UNIT
WHM24-60SZA21S

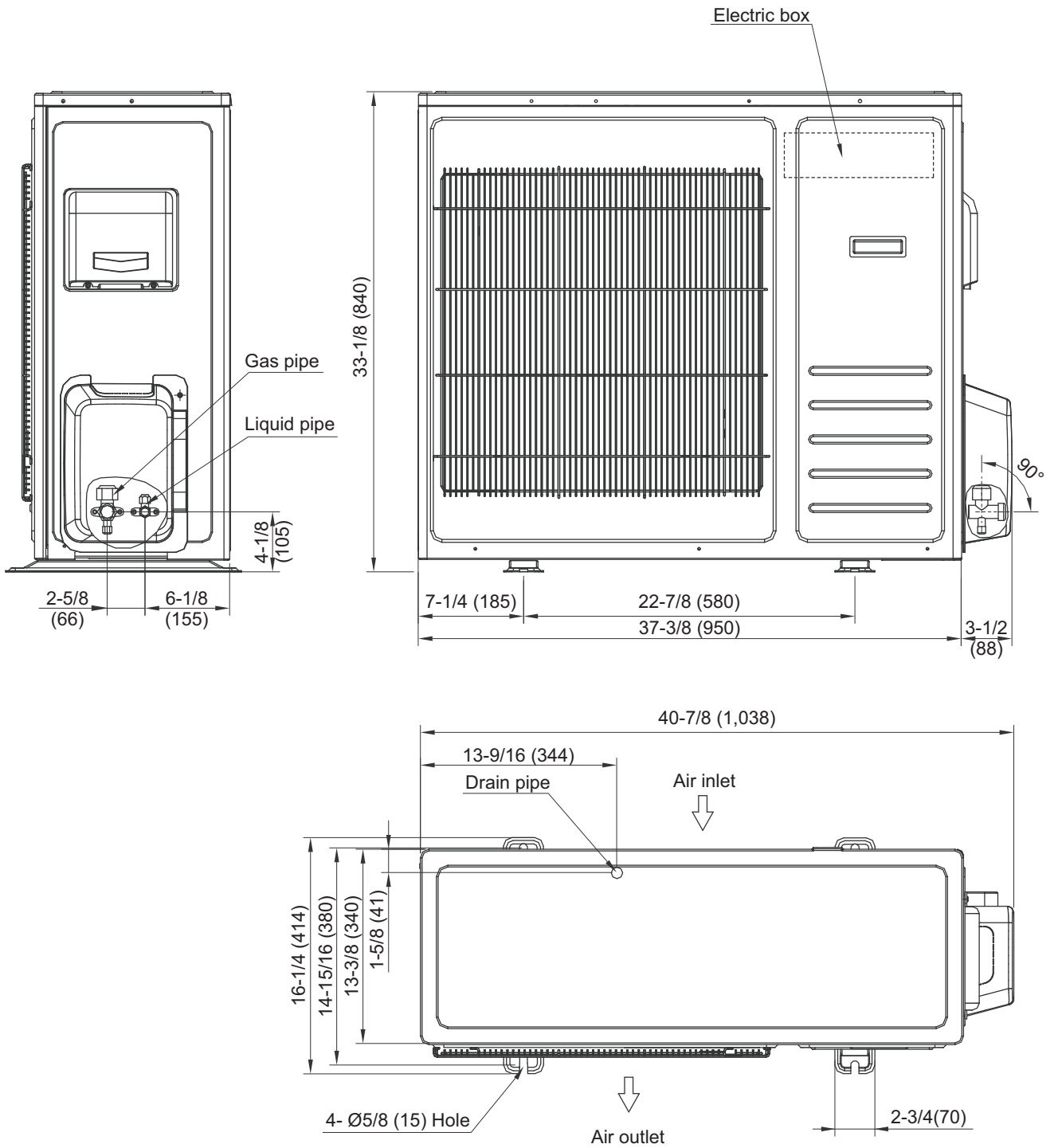


2-2. Model: WHM36SZA21S

Unit: in (mm)

