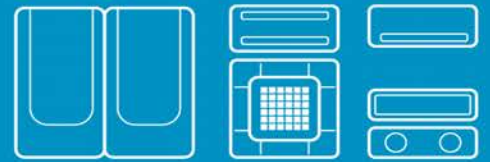


# SINGLE

## Technical Data Book

Multi-position AHU for North America (R410A, 60Hz, H/P)



Model : AC\*\*\*KNZDCH/AA (IDU)  
AC\*\*\*JXADCH/AA (ODU)

# History

Version	Modification	Date	Remark
Ver.0.0	Release SINGLE Multi-position AHU Pre-TDB for NA (R410A, 60Hz, HP)	16.03.02.	Preliminary Ver.
Ver.1.0	Release SINGLE Multi-position AHU TDB for NA (R410A, 60Hz, HP)	16.03.22.	Final Ver.
Ver.1.1	Modification for '2. Specification'. (COP: BTU/h-W → W/W)	16.04.21.	
Ver.1.2	Add the 54K model	16.04.28.	
Ver.1.3	Modification for Operating Temp. Range, Capacity table, Cycle diagram.	16.10.10.	
Ver.1.4	Revised Compressor Oil type of outdoor unit	18.10.30.	

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# 1 Nomenclature

## Indoor Units

### Model Names

<b>AC</b>	<b>036</b>	<b>K</b>	<b>N</b>	<b>Z</b>	<b>D</b>	<b>C</b>	<b>H</b>	/	<b>AA</b>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

### (1) Classification

AC	SINGLE
----	--------

### (2) Capacity

x 1000 Btu/h (3 digits)
-------------------------

### (3) Version

F	2013
H	2014
J	2015
K	2016
L	2017

### (4) Product Type

N	Indoor Unit (NASA)
B	Indoor Unit (Non-NASA)

### (5) Feature1

4	4Way Cassette S / 360 Cassette
C	Ceiling
L	LSP Duct
M	MSP Duct
H	HSP Duct
Z	Multi-position AHU

### (6) Feature2

F	Flagship
P	Premium
D	Deluxe
S	Standard

### (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)

# 1 Nomenclature

## Outdoor Units

### Model Names

<b>AC</b>	<b>036</b>	<b>J</b>	<b>X</b>	<b>A</b>	<b>D</b>	<b>C</b>	<b>H</b>	/	<b>AA</b>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

### (1) Classification

AC	SINGLE
----	--------

### (2) Capacity

x 1000 Btu/h (3 digits)
-------------------------

### (3) Version

F	2013
H	2014
J	2015
K	2016
L	2017

### (4) Product Type

X	Outdoor Unit (NASA)
C	Outdoor Unit (Non-NASA)

### (5) Feature1

A	Inv+Side+General Temp
S	Inv+Side+Low Temp
Q	Inv+Side+Tropical Temp
R	Non Inv+Side+Tropical Temp
4	4Way Cassette only
M	MSP Duct only

### (6) Feature2

D	DELUXE
C	DELUXE+Low Temp.
T	DELUXE+TROPICAL
R	PREMIUM+TROPICAL

### (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

## Multi-position AHU

Type				Multi-position AHU	Multi-position AHU		
Model Name	Indoor Unit			AC018KNZDCH/AA	AC024KNZDCH/AA		
	Outdoor Unit			AC018JXADCH/AA	AC024JXADCH/AA		
System	Mode			-	HEAT PUMP		
	Capacity (Nominal)	Cooling (MIN/STD/MAX)		Btu/h	5,000 / 18,000 / 21,000	7,000 / 24,000 / 27,000	
				kW	1.46 / 5.28 / 6.15	2.05 / 7.03 / 7.91	
				USRT	0.42 / 1.50 / 1.75	0.58 / 2.00 / 2.25	
		Heating (MIN/STD/MAX)		Btu/h	4,400 / 20,000 / 24,000	6,700 / 27,000 / 29,000	
				kW	1.29 / 5.86 / 7.03	1.96 / 7.91 / 8.50	
				USRT	0.37 / 1.67 / 2.00	0.56 / 2.25 / 2.42	
	Power	Power Input (Nominal)	Cooling (Min / Std / Max)		kW	0.35 / 1.60 / 2.30	
			Heating (Min / Std / Max)			0.51 / 2.64 / 3.15	
		Current Input (Nominal)	Cooling (Min / Std / Max)		A	2.4 / 7.1 / 9.6	
			Heating (Min / Std / Max)			3.6 / 11.6 / 12.8	
		MCA			A	9.40	
	MOP			A	15		
	Energy Efficiency	EER (Nominal Cooling)			Btu/h-W	11.25	
		COP (Nominal Heating)			W/W	2.93	
		Energy Grade			Energy Grade (C)	SEER 20.1	
					Energy Grade (H)	HSPF 10.5	
	Piping Connections	Liquid Pipe		Φ, mm	6.35	6.35	
				Φ, inch	1/4"	1/4"	
		Gas Pipe		Φ, mm	12.7	15.88	
				Φ, inch	1/2"	5/8"	
		Installation Limitation	Max. Length (Outdoor to indoor)		m	30	50
					ft	98.4	164
			Max. Height (Between ID/OD)		m	20	30
					ft	65.6	98.4
	Refrigerant	Type			-	R410A	
		Factory Charging			kg	1.3	
					lbs	2.87	
Indoor Unit	Power Supply			Φ, #, V, Hz	1, 2, 208-230, 60		
	Fan	Type		-	Sirocco (ECM)		
		Motor	Output	W	290		
		Number of Unit		EA	1		
		Air Flow Rate		High / Mid / Low	CFM	600.4 / 529.7 / 494.4	
		External Static Pressure			Min / Std / Max	in Wg	0.0 / 0.2 / 0.8
		Drain Pipe				Φ, inch	FPT 3/4"
	Sound Pressure		High / Mid / Low	dB(A)	38 / 35 / 32		
	Net Weight				kg	44.5	
	External Dimension	Shipping Weight		lbs	98.11		
				kg	49.0		
		Net Dimensions (WxHxD)		lbs	108.03		
				mm	445 x 1,092 x 533		
		Shipping Dimensions (WxHxD)		mm	445 x 1,092 x 533		
				inch	17.50 x 43.00 x 21.00		
	Additional Accessories			Air Filter Base (option, for vertical installation)	VFB-1 (MERV 8)		
	Heater kit (option, see NOTE 3)			-	VHK-103A VHK-105A		
	Outdoor Unit	Power Supply			Φ, #, V, Hz	1, 2, 208-230, 60	
		Compressor	Type		-	Twin BLDC Rotary	
			Model		-	UG4T150LNBEQ	
			Output		kW	1.42	
			Oil	Type	-	POE	
		Fan	Air Flow Rate	Cooling / Heating	CFM	1,550	
		Sound	Sound Pressure		dB(A)	48 / 48	
			Cooling / Heating			50 / 50	
		External Dimension	Net Weight		kg	45.0	
					lbs	99.2	
			Shipping Weight		kg	48.0	
lbs					105.8		
Net Dimensions (WxHxD)			mm	880 x 638 x 310			
			inch	34.6 x 25.1 x 12.2			
Shipping Dimensions (WxHxD)		mm	1,023 x 730 x 413				
		inch	40.3 x 28.7 x 16.3				
Operating Temp. Range		Cooling		°F	-0.4 ~ 114.8		
		Heating		°F	-4.0 ~ 75.2		

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

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

0ft) ; Cooling : Indoor temp. 80°F DB, 67°F WB / Outdoor temp. 95°F DB, 75°F WB . Heating : Indoor temp. 70°F DB, 60°F WB / Outdoor temp. 47°F DB, 43°F WB

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

3)VHK-03/05/10A: 3/5/10[kW] supplemental electric heat kit.

4)These products contain R410A which is fluorinated greenhouse gas.

# 2 Specifications

## Multi-position AHU

Type				Multi-position AHU	Multi-position AHU		
Model Name	Indoor Unit			AC030KNZDCH/AA	AC036KNZDCH/AA		
	Outdoor Unit			AC030JXADCH/AA	AC036JXADCH/AA		
System	Mode			-	HEAT PUMP		
	Capacity (Nominal)	Cooling (MIN/STD/MAX)		Btu/h	10,000 / 30,000 / 33,000	14,000 / 36,000 / 39,000	
				kW	2.93 / 8.79 / 9.67	4.10 / 10.55 / 11.43	
				USRT	0.83 / 2.50 / 2.75	1.17 / 3.00 / 3.25	
		Heating (MIN/STD/MAX)		Btu/h	9,000 / 32,000 / 36,000	12,000 / 40,000 / 43,000	
				kW	2.64 / 9.38 / 10.55	3.52 / 11.72 / 12.60	
				USRT	0.75 / 2.67 / 3.00	1.00 / 3.33 / 3.58	
	Power	Power Input (Nominal)	Cooling (Min / Std / Max)	kW	0.82 / 2.95 / 3.67	0.98 / 3.16 / 3.45	
			Heating (Min / Std / Max)		0.75 / 2.82 / 4.35	0.81 / 3.62 / 4.70	
		Current Input (Nominal)	Cooling (Min / Std / Max)	A	4.5 / 13.0 / 17.2	5.1 / 14.1 / 18.2	
			Heating (Min / Std / Max)		4.1 / 12.3 / 20.2	4.5 / 15.8 / 23.0	
		MCA			A	21.71	26.36
	MOP			A	35	40	
	Energy Efficiency	EER (Nominal Cooling)		Btu/h-W	10.17	11.39	
		COP (Nominal Heating)		W/W	3.33	3.24	
		Energy Grade		Energy Grade (C)	SEER 19.6	SEER 19.0	
				Energy Grade (H)	HSPF 10.4	HSPF 10.2	
	Piping Connections	Liquid Pipe		Φ, mm	9.52	9.52	
				Φ, inch	3/8"	3/8"	
		Gas Pipe		Φ, mm	15.88	15.88	
				Φ, inch	5/8"	5/8"	
		Installation Limitation	Max. Length (Outdoor to indoor)		m	50	75
					ft	164	246.1
			Max. Height (Between ID/OD)		m	30	30
					ft	98.4	98.4
	Refrigerant	Type		-	R410A	R410A	
		Factory Charging		kg	2.6	2.8	
lbs				5.73	6.17		
Indoor Unit	Power Supply			Φ, #, V, Hz	1, 2, 208-230, 60	1, 2, 208-230, 60	
	Fan	Type		-	Sirocco (ECM)	Sirocco (ECM)	
		Motor	Output	W	410	410	
		Number of Unit		EA	1	1	
		Air Flow Rate	High / Mid / Low		CFM	1,006.5 / 918.2 / 847.6	1,165.4 / 1,041.8 / 882.9
					CMM	28.5 / 26.0 / 24.0	33.0 / 29.5 / 25.0
	External Static Pressure		Min / Std / Max	In Wg	0.0 / 0.24 / 1.0	0.0 / 0.24 / 1.0	
	Drain	Drain Pipe		Φ, inch	FPT 3/4"	FPT 3/4"	
	Sound	Sound Pressure	High / Mid / Low	dB(A)	41 / 38 / 35	42 / 39 / 36	
			External Dimension		kg	56.0	56.0
	Additional Accessories	Net Weight		lbs	123.46	123.46	
		Shipping Weight		kg	62.0	62.0	
				lbs	136.69	136.69	
		Net Dimensions (WxHxD)		mm	533 x 1,219 x 533	533 x 1,219 x 533	
				inch	21.00 x 48.00 x 21.00	21.00 x 48.00 x 21.00	
Shipping Dimensions (WxHxD)		mm	590 x 1,305 x 665	590 x 1,305 x 665			
		inch	23.25 x 51.50 x 26.25	23.25 x 51.50 x 26.25			
Air Filter Base (option, for vertical installation)				-	VFB-2 (MERV 8)	VFB-2 (MERV 8)	
Heater kit (option, see NOTE 3)				-	VHK-205A VHK-210A	VHK-205A VHK-210A	
Outdoor Unit	Power Supply			Φ, #, V, Hz	1, 2, 208-230, 60	1, 2, 208-230, 60	
	Compressor	Type		-	Twin BLDC Rotary	Twin BLDC Rotary	
		Model		-	UG8T300LNBJU	UG5T450FUEJX	
		Output		kW	2.82	4.12	
	Oil	Type		-	PVE	PVE	
		Air Flow Rate	Cooling	CFM	2,220	3,040	
	Sound	Sound Pressure	Cooling / Heating	dB(A)	50 / 52	49 / 51	
			External Dimension		kg	70.0	88.0
	Additional Accessories	Net Weight		lbs	154.3	194.0	
				kg	74.0	98.0	
		Shipping Weight		lbs	163.1	216.0	
				mm	940 x 998 x 330	940 x 1,210 x 330	
		Net Dimensions (WxHxD)		inch	37.0 x 39.3 x 13.0	37.0 x 47.6 x 13.0	
				mm	995 x 1,096 x 426	995 x 1,388 x 426	
	Shipping Dimensions (WxHxD)		inch	39.2 x 43.1 x 16.8	39.2 x 54.6 x 16.8		
			Operating Temp. Range		Cooling	°F	-0.4 ~ 114.8
			Heating	°F	-4.0 ~ 75.2	-4.0 ~ 75.2	

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

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

. Cooling : Indoor temp. 80°F DB, 67°F WB / Outdoor temp. 95°F DB, 75°F WB . Heating : Indoor temp. 70°F DB, 60°F WB / Outdoor temp. 47°F DB, 43°F WB

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

3) VHK-\*03/05/10A: 3/5/10[kW] supplemental electric heat kit.

4) These products contain R410A which is fluorinated greenhouse gas.

# 2 Specifications

## Multi-position AHU

Type				Multi-position AHU	Multi-position AHU		
Model Name	Indoor Unit			AC042KNZDCH/AA	AC048KNZDCH/AA		
	Outdoor Unit			AC042JXADCH/AA	AC048JXADCH/AA		
System	Mode			-	HEAT PUMP		
	Capacity (Nominal)	Cooling (MIN/STD/MAX)		Btu/h	17,000 / 42,000 / 44,000	19,000 / 48,000 / 50,000	
				kW	4.98 / 12.31 / 12.90	5.57 / 14.07 / 14.65	
				USRT	1.42 / 3.50 / 3.67	1.58 / 4.00 / 4.17	
		Heating (MIN/STD/MAX)		Btu/h	14,000 / 47,000 / 49,000	16,000 / 53,000 / 55,000	
				kW	4.10 / 13.77 / 14.36	4.69 / 15.53 / 16.12	
				USRT	1.17 / 3.92 / 4.08	1.33 / 4.42 / 4.58	
	Power	Power Input (Nominal)	Cooling (Min / Std / Max)		kW	1.15 / 4.14 / 4.46	
			Heating (Min / Std / Max)			1.28 / 4.95 / 5.60	
		Current Input (Nominal)	Cooling (Min / Std / Max)		A	5.6 / 18.0 / 21.2	
			Heating (Min / Std / Max)			7.9 / 21.3 / 23.0	
		MCA			A	26.36	
	MOP			A	40		
	Energy Efficiency	EER (Nominal Cooling)		Btu/h-W	10.14	9.60	
		COP (Nominal Heating)		W/W	3.26	3.14	
		Energy Grade		Energy Grade (C)	SEER 18.4	SEER 18.0	
				Energy Grade (H)	HSPF 9.6	HSPF 9.7	
	Piping Connections	Liquid Pipe		Φ, mm	9.52	9.52	
				Φ, inch	3/8"	3/8"	
		Gas Pipe		Φ, mm	15.88	15.88	
				Φ, inch	5/8"	5/8"	
		Installation Limitation	Max. Length (Outdoor to indoor)		m	75	75
					ft	246.1	246.1
			Max. Height (Between ID/OD)		m	30	30
					ft	98.4	98.4
	Refrigerant	Type		-	R410A	R410A	
		Factory Charging		kg	2.8	2.8	
				lbs	6.17	6.17	
Indoor Unit	Power Supply			Φ, #, V, Hz	1, 2, 208-230, 60	1, 2, 208-230, 60	
	Fan	Type		-	Sirocco (ECM)	Sirocco (ECM)	
		Motor	Output	W	410	590	
		Number of Unit		EA	1	1	
		Air Flow Rate		High / Mid / Low	CFM	1,271.4 / 1,165.4 / 1,059.5	1,412.6 / 1,271.4 / 1,130.1
					CMM	36.0 / 33.0 / 30.0	40.0 / 36.0 / 32.0
		External Static Pressure		Min / Std / Max	In Wg	0.1 / 0.28 / 1.0	0.1 / 0.28 / 1.0
	Drain	Drain Pipe		Φ, inch	FPT 3/4"	FPT 3/4"	
	Sound	Sound Pressure	High / Mid / Low	dB(A)	42 / 39 / 36	43 / 41 / 38	
	External Dimension	Net Weight		kg	74.0	74.0	
				lbs	163.14	163.14	
		Shipping Weight		kg	80.0	80.0	
				lbs	176.37	176.37	
		Net Dimensions (WxHxD)		mm	622 x 1,492 x 553	622 x 1,492 x 553	
				inch	24.50 x 58.75 x 21.75	24.50 x 58.75 x 21.75	
	Shipping Dimensions (WxHxD)		mm	676 x 1,588 x 695	676 x 1,588 x 695		
			inch	26.50 x 62.50 x 27.25	26.50 x 62.50 x 27.25		
	Additional Accessories	Air Filter Base (option, for vertical installation)		-	VFB-3 (MERV 8)	VFB-3 (MERV 8)	
		Heater kit (option, see NOTE 3)		-	VHK-305A VHK-310A	VHK-305A VHK-310A	
	Outdoor Unit	Power Supply			Φ, #, V, Hz	1, 2, 208-230, 60	1, 2, 208-230, 60
		Compressor	Type		-	Twin BLDC Rotary	Twin BLDC Rotary
			Model		-	UG5T450FUEJX	UG5T450FUEJX
			Output		kW	4.12	4.12
			Oil	Type	-	PVE	PVE
		Fan	Air Flow Rate	Cooling	CFM	3,040	3,040
		Sound	Sound Pressure	Cooling / Heating	dB(A)	51 / 53	53 / 55
		External Dimension	Net Weight		kg	88.0	88.0
					lbs	194.0	194.0
Shipping Weight			kg	98.0	98.0		
			lbs	216.0	216.0		
Net Dimensions (WxHxD)			mm	940 x 1,210 x 330	940 x 1,210 x 330		
			inch	37.0 x 47.6 x 13.0	37.0 x 47.6 x 13.0		
Shipping Dimensions (WxHxD)		mm	995 x 1,388 x 426	995 x 1,388 x 426			
		inch	39.2 x 54.6 x 16.8	39.2 x 54.6 x 16.8			
Operating Temp. Range		Cooling		°F	-0.4 ~ 114.8	-0.4 ~ 114.8	
		Heating		°F	-4.0 ~ 75.2	-4.0 ~ 75.2	

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

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

. Cooling : Indoor temp. 80°F DB, 67°F WB / Outdoor temp. 95°F DB, 75°F WB . Heating : Indoor temp. 70°F DB, 60°F WB / Outdoor temp. 47°F DB, 43°F WB

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

3) VHK-\*03/05/10A: 3/5/10[kW] supplemental electric heat kit.

4) These products contain R410A which is fluorinated greenhouse gas.



# 2 Specifications

## Multi-position AHU

Type				Multi-position AHU			
Model Name		Indoor Unit		AC054KNZDCH/AA			
		Outdoor Unit		AC054KXADCH/AA			
System	Mode		-		HEAT PUMP		
	Capacity (Nominal)	Cooling (MIN/STD/MAX)		Btu/h	21,000 / 54,000 / 55,000		
				kW	6.15 / 15.83 / 16.12		
				USRT	1.75 / 4.50 / 4.58		
		Heating (MIN/STD/MAX)		Btu/h	21,000 / 60,000 / 62,000		
				kW	6.15 / 17.58 / 18.17		
				USRT	1.75 / 5.00 / 5.17		
	Power	Power Input (Nominal)	Cooling (Min / Std / Max)	kW	1.92 / 6.72 / 7.30		
			Heating (Min / Std / Max)		1.95 / 5.80 / 7.80		
		Current Input (Nominal)	Cooling (Min / Std / Max)	A	10.1 / 28.7 / 35.8		
			Heating (Min / Std / Max)		10.2 / 24.7 / 38.5		
		MCA			A	41.64	
		MOP			A	70	
	Energy Efficiency	EER (Nominal Cooling)		Btu/h-W	8.04		
		COP (Nominal Heating)		W/W	3.03		
		Energy Grade		Energy Grade (C)	SEER 17.1		
				Energy Grade (H)	HSPF 9.0		
	Piping Connections	Liquid Pipe		Φ, mm	9.52		
				Φ, inch	3/8"		
		Gas Pipe		Φ, mm	19.05		
				Φ, inch	3/4"		
		Installation Limitation	Max. Length (Outdoor to indoor)		m	75	
					ft	246.1	
			Max. Height (Between ID/OD)		m	30	
ft					98.4		
Refrigerant	Type		-	R410A			
	Factory Charging		kg	3.5			
			lbs	7.72			
Indoor Unit	Power Supply			Φ, #, V, Hz	1, 2, 208-230, 60		
	Fan	Type		-	Sirocco (ECM)		
		Motor	Output	W	590		
		Number of Unit		EA	1		
		Air Flow Rate	High / Mid / Low		CFM	1,889.4 / 1,500.9 / 1,342.0	
					CMM	53.5 / 42.5 / 38.0	
	External Static Pressure		Min / Std / Max	In Wg	0.1 / 0.28 / 1.0		
	Drain	Drain Pipe		Φ, inch	FPT 3/4"		
	Sound	Sound Pressure	High / Mid / Low	dB(A)	45 / 42 / 39		
	External Dimension	Net Weight		kg	74.0		
				lbs	163.14		
		Shipping Weight		kg	80.0		
				lbs	176.37		
		Net Dimensions (WxHxD)		mm	622 x 1,492 x 553		
inch				24.50 x 58.75 x 21.75			
Shipping Dimensions (WxHxD)		mm	676 x 1,588 x 695				
		inch	26.50 x 62.50 x 27.25				
Additional Accessories	Air Filter Base (option, for vertical installation)		-	VFB-3 (MERV 8)			
	Heater kit (option, see NOTE 3)		-	VHK-305A VHK-310A VHK-315A			
Outdoor Unit	Power Supply			Φ, #, V, Hz	1, 2, 208-230, 60		
	Compressor	Type		-	Twin BLDC Rotary		
		Model		-	UG5T450FXAJX		
		Output		kW	4.01		
		Oil	Type	-	POE		
	Fan	Air Flow Rate	Cooling	CFM	5160		
	Sound	Sound Pressure	Cooling / Heating	dB(A)	56 / 56		
	External Dimension	Net Weight		kg	96.0		
				lbs	211.6		
		Shipping Weight		kg	106.0		
				lbs	233.7		
		Net Dimensions (WxHxD)		mm	940 x 1420 x 330		
				inch	37.0 x 55.9 x 13.0		
	Shipping Dimensions (WxHxD)		mm	995 x 1598 x 426			
			inch	39.2 x 62.9 x 16.8			
	Operating Temp. Range	Cooling		°F	-0.4 ~ 114.8		
		Heating		°F	-4.0 ~ 75.2		

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

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

. Cooling : Indoor temp. 80°F DB, 67°F WB / Outdoor temp. 95°F DB, 75°F WB . Heating : Indoor temp. 70°F DB, 60°F WB / Outdoor temp. 47°F DB, 43°F WB

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

3) VHK-\*05/10/15A: 5/10/15[kW] supplemental electric heat kit.

4) These products contain R410A which is fluorinated greenhouse gas.

# 3 Capacity table

## Multi-position AHU

### AC018KNZDCH + AC018JXADCH

#### Cooling

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

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB / 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
-0.4	20.5	16.4	0.70	21.0	16.8	0.71	21.5	17.2	0.73	22.0	17.6	0.75	22.2	17.8	0.76	22.4	18.0	0.77	22.7	18.1	0.77
70.0	21.8	17.5	1.21	22.4	17.9	1.24	22.9	18.3	1.27	23.5	18.8	1.30	23.7	19.0	1.31	24.0	19.2	1.33	24.2	19.4	1.34
95.0	16.7	13.4	1.49	17.1	13.7	1.52	17.6	14.1	1.56	18.0	14.4	1.60	18.2	14.5	1.62	18.4	14.7	1.63	18.5	14.8	1.65
114.8	16.3	13.0	2.27	16.7	13.3	2.32	17.1	13.7	2.38	17.5	14.0	2.44	17.7	14.1	2.46	17.9	14.3	2.49	18.0	14.4	2.51

#### 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
-4.0	10.5	1.6	10.4	1.6	10.3	1.5	10.2	1.5	10.1	1.5	10.0	1.5
14.0	19.6	1.9	19.4	1.9	19.2	1.9	19.0	1.9	18.8	1.9	18.6	1.9
32.0	20.5	1.9	20.3	1.9	20.1	1.9	19.9	1.9	19.7	1.9	19.5	1.8
47.0	20.6	2.1	20.4	2.0	20.2	2.0	20.0	2.0	19.8	2.0	19.6	2.0
75.2	26.0	1.5	25.7	1.4	25.5	1.4	25.2	1.4	24.9	1.4	24.7	1.4

### AC024KNZDCH + AC024JXADCH

#### Cooling

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

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB / 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
-0.4	24.9	19.9	0.91	25.5	20.4	0.93	26.2	20.9	0.96	26.8	21.4	0.98	27.1	21.7	0.99	27.3	21.9	1.00	27.6	22.1	1.01
70.0	26.0	20.8	2.01	26.7	21.3	2.06	27.3	21.9	2.11	28.0	22.4	2.16	28.3	22.6	2.18	28.6	22.9	2.20	28.8	23.1	2.23
95.0	22.3	17.9	2.03	22.9	18.3	2.08	23.4	18.7	2.13	24.0	19.2	2.18	24.2	19.4	2.20	24.5	19.6	2.22	24.7	19.8	2.25
114.8	21.8	17.4	2.80	22.3	17.8	2.87	22.8	18.3	2.94	23.4	18.7	3.01	23.6	18.9	3.04	23.9	19.1	3.07	24.1	19.3	3.10

#### 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
-4.0	17.3	2.7	17.1	2.7	17.0	2.7	16.8	2.7	16.6	2.6	16.5	2.6
14.0	26.3	3.6	26.0	3.5	25.8	3.5	25.5	3.5	25.2	3.4	25.0	3.4
32.0	27.3	3.2	27.0	3.2	26.8	3.2	26.5	3.2	26.2	3.1	26.0	3.1
47.0	27.8	2.7	27.5	2.7	27.3	2.7	27.0	2.6	26.7	2.6	26.5	2.6
75.2	34.5	2.7	34.2	2.6	33.8	2.6	33.5	2.6	33.2	2.6	32.8	2.5

\* Capacities are based on following conditions; Refrigerant pipe length : 24.6ft / Level difference : 0ft

# 3 Capacity table

## Multi-position AHU

### AC030KNZDCH + AC030JXADCH

#### Cooling

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

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB / 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
-0.4	32.4	26.0	1.75	33.2	26.6	1.79	34.1	27.2	1.83	34.9	27.9	1.88	35.2	28.2	1.90	35.6	28.5	1.92	36.0	28.8	1.94
70.0	30.2	24.2	2.71	31.0	24.8	2.78	31.7	25.4	2.85	32.5	26.0	2.92	32.8	26.3	2.95	33.2	26.5	2.98	33.5	26.8	3.01
95.0	27.9	22.3	2.74	28.6	22.9	2.81	29.3	23.4	2.88	30.0	24.0	2.95	30.3	24.2	2.98	30.6	24.5	3.01	30.9	24.7	3.04
114.8	23.8	19.0	3.11	24.4	19.5	3.18	25.0	20.0	3.26	25.6	20.5	3.34	25.9	20.7	3.37	26.1	20.9	3.41	26.4	21.1	3.44

#### 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		
-4.0	23.1	3.0	22.9	2.9	22.6	2.9	22.4	2.9	22.2	2.9	22.0	2.8		
14.0	32.5	4.6	32.1	4.5	31.8	4.5	31.5	4.5	31.2	4.4	30.9	4.4		
32.0	33.2	3.2	32.8	3.2	32.5	3.2	32.2	3.2	31.9	3.1	31.6	3.1		
47.0	33.0	2.9	32.6	2.9	32.3	2.8	32.0	2.8	31.7	2.8	31.4	2.8		
75.2	41.4	2.9	41.0	2.9	40.6	2.8	40.2	2.8	39.8	2.8	39.4	2.8		

### AC036KNZDCH + AC036JXADCH

#### Cooling

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

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB / 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
-0.4	34.9	27.9	2.37	35.7	28.6	2.43	36.6	29.3	2.49	37.5	30.0	2.55	37.9	30.3	2.58	38.3	30.6	2.60	38.6	30.9	2.63
70.0	35.4	28.3	2.49	36.3	29.0	2.55	37.2	29.7	2.62	38.1	30.5	2.68	38.5	30.8	2.71	38.9	31.1	2.73	39.3	31.4	2.76
95.0	33.5	26.8	2.94	34.3	27.4	3.01	35.1	28.1	3.08	36.0	28.8	3.16	36.4	29.1	3.19	36.7	29.4	3.22	37.1	29.7	3.26
114.8	25.3	20.2	3.02	25.9	20.7	3.10	26.5	21.2	3.17	27.2	21.8	3.25	27.5	22.0	3.28	27.7	22.2	3.32	28.0	22.4	3.35

#### 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		
-4.0	28.3	4.5	28.1	4.4	27.8	4.4	27.5	4.4	27.2	4.3	27.0	4.3		
14.0	39.2	5.0	38.8	4.9	38.4	4.9	38.0	4.9	37.6	4.8	37.2	4.8		
32.0	40.4	4.3	40.0	4.3	39.6	4.3	39.2	4.2	38.8	4.2	38.4	4.1		
47.0	41.2	3.7	40.8	3.7	40.4	3.7	40.0	3.6	39.6	3.6	39.2	3.5		
75.2	47.6	3.2	47.1	3.2	46.7	3.2	46.2	3.2	45.7	3.1	45.3	3.1		

\* Capacities are based on following conditions; Refrigerant pipe length : 24.6ft / Level difference : 0ft

# 3 Capacity table

## Multi-position AHU

### AC042KNZDCH + AC042JXADCH

#### Cooling

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

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB / 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
-0.4	41.4	33.1	3.02	42.4	33.9	3.10	43.4	34.7	3.17	44.5	35.6	3.25	44.9	36.0	3.28	45.4	36.3	3.32	45.8	36.7	3.35
70.0	40.2	32.1	3.16	41.2	32.9	3.24	42.2	33.7	3.32	43.2	34.6	3.40	43.6	34.9	3.43	44.1	35.3	3.47	44.5	35.6	3.50
95.0	39.0	31.2	3.85	40.0	32.0	3.94	41.0	32.8	4.04	42.0	33.6	4.14	42.4	33.9	4.18	42.8	34.3	4.22	43.3	34.6	4.27
114.8	28.0	22.4	3.92	28.7	22.9	4.02	29.4	23.5	4.12	30.1	24.1	4.22	30.4	24.3	4.26	30.7	24.6	4.30	31.0	24.8	4.35

#### 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
-4.0	27.3	4.3	27.0	4.3	26.8	4.2	26.5	4.2	26.2	4.1	26.0	4.1
14.0	40.7	5.2	40.3	5.1	39.9	5.1	39.5	5.0	39.1	5.0	38.7	4.9
32.0	46.2	4.7	45.7	4.6	45.2	4.6	44.8	4.5	44.4	4.5	43.9	4.4
47.0	48.4	4.3	47.9	4.3	47.5	4.3	47.0	4.2	46.5	4.2	46.1	4.1
75.2	53.0	4.0	52.5	4.0	52.0	4.0	51.5	3.9	51.0	3.9	50.5	3.8

### AC048KNZDCH + AC048JXADCH

#### Cooling

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

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB / 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
-0.4	46.6	37.3	3.02	47.7	38.2	3.10	48.9	39.1	3.17	50.1	40.1	3.25	50.6	40.5	3.28	51.1	40.9	3.32	51.6	41.3	3.35
70.0	47.0	37.6	3.14	48.1	38.5	3.22	49.3	39.4	3.30	50.5	40.4	3.38	51.0	40.8	3.41	51.5	41.2	3.45	52.0	41.6	3.48
95.0	44.6	35.7	4.65	45.7	36.6	4.76	46.8	37.5	4.88	48.0	38.4	5.00	48.5	38.8	5.05	49.0	39.2	5.10	49.5	39.6	5.15
114.8	34.9	27.9	4.42	35.7	28.6	4.52	36.6	29.3	4.64	37.5	30.0	4.75	37.9	30.3	4.80	38.3	30.6	4.85	38.6	30.9	4.89

#### 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
-4.0	28.6	4.8	28.4	4.7	28.1	4.7	27.8	4.6	27.5	4.6	27.2	4.5
14.0	43.8	5.2	43.4	5.1	42.9	5.1	42.5	5.0	42.1	5.0	41.7	4.9
32.0	45.1	5.3	44.7	5.3	44.2	5.2	43.8	5.2	43.4	5.1	42.9	5.0
47.0	54.6	5.1	54.1	5.0	53.5	5.0	53.0	5.0	52.5	4.9	51.9	4.9
75.2	54.1	4.9	53.6	4.9	53.0	4.8	52.5	4.8	52.0	4.7	51.5	4.7

\* Capacities are based on following conditions; Refrigerant pipe length : 24.6ft / Level difference : 0ft

# 3 Capacity table

## Multi-position AHU

### AC054KNZDCH + AC054KXADCH

#### Cooling

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

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB / 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
-0.4	49.6	39.7	5.78	50.9	40.7	5.93	52.1	41.7	6.07	53.4	42.7	6.22	53.9	43.1	6.28	54.5	43.6	6.35	55.0	44.0	6.41
70.0	55.3	44.3	5.88	56.7	45.3	6.02	58.1	46.5	6.17	59.5	47.6	6.32	60.1	48.1	6.38	60.7	48.6	6.45	61.3	49.0	6.51
95.0	50.2	40.2	6.25	51.4	41.2	6.40	52.7	42.2	6.56	54.0	43.2	6.72	54.5	43.6	6.79	55.1	44.1	6.86	55.6	44.5	6.92
114.8	45.1	36.1	4.88	46.2	37.0	5.00	47.3	37.9	5.12	48.5	38.8	5.25	49.0	39.2	5.30	49.5	39.6	5.36	50.0	40.0	5.41

#### 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
-4.0	43.5	5.4	43.0	5.4	42.6	5.3	42.2	5.3	41.8	5.2	41.4	5.1
14.0	51.7	6.8	51.2	6.7	50.7	6.6	50.2	6.6	49.7	6.5	49.2	6.4
32.0	61.3	7.0	60.7	7.0	60.1	6.9	59.5	6.8	58.9	6.8	58.3	6.7
47.0	61.8	6.0	61.2	5.9	60.6	5.9	60.0	5.8	59.4	5.7	58.8	5.7
75.2	64.4	5.7	63.8	5.6	63.1	5.6	62.5	5.5	61.9	5.4	61.3	5.4

\* Capacities are based on following conditions; Refrigerant pipe length : 24.6ft / Level difference : 0ft

# 4 Dimensional drawing

## Indoor : Multi-position AHU

AC018KNZDCH/AA, AC024KNZDCH/AA

Units : mm / inches

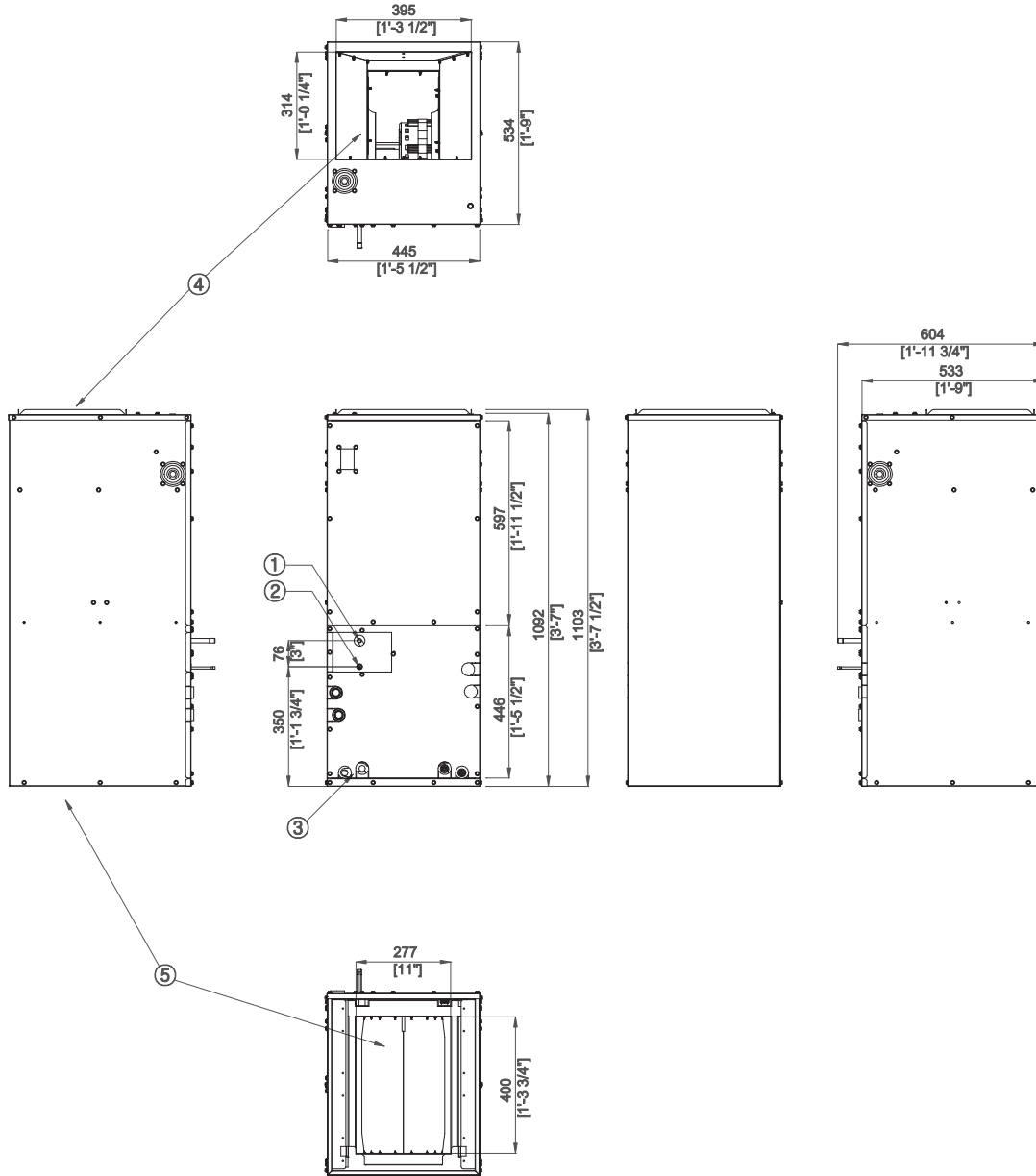


Table of descriptions

1	Refrigerant gas pipe	7	
2	Refrigerant liquid pipe	8	
3	Condensate drain pipe	9	
4	Air outlet	10	
5	Air intake	11	
6		12	

# 4 Dimensional drawing

## Indoor : Multi-position AHU

AC030KNZDCH/AA, AC036KNZDCH/AA

Units : mm / inches

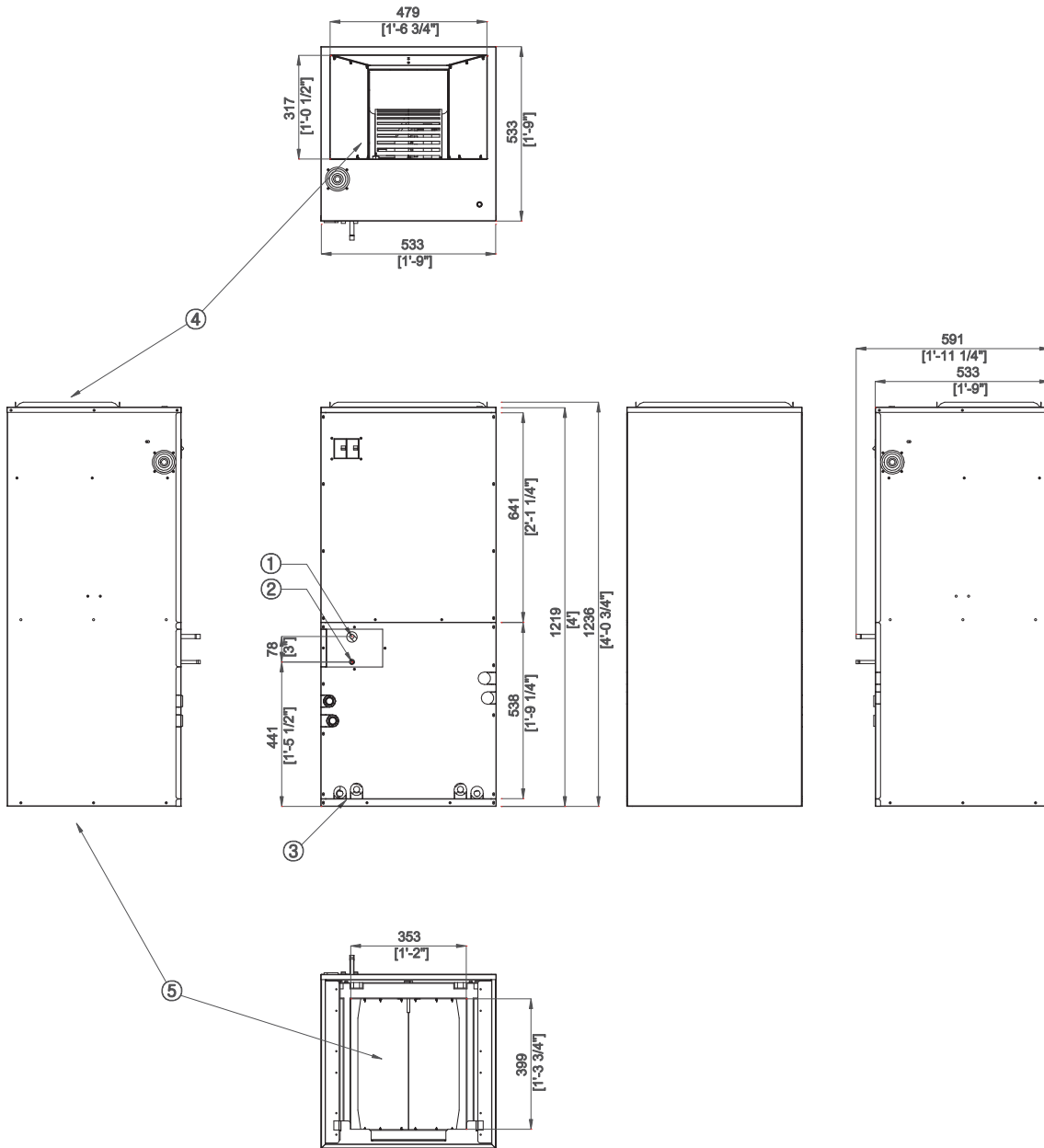


Table of descriptions

1	Refrigerant gas pipe	7	
2	Refrigerant liquid pipe	8	
3	Condensate drain pipe	9	
4	Air outlet	10	
5	Air intake	11	
6		12	

# 4 Dimensional drawing

## Indoor : Multi-position AHU

AC042KNZDCH/AA, AC048KNZDCH/AA, AC054KNZDCH/AA

Units : mm / inches

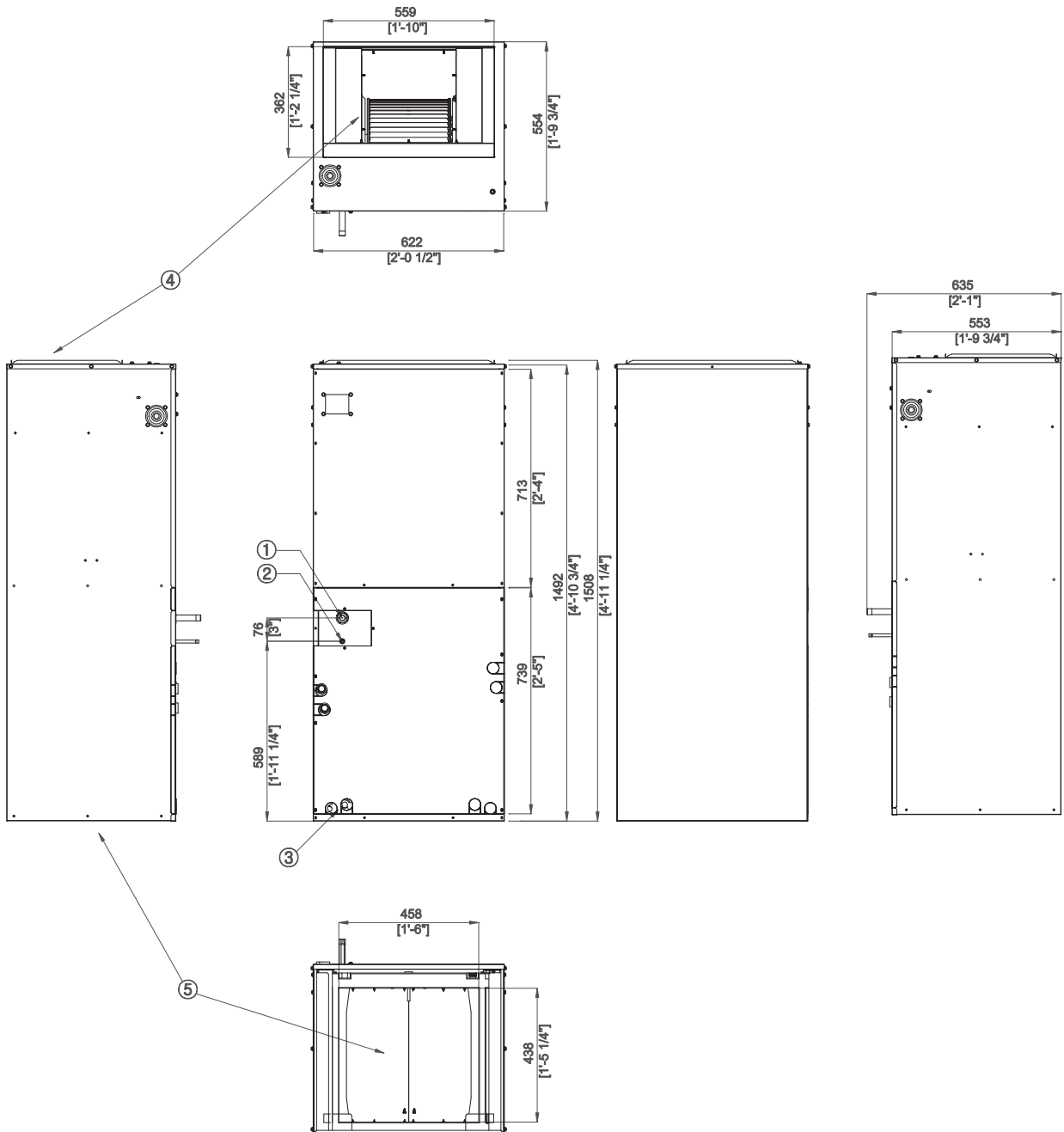


Table of descriptions

1	Refrigerant gas pipe	7	
2	Refrigerant liquid pipe	8	
3	Condensate drain pipe	9	
4	Air outlet	10	
5	Air intake	11	
6		12	



# 4 Dimensional drawing

## Outdoor

AC018JXADCH/AA

Units : mm / inches

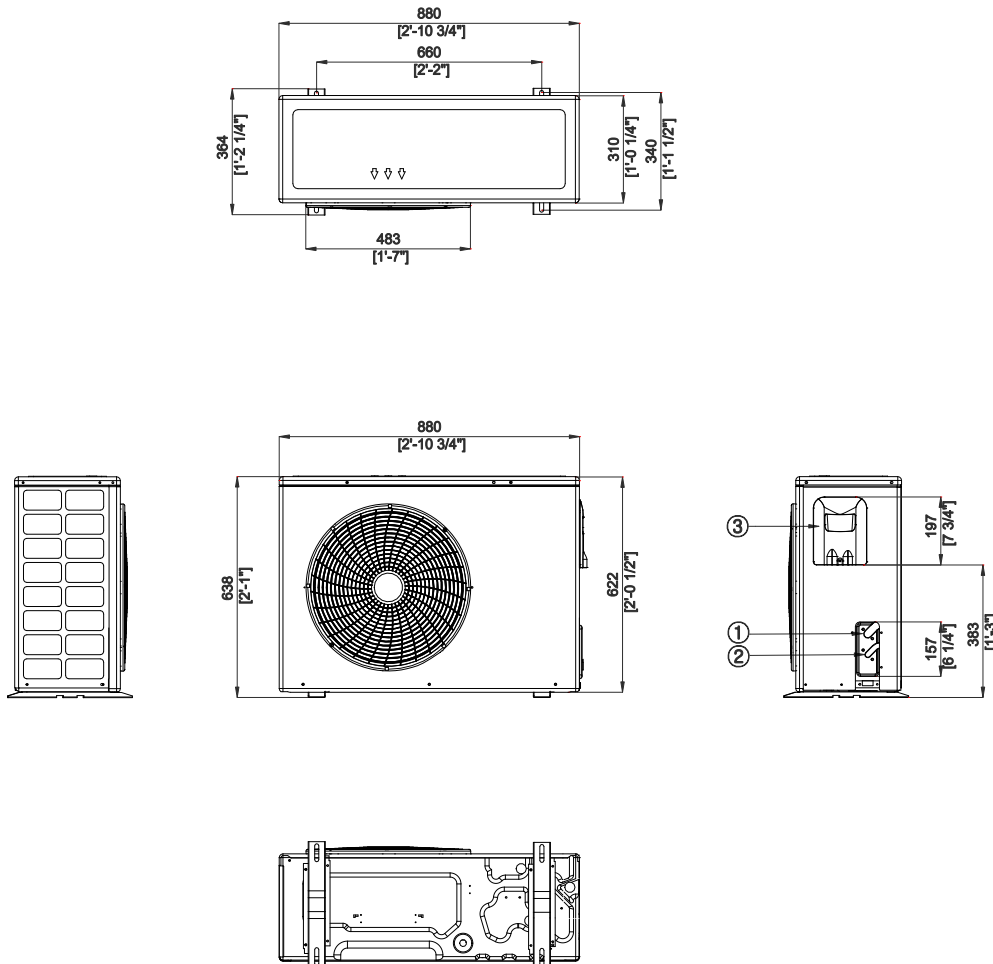


Table of descriptions

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

# 4 Dimensional drawing

## Outdoor

AC024JXADCH/AA, AC030JXADCH/AA

Units : mm / inches

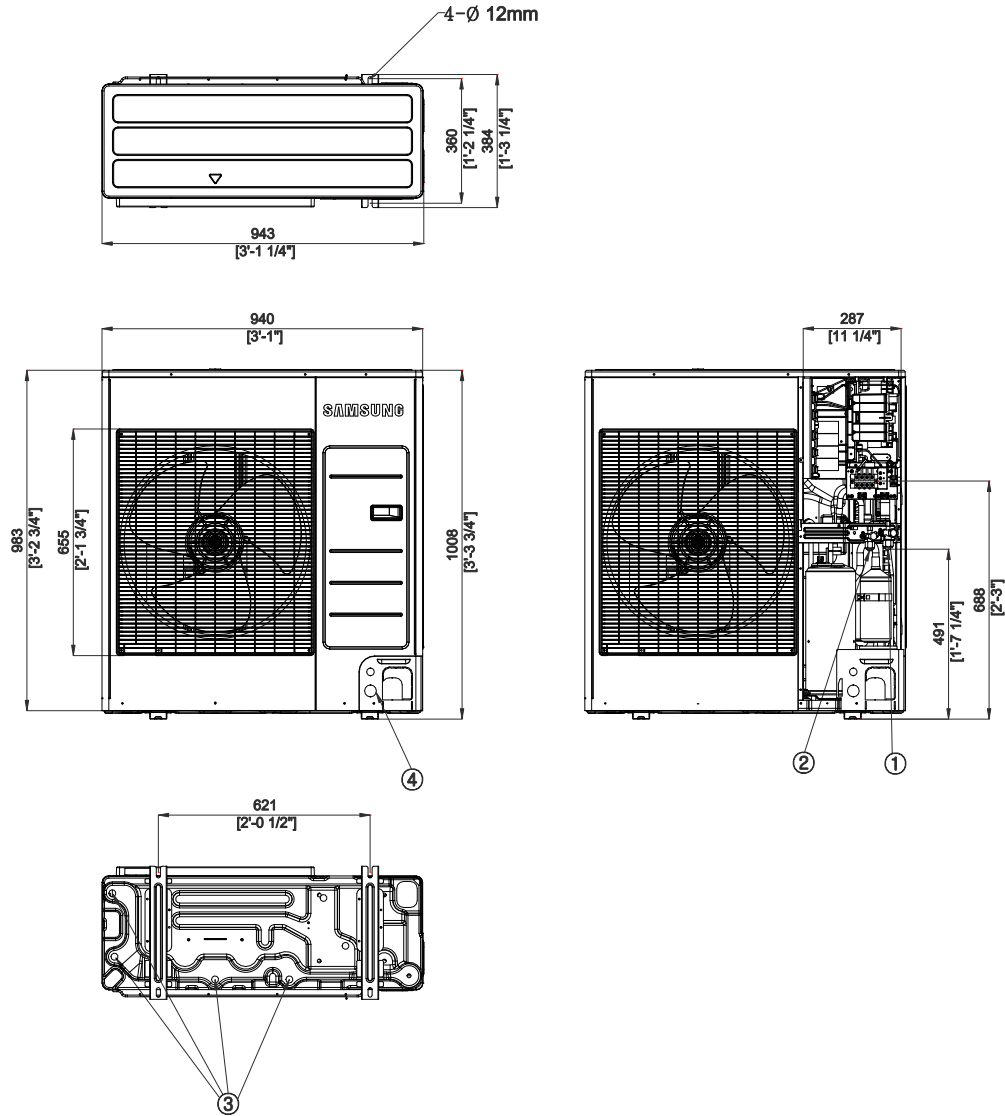


Table of descriptions

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

# 4 Dimensional drawing

## Outdoor

AC036JXADCH/AA, AC042JXADCH/AA, AC048JXADCH/AA

Units : mm / inches

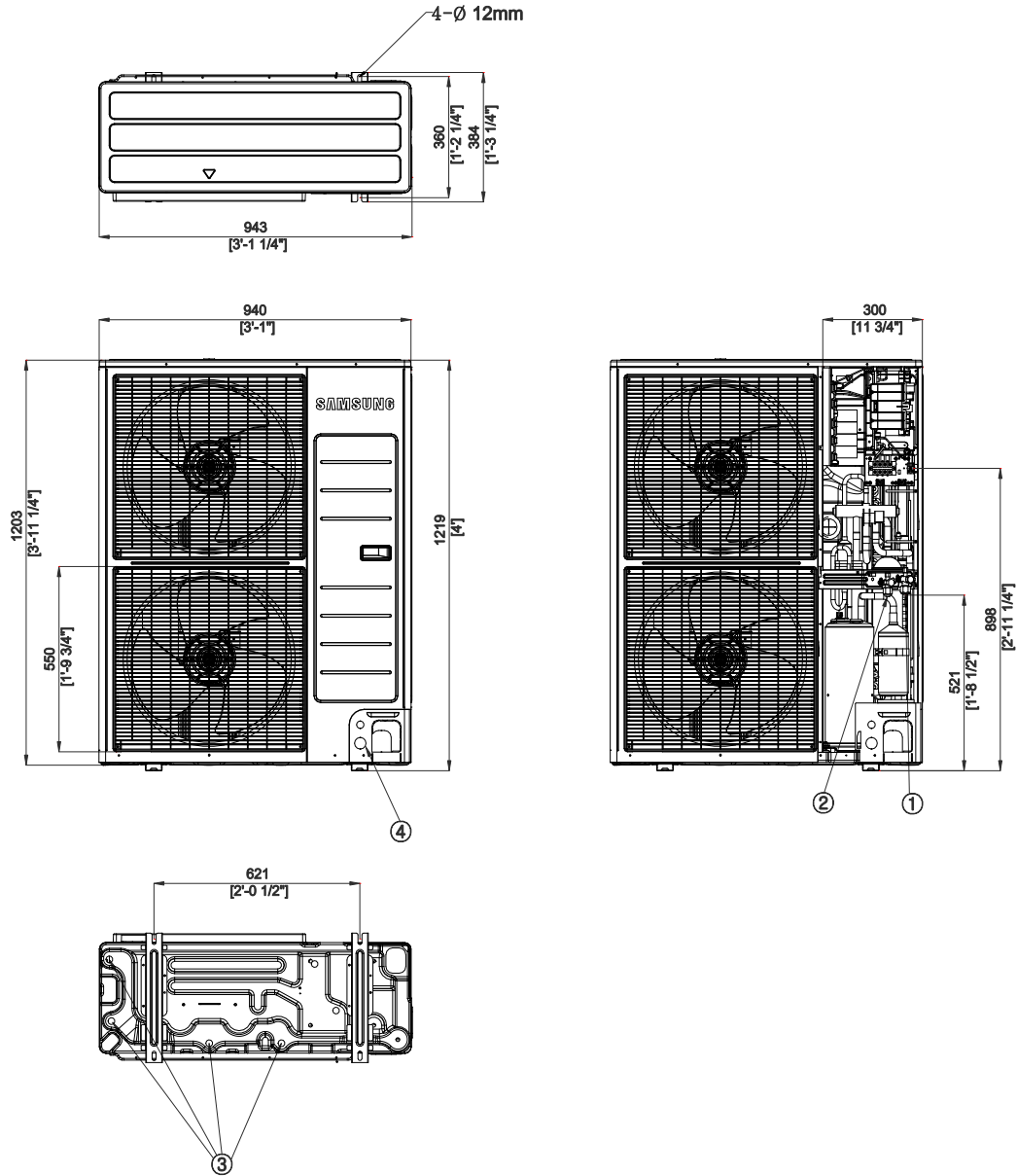


Table of descriptions

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

# 4 Dimensional drawing

## Outdoor

AC054KXADCH/AA

Units : mm / inches

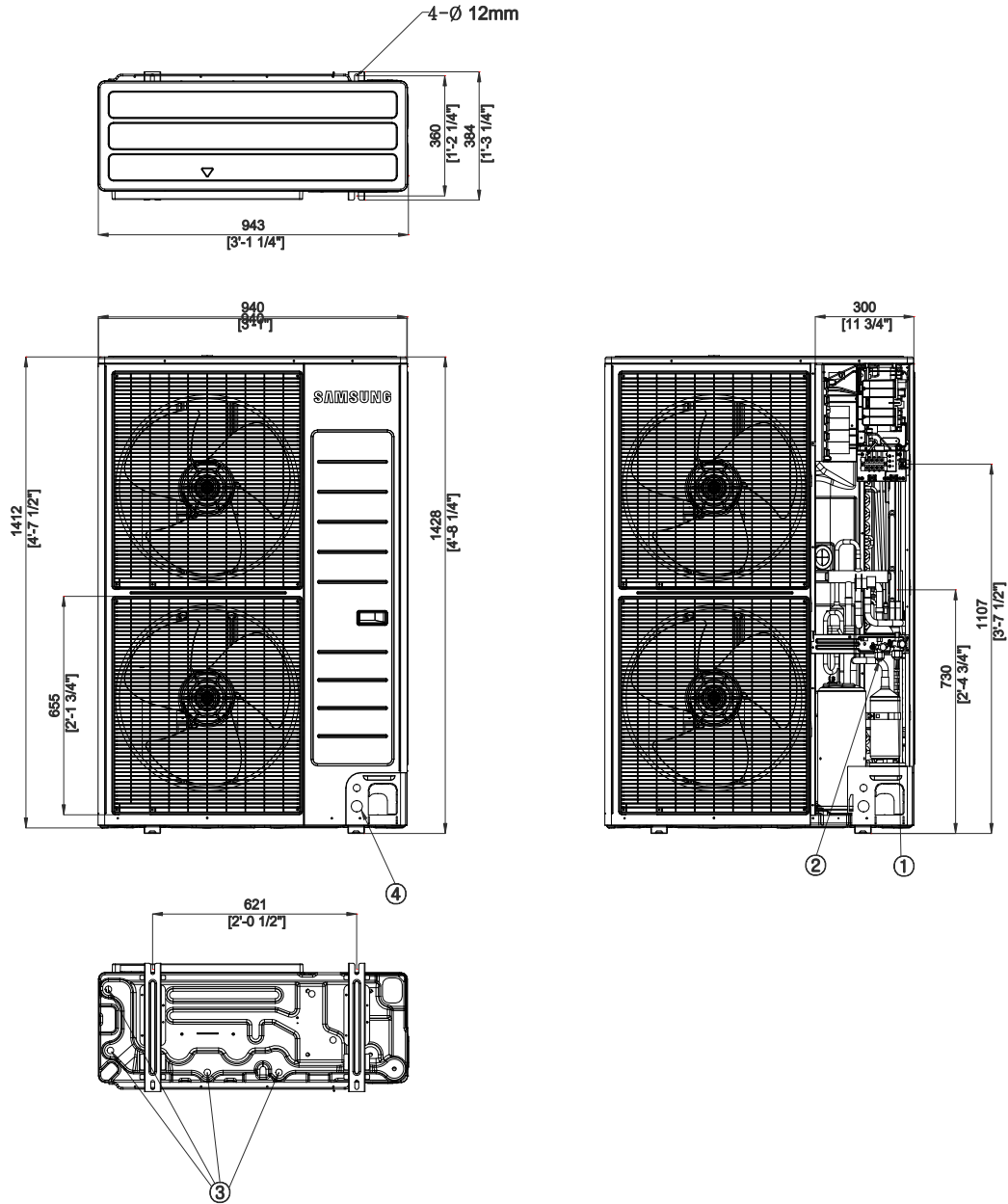


Table of descriptions

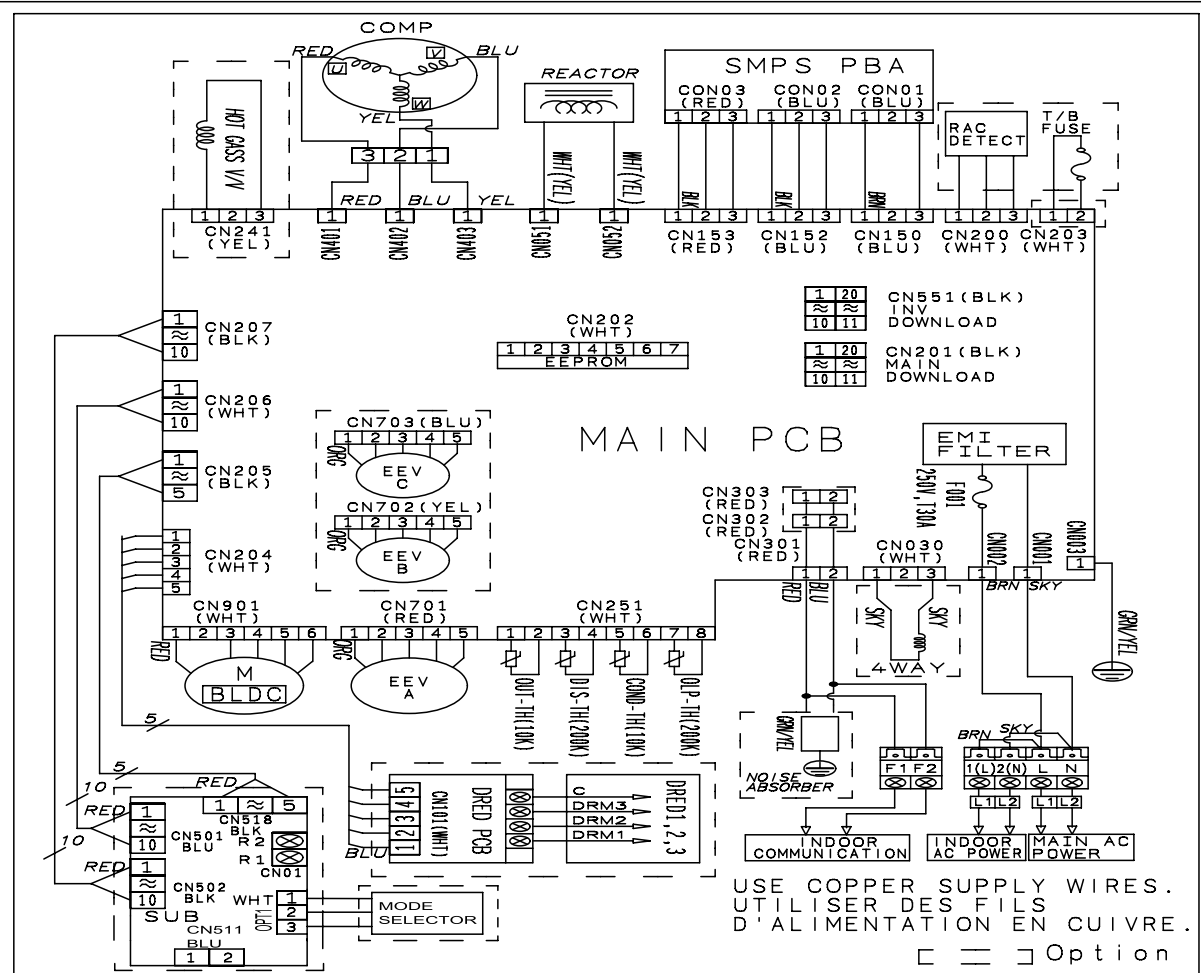
1	Refrigerant gas pipe	7	
2	Refrigerant liquid pipe	8	
3	Drain Hole	9	
4	Power & Comm. wiring conduits	10	
5		11	
6		12	



# 5 Electrical wiring diagram

## Outdoor

AC018JXADCH/AA



※ NOTE  
THERMISTOR MARK BASED ON THE TEMP at 25°C, 77°F

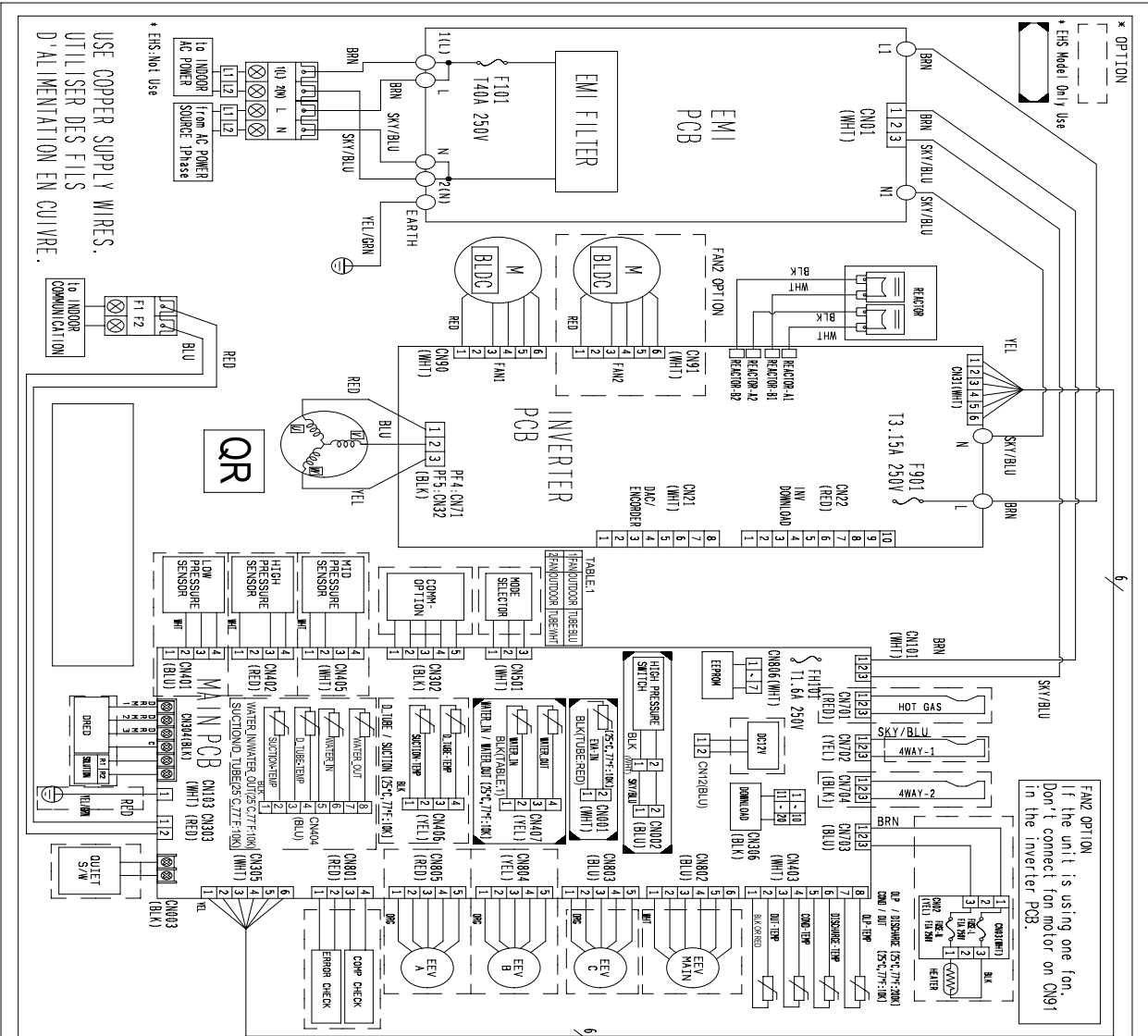
ERROR MODE	
E198	IDU_Terminal Block Theror
E201	Communication Error (Pre tracking fail or The mismatched of indoor unit)
E202	Communication Error between the outdoor and indoor unit
E203	Time out Comm. (Inv Micom → Main Micom)
E221	Outdoor Temperature Sensor Error(OPEN/SHORT)
E231	COND Temperature Sensor Error(OPEN/SHORT)
E251	Discharge Temperature Sensor Error(OPEN/SHORT)
E320	COMP-OLP Temperature Sensor Error(Open/Short)
E403	Comp Down by a freezing protection
E404	System stop to protect from overload
E416	Discharge Temperature Sensor Over Error
E422	EEV or Valve Close
E440	Prohibit Operation Condition Error(Heating)
E441	Prohibit Operation Condition Error(Cooling)
E458	Fan Error
E461	Comp Starting Error
E462	AC Input I_Limit Trip Error
E463	System stop due to OLP(Temp.)
E464	IPM Over Current(O.C) Error
E465	Comp V_Limit/I_Limit Error
E466	DC Link Voltage Protecting Error
E467	Comp Wire Missing Error
E468	Current Sensor Error
E469	DC Link Volage Sensor Error
E470	EEPROM Read/Write Error
E471	EEPROM Read/Write Error (H/W)
E474	Heatsink Sensor Error
E483	Over Voltage Protecting Error
E484	PFC Overload Error
E485	Input Current Sensor Error
E488	AC Input V_Limit Sensor Error
E500	IPM Overheat Error
E554	Gas Leak Error
E556	Model Mismatching Error(ODU/IDU)
E590	EEPROM CHECKSUM Error (Main → INVERTER)

DB68-04513A OUTDOOR UNIT

# 5 Electrical wiring diagram

## Outdoor

AC024JXADCH/AA, AC030JXADCH/AA, AC036JXADCH/AA, AC042JXADCH/AA, AC048JXADCH/AA



Wiring Diagram for Outdoor

CODE:DB68-04592A

### ERROR CODE

ERROR NO	DESCRIPTION
E198	Indoor Terminal Block Thermal Fuse error
E201	Unit Quantity Miss Matching between Indoor and Outdoor
E202	Abnormal state or Main Time out Comm between Indoor and Outdoor
E203	Main Time out Comm between Inverter and Outdoor
E221	Outdoor Temp Sensor error
E231	Cond Temp Sensor error
E231	Discharge Temp Sensor error
E320	OLP Sensor error
E403	Detection of Outdoor Freezing when Comp Stop
E404	Protection of Outdoor Overload when Comp Stop
E407	HIGH PRESS SWITCH error
E416	Discharge over Temp error when Comp Stop
E419	Outdoor EEV open error
E422	EEV Close error
E439	Gas leakage error (stop state)
E440	Out of Operation Temp range in heating
E441	Out of Operation Temp range in cooling
E443	Gas leakage error (before operating)
E458	Outdoor Fan1 error
E461	Comp Starting error
E462	Li Trip error/PTC Over Current
E463	OLP Over Heat and Comp Stop
E464	IPM Over Current(O.C) error
E465	COMP Over Load error
E466	DC Link Under/Over Voltage error
E467	COMP Wire Missing error
E468	Current Sensor error
E469	DC Link Voltage Sensor error
E470	Outdoor EEPROM data checksum error
E471	Outdoor EEPROM hardware read/write error
E474	Heatsink Sensor error
E475	Outdoor Fan2 error (Only 2 FAN model)
E484	PTC Over Load error
E485	Input current sensor error
E500	Heatsink Over Heat error
E554	GAS Leak error
E556	Capacitly Miss Matching between Indoor and Outdoor
E557	Option Code Miss Matching among the Indoor(only for DM)
E590	Inverter EEPROM loading error
E901	Water inlet (PHE) temp sensor error (Short/open)
E902	Water outlet (PHE) temp sensor error (Short/open)
E906	Refrigerant gas inlet temp sensor error (Short/open)

USE COPPER SUPPLY WIRES.  
UTILISER DES FILS  
D'ALIMENTATION EN CUIVRE.

\* EHS:Not Use

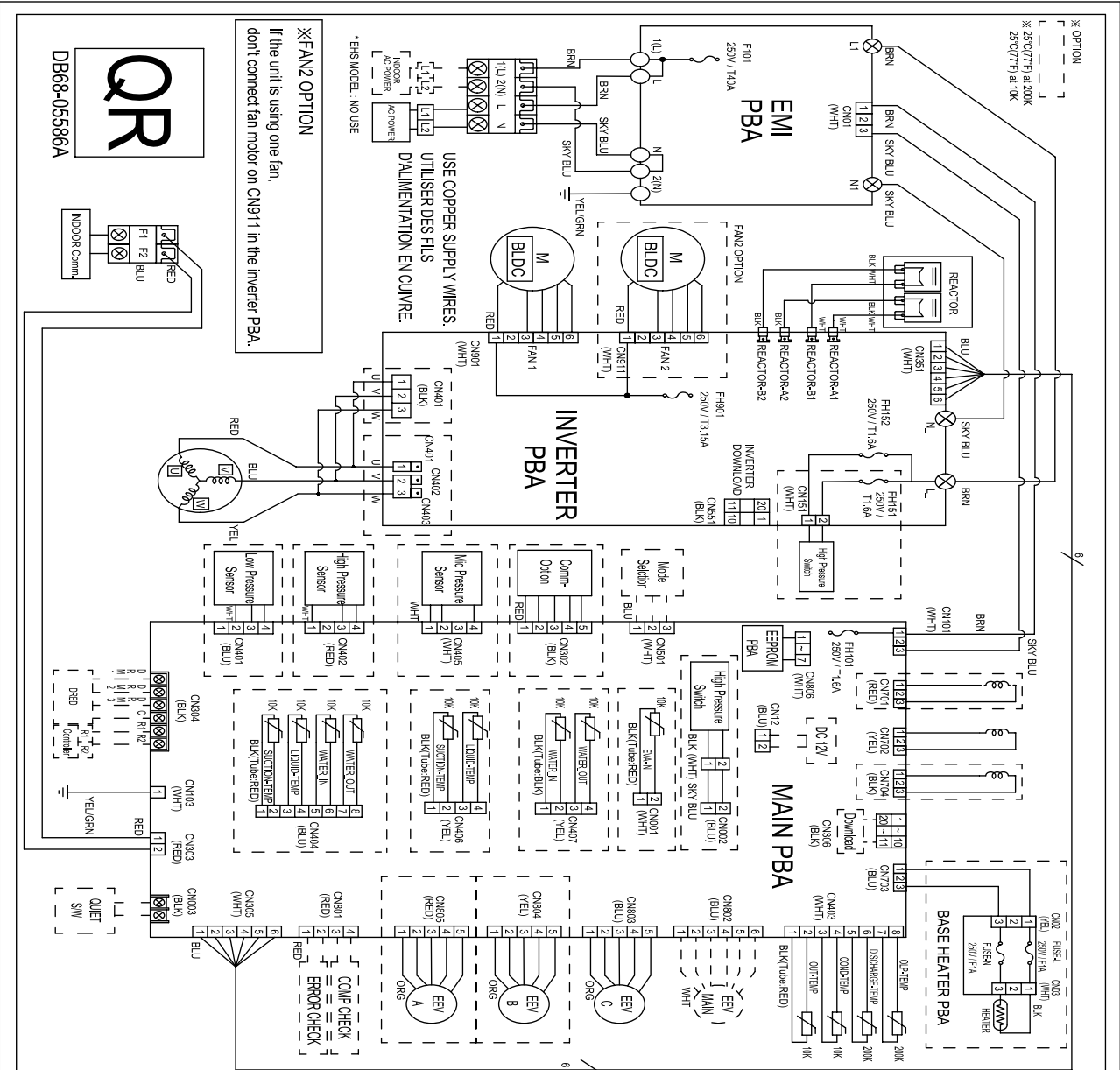
\* OPTION  
\* EHS Model Only Use

FAN2 OPTION  
If the unit is using one fan,  
Don't connect fan motor on CN91  
in the inverter PCB.

# 5 Electrical wiring diagram

## Outdoor

AC054KXADCH/AA



Wiring Diagram for Outdoor DB68-05586A

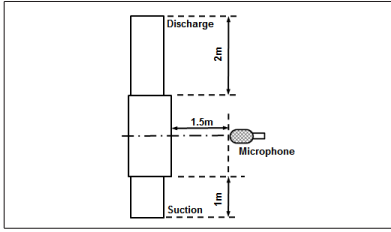
### ERROR CODE

ERROR NO.	DESCRIPTION
E198	Indoor Terminal Block Thermal Fuse error
E201	Unit Quantity Miss Matching between Indoor and Outdoor
E202	Abnormal state or trim Time out Comm between Indoor and Outdoor
E203	Trim Time out Comm between Inverter and Outdoor
E221	Outdoor Temp Sensor error
E231	Cond Temp Sensor error
E251	Discharge Temp Sensor error
E320	OLP Sensor error
E403	Detection of Outdoor Freezing when Comp Stop
E404	Protection of Outdoor Overload when Comp stop
E407	High Press Switch error
E422	Discharge over Temp error when Comp Stop
E440	Out of Operation Temp range in Heating
E441	Out of Operation Temp range in Cooling
E458	Outdoor Fan1 error
E461	Comp Starting error
E462	Outdoor 1 Trip error/PG over Current
E463	OLP Over-Heat and Comp Stop
E464	IPM Over Current(O.C) error
E465	Comp Over Load error
E466	DC Link Under /Over Voltage error
E467	Comp Wire Missing error
E468	Inverter Current Sensor error
E469	Inverter DC Link Voltage Sensor error
E470	Outdoor EEPROM data checksum error
E471	Outdoor EEPROM hardware read/write error
E474	Inverter Heatsink Sensor error
E475	Outdoor Fan2 error(Only 2 FAN model)
E483	Overvoltage of HV Detect DC Link
E484	PFC Overload(Over Current) Error
E485	Inverter Input Current Sensor error
E488	Inverter Input Voