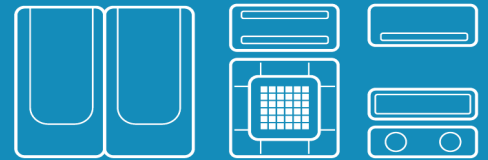


# RAC

## Technical Data Book

2016 RAC for North America  
(Inv, R410A, 60Hz, HP)



Model : AR\*\*KSWSJWKN  
(Whisper)

**SAMSUNG**

# History

Version	Modification	Date	Remark
1.0	Release the new TDB	16.08.12	
1.1	Modify Capacity correction data	17.03.06	

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# 1 Specifications

## Inverter(HP)

Type				Inverter(HP)	Inverter(HP)			
Model Name	Indoor Unit			AR09KSW SJWKNCV	AR12KSW SJWKNCV			
	Outdoor Unit			AR09KSW SJWKXCV	AR12KSW SJWKXCV			
System	Model	Whisper			Whisper			
		Capacity	Cooling(Min/Std/Max)		kW	0.99 / 2.64 / 3.20	0.99 / 3.52 / 4.00	
	Btu/h				3,400 / 9,000 / 10,900	3,400 / 12,000 / 13,600		
	US RT				0.28 / 0.75 / 0.91	0.28 / 1.00 / 1.14		
	Heating(Min/Std/Max)		kW	0.99 / 3.52 / 5.20	0.99 / 3.99 / 6.00			
			Btu/h	3,400 / 12,000 / 17,700	3,400 / 13,600 / 20,500			
			US RT	0.28 / 1.00 / 1.48	0.28 / 1.13 / 1.71			
	Power	Power Input (Nominal)	Cooling(Min/Std/Max)	kW	0.22 / 0.60 / 0.70	0.22 / 0.88 / 1.15		
			Heating(Min/Std/Max)		0.19 / 0.88 / 1.40	0.19 / 1.06 / 1.80		
		Current Input (Nominal)	Cooling(Min/Std/Max)	A	1.50 / 2.90 / 3.20	1.50 / 4.10 / 5.30		
			Heating(Min/Std/Max)		1.30 / 4.10 / 6.50	1.30 / 4.90 / 8.30		
		MCA			A	10.30 (MCA)	10.30 (MCA)	
		MFA			A	15.00	15.00	
	Energy Efficiency	EER (Nominal Cooling)		-	4.40	4.00		
		EER (Nominal Cooling, US)		Btu/Wh	15.00	13.60		
		COP (Nominal Heating)		-	4.00	3.76		
		Energy Grade		Energy	SEER 23	SEER 22		
				Energy	HSPF 10.5	HSPF 9.5		
	Piping Connections	Liquid Pipe		Ø, mm	6.35	6.35		
				Ø, inch	1/4"	1/4"		
		Gas Pipe		Ø, mm	9.52	9.52		
				Ø, inch	3/8"	3/8"		
		Installation Limitation	Max. Length		m	15	15	
			Max. Height		ft	49	49	
						m	8	8
						ft	26	26
	Field Wiring	Power Source Wire		Ø, mm	-	-		
		Transmission Cable		Ø, mm	-	-		
Refrigerant	Type		-	R410A	R410A			
	Control Method		-	-	-			
	Factory Charging		kg	1.25	1.25			
			lbs	2.76	2.76			
Indoor Unit	Power Supply			Ø, #, V, Hz	1,2,208-230,60	1,2,208-230,60		
	Fan	Type		-	Cross Flow Fan	Cross Flow Fan		
		Motor	Output	W	27 x 1	27 x 1		
		Air Flow Rate	Turbo/High/Mid/Low	CFM	460 / 400 / 330 / 270	490 / 430 / 370 / 310		
		External Static Pressure	Min/Std/Max	Pa	-	-		
					In Wg	-	-	
	Drain	Drain Pipe		Ø,mm	ID18 HOSE	ID18 HOSE		
	Sound	Pressure	High/Low	dB(A)	40 / 20	44 / 20		
		Power	Cooling		-	-		
	External Dimension	Net Weight		kg	11.00	13.00		
				lbs	24.25	28.66		
		Shipping Weight		kg	13.00	15.00		
				lbs	28.66	33.07		
		Net Dimensions (WxHxD)		mm	896 x 261 x 261	896 x 261 x 261		
				inch	35.28 x 10.28 x 10.28	35.28 x 10.28 x 10.28		
	Shipping Dimensions (WxHxD)		mm	956 x 317 x 335	956 x 317 x 335			
			inch	37.64 x 12.48 x 13.19	37.64 x 12.48 x 13.19			
	Panel Size	Panel model		-	-	-		
		Panel Net Weight		kg	-	-		
				lbs	-	-		
		Shipping Weight		kg	-	-		
				lbs	-	-		
		Net Dimensions (WxHxD)		mm	-	-		
	inch			-	-			
	Shipping Dimensions (WxHxD)		mm	-	-			
			inch	-	-			
	Additional Accessories	Drain pump	Drain pump	-	-	-		
			Max. Lifting	mm/liter/h	-	-		
Air Filter				-	-			
Outdoor Unit	Power Supply			Ø, #, V, Hz	1,2,208-230,60	1,2,208-230,60		
	Compressor	Type		-	BLDC Rotary	BLDC Rotary		
		Model		-	UG9T115FUAEQ	UG9T115FUAEQ		
		Output		kW	3.49	3.49		
	Fan	Oil	Type	-	POE	POE		
		Air Flow Rate	Cooling	CFM	1,400.00	1,400.00		
	Sound	Pressure	Cooling/Heating	dB(A)	45	46		
		Power	Cooling		-	-		
	External Dimension	Net Weight		kg	37.00	37.00		
				lbs	81.57	81.57		
		Shipping Weight		kg	40.00	40.00		
				lbs	88.18	88.18		
		Net Dimensions (WxHxD)		mm	790 x 548 x 285	790 x 548 x 285		
				inch	31.10 x 21.57 x 11.22	31.10 x 21.57 x 11.22		
	Shipping Dimensions (WxHxD)		mm	926 x 640 x 384	926 x 640 x 384			
			inch	36.46 x 25.20 x 15.12	36.46 x 25.20 x 15.12			
	Operating Temp.	Cooling		°F	14.0 ~ 114.8	14.0 ~ 114.8		
		Heating		°F	5.0 ~ 75.2	5.0 ~ 75.2		

\* Specifications may be subject to change without prior notice.

1) Nominal capacity are based on (Refrigerant Piping : 24.6ft(7.5m) , Level Differences : 0ft);

.Cooling : Indoor temperature : 80°F DB, 67°F WB / Outdoor temperature : 95°F DB, 75°F WB

.Heating : Indoor temperature : 70°F DB, 60°F WB / Outdoor temperature : 47°F DB, 43°F WB

2) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

# 1 Specifications

## Inverter(HP)

Type				Inverter(HP)	Inverter(HP)		
Model Name	Indoor Unit			AR18KSWSJWKNCV	AR24KSWSJWKNCV		
	Outdoor Unit			AR18KSWSJWKXCV	AR24KSWSJWKXCV		
System	Mode			Whisper			
	Capacity	Cooling(Min/Std/Max)		-	Whisper		
				kW	1.60 / 5.28 / 7.00	2.60 / 6.16 / 9.30	
				Btu/h	5,500 / 18,000 / 23,900	8,900 / 21,000 / 31,700	
		Heating(Min/Std/Max)		US RT	0.45 / 1.50 / 1.99	0.74 / 1.75 / 2.64	
				kW	1.20 / 6.04 / 8.00	2.20 / 7.90 / 11.50	
				Btu/h	4,100 / 20,600 / 27,300	7,500 / 27,000 / 39,200	
	Power	Power Input (Nominal)		US RT	0.34 / 1.72 / 2.27	0.63 / 2.25 / 3.27	
				kW	0.38 / 1.36 / 2.20	0.60 / 1.68 / 3.30	
				US RT	0.30 / 1.63 / 2.10	0.48 / 2.52 / 4.20	
		Current Input (Nominal)		kW	1.80 / 6.20 / 9.70	3.20 / 7.80 / 14.00	
				A	1.50 / 7.30 / 10.50	2.60 / 11.50 / 19.00	
				MCA	A	12.70 (MCA)	18.10 (MCA)
	Energy Efficiency	MFA		A	20.00	30.00	
		EER (Nominal Cooling)		-	3.88	3.67	
		EER (Nominal Cooling, US)		Btu/Wh	13.20	12.50	
		COP (Nominal Heating)		-	3.71	3.13	
		Energy Grade		Energy	SEER 20.5	SEER 21.6	
				Energy	HSPF 9	HSPF 10.7	
	Piping Connections	Liquid Pipe		Ø, mm	6.35	6.35	
				Ø, inch	1/4"	1/4"	
		Gas Pipe		Ø, mm	12.70	15.88	
				Ø, inch	1/2"	5/8"	
		Installation Limitation		Max. Length	m	30	30
				Max. Height	ft	98	98
	Field Wiring	Power Source Wire		Ø, mm	-	-	
		Transmission Cable		Ø, mm	-	-	
	Refrigerant	Type		-	R410A	R410A	
Control Method		-	-	-			
Factory Charging		kg	2.00	1.60			
		lbs	4.41	3.53			
Indoor Unit	Power Supply			Ø, #, V, Hz	1,2,208-230,60	1,2,208-230,60	
	Fan	Type		-	Cross Flow Fan	Cross Flow Fan	
		Motor	Output	W	27 x 1	27 x 1	
		Air Flow Rate	Turbo/High/Mid/Low	CFM	600 / 550 / 500 / 430	670 / 580 / 430 / 400	
		External Static Pressure	Min/Std/Max	Pa	-	-	
	Drain	Drain Pipe		Ø,mm	ID18 HOSE	ID18 HOSE	
		Sound	Pressure	High/Low	dB(A)	42 / 23	47 / 28
	Power		Cooling		-	-	
	External Dimension	Net Weight		kg	14.00	14.00	
				lbs	30.86	30.86	
		Shipping Weight		kg	16.00	16.00	
				lbs	35.27	35.27	
		Net Dimensions (WxHxD)		mm	1,065 x 301 x 294	1,065 x 301 x 294	
				inch	41.93 x 11.85 x 11.57	41.93 x 11.85 x 11.57	
	Shipping Dimensions (WxHxD)		mm	1,123 x 354 x 384	1,123 x 354 x 384		
			inch	44.21 x 13.94 x 15.12	44.21 x 13.94 x 15.12		
	Panel Size	Panel model		-	-	-	
		Panel Net Weight		kg	-	-	
				lbs	-	-	
		Shipping Weight		kg	-	-	
				lbs	-	-	
		Net Dimensions (WxHxD)		mm	-	-	
	inch			-	-		
	Shipping Dimensions (WxHxD)		mm	-	-		
			inch	-	-		
	Additional Accessories	Drain pump	Drain pump	-	-	-	
		Air Filter	Max. Lifting	mm/liter/h	-	-	
	Outdoor Unit	Power Supply			Ø, #, V, Hz	1,2,208-230,60	1,2,208-230,60
Compressor		Type		-	BLDC Rotary	Twin BLDC Rotary	
		Model		-	UG4T200FUA4	UG8TH8265FEW	
		Output		kW	1.79	7.82	
Fan		Oil	Type	-	POE	POE	
		Air Flow Rate	Cooling	CFM	1,950.00	2,120.00	
Sound		Pressure	Cooling/Heating	dB(A)	51	56	
		Power	Cooling		-	-	
External Dimension		Net Weight		kg	53.00	65.50	
				lbs	116.85	144.40	
		Shipping Weight		kg	57.00	71.00	
				lbs	125.66	156.53	
		Net Dimensions (WxHxD)		mm	880 x 793 x 310	880 x 967 x 320	
				inch	34.65 x 31.22 x 12.20	34.65 x 38.07 x 12.60	
Shipping Dimensions (WxHxD)		mm	1,023 x 911 x 413	1,047 x 1,045 x 415			
		inch	40.28 x 35.87 x 16.26	41.22 x 41.14 x 16.34			
Operating Temp.		Cooling		°F	14.0 ~ 114.8	14.0 ~ 114.8	
		Heating		°F	5.0 ~ 75.2	5.0 ~ 75.2	

\* Specifications may be subject to change without prior notice.

1) Nominal capacity are based on (Refrigerant Piping : 24.6ft(7.5m) , Level Differences : 0ft);

.Cooling : Indoor temperature : 80°F DB, 67°F WB / Outdoor temperature : 95°F DB, 75°F WB

.Heating : Indoor temperature : 70°F DB, 60°F WB / Outdoor temperature : 47°F DB, 43°F WB

2) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

# 2 Capacity table

## Inverter(HP)

### AR09KSWJWKNCV + AR09KSWJWKXCV

#### Cooling

TC(Total Capacity), SHC(Sensible Heat Capacity), PI(Power Input)

Outdoor Air Temp. (°F, DB)	Indoor Temperature (°F)																				
	68 (DB)			72 (DB)			77 (DB)			80 (DB)			82 (DB)			86 (DB)			90 (DB)		
	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)
14	9.55	5.35	0.45	8.26	5.95	0.45	9.55	6.88	0.46	9.55	7.64	0.46	10.85	7.81	0.46	12.15	8.26	0.46	12.15	9.23	0.46
32	9.89	5.54	0.44	8.60	6.19	0.44	9.89	7.12	0.45	9.89	7.92	0.45	11.19	8.06	0.45	12.49	8.49	0.45	12.49	9.49	0.45
50	10.24	5.73	0.44	8.94	6.44	0.44	10.24	7.37	0.45	10.24	8.19	0.44	11.53	8.30	0.45	12.83	8.72	0.45	12.83	9.75	0.45
68	10.58	5.92	0.42	9.28	6.68	0.42	10.58	7.62	0.43	10.58	8.46	0.43	11.87	8.55	0.43	13.17	8.96	0.44	13.17	10.01	0.44
77	10.07	5.64	0.47	8.77	6.31	0.47	10.07	7.25	0.48	10.07	8.05	0.48	11.36	8.18	0.48	12.66	8.61	0.49	12.66	9.62	0.49
90	9.31	5.22	0.55	8.02	5.77	0.55	9.31	6.71	0.56	9.31	7.45	0.56	10.61	7.64	0.57	11.91	8.10	0.57	11.91	9.05	0.58
95	9.00	5.04	0.59	7.70	5.55	0.59	9.00	6.48	0.60	<b>9.00</b>	<b>7.20</b>	<b>0.60</b>	10.30	7.41	0.60	11.59	7.88	0.61	11.59	8.81	0.61
104	8.87	4.97	0.79	7.57	5.45	0.79	8.87	6.39	0.80	8.87	7.10	0.81	10.17	7.32	0.82	11.46	7.80	0.83	11.46	8.71	0.83
110	8.77	4.91	0.91	7.47	5.38	0.92	8.77	6.31	0.94	8.77	7.02	0.95	10.07	7.25	0.96	11.36	7.73	0.98	11.36	8.64	0.99
115	8.70	4.87	1.04	7.40	5.33	1.05	8.70	6.26	1.07	8.70	6.96	1.08	10.00	7.20	1.09	11.29	7.68	1.11	11.29	8.58	1.13

#### Heating

TC : Total Capacity PI: Power Input

Outdoor Air Temp. (°F, DB)	Indoor Temperature (°F)											
	61 (DB)		64 (DB)		68 (DB)		70 (DB)		72 (DB)		75 (DB)	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
5	9.58	1.20	9.40	1.23	9.21	1.25	9.21	1.26	9.21	1.26	9.21	1.28
14	11.32	1.17	11.10	1.19	10.88	1.22	10.88	1.23	10.88	1.23	10.88	1.24
23	13.05	1.14	12.80	1.16	12.55	1.19	12.55	1.19	12.55	1.20	12.55	1.21
32	14.79	1.11	14.50	1.13	14.21	1.16	14.21	1.16	14.21	1.17	14.21	1.18
36	15.48	1.10	15.18	1.12	14.88	1.15	14.88	1.15	14.88	1.16	14.88	1.17
41	12.39	0.86	12.14	0.87	11.90	0.89	11.79	0.90	11.67	0.90	11.43	0.91
47	12.61	0.85	12.36	0.86	12.12	0.88	<b>12.00</b>	<b>0.88</b>	12.00	0.89	11.88	0.90
50	12.95	0.83	12.69	0.85	12.44	0.86	12.32	0.87	12.32	0.87	12.20	0.88
59	13.51	0.80	13.24	0.82	12.98	0.83	12.85	0.84	12.85	0.84	12.73	0.85
68	14.07	0.77	13.79	0.79	13.52	0.80	13.39	0.81	13.39	0.81	13.25	0.82
75	14.52	0.75	14.23	0.76	13.96	0.78	13.82	0.78	13.82	0.79	13.68	0.80

### AR12KSWJWKNCV + AR12KSWJWKXCV

#### Cooling

TC(Total Capacity), SHC(Sensible Heat Capacity), PI(Power Input)

Outdoor Air Temp. (°F, DB)	Indoor Temperature (°F)																				
	68 (DB)			72 (DB)			77 (DB)			80 (DB)			82 (DB)			86 (DB)			90 (DB)		
	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)
14	13.48	6.74	0.66	12.18	8.04	0.66	13.48	8.90	0.67	13.48	9.97	0.67	14.77	9.75	0.67	16.07	9.96	0.67	16.07	11.25	0.68
32	13.65	6.82	0.69	12.35	8.15	0.69	13.65	9.01	0.70	13.65	10.10	0.70	14.94	9.86	0.70	16.24	10.07	0.70	16.24	11.37	0.71
50	13.82	6.91	0.69	12.52	8.26	0.69	13.82	9.12	0.70	13.82	10.23	0.73	15.12	9.98	0.70	16.41	10.18	0.70	16.41	11.49	0.71
68	13.99	6.99	0.74	12.69	8.38	0.75	13.99	9.23	0.76	13.99	10.35	0.76	15.29	10.09	0.77	16.58	10.28	0.78	16.58	11.61	0.78
77	13.34	6.67	0.78	12.04	7.95	0.79	13.34	8.81	0.80	13.34	9.87	0.80	14.64	9.66	0.81	15.93	9.88	0.82	15.93	11.15	0.82
90	12.39	6.19	0.83	11.09	7.32	0.84	12.39	8.17	0.85	12.39	9.17	0.85	13.68	9.03	0.86	14.98	9.29	0.87	14.98	10.49	0.88
95	12.00	6.00	0.86	10.70	7.06	0.87	12.00	7.92	0.88	<b>12.00</b>	<b>8.88</b>	<b>0.88</b>	13.30	8.78	0.88	14.59	9.05	0.89	14.59	10.22	0.89
104	11.26	5.63	1.00	9.96	6.58	1.01	11.26	7.43	1.02	11.26	8.33	1.03	12.56	8.29	1.04	13.85	8.59	1.05	13.85	9.70	1.06
110	10.85	5.43	1.08	9.55	6.31	1.09	10.85	7.16	1.11	10.85	8.03	1.12	12.15	8.02	1.14	13.44	8.33	1.15	13.44	9.41	1.16
115	10.41	5.20	1.16	9.11	6.01	1.17	10.41	6.87	1.20	10.41	7.70	1.21	11.70	7.72	1.22	13.00	8.06	1.25	13.00	9.10	1.27

#### Heating

TC : Total Capacity PI: Power Input

Outdoor Air Temp. (°F, DB)	Indoor Temperature (°F)											
	61 (DB)		64 (DB)		68 (DB)		70 (DB)		72 (DB)		75 (DB)	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
5	10.47	1.34	10.27	1.37	10.07	1.40	10.07	1.41	10.07	1.41	10.07	1.43
14	12.57	1.37	12.33	1.40	12.09	1.42	12.09	1.43	12.09	1.44	12.09	1.45
23	14.68	1.39	14.39	1.42	14.11	1.45	14.11	1.45	14.11	1.46	14.11	1.48
32	16.78	1.41	16.45	1.44	16.13	1.47	16.13	1.48	16.13	1.49	16.13	1.50
36	17.62	1.42	17.27	1.45	16.93	1.48	16.93	1.49	16.93	1.49	16.93	1.51
41	13.83	1.01	13.56	1.03	13.30	1.05	13.16	1.06	13.03	1.06	12.77	1.07
47	14.29	1.02	14.01	1.04	13.74	1.06	<b>13.60</b>	<b>1.07</b>	13.60	1.07	13.46	1.08
50	14.98	1.02	14.68	1.05	14.39	1.07	14.25	1.08	14.25	1.08	14.11	1.09
59	16.12	1.05	15.80	1.07	15.49	1.09	15.34	1.09	15.34	1.10	15.18	1.11
68	17.26	1.06	16.92	1.08	16.59	1.11	16.43	1.11	16.43	1.12	16.26	1.13
75	18.18	1.08	17.82	1.10	17.47	1.12	17.29	1.13	17.29	1.13	17.12	1.14

- Capacities are based on following conditions:

. Cooling mode indoor air temperature (°F, DB/WB) : 68/57, 72/61, 77/64, 80/67, 82/70, 86/72, 90/75

. Heating mode outdoor air : 85%RH. However, the condition rated capacity is 47 DB / 43 WB.

. Refrigerant piping length : 7.5m (24.6ft) . Level difference : 0m.

. In case of Inverter models, the cooling capacity on the capacity table can be higher than nominal capacity as inverter compressors operate with different Hz depending on outdoor and indoor temperatures.

- The specifications, designs and information in this Databook is subject to change without notice.

# 2 Capacity table

## Inverter(HP)

### AR18KSWJWKNCV + AR18KSWJWKXCV

#### Cooling

TC(Total Capacity), SHC(Sensible Heat Capacity), PI(Power Input)

Outdoor Air Temp. (°F, DB)	Indoor Temperature (°F)																				
	68 (DB)			72 (DB)			77 (DB)			80 (DB)			82 (DB)			86 (DB)			90 (DB)		
	57 (WB)			61 (WB)			64 (WB)			67 (WB)			70 (WB)			72 (WB)			75 (WB)		
	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)
14	17.06	8.02	1.42	15.76	9.93	1.43	17.06	10.75	1.44	17.06	12.11	1.45	18.36	11.56	1.45	19.65	11.60	1.46	19.65	13.17	1.46
32	17.98	8.45	1.40	16.68	10.51	1.41	17.98	11.33	1.42	17.98	12.77	1.43	19.28	12.15	1.43	20.57	12.14	1.44	20.57	13.78	1.44
50	18.87	8.87	1.40	17.57	11.07	1.41	18.87	11.89	1.42	18.87	13.40	1.41	20.16	12.70	1.43	21.46	12.66	1.44	21.46	14.38	1.44
68	19.79	9.30	1.36	18.49	11.65	1.37	19.79	12.47	1.38	19.79	14.05	1.39	21.09	13.28	1.40	22.38	13.21	1.42	22.38	15.00	1.43
77	19.21	9.03	1.35	17.91	11.29	1.36	19.21	12.10	1.37	19.21	13.64	1.38	20.51	12.92	1.39	21.80	12.86	1.41	21.80	14.61	1.42
90	18.36	8.63	1.34	17.06	10.75	1.35	18.36	11.56	1.36	18.36	13.03	1.37	19.65	12.38	1.38	20.95	12.36	1.40	20.95	14.04	1.41
95	18.00	8.46	1.33	16.70	10.52	1.34	18.00	11.34	1.35	<b>18.00</b>	<b>12.78</b>	<b>1.36</b>	19.30	12.16	1.37	20.59	12.15	1.37	20.59	13.80	1.38
104	17.26	8.11	1.70	15.97	10.06	1.72	17.26	10.88	1.73	17.26	12.26	1.75	18.56	11.69	1.77	19.86	11.72	1.79	19.86	13.30	1.80
110	16.82	7.91	1.91	15.52	9.78	1.93	16.82	10.60	1.97	16.82	11.94	1.99	18.12	11.41	2.02	19.41	11.45	2.04	19.41	13.01	2.07
115	16.38	7.70	2.14	15.08	9.50	2.16	16.38	10.32	2.21	16.38	11.63	2.23	17.67	11.13	2.25	18.97	11.19	2.30	18.97	12.71	2.34

#### Heating

TC : Total Capacity, PI: Power Input

Outdoor Air Temp. (°F, DB)	Indoor Temperature (°F)											
	61 (DB)		64 (DB)		68 (DB)		70 (DB)		72 (DB)		75 (DB)	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
5	14.13	1.78	13.85	1.81	13.58	1.85	13.58	1.86	13.58	1.87	13.58	1.89
14	17.28	1.77	16.94	1.80	16.61	1.84	16.61	1.85	16.61	1.86	16.61	1.88
23	20.43	1.76	20.03	1.79	19.64	1.83	19.64	1.84	19.64	1.85	19.64	1.87
32	23.58	1.75	23.12	1.78	22.67	1.82	22.67	1.83	22.67	1.84	22.67	1.86
36	24.85	1.74	24.36	1.78	23.88	1.82	23.88	1.82	23.88	1.83	23.88	1.85
41	21.25	1.55	20.84	1.58	20.43	1.61	20.22	1.62	20.02	1.63	19.62	1.64
47	21.65	1.57	21.22	1.60	20.81	1.63	<b>20.60</b>	<b>1.64</b>	20.60	1.65	20.39	1.66
50	22.24	1.58	21.80	1.62	21.37	1.66	21.16	1.67	21.16	1.67	20.95	1.69
59	23.22	1.64	22.77	1.67	22.32	1.71	22.10	1.71	22.10	1.72	21.87	1.74
68	24.20	1.68	23.73	1.72	23.26	1.75	23.03	1.76	23.03	1.77	22.80	1.79
75	24.99	1.72	24.50	1.75	24.02	1.79	23.78	1.80	23.78	1.81	23.54	1.83

### AR24KSWJWKNCV + AR24KSWJWKXCV

#### Cooling

TC(Total Capacity), SHC(Sensible Heat Capacity), PI(Power Input)

Outdoor Air Temp. (°F, DB)	Indoor Temperature (°F)																				
	68 (DB)			72 (DB)			77 (DB)			80 (DB)			82 (DB)			86 (DB)			90 (DB)		
	57 (WB)			61 (WB)			64 (WB)			67 (WB)			70 (WB)			72 (WB)			75 (WB)		
	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)	TC(MBH)	SHC(MBH)	PI(kW)
14	28.59	12.29	2.04	27.30	16.10	2.05	28.59	16.87	2.07	28.59	19.16	2.08	29.89	17.63	2.09	31.19	17.15	2.09	31.19	19.65	2.10
32	27.98	12.03	2.01	26.68	15.74	2.02	27.98	16.51	2.04	27.98	18.75	2.05	29.27	17.27	2.06	30.57	16.81	2.06	30.57	19.26	2.07
50	27.40	11.78	2.01	26.10	15.40	2.02	27.40	16.17	2.04	27.40	18.36	2.01	28.69	16.93	2.06	29.99	16.50	2.06	29.99	18.89	2.07
68	26.78	11.52	1.94	25.49	15.04	1.95	26.78	15.80	1.97	26.78	17.95	1.98	28.08	16.57	2.00	29.38	16.16	2.02	29.38	18.51	2.04
77	24.84	10.68	1.85	23.54	13.89	1.86	24.84	14.66	1.88	24.84	16.64	1.89	26.14	15.42	1.91	27.43	15.09	1.93	27.43	17.28	1.95
90	22.14	9.52	1.72	20.85	12.30	1.72	22.14	13.06	1.74	22.14	14.84	1.75	23.44	13.83	1.77	24.74	13.61	1.79	24.74	15.58	1.80
95	21.00	9.03	1.65	19.70	11.63	1.65	21.00	12.39	1.67	<b>21.00</b>	<b>14.07</b>	<b>1.68</b>	22.30	13.15	1.69	23.59	12.98	1.70	23.59	14.86	1.71
104	22.04	9.48	2.35	20.74	12.24	2.37	22.04	13.00	2.40	22.04	14.77	2.42	23.34	13.77	2.44	24.63	13.55	2.47	24.63	15.52	2.49
110	22.66	9.74	2.76	21.36	12.60	2.79	22.66	13.37	2.85	22.66	15.18	2.88	23.95	14.13	2.92	25.25	13.89	2.96	25.25	15.91	3.00
115	23.27	10.01	3.21	21.97	12.96	3.24	23.27	13.73	3.31	23.27	15.59	3.34	24.57	14.49	3.37	25.86	14.22	3.44	25.86	16.29	3.51

#### Heating

TC : Total Capacity PI: Power Input

Outdoor Air Temp. (°F, DB)	Indoor Temperature (°F)											
	61 (DB)		64 (DB)		68 (DB)		70 (DB)		72 (DB)		75 (DB)	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
5	22.79	3.03	22.34	3.10	21.91	3.16	21.91	3.18	21.91	3.19	21.91	3.22
14	26.26	3.09	25.75	3.15	25.24	3.22	25.24	3.23	25.24	3.25	25.24	3.28
23	29.74	3.15	29.15	3.21	28.58	3.28	28.58	3.29	28.58	3.31	28.58	3.34
32	33.21	3.20	32.56	3.27	31.92	3.34	31.92	3.35	31.92	3.37	31.92	3.40
36	34.60	3.23	33.92	3.29	33.25	3.36	33.25	3.38	33.25	3.39	33.25	3.43
41	27.01	2.27	26.48	2.32	25.96	2.36	25.70	2.38	25.44	2.39	24.93	2.41
47	28.37	2.42	27.82	2.47	27.27	2.52	<b>27.00</b>	<b>2.53</b>	27.00	2.55	26.73	2.57
50	30.41	2.57	29.82	2.62	29.23	2.75	28.94	2.77	28.94	2.78	28.65	2.81
59	33.81	3.02	33.15	3.08	32.50	3.15	32.18	3.16	32.18	3.18	31.85	3.21
68	37.21	3.40	36.49	3.47	35.77	3.54	35.41	3.55	35.41	3.57	35.06	3.61
75	39.94	3.70	39.15	3.77	38.39	3.85	38.00	3.87	38.00	3.89	37.62	3.93

- Capacities are based on following conditions:

. Cooling mode indoor air temperature (°F, DB/WB) : 68/57, 72/61, 77/64, 80/67, 82/70, 86/72, 90/75

. Heating mode outdoor air : 85%RH. However, the condition rated capacity is 47 DB / 43 WB.

. Refrigerant piping length : 7.5m (24.6ft) . Level difference : 0m.

. In case of Inverter models, the cooling capacity on the capacity table can be higher than nominal capacity as inverter compressors operate with different Hz depending on outdoor and indoor temperatures.

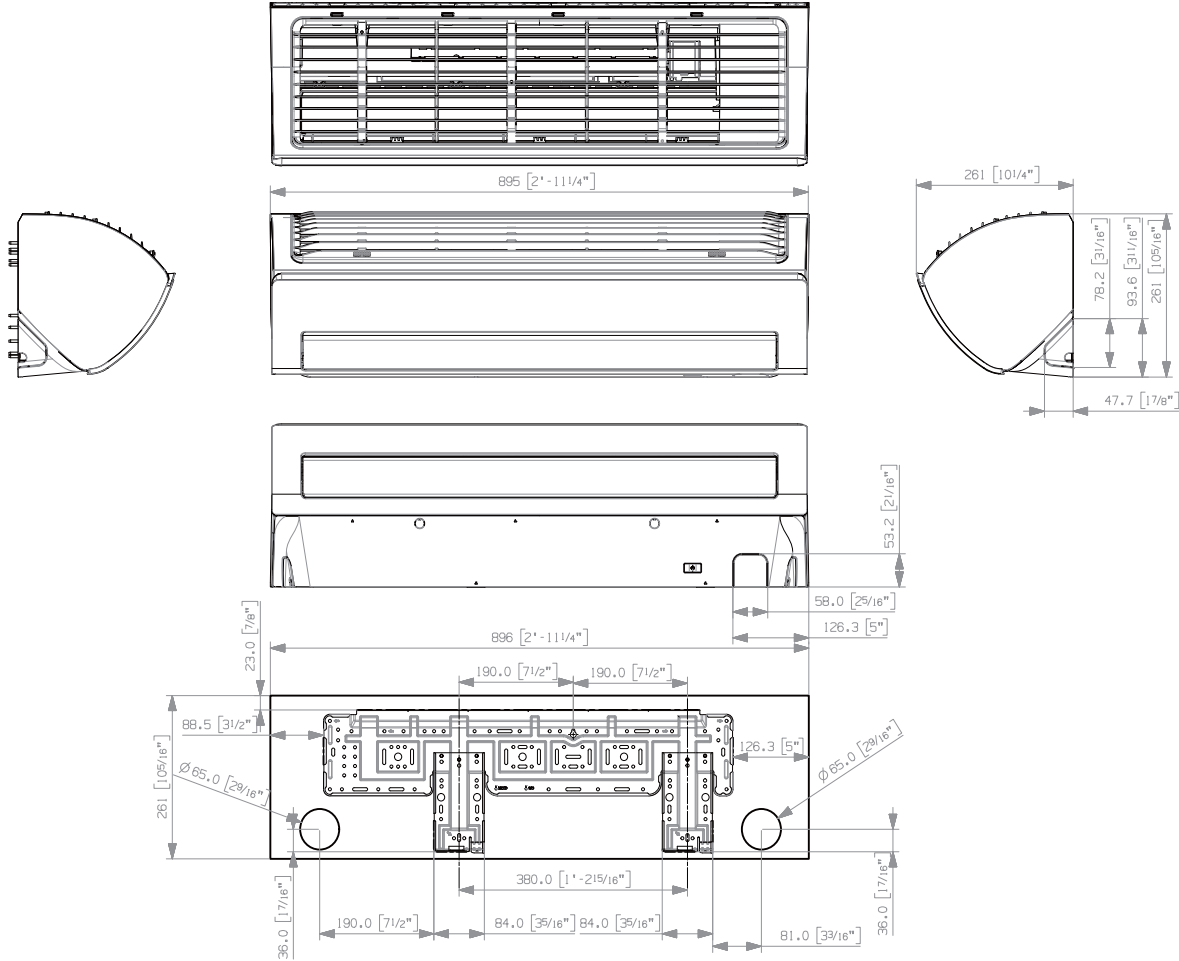
- The specifications, designs and information in this Databook is subject to change without notice.

# 3 Dimensional drawing

## Indoor : Inverter(HP)

AR09KSWSJWKNCV, AR12KSWSJWKNCV

Units : mm / inches



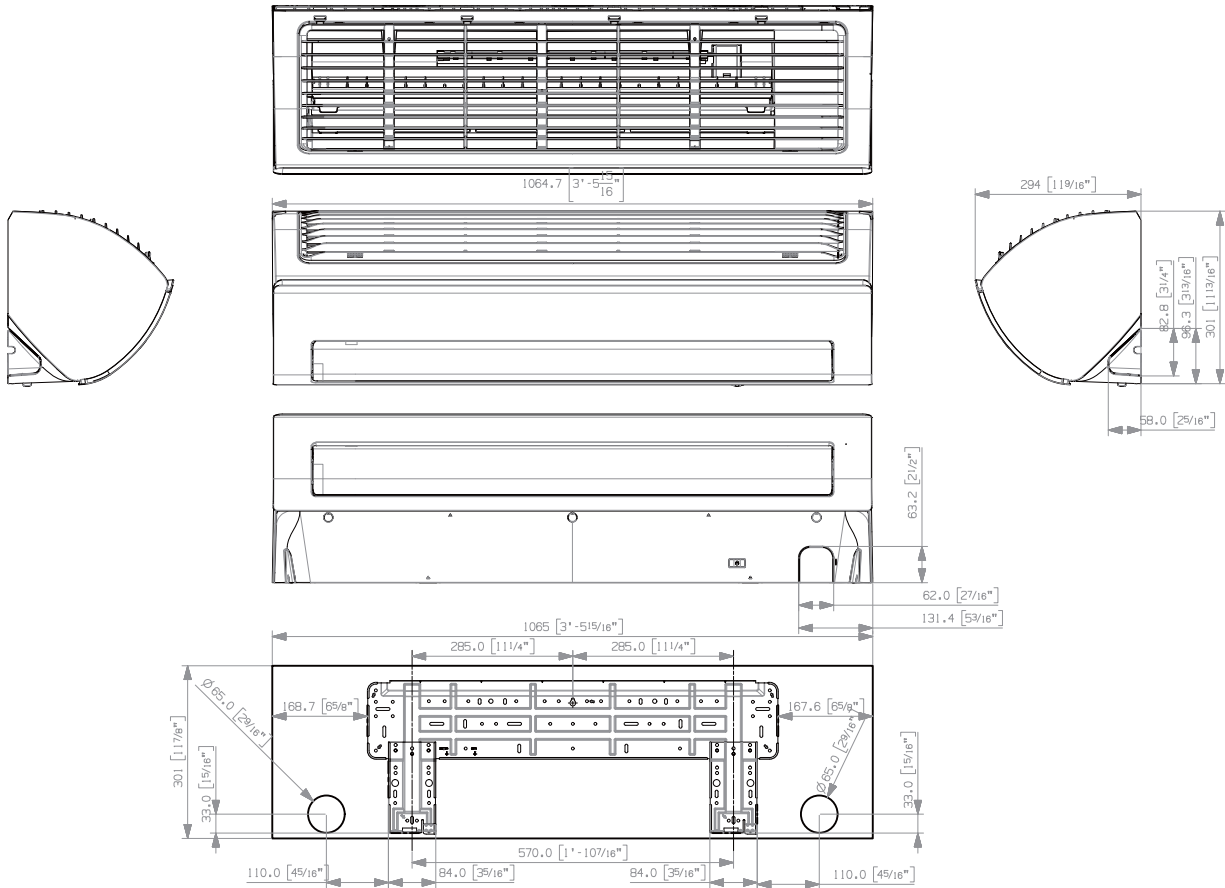


# 3 Dimensional drawing

## Indoor : Inverter(HP)

AR18KSWSJWKNCV, AR24KSWSJWKNCV

Units : mm / inches



# 3 Dimensional drawing

## Outdoor

AR09KSWSJWKXCV, AR12KSWSJWKXCV

Units : mm / inches

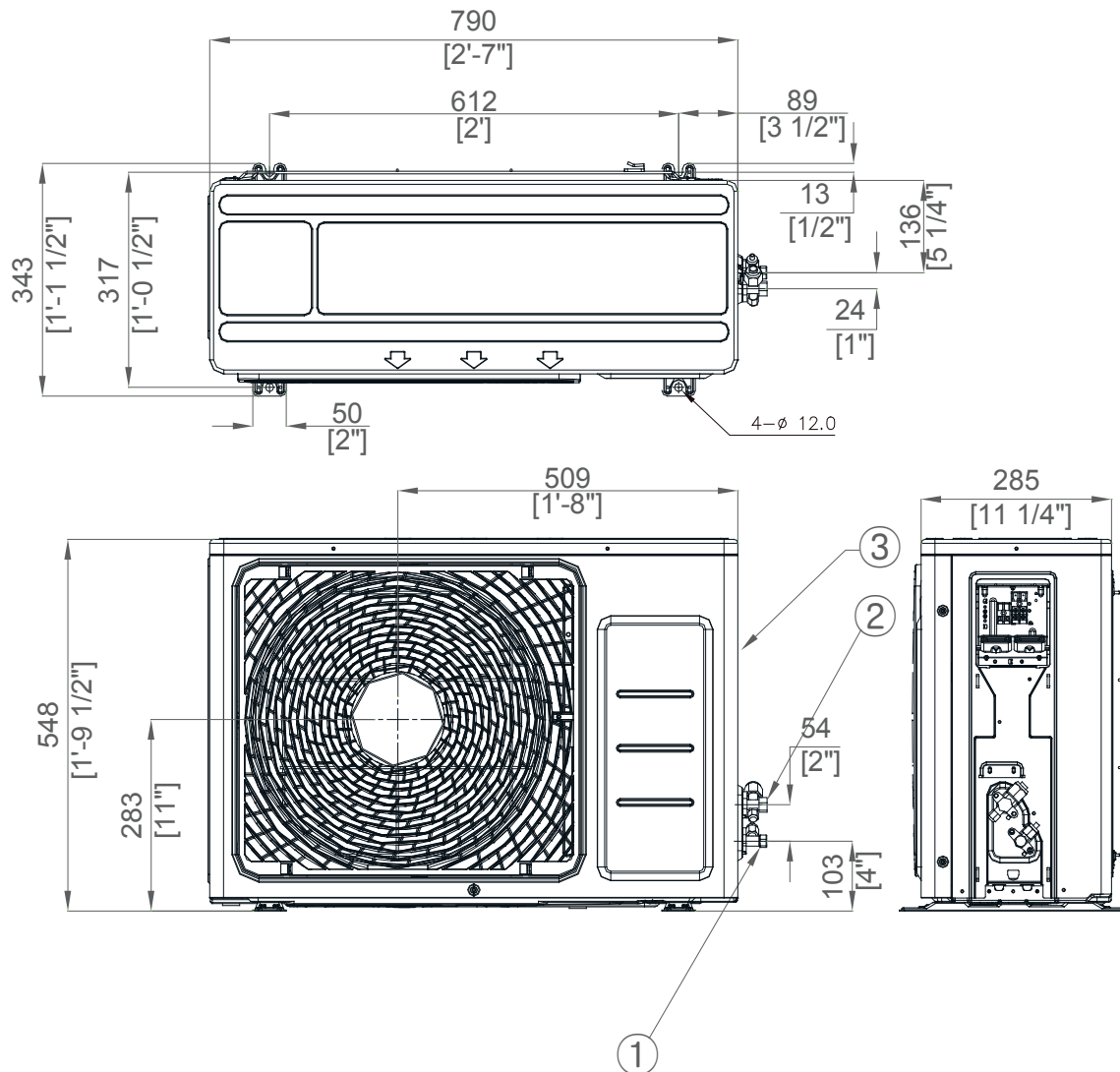


Table of descriptions

1	Refrigerant gas pipe	∅6.35 Flare
2	Refrigerant liquid pipe	∅9.52 Flare
3	Power & Comm. wiring conduits	
4		
5		
6		

# 3 Dimensional drawing

## Outdoor

AR18KSWSJWKXCV

Units : mm / inches

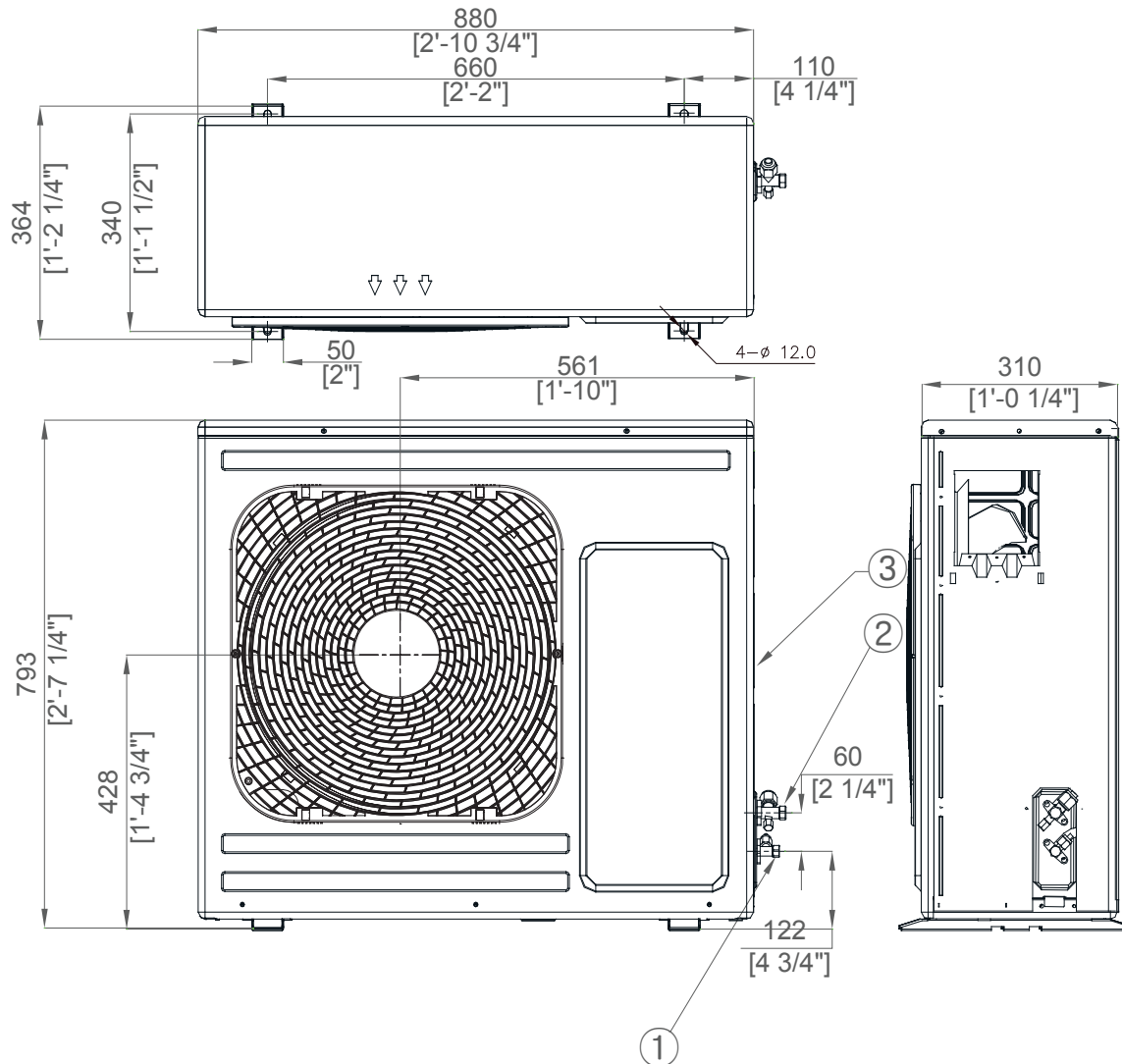


Table of descriptions

1	Refrigerant gas pipe	∅6.35 Flare
2	Refrigerant liquid pipe	∅12.70 Flare
3	Power & Comm. wiring conduits	
4		
5		
6		

# 3 Dimensional drawing

## Outdoor

AR24KSWSJWKXCV

Units : mm / inches

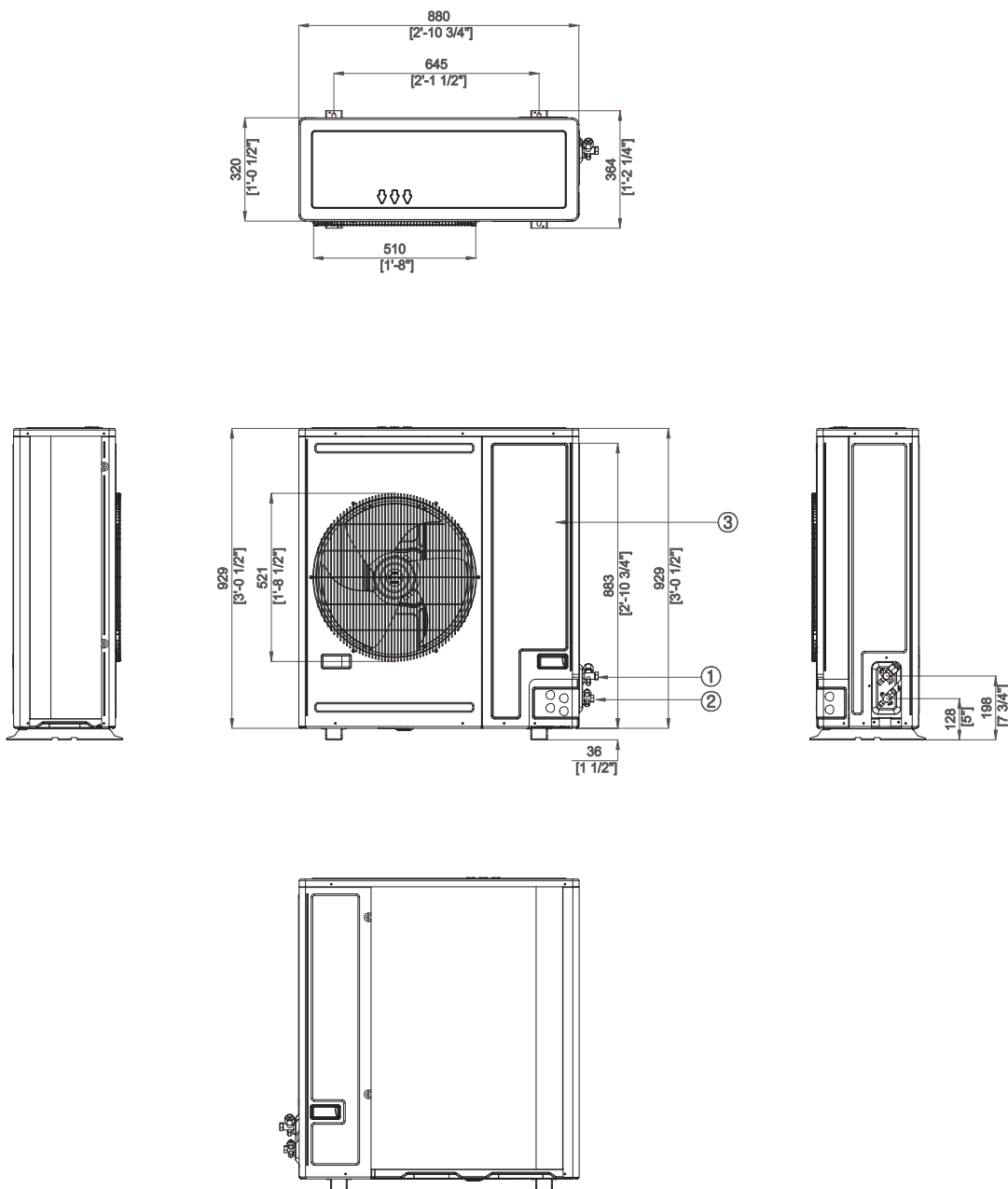


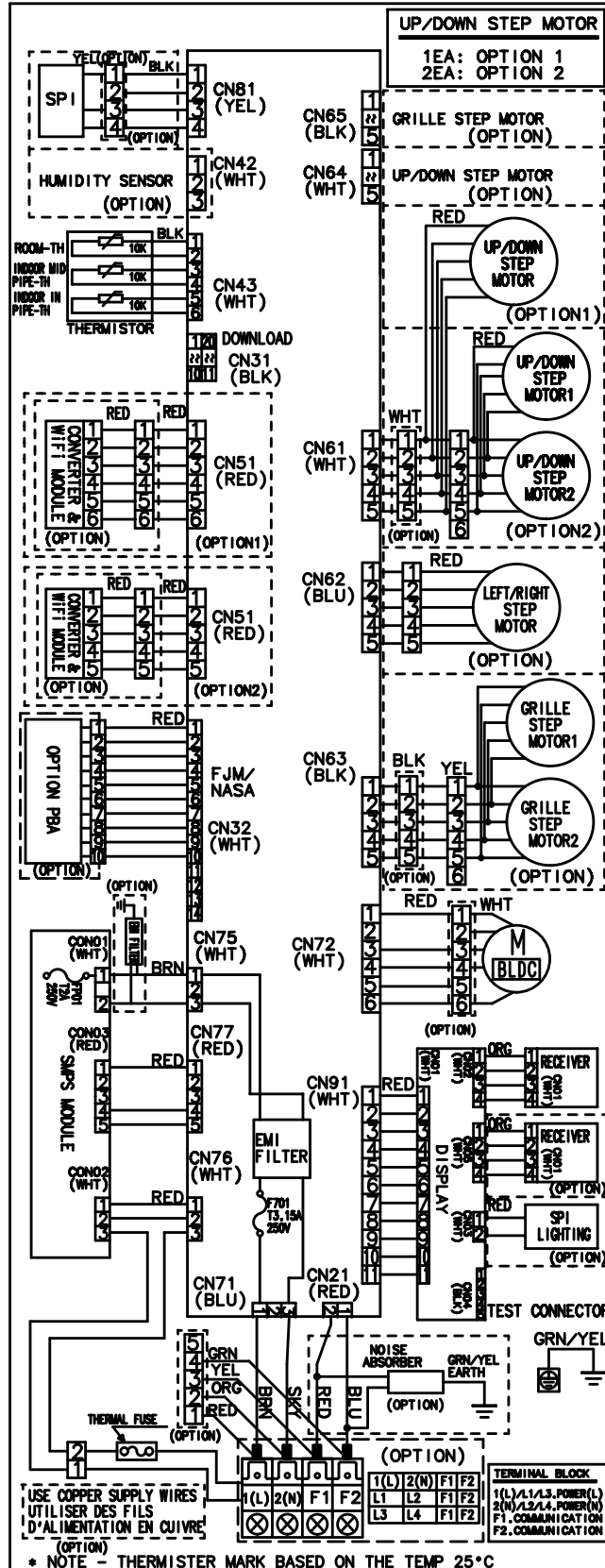
Table of descriptions

1	Refrigerant gas pipe	Ø6.35 Flare
