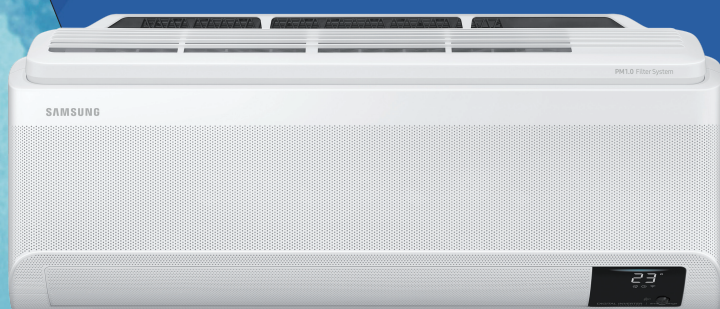


SAMSUNG

RAC

Technical Data Book

RAC for CIS
(INV, R410A, 50Hz, HP)



Model : AR**A****WKNER (Indoor Unit)
AR**A****WKXER (Outdoor Unit)

History

Version	Modification	Date	Remark
Ver.1.0	Released 2021 QMD RAC TDB for CIS	21. 07. 16	

Nomenclature

Model Name

AR

09

A

X

A

A

A

WK

N

ER

(1)

(2)

(3)

(4)

(5)

(6)

(7)

(8)

(9)

Buyer

(1) Classification

AR	RAC
----	-----

(2) Capacity

x1000 Btu/h

(3) Year

A	2021
---	------

(4) Product Type

S	INVERTER HP R410A
X	INVERTER HP R32

(5) Characteristics

A	Motion Detect Sensor + PM1.0 Filter + PM1.0 Sensor+Wi-Fi
C	Motion Detect Sensor +Wi-Fi + Tri-care Filter
E	Wi-Fi + Tri-care Filter
F	Wi-Fi
G	Tri-care Filter
H	-

(6) Design Segment

A	Wind-Free GEO
C	Wind-Free AIRISE
Y	GEO
Z	AIRISE

(7) Version

A-Z (1 digit)

(8) Color

WK	DA White
----	----------

(9) Set

N	Indoor Unit
X	Outdoor Unit
/	Set

Line-up

Indoor Unit

Design	Image	
Wind-Free GEO PM1.0		
Wind-Free AIRISE		

Design	Capacity (kBtu/h)			
	9	12	18	24
Wind-Free GEO PM1.0	●	●		
Wind-Free AIRISE	●	●	●	●

Line-up

Outdoor Unit

Design	Capacity (kBtu/h)			
	9	12	18	24
Wind-Free GEO PM 1.0				
Wind-Free AIRISE				

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1. Specification

Wind-Free GEO

System	Model Name	Indoor Unit		AR09AXAAAWKNER		AR12AXAAAWKNER				
		Outdoor Unit		AR09AXAAAWKXER		AR12AXAAAWKXER				
	Mode				-	Heat Pump		Heat Pump		
	Performance	Capacity (Min/Std/Max)	Cooling	W		900 / 2,500 / 3,400		900 / 3,500 / 4,400		
				Btu/h		3,071 / 8,530 / 11,601		3,071 / 11,942 / 15,013		
			Heating	W		700 / 3,200 / 6,500		700 / 4,000 / 6,800		
				Btu/h		2,388 / 10,919 / 22,179		2,388 / 13,649 / 23,203		
	Power	Power Input (Min/Std/Max)	Cooling	W		180 / 560 / 930		180 / 920 / 1,450		
			Heating	W		150 / 810 / 2,160		150 / 1,079 / 2,280		
		Current Input (Min/Std/Max)	Cooling	A		1.2 / 2.9 / 4.5		1.2 / 4.4 / 6.4		
			Heating	A		1 / 3.9 / 9.5		1 / 5.1 / 10		
	Efficiency	EER	Cooling	W/W		4.46		3.80		
		COP	Heating	-		3.95		3.71		
		Energy Grade	Cooling	-		A++		A++		
			Heating	-		A++ / A		A++ / A		
	Piping Connections	Liquid Pipe			Type	Flare connection		Flare connection		
					Φ, mm (inch)	6.35 (1/4)		6.35 (1/4)		
		Gas Pipe			Type	Flare connection		Flare connection		
					Φ, mm (inch)	9.52 (3/8)		9.52 (3/8)		
		Heat Insulation			-		Both liquid and gas pipes		Both liquid and gas pipes	
		Installation Limitation	Max. Length (Outdoor to indoor)		m		15		15	
			Max. Height (Between ID/OD)		m		8		8	
	Wiring connections	Power Source Wire			mm²		1.5		1.5	
		Communication	Min.		mm²		0.75		0.75	
			Remark		-		F1, F2		F1, F2	
	Refrigerant	Type			-		R32		R32	
		Factory Charging			kg		0.965		0.965	
					tCO2e		0.65		0.65	
Indoor Unit	Power Supply			Ø, #, V, Hz		1, 2, 220-240, 50		1, 2, 220-240, 50		
	Heat Exchanger	Type		-		F&T		F&T		
		Material	Fin	-		Al		Al		
			Tube	-		Cu		Cu		
		Fin Treatment		-		NGS(Neo-Green)		NGS(Neo-Green)		
	Fan	Type		-		Cross Flow		Cross Flow		
		Quantity		EA		1		1		
		Air Flow Rate	Cooling (T/H/M/L)	m³/min		11.7 / 10.7 / 9.8 / 8.4		12.1 / 11.2 / 9.8 / 8.4		
				l/s		195 / 178 / 163 / 140		202 / 187 / 163 / 140		
			Heating (T/H/M/L)	m³/min		13 / 12.1 / 11.2 / 9.8		13 / 12.1 / 10.7 / 9.3		
	l/s			217 / 202 / 187 / 163		217 / 202 / 178 / 155				
	Fan Motor	Type		-		BLDC		BLDC		
		Output		W x n		27 x 1		27 x 1		
	Drain	Drain Pipe		Φ, mm		16.3, 550		16.3, 550		
	Sound□	Sound Pressure Level	H / Silent		dB(A)		38 / 19		40 / 19	
	External Dimension	Net Weight			kg		10.5		10.5	
		Shipping Weight			kg		12.1		12.1	
		Net Dimensions (WxHxD)			mm		820 x 345 x 215		820 x 345 x 215	
		Shipping Dimensions (WxHxD)			mm		880 x 290 x 410		880 x 290 x 410	
	Casing	Material			-		HIPS		HIPS	
	Control System	Infrared remote control			-		Included		Included	
		Wired remote control			-		-		-	
	Drain Pump	Drain Pump			-		-		-	
		Max. lifting Height / Displacement			mm / Liter/h		-		-	
	Additional Accessories	Drain Pump	External Model	-		-		-		
			Internal Model	-		-		-		
			Max. lifting Height / Displacement		mm / Liter/h		-		-	
			Easy Filter Plus			-		Removable / Washable		Removable / Washable
Tri-Care Filter			-		-		-			
Motion Detect Sensor			-		○		○			
Wi-Fi			-		○		○			

1. Specification

Wind-Free GEO

Model Name		Indoor Unit		AR09AXAAAWKNER	AR12AXAAAWKNER
		Outdoor Unit		AR09AXAAAWKXER	AR12AXAAAWKXER
Outdoor Unit	Power Supply			Ø, #, V, Hz	1, 2, 220-240, 50
	Heat Exchanger	Type		-	F&T
		Material	Fin	-	Al
			Tube	-	Cu
		Fin Treatment		-	NGS(Neo-Green)
	Compressor	Model Name		KTN130D42UFR	KTN130D42UFR
		Type		-	BLDC ROTARY
		Output		kW	4.09
		Oil	Type	-	POE
			Initial charge	cc	350
	Fan	Type		-	Propeller
		Discharge direction		-	Front
		Quantity		EA	1
		Air Flow Rate		m³/min	45
				l/s	750
	Fan Motor	Type		-	BLDC
		Output		W x n	40 x 1
	Sound□	Sound Pressure Level	Cooling	dB(A)	45
					46
	External Dimension	Net Weight		kg	32.8
		Shipping Weight		kg	35.0
		Net Dimensions (WxHxD)		mm	790 x 548 x 285
		Shipping Dimensions (WxHxD)		mm	913 x 622 x 371
	Casing	Material	Body	-	EGI Steel Plate / PP
	Operating Temp. Range	Cooling		°C	-10 ~ 46
		Heating		°C	-15 ~ 24

NOTE

- Specifications may be subject to change without prior notice.
- Nominal cooling capacities are based on;
Indoor temperature: 27°C DB, 19°C WB
Outdoor temperature: 35°C DB, 24°C WB, Equivalent refrigerant piping: 5m, Level differences: 0 m
 - Nominal heating capacities are based on;
Indoor temperature: 20°C DB, 15°C WB
Outdoor temperature: 7°C DB, 6°C WB, Equivalent refrigerant piping: 5m, Level differences: 0 m
 - Sound pressure was acquired in an anechoic room. Thus actual noise level may be different depending on the installation conditions.
 - These products contain R410A/R32 which is fluorinated greenhouse gas.

1. Specification

Wind-Free AIRISE

System	Model Name	Indoor Unit		AR09ASHCBWKNER		AR12ASHCBWKNER	
		Outdoor Unit		AR09ASHCBWKXER		AR12ASHCBWKXER	
	Mode			-	Heat Pump	Heat Pump	
	Performance	Capacity (Min/Std/Max)	Cooling	W	1,000 / 2,500 / 3,300	1,000 / 3,500 / 4,000	
				Btu/h	3,412 / 8,530 / 11,260	3,412 / 11,942 / 13,649	
			Heating	W	1,100 / 3,200 / 5,200	1,100 / 3,500 / 5,400	
				Btu/h	3,753 / 10,919 / 17,743	3,753 / 11,942 / 18,426	
	Power	Power Input (Min/Std/Max)	Cooling	W	180 / 670 / 890	180 / 1,060 / 1,210	
			Heating	W	240 / 860 / 1,600	240 / 940 / 1,600	
		Current Input (Min/Std/Max)	Cooling	A	1.5 / 3.6 / 4.4	1.5 / 5 / 6	
			Heating	A	1.6 / 4.4 / 7	1.6 / 4.5 / 7	
	Efficiency	EER	Cooling	W/W	3.73	3.30	
		COP	Heating	-	3.72	3.72	
		Energy Grade	Cooling	-	A++	A++	
			Heating	-	A+ / B	A+ / B	
	Piping Connections	Liquid Pipe	Type		Flare connection	Flare connection	
			Φ, mm (inch)		6.35 (1/4)	6.35 (1/4)	
		Gas Pipe	Type		Flare connection	Flare connection	
			Φ, mm (inch)		9.52 (3/8)	9.52 (3/8)	
		Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	
		Installation Limitation	Max. Length (Outdoor to indoor)	m	15	15	
	Max. Height (Between ID/OD)		m	8	8		
	Wiring connections	Power Source Wire		mm²	1.5	1.5	
		Communication	Min.	mm²	0.75	0.75	
			Remark	-	F1, F2	F1, F2	
	Refrigerant	Type		-	R410A	R410A	
		Factory Charging		kg	1	1	
				tCO2e	2.09	2.09	
Ø, #, V, Hz				1, 2, 220-240, 50	1, 2, 220-240, 50		
Heat Exchanger	Type		-	F&T	F&T		
	Material	Fin	-	Al	Al		
		Tube	-	Cu	Cu		
	Fin Treatment		-	NGS(Neo-Green)	NGS(Neo-Green)		
Fan	Type		-	Cross Flow	Cross Flow		
	Quantity		EA	1	1		
	Air Flow Rate	Cooling (T/H/M/L)	m³/min	10.3 / 9.8 / 9.3 / 8.4	10.7 / 10.3 / 9.3 / 8.4		
			l/s	172 / 163 / 155 / 140	178 / 172 / 155 / 140		
		Heating (T/H/M/L)	m³/min	11.2 / 10.7 / 10.3 / 9.3	11.7 / 11.2 / 10.3 / 9.3		
			l/s	187 / 178 / 172 / 155	195 / 187 / 172 / 155		
Fan Motor	Type		-	BLDC	BLDC		
	Output		W x n	27 x 1	27 x 1		
Drain	Drain Pipe		Φ, mm	16.3, 550	16.3, 550		
Sound□	Sound Pressure Level	H / Silent	dB(A)	38 / 22	38 / 22		
External Dimension	Net Weight		kg	9.2	9.2		
	Shipping Weight		kg	10.5	10.5		
	Net Dimensions (WxHxD)		mm	820 x 299 x 215	820 x 299 x 215		
	Shipping Dimensions (WxHxD)		mm	880 x 290 x 375	880 x 290 x 375		
Casing	Material		-	HIPS	HIPS		
Control System	Infrared remote control		-	Included	Included		
	Wired remote control		-	-	-		
Drain Pump	Drain Pump		-	-	-		
	Max. lifting Height / Displacement		mm / Liter/h	-	-		
Additional Accessories	Drain Pump	External Model	-	-	-		
		Internal Model	-	-	-		
		Max. lifting Height / Displacement	mm / Liter/h	-	-		
		Easy Filter Plus		-	Removable / Washable	Removable / Washable	
	Tri-Care Filter		-	-	-		
	Motion Detect Sensor		-	-	-		
	Wi-Fi		-	-	-		

1. Specification

Wind-Free AIRISE

Model Name		Indoor Unit		AR09ASHCBWKNER	AR12ASHCBWKNER
		Outdoor Unit		AR09ASHCBWKXER	AR12ASHCBWKXER
Outdoor Unit	Power Supply			Ø, #, V, Hz	1, 2, 220-240, 50
	Heat Exchanger	Type		-	F&T
		Material	Fin	-	Al
			Tube	-	Cu
		Fin Treatment		-	NGS(Neo-Green)
	Compressor	Model Name		UB1AR1090FE6	UB1AR1090FE6
		Type		-	BLDC ROTARY
		Output		kW	2.8
		Oil	Type	-	POE
			Initial charge	cc	260
	Fan	Type		-	Propeller
		Discharge direction		-	Front
		Quantity		EA	1
		Air Flow Rate		m³/min	40
				l/s	667
	Fan Motor	Type		-	BLDC
		Output		W x n	40 x 1
	Sound□	Sound Pressure Level	Cooling	dB(A)	45
					46
	External Dimension	Net Weight		kg	27.0
		Shipping Weight		kg	29.1
		Net Dimensions (WxHxD)		mm	720 x 548 x 265
		Shipping Dimensions (WxHxD)		mm	844 x 622 x 353
	Casing	Material	Body	-	EGI Steel Plate / PP
					EGI Steel Plate / PP
	Operating Temp. Range	Cooling		°C	-10 ~ 46
		Heating		°C	-15 ~ 24

NOTE

- Specifications may be subject to change without prior notice.
- Nominal cooling capacities are based on;
Indoor temperature: 27°C DB, 19°C WB
Outdoor temperature: 35°C DB, 24°C WB, Equivalent refrigerant piping: 5m, Level differences: 0 m
 - Nominal heating capacities are based on;
Indoor temperature: 20°C DB, 15°C WB
Outdoor temperature: 7°C DB, 6°C WB, Equivalent refrigerant piping: 5m, Level differences: 0 m
 - Sound pressure was acquired in an anechoic room. Thus actual noise level may be different depending on the installation conditions.
 - These products contain R410A/R32 which is fluorinated greenhouse gas.

1. Specification

Wind-Free AIRISE

System	Model Name	Indoor Unit		AR18ASHCBWKNER	AR24ASHCBWKNER	
		Outdoor Unit		AR18ASHCBWKXER	AR24ASHCBWKXER	
	Mode			Heat Pump	Heat Pump	
	Performance	Capacity (Min/Std/Max)	Cooling	W	1,600 / 5,000 / 6,500	1,400 / 6,450 / 7,900
				Btu/h	5,459 / 17,061 / 22,179	4,777 / 22,008 / 26,956
			Heating	W	1,200 / 6,000 / 7,200	1,200 / 6,450 / 8,900
				Btu/h	4,095 / 20,473 / 24,567	4,095 / 22,008 / 30,368
	Power	Power Input (Min/Std/Max)	Cooling	W	300 / 1,450 / 1,980	340 / 2,000 / 2,700
			Heating	W	270 / 1,750 / 2,000	280 / 1,890 / 3,750
		Current Input (Min/Std/Max)	Cooling	A	2 / 6.6 / 9.2	2.2 / 9.2 / 12
			Heating	A	1.7 / 7.9 / 9	1.8 / 8.5 / 17.2
	Efficiency	EER	Cooling	W/W	3.45	3.23
		COP	Heating	-	3.43	3.41
		Energy Grade	Cooling	-	A++	A++
			Heating	-	A / C	A / B
	Piping Connections	Liquid Pipe		Type	Flare connection	Flare connection
				Φ, mm (inch)	6.35 (1/4)	6.35 (1/4)
		Gas Pipe		Type	Flare connection	Flare connection
				Φ, mm (inch)	12.7 (1/2)	15.88 (5/8)
		Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes
		Installation Limitation	Max. Length (Outdoor to indoor)	m	30	30
			Max. Height (Between ID/OD)	m	15	15
	Wiring connections	Power Source Wire		mm²	2.5	2.5
		Communication	Min.	mm²	0.75	0.75
			Remark	-	F1, F2	F1, F2
	Refrigerant	Type		-	R410A	R410A
		Factory Charging		kg	1.3	1.4
				tCO ₂ e	2.71	2.92
Indoor Unit	Power Supply			Ø, #, V, Hz	1, 2, 220-240, 50	1, 2, 220-240, 50
	Heat Exchanger	Type		-	F&T	F&T
		Material	Fin	-	Al	Al
			Tube	-	Cu	Cu
		Fin Treatment		-	NGS(Neo-Green)	NGS(Neo-Green)
	Fan	Type		-	Cross Flow	Cross Flow
		Quantity		EA	1	1
		Air Flow Rate	Cooling (T/H/M/L)	m³/min	16.6 / 15.3 / 14 / 12.6	17.3 / 15.9 / 14.6 / 13.3
				l/s	277 / 255 / 233 / 210	288 / 265 / 243 / 222
			Heating (T/H/M/L)	m³/min	16.6 / 15.3 / 14 / 12.6	17.9 / 16.6 / 15.3 / 14
				l/s	277 / 255 / 233 / 210	298 / 277 / 255 / 233
	Fan Motor	Type		-	BLDC	BLDC
		Output		W x n	27 x 1	27 x 1
	Drain	Drain Pipe		Φ, mm	16.3, 550	16.3, 550
	Sound□	Sound Pressure Level	H / Silent	dB(A)	41 / 28	44 / 28
	External Dimension	Net Weight		kg	11.5	11.5
		Shipping Weight		kg	13.2	13.2
		Net Dimensions (WxHxD)		mm	1,055 x 299 x 215	1,055 x 299 x 215
		Shipping Dimensions (WxHxD)		mm	1,115 x 290 x 375	1,115 x 290 x 375
	Casing	Material		-	HIPS	HIPS
	Control System	Infrared remote control		-	Included	Included
		Wired remote control		-	-	-
	Drain Pump	Drain Pump		-	-	-
		Max. lifting Height / Displacement		mm / Liter/h	-	-
	Additional Accessories	Drain Pump	External Model	-	-	-
			Internal Model	-	-	-
			Max. lifting Height / Displacement	mm / Liter/h	-	-
Easy Filter Plus		-	Removable / Washable	Removable / Washable		
Tri-Care Filter		-	-	-		
Motion Detect Sensor		-	-	-		
Wi-Fi		-	-	-		

1. Specification

Wind-Free AIRISE

Model Name		Indoor Unit		AR18ASHCBWKNER	AR24ASHCBWKNER
		Outdoor Unit		AR18ASHCBWKXER	AR24ASHCBWKXER
Outdoor Unit	Power Supply			Ø, #, V, Hz	1, 2, 220-240, 50
	Heat Exchanger	Type		-	F&T
		Material	Fin	-	Al
			Tube	-	Cu
		Fin Treatment		-	NGS(Neo-Green)
	Compressor	Model Name		UG9TK3150FE4	UG9TK2150FE4
		Type		-	BLDC ROTARY
		Output		kW	4.57
		Oil	Type	-	POE
			Initial charge	cc	500
	Fan	Type		-	Propeller
		Discharge direction		-	Front
		Quantity		EA	1
		Air Flow Rate		m³/min	50
				l/s	833
	Fan Motor	Type		-	BLDC
		Output		W x n	40 x 1
	Sound□	Sound Pressure Level	Cooling	dB(A)	51
					54
	External Dimension	Net Weight		kg	39.8
		Shipping Weight		kg	43.1
		Net Dimensions (WxHxD)		mm	880 x 638 x 310
		Shipping Dimensions (WxHxD)		mm	1,023 x 724 x 413
	Casing	Material	Body	-	EGI Steel Plate / PP
	Operating Temp. Range	Cooling		°C	-10 ~ 46
		Heating		°C	-15 ~ 24

NOTE

- Specifications may be subject to change without prior notice.
- Nominal cooling capacities are based on;
Indoor temperature: 27°C DB, 19°C WB
Outdoor temperature: 35°C DB, 24°C WB, Equivalent refrigerant piping: 5m, Level differences: 0 m
 - Nominal heating capacities are based on;
Indoor temperature: 20°C DB, 15°C WB
Outdoor temperature: 7°C DB, 6°C WB, Equivalent refrigerant piping: 5m, Level differences: 0 m
 - Sound pressure was acquired in an anechoic room. Thus actual noise level may be different depending on the installation conditions.
 - These products contain R410A/R32 which is fluorinated greenhouse gas.

2. Capacity Table

Wind-Free GEO

AR09AXAAAWKNER + AR09AXAAAWKXER

Cooling

TC : Total Capacity, SHC : Sensible Heat Capacity, PI : Power Input

Outdoor Temperature (°C, DB)	Indoor Temperature (°C, DB / WB)																				
	20 / 14			22 / 16			25 / 18			27 / 19			28 / 20			30 / 22			32 / 24		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-10	2.80	2.33	0.76	2.91	2.41	0.79	3.13	2.55	0.83	3.31	2.65	0.84	3.42	2.71	0.84	3.65	2.81	0.85	3.91	2.92	0.85
0	2.88	2.41	0.66	3.01	2.50	0.69	3.26	2.65	0.72	3.46	2.77	0.73	3.57	2.82	0.73	3.82	2.94	0.74	4.10	3.05	0.74
10	3.06	2.55	0.61	3.19	2.65	0.64	3.45	2.81	0.67	3.66	2.93	0.68	3.78	2.99	0.68	4.04	3.11	0.68	4.33	3.23	0.68
20	3.20	2.67	0.63	3.34	2.77	0.66	3.61	2.93	0.70	3.82	3.05	0.71	3.94	3.11	0.71	4.20	3.24	0.71	4.49	3.35	0.71
25	3.23	2.69	0.67	3.37	2.79	0.70	3.63	2.95	0.74	3.84	3.07	0.75	3.96	3.13	0.75	4.22	3.25	0.75	4.51	3.37	0.75
32	3.19	2.65	0.76	3.32	2.75	0.80	3.57	2.91	0.83	3.78	3.02	0.85	3.90	3.08	0.85	4.15	3.20	0.85	4.44	3.31	0.85
35	3.13	2.61	0.81	3.26	2.70	0.85	3.51	2.85	0.89	2.50	2.00	0.56	3.82	3.02	0.91	4.07	3.14	0.91	4.36	3.25	0.91
40	2.97	2.47	0.92	3.09	2.56	0.96	3.33	2.71	1.00	3.52	2.82	1.02	3.63	2.88	1.02	3.88	2.99	1.03	4.15	3.10	1.03
43	2.84	2.36	0.99	2.95	2.44	1.04	3.18	2.59	1.08	3.37	2.70	1.10	3.47	2.75	1.11	3.71	2.86	1.11	3.98	2.97	1.11
46	2.66	2.22	1.08	2.77	2.30	1.13	2.99	2.44	1.17	3.17	2.54	1.19	3.27	2.59	1.20	3.50	2.70	1.21	3.77	2.80	1.21

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°C, DB)	Indoor Temperature (°C, DB)											
	16		18		20		21		22		24	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-15	3.65	1.88	3.64	1.90	3.63	1.92	3.62	1.93	3.60	1.94	3.53	1.97
-10	4.06	1.93	4.11	1.96	4.11	2.00	4.10	2.02	4.06	2.04	3.92	2.07
-5	4.20	1.77	4.30	1.82	4.33	1.88	4.30	1.90	4.25	1.92	4.05	1.96
0	4.17	1.49	4.33	1.56	4.37	1.63	4.34	1.65	4.27	1.68	4.01	1.71
2	4.13	1.37	4.31	1.44	4.36	1.51	4.32	1.54	4.25	1.56	3.97	1.60
5	4.06	1.18	4.28	1.26	4.34	1.34	4.30	1.36	4.22	1.39	3.90	1.42
7	4.02	1.06	4.26	1.15	3.20	0.81	4.29	1.25	4.20	1.28	3.86	1.31
10	3.98	0.91	4.25	1.01	4.33	1.08	4.29	1.11	4.20	1.13	3.82	1.16
15	4.01	0.77	4.35	0.88	4.45	0.95	4.41	0.98	4.30	1.00	3.87	1.02
20	4.27	0.85	4.67	0.95	4.80	1.03	4.76	1.05	4.63	1.07	4.15	1.07
24	4.70	1.11	5.15	1.22	5.30	1.29	5.26	1.31	5.13	1.32	4.61	1.31

NOTE

- The performance table shows the average value of each conditions.

2. Capacity Table

Wind-Free GEO

AR12AXAAAWKNER + AR12AXAAAWKXER

Cooling

TC : Total Capacity, SHC : Sensible Heat Capacity, PI : Power Input

Outdoor Temperature (°C, DB)	Indoor Temperature (°C, DB / WB)																				
	20 / 14			22 / 16			25 / 18			27 / 19			28 / 20			30 / 22			32 / 24		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-10	3.09	2.57	0.87	3.22	2.62	0.91	3.45	2.78	0.94	3.64	2.91	0.96	3.74	2.98	0.96	3.98	3.10	0.97	4.27	3.19	0.97
0	2.98	2.49	0.71	3.13	2.56	0.75	3.39	2.73	0.79	3.59	2.88	0.80	3.71	2.95	0.80	3.97	3.08	0.81	4.28	3.18	0.81
10	3.21	2.69	0.73	3.37	2.76	0.77	3.65	2.94	0.81	3.87	3.09	0.82	3.99	3.17	0.82	4.27	3.31	0.83	4.59	3.42	0.82
20	3.54	2.95	0.87	3.70	3.02	0.91	3.99	3.21	0.95	4.21	3.37	0.97	4.34	3.44	0.97	4.62	3.58	0.98	4.95	3.70	0.97
25	3.66	3.04	0.97	3.82	3.12	1.01	4.11	3.31	1.06	4.33	3.46	1.08	4.46	3.54	1.08	4.74	3.68	1.08	5.07	3.79	1.08
32	3.70	3.08	1.12	3.87	3.15	1.17	4.15	3.34	1.22	4.37	3.49	1.24	4.49	3.56	1.25	4.77	3.71	1.26	5.10	3.82	1.25
35	3.66	3.04	1.19	3.82	3.11	1.24	4.10	3.30	1.30	3.50	2.80	0.92	4.44	3.52	1.33	4.72	3.66	1.33	5.04	3.77	1.33
40	3.48	2.89	1.30	3.63	2.96	1.36	3.90	3.14	1.42	4.11	3.29	1.44	4.23	3.36	1.45	4.51	3.50	1.46	4.83	3.61	1.46
43	3.30	2.74	1.37	3.44	2.81	1.43	3.70	2.99	1.49	3.91	3.13	1.51	4.03	3.21	1.52	4.30	3.34	1.53	4.62	3.44	1.53
46	3.05	2.54	1.42	3.19	2.61	1.49	3.44	2.78	1.55	3.64	2.92	1.58	3.76	2.99	1.59	4.03	3.13	1.60	4.34	3.23	1.60

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°C, DB)	Indoor Temperature (°C, DB)											
	16		18		20		21		22		24	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-15	4.15	2.20	4.15	2.21	4.14	2.24	4.12	2.25	4.10	2.27	4.01	2.30
-10	4.64	2.32	4.70	2.36	4.70	2.41	4.68	2.44	4.63	2.46	4.48	2.50
-5	4.84	2.21	4.95	2.28	4.97	2.35	4.94	2.38	4.88	2.41	4.66	2.46
0	4.83	1.96	5.00	2.05	5.04	2.13	5.00	2.17	4.93	2.20	4.65	2.25
2	4.79	1.84	4.99	1.93	5.03	2.02	4.99	2.06	4.91	2.09	4.61	2.14
5	4.71	1.64	4.95	1.75	5.00	1.84	4.96	1.87	4.87	1.91	4.53	1.95
7	4.65	1.51	4.91	1.62	4.00	1.08	4.93	1.75	4.84	1.78	4.48	1.82
10	4.57	1.33	4.87	1.44	4.95	1.53	4.90	1.57	4.80	1.60	4.40	1.63
15	4.50	1.10	4.86	1.21	4.96	1.30	4.92	1.34	4.80	1.36	4.35	1.38
20	4.58	1.03	5.01	1.14	5.14	1.23	5.09	1.25	4.96	1.27	4.46	1.27
24	4.83	1.14	5.31	1.25	5.47	1.32	5.42	1.35	5.28	1.36	4.73	1.34

NOTE

- The performance table shows the average value of each conditions.

2. Capacity Table

Wind-Free AIRISE

AR09ASHCBWKNER + AR09ASHCBWKXER

Cooling

TC : Total Capacity, SHC : Sensible Heat Capacity, PI : Power Input

Outdoor Temperature (°C, DB)	Indoor Temperature (°C, DB / WB)																				
	20 / 14			22 / 16			25 / 18			27 / 19			28 / 20			30 / 22			32 / 24		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-10	2.40	2.00	0.34	2.48	2.07	0.39	2.68	2.19	0.45	2.85	2.28	0.47	2.94	2.33	0.48	3.15	2.42	0.49	3.38	2.52	0.49
0	2.55	2.12	0.28	2.65	2.20	0.33	2.86	2.33	0.39	3.03	2.42	0.41	3.13	2.47	0.42	3.34	2.57	0.42	3.57	2.66	0.41
10	2.55	2.12	0.27	2.65	2.20	0.33	2.86	2.33	0.39	3.03	2.42	0.41	3.13	2.47	0.41	3.34	2.56	0.41	3.56	2.66	0.40
20	2.41	2.01	0.31	2.51	2.08	0.37	2.71	2.21	0.43	2.88	2.30	0.46	2.97	2.34	0.46	3.17	2.43	0.46	3.38	2.52	0.45
25	2.30	1.92	0.34	2.39	1.99	0.41	2.59	2.11	0.47	2.75	2.19	0.50	2.84	2.24	0.50	3.03	2.32	0.50	3.23	2.41	0.49
32	2.10	1.75	0.40	2.19	1.82	0.47	2.37	1.93	0.55	2.52	2.01	0.57	2.60	2.05	0.58	2.77	2.13	0.58	2.96	2.21	0.57
35	2.01	1.67	0.42	2.08	1.74	0.50	2.26	1.84	0.58	3.20	2.56	0.86	2.48	1.96	0.62	2.65	2.03	0.62	2.83	2.11	0.61
40	1.83	1.53	0.48	1.90	1.58	0.56	2.06	1.68	0.65	2.19	1.75	0.68	2.26	1.78	0.69	2.42	1.86	0.70	2.58	1.93	0.69
43	1.72	1.43	0.51	1.78	1.49	0.60	1.93	1.58	0.69	2.05	1.64	0.73	2.12	1.67	0.74	2.27	1.74	0.75	2.42	1.81	0.74
46	1.60	1.33	0.55	1.66	1.38	0.64	1.79	1.47	0.74	1.91	1.53	0.78	1.97	1.56	0.79	2.11	1.62	0.80	2.26	1.68	0.79

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°C, DB)	Indoor Temperature (°C, DB)											
	16		18		20		21		22		24	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-15	3.40	1.30	3.01	1.26	2.80	1.30	2.77	1.35	2.79	1.42	3.01	1.63
-10	3.30	1.36	3.00	1.33	2.84	1.36	2.83	1.41	2.86	1.47	3.05	1.67
-5	3.36	1.33	3.14	1.30	3.03	1.33	3.02	1.37	3.05	1.43	3.21	1.61
0	3.55	1.24	3.40	1.21	3.32	1.24	3.31	1.28	3.32	1.34	3.43	1.50
2	3.65	1.20	3.52	1.17	3.45	1.20	3.44	1.23	3.45	1.29	3.54	1.45
5	3.82	1.13	3.72	1.10	3.66	1.13	3.64	1.16	3.64	1.22	3.69	1.37
7	3.95	1.08	3.86	1.06	3.20	0.86	3.78	1.12	3.77	1.17	3.80	1.32
10	4.14	1.02	4.08	1.00	4.02	1.03	3.99	1.06	3.96	1.11	3.94	1.26
15	4.45	0.96	4.42	0.94	4.35	0.97	4.30	1.01	4.25	1.06	4.14	1.19
20	4.73	0.98	4.71	0.97	4.62	1.00	4.54	1.04	4.45	1.09	4.24	1.22
24	4.90	1.08	4.88	1.08	4.75	1.11	4.65	1.15	4.53	1.19	4.23	1.32

NOTE

- The performance table shows the average value of each conditions.

2. Capacity Table

Wind-Free AIRISE

AR12ASHCBWKNER + AR12ASHCBWKXER

Cooling

TC : Total Capacity, SHC : Sensible Heat Capacity, PI : Power Input

Outdoor Temperature (°C, DB)	Indoor Temperature (°C, DB / WB)																				
	20 / 14			22 / 16			25 / 18			27 / 19			28 / 20			30 / 22			32 / 24		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-10	3.24	2.69	0.70	3.34	2.79	0.80	3.59	2.95	0.91	3.82	3.06	0.96	3.95	3.12	0.97	4.22	3.24	0.99	4.51	3.37	0.97
0	3.33	2.78	0.51	3.45	2.89	0.62	3.75	3.07	0.73	4.00	3.20	0.78	4.14	3.26	0.80	4.43	3.39	0.81	4.74	3.53	0.79
10	3.46	2.89	0.52	3.60	3.01	0.63	3.91	3.20	0.75	4.17	3.33	0.80	4.31	3.40	0.82	4.62	3.54	0.83	4.93	3.67	0.81
20	3.52	2.94	0.64	3.66	3.06	0.76	3.97	3.24	0.89	4.23	3.37	0.94	4.37	3.44	0.96	4.66	3.57	0.97	4.97	3.71	0.94
25	3.49	2.92	0.72	3.63	3.03	0.84	3.93	3.21	0.97	4.18	3.33	1.03	4.32	3.40	1.04	4.60	3.53	1.05	4.90	3.66	1.03
32	3.35	2.79	0.82	3.47	2.89	0.94	3.75	3.06	1.09	3.99	3.18	1.14	4.11	3.24	1.16	4.38	3.36	1.17	4.66	3.49	1.15
35	3.24	2.70	0.85	3.36	2.80	0.98	3.62	2.96	1.13	3.50	2.80	0.94	3.97	3.13	1.20	4.23	3.25	1.22	4.50	3.37	1.19
40	2.99	2.49	0.89	3.09	2.58	1.03	3.33	2.72	1.18	3.54	2.83	1.24	3.65	2.88	1.26	3.90	2.99	1.27	4.15	3.10	1.25
43	2.79	2.32	0.90	2.88	2.40	1.04	3.10	2.54	1.19	3.30	2.64	1.26	3.41	2.69	1.28	3.64	2.79	1.29	3.87	2.89	1.27
46	2.55	2.12	0.90	2.63	2.20	1.04	2.83	2.32	1.19	3.02	2.42	1.26	3.12	2.46	1.28	3.33	2.56	1.30	3.55	2.65	1.27

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°C, DB)	Indoor Temperature (°C, DB)											
	16		18		20		21		22		24	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-15	3.56	1.31	3.13	1.27	2.92	1.31	2.90	1.36	2.93	1.43	3.14	1.64
-10	3.38	1.36	3.05	1.33	2.91	1.36	2.90	1.41	2.94	1.48	3.13	1.67
-5	3.45	1.37	3.21	1.33	3.11	1.37	3.11	1.41	3.14	1.48	3.29	1.66
0	3.70	1.34	3.53	1.30	3.46	1.34	3.46	1.38	3.48	1.44	3.58	1.62
2	3.84	1.32	3.69	1.29	3.63	1.32	3.63	1.37	3.64	1.43	3.72	1.60
5	4.07	1.29	3.95	1.26	3.90	1.30	3.89	1.34	3.90	1.40	3.93	1.57
7	4.24	1.27	4.14	1.25	3.50	0.94	4.07	1.33	4.07	1.38	4.08	1.56
10	4.49	1.25	4.42	1.23	4.36	1.27	4.34	1.31	4.32	1.37	4.28	1.54
15	4.91	1.24	4.86	1.22	4.79	1.26	4.75	1.30	4.69	1.36	4.56	1.53
20	5.25	1.27	5.22	1.26	5.12	1.31	5.05	1.35	4.95	1.41	4.71	1.57
24	5.44	1.35	5.40	1.34	5.27	1.39	5.17	1.43	5.04	1.49	4.70	1.65

NOTE

- The performance table shows the average value of each conditions.

2. Capacity Table

Wind-Free AIRISE

AR18ASHCBWKNER + AR18ASHCBWKXER

Cooling

TC : Total Capacity, SHC : Sensible Heat Capacity, PI : Power Input

Outdoor Temperature (°C, DB)	Indoor Temperature (°C, DB / WB)																				
	20 / 14			22 / 16			25 / 18			27 / 19			28 / 20			30 / 22			32 / 24		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-10	4.35	2.90	0.81	4.54	3.37	0.82	4.86	3.89	0.86	5.13	4.12	0.89	5.28	4.22	0.90	5.63	4.37	0.91	6.05	4.50	0.90
0	4.43	2.94	0.84	4.64	3.44	0.87	5.02	3.99	0.91	5.31	4.26	0.94	5.48	4.37	0.95	5.86	4.55	0.96	6.30	4.70	0.95
10	4.69	3.12	0.99	4.93	3.64	1.02	5.32	4.22	1.07	5.64	4.50	1.10	5.81	4.62	1.11	6.20	4.81	1.12	6.67	4.98	1.11
20	4.94	3.30	1.22	5.18	3.82	1.26	5.58	4.40	1.32	5.89	4.69	1.36	6.07	4.80	1.37	6.46	5.01	1.38	6.93	5.18	1.37
25	4.99	3.34	1.36	5.22	3.86	1.41	5.62	4.43	1.48	5.93	4.71	1.51	6.10	4.83	1.53	6.49	5.03	1.54	6.95	5.19	1.53
32	4.90	3.29	1.58	5.13	3.79	1.64	5.51	4.35	1.72	5.80	4.62	1.76	5.97	4.73	1.77	6.35	4.92	1.79	6.80	5.08	1.78
35	4.80	3.22	1.69	5.02	3.71	1.75	5.38	4.26	1.83	5.00	4.00	1.45	5.84	4.63	1.89	6.21	4.81	1.90	6.66	4.97	1.89
40	4.51	3.01	1.87	4.71	3.50	1.93	5.06	4.03	2.02	5.34	4.27	2.07	5.50	4.37	2.09	5.86	4.54	2.10	6.29	4.68	2.09
43	4.26	2.83	1.98	4.45	3.31	2.05	4.79	3.82	2.14	5.06	4.06	2.19	5.21	4.16	2.21	5.56	4.32	2.23	5.98	4.45	2.22
46	3.94	2.61	2.09	4.13	3.07	2.16	4.44	3.57	2.26	4.70	3.80	2.32	4.85	3.89	2.34	5.19	4.04	2.36	5.59	4.16	2.35

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°C, DB)	Indoor Temperature (°C, DB)											
	16		18		20		21		22		24	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-15	4.15	1.63	4.04	1.63	4.00	1.65	4.00	1.66	4.01	1.67	4.04	1.69
-10	4.91	1.68	4.88	1.71	4.85	1.73	4.84	1.74	4.81	1.76	4.75	1.78
-5	5.35	1.72	5.40	1.76	5.40	1.80	5.37	1.81	5.32	1.83	5.16	1.85
0	5.57	1.74	5.70	1.80	5.72	1.85	5.69	1.87	5.61	1.88	5.36	1.90
2	5.62	1.74	5.78	1.80	5.81	1.86	5.77	1.88	5.69	1.90	5.40	1.92
5	5.65	1.74	5.87	1.81	5.92	1.87	5.87	1.90	5.78	1.91	5.43	1.93
7	5.67	1.73	5.92	1.81	6.00	1.75	5.93	1.90	5.82	1.92	5.44	1.94
10	5.68	1.72	5.98	1.81	6.06	1.88	6.01	1.90	5.89	1.92	5.46	1.94
15	5.73	1.68	6.13	1.78	6.24	1.86	6.18	1.89	6.05	1.91	5.54	1.92
20	5.90	1.61	6.39	1.74	6.54	1.83	6.48	1.85	6.33	1.87	5.74	1.88
24	6.17	1.55	6.75	1.68	6.93	1.78	6.87	1.81	6.71	1.83	6.06	1.83

NOTE

- The performance table shows the average value of each conditions.

2. Capacity Table

Wind-Free AIRISE

AR24ASHCBWKNER + AR24ASHCBWKXER

Cooling

TC : Total Capacity, SHC : Sensible Heat Capacity, PI : Power Input

Outdoor Temperature (°C, DB)	Indoor Temperature (°C, DB / WB)																				
	20 / 14			22 / 16			25 / 18			27 / 19			28 / 20			30 / 22			32 / 24		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-10	5.49	3.64	0.89	5.67	4.17	0.93	6.10	4.87	0.97	6.48	5.24	0.99	6.69	5.39	0.99	7.16	5.61	1.00	7.68	5.69	0.99
0	5.51	3.63	0.70	5.75	4.20	0.75	6.25	4.95	0.81	6.67	5.37	0.83	6.90	5.54	0.84	7.41	5.81	0.85	7.97	5.95	0.84
10	5.87	3.89	1.04	6.14	4.47	1.11	6.68	5.25	1.18	7.12	5.69	1.21	7.36	5.87	1.22	7.89	6.17	1.23	8.47	6.34	1.23
20	6.25	4.18	1.65	6.51	4.74	1.72	7.06	5.52	1.80	7.50	5.95	1.84	7.74	6.14	1.85	8.27	6.44	1.86	8.83	6.62	1.86
25	6.34	4.25	1.95	6.60	4.80	2.03	7.13	5.56	2.12	7.56	5.99	2.16	7.80	6.18	2.17	8.31	6.47	2.19	8.86	6.64	2.18
32	6.25	4.21	2.31	6.49	4.73	2.39	6.99	5.45	2.49	7.40	5.86	2.53	7.63	6.03	2.54	8.11	6.31	2.56	8.64	6.46	2.56
35	6.11	4.12	2.41	6.34	4.63	2.50	6.82	5.33	2.60	7.24	5.76	2.64	7.47	5.89	2.65	7.91	6.15	2.67	8.42	6.30	2.67
40	5.72	3.85	2.49	5.93	4.33	2.58	6.37	4.99	2.69	6.74	5.35	2.73	6.94	5.51	2.74	7.39	5.75	2.76	7.87	5.87	2.75
43	5.37	3.60	2.47	5.56	4.06	2.57	5.97	4.69	2.67	6.32	5.04	2.71	6.52	5.19	2.73	6.94	5.41	2.74	7.40	5.52	2.74
46	4.92	3.29	2.39	5.09	3.72	2.49	5.48	4.32	2.59	5.81	4.65	2.64	5.99	4.79	2.65	6.39	4.99	2.67	6.83	5.08	2.66

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°C, DB)	Indoor Temperature (°C, DB)											
	16		18		20		21		22		24	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-15	4.57	2.29	4.50	2.26	4.47	2.25	4.46	2.25	4.46	2.26	4.45	2.27
-10	5.55	2.40	5.57	2.42	5.56	2.46	5.53	2.48	5.49	2.49	5.37	2.53
-5	6.20	2.54	6.31	2.62	6.32	2.69	6.28	2.72	6.21	2.75	5.97	2.80
0	6.60	2.70	6.81	2.81	6.85	2.91	6.80	2.95	6.70	2.99	6.34	3.04
2	6.71	2.75	6.96	2.88	7.01	2.99	6.96	3.03	6.85	3.07	6.45	3.12
5	6.84	2.82	7.15	2.97	7.23	3.09	7.16	3.14	7.04	3.18	6.57	3.23
7	6.91	2.85	7.27	3.01	7.45	3.19	7.29	3.19	7.15	3.23	6.64	3.28
10	7.01	2.88	7.43	3.05	7.53	3.19	7.46	3.24	7.31	3.28	6.74	3.33
15	7.18	2.83	7.71	3.03	7.85	3.17	7.78	3.23	7.60	3.26	6.94	3.30
20	7.44	2.66	8.09	2.87	8.28	3.01	8.20	3.06	8.00	3.10	7.24	3.11
24	7.78	2.40	8.52	2.61	8.74	2.76	8.66	2.80	8.45	2.83	7.61	2.82

NOTE

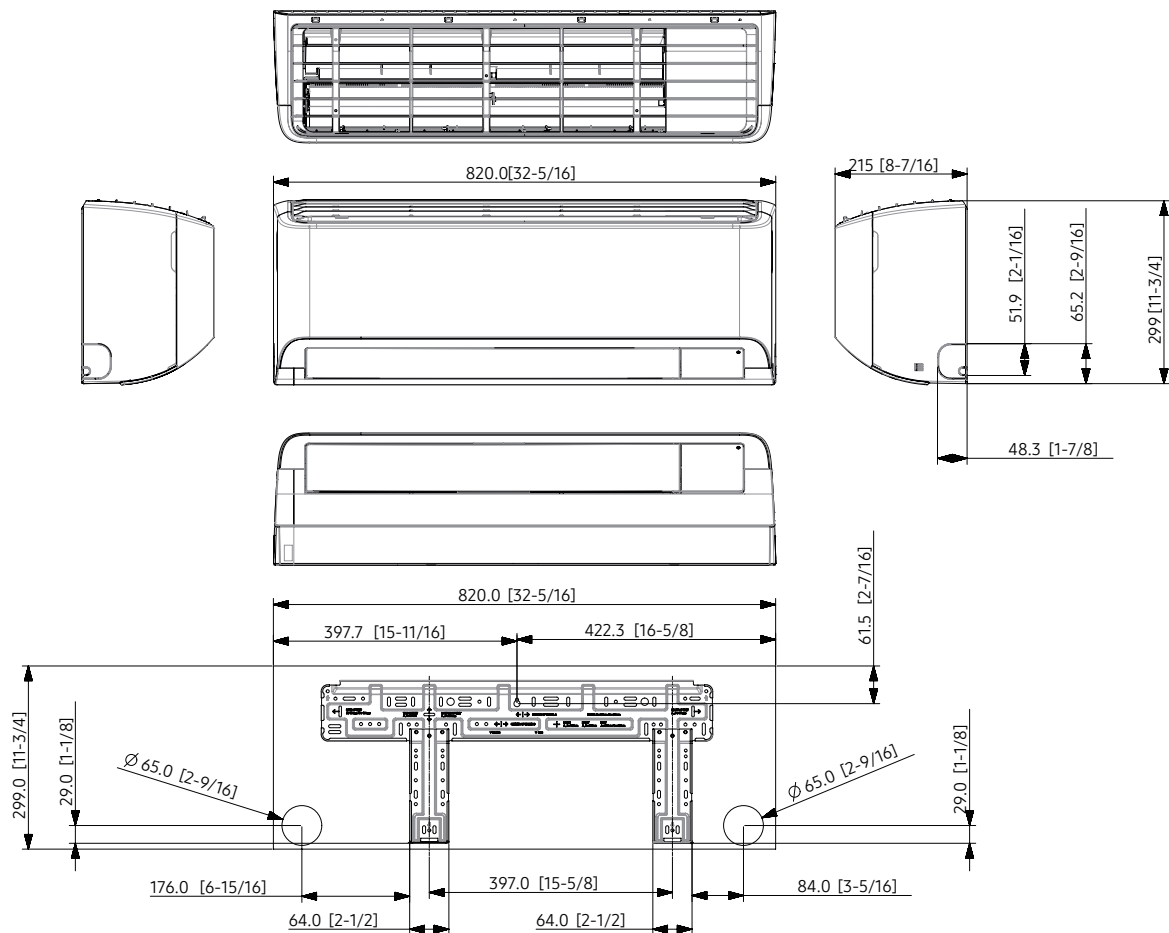
- The performance table shows the average value of each conditions.

3. Dimensional Drawing

Indoor units

Wind-Free AIRISE : AR09ASHCBWKNER, AR12ASHCBWKNER

Unit: mm (inches)

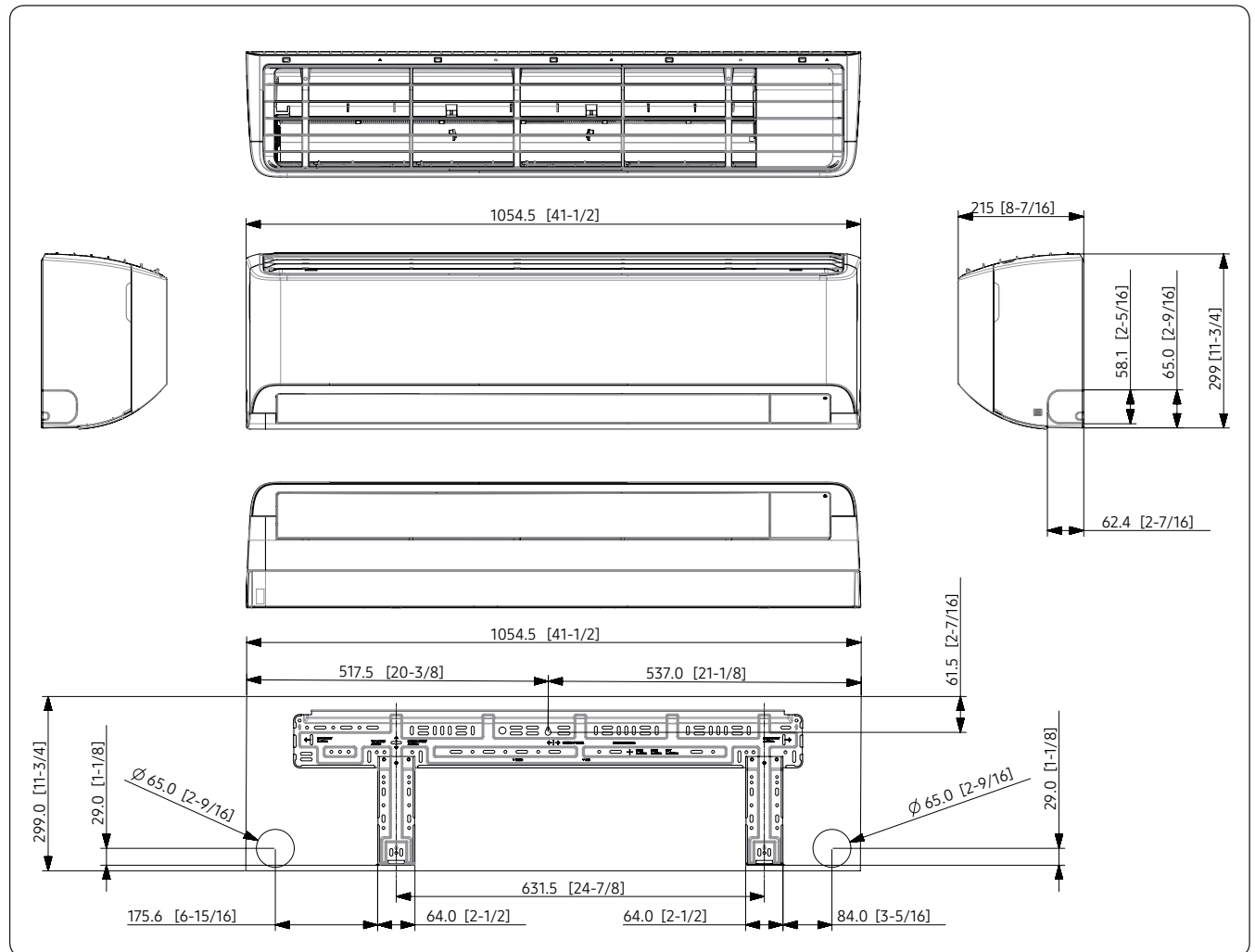


3. Dimensional Drawing

Indoor units

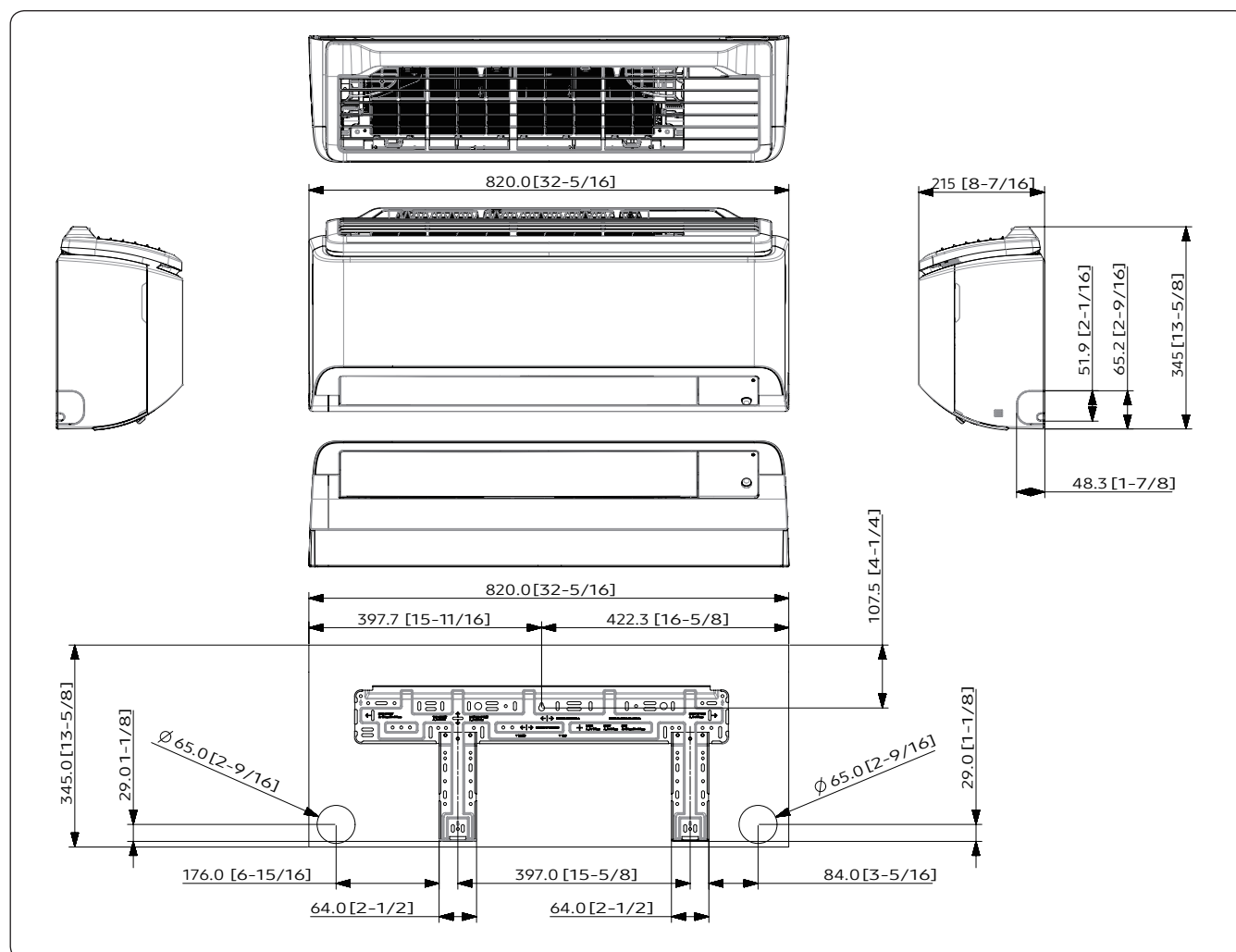
Wind-Free AIRISE : AR18ASHCBWKNR, AR24ASHCBWKNR

Unit: mm (inches)



Indoor units

Unit: mm (inches)

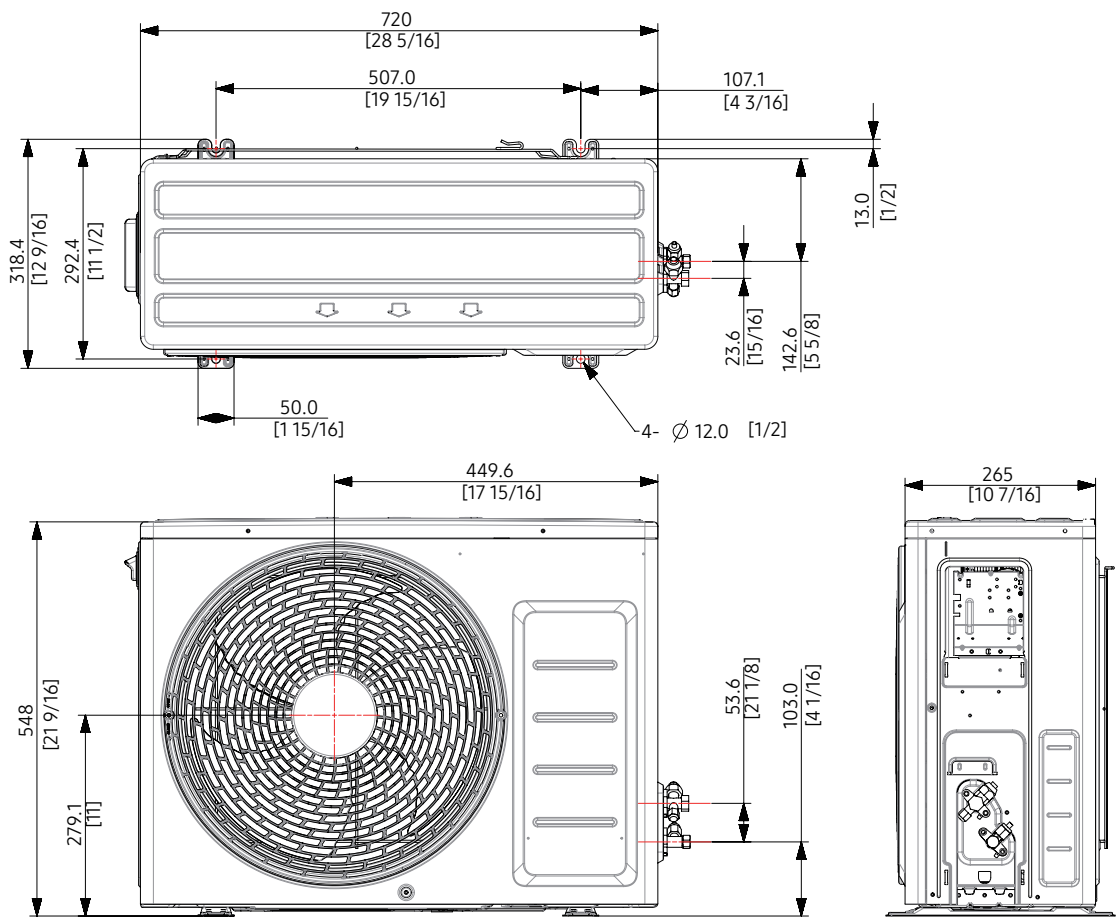


3. Dimensional Drawing

Outdoor units

Wind-Free AIRISE : AR09ASHCBWKXER, AR12ASHCBWKXER

Unit: mm (inches)

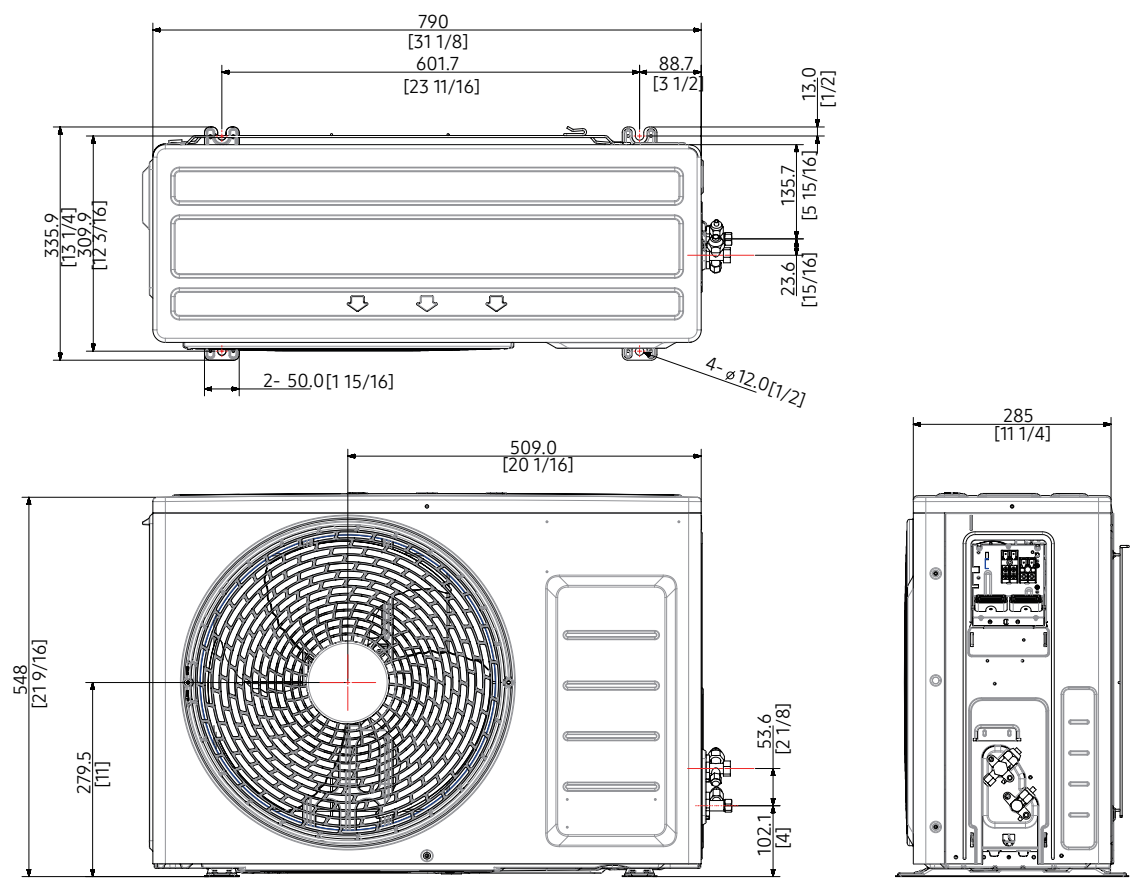


3. Dimensional Drawing

Outdoor units

Wind-Free GEO : AR09AXAAAWKXER, AR12AXAAAWKXER

Unit: mm (inches)

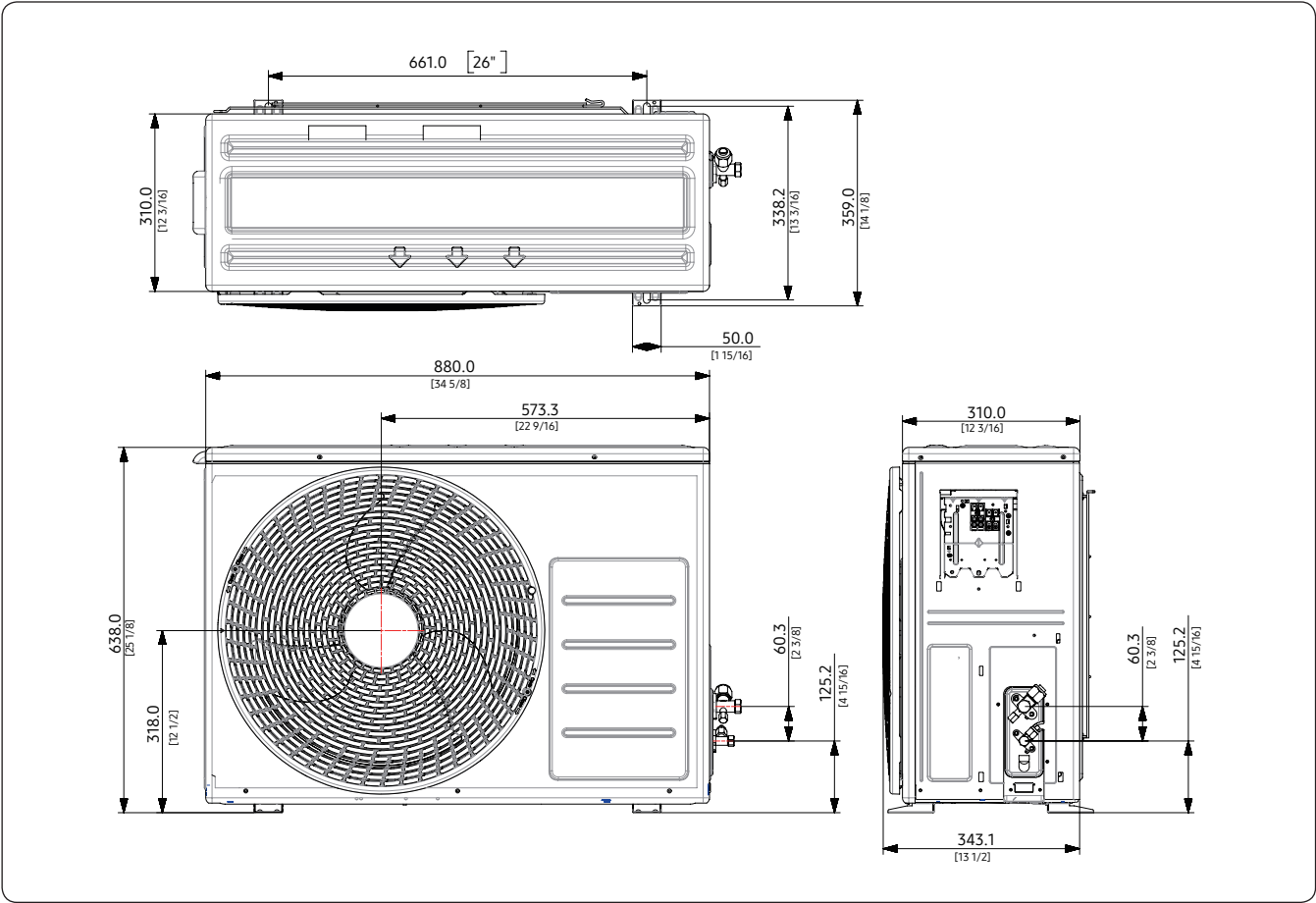


3. Dimensional Drawing

Outdoor units

Wind-Free AIRISE : AR18ASHCBWKXER, AR24ASHCBWKXER

Unit: mm (inches)

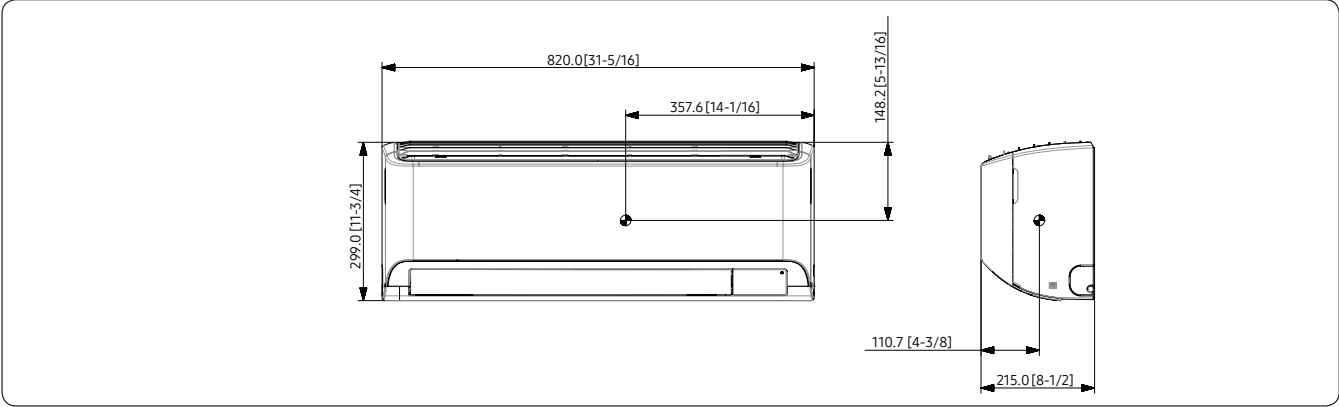


4. Center of Gravity

Indoor units

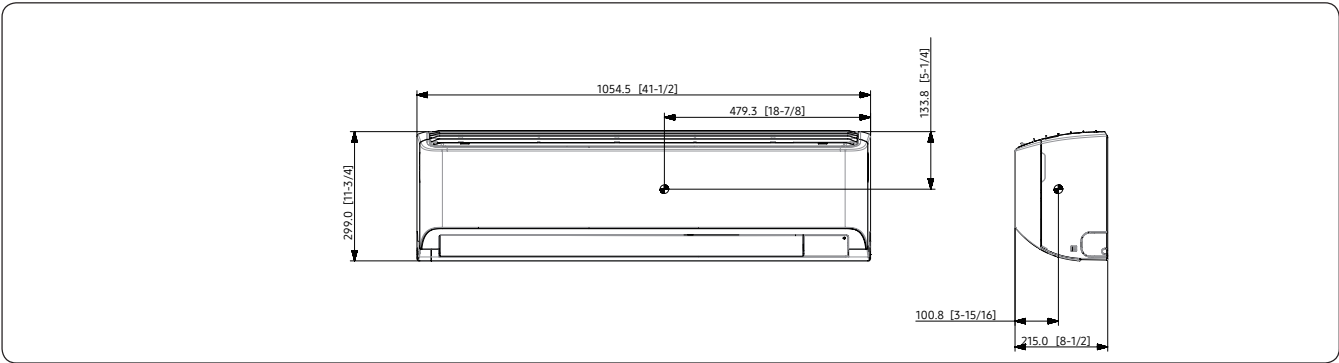
Wind-Free AIRISE : AR09ASHCBWKNR, AR12ASHCBWKNR

Unit: mm (inches)



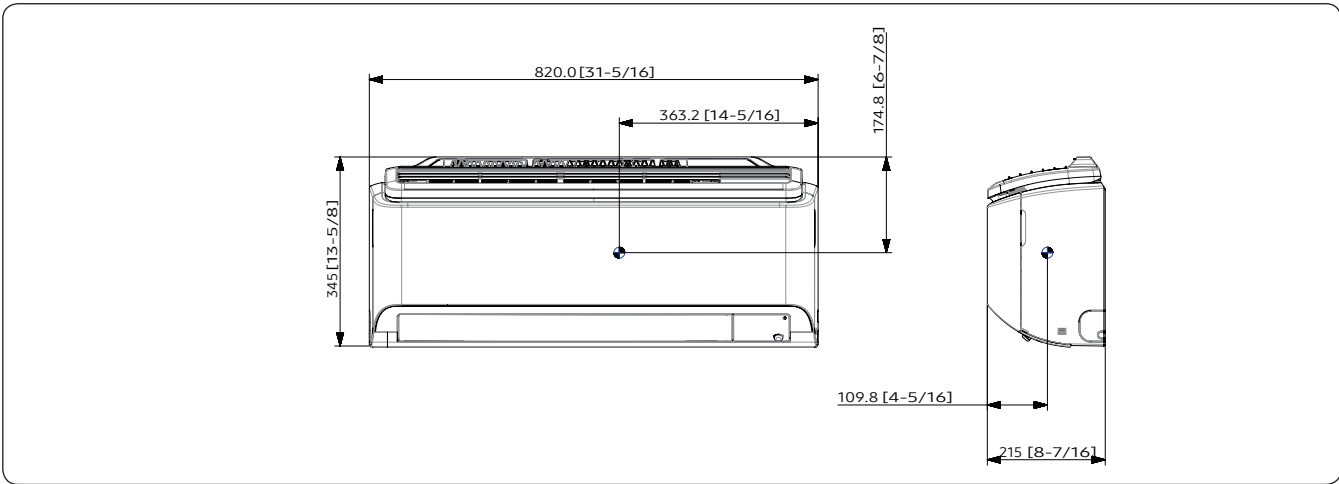
Wind-Free AIRISE : AR18ASHCBWKNR, AR24ASHCBWKNR

Unit: mm (inches)



Wind-Free GEO : AR09AXAAAWKNR, AR12AXAAAWKNR

Unit: mm (inches)

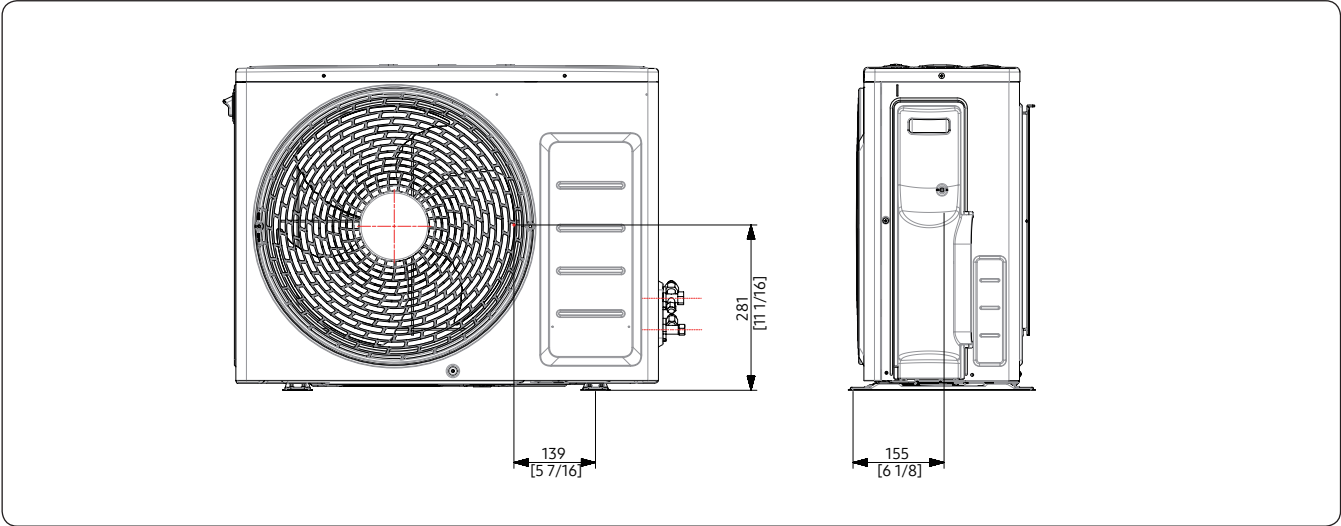


4. Center of Gravity

Outdoor units

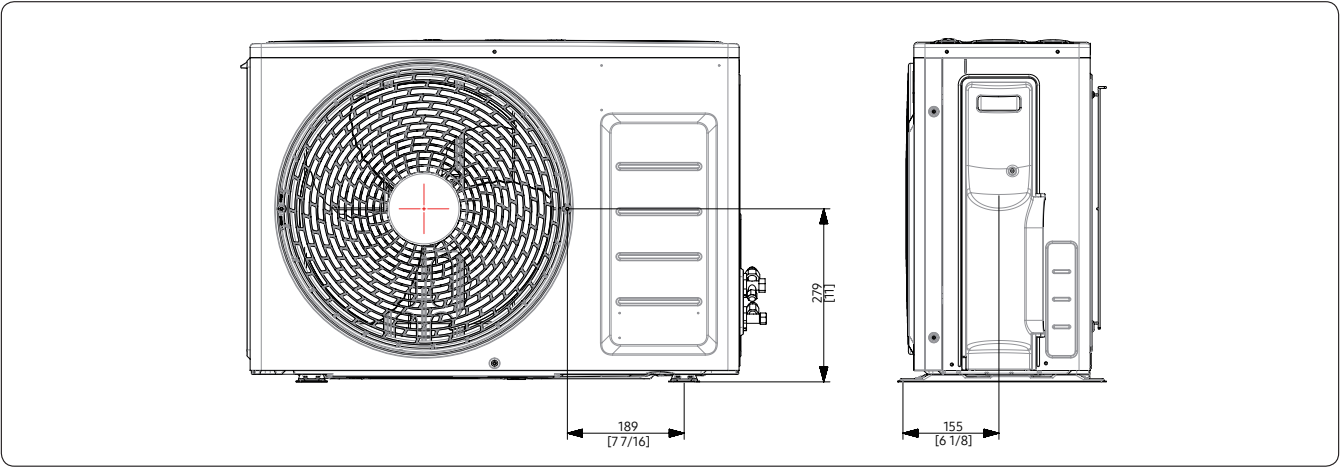
Wind-Free AIRISE : AR09ASHCBWKXER, AR12ASHCBWKXER

Unit: mm (inches)



Wind-Free GEO : AR09AXAAAWKXER, AR12AXAAAWKXER

Unit: mm (inches)

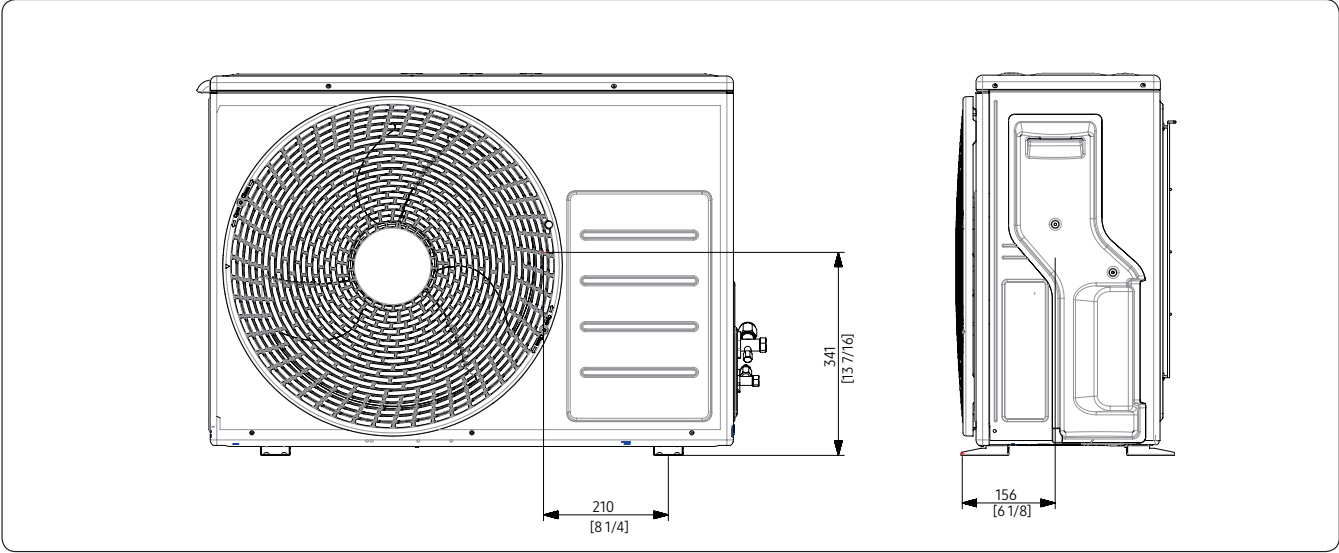


4. Center of Gravity

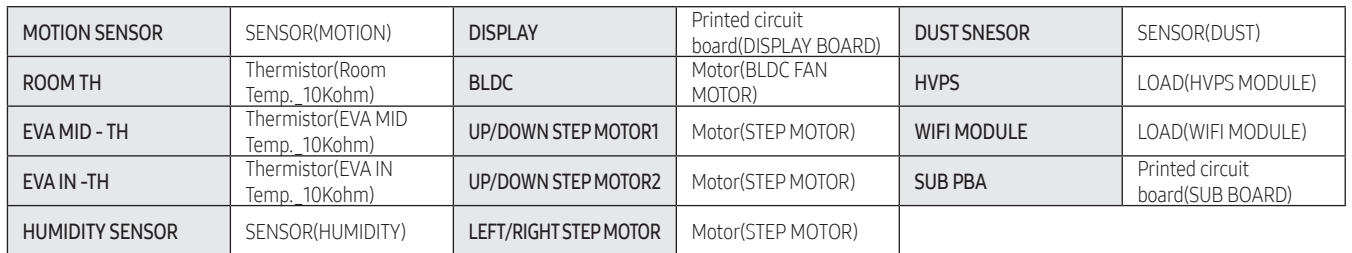
Outdoor units

Wind-Free AIRISE : AR18ASHCBWKXER, AR24ASHCBWKXER

Unit: mm (inches)



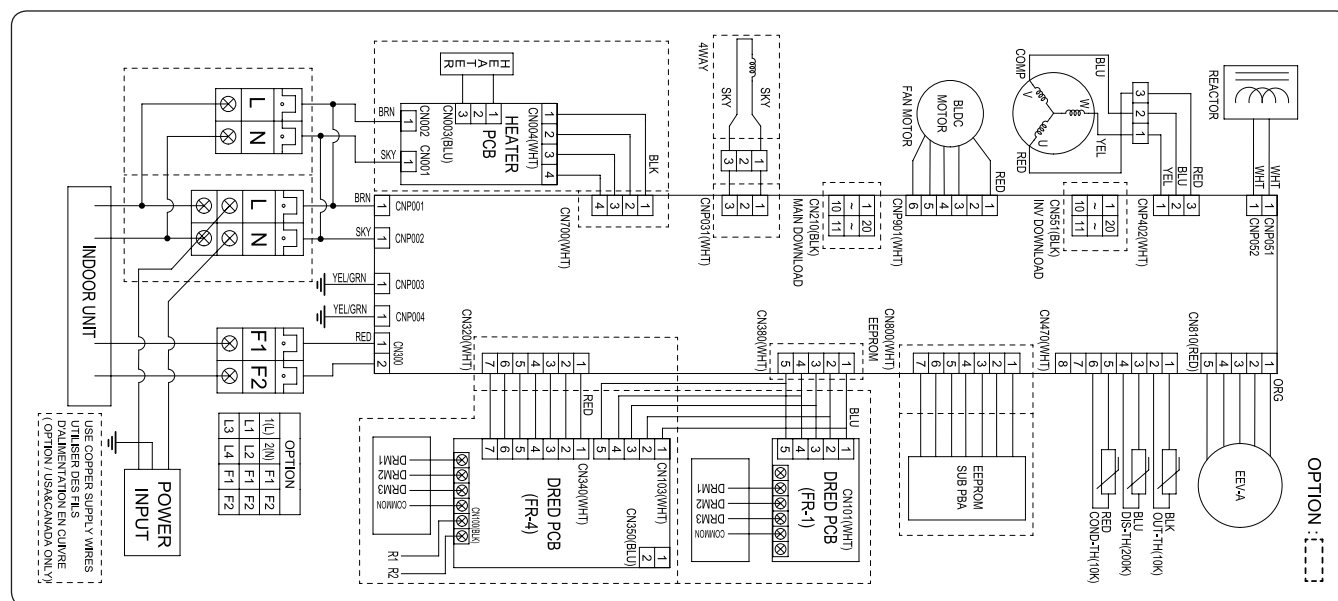
Indoor units



- This wiring diagram applies only to the indoor unit.
- Colors BLK : black, BRN : brown, SKY-BLU : sky-blue, GRN/YEL : green/yellow, RED : red, YEL : yellow, ORG : orange, BLU : blue, WHT:white
- : Protective earth(screw)

Outdoor units

Wind-Free AIRISE : AR09ASHCBWKXER, AR12ASHCBWKXER, AR18ASHCBWKXER



DRED	Printed circuit board(DRED PCB)	DIS-TH	Thermistor(Discharge Temp._200Kohm)
REACTOR	REACTOR	OUT-TH	Thermistor(AmbientTemp._10Kohm)
EEPROM	Printed circuit board(EEPROM PCB)	COND-TH	Thermistor(Cond Out Temp._10Kohm)
COMP	COMPRESSOR	BLDC	Motor(BLDC FAN Motor)
HEATER	Printed circuit board(HEATER PCB)	EEV-A	Electronic expansion valve A
4-WAY VALVE	4-WAY VALVE		

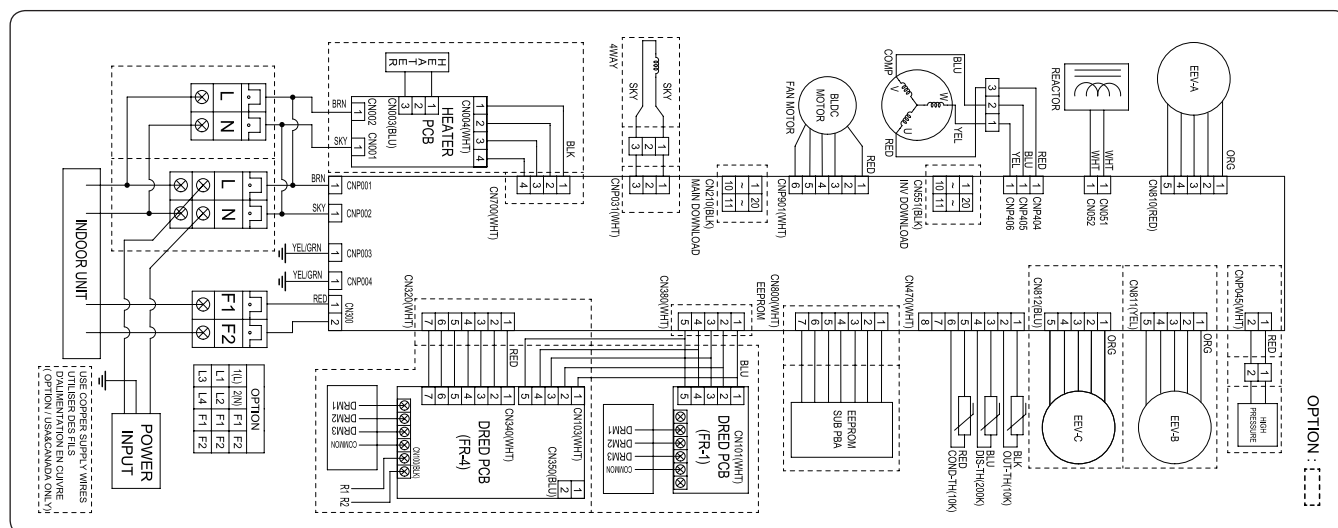
NOTE

- This wiring diagram applies only to the outdoor unit.
- Colors BLK : black, BRN : brown, SKY-BLU : sky-blue, GRN/YEL : green/yellow, RED : red, YEL : yellow, ORG : orange, BLU : blue, WHT:white
-  Protective earth(screw)

5. Electrical Wiring Diagram

Outdoor units

Wind-Free AIRISE : AR24ASHCBWKXER



DRED	Printed circuit board(DRED PCB)	DIS-TH	Thermistor (Discharge Temp._200Kohm)	EEV-C	Electronic expansion valve C
REACTOR	REACTOR	OUT-TH	Thermistor (AmbientTemp._10Kohm)	EEV-A	Electronic expansion valve A
EEPROM	Printed circuit board(EEPROM PCB)	COND-TH	Thermistor (Cond Out Temp._10Kohm)	EEV-B	Electronic expansion valve B
COMP	COMPRESSOR	BLDC	Motor(BLDC FAN Motor)	HIGH PRESSURE	PRESSURE SWITCH
HEATER	Printed circuit board(HEATER PCB)	4-WAY VALVE	4WAY VALVE		

NOTE

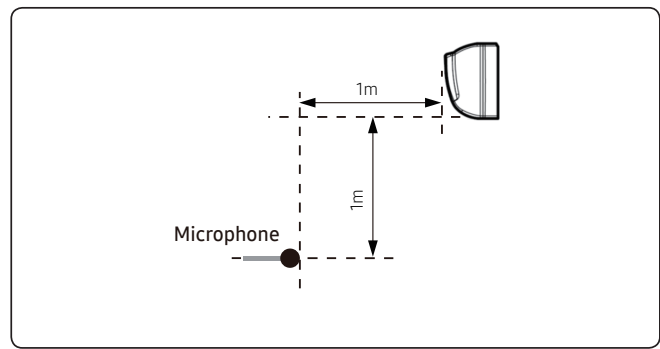
- This wiring diagram applies only to the outdoor unit.
- Colors BLK : black, BRN : brown, SKY-BLU : sky-blue, GRN/YEL : green/yellow, RED : red, YEL : yellow, ORG : orange, BLU : blue, WHT:white
- protective earth(screw)

6. Sound Data

Indoor units: Wind-Free GEO

Sound Pressure level

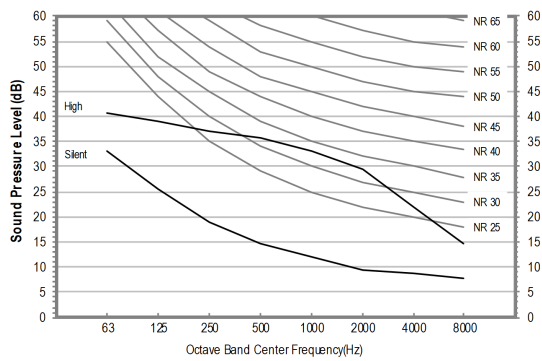
Unit: dB(A)



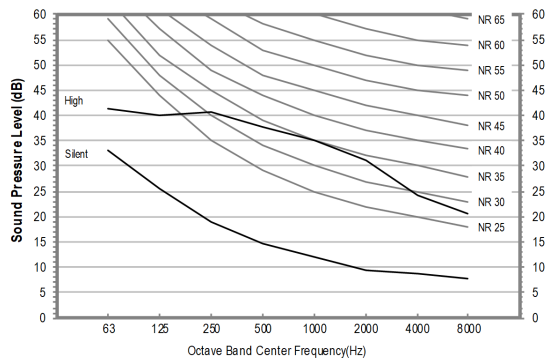
Model	Cooling	
	High	Silent
AR09AXAAWKNER	38	19
AR12AXAAWKNER	40	19

- NR Curve

1) AR09AXAAWKNER



2) AR12AXAAWKNER



NOTE

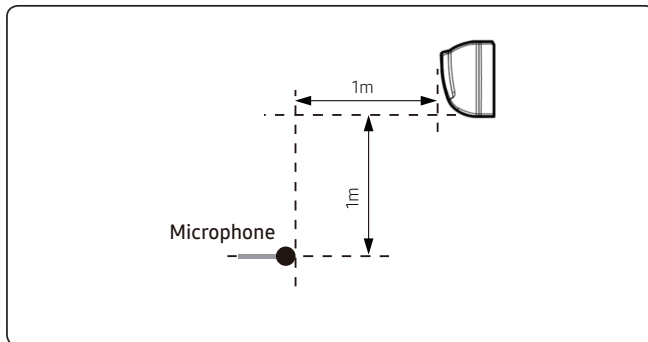
- Specifications may be subject to change without prior notice.
- Sound pressure Level
 - Sound pressure level is obtained in an anechoic room.
 - Sound pressure level is a relative value, depending on the distance and acoustic environment.
 - Sound pressure level may differ depending on operation condition.
 - dBA = A weighted sound pressure level
 - Reference acoustic pressure 0 dB = 20μPa

6. Sound Data

Indoor units: Wind-Free AIRISE

Sound Pressure level

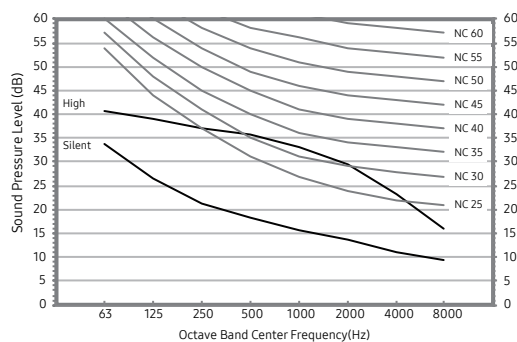
Unit: dB(A)



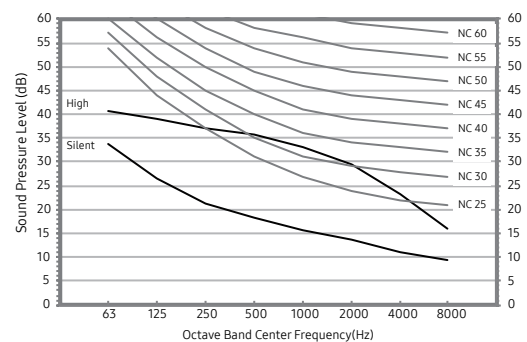
Model	Cooling	
	High	Silent
AR09ASHCBWKNR	38	22
AR12ASHCBWKNR	38	22
AR18ASHCBWKNR	41	28
AR24ASHCBWKNR	44	28

• NR Curve

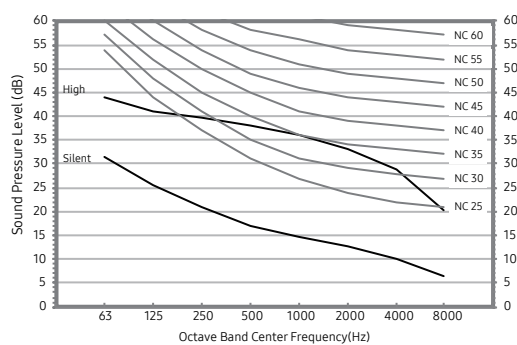
1) AR09ASHCBWKNR



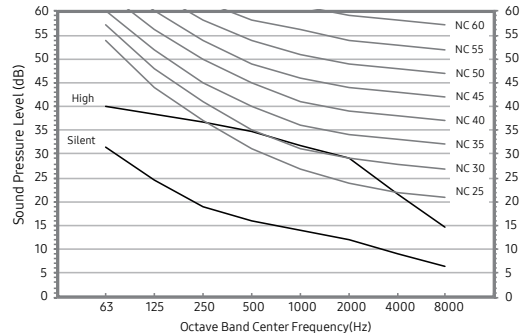
2) AR12ASHCBWKNR



3) AR18ASHCBWKNR



4) AR24ASHCBWKNR



NOTE

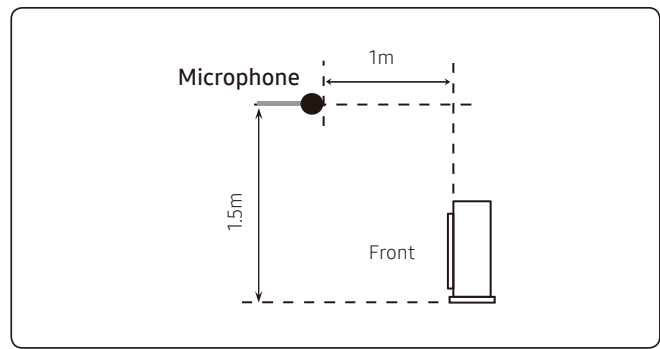
- Specifications may be subject to change without prior notice.
- Sound pressure Level
 - Sound pressure level is obtained in an anechoic room.
 - Sound pressure level is a relative value, depending on the distance and acoustic environment.
 - Sound pressure level may differ depending on operation condition.
 - dBA = A weighted sound pressure level
 - Reference acoustic pressure 0 dB = 20μPa

6. Sound Data

Outdoor units: Wind-Free GEO

Sound Pressure level

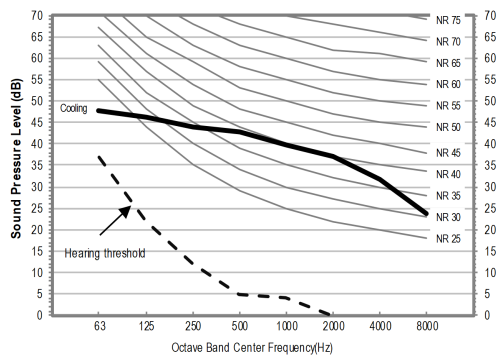
Unit: dB(A)



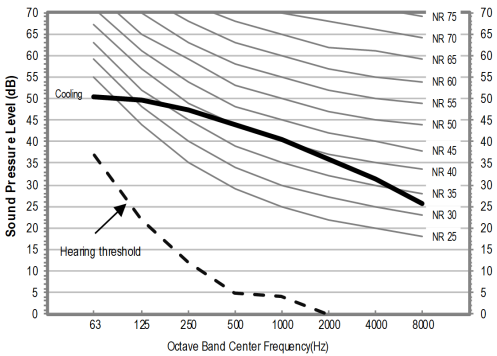
Model	Cooling
AR09AXAAAWKXER	45
AR12AXAAAWKXER	46

• NR Curve

1) AR09AXAAAWKXER



2) AR12AXAAAWKXER



NOTE

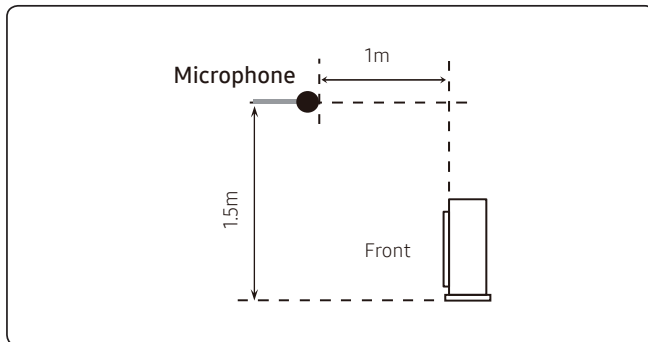
- Specifications may be subject to change without prior notice.
- Sound pressure Level
 - Sound pressure level is obtained in an anechoic room.
 - Sound pressure level is a relative value, depending on the distance and acoustic environment.
 - Sound pressure level may differ depending on operation condition.
 - dBA = A weighted sound pressure level
 - Reference acoustic pressure 0 dB = 20μPa

6. Sound Data

Outdoor units: Wind-Free AIRISE

Sound Pressure level

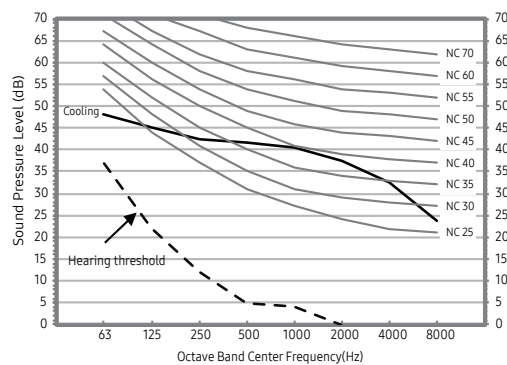
Unit: dB(A)



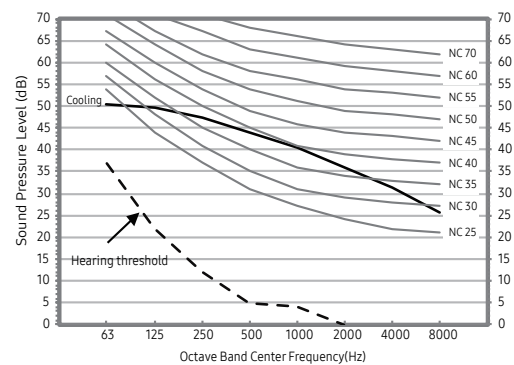
Model	Cooling
AR09ASHCBWKXER	45
AR12ASHCBWKXER	46
AR18ASHCBWKXER	51
AR24ASHCBWKXER	54

• NR Curve

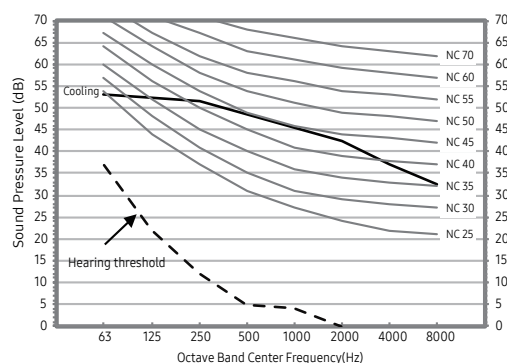
1) AR09ASHCBWKXER



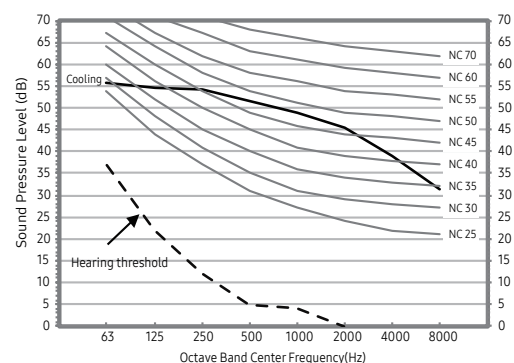
2) AR12ASHCBWKXER



3) AR18ASHCBWKXER



4) AR24ASHCBWKXER



NOTE

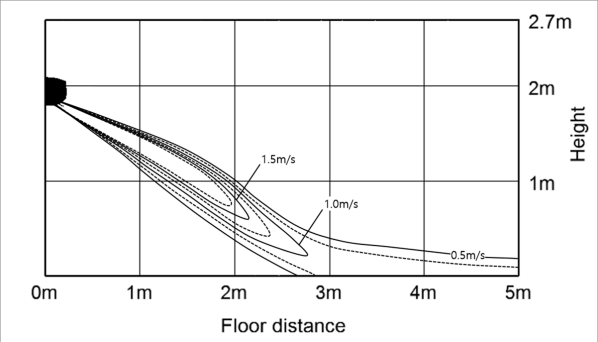
- Specifications may be subject to change without prior notice.
- Sound pressure Level
 - Sound pressure level is obtained in an anechoic room.
 - Sound pressure level is a relative value, depending on the distance and acoustic environment.
 - Sound pressure level may differ depending on operation condition.
 - dBA = A weighted sound pressure level
 - Reference acoustic pressure 0 dB = 20μPa

7. Temperature and air flow distribution

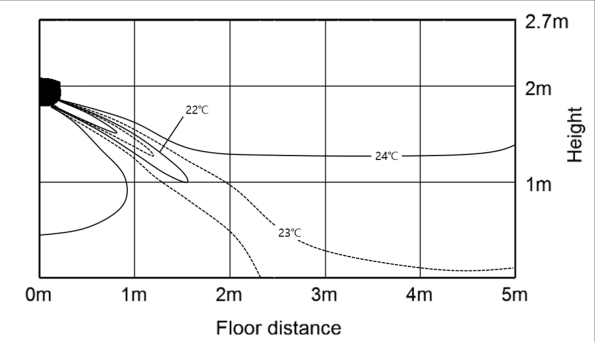
Wind-Free GEO

AR09AXAAWKNER

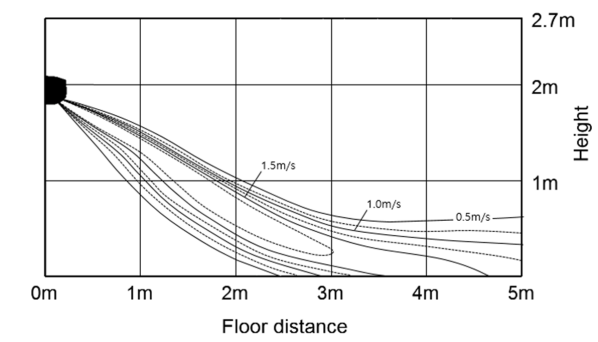
- Cooling air velocity distribution
(Discharge angle : 20 degree)



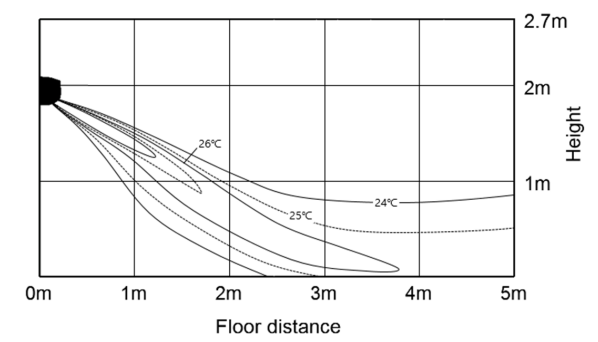
- Cooling Temperature distribution
(Discharge angle : 20 degree)



- Heating air velocity distribution
(Discharge angle : 30 degree)

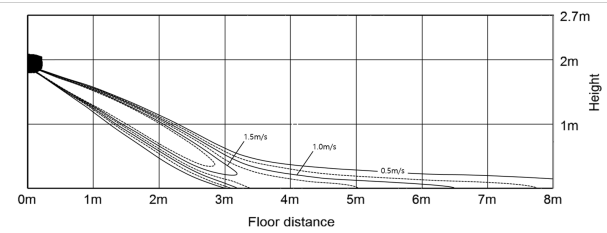


- Heating Temperature distribution
(Discharge angle : 30 degree)

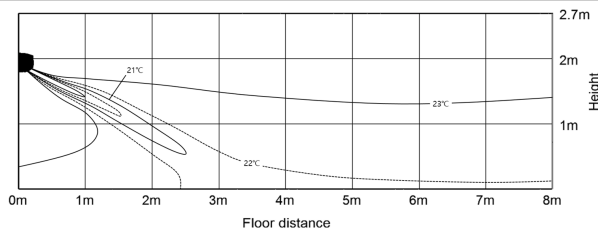


AR12AXAAWKNER

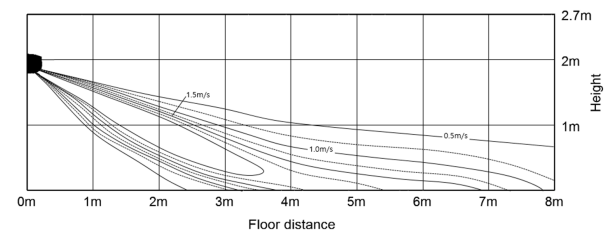
- Cooling air velocity distribution
(Discharge angle : 20 degree)



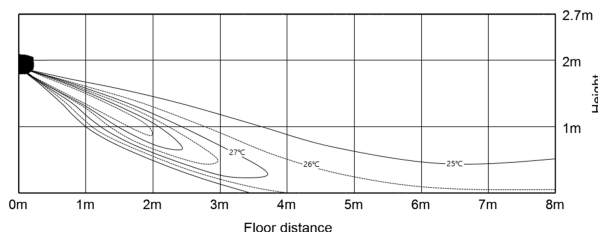
- Cooling Temperature distribution
(Discharge angle : 20 degree)



- Heating air velocity distribution
(Discharge angle : 30 degree)



- Heating Temperature distribution
(Discharge angle : 30 degree)

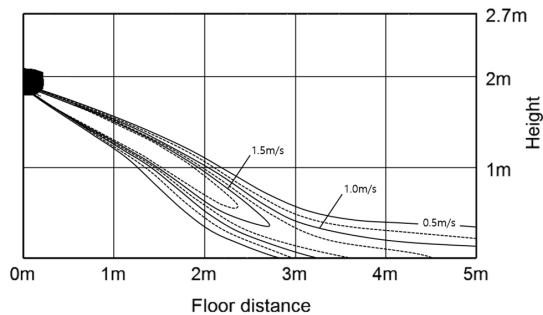


7. Temperature and air flow distribution

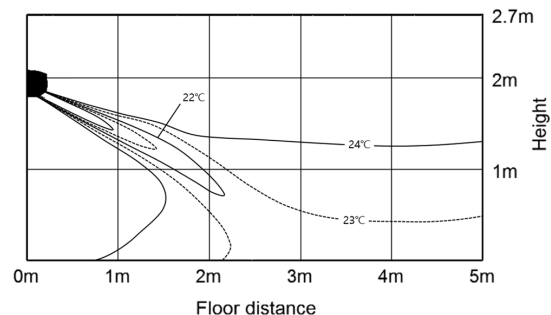
Wind-Free AIRISE

AR09ASHCBWKNER

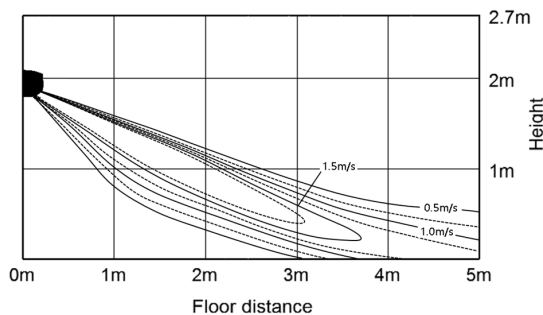
- Cooling air velocity distribution
(Discharge angle : 20 degree)



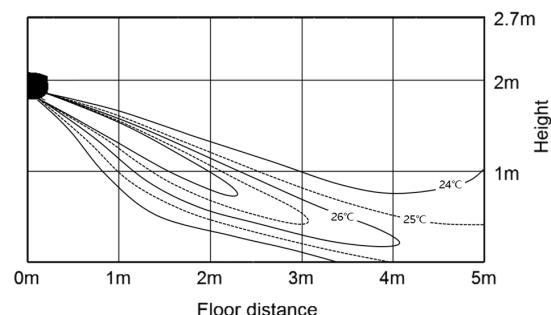
- Cooling Temperature distribution
(Discharge angle : 20 degree)



- Heating air velocity distribution
(Discharge angle : 30 degree)

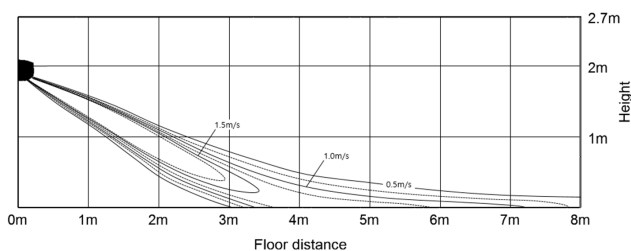


- Heating Temperature distribution
(Discharge angle : 30 degree)

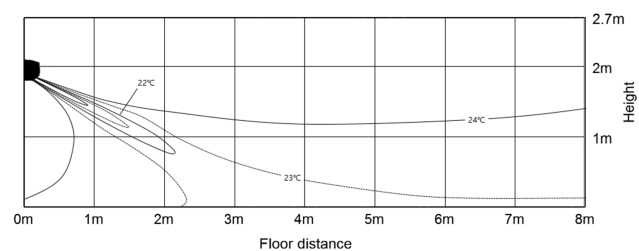


AR12ASHCBWKNER

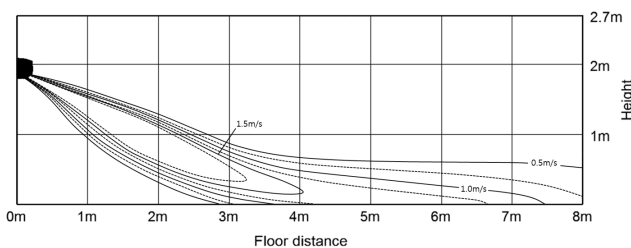
- Cooling air velocity distribution
(Discharge angle : 20 degree)



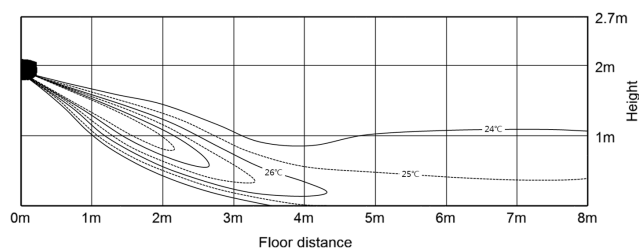
- Cooling Temperature distribution
(Discharge angle : 20 degree)



- Heating air velocity distribution
(Discharge angle : 30 degree)



- Heating Temperature distribution
(Discharge angle : 30 degree)



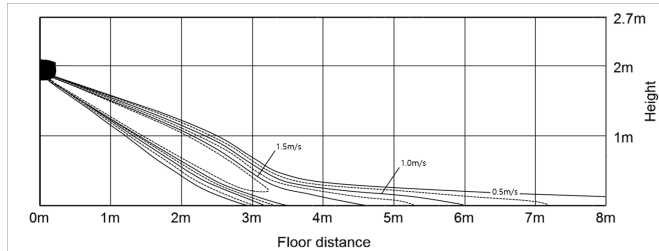
7. Temperature and air flow distribution

Wind-Free AIRISE

AR18ASHCBWKNER

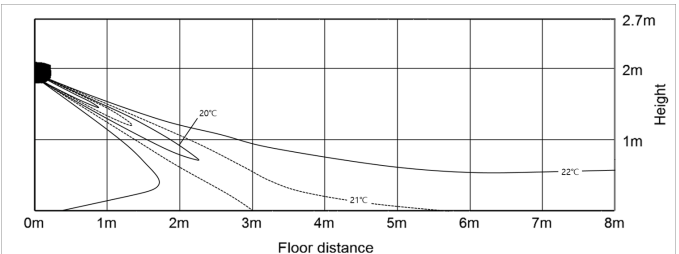
- Cooling air velocity distribution

(Discharge angle : 20 degree)



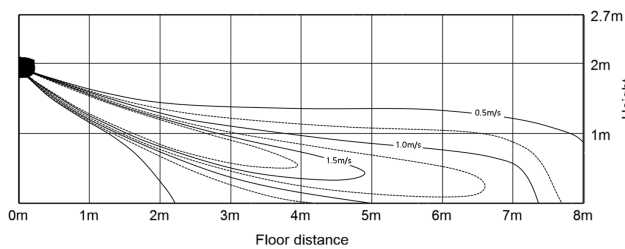
- Cooling Temperature distribution

(Discharge angle : 20 degree)



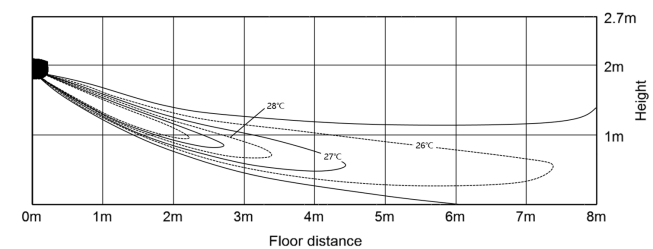
- Heating air velocity distribution

(Discharge angle : 30 degree)



- Heating Temperature distribution

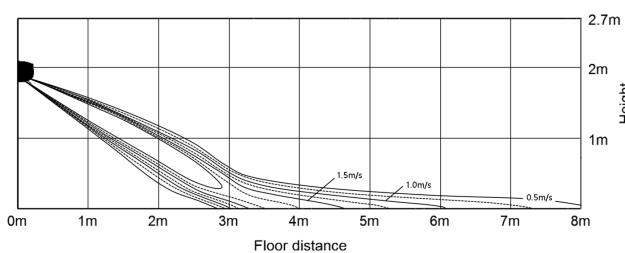
(Discharge angle : 30 degree)



AR24ASHCBWKNER

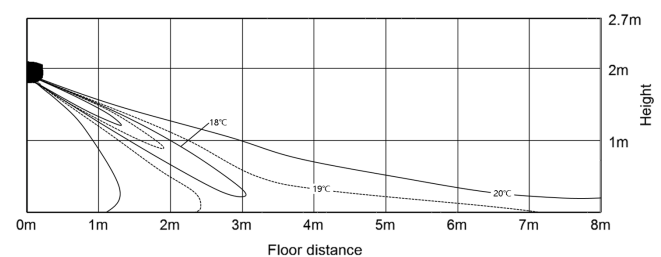
- Cooling air velocity distribution

(Discharge angle : 20 degree)



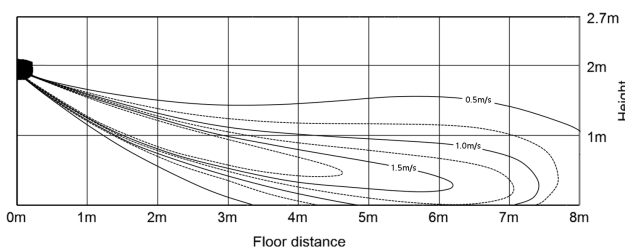
- Cooling Temperature distribution

(Discharge angle : 20 degree)



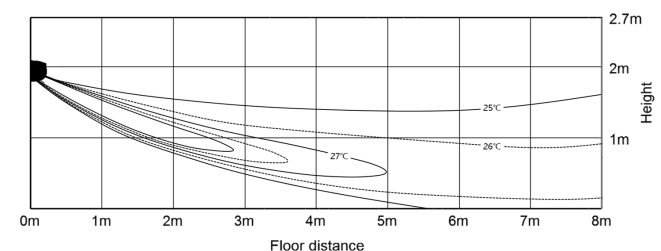
- Heating air velocity distribution

(Discharge angle : 30 degree)

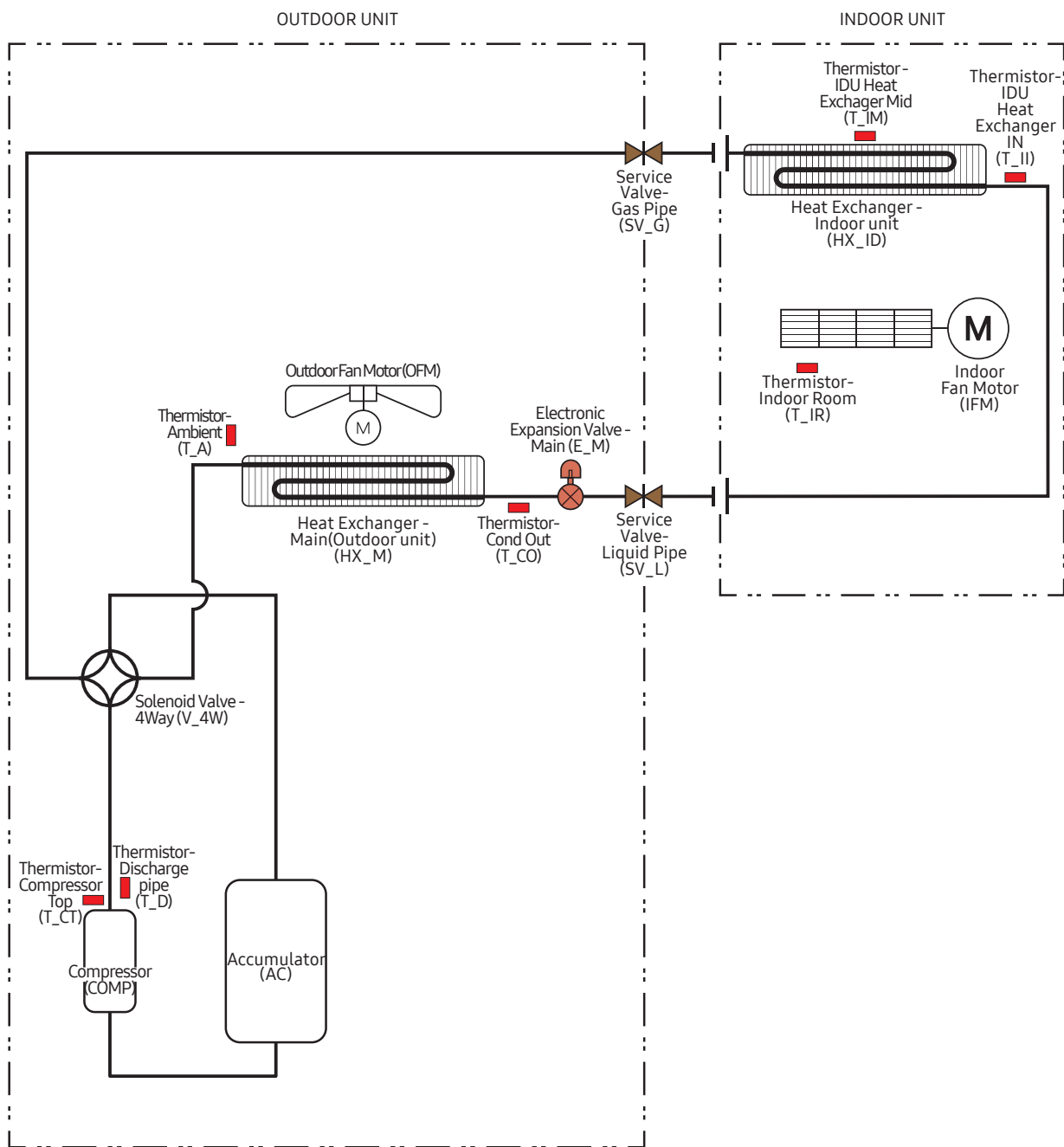


- Heating Temperature distribution

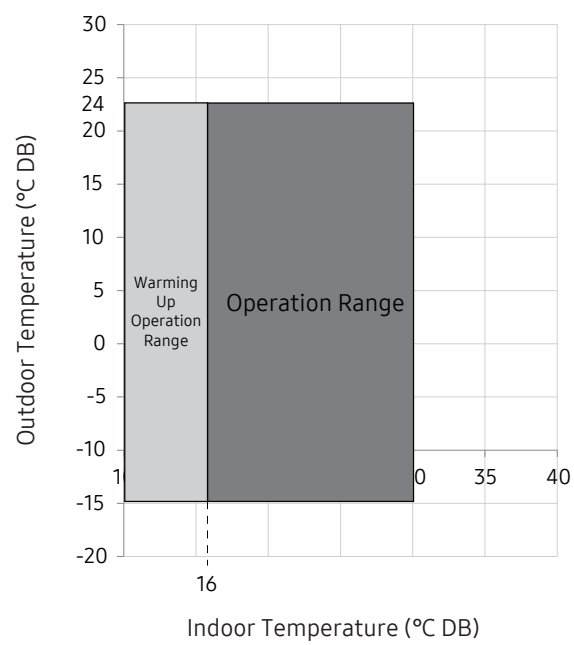
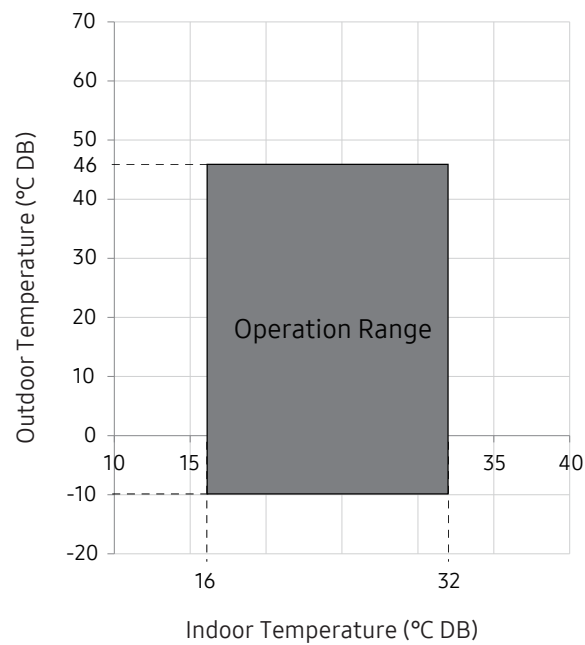
(Discharge angle : 30 degree)



8. Piping Diagram



9. Operation Limit



10. Capacity Correction

Outdoor units

AR09AXAAAWKNER + AR09AXAAAWKXER, AR12AXAAAWKNER + AR12AXAAAWKXER
AR09ASHCBWKNER + AR09ASHCBWKXER, AR12ASHCBWKNER + AR12ASHCBWKXER

Cooling

		Pipe Length (m)			
		5	10	12.5	15
Level Difference (m)	8	-	0.96	0.94	0.91
	5	0.99	0.97	0.95	0.92
	0	1	0.98	0.96	0.93
	-5	0.99	0.97	0.95	0.92
	-8	-	0.96	0.94	0.91

Heating

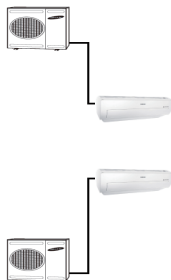
		Pipe Length (m)			
		5	10	12.5	15
Level Difference (m)	8	-	0.96	0.94	0.91
	5	0.99	0.97	0.95	0.92
	0	1	0.98	0.96	0.93
	-5	0.99	0.97	0.95	0.92
	-8	-	0.96	0.94	0.91

10. Capacity Correction

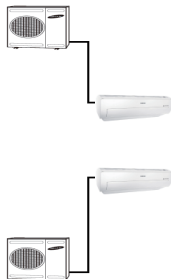
Outdoor units

AR18ASHCBWKNER + AR18ASHCBWKXER, AR24ASHCBWKNER + AR24ASHCBWKXER

Cooling

			Pipe Length (m)						
			5	10	12.5	15	20	25	30
	Level Difference (m)	15	-	-	-	0.92	0.90	0.88	0.86
		10	-	0.95	0.94	0.93	0.91	0.89	0.87
		7	-	0.96	0.95	0.94	0.92	0.90	0.88
		5	0.99	0.97	0.96	0.95	0.93	0.91	0.89
		0	1	0.98	0.97	0.96	0.94	0.92	0.90
		-5	0.99	0.97	0.96	0.95	0.93	0.91	0.89
		-7	-	0.96	0.95	0.94	0.92	0.90	0.88
		-10	-	0.95	0.94	0.93	0.91	0.89	0.87
		-15	-	-	-	0.92	0.90	0.88	0.86

Heating

			Pipe Length (m)						
			5	10	12.5	15	20	25	30
	Level Difference (m)	15	-	-	-	0.92	0.90	0.88	0.86
		10	-	0.95	0.94	0.93	0.91	0.89	0.87
		7	-	0.96	0.95	0.94	0.92	0.90	0.88
		5	0.99	0.97	0.96	0.95	0.93	0.91	0.89
		0	1	0.98	0.97	0.96	0.94	0.92	0.90
		-5	0.99	0.97	0.96	0.95	0.93	0.91	0.89
		-7	-	0.96	0.95	0.94	0.92	0.90	0.88
		-10	-	0.95	0.94	0.93	0.91	0.89	0.87
		-15	-	-	-	0.92	0.90	0.88	0.86



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Samsung Electronics Co., LTD.

Head Office (Suwon Korea) 129, Samsung-Ro, Yeongtong-Gu, Suwon City, Gyeonggi-Do, Korea 16677

Website : www.samsung.com, <https://partnerhub.samsung.com> Email : airconditioner@samsung.com

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