OUTDOOR UNIT
WHM24-60SZA21S

OUTDOOR UNIT
WHM24-60SZA21S

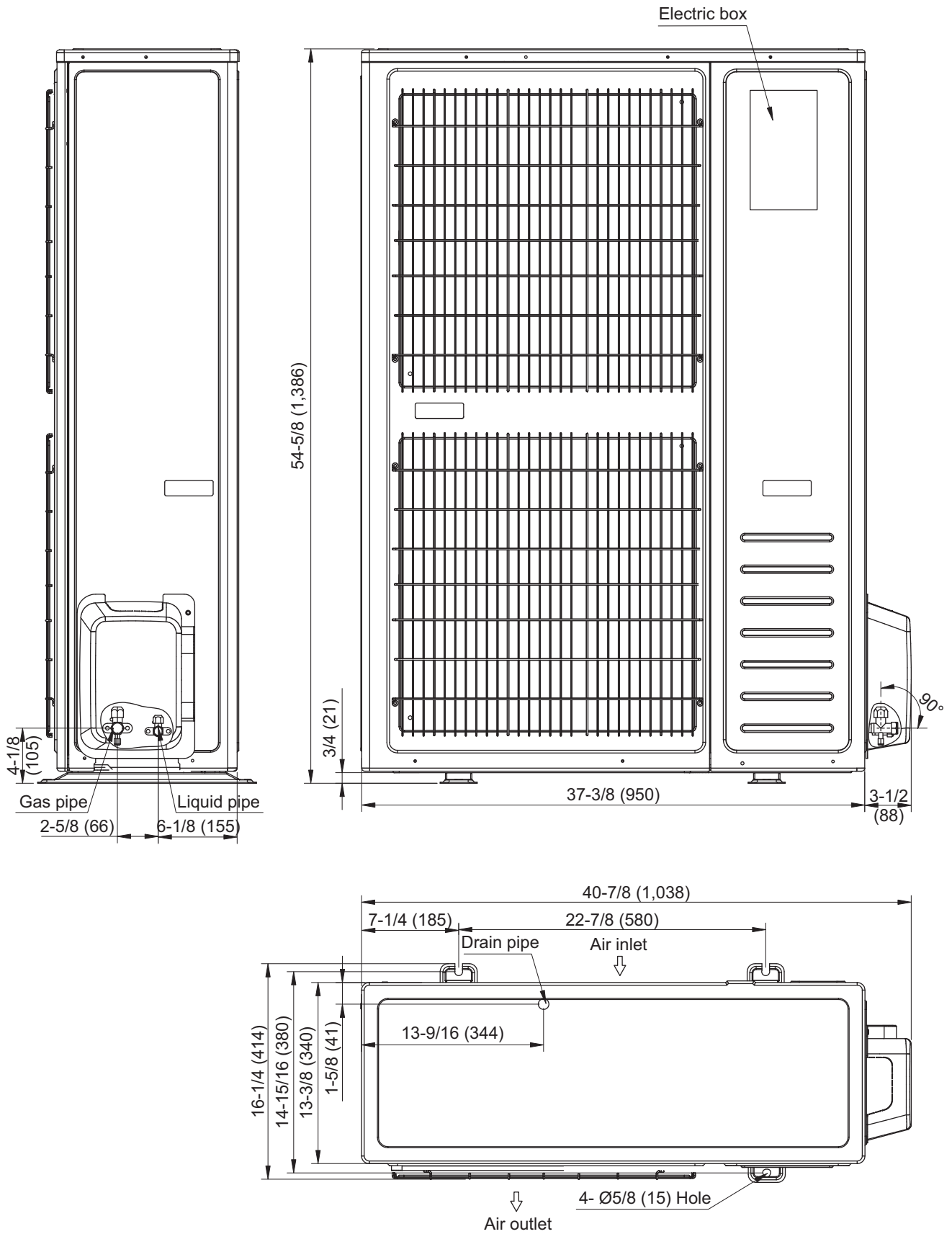


2-3. Models: WHM48SZA21S and WHM60SZA21S

Unit: in (mm)

OUTDOOR UNIT
WHM24-60SZA21S

OUTDOOR UNIT
WHM24-60SZA21S



3. Installation space

3-1. Models: WHM24SZA21S, WHM36SZA21S, WHM48SZA21S, and WHM60SZA21S

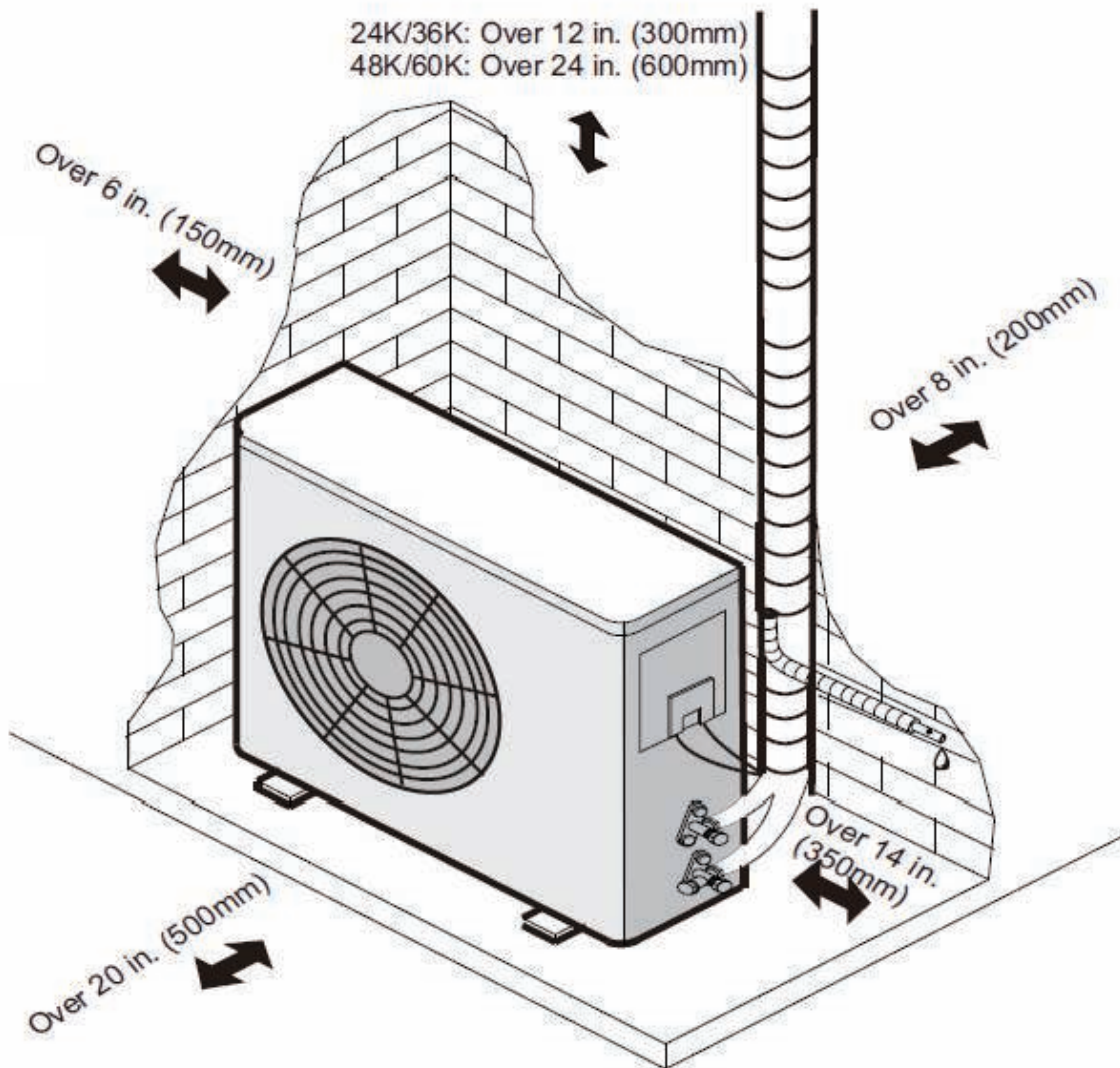
■ Space requirement

Provide sufficient installation space for product safety.

⚠ CAUTION

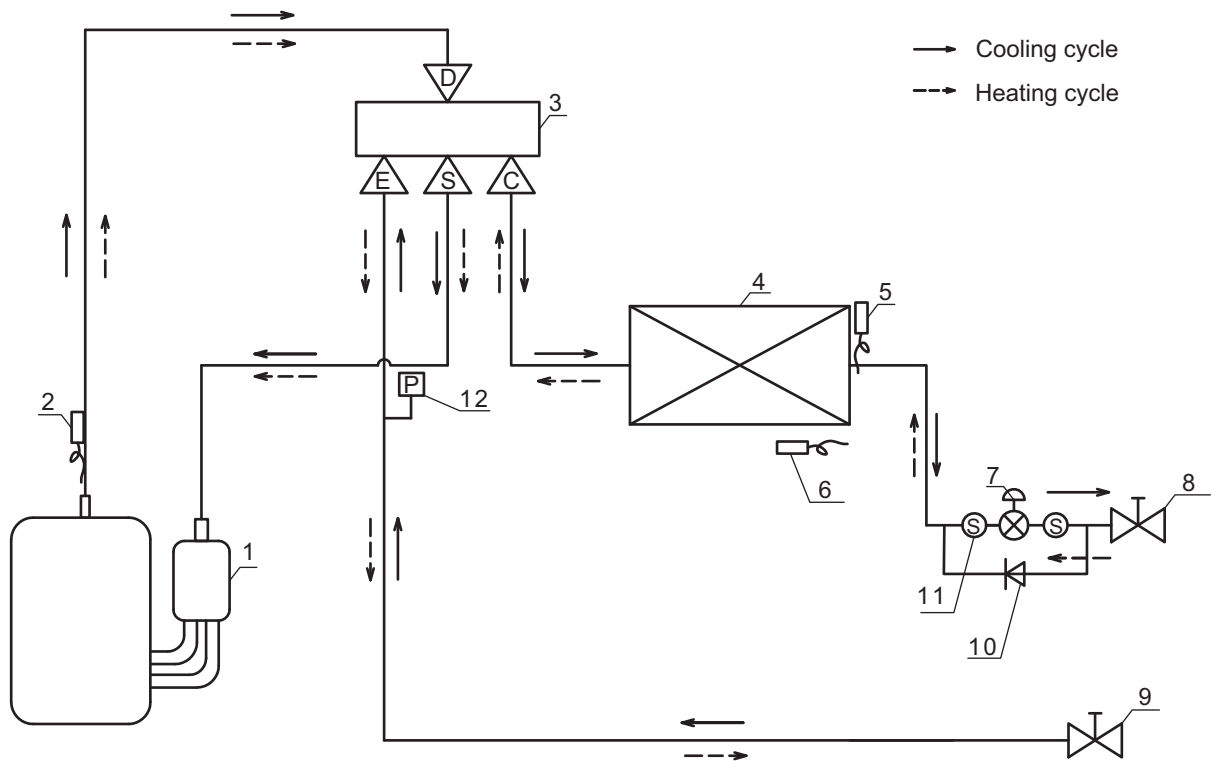
Keep the space shown in the installation examples.

If the installation is not performed accordingly, it could cause a short circuit and result in a lack of operating performance.



4. Refrigerant circuit

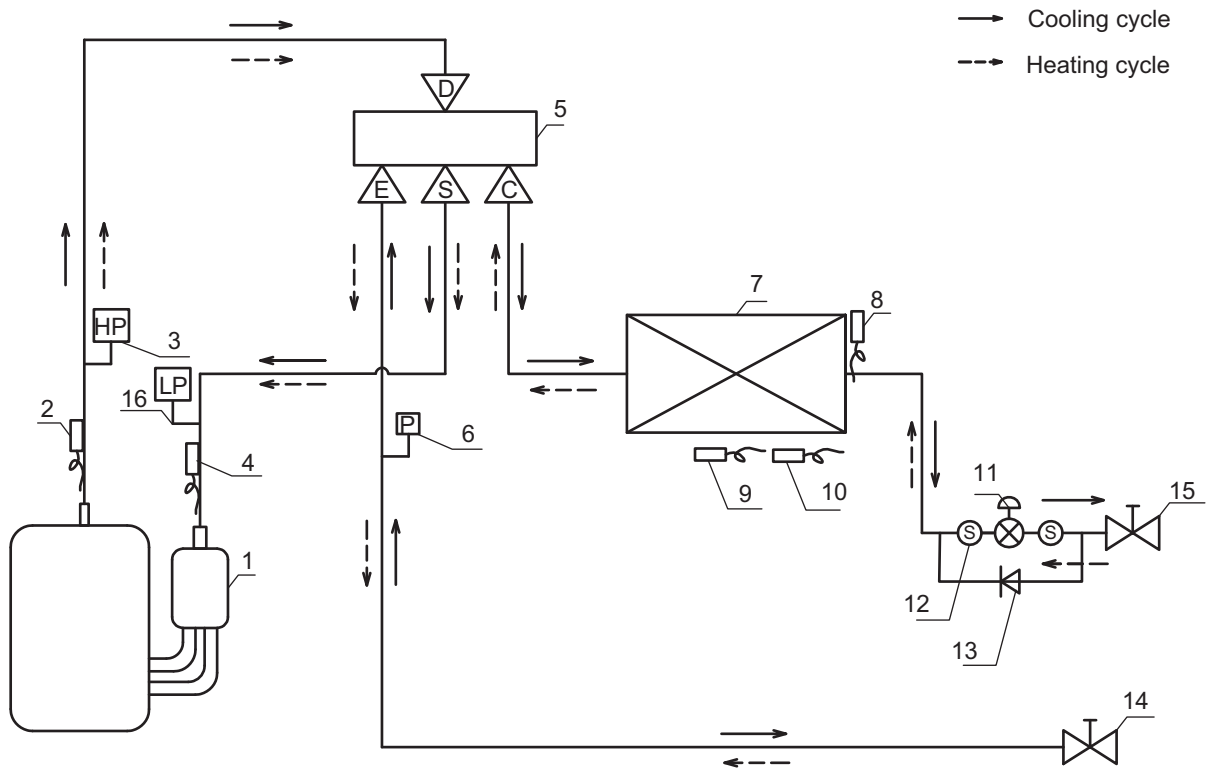
4-1. Models: WHM24SZA21S and WHM36SZA21S



List of components

List of components	
1	Compressor
2	Discharge temperature sensor
3	4-way valve
4	Outdoor heat exchanger
5	Coil temperature sensor
6	Ambient temperature sensor
7	Electronic expansion valve
8	Stop valve (Liquid)
9	Stop valve (Gas)
10	One-way valve
11	Strainer
12	Pressure sensor

4-2. Models: WHM48SZA21S and WHM60SZA21S

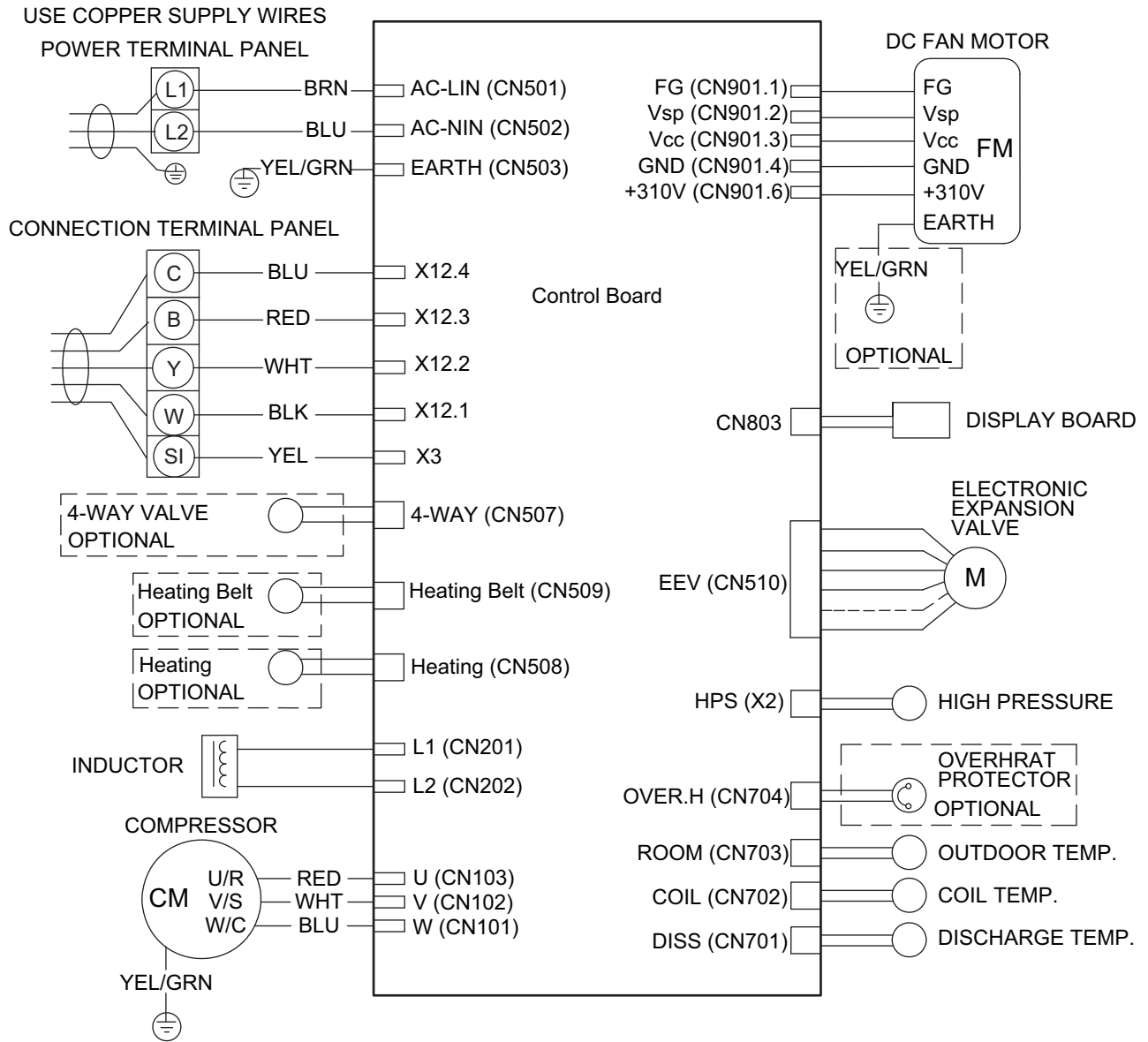


List of components

List of components	
1	Compressor
2	Discharge temperature sensor
3	High pressure switch
4	Suction temperature sensor
5	4-Way valve
6	Pressure sensor
7	Outdoor heat exchanger
8	Ambient temperature sensor
9	Coil temperature sensor
10	Defrost temperature sensor
11	Electronic expansion valve
12	Strainer
13	One-way valve
14	Stop valve (Gas)
15	Stop valve (Liquid)
16	Low pressure switch

5. Wiring diagrams

5-1. Models: WHM24SZA21S and WHM36SZA21S



Fan motor

Pin No.	Terminal code	Function of terminal	Lead wire color
1	FG	Revolution pulse output	Blue
2	Vsp	Speed control voltage input	Yellow
3	Vcc	Control power voltage input	White
4	GND	GND	Black
5	—	—	—
6	Vm	Motor power voltage input	Red

Compressor

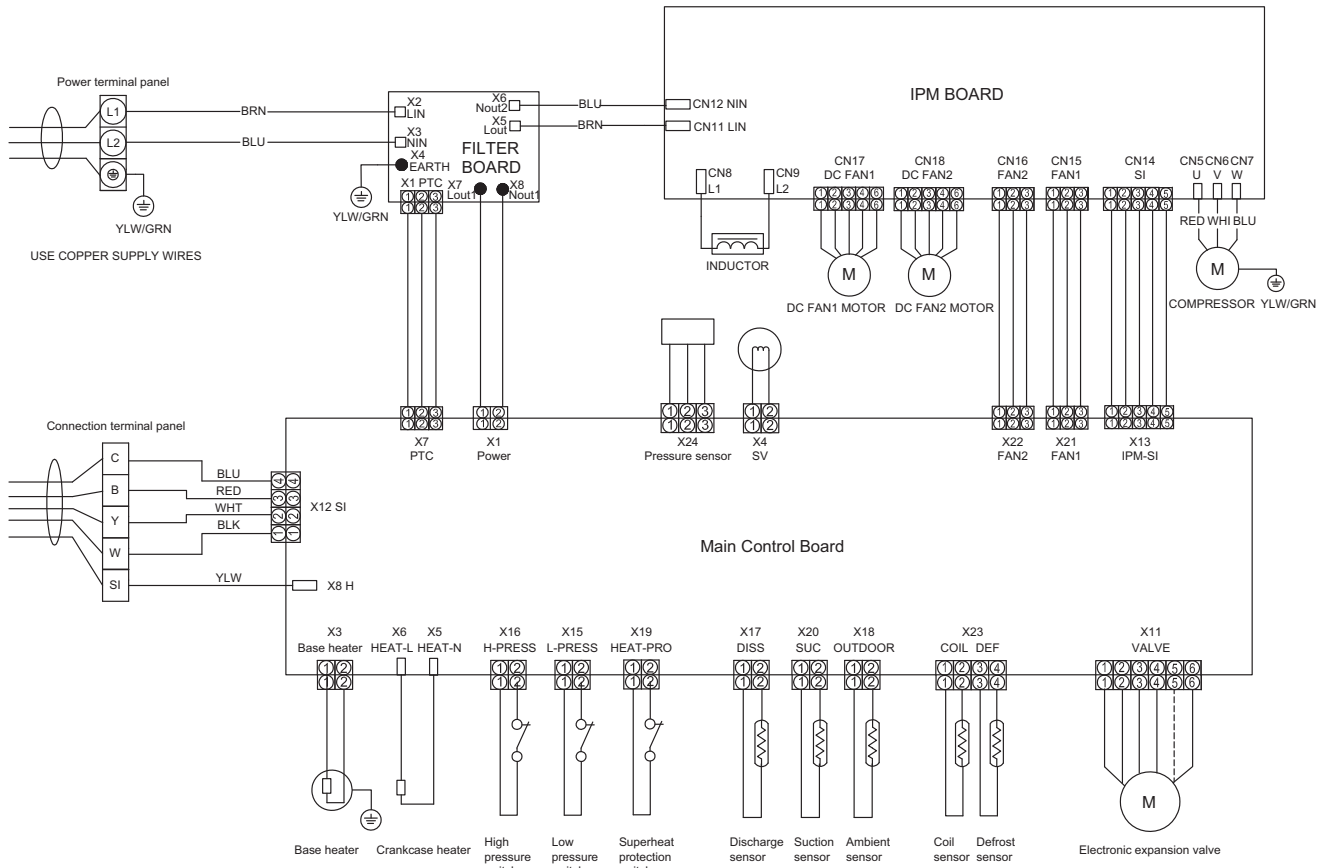
24 model: 0.75 Ω
 36 model: 0.75 Ω
 (20°C 68°F)

Temperature	0°C 32°F	20°C 68°F	30°C 86°F
Thermistor (Outdoor temp.)	15 kΩ 1.3 V	6.5 kΩ 2.2 V	4.5 kΩ 2.7 V
Thermistor (Coil & Defrost temp.)	15 kΩ 1.3 V	6.5 kΩ 2.2 V	4.5 kΩ 2.7 V
Thermistor (Discharge temp.)	187 kΩ 0.18 V	72.1 kΩ 0.43 V	46.5 kΩ 0.64 V

5-2. Models: WHM48SZA21S and WHM60SZA21S

OUTDOOR UNIT
WHM24-60SZA21S

OUTDOOR UNIT
WHM24-60SZA21S



Fan motor

Pin No.	Terminal code	Function of terminal	Lead wire color
1	FG	Revolution pulse output	Blue
2	Vsp	Speed control voltage input	Yellow
3	Vcc	Control power voltage input	White
4	GND	GND	Black
5	—	—	—
6	Vm	Motor power voltage input	Red

Compressor

48 model: 0.63 Ω
60 model: 0.63 Ω
(20°C 68°F)

Temperature	0°C 32°F	20°C 68°F	30°C 86°F
Thermistor (Outdoor temp.)	15 kΩ 1.3 V	6.5 kΩ 2.2 V	4.5 kΩ 2.7 V
Thermistor (Coil & Defrost temp.)	15 kΩ 1.3 V	6.5 kΩ 2.2 V	4.5 kΩ 2.7 V
Thermistor (Discharge temp.)	187 kΩ 0.18 V	72.1 kΩ 0.43 V	46.5 kΩ 0.64 V
Thermistor (Suction temp.)	15 kΩ 1.3 V	6.5 kΩ 2.2 V	4.5 kΩ 2.7 V

6. Electrical characteristics

Model name			WHM24SZA21S	WHM36SZA21S	
Power supply	Voltage	V	208/230 ~		
	Frequency	Hz	60		
MCA*1		A	15	23	
Wiring spec.*2	MAX. CKT. BKR*3		A	25	35
	Power cable		AWG	3 × 12	3 × 10
	Connection cable*4	Size	AWG	5 × 16	
		Limited wiring length	ft (m)	167 (51)	249 (76)

Model name			WHM48SZA21S	WHM60SZA21S	
Power supply	Voltage	V	208/230 ~		
	Frequency	Hz	60		
MCA*1		A	35		
Wiring spec.*2	MAX. CKT. BKR*3		A	50	
	Power cable		AWG	3 × 8	
	Connection cable*4	Size	AWG	5 × 16	
		Limited wiring length	ft (m)	249 (76)	

*1: Minimum Circuit Ampacity (Calculation based on UL60335-2-40)

*2: Selected sample based on Japan Electrotechnical Standards and Codes Committee E0005. As the regulations of wire size and circuit breaker differ in each country or region, select appropriate devices complied to the regional standard.

*3: Maximum Circuit Breaker

*4: Limit voltage drop to less than 2%. If voltage drop is 2% or more, increase cable conductor size.

7. Accessories

Part name	Q'ty	Part name	Q'ty
Installation and operation manual	1	Drain hose	1
Rubber cushion	1		