2	Refrigerant liquid pipe	Ø15.88 Flare
3	Power & Comm. wiring conduits	
4		
5		
6		

# 4 Electrical wiring diagram

## Indoor : Inverter(HP)

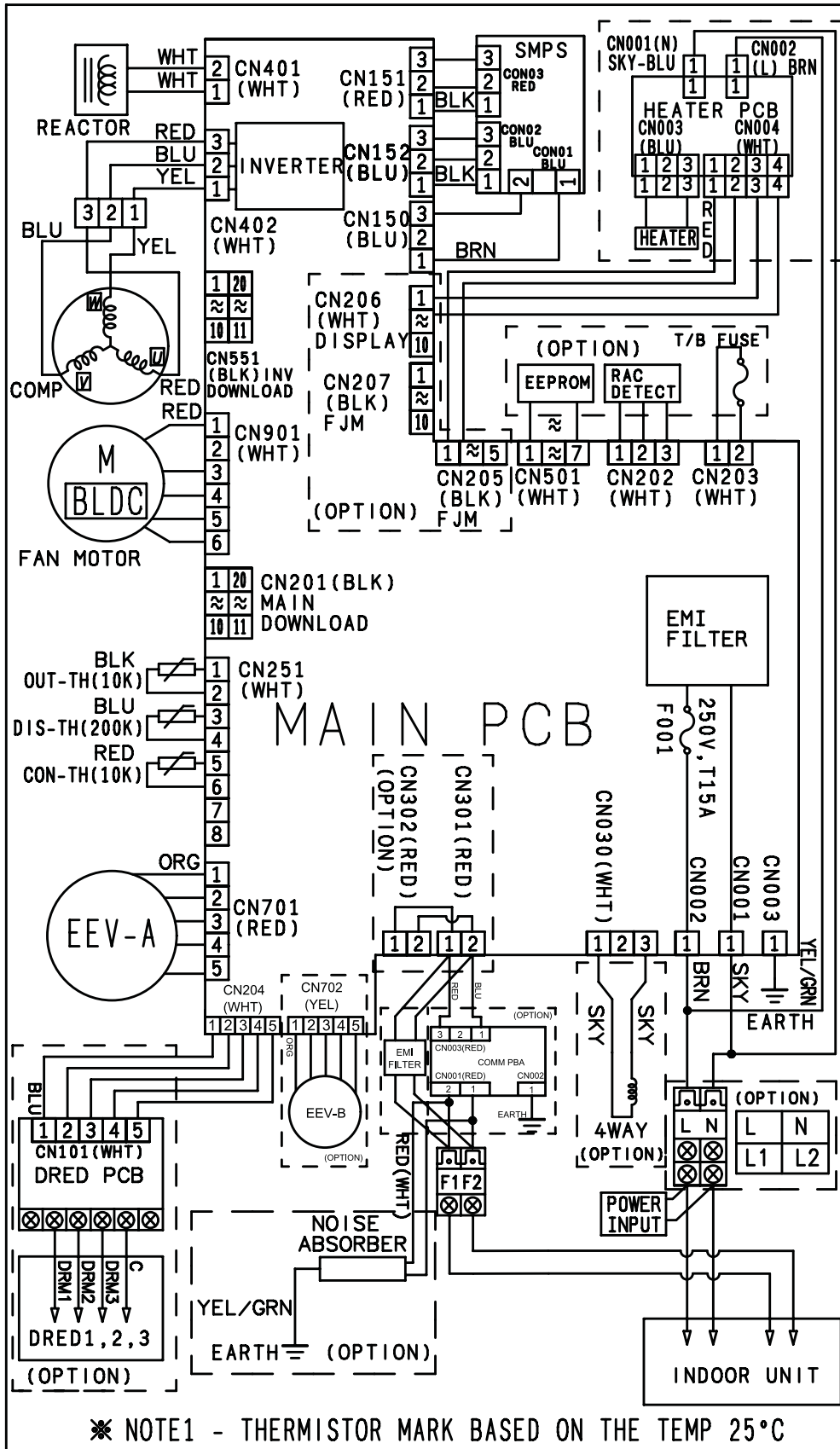
AR09KSWSJWKNCV, AR12KSWSJWKNCV, AR18KSWSJWKNCV, AR24KSWSJWKNCV



# 4 Electrical wiring diagram

## Outdoor

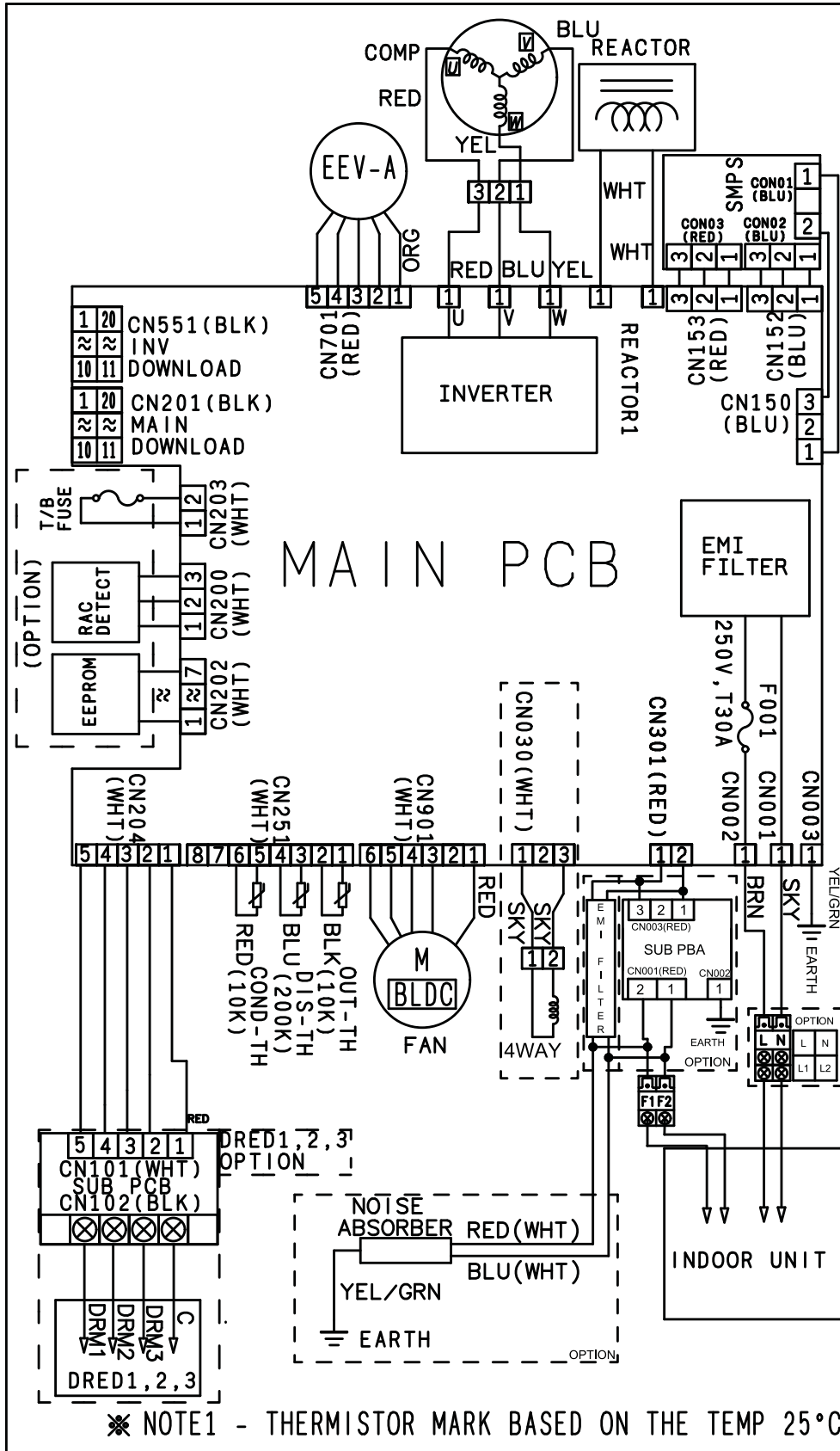
AR09KSWJWKXCV, AR12KSWJWKXCV



# 4 Electrical wiring diagram

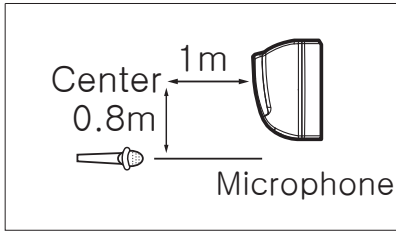
## Outdoor

AR18KSWSJWKXCV, AR24KSWSJWKXCV



# 5 Sound pressure level

## Indoor : Inverter(HP)



Unit: dB(A)

Model	High	Low
AR09KSWSJWKNCV (ODU : AR09KSWSJWKXCV)	40	20
AR12KSWSJWKNCV (ODU : AR12KSWSJWKXCV)	44	20

### Note

\* Specifications may be subject to change without prior notice

1) These operation values were obtained in an anechoic room.

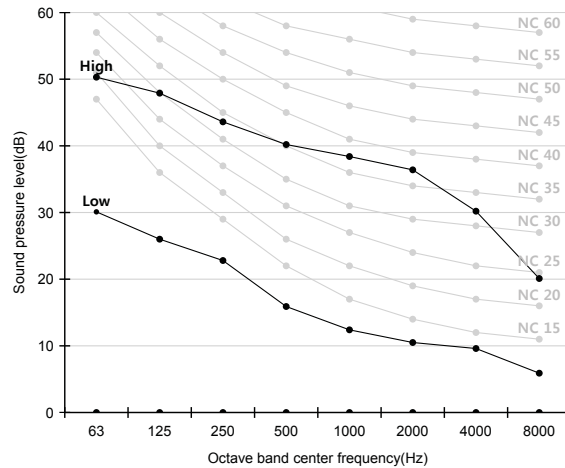
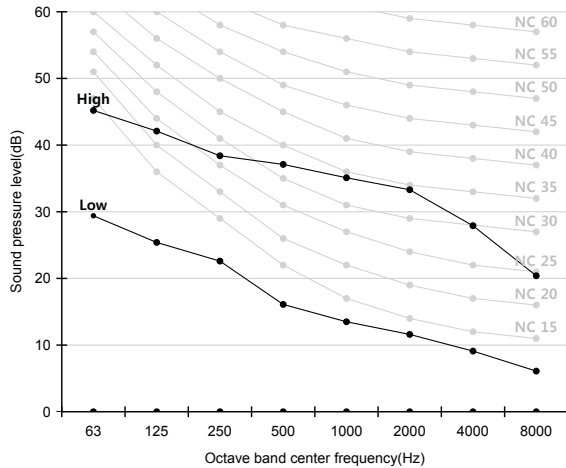
2) Sound pressure level will vary depending on a range of factors such as the construction of the particular room where the equipment is installed.

3) Operation sound level may differ depending on operation and ambient conditions.

## NC curve

1) AR09KSWSJWKNCV (ODU : AR09KSWSJWKXCV)

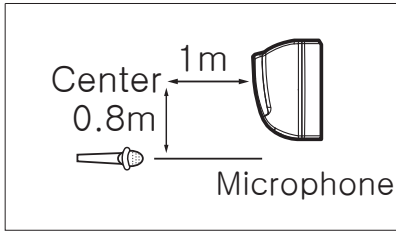
2) AR12KSWSJWKNCV (ODU : AR12KSWSJWKXCV)





# 5 Sound pressure level

## Indoor : Inverter(HP)



Unit: dB(A)

Model	High	Low
AR18KSW SJWKNCV (ODU : AR18KSW SJWKXCV)	42	23
AR24KSW SJWKNCV (ODU : AR24KSW SJWKXCV)	47	28

### Note

\* Specifications may be subject to change without prior notice

1) These operation values were obtained in an anechoic room.

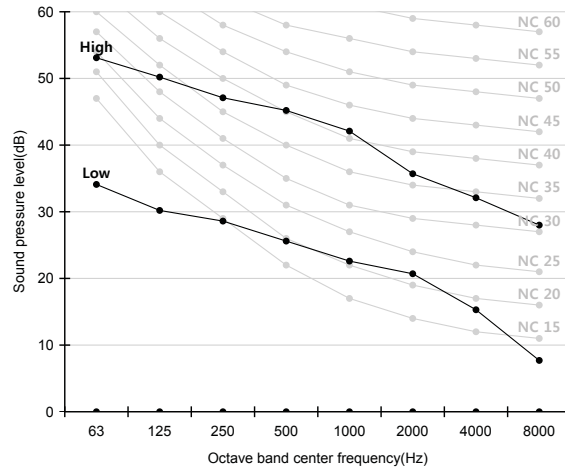
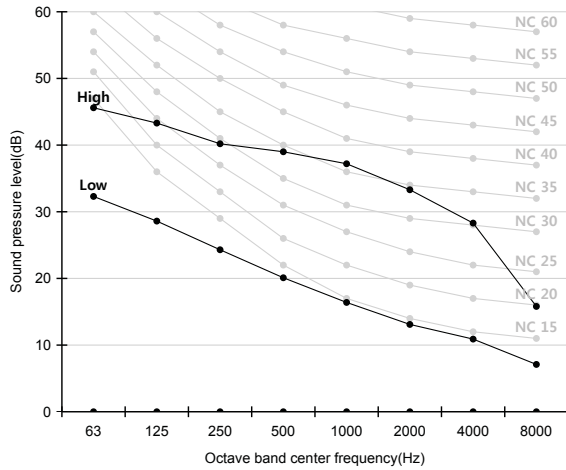
2) Sound pressure level will vary depending on a range of factors such as the construction of the particular room where the equipment is installed.

3) Operation sound level may differ depending on operation and ambient conditions.

## NC curve

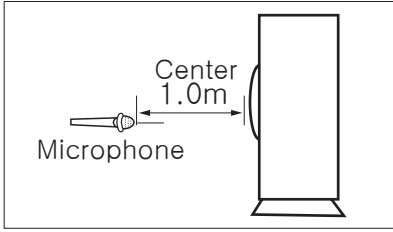
1) AR18KSW SJWKNCV (ODU : AR18KSW SJWKXCV)

2) AR24KSW SJWKNCV (ODU : AR24KSW SJWKXCV)



# 5 Sound pressure level

## Outdoor



Unit: dB(A)

Model	Cooling
AR09KSWJWKXCV (IDU : AR09KSWJWKNCV)	45
AR12KSWJWKXCV (IDU : AR12KSWJWKNCV)	46

### Note

\* Specifications may be subject to change without prior notice

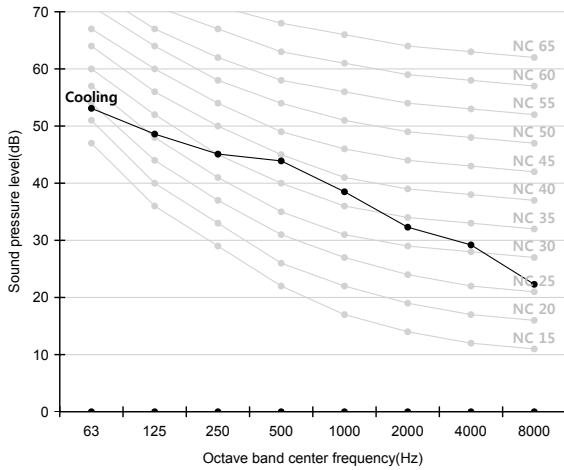
1) These operation values were obtained in an anechoic room.

2) Sound pressure level will vary depending on a range of factors such as the construction of the particular room where the equipment is installed.

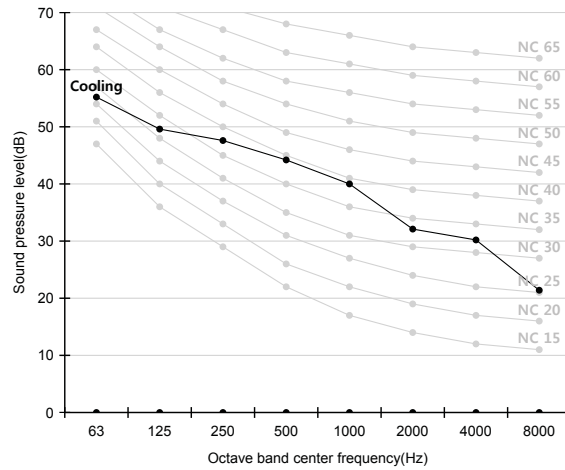
3) Operation sound level may differ depending on operation and ambient conditions.

## NC curve

1) AR09KSWJWKXCV (IDU : AR09KSWJWKNCV)

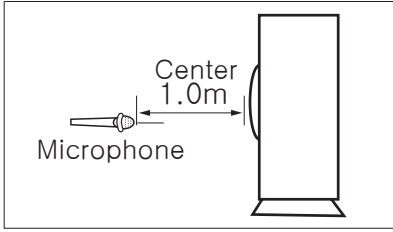


2) AR12KSWJWKXCV (IDU : AR12KSWJWKNCV)



# 5 Sound pressure level

## Outdoor



Unit: dB(A)

Model	Cooling
AR18KSWSJWKXCV (IDU : AR18KSWSJWKNCV)	51
AR24KSWSJWKXCV (IDU : AR24KSWSJWKNCV)	56

### Note

\* Specifications may be subject to change without prior notice

1) These operation values were obtained in an anechoic room.

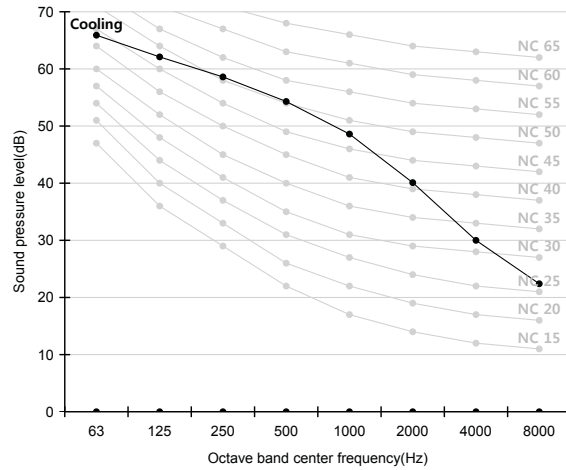
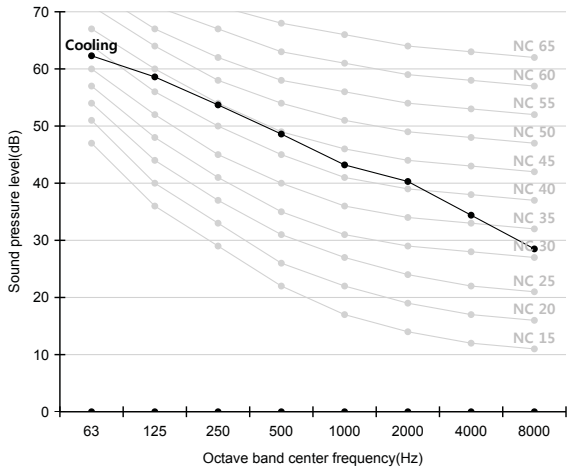
2) Sound pressure level will vary depending on a range of factors such as the construction of the particular room where the equipment is installed.

3) Operation sound level may differ depending on operation and ambient conditions.

## NC curve

1) AR18KSWSJWKXCV (IDU : AR18KSWSJWKNCV)

2) AR24KSWSJWKXCV (IDU : AR24KSWSJWKNCV)

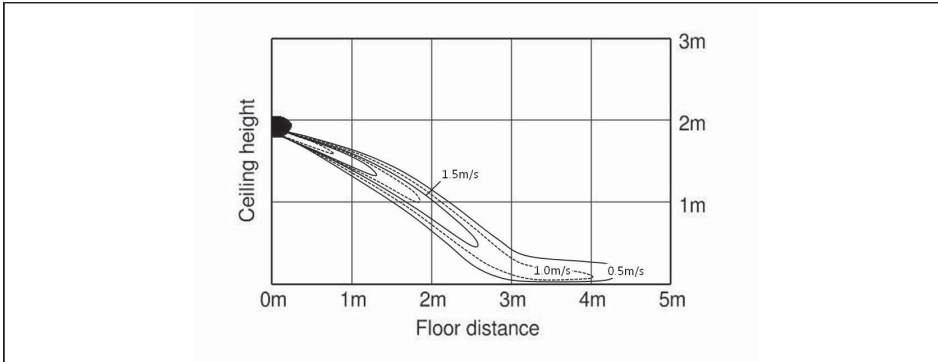


# 6 Temperature and air flow distribution

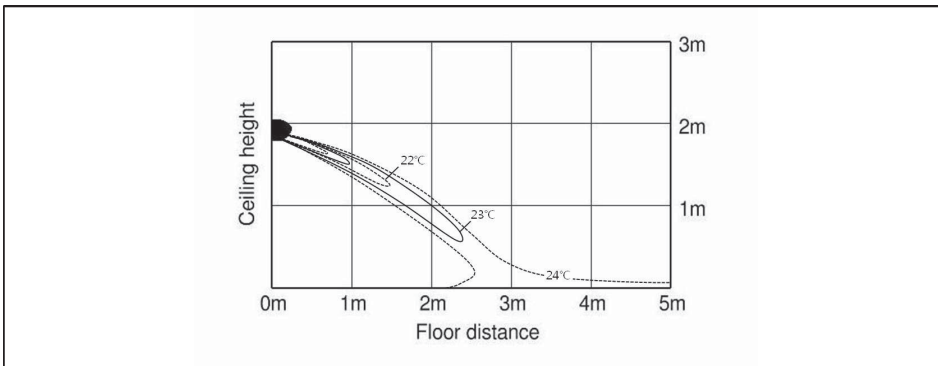
Indoor : Inverter(HP)

AR09KSW SJWKNCV

(1) Cooling air velocity distribution



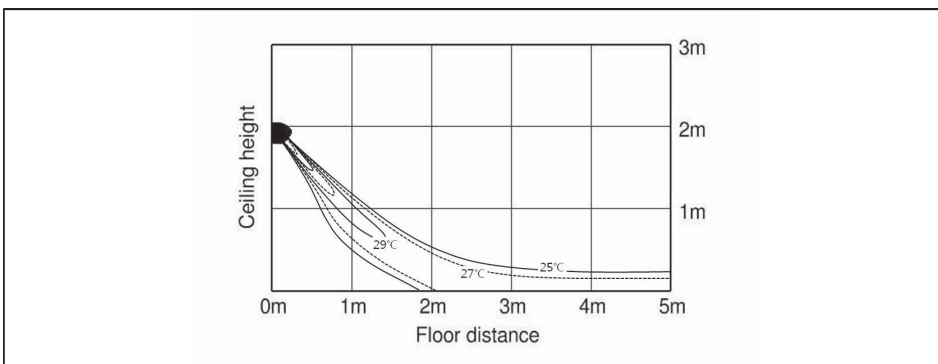
(2) Cooling temperature distribution



(3) Heating air velocity distribution



(4) Heating temperature distribution

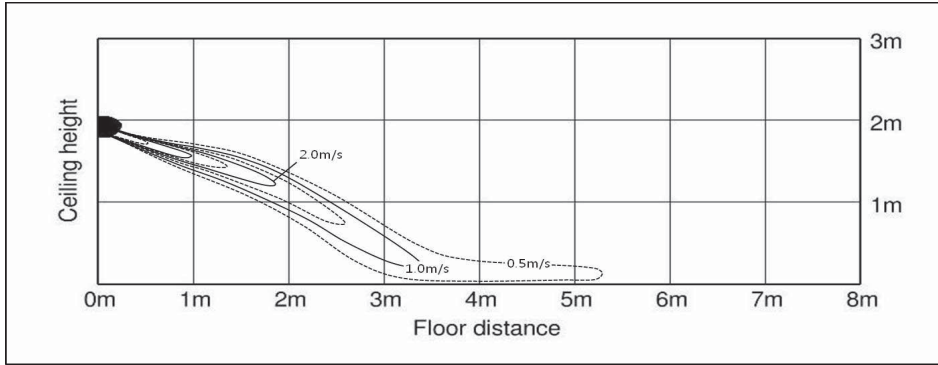


# 6 Temperature and air flow distribution

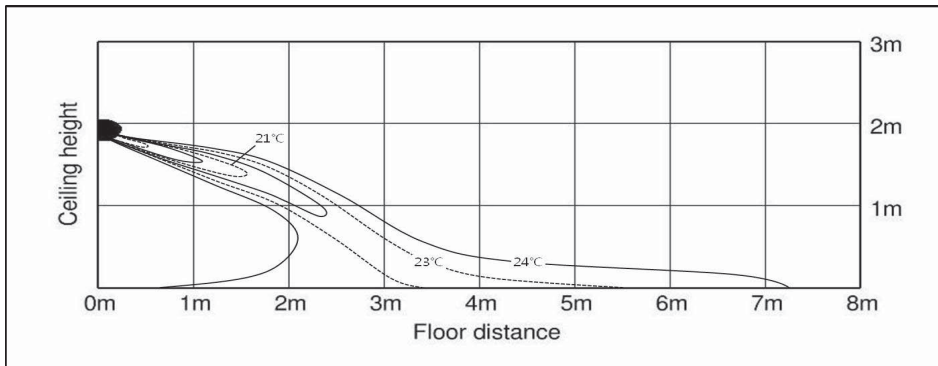
Indoor : Inverter(HP)

AR12KSW SJWKNCV

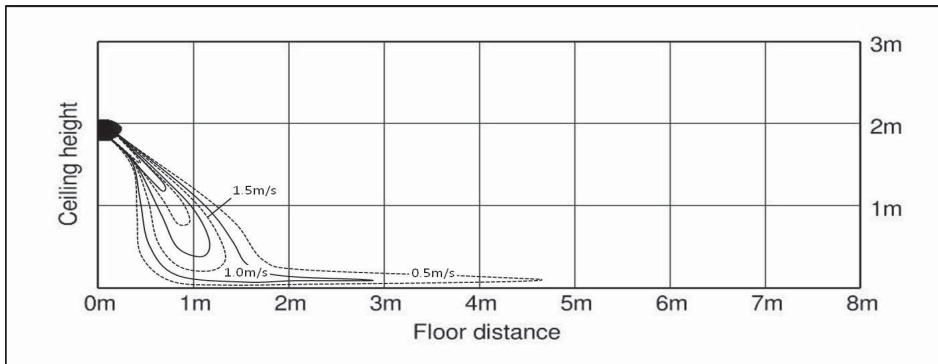
(1) Cooling air velocity distribution



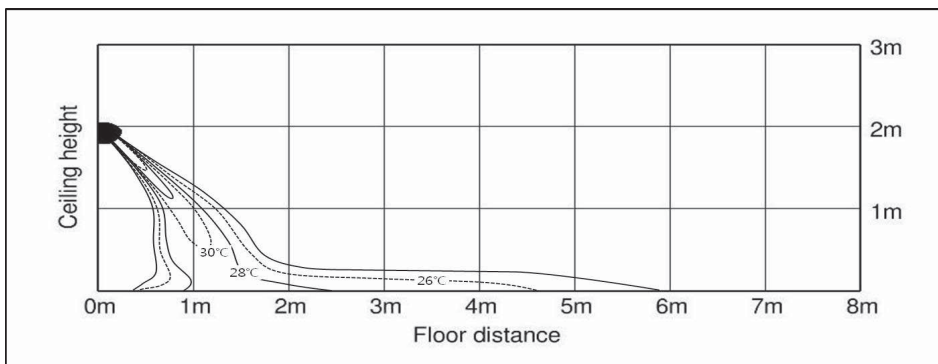
(2) Cooling temperature distribution



(3) Heating air velocity distribution



(4) Heating temperature distribution

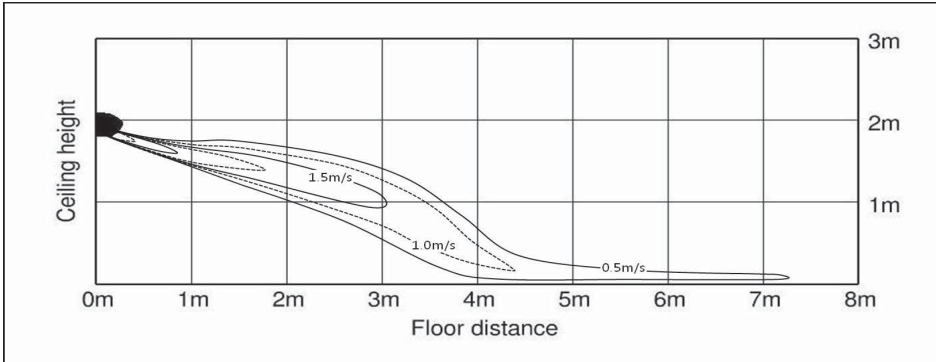


# 6 Temperature and air flow distribution

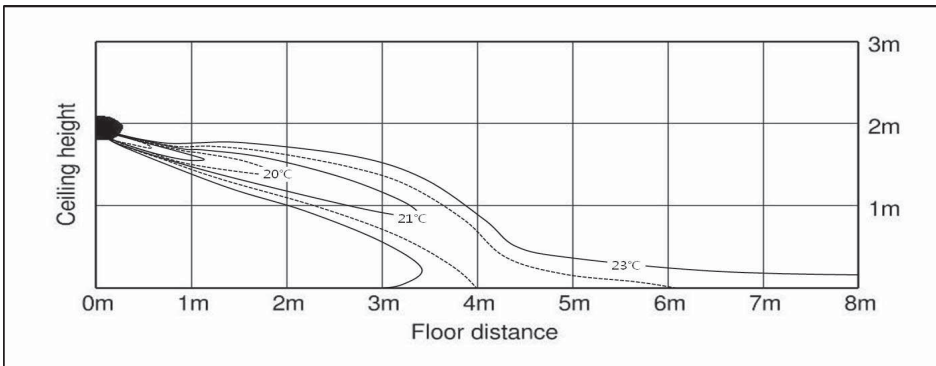
Indoor : Inverter(HP)

AR18KSW SJWKN CV

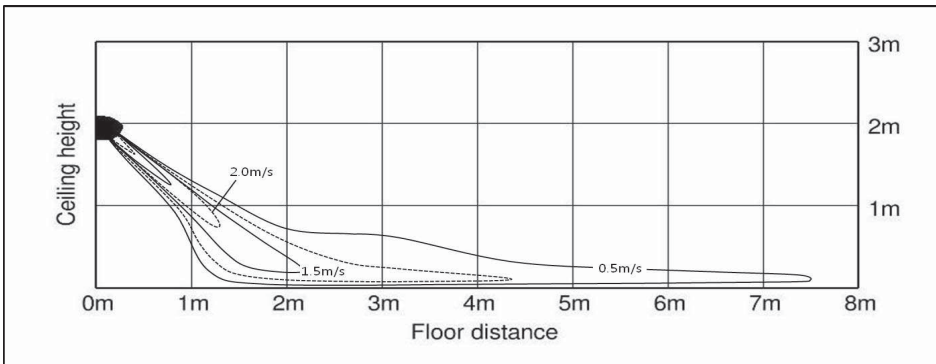
(1) Cooling air velocity distribution



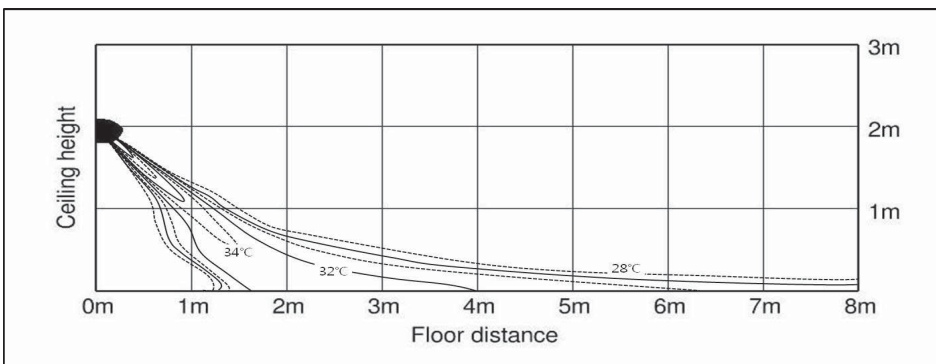
(2) Cooling temperature distribution



(3) Heating air velocity distribution



(4) Heating temperature distribution

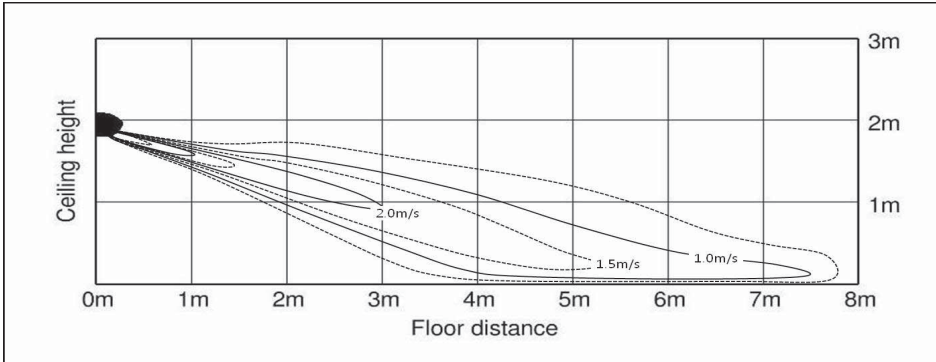


# 6 Temperature and air flow distribution

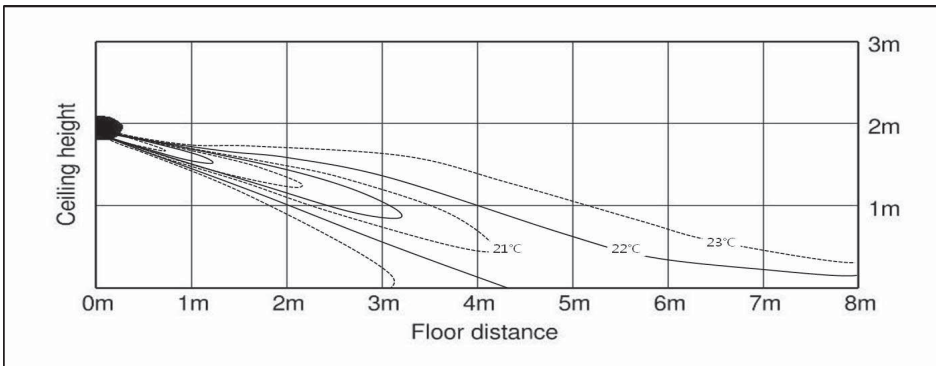
Indoor : Inverter(HP)

AR24KSW SJWKN CV

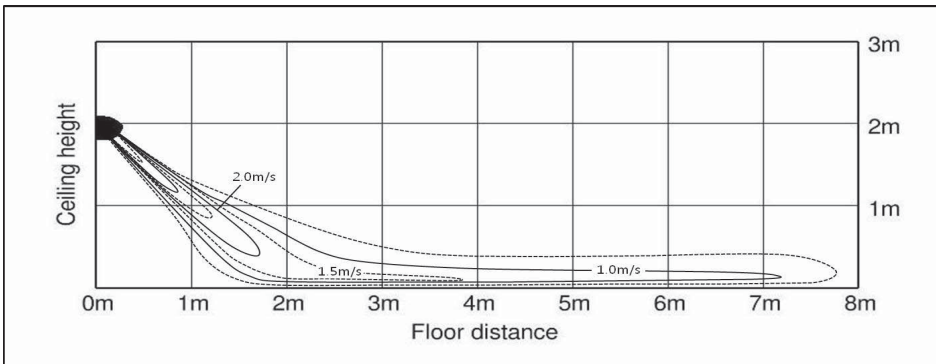
(1) Cooling air velocity distribution



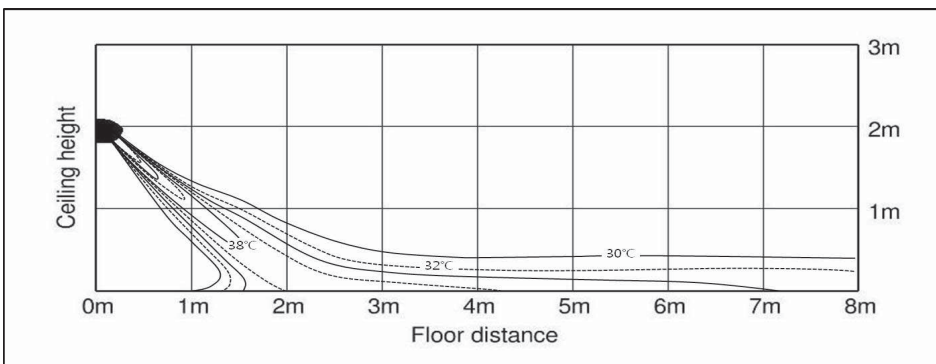
(2) Cooling temperature distribution



(3) Heating air velocity distribution



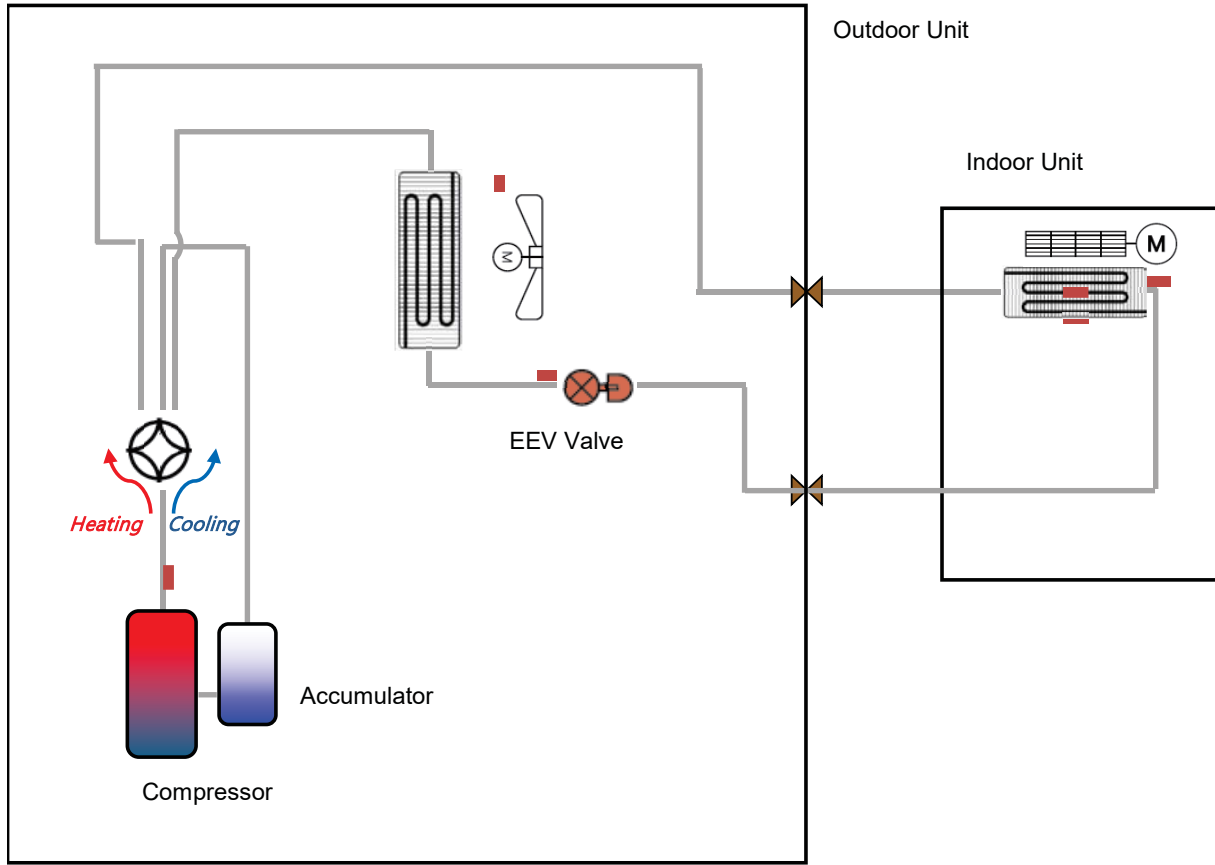
(4) Heating temperature distribution




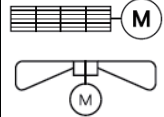






# 7 Cycle diagram

## Outdoor

AR09KSWJWKXCV, AR12KSWJWKXCV, AR18KSWJWKXCV, AR24KSWJWKXCV

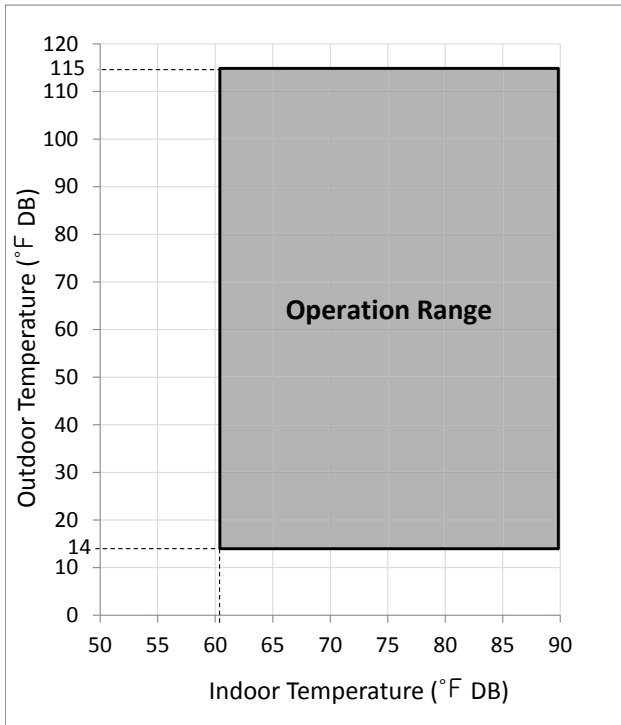


Category	Symbol	Description
Compressor		Rotary Compressor
Accumulator		Accumulator
Heat Exchanger		Condensing/Evaporating unit
Blower		Cross Fan/Propeller Fan
Expansion		EEV Valve
Valve		Service valve
		4-way valve
Sensor	Temperature	 Pipe/Air Temperature sensor

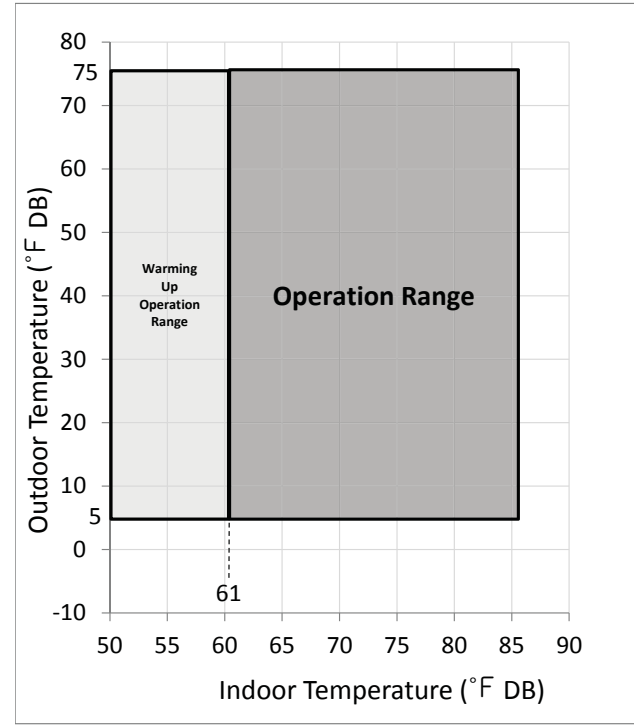


# 8 Operation limit

## Cooling



## Heating




# 9 Capacity correction

## Outdoor


AR09KSWJWKNCV + AR09KSWJWKXCV

### Cooling



Level Difference (ft)	Pipe Length (ft)			
	16.4	32.8	41.0	49.2
26.2	-	0.96	0.94	0.91
16.4	0.99	0.97	0.95	0.92
0	1.00	0.98	0.96	0.93
-16.4	0.99	0.97	0.95	0.92
-26.4	-	0.96	0.94	0.91


### Heating



Level Difference (ft)	Pipe Length (ft)			
	16.4	32.8	41.0	49.2
26.2	-	0.96	0.94	0.91
16.4	0.99	0.97	0.95	0.92
0	1.00	0.98	0.96	0.93
-16.2	0.99	0.97	0.95	0.92
-26.4	-	0.96	0.94	0.91


AR12KSWJWKNCV + AR12KSWJWKXCV

### Cooling



Level Difference (ft)	Pipe Length (ft)			
	16.4	32.8	41.0	49.2
26.2	-	0.96	0.94	0.91
16.4	0.99	0.97	0.95	0.92
0	1.00	0.98	0.96	0.93
-16.4	0.99	0.97	0.95	0.92
-26.4	-	0.96	0.94	0.91

### Heating




Level Difference (ft)	Pipe Length (ft)			
	16.4	32.8	41.0	49.2
26.2	-	0.96	0.94	0.91
16.4	0.99	0.97	0.95	0.92
0	1.00	0.98	0.96	0.93
-16.2	0.99	0.97	0.95	0.92
-26.4	-	0.96	0.94	0.91

# 9 Capacity correction

## Outdoor


AR18KSWJWKNCV + AR18KSWJWKXCV

### Cooling



		Pipe Length (ft)						
		16.4	32.8	41.0	49.2	65.6	82.0	98.4
Level Difference (ft)	49.2	-	-	-	0.92	0.90	0.88	0.86
	41	-	0.95	0.94	0.93	0.91	0.89	0.87
	26.2	-	0.96	0.95	0.94	0.92	0.90	0.88
	16.4	0.99	0.97	0.96	0.95	0.93	0.91	0.89
	0	1.00	0.98	0.97	0.96	0.94	0.92	0.90
	-16.4	0.99	0.97	0.96	0.95	0.93	0.91	0.89
	-26.2	-	0.96	0.95	0.94	0.92	0.90	0.88
	-32.8	-	0.95	0.94	0.93	0.91	0.89	0.87
	-49.2	-	-	-	0.92	0.90	0.88	0.86


### Heating



		Pipe Length (ft)						
		16.4	32.8	41.0	49.2	65.6	82.0	98.4
Level Difference (ft)	49.2	-	-	-	0.92	0.90	0.88	0.86
	41	-	0.95	0.94	0.93	0.91	0.89	0.87
	26.2	-	0.96	0.95	0.94	0.92	0.90	0.88
	16.4	0.99	0.97	0.96	0.95	0.93	0.91	0.89
	0	1.00	0.98	0.97	0.96	0.94	0.92	0.90
	-16.4	0.99	0.97	0.96	0.95	0.93	0.91	0.89
	-26.2	-	0.96	0.95	0.94	0.92	0.90	0.88
	-32.8	-	0.95	0.94	0.93	0.91	0.89	0.87
	-49.2	-	-	-	0.92	0.90	0.88	0.86

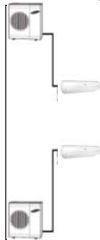
AR24KSWJWKNCV + AR24KSWJWKXCV

### Cooling



		Pipe Length (ft)						
		16.4	32.8	41.0	49.2	65.6	82.0	98.4
Level Difference (ft)	49.2	-	-	-	0.92	0.90	0.88	0.86
	41	-	0.95	0.94	0.93	0.91	0.89	0.87
	26.2	-	0.96	0.95	0.94	0.92	0.90	0.88
	16.4	0.99	0.97	0.96	0.95	0.93	0.91	0.89
	0	1.00	0.98	0.97	0.96	0.94	0.92	0.90
	-16.4	0.99	0.97	0.96	0.95	0.93	0.91	0.89
	-26.2	-	0.96	0.95	0.94	0.92	0.90	0.88
	-32.8	-	0.95	0.94	0.93	0.91	0.89	0.87
	-49.2	-	-	-	0.92	0.90	0.88	0.86

### Heating



		Pipe Length (ft)						
		16.4	32.8	41.0	49.2	65.6	82.0	98.4
Level Difference (ft)	49.2	-	-	-	0.92	0.90	0.88	0.86
	41	-	0.95	0.94	0.93	0.91	0.89	0.87
	26.2	-	0.96	0.95	0.94	0.92	0.90	0.88
	16.4	0.99	0.97	0.96	0.95	0.93	0.91	0.89
	0	1.00	0.98	0.97	0.96	0.94	0.92	0.90
	-16.4	0.99	0.97	0.96	0.95	0.93	0.91	0.89
	-26.2	-	0.96	0.95	0.94	0.92	0.90	0.88
	-32.8	-	0.95	0.94	0.93	0.91	0.89	0.87
	-49.2	-	-	-	0.92	0.90	0.88	0.86

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