SINGLE

Technical Data Book

Big duct /Big Ceiling for Argentina (R410A, 50Hz, HP)

Model : IDU : AC****N***H/AR

ODU : AC****X***H/AR

SAMSUNG

History

Version	Modification	Date	Remark
Ver 1.0	Release SINGLE Big duct /Big Ceiling for Argentina (R410A, 50Hz, HP)	17.02.15	-

Nomenclature

Indoor Units

Model Names

AC	200	K	N	H	P	K	H	/	AR
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

(1) Classification

AC	SINGLE
AM	VRF

(2) Capacity

x 1/10 kW (3 digits)

(3) Version

F	2013
H	2014
J	2015
K	2016

(4) Product Type

N	Indoor Unit
X	Outdoor Unit

(5) Product Notation

1	1Way Cassette
2	2Way Cassette
N	4Way Cassette (600 x 600)
4	4Way Cassette
L	LSP Duct (Slim Duct)
M	MSP Duct
H	HSP Duct
C	Ceiling
T	Neo Forte
E	OAP Duct

(6) Feature

D	DELUXE
F	FLAGSHIP
P	Premium
G(EHS)	Cascade (EEV)

(7) Rating Voltage

C	1Ø, 208~230V, 60Hz
E	1Ø, 220~240V, 50Hz
G	3Ø, 380~415V, 50Hz
K	1Ø, 220~240V, 50/60Hz
N	3Ø, 380~415V, 50/60Hz

(8) Mode

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

Nomenclature

Outdoor Units

Model Names

AC	200	K	X	A	P	N	H	/	AR
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

(1) Classification

AC	SINGLE
AM	VRF

(2) Capacity

x 1/10 kW (3 digits)

(3) Version

F	2013
H	2014
J	2015
K	2016

(4) Product Type

N	Indoor Unit
X	Outdoor Unit

(5) Feature1

A	Inv+Side+General Temp
B	Non Inv+Side+General Temp

(6) Feature2

D	Deluxe
F	Flagship
P	Premium
S	Standard

(7) Rating Voltage

E	1Ø, 220~240V, 50Hz
G	3Ø, 380~415V, 50Hz
K	1Ø, 220~240V, 50/60Hz
N	3Ø, 380~415V, 50/60Hz

(8) Mode

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

Big Duct

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6 Sound power level

7 Recommended operation range

8 Cycle diagram

9 Capacity correction

Big Duct

Type					HSP Duct	HSP Duct
Model Name		Indoor Unit			AC180JNHPKH/AR	AC200KNHPKH/AR
		Outdoor Unit			AC180JXAPNH/AR	AC200KXAPNH/AR
System	Mode			-	Heat Pump	Heat Pump
	Capacity	Cooling(Min/Std/Max)		kW	6.00 / 18.00 / 20.00	7.50 / 20.00 / 23.00
				Btu/h	20,500 / 61,400 / 68,200	25,600 / 68,200 / 78,500
		Heating(Min/Std/Max)		kW	4.80 / 20.00 / 22.50	8.50 / 23.00 / 25.00
				Btu/h	16,400 / 68,200 / 76,800	29,000 / 78,500 / 85,300
	Power	Power Input (Nominal)	Cooling(Min/Std/Max)	kW	1.30 / 5.45 / 7.30	2.10 / 6.45 / 8.00
			Heating(Min/Std/Max)		1.20 / 5.54 / 7.60	2.10 / 6.66 / 9.80
		Current Input (Nominal)	Cooling(Min/Std/Max)	A	2.30 / 8.40 / 16.10	3.80 / 10.00 / 12.30
			Heating(Min/Std/Max)		2.20 / 8.60 / 16.10	3.80 / 10.30 / 16.00
		MCA		A	18.60 (MCA)	25.00 (MCA)
		MFA		A	20.46	31.25
	Energy Efficiency	EER (Nominal Cooling)		-	3.30	3.10
		COP (Nominal Heating)		-	3.61	3.45
		Energy Grade		-	-	-
				-	-	-
	Piping Connections	Liquid Pipe		Ø, mm	9.52	9.52
				Ø, inch	3/8"	3/8"
		Gas Pipe		Ø, mm	19.05	19.05
				Ø, inch	3/4"	3/4"
		Installation Limitation	Max. Length	m	75	75
			Max. Height	m	30	30
	Field Wiring	Power Source Wire		Ø, mm	-	-
		Transmission Cable		Ø, mm	-	-
	Refrigerant	Type		-	R410A	R410A
		Control Method		-	-	-
		Factory Charging		kg / tCO2e	4.60 / 9.60	6.60 / 13.78
Indoor Unit	Power Supply			Ø, #, V, Hz	1,2,220-240,50	1,2,220-240,50
	Fan	Type		-	Sirocco Fan	Sirocco Fan
		Motor	Output	W	630	630
		Air Flow Rate	High/Mid/Low	CMM	71.00 / 60.00 / 50.00	72.00 / 62.00 / 48.00
				l/s	1,183.33 / 1,000.00 / 833.33	1,200.00 / 1,000.00 / 800.00
		External Static Pressure	Min/Std/Max	mmAq	5.00 / 6.12 / 20.00	5.00 / 7.34 / 20.00
				Pa	49.00 / 60.00 / 196.00	49.00 / 71.95 / 196.00
	Drain	Drain Pipe		Ø,mm	VP25 (OD 32,ID 25)	VP25 (OD 32,ID 25)
	Sound	Pressure	High/Mid/Low	dB(A)	43 / 39 / 35	44 / 40 / 36
		Power	Cooling		69	70
	External Dimension	Net Weight		kg	82.50	82.50
		Shipping Weight		kg	92.00	92.00
		Net Dimensions (WxHxD)		mm	1,350 x 450 x 910	1,350 x 450 x 910
		Shipping Dimensions (WxHxD)		mm	1,612 x 519 x 984	1,612 x 519 x 984
	Panel Size	Panel model		-	-	-
		Panel Net Weight		kg	-	-
		Shipping Weight		kg	-	-
		Net Dimensions (WxHxD)		mm	-	-
		Shipping Dimensions (WxHxD)		mm	-	-
	Additional Accessories	Drain pump	External	-	MDP-G075SP	MDP-G075SP
			Internal	-	MDP-G075SQ	MDP-G075SQ
		Air Filter		-	-	-
Outdoor Unit	Power Supply			Ø, #, V, Hz	3,4,380-415,50	3,4,380-415,50
	Compressor	Type		-	Twin BLDC Rotary	BLDC Scroll
		Model		-	UG5T520FUBJX	DS-GB066FAVB
		Output		kW	4.78	6.39
		Oil	Type	-	PVE	PVE
	Fan	Air Flow Rate	Cooling	CMM	110.00	200.00
				l/s	1,833.33	3,333.33
	Sound	Pressure	Cooling/Heating	dB(A)	55 / 57	58 / 60
		Power	Cooling		76	75
	External Dimension	Net Weight		kg	107.50	154.00
		Shipping Weight		kg	117.50	167.00
		Net Dimensions (WxHxD)		mm	940 x 1,420 x 330	940 x 1,630 x 460
		Shipping Dimensions (WxHxD)		mm	995 x 1,598 x 426	1,020 x 1,820 x 575
	Operating Temp. Range	Cooling		ºC	-15.0 ~ 50.0	-20.0 ~ 50.0
		Heating		ºC	-20.0 ~ 24.0	-20.0 ~ 24.0

- All figures comply with EN14511
- Nominal cooling capacities are based on;
  Indoor temperature : 27°C DB, 19°C WB / Outdoor temperature : 35°C DB, Refrigerant piping : 5m , Level differences : 0m
- Nominal heating capacities are based on;
  Indoor temperature : 20°C DB, 15°C WB / Outdoor temperature : 7°C DB, 6°C WB, Refrigerant piping : 5m, Level differences : 0m
- Sound level was 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.
- These products contain R410A(GWP=2,088) which is fluorinated greenhouse gas.
- If indoor unit is located in a higher position than outdoor unit, please refer to the ( )* value of Installation Height Limitation.

1 Specifications

Big Duct

Type					HSP Duct
Model Name	Indoor Unit				AC250KNHPKH/AR
	Outdoor Unit				AC250KXAPNH/AR
System	Mode			-	Heat Pump
	Capacity	Cooling(Min/Std/Max)		kW	9.00 / 25.00 / 28.50
				Btu/h	30,700 / 85,300 / 97,200
		Heating(Min/Std/Max)		kW	10.00 / 27.00 / 32.00
				Btu/h	34,100 / 92,100 / 109,200
	Power	Power Input (Nominal)	Cooling(Min/Std/Max)	kW	2.60 / 9.58 / 12.00
			Heating(Min/Std/Max)		2.50 / 8.33 / 13.50
		Current Input (Nominal)	Cooling(Min/Std/Max)	A	4.70 / 14.90 / 18.40
			Heating(Min/Std/Max)		4.50 / 12.90 / 22.00
		MCA		A	25.00
		MFA		A	31.25
	Energy Efficiency	EER (Nominal Cooling)		-	2.61
		COP (Nominal Heating)		-	3.24
		Energy Grade		-	-
				-	-
	Piping Connections	Liquid Pipe		Ø, mm	9.52
				Ø, inch	3/8"
		Gas Pipe		Ø, mm	22.22
				Ø, inch	7/8"
		Installation Limitation	Max. Length	m	75
			Max. Height	m	30
	Field Wiring	Power Source Wire		Ø, mm	-
		Transmission Cable		Ø, mm	-
	Refrigerant	Type		-	R410A
		Control Method		-	-
		Factory Charging		kg / tCO2e	6.60 / 13.78
Indoor Unit	Power Supply			Ø, #, V, Hz	1,2,220-240,50
	Fan	Type		-	Sirocco Fan
		Motor	Output	W	630
		Air Flow Rate	High/Mid/Low	CMM	80.00 / 64.00 / 51.00
				l/s	1,333.33 / 1,066.67 / 850.00
		External Static Pressure	Min/Std/Max	mmAq	5.00 / 7.34 / 20.00
				Pa	49.00 / 71.95 / 196.00
	Drain	Drain Pipe		Ø,mm	VP25 (OD 32,ID 25)
	Sound	Pressure	High/Mid/Low	dB(A)	47 / 42 / 37
		Power	Cooling		72
	External Dimension	Net Weight		kg	82.50
		Shipping Weight		kg	92.00
		Net Dimensions (WxHxD)		mm	1,350 x 450 x 910
		Shipping Dimensions (WxHxD)		mm	1,612 x 519 x 984
	Panel Size	Panel model		-	-
		Panel Net Weight		kg	-
		Shipping Weight		kg	-
		Net Dimensions (WxHxD)		mm	-
		Shipping Dimensions (WxHxD)		mm	-
	Additional Accessories	Drain pump	External	-	MDP-G075SP
			Internal	-	MDP-G075SQ
		Air Filter		-	-
Outdoor Unit	Power Supply			Ø, #, V, Hz	3,4,380-415,50
	Compressor	Type		-	BLDC Scroll
		Model		-	DS-GB066FAVB
		Output		kW	6.39
		Oil	Type	-	PVE
	Fan	Air Flow Rate	Cooling	CMM	200.00
				l/s	3,333.33
	Sound	Pressure	Cooling/Heating	dB(A)	59 / 61
		Power	Cooling		77
	External Dimension	Net Weight		kg	154.00
		Shipping Weight		kg	167.00
		Net Dimensions (WxHxD)		mm	940 x 1,630 x 460
		Shipping Dimensions (WxHxD)		mm	1,020 x 1,820 x 575
	Operating Temp. Range	Cooling		ºC	-20.0 ~ 50.0
		Heating		ºC	-20.0 ~ 24.0

* Specifications may be subject to change without prior notice.

1) 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 : 0m

2) 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 : 0m

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

4) These products contain R410A(GWP=2,088) which is fluorinated greenhouse gas.

2 Capacity table

AC180JNHPKH/AR + AC180JXAPNH/AR

Cooling

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

Outdoor temperature (ºC, DB)	Indoor temperature (ºC, WB)																	
	14.0			16.0			18.0			19.0			22.0			24.0		
	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
-15.0	19.91	15.93	4.15	20.40	16.32	4.26	20.91	16.72	4.36	21.42	17.14	4.47	21.93	17.55	4.58	22.46	17.97	4.69
21.0	20.75	16.60	4.31	21.26	17.01	4.41	21.78	17.43	4.52	22.32	17.86	4.63	22.86	18.28	4.74	23.40	18.72	4.86
35.0	16.73	13.39	5.07	17.15	13.72	5.19	17.57	14.05	5.32	18.00	14.40	5.45	18.43	14.75	5.58	18.87	15.10	5.71
46.0	13.22	10.58	5.83	13.55	10.84	5.97	13.88	11.10	6.12	14.22	11.38	6.27	14.56	11.65	6.42	14.91	11.93	6.57
52.0	10.86	8.69	5.32	11.13	8.90	5.45	11.40	9.12	5.59	11.68	9.35	5.72	11.96	9.57	7.10	12.25	9.80	7.27

Heating

TC : Total Capacity, PI: Power Input

Outdoor temperature (ºC, DB)	Indoor temperature (ºC, DB)											
	16.0		18.0		20.0		21.0		22.0		24.0	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-20.0	14.08	7.06	13.94	6.99	13.80	6.93	13.66	6.86	13.53	6.79	13.39	6.72
-10.0	19.18	8.19	18.99	8.11	18.80	8.03	18.61	7.95	18.43	7.87	18.24	7.79
7.0	20.40	5.65	20.20	5.60	20.00	5.54	19.80	5.48	19.60	5.43	19.41	5.38
24.0	27.34	6.50	27.07	6.43	26.80	6.37	26.53	6.31	26.27	6.24	26.00	6.18

AC200KNHPKH/AR + AC200KXAPNH/AR

Cooling

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

Outdoor Air Temp. (DB)	Indoor temperature (ºC)																				
	20 (DB)			23 (DB)			26 (DB)			27 (DB)			28 (DB)			30 (DB)			32 (DB)		
	14 (WB)			16 (WB)			18 (WB)			19 (WB)			20 (WB)			22 (WB)			24 (WB)		
	TC(kW)	SHC(kW)	PI(kW)	TC(kW)	SHC(kW)	PI(kW)	TC(kW)	SHC(kW)	PI(kW)	TC(kW)	SHC(kW)	PI(kW)	TC(kW)	SHC(kW)	PI(kW)	TC(kW)	SHC(kW)	PI(kW)	TC(kW)	SHC(kW)	PI(kW)
-20.0	19.90	16.60	4.52	20.90	17.10	4.61	21.80	17.70	4.71	22.50	18.20	4.80	22.90	18.00	4.85	24.10	17.90	4.90	25.30	17.50	5.00
21.0	18.60	15.50	4.86	19.60	16.00	4.96	20.40	16.50	5.06	21.00	17.00	5.16	21.40	16.80	5.21	22.50	16.60	5.26	23.60	16.30	5.37
35.0	17.70	14.70	6.07	18.60	15.20	6.19	19.40	15.70	6.32	**20.00**	**16.20**	**6.45**	20.40	16.00	6.51	21.40	15.80	6.58	22.50	15.50	6.71
46.0	14.00	12.70	6.10	14.70	13.10	6.23	15.30	13.50	6.35	15.80	13.90	6.48	16.10	13.80	6.55	16.90	13.60	6.61	17.80	13.40	6.74
50.0	11.90	11.30	6.12	12.60	11.70	6.24	13.10	12.00	6.37	13.50	12.40	6.50	13.80	12.30	6.57	14.50	12.20	6.63	15.20	11.90	6.76

Heating

TC : Total Capacity, PI: Power Input

Outdoor Air Temp. (DB)	Indoor temperature (ºC)											
	16 (DB)		18 (DB)		20 (DB)		21 (DB)		22 (DB)		24 (DB)	
	TC(kW)	PI(kW)	TC(kW)	PI(kW)	TC(kW)	PI(kW)	TC(kW)	PI(kW)	TC(kW)	PI(kW)	TC(kW)	PI(kW)
-20.0	19.54	8.31	19.41	8.44	19.29	8.61	19.22	8.62	19.16	8.71	19.03	8.77
-20.0	20.30	8.73	20.10	8.87	20.00	9.00	19.90	9.07	19.90	9.14	19.70	9.27
-10.0	21.70	7.65	21.60	7.77	21.40	7.89	21.40	7.94	21.30	8.00	21.20	8.12
0.0	22.40	7.11	22.30	7.22	22.10	7.33	22.10	7.38	22.00	7.44	21.90	7.55
7.0	23.30	6.46	23.20	6.56	**23.00**	**6.66**	22.90	6.71	22.90	6.76	22.70	6.86
24.0	28.20	5.53	28.00	5.61	27.80	5.70	27.70	5.74	27.60	5.79	27.40	5.87

AC250KNHPKH/AR + AC250KXAPNH/AR

Cooling

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

Outdoor Air Temp. (DB)	Indoor temperature (ºC)																				
	20 (DB)			23 (DB)			26 (DB)			27 (DB)			28 (DB)			30 (DB)			32 (DB)		
	14 (WB)			16 (WB)			18 (WB)			19 (WB)			20 (WB)			22 (WB)			24 (WB)		
	TC(kW)	SHC(kW)	PI(kW)	TC(kW)	SHC(kW)	PI(kW)	TC(kW)	SHC(kW)	PI(kW)	TC(kW)	SHC(kW)	PI(kW)	TC(kW)	SHC(kW)	PI(kW)	TC(kW)	SHC(kW)	PI(kW)	TC(kW)	SHC(kW)	PI(kW)
-20.0	24.90	19.40	6.72	26.20	20.00	6.85	27.30	20.60	6.99	28.10	21.20	7.14	28.70	21.00	7.21	30.10	20.80	7.28	31.60	20.40	7.42
21.0	23.20	18.10	7.21	24.40	18.60	7.36	25.50	19.20	7.51	26.30	19.80	7.66	26.80	19.60	7.74	28.10	19.40	7.82	29.50	19.00	7.97
35.0	22.10	17.20	9.02	23.30	17.80	9.20	24.30	18.30	9.39	**25.00**	**18.90**	**9.58**	25.50	18.70	9.68	26.80	18.50	9.77	28.10	18.10	9.97
46.0	14.70	13.60	7.99	15.50	14.10	8.16	16.10	14.50	8.32	16.60	14.90	8.49	17.00	14.80	8.58	17.80	14.60	8.66	18.70	14.40	8.84
50.0	10.70	10.80	7.44	11.20	11.10	7.59	11.40	11.40	7.74	12.10	11.80	7.90	12.30	11.70	7.98	12.90	11.60	8.06	13.60	11.30	8.22

Heating

TC : Total Capacity PI: Power Input

Outdoor Air Temp. (DB)	Indoor temperature (ºC)											
	16 (DB)		18 (DB)		20 (DB)		21 (DB)		22 (DB)		24 (DB)	
	TC(kW)	PI(kW)	TC(kW)	PI(kW)	TC(kW)	PI(kW)	TC(kW)	PI(kW)	TC(kW)	PI(kW)	TC(kW)	PI(kW)
-20.0	19.94	9.15	19.76	9.50	19.57	9.93	19.48	10.09	19.39	10.31	19.20	10.67
-20.0	21.40	9.91	21.20	10.34	21.00	10.77	20.90	10.98	20.80	11.20	20.60	11.63
-10.0	24.30	8.84	24.10	9.22	23.90	9.61	23.70	9.80	23.60	9.99	23.40	10.38
0.0	25.80	8.30	25.50	8.67	25.30	9.03	25.20	9.21	25.10	9.39	24.80	9.75
7.0	27.50	7.66	27.30	8.00	**27.00**	**8.33**	26.90	8.50	26.70	8.66	26.50	9.00
24.0	31.80	6.03	31.50	6.29	31.20	6.55	31.10	6.68	30.90	6.81	30.60	7.07

* Specifications may be subject to change without prior notice for product improvement.

1) Capacities are based on following conditions;

. Cooling mode indoor air temperature (°C, DB/WB) : 20/14, 23/16, 26/18, 27/19, 28/20, 30/22, 32/24 .

Heating mode outdoor air : 85%RH. However, the condition rated capacity is 7°C DB / 6°C WB.

. Refrigerant piping length : 5m

. Level difference : 0m.

2) 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.

3 Dimensional drawing

Indoor

AC180JNHPKH/AR, AC200KNHPKH/AR, AC250KNHPKH/AR

Units : mm / inches

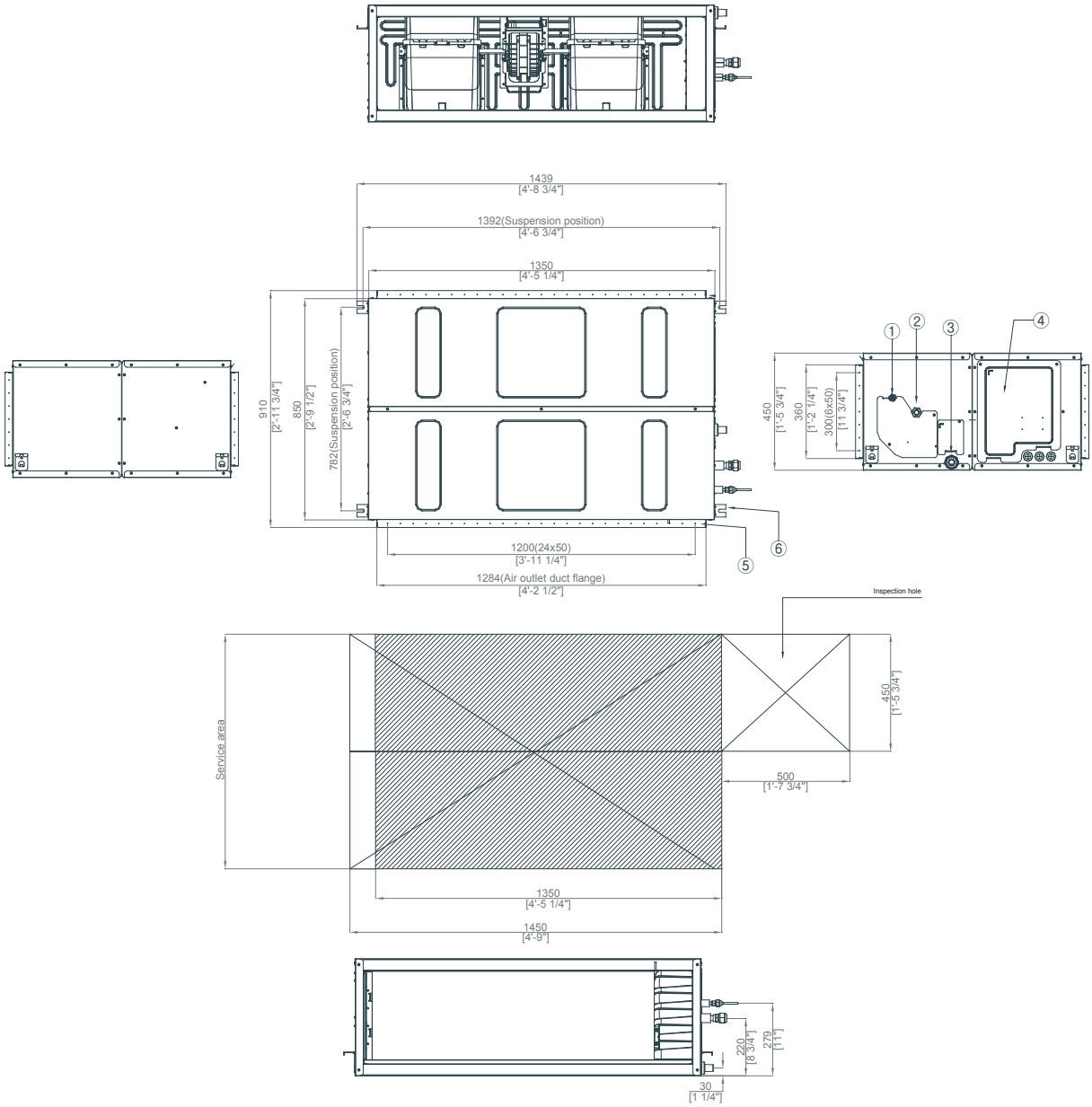


Table of descriptions	
1	Liquid pipe connection
2	Gas pipe connection
3	Drain pipe connection
4	Power supply connection
5	Air discharge flange
6	Hook

3 Dimensional drawing

Outdoor

AC180JXAPNH/AR

Units : mm / inches

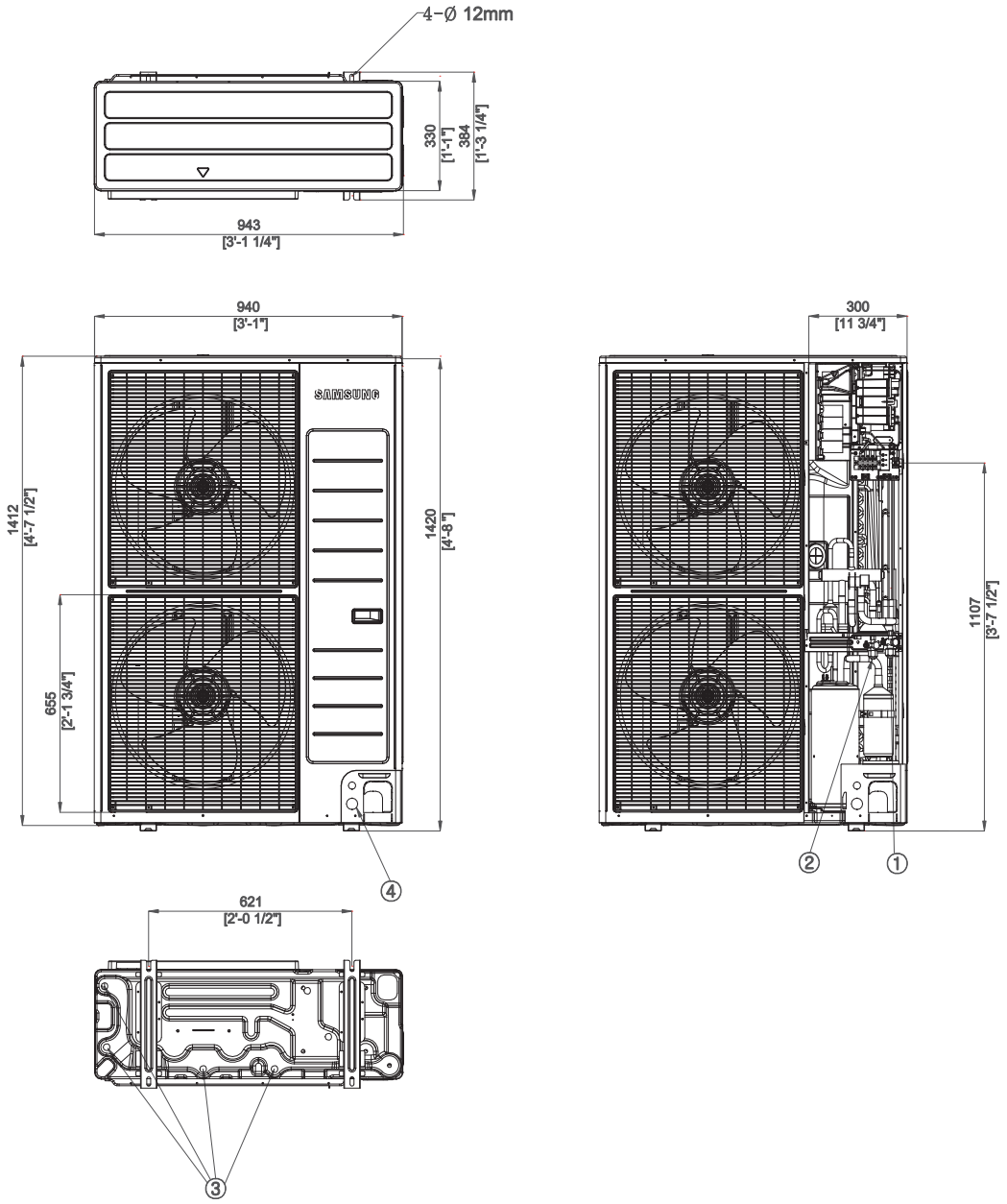


Table of descriptions	
1	Refrigerant gas pipe
2	Refrigerant liquid pipe
3	Drain Hole
4	Power & Comm. wiring conduits

3 Dimensional drawing

Outdoor

AC200KXAPNH/AR, AC250KXAPNH/AR

Units : mm / inches

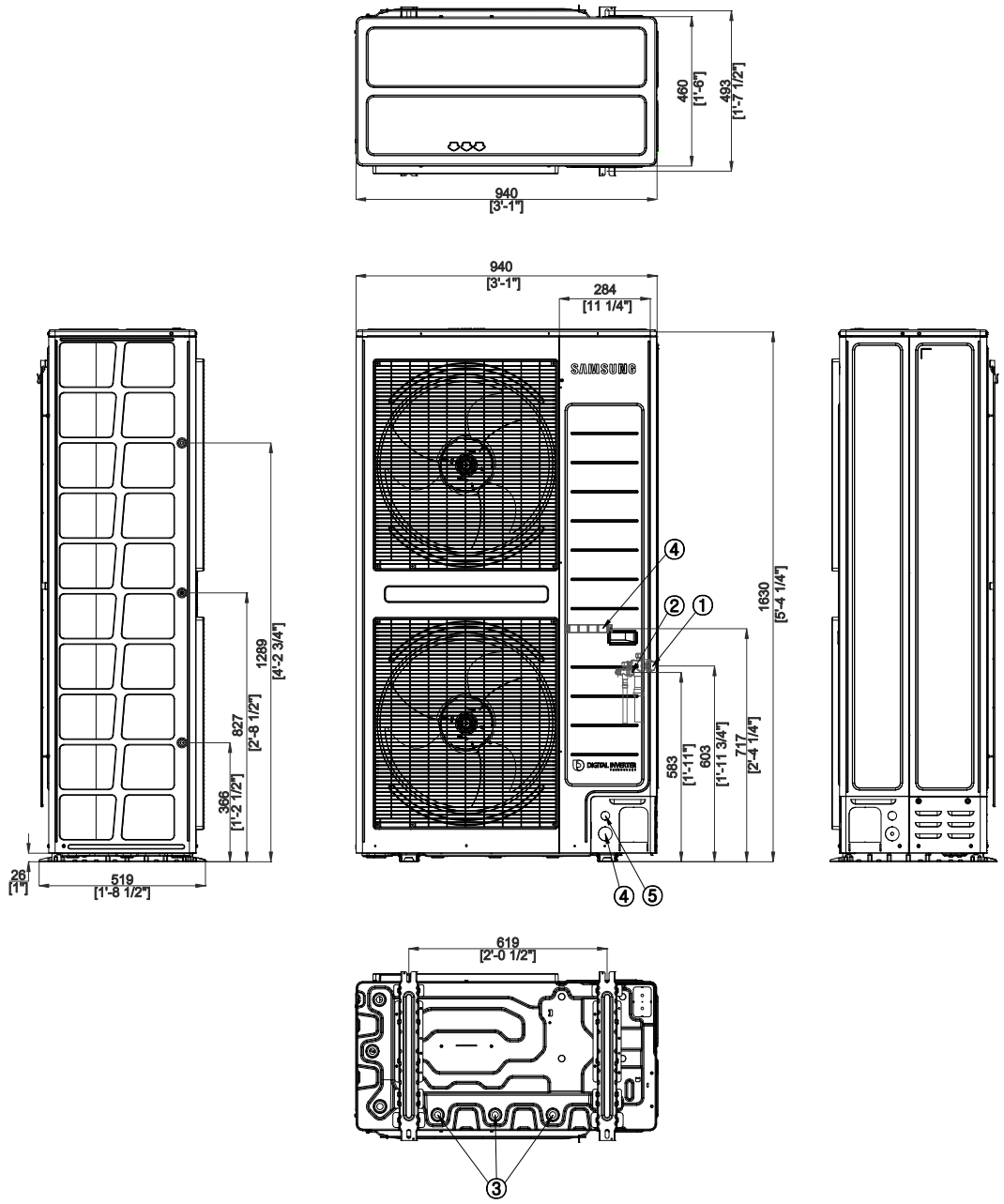
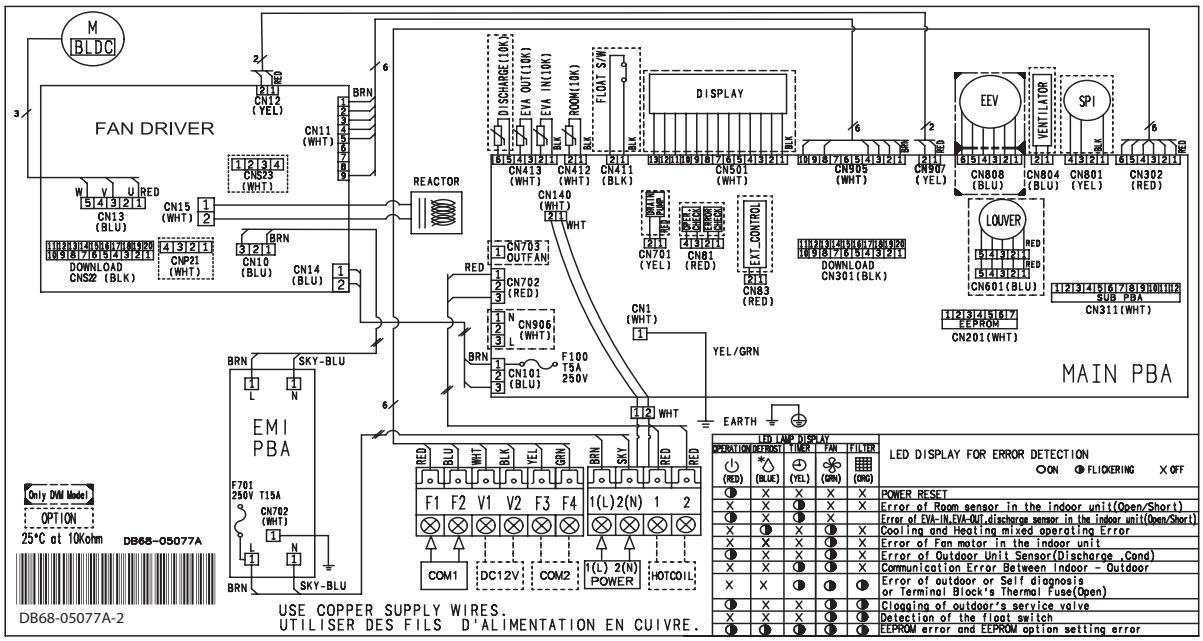


Table of descriptions	
1	Refrigerant gas pipe
2	Refrigerant liquid pipe
3	Drain Hole
4	Power wiring conduits
5	Communication wiring conduits

4 Electrical wiring diagram

Indoor

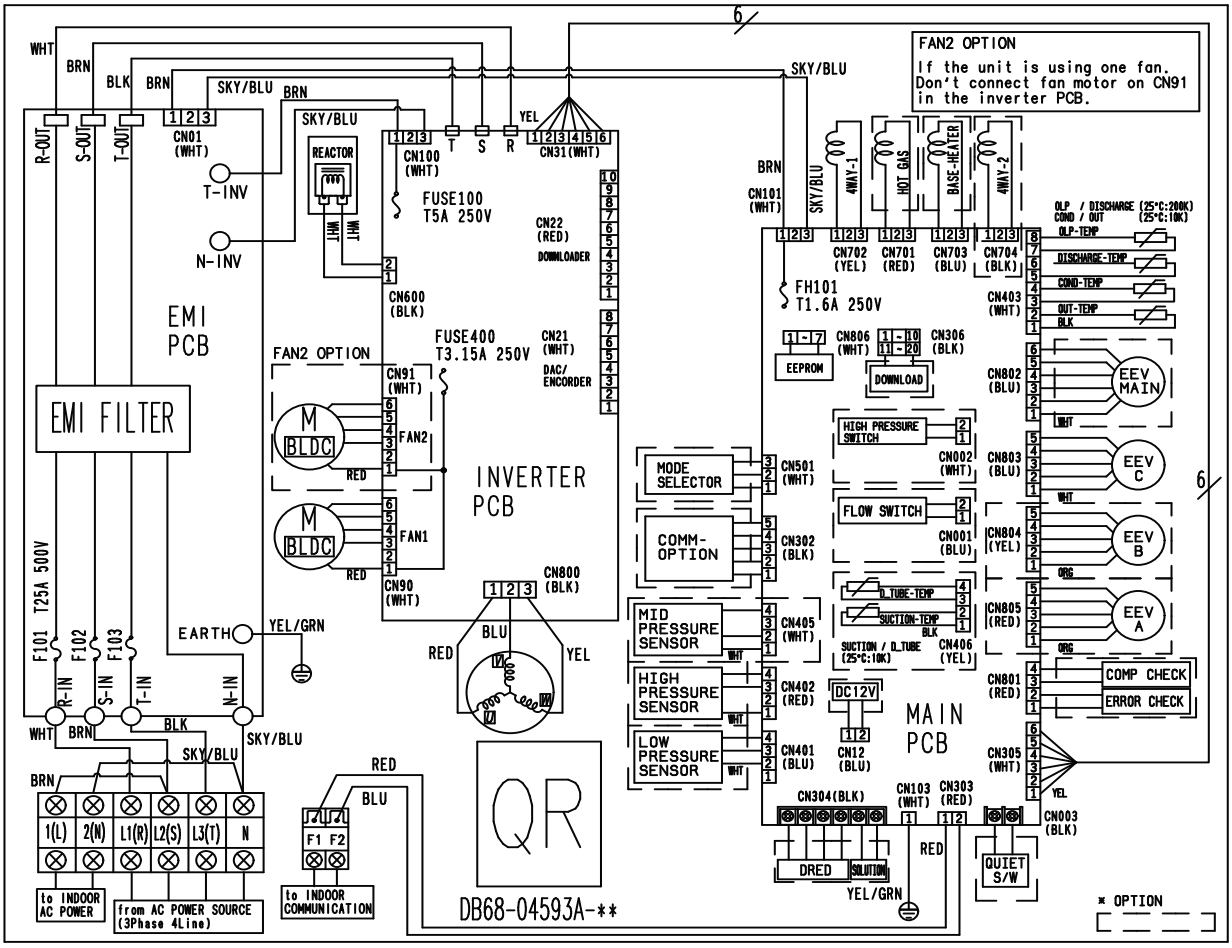
AC180JNHPKH/AR, **,AC200KNHPKH/**AR, **AC250KNHPKH/**AR



4 Electrical wiring diagram

Outdoor

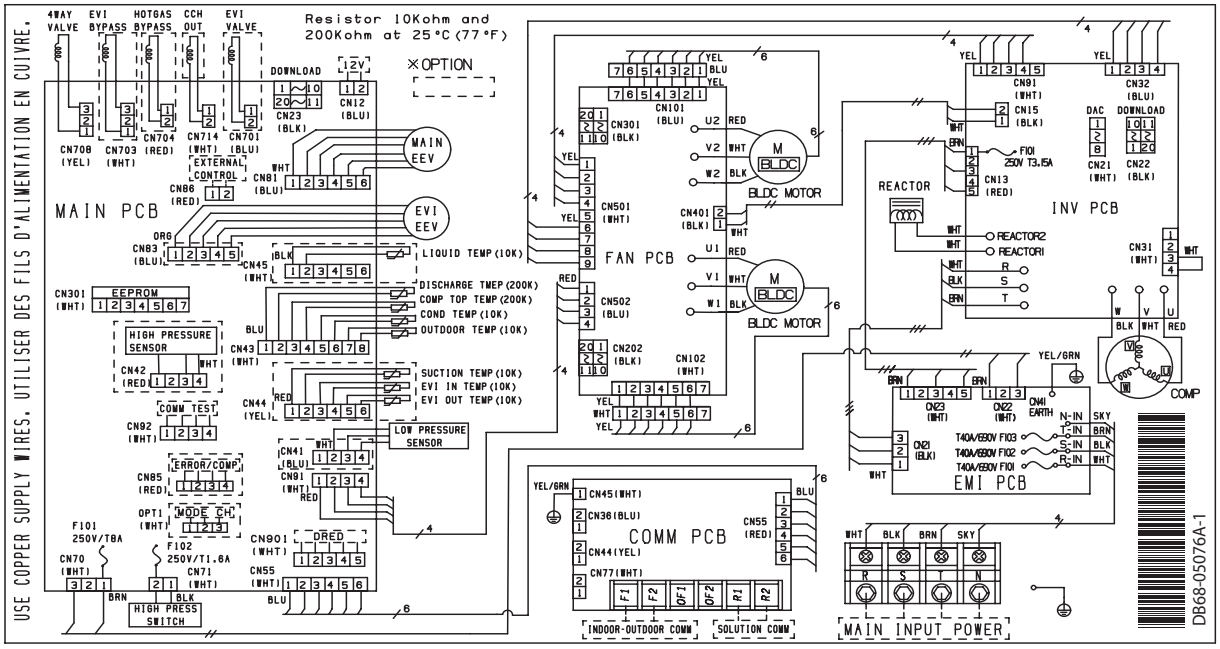
AC180JXAPNH/AR



4 Electrical wiring diagram

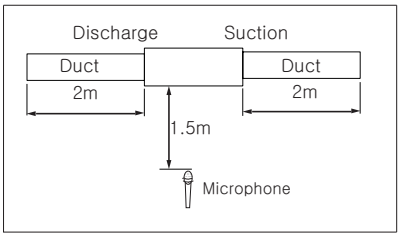
Outdoor

AC200KXAPNH/AR, **AC250KXAPNH**/AR



5 Sound pressure level

Indoor



Unit: dB(A)

Model	High	Low
AC180JNHPKH/AR (ODU : AC180JXAPNH/AR)	43	35
AC200KNHPKH/AR (ODU : AC200KXAPNH/AR)	44	36
AC250KNHPKH/AR (ODU : AC250KXAPNH/AR)	47	37

Note

* Specifications may be subject to change without prior notice

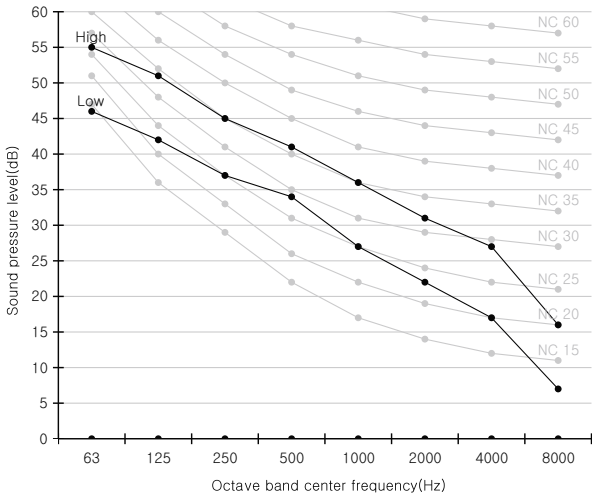
1) These operation values were obtained in an anechoic room.

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.

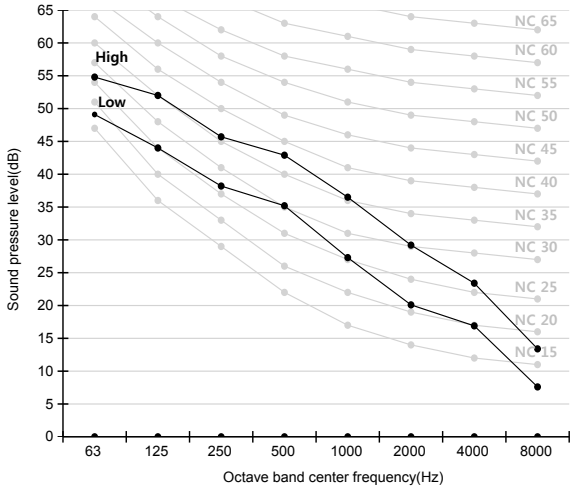
3) Operation sound level may differ depending on operation and ambient conditions.

NC curve

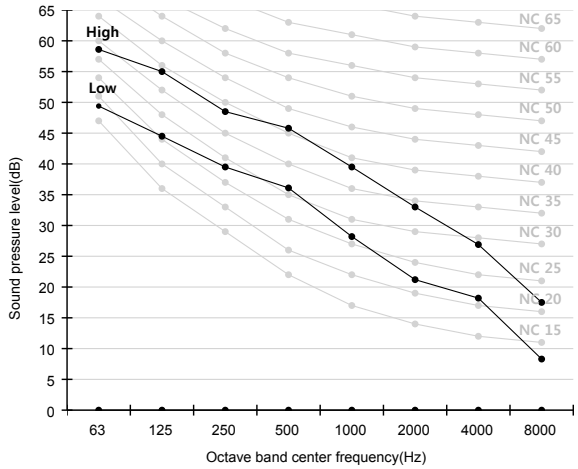
1) AC180JNHPKH/AR (ODU : AC180JXAPNH/AR)



2) AC200KNHPKH/AR (ODU : AC200KXAPNH/AR)

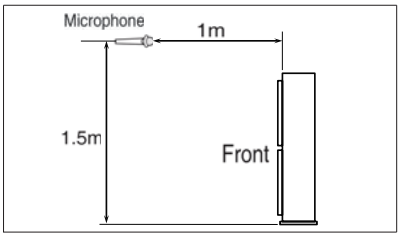


3) AC250KNHPKH/AR (ODU : AC250KXAPNH/AR)



5 Sound pressure level

Outdoor



Unit: dB(A)

Model	Cooling	Heating
AC180JXAPNH/AR (IDU : AC180JNHPKH/AR)	55	57
AC200KXAPNH/AR (IDU : AC200KNHPKH/AR)	58	60
AC250KXAPNH/AR (IDU : AC250KNHPKH/AR)	59	61

Note

* Specifications may be subject to change without prior notice

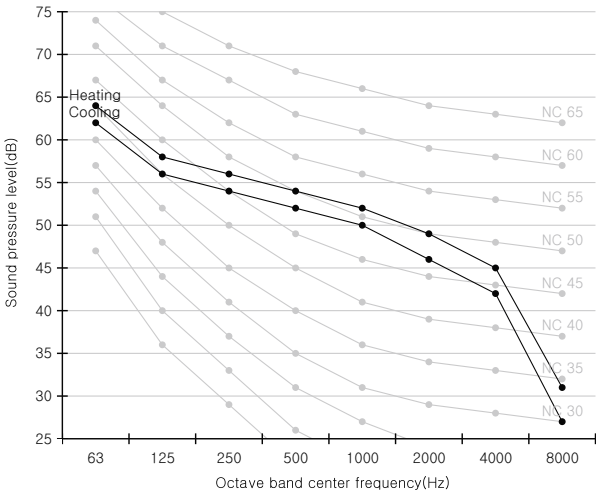
1) These operation values were obtained in an anechoic room.

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.

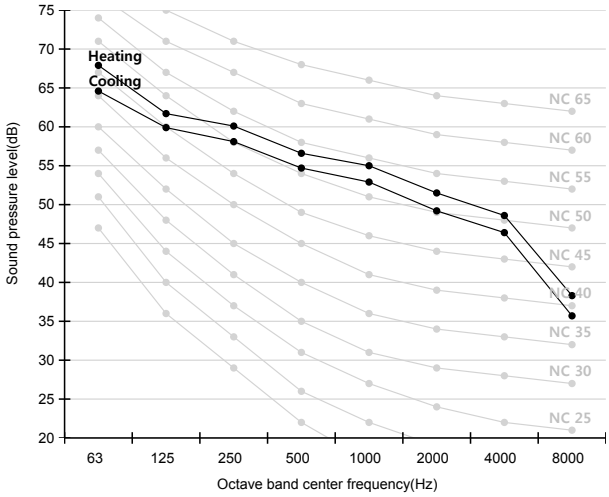
3) Operation sound level may differ depending on operation and ambient conditions.

NC curve

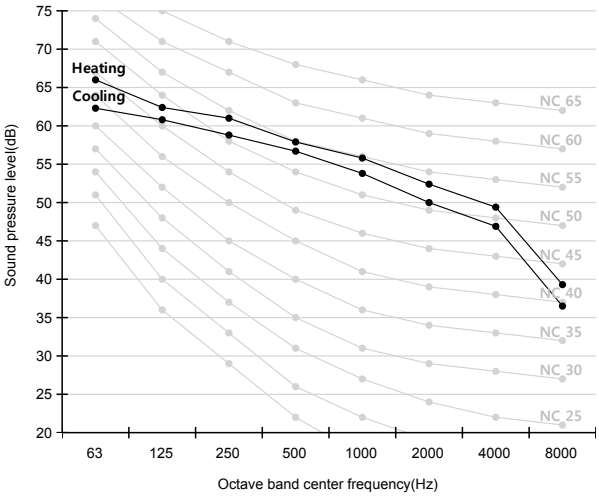
1) AC180JXAPNH/AR (IDU : AC180JNHPKH/AR)



2) AC200KXAPNH/AR (IDU : AC200KNHPKH/AR)



3) AC250KXAPNH/AR (IDU : AC250KNHPKH/AR)



6 Sound Power Level

Indoor

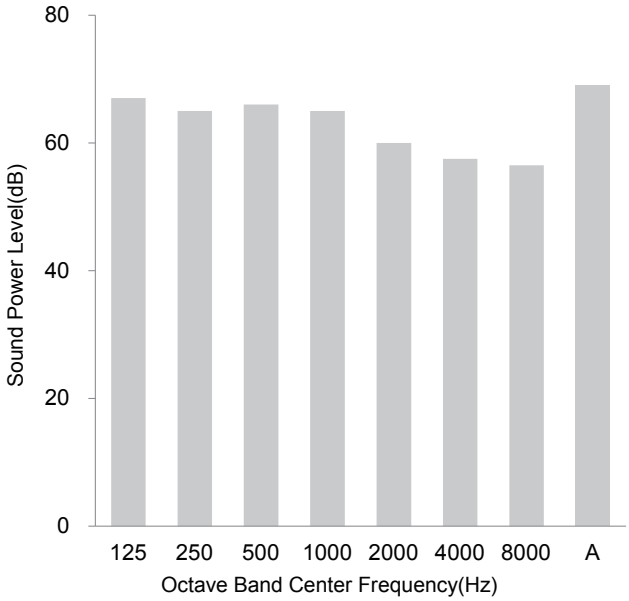
Note

* Specifications may be subject to change
  1) dBA = A-weighted sound power level.
  2) Reference power : 1pW.
  3) Measured according to ISO 3741.

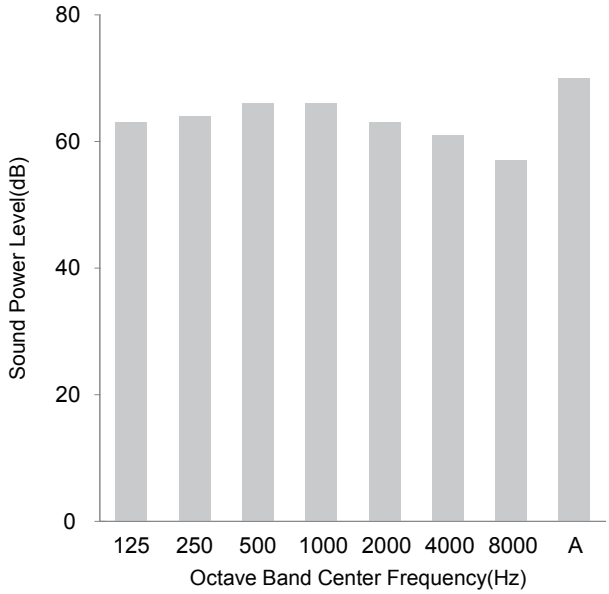
Unit: dB(A)

Model	Power
AC180JNHPKH/AR (ODU : AC180JXAPNH/AR)	69
AC200KNHPKH/AR (ODU : AC200KXAPNH/AR)	70
AC250KNHPKH/AR (ODU : AC250KXAPNH/AR)	72

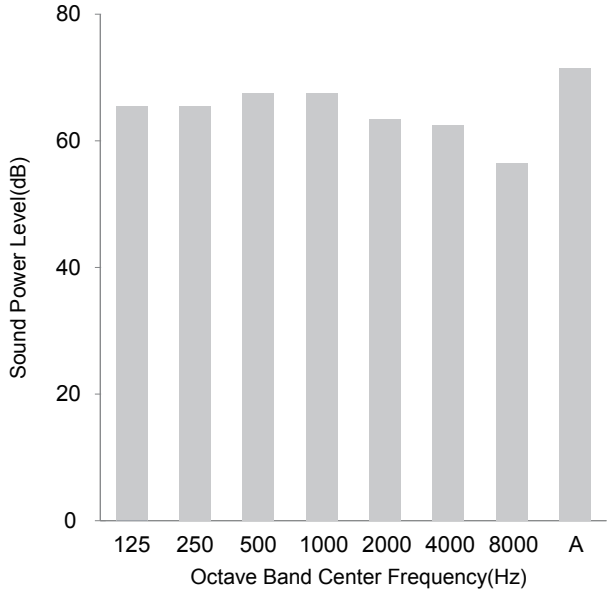
1) AC180JNHPKH/AR (ODU : AC180JXAPNH/AR)



2) AC200KNHPKH/AR (ODU : AC200KXAPNH/AR)



3) AC250KNHPKH/AR (ODU : AC250KXAPNH/AR)



6 Sound power level

Outdoor

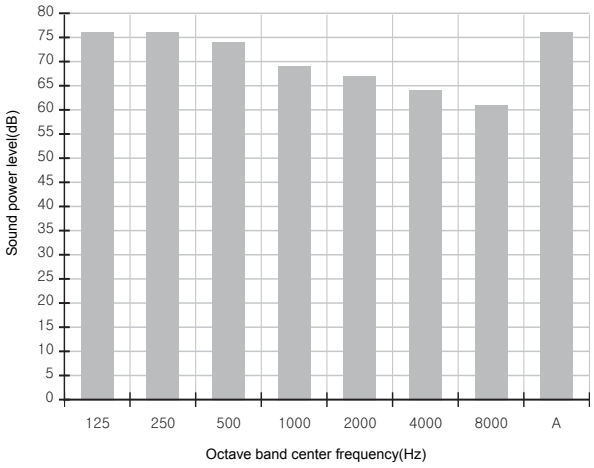
Note

* Specifications may be subject to change
  1) dBA = A-weighted sound power level.
  2) Reference power : 1pW.
  3) Measured according to ISO 3741.

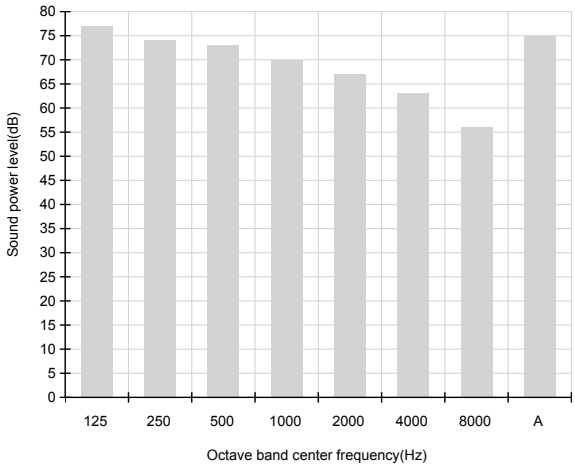
Unit: dB(A)

Model	Power
AC180JXAPNH/AR (IDU : AC180JNHPKH/AR)	76
AC200KXAPNH/AR (IDU : AC200KNHPKH/AR)	75
AC250KXAPNH/AR (IDU : AC250KNHPKH/AR)	77

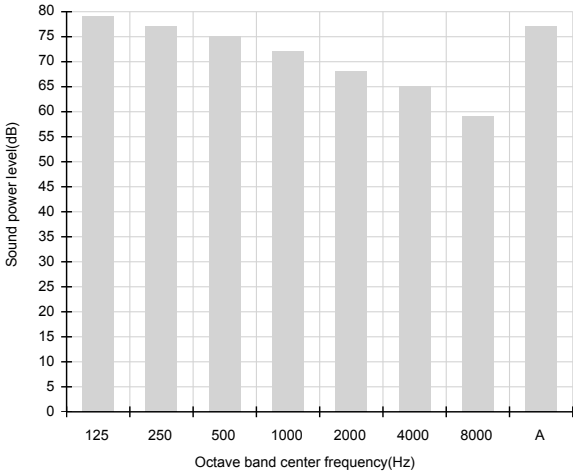
1) AC180JXAPNH/AR (IDU : AC180JNHPKH/AR)



2) AC200KXAPNH/AR (IDU : AC200KNHPKH/AR)



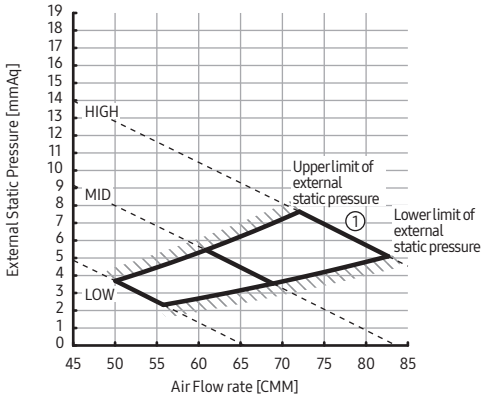
3) AC250KXAPNH/AR (IDU : AC250KNHPKH/AR)



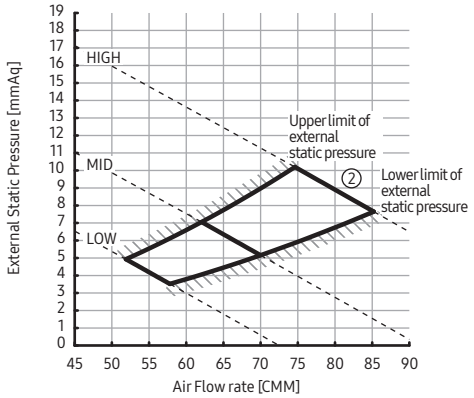
7 Recommended operation range

1) AC180JNHPKH/AR (ODU : AC180JXAPNH/AR)

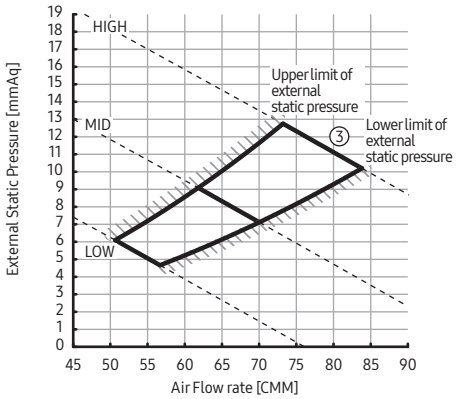
①	External Static Pressure(mmAq)	Option Code
	5-7.5	01107C-1C50B0-27B414-370060



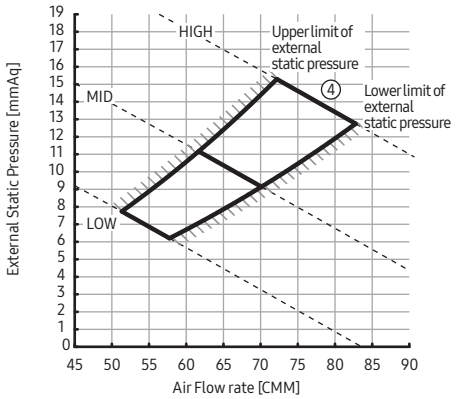
②	External Static Pressure(mmAq)	Option Code
	7.5-10	01107C-1C50E3-27B414-370060



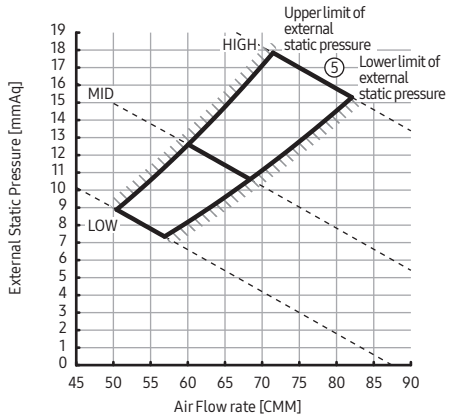
③	External Static Pressure(mmAq)	Option Code
	10-12.5	01107C-1C50F5-27B414-370060



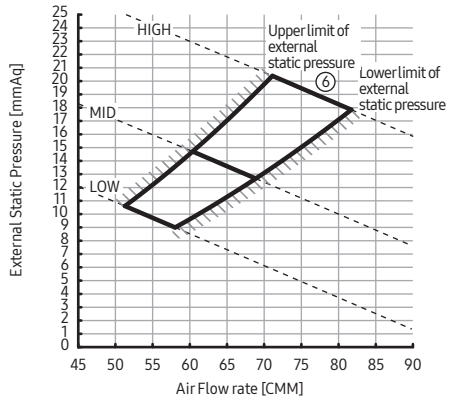
④	External Static Pressure(mmAq)	Option Code
	12.5-15	01107C-1C5436-27B414-370060



⑤	External Static Pressure(mmAq)	Option Code
	15-17.5	01107C-1C5458-27B414-370060



⑥	External Static Pressure(mmAq)	Option Code
	17.5-20	01107C-1C548E-27B414-370060



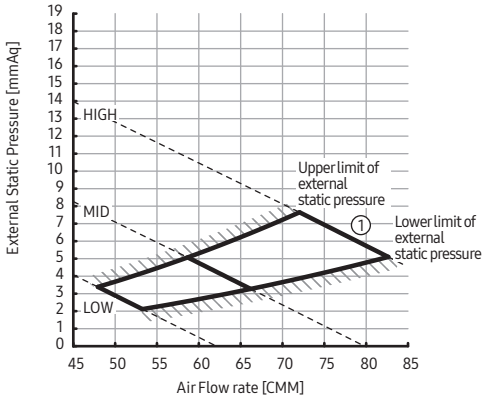
Note

Adjust option code according to the actual installation condition (external static pressure).

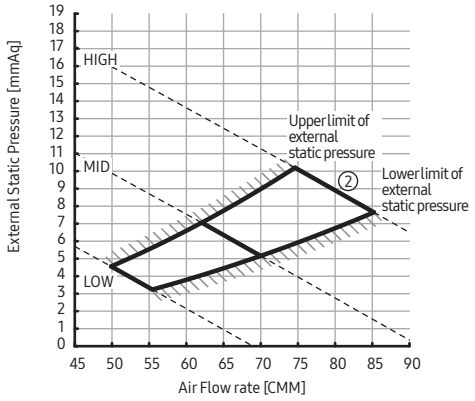
The graphs display the available external static pressure range of installed indoor units. Therefore, they do not reflect the actual change of external static pressure and airflow rate according to adjusted airflow (High-Mid-Low) of installed indoor units.

2) AC200KNHPKH/AR (ODU : AC200KXAPNH/AR)

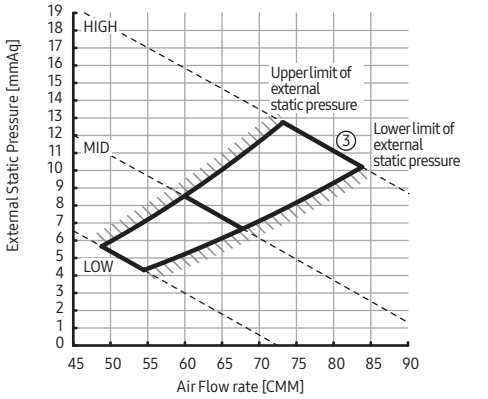
①	External Static Pressure (mmAq)	Option Code
	5≤P<7.5	011074-1C50C0-27C8E6-372000



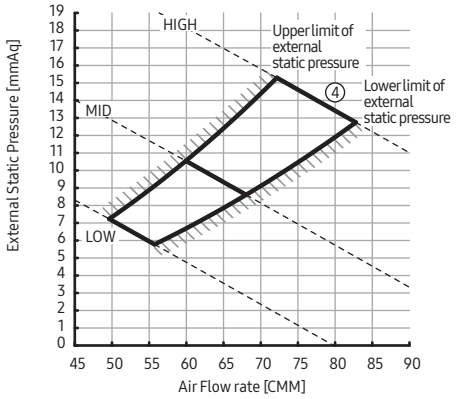
②	External Static Pressure (mmAq)	Option Code
	7.5≤P<10	011074-1C50E3-27C8E6-372000



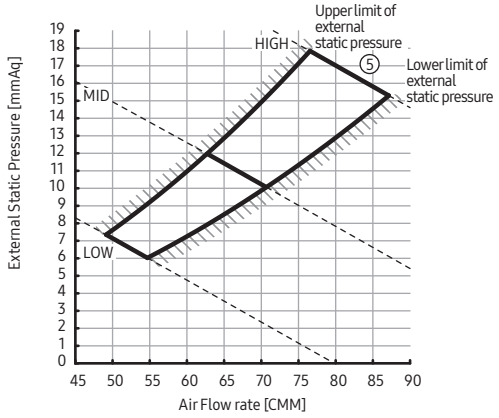
③	External Static Pressure (mmAq)	Option Code
	10≤P<12.5	011074-1C50F5-27C8E6-372000



④	External Static Pressure (mmAq)	Option Code
	12.5≤P<15	011074-1C5436-27C8E6-372000



⑤	External Static Pressure (mmAq)	Option Code
	15≤P<17.5	011074-1C5458-27C8E6-372000



⑥	External Static Pressure (mmAq)	Option Code
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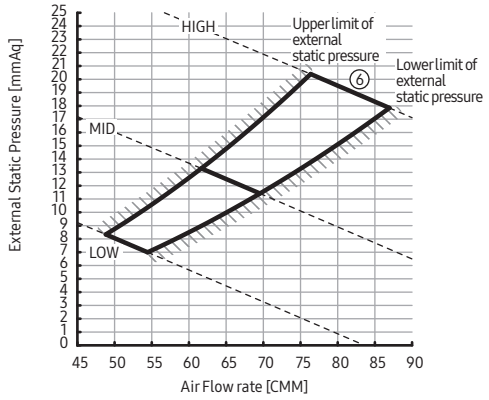


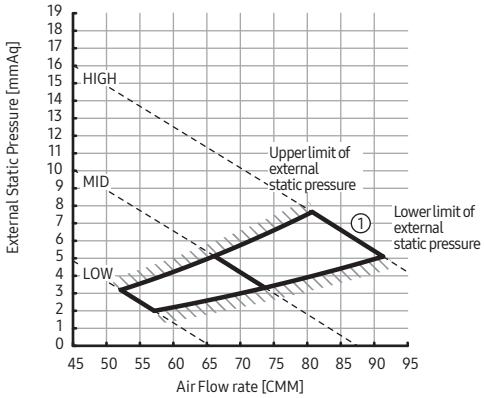
Note

Adjust option code according to the actual installation condition (external static pressure).

The graphs display the available external static pressure range of installed indoor units. Therefore, they do not reflect the actual change of external static pressure and airflow rate according to adjusted airflow (High-Mid-Low) of installed indoor units.

3) AC250KNHPKH/AR (ODU : AC250KXAPNH/AR)

①	External Static Pressure(mmAq)	Option Code
	5≤P<7.5	011074-1C50F0-270014-373800



②	External Static Pressure(mmAq)	Option Code
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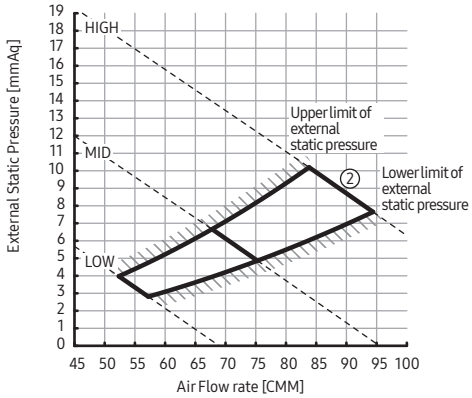

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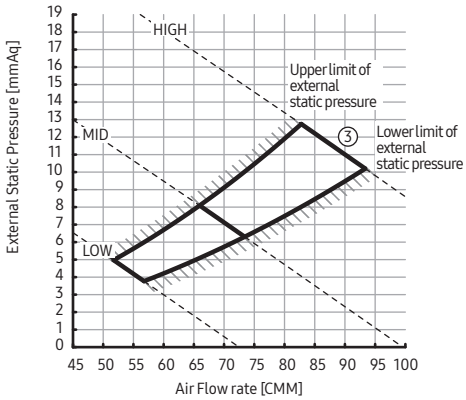
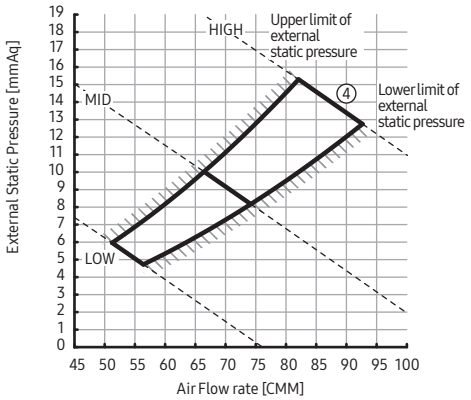


④	External Static Pressure(mmAq)	Option Code
	12.5≤P<15	011074-1C5466-270014-373800



⑤	External Static Pressure(mmAq)	Option Code
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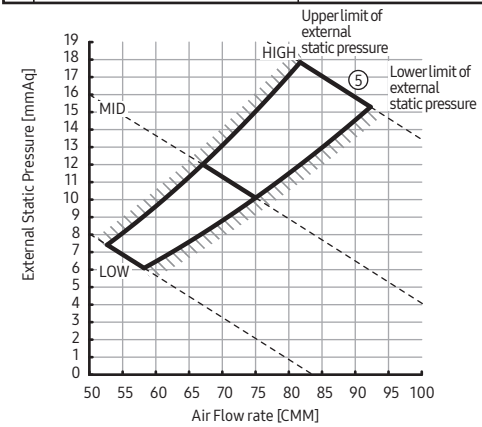
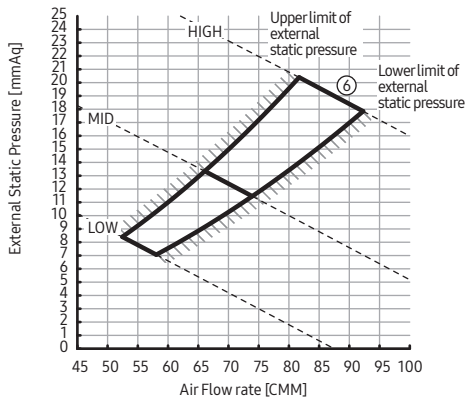


⑥	External Static Pressure(mmAq)	Option Code
	17.5≤P≤20	011074-1C54BB-270014-373800



Note

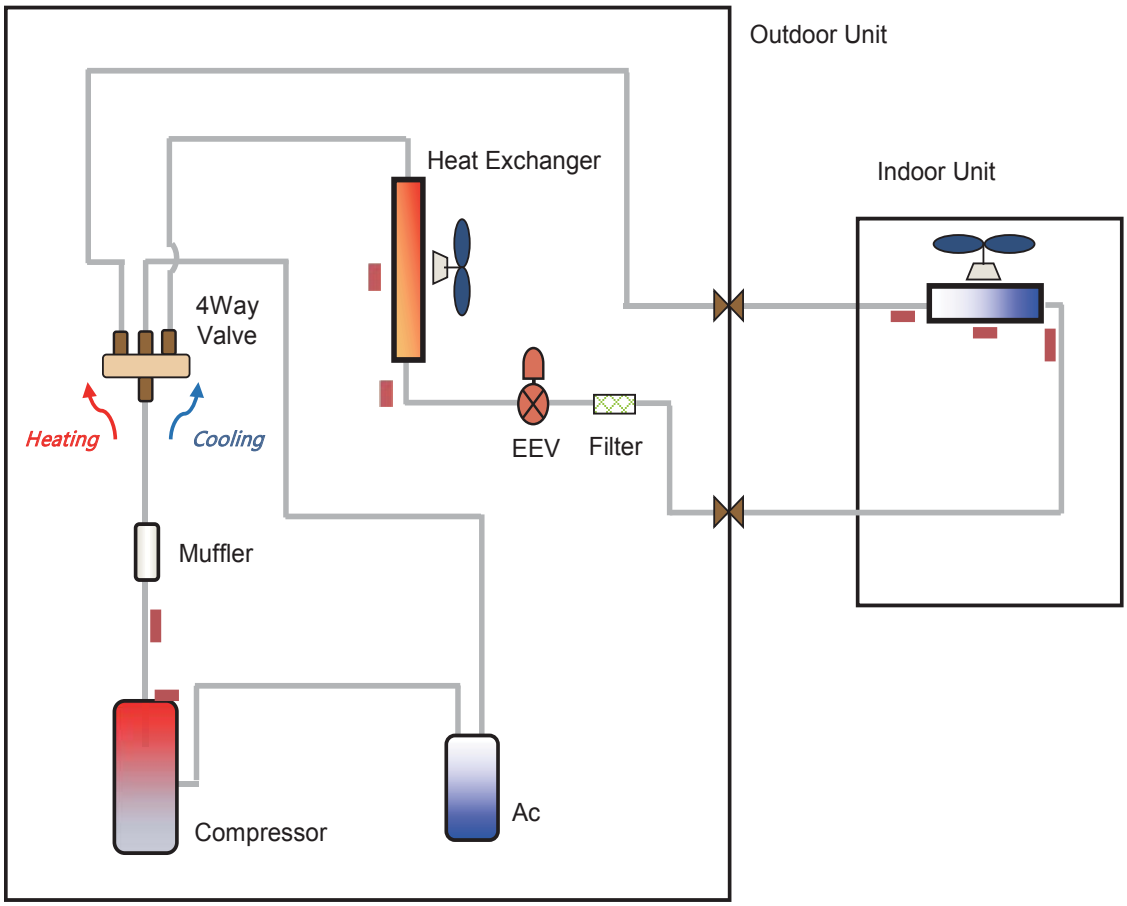
Adjust option code according to the actual installation condition (external static pressure).

The graphs display the available external static pressure range of installed indoor units. Therefore, they do not reflect the actual change of external static pressure and airflow rate according to adjusted airflow (High-Mid-Low) of installed indoor units.

8 Cycle diagram

Outdoor

AC180JXAPNH/AR

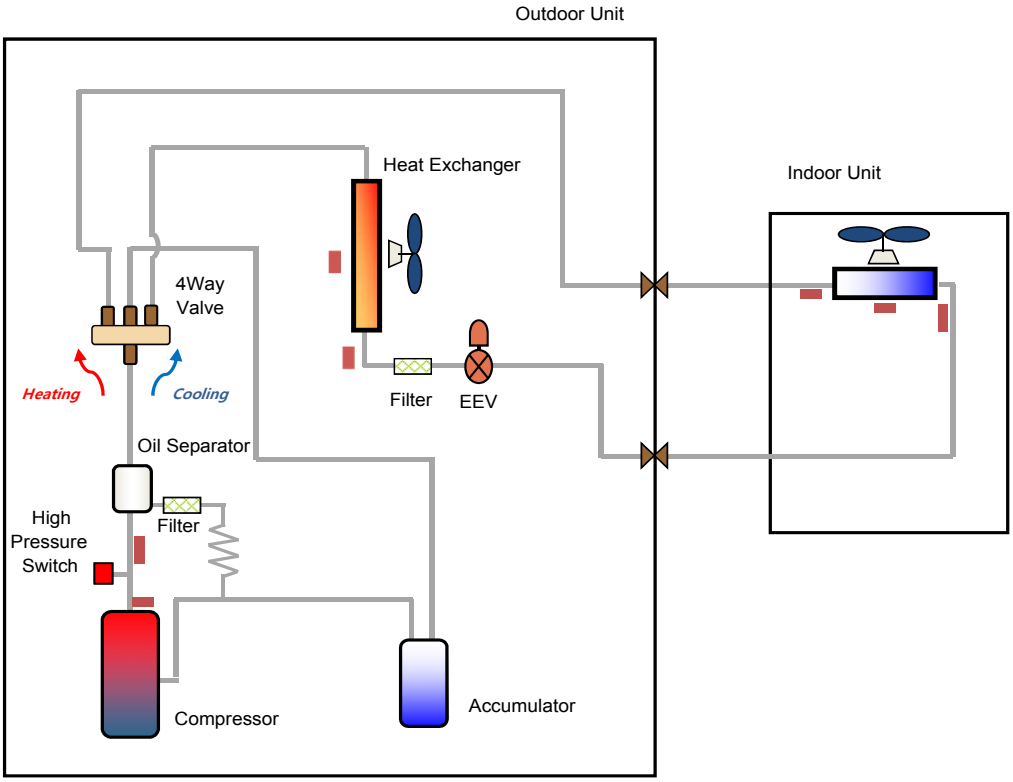


Category		Description
Compressor		Rotary Inverter Compressor
Heat Exchanger		Condensing/Evaporating unit(FMC)
AC		Accumulator
Filter		Filter
Valve	Expansion	Electronic Expansion Valve(EEV)
	Reversing	4 Way valve (Reversing valve)
	Service	Service valve
Sensor	Temperature	Pipe/Air Temperature sensor

8 Cycle diagram

Outdoor

AC200KXAPNH/AR, AC250KXAPNH/AR



Category		Symbol	Description
Compressor			Scroll Inveter Compressor.
Heat Exchanger			Condensing/Evaporating unit
Accumulator			Accumulator
Oil Separator			Oil Separator
Switch			High Pressure Switch
Filter			Filter
Valve	Expansion		Electronic Expansion Valve(EEV)
	Reversing		4 Way valve (Reversing valve)
	Service		Service valve
Senser	Temperature		Pipe/Air Temperature sensor

AC180JNHPKH/AR + AC180JXAPNH/AR

Cooling

Level Difference (m)	Pipe Length (m)														
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
30	-	-	-	-	-	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
25	-	-	-	-	0.94	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
20	-	-	-	0.96	0.94	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
15	-	-	0.97	0.96	0.94	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
10	-	0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
5	1.00	0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
0	1.00	0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
-5	1.00	0.98	0.97	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.85	0.84	0.83	0.81	0.80
-10	-	0.97	0.96	0.95	0.93	0.92	0.90	0.89	0.88	0.86	0.85	0.83	0.82	0.81	0.80
-15	-	-	0.96	0.94	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.82	0.81	0.80
-20	-	-	-	0.94	0.92	0.91	0.90	0.88	0.87	0.85	0.84	0.83	0.81	0.80	0.80
-25	-	-	-	-	0.92	0.90	0.89	0.88	0.86	0.85	0.83	0.82	0.81	0.80	0.80
-30	-	-	-	-	-	0.90	0.89	0.87	0.86	0.84	0.83	0.82	0.81	0.80	0.80

Heating

Level Difference (m)	Pipe Length (m)														
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
30	-	-	-	-	-	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
25	-	-	-	-	0.94	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
20	-	-	-	0.96	0.94	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
15	-	-	0.97	0.96	0.94	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
10	-	0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
5	1.00	0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
0	1.00	0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
-5	1.00	0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
-10	-	0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
-15	-	-	0.97	0.96	0.94	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
-20	-	-	-	0.96	0.94	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
-25	-	-	-	-	0.94	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80
-30	-	-	-	-	-	0.93	0.91	0.90	0.89	0.87	0.86	0.84	0.83	0.81	0.80

AC200KNHPKH/AR + AC200KXAPNH/AR

Cooling

Level Difference (m)	Pipe Length (m)														
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
30	-	-	-	-	-	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72
25	-	-	-	-	0.92	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72
20	-	-	-	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72
15	-	-	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72
10	-	0.98	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72
5	1.00	0.98	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72
0	1.00	0.98	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72
-5	1.00	0.98	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72
-10	-	0.97	0.95	0.93	0.91	0.89	0.87	0.85	0.83	0.81	0.79	0.77	0.75	0.73	0.71
-15	-	-	0.95	0.93	0.91	0.89	0.87	0.85	0.83	0.81	0.79	0.77	0.75	0.73	0.71
-20	-	-	-	0.92	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72	0.70
-25	-	-	-	-	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72	0.70
-30	-	-	-	-	-	0.87	0.85	0.83	0.81	0.79	0.77	0.75	0.73	0.71	0.69

Heating

Level Difference (m)	Pipe Length (m)														
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
30	-	-	-	-	-	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
25	-	-	-	-	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
20	-	-	-	0.98	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
15	-	-	0.99	0.98	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
10	-	0.99	0.99	0.98	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
5	1.00	0.99	0.99	0.98	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
0	1.00	0.99	0.99	0.98	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
-5	1.00	0.99	0.99	0.98	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
-10	-	0.99	0.99	0.98	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
-15	-	-	0.99	0.98	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
-20	-	-	-	0.98	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
-25	-	-	-	-	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
-30	-	-	-	-	-	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90

AC250KNHPKH/AR + AC250KXAPNH/AR

Cooling

Level Difference (m)	Pipe Length (m)														
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
30	-	-	-	-	-	0.88	0.86	0.83	0.81	0.79	0.76	0.74	0.72	0.69	0.67
25	-	-	-	-	0.91	0.88	0.86	0.83	0.81	0.79	0.76	0.74	0.72	0.69	0.67
20	-	-	-	0.93	0.91	0.88	0.86	0.83	0.81	0.79	0.76	0.74	0.72	0.69	0.67
15	-	-	0.95	0.93	0.91	0.88	0.86	0.83	0.81	0.79	0.76	0.74	0.72	0.69	0.67
10	-	0.98	0.95	0.93	0.91	0.88	0.86	0.83	0.81	0.79	0.76	0.74	0.72	0.69	0.67
5	1.00	0.98	0.95	0.93	0.91	0.88	0.86	0.83	0.81	0.79	0.76	0.74	0.72	0.69	0.67
0	1.00	0.98	0.95	0.93	0.91	0.88	0.86	0.83	0.81	0.79	0.76	0.74	0.72	0.69	0.67
-5	1.00	0.98	0.95	0.93	0.91	0.88	0.86	0.83	0.81	0.79	0.76	0.74	0.72	0.69	0.67
-10	-	0.97	0.94	0.92	0.90	0.87	0.85	0.82	0.80	0.78	0.75	0.73	0.71	0.68	0.66
-15	-	-	0.94	0.92	0.90	0.87	0.85	0.82	0.80	0.78	0.75	0.73	0.71	0.68	0.66
-20	-	-	-	0.91	0.89	0.86	0.84	0.81	0.79	0.77	0.74	0.72	0.70	0.67	0.65
-25	-	-	-	-	0.89	0.86	0.84	0.81	0.79	0.77	0.74	0.72	0.70	0.67	0.65
-30	-	-	-	-	-	0.86	0.84	0.81	0.79	0.77	0.74	0.72	0.70	0.67	0.65

Heating

Level Difference (m)	Pipe Length (m)														
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
30	-	-	-	-	-	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
25	-	-	-	-	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
20	-	-	-	0.98	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
15	-	-	0.99	0.98	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
10	-	0.99	0.99	0.98	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
5	1.00	0.99	0.99	0.98	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
0	1.00	0.99	0.99	0.98	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
-5	1.00	0.99	0.99	0.98	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
-10	-	0.99	0.99	0.98	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
-15	-	-	0.99	0.98	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
-20	-	-	-	0.98	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
-25	-	-	-	-	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90
-30	-	-	-	-	-	0.96	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.91	0.90

Big Ceiling

1 Specifications

2 Capacity table

3 Dimensional drawing

4 Electrical wiring diagram

5 Sound pressure level

6 Sound power level

7 Temperature and air flow distribution

8 Cycle diagram

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1 Specifications

Big Ceiling

Type					Ceiling	Ceiling
Model Name		Indoor Unit			AC140JNCDEH/AR	AC160JNCDEH/AR
		Outdoor Unit			AC140JXADGH/AR	AC160JXADGH/AR
System	Mode			-	Heat Pump	Heat Pump
	Capacity	Cooling(Min/Std/Max)		kW	4.30 / 14.00 / 15.40	4.30 / 15.00 / 17.30
				Btu/h	14,700 / 47,800 / 52,500	14,700 / 51,200 / 59,000
		Heating(Min/Std/Max)		kW	4.70 / 16.00 / 18.00	4.70 / 17.50 / 19.00
				Btu/h	16,000 / 54,600 / 61,400	16,000 / 59,700 / 64,800
	Power	Power Input (Nominal)	Cooling(Min/Std/Max)	kW	0.90 / 4.65 / 5.50	0.90 / 5.28 / 6.40
			Heating(Min/Std/Max)		0.80 / 4.43 / 5.70	0.80 / 4.86 / 6.50
		Current Input (Nominal)	Cooling(Min/Std/Max)	A	1.70 / 7.10 / 9.50	1.70 / 8.20 / 9.80
			Heating(Min/Std/Max)		1.70 / 6.80 / 8.80	1.70 / 7.50 / 10.00
		MCA		A	14.70 (MCA)	14.70 (MCA)
		MFA		A	16.20	16.20
	Energy Efficiency	EER (Nominal Cooling)		-	3.01	2.84
		COP (Nominal Heating)		-	3.61	3.60
		Energy Grade		-	-	-
				-	-	-
	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	Max. Length	m	75	75
			Max. Height	m	30	30
	Field Wiring	Power Source Wire		Ø, mm	-	-
		Transmission Cable		Ø, mm	0.75 ~ 1.50	0.75 ~ 1.50
	Refrigerant	Type		-	R410A	R410A
		Control Method		-	-	-
		Factory Charging		kg / tCO2e	3.20 / 6.68	3.50 / 7.31
Indoor Unit	Power Supply			Ø, #, V, Hz	1,2,220-240,50	1,2,220-240,50
	Fan	Type		-	Sirroco	Sirroco
		Motor	Output	W	244 x 1	244 x 1
		Air Flow Rate	High/Mid/Low	CMM	34.00 / 27.00 / 23.00	37.00 / 31.00 / 26.00
				l/s	566.67 / 450.00 / 383.33	616.67 / 516.67 / 433.33
		External Static Pressure	Min/Std/Max	mmAq	-	-
				Pa	-	-
	Drain	Drain Pipe		Ø,mm	VP20 (OD 25,ID 20)	VP20 (OD 25,ID 20)
	Sound	Pressure	High/Mid/Low	dB(A)	46 / 42 / 38	50 / 47 / 43
		Power	Cooling		64	68
	External Dimension	Net Weight		kg	42.0	42.0
		Shipping Weight		kg	48.0	48.0
		Net Dimensions (WxHxD)		mm	1,650 x 235 x 675	1,650 x 235 x 675
		Shipping Dimensions (WxHxD)		mm	1,739 x 321 x 758	1,739 x 321 x 758
	Panel Size	Panel model		-	-	-
		Panel Net Weight		kg	-	-
		Shipping Weight		kg	-	-
		Net Dimensions (WxHxD)		mm	-	-
		Shipping Dimensions (WxHxD)		mm	-	-
	Additional Accessories	Drain pump	Drain pump	-	-	-
			Max. Lifting	mm/liter/h	-	-
		Air Filter		-	-	-
Outdoor Unit	Power Supply			Ø, #, V, Hz	3,4,380-415,50	1,2,220-240,50
	Compressor	Type		-	Twin BLDC Rotary	Twin BLDC Rotary
		Model		-	UG5T450FUFJX	UG5T450FXAJX
		Output		kW	4.12	4.01
		Oil	Type	-	POE	PVE
	Fan	Air Flow Rate	Cooling	CMM	100.00	115.00
				l/s	1,666.67	1,916.67
	Sound	Pressure	Cooling/Heating	dB(A)	53 / 54	55 / 57
		Power	Cooling		70	73
	External Dimension	Net Weight		kg	90.0	96.0
		Shipping Weight		kg	100.0	106.0
		Net Dimensions (WxHxD)		mm	940 x 1,210 x 330	940 x 1,420 x 330
		Shipping Dimensions (WxHxD)		mm	995 x 1,388 x 426	995 x 1,598 x 426
	Operating Temp. Range	Cooling		ºC	-15 ~ 50	-15 ~ 50
		Heating		ºC	-20 ~ 24	-20 ~ 24

* Specifications may be subject to change without prior notice.

1) 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 : 0m

2) 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 : 0m

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

4) These products contain R410A(GWP=2,088) which is fluorinated greenhouse gas.

2 Capacity table

Big Ceiling

AC140JNCDEH/AR + AC140JXADGH/AR

Cooling

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

Outdoor temperature (ºC, DB)	Indoor temperature (ºC, WB)																	
	14.0			16.0			18.0			19.0			22.0			24.0		
	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
-15.0	10.30	8.24	3.30	10.55	8.44	3.38	10.81	8.65	3.46	11.08	8.86	3.55	11.35	9.08	3.64	11.62	9.29	3.72
21.0	14.84	11.87	4.68	15.20	12.16	4.80	15.58	12.46	4.92	15.96	12.77	5.04	16.34	13.07	5.16	16.74	13.39	5.28
35.0	13.02	10.41	4.32	13.34	10.67	4.43	13.66	10.93	4.54	14.00	11.20	4.65	14.34	11.47	4.76	14.68	11.74	4.88
46.0	8.96	7.17	3.93	9.18	7.35	4.03	9.41	7.53	4.13	9.64	7.71	4.23	9.87	7.90	4.33	10.11	8.09	4.44
50.0	6.02	2.09	1.33	6.17	2.14	1.36	6.32	2.20	1.40	6.48	5.18	3.17	6.64	5.31	3.93	6.79	5.44	4.03

Heating

TC : Total Capacity PI: Power Input

Outdoor temperature (ºC, DB)	Indoor temperature (ºC, DB)											
	16.0		18.0		20.0		21.0		22.0		24.0	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-20.0	9.67	4.26	9.57	4.22	9.48	4.18	9.38	4.14	9.29	4.10	9.20	4.06
-10.0	13.87	5.71	13.74	5.66	13.60	5.60	13.46	5.54	13.33	5.49	13.20	5.43
7.0	16.32	4.52	16.16	4.47	16.00	4.43	15.84	4.39	15.68	4.34	15.52	4.30
24.0	19.98	4.60	19.79	4.56	19.59	4.51	19.39	4.46	19.20	4.42	19.01	4.38

AC160JNCDEH/AR + AC160JXADGH/AR

Cooling

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

Outdoor temperature (ºC, DB)	Indoor temperature (ºC, WB)																	
	14.0			16.0			18.0			19.0			22.0			24.0		
	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
-15.0	13.95	11.16	2.23	14.29	11.43	2.29	14.64	11.71	2.34	15.00	12.00	2.40	15.36	12.29	2.46	15.73	12.58	2.52
21.0	15.81	12.65	4.00	16.20	12.96	4.10	16.60	13.28	4.20	17.01	13.61	4.30	17.42	13.93	4.40	17.84	14.27	4.51
35.0	13.95	11.16	4.91	14.29	11.43	5.03	14.64	11.71	5.15	15.00	12.00	5.28	15.36	12.29	5.41	15.73	12.58	5.54
46.0	12.68	10.15	5.37	12.99	10.39	5.51	13.31	10.65	5.64	13.64	10.91	5.78	13.97	11.17	5.92	14.30	11.44	6.06
50.0	9.46	7.57	4.62	9.70	7.76	4.73	9.94	7.95	4.85	10.18	8.14	4.97	10.42	8.34	6.16	10.67	8.54	6.31

Heating

TC : Total Capacity, PI: Power Input

Outdoor temperature (ºC, DB)	Indoor temperature (ºC, DB)											
	16.0		18.0		20.0		21.0		22.0		24.0	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-20.0	9.91	4.53	9.81	4.48	9.71	4.44	9.61	4.40	9.52	4.35	9.42	4.31
-10.0	16.65	6.81	16.48	6.75	16.32	6.68	16.16	6.61	16.00	6.55	15.84	6.48
7.0	17.85	4.96	17.68	4.91	17.50	4.86	17.33	4.81	17.15	4.76	16.98	4.72
24.0	22.60	5.64	22.37	5.59	22.15	5.53	21.93	5.47	21.71	5.42	21.49	5.37

* Capacity table may be subject to change without prior notice.

1) Capacities are based on following conditions;

. Cooling mode indoor air temperature (°C, DB/WB) : 20/14, 22/16, 25/18, 27/19, 28/20, 30/22, 32/24

. Heating mode outdoor air : 85%RH. However, the condition rated capacity is 7°C DB / 6°C WB.

. Refrigerant piping length : 5m

. Level difference : 0m.

3 Dimensional drawing

Indoor

AC140JNCDEH/AR, **AC160JNCDEH/**AR

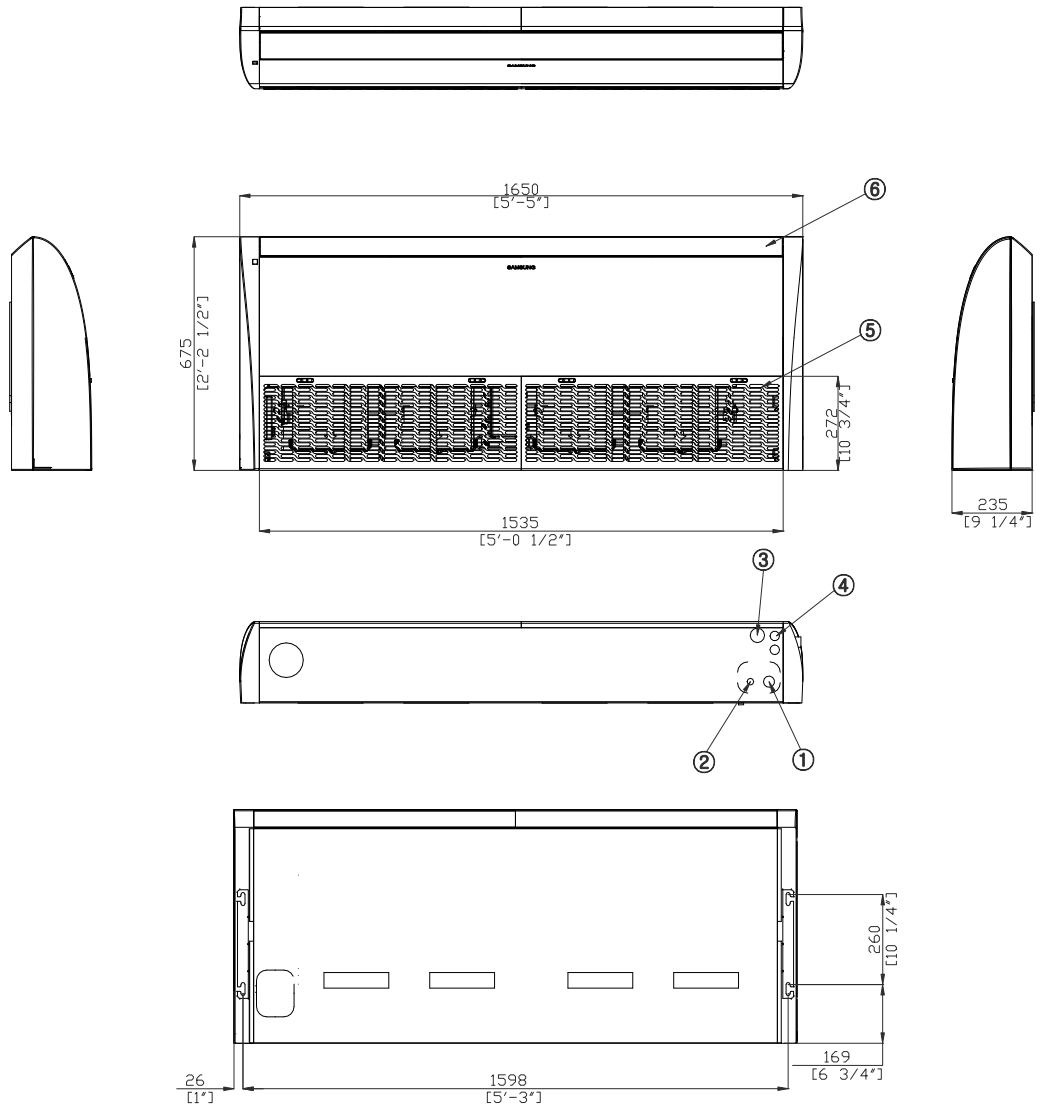


Table of descriptions			
1	Refrigerant gas pipe	7	
2	Refrigerant liquid pipe	8	
3	Condensate drain	9	
4	Power&Comm. wiring conduits	10	
5	Air Inlet grille	11	
6	Air Outlet grille	12	

3 Dimensional drawing

Outdoor

AC140JXADGH/AR

Units : mm / inches

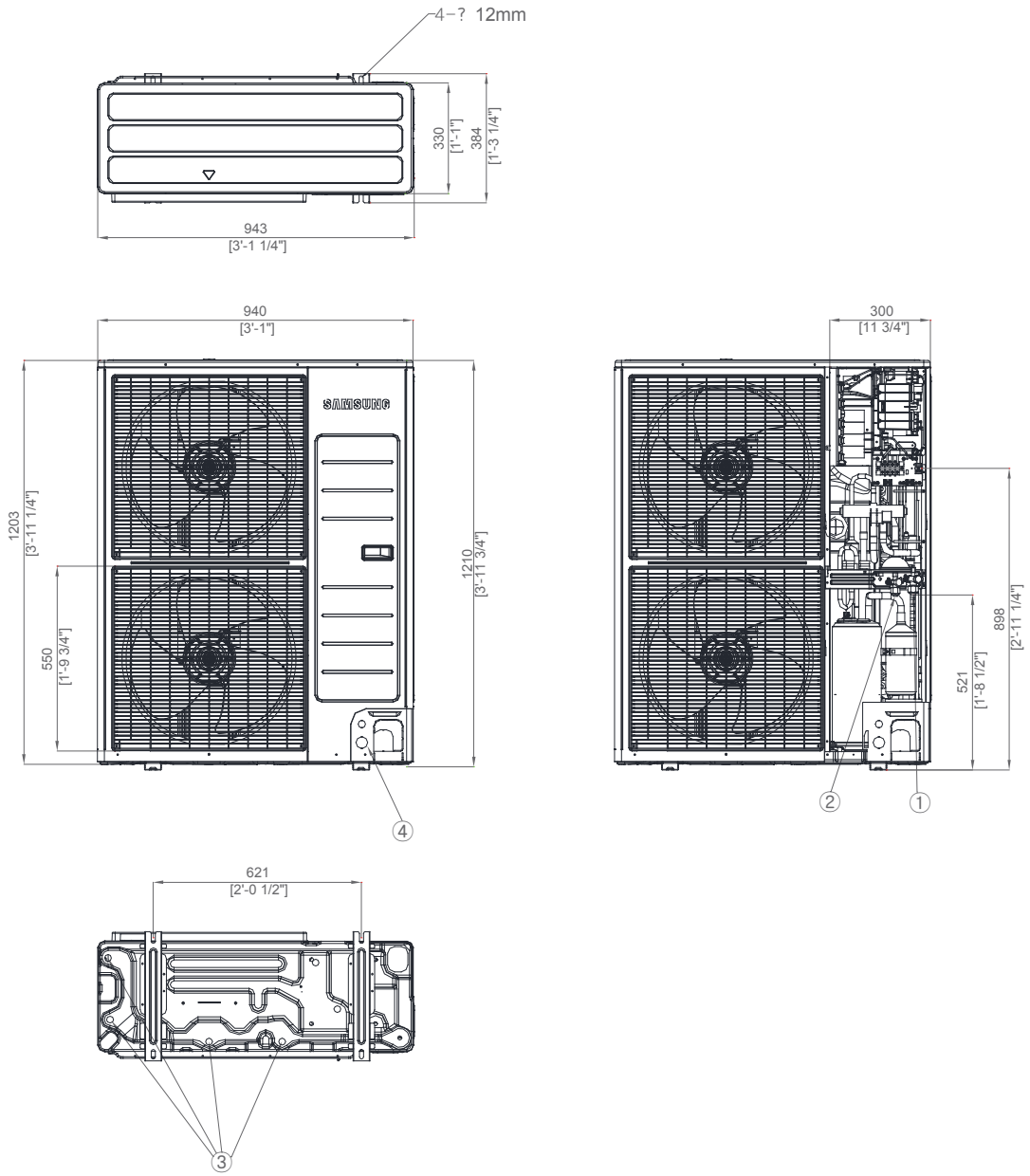


Table of descriptions	
1	Refrigerant gas pipe
2	Refrigerant liquid pipe
3	Drain Hole
4	Power & Comm. wiring conduits

3 Dimensional drawing

Outdoor

AC160JXADGH/AR

Units : mm / inches

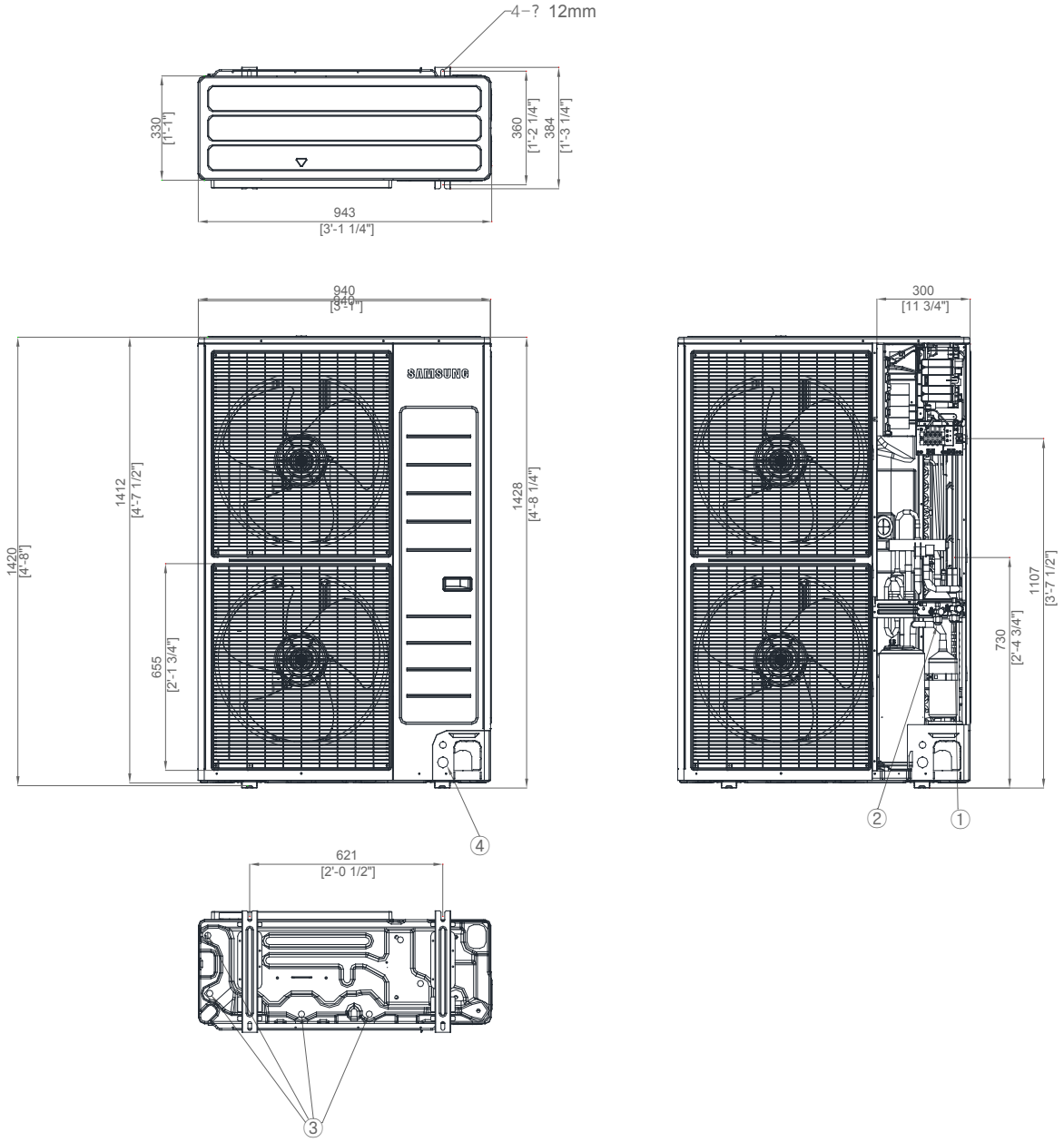
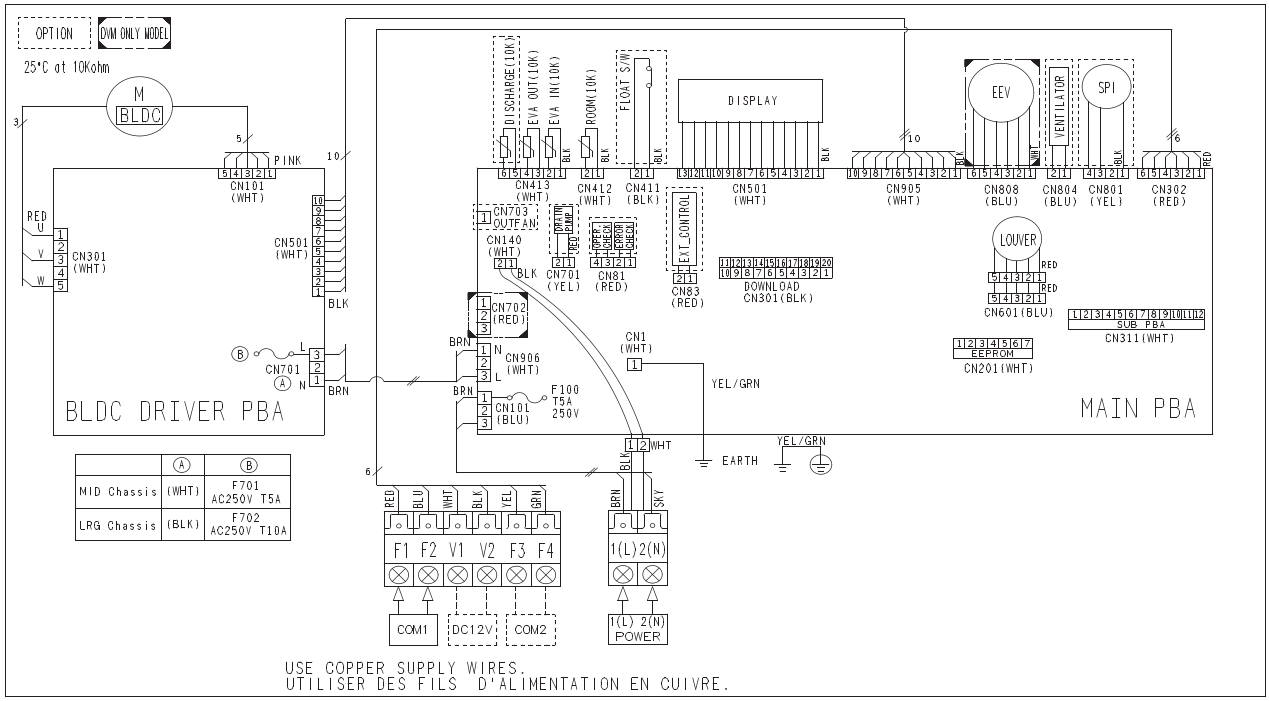


Table of descriptions	
1	Refrigerant gas pipe
2	Refrigerant liquid pipe
3	Drain Hole
4	Power & Comm. wiring conduits

4 Electrical wiring diagram

Indoor

AC140JNCDEH/AR, **AC160JNCDEH/**AR

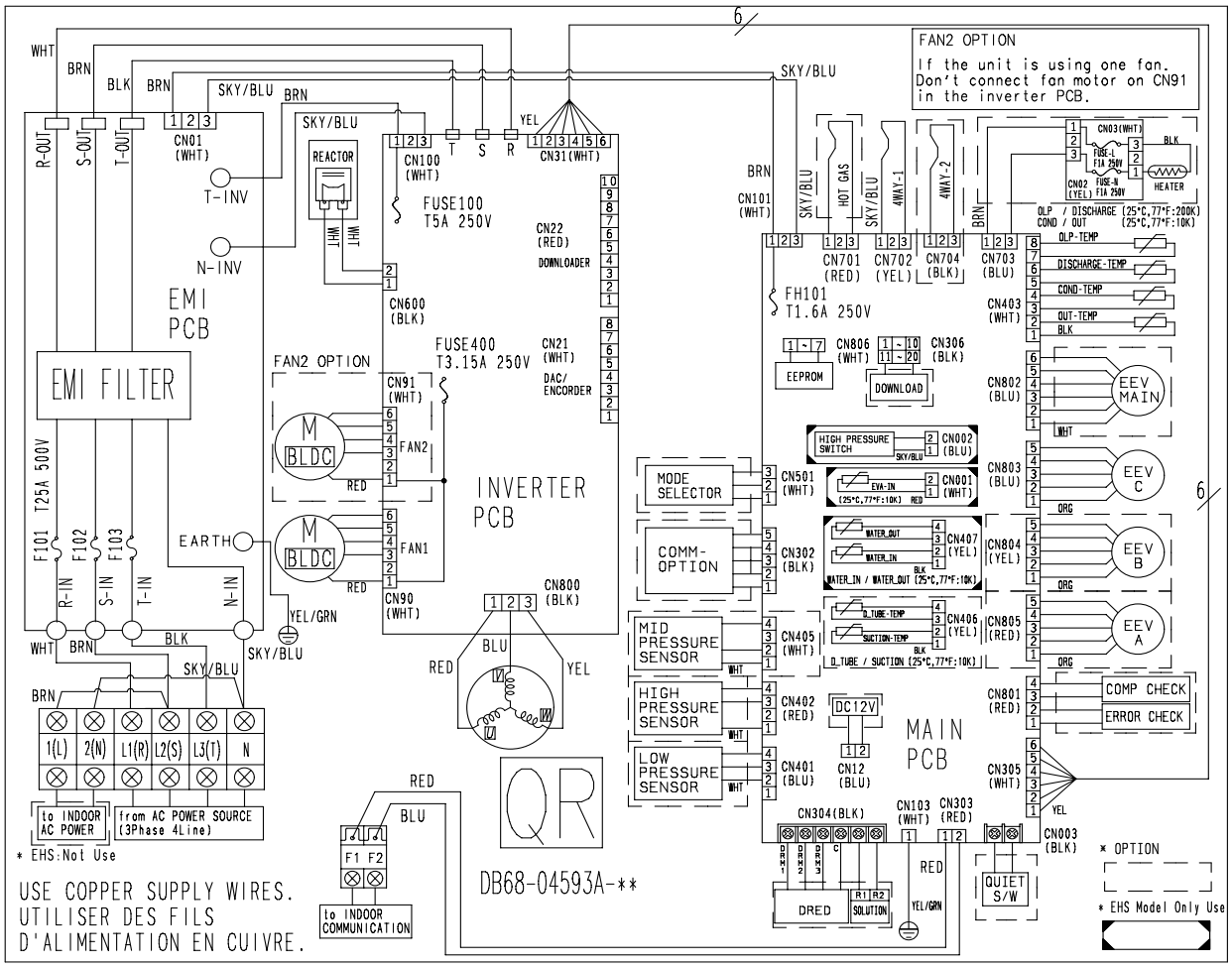


	Ⓐ	Ⓑ
MID Chassis	(WHT)	F701 AC250V T5A
LRG Chassis	(BLK)	F702 AC250V T10A

4 Electrical wiring diagram

Outdoor

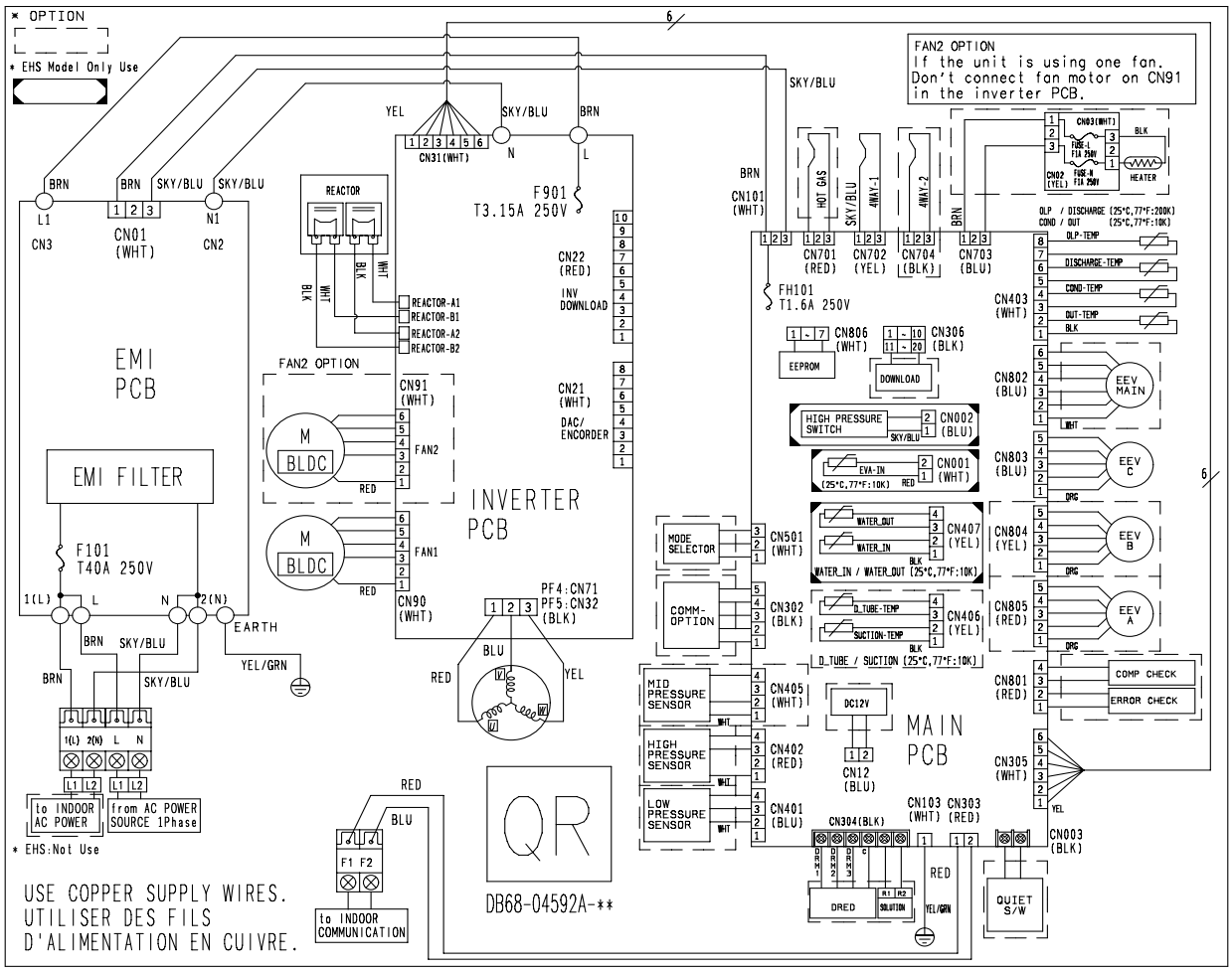
AC140JXADGH/AR



4 Electrical wiring diagram

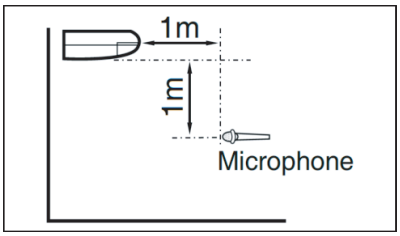
Outdoor

AC160JXADGH/AR



5 Sound pressure level

Indoor



Unit: dB(A)

Model	High	Low
AC140JNCDEH/AR (ODU : AC140JXADGH/AR)	46	38
AC160JNCDEH/AR (ODU : AC160JXADGH/AR)	50	43

Note

* Specifications may be subject to change without prior notice

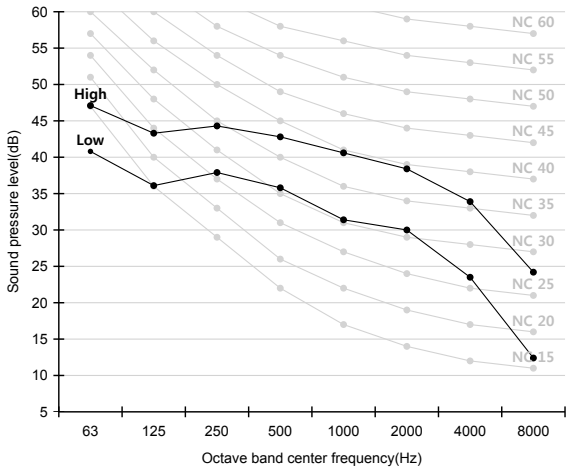
1) These operation values were obtained in an anechoic room.

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.

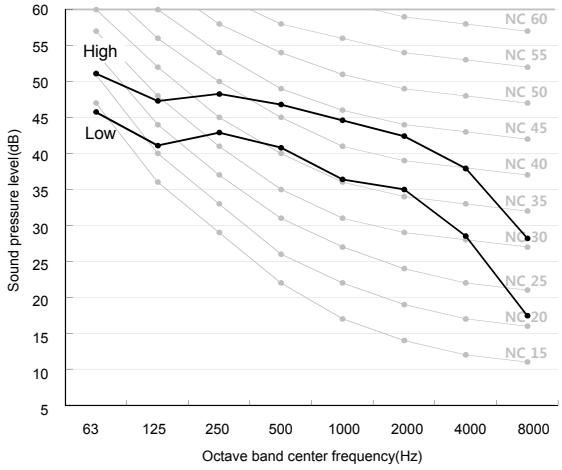
3) Operation sound level may differ depending on operation and ambient conditions.

NC curve

1) AC140JNCDEH/AR (ODU : AC140JXADGH/AR)

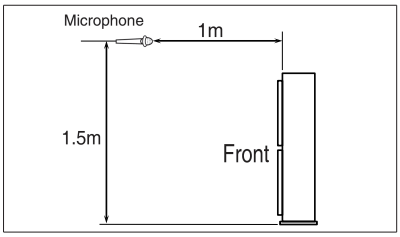


2) AC160JNCDEH/AR (ODU : AC160JXADGH/AR)



5 Sound pressure level

Outdoor



Unit: dB(A)

Model	Cooling	Heating
AC140JXADGH/AR (IDU : AC140JNCDEH/AR)	53	54
AC160JXADGH/AR (IDU : AC160JNCDEH/AR)	55	57

Note

* Specifications may be subject to change without prior notice

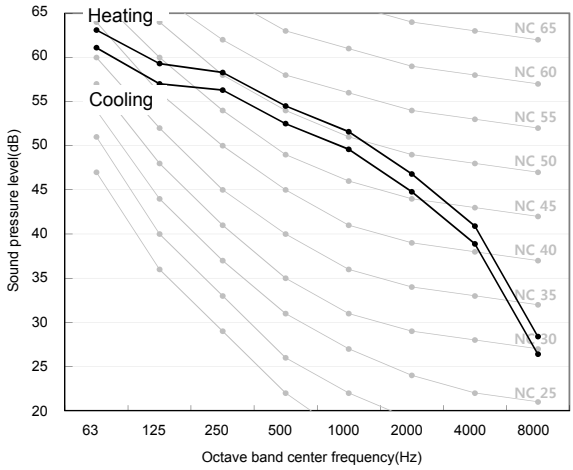
1) These operation values were obtained in an anechoic room.

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.

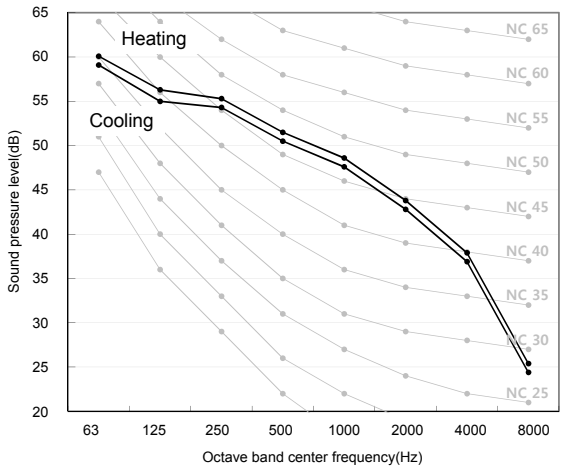
3) Operation sound level may differ depending on operation and ambient conditions.

NC curve

1) AC140JXADGH/AR (IDU : AC140JNCDEH/AR)



2) AC160JXADGH/AR (IDU : AC160JNCDEH/AR)



6 Sound power level

Indoor

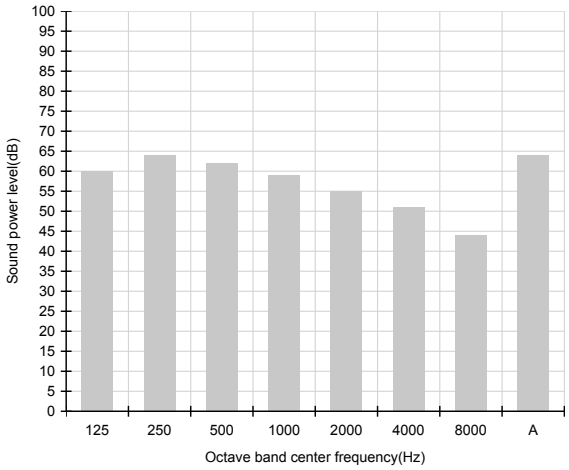
Note

* Specifications may be subject to change
  1) dBA = A-weighted sound power level.
  2) Reference power : 1pW.
  3) Measured according to ISO 3741.

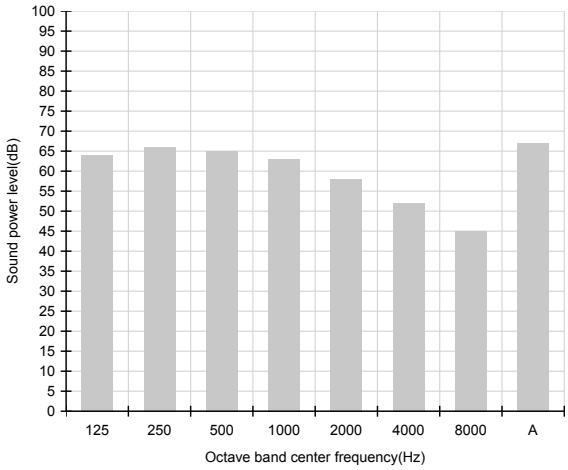
Unit: dB(A)

Model	Power
AC140JNCDEH/AR (ODU : AC140JXADGH/AR)	64
AC160JNCDEH/AR (ODU : AC160JXADGH/AR)	68

1) AC140JNCDEH/AR (ODU : AC140JXADGH/AR)



2) AC160JNCDEH/AR (ODU : AC160JXADGH/AR)



6 Sound power level

Outdoor

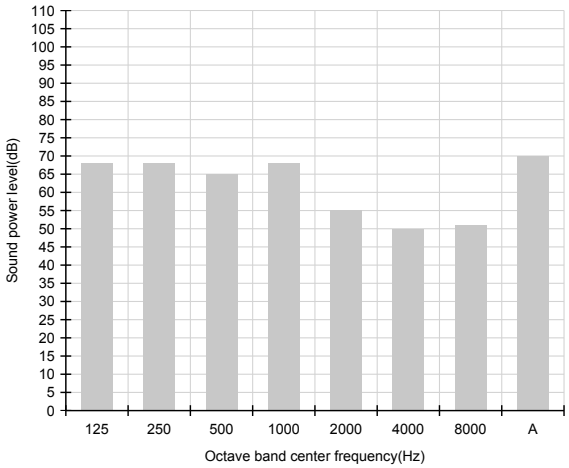
Note

* Specifications may be subject to change
  1) dBA = A-weighted sound power level.
  2) Reference power : 1pW.
  3) Measured according to ISO 3741.

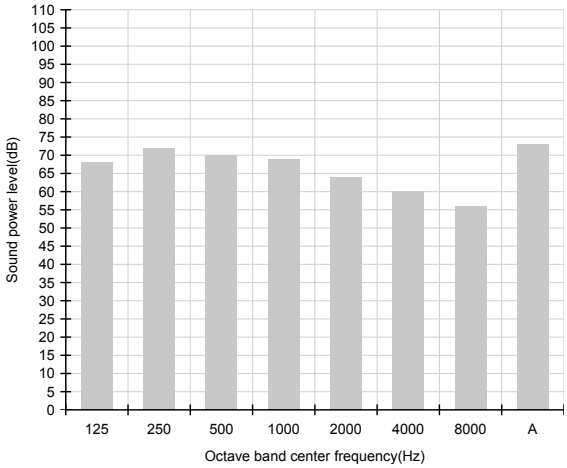
Unit: dB(A)

Model	Power
AC140JXADGH/AR (IDU : AC140JNCDEH/AR)	70
AC160JXADGH/AR (IDU : AC160JNCDEH/AR)	73

1) AC140JXADGH/AR (IDU : AC140JNCDEH/AR)



2) AC160JXADGH/AR (IDU : AC160JNCDEH/AR)

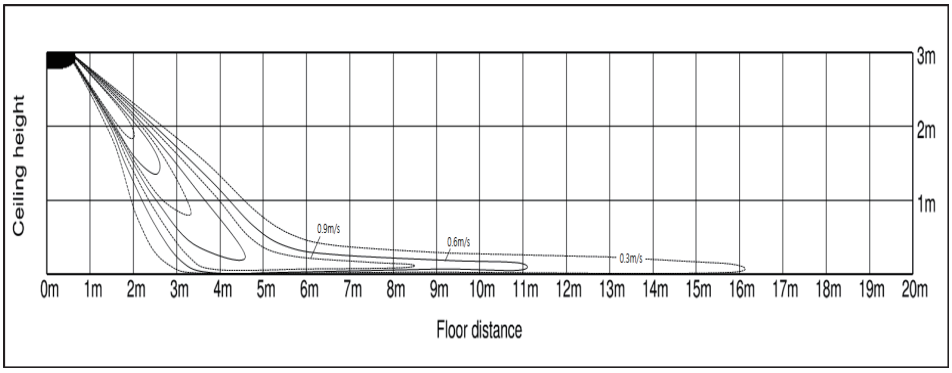


Temperature and air flow distribution

AC140JNCDEH/AR

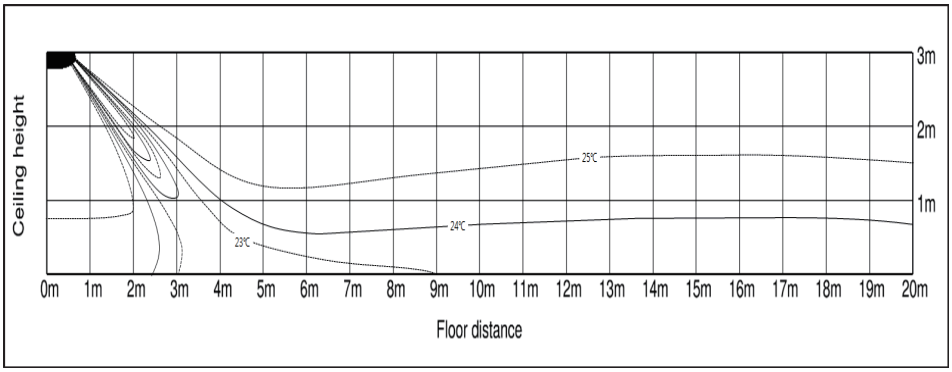
(1) Cooling air velocity distribution

Discharge angle : 32º



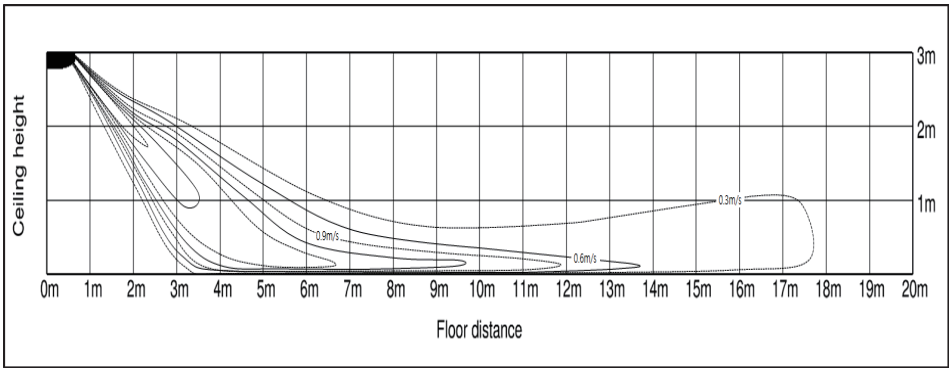
(2) Cooling temperature distribution

Discharge angle : 32º



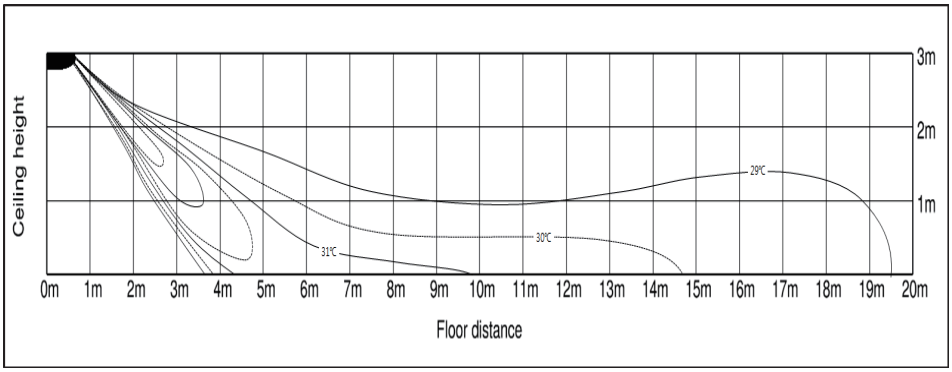
(3) Heating air velocity distribution

Discharge angle : 32º



(4) Heating temperature distribution

Discharge angle : 32º

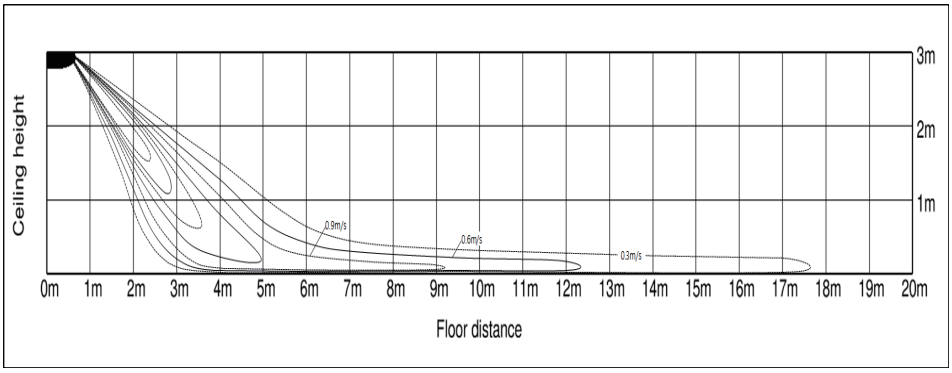


7 Temperature and air flow distribution

AC160JNCDEH/AR

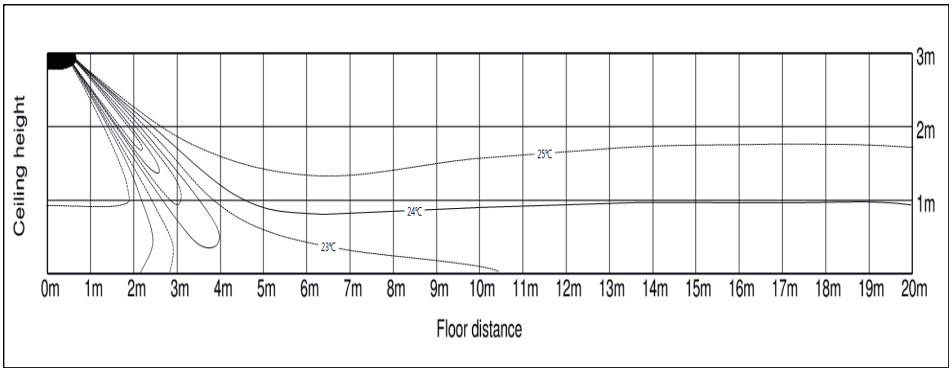
(1) Cooling air velocity distribution

Discharge angle : 32º



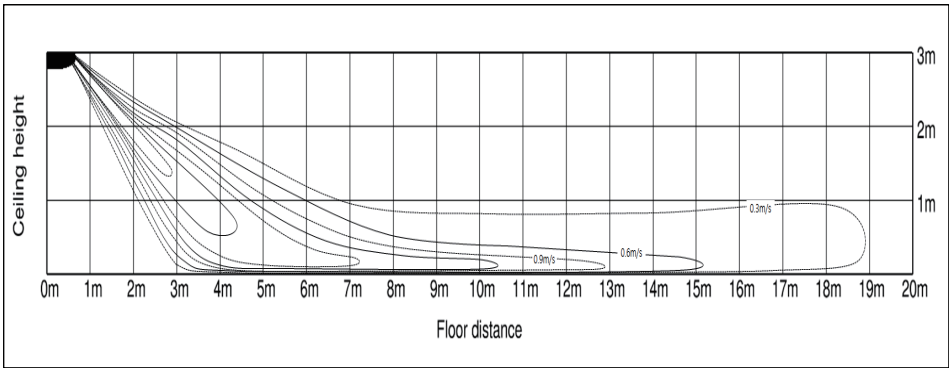
(2) Cooling temperature distribution

Discharge angle : 32º



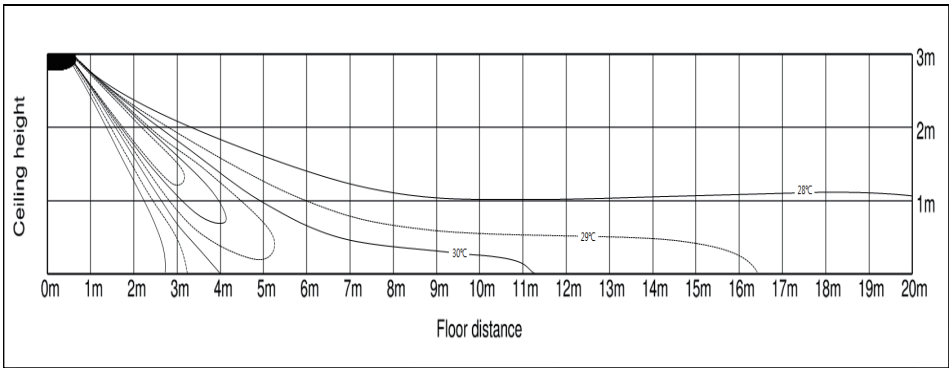
(3) Heating air velocity distribution

Discharge angle : 32º



(4) Heating temperature distribution

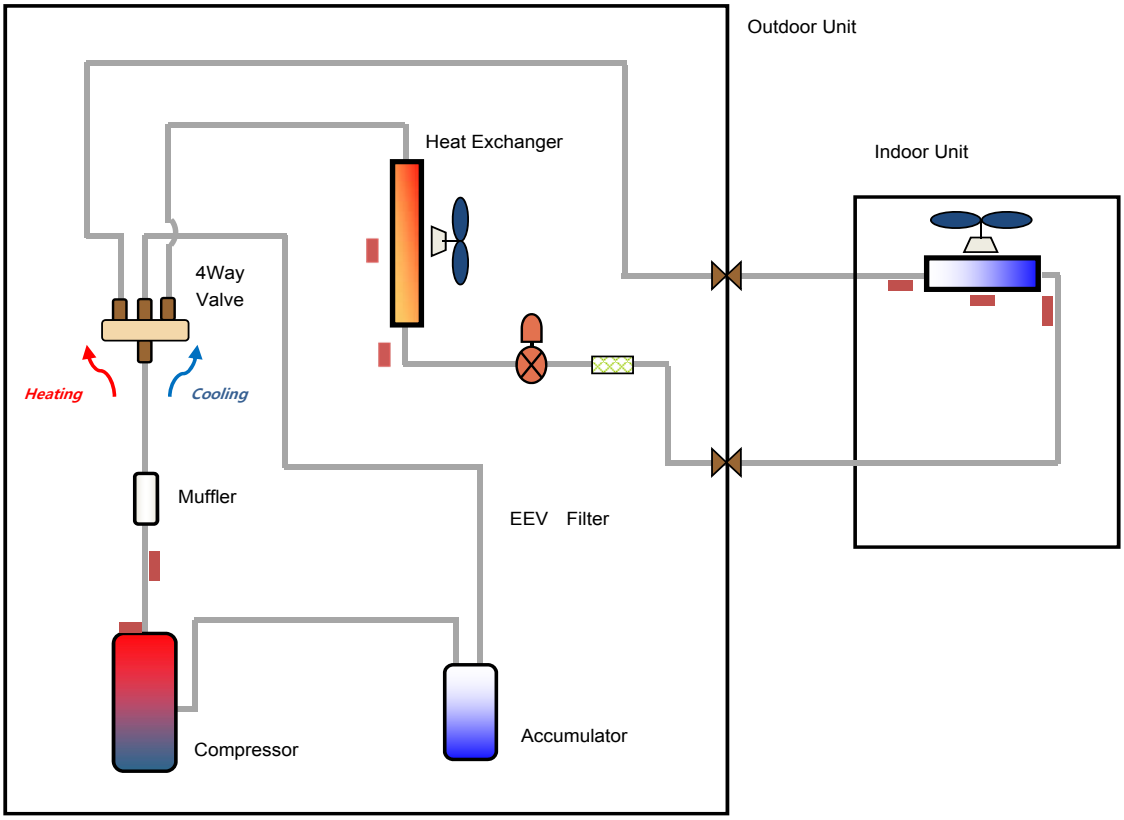
Discharge angle : 32º



8 Cycle diagram

Outdoor

AC140JXADGH/AR, **AC160JXADGH/**AR



Category		Symbol	Description
Compressor			Rotary Inveter Compressor
Heat Exchanger			Condensing/Evaporating unit(FMC)
Accumulator			Accumulator
Filter			Filter
Valve	Expansion		Electronic Expansion Valve(EEV)
	Reversing		4 Way valve (Reversing valve)
	Service		Service valve
Sensor	Temperature		Pipe/Air Temperature sensor

AC140JNCDEH/AR + AC140JXADGH/AR

Cooling

Level Difference (m)	Pipe Length (m)														
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
30	-	-	-	-	-	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
25	-	-	-	-	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
20	-	-	-	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
15	-	-	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
10	-	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
5	1.00	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
0	1.00	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
-5	1.00	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.89	0.88	0.87	0.85	0.84	0.83	0.82
-10	-	0.97	0.97	0.95	0.94	0.93	0.91	0.90	0.89	0.88	0.86	0.85	0.84	0.83	0.81
-15	-	-	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82	0.81
-20	-	-	-	0.94	0.93	0.92	0.91	0.89	0.88	0.87	0.85	0.84	0.83	0.82	0.81
-25	-	-	-	-	0.93	0.91	0.90	0.89	0.88	0.86	0.85	0.84	0.83	0.81	0.80
-30	-	-	-	-	-	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82	0.81	0.80

Heating

Level Difference (m)	Pipe Length (m)														
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
30	-	-	-	-	-	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
25	-	-	-	-	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
20	-	-	-	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
15	-	-	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
10	-	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
5	1.00	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
0	1.00	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
-5	1.00	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
-10	-	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
-15	-	-	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
-20	-	-	-	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
-25	-	-	-	-	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
-30	-	-	-	-	-	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82

AC160JNCDEH/AR + AC160JXADGH/AR

Cooling

Level Difference (m)	Pipe Length (m)														
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
30	-	-	-	-	-	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
25	-	-	-	-	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
20	-	-	-	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
15	-	-	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
10	-	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
5	1.00	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
0	1.00	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
-5	1.00	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.89	0.88	0.87	0.85	0.84	0.83	0.82
-10	-	0.97	0.97	0.95	0.94	0.93	0.91	0.90	0.89	0.88	0.86	0.85	0.84	0.83	0.81
-15	-	-	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82	0.81
-20	-	-	-	0.94	0.93	0.92	0.91	0.89	0.88	0.87	0.85	0.84	0.83	0.82	0.81
-25	-	-	-	-	0.93	0.91	0.90	0.89	0.88	0.86	0.85	0.84	0.83	0.81	0.80
-30	-	-	-	-	-	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82	0.81	0.80

Heating

Level Difference (m)	Pipe Length (m)														
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
30	-	-	-	-	-	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
25	-	-	-	-	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
20	-	-	-	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
15	-	-	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
10	-	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
5	1.00	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
0	1.00	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
-5	1.00	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
-10	-	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
-15	-	-	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
-20	-	-	-	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
-25	-	-	-	-	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82
-30	-	-	-	-	-	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82

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