

SINGLE

Technical Data Book

4Way CST S for America
(Low Ambient, R410A, 60Hz, H/P)

SAMSUNG

[illegible]

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1 Nomenclature

Indoor Units / Outdoor Units

Model Names

AC	030	J	N	4	D	C	H	/	AA
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

(1) Classification

AC	SINGLE
AM	VRF

(2) Capacity

x 1000 Btu/h (3 digits)

(3) Version

F	2013
H	2014
J	2015

(4) Product Type

N	Indoor Unit (NASA)
X	Outdoor Unit (NASA)

(5) Feature1

1	1Way Cassette
4	4Way Cassette S
A	Wall-Mounted
C	Ceiling
J	Console
L	LSP Duct
M	MSP Duct
H	HSP Duct
N	4Way Cassette S (600 x 600)

(6) Feature2

F	Flagship
S	Standard
D	Deluxe
P	Premium

(7) Rating Voltage

C	1Φ, 208~230V, 60Hz
H	3Φ, 400V, 60Hz

(8) Mode

H	Heat Pump(R410A)
C	Cooling Only(R410A)
E	Heat Pump(R22)
D	Cooling Only(R22)

2 Specifications

4 Way Cassette S

Type				4Way Cassette		4Way Cassette		
Model Name	Indoor Unit			AC030JN4DCH/AA		AC036JN4DCH/AA		
	Outdoor Unit			AC030JXSCCH/AA		AC036JXSCCH/AA		
System	Mode			-	Heat Pump		Heat Pump	
	Capacity	Cooling(Min/Std/Max)		kW	3.81 / 8.79 / 10.55		4.10 / 10.55 / 12.31	
				Btu/h	13,000 / 30,000 / 36,000		14,000 / 36,000 / 42,000	
				US RT	1.08 / 2.50 / 3.00		1.17 / 3.00 / 3.50	
		Heating(Min/Std/Max)		kW	3.22 / 9.38 / 11.43		3.52 / 11.72 / 14.07	
				Btu/h	11,000 / 32,000 / 39,000		12,000 / 40,000 / 48,000	
				US RT	0.92 / 2.67 / 3.25		1.00 / 3.33 / 4.00	
	Power	Power Input (Nominal)	Cooling(Min/Std/Max)	kW	0.87 / 2.29 / 3.20		0.93 / 2.79 / 3.60	
			Heating(Min/Std/Max)		0.72 / 2.44 / 5.00		0.72 / 3.22 / 5.50	
		Current Input (Nominal)	Cooling(Min/Std/Max)	A	4.80 / 11.00 / 14.00		4.80 / 13.40 / 17.00	
			Heating(Min/Std/Max)		3.70 / 11.60 / 22.50		3.70 / 15.40 / 23.00	
		MCA		A	26.31		26.31	
		MOP		A	45.00		45.00	
	Energy Efficiency	EER (Nominal Cooling)		-	3.84		3.78	
		EER (Nominal Cooling, US)		Btu/Wh	13.10		12.90	
		COP (Nominal Heating)		-	3.84		3.64	
		Energy Grade		Energy	SEER 21		SEER 20	
				Energy	HSPF 10.1		HSPF 10.4	
	Piping Connections	Liquid Pipe		Ø, mm	9.52		9.52	
				Ø, inch	3/8"		3/8"	
		Gas Pipe		Ø, mm	15.88		15.88	
				Ø, inch	5/8"		5/8"	
		Installation Limitation		m	75		75	
				ft	246		246	
				m	30		30	
				ft	98		98	
		Field Wiring	Power Source Wire		Ø, mm	2.50		2.50
Transmission Cable			Ø, mm	0.75		0.75		
Refrigerant		Type		-	R410A		R410A	
		Control Method		-	-		-	
	Factory Charging		kg	2.90		2.90		
			lbs	6.39		6.39		
Indoor Unit	Power Supply			Ø, #, V, Hz	1,2,208-230,60		1,2,208-230,60	
	Fan	Type		-	Turbo		Turbo	
		Motor	Output	W	97 x 1		97 x 1	
		Air Flow Rate	High/Mid/Low	CFM	840.52 / 720.45 / 600.37		1020.63 / 928.81 / 812.27	
		External Static Pressure	Min/Std/Max	Pa	-		-	
	Drain	Drain Pipe		Ø,mm	VP25 (OD 32,ID 25)		VP25 (OD 32,ID 25)	
	Sound	Pressure	High/Mid/Low	dB(A)	38 / 35 / 32		43 / 38 / 33	
		Power	Cooling		53		58	
	External Dimension	Net Weight		kg	19.00		19.00	
				lbs	41.89		41.89	
		Shipping Weight		kg	22.00		22.00	
				lbs	48.5		48.5	
		Net Dimensions (WxHxD)		mm	840 x 288 x 840		840 x 288 x 840	
				inch	33.07 x 11.34 x 33.07		33.07 x 11.34 x 33.07	
	Panel Size	Shipping Dimensions (WxHxD)		mm	898 x 357 x 898		898 x 357 x 898	
				inch	35.35 x 14.06 x 35.35		35.35 x 14.06 x 35.35	
		Panel model		-	PC4NUSKFN		PC4NUSKFN	
				kg	5.80		5.80	
		Panel Net Weight		lbs	12.79		12.79	
				kg	8.00		8.00	
	Shipping Weight			lbs	17.60		17.60	
				mm	950 x 45 x 950		950 x 45 x 950	
		Net Dimensions (WxHxD)		inch	37.40 x 1.77 x 37.40		37.40 x 1.77 x 37.40	
				mm	1,005 x 100 x 1,005		1,005 x 100 x 1,005	
	Shipping Dimensions (WxHxD)		inch	39.57 x 3.94 x 39.57		39.57 x 3.94 x 39.57		
	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		-	Twin BLDC Rotary		Twin BLDC Rotary	
		Model		-	UG5T450FUFJX		UG5T450FUEJX	
		Output		kW	4.12		4.12	
	Fan	Oil	Type	-	PVE		PVE	
		Air Flow Rate	Cooling	CFM	4414.5		4414.5	
	Sound	Pressure	Cooling/Heating	dB(A)	49 / 50		51 / 53	
		Power	Cooling		64		66	
	External Dimension	Net Weight		kg	96.00		96.00	
				lbs	211.64		211.64	
		Shipping Weight		kg	106.00		106.00	
				lbs	233.69		233.69	
		Net Dimensions (WxHxD)		mm	940 x 1,420 x 330		940 x 1,420 x 330	
				inch	37.01 x 55.91 x 12.99		37.01 x 55.91 x 12.99	
	Shipping Dimensions (WxHxD)		mm	995 x 1,598 x 426		995 x 1,598 x 426		
			inch	39.17 x 62.91 x 16.77		39.17 x 62.91 x 16.77		
	Operating Temp.	Cooling		°F	-0.4 ~ 114.8		-0.4 ~ 114.8	
		Heating		°F	-13.0 ~ 75.2		-13.0 ~ 75.2	

[Note]

- Nominal Cooling : Indoor temperature 26.7DB/19.4WB(80DB/67WB), Outdoor temperature 35DB/23.9WB(90DB/75WB), Refrigerant pipe length 5m, Level difference 0m.

- Nominal Heating : Indoor temperature 21.1DB/15.6WB(70DB/60WB), Outdoor temperature 8.3DB/6.1WB(47DB/43WB), Refrigerant pipe length 5m, Level difference 0m.

- Sound pressure level is acquired in an anechoic room. Thus actual noise level may be different depending on the installation conditions.

- Specifications may be subject to change without prior notice.

3 Capacity table

4 Way Cassette S

AC030JN4DCH/AA + AC030JXSCCH/AA

Cooling

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

Outdoor temperature (°F, DB)	Indoor temperature (°F, WB)																				
	68/57			72/61			77/64			80/67			82/70			86/72			90/75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
0.0	32.40	25.90	1.30	33.10	26.50	1.30	34.00	27.20	1.40	34.80	27.80	1.40	35.10	28.10	1.40	36.00	28.80	1.40	36.50	29.20	1.50
70.0	31.80	25.40	1.50	32.60	26.10	1.50	33.40	26.70	1.60	34.20	27.40	1.60	34.50	27.60	1.60	35.40	28.30	1.70	35.90	28.70	1.70
95.0	27.90	22.30	2.10	28.60	22.90	2.20	29.30	23.40	2.20	30.00	24.00	2.29	30.30	24.20	2.30	31.00	24.80	2.40	31.50	25.20	2.40
115.0	24.90	19.90	3.00	25.50	20.40	3.00	26.20	20.90	3.10	26.80	21.40	3.20	27.10	21.70	3.20	27.70	22.20	3.30	28.10	22.50	3.40

Heating

TC : Total Capacity, PI: Power Input

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB)											
	61.0		64.0		68.0		70.0		72.0		75.0	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-13	29.5	5.2	29.2	5.1	28.9	5.1	28.6	5.0	28.3	5.0	28.0	4.9
-4	32.5	5.5	32.1	5.4	31.8	5.4	31.5	5.3	31.2	5.2	30.9	5.2
14	38.6	5.3	38.3	5.2	37.9	5.2	37.5	5.1	37.1	5.0	36.8	5.0
32	37.0	3.7	36.6	3.7	36.2	3.6	35.9	3.6	35.5	3.6	35.2	3.5
47	33.0	2.5	32.6	2.5	32.3	2.5	32.0	2.4	31.7	2.4	31.4	2.4
75.2	49.2	2.7	48.8	2.7	48.3	2.6	47.8	2.6	47.3	2.6	46.8	2.5

AC036JN4DCH/AA + AC036JXSCCH/AA

Cooling

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

Outdoor temperature (°F, DB)	Indoor temperature (°F, WB)																				
	68/57			72/61			77/64			80/67			82/70			86/72			90/75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
0.0	38.90	31.10	2.10	39.80	31.90	2.20	40.80	32.60	2.20	41.80	33.40	2.30	42.20	33.80	2.30	43.20	34.60	2.40	43.90	35.10	2.40
70.0	35.80	28.60	2.20	36.70	29.30	2.30	37.60	30.10	2.30	38.50	30.80	2.40	38.90	31.10	2.40	39.80	31.90	2.50	40.40	32.30	2.50
95.0	33.50	26.80	2.60	34.30	27.40	2.70	35.10	28.10	2.70	36.00	28.80	2.79	36.40	29.10	2.80	37.20	29.80	2.90	37.80	30.20	2.90
115.0	31.10	24.90	3.50	31.90	25.50	3.60	32.70	26.20	3.70	33.50	26.80	3.80	33.80	27.10	3.80	34.60	27.70	3.90	35.20	28.10	4.00

Heating

TC : Total Capacity PI: Power Input

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB)											
	61		64		68		70		72		75	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-13	32.5	5.6	32.1	5.5	31.8	5.5	31.5	5.4	31.2	5.3	30.9	5.3
-4	36.6	5.6	36.2	5.5	35.9	5.5	35.5	5.4	35.1	5.3	34.8	5.3
14	43.1	5.3	42.6	5.2	42.2	5.2	41.8	5.1	41.4	5.0	41.0	5.0
32	43.5	4.7	43.0	4.7	42.6	4.6	42.2	4.6	41.8	4.5	41.4	4.5
47	41.2	3.4	40.8	3.4	40.4	3.3	40.0	3.3	39.6	3.3	39.2	3.2
75.2	51.6	3.6	51.1	3.6	50.6	3.5	50.1	3.5	49.6	3.5	49.1	3.4

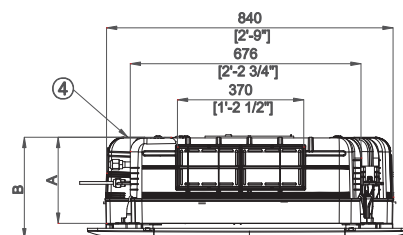
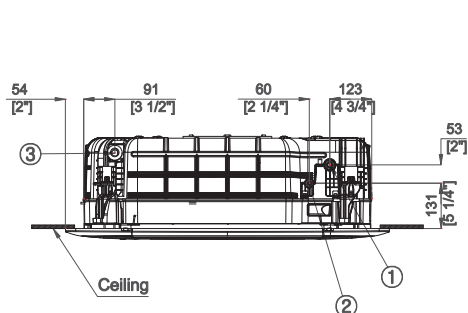
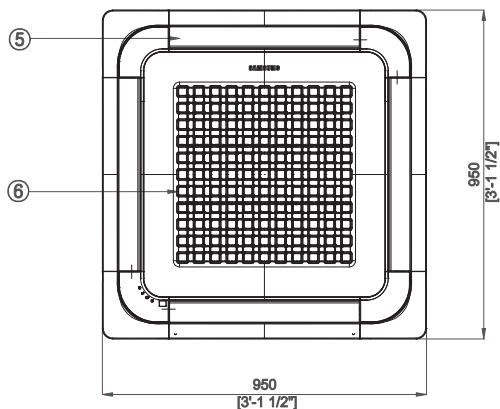
- Capacities are based on following conditions;
 - . Cooling mode indoor air temperature (, DB/WB) : 68/57, 72/61, 77/64, 80/67, 82/70, 86/72, 90/75
 - . Heating mode outdoor air : 85%RH. However, the condition rated capacity is 47 DB / 43 WB.
 - . Refrigerant piping length : 5m (16.4ft)
 - . Level difference : 0m.
- Be sure to install the unit under circumstances within the allowable range of temperature.
(Extended operation range down to -25.(-13.) in heating)

4 Dimensional drawing

4 Way Cassette S

AC030JN4DCH/AA, AC036JN4DCH/AA

Units : mm / inches



		Description		
		Small	Mid	Big
	A (mm)	204	246	288
	B (mm)	253	295	337

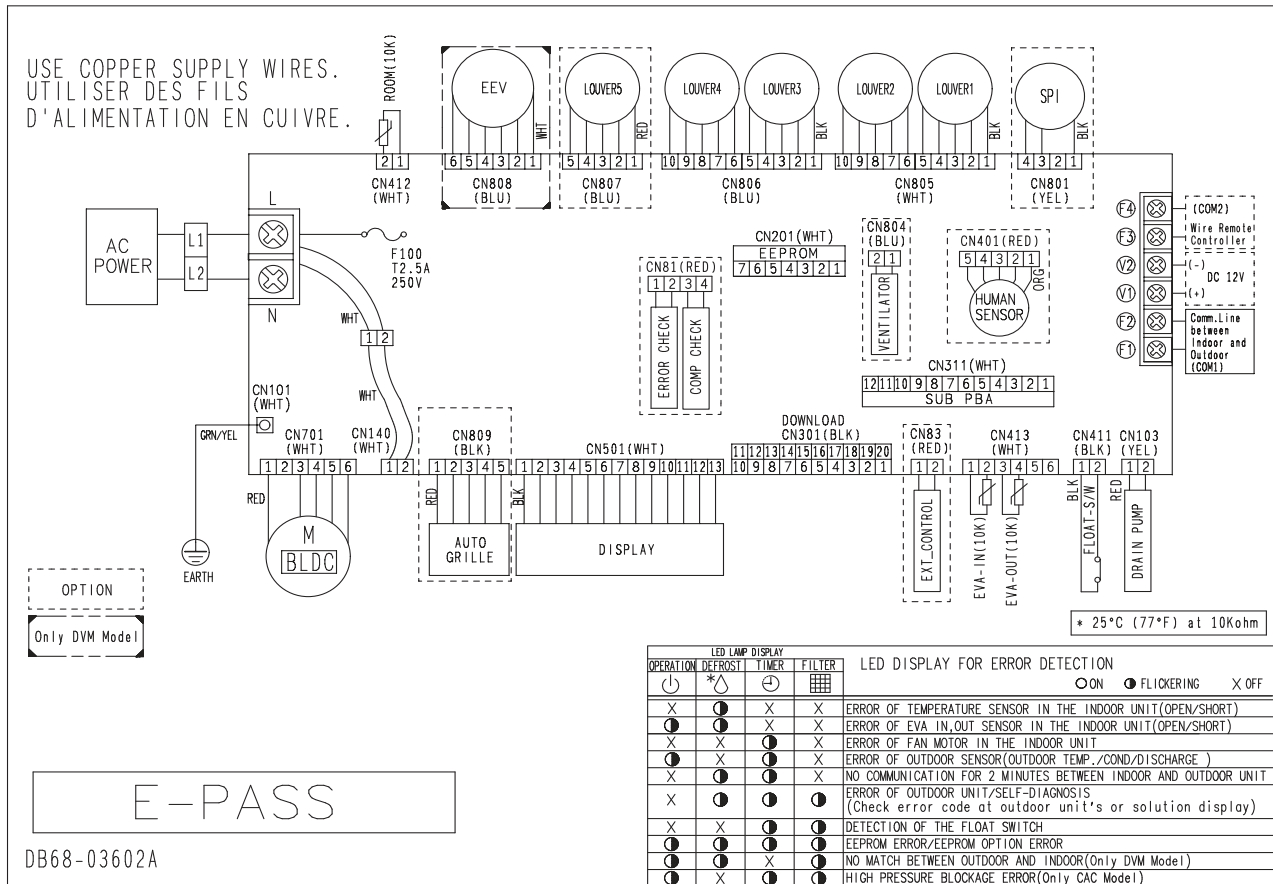
Table of descriptions

1	Refrigerant gas pipe	7	Fresh air intake
2	Refrigerant liquid pipe	8	
3	Condensate drain	9	
4	Power & Comm. wiring conduits	10	
5	Air inlet grille	11	
6	Air outlet louver	12	

5 Electrical wiring diagram

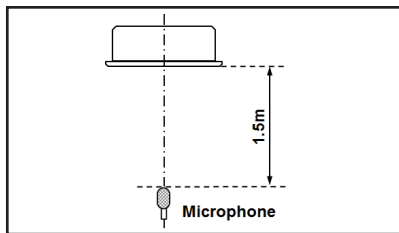
4 Way Cassette S

AC030JN4DCH/AA, AC036JN4DCH/AA



6 Sound pressure level

4 Way Cassette S



Unit: dB(A)

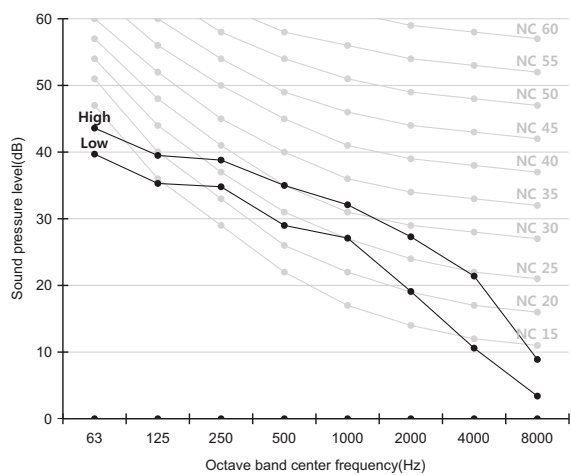
Model	High	Low
AC030JN4DCH/AA (ODU : AC030JXSCCH/AA)	38	32
AC036JN4DCH/AA (ODU : AC036JXSCCH/AA)	43	33

Note

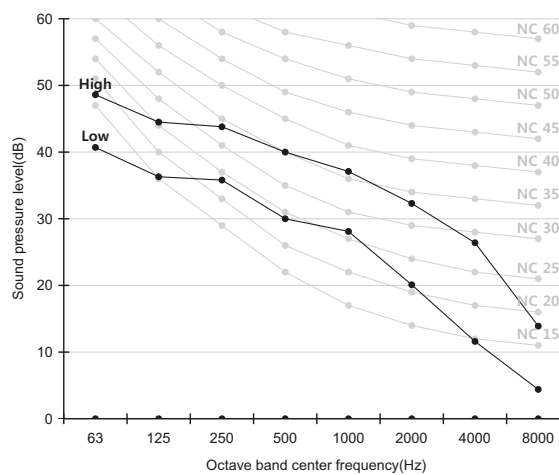
- * Specifications may be subject to change without prior notice
- These operation values are obtained in an anechoic room.
- Sound pressure level is a relative value, depending on the distance and acoustic environment.
- Sound pressure level may differ depending on operation condition

NC curve

1) AC030JN4DCH/AA (ODU : AC030JXSCCH/AA)



2) AC036JN4DCH/AA (ODU : AC036JXSCCH/AA)



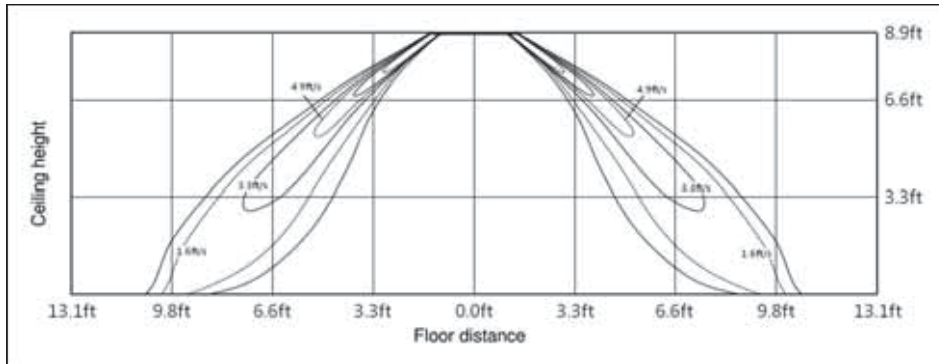
7 Temperature and air flow distribution

4 Way Cassette S

AC030JN4DCH/AA

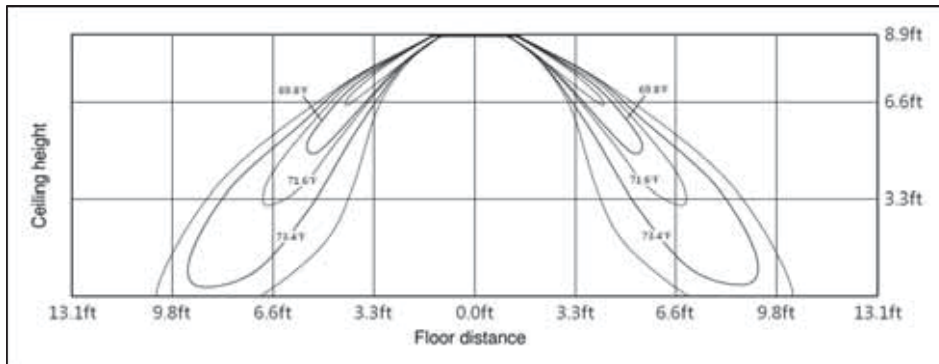
(1) Cooling air velocity distribution

Discharge angle : 38°



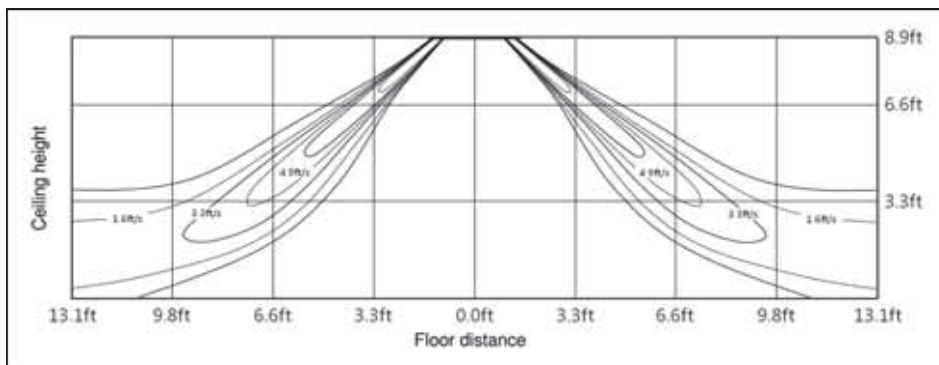
(2) Cooling temperature distribution

Discharge angle : 38°



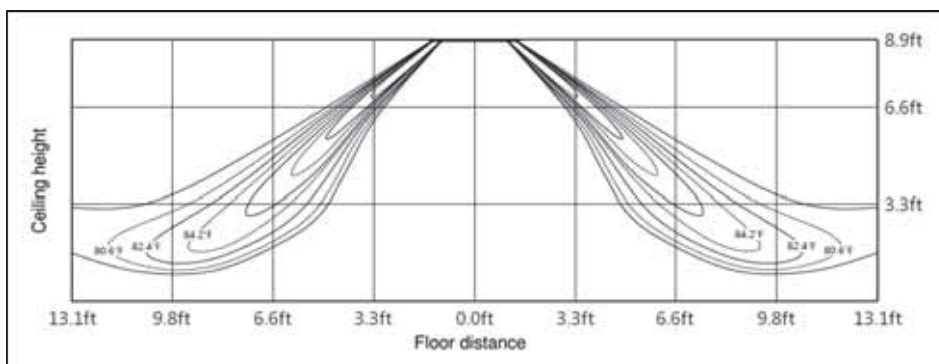
(3) Heating air velocity distribution

Discharge angle : 43°



(4) Heating temperature distribution

Discharge angle : 43°



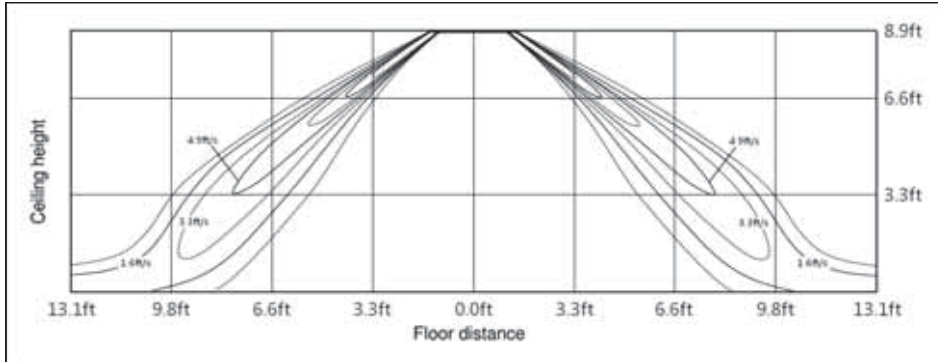
7 Temperature and air flow distribution

4 Way Cassette S

AC036JN4DCH/AA

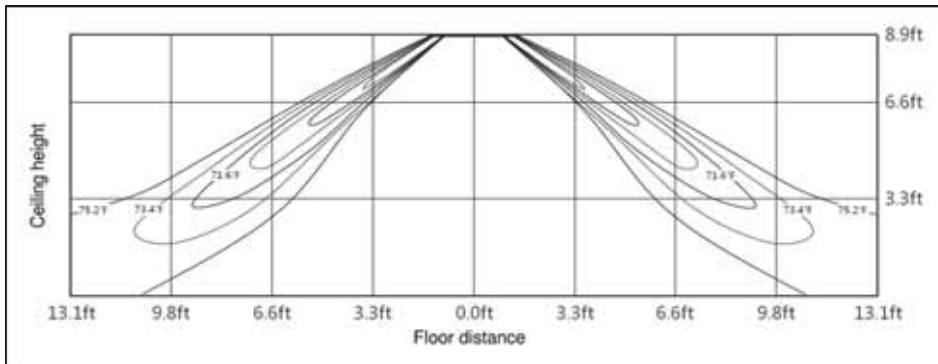
(1) Cooling air velocity distribution

Discharge angle : 38°



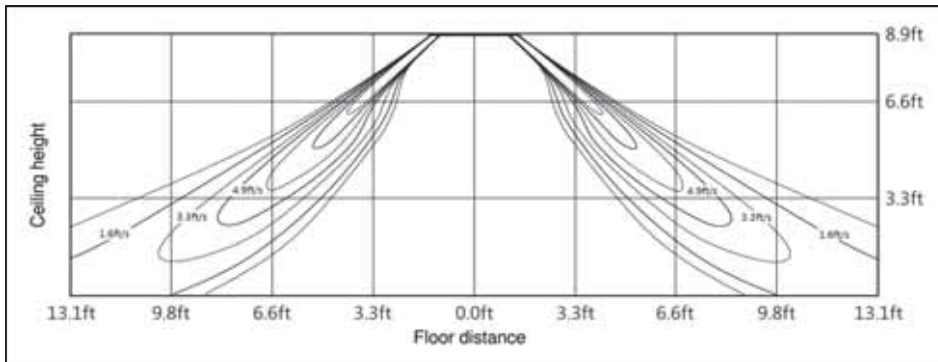
(2) Cooling temperature distribution

Discharge angle : 38°



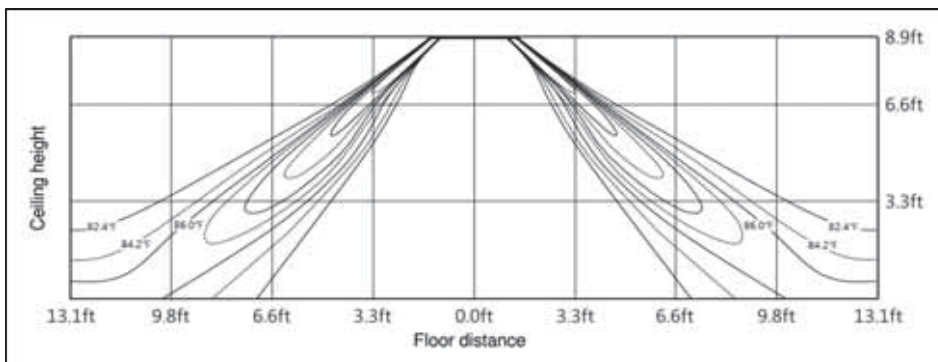
(3) Heating air velocity distribution

Discharge angle : 43°



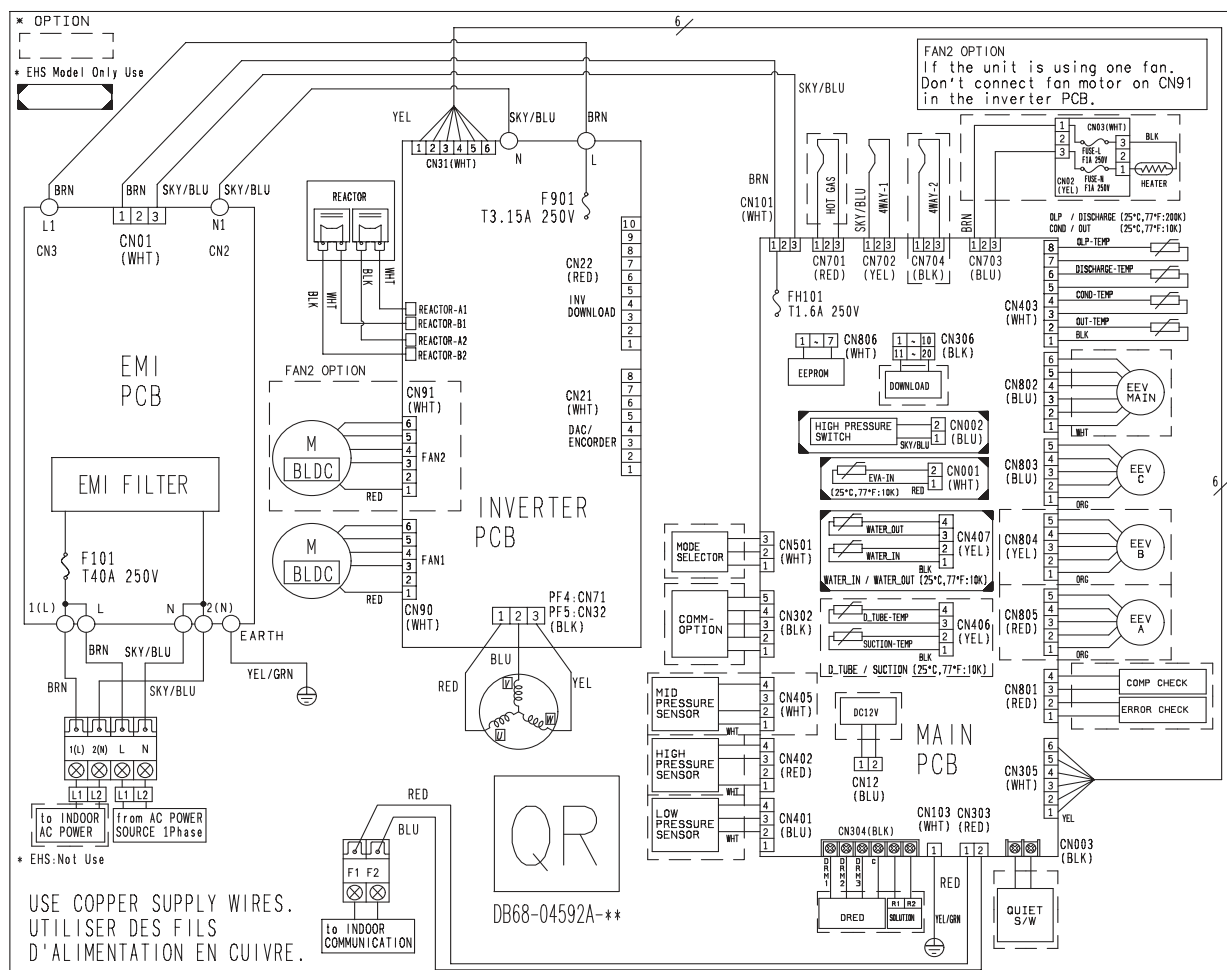
(4) Heating temperature distribution

Discharge angle : 43°



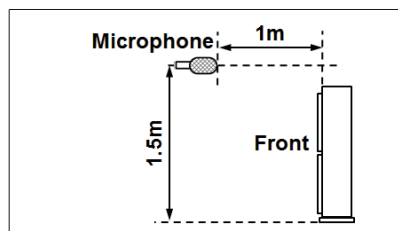
Outdoor

AC030JXSCCH/AA, AC036JXSCCH/AA



9 Sound pressure level

Outdoor



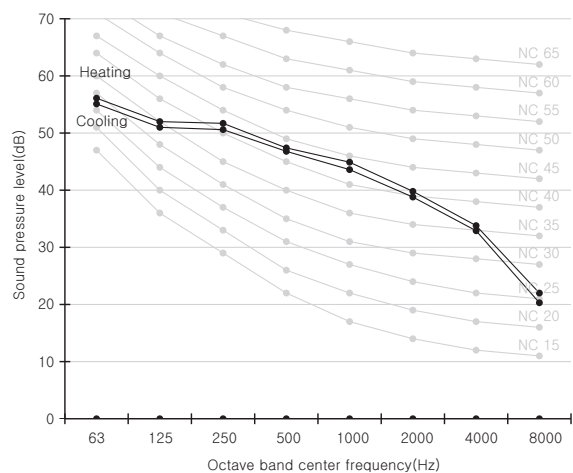
Model	Unit: dB(A)	
	Cooling	Heating
AC030JXSCCH/AA (IDU : AC030JN4DCH/AA)	49	50
AC036JXSCCH/AA (IDU : AC036JN4DCH/AA)	51	53

Note

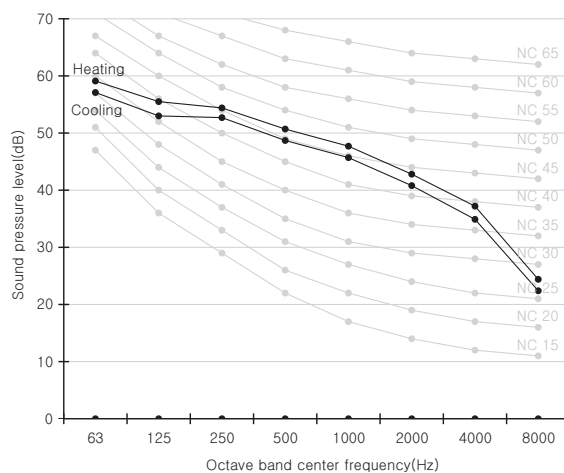
- * Specifications may be subject to change without prior notice
- These operation values are obtained in an anechoic room.
- Sound pressure level is a relative value, depending on the distance and acoustic environment.
- Sound pressure level may differ depending on operation condition

NC curve

1) AC030JXSCCH/AA (IDU : AC030JN4DCH/AA)



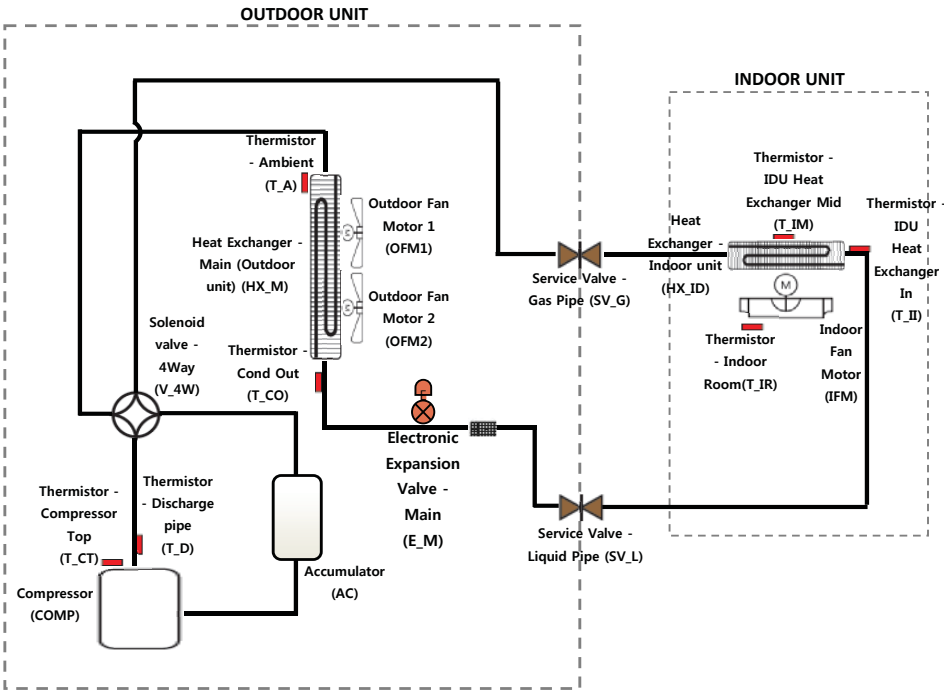
2) AC036JXSCCH/AA (IDU : AC036JN4DCH/AA)



10 Cycle diagram

Outdoor

AC030JXSCCH/AA, AC036JXSCCH/AA



Category	Symbol	Description
Compressor		Compressor
Heat Exchanger	HX_M	Heat Exchanger - Main (Outdoor unit)
	HX_ID	Heat Exchanger - Indoor unit
Tank		Accumulator
Filter		Filter
EEV	E_M	Electronic Expansion Valve - Main
Solenoid valve	V_4W	Solenoid valve - 4Way
Valve (etc)	SV_G	Service Valve - Gas Pipe
	SV_L	Service Valve - Liquid Pipe
Thermistor	T_CT	Thermistor - Compressor Top
	T_D	Thermistor - Discharge pipe
	T_CO	Thermistor - Cond Out
	T_A	Thermistor - Ambient
	T_IR	Thermistor - Indoor Room
	T_IM	Thermistor - IDU Heat Exchanger Mid
Fan	OFM1	Outdoor Fan Motor 1
	OFM2	Outdoor Fan Motor 2
	IFM	Indoor Fan Motor

11 Dimensional drawing

Outdoor

AC030JXSCCH/AA, AC036JXSCCH/AA

Units : mm / inches

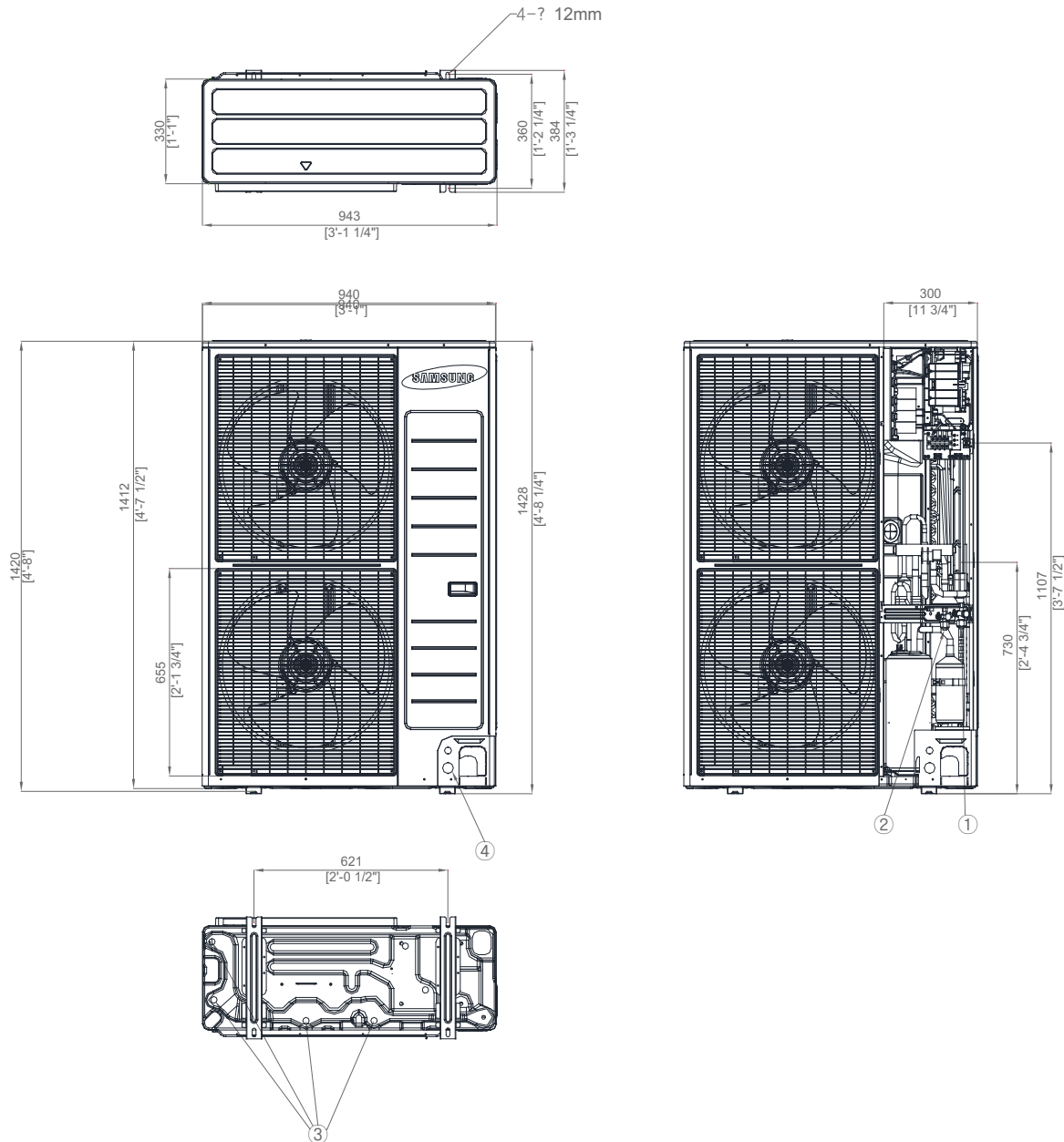


Table of descriptions

1	Refrigerant gas pipe	7	
2	Refrigerant liquid pipe	8	
3	Drain Hole	9	
4	Power & Comm. wiring conduits	10	
5		11	
6		12	

22016.03
Ver.1.3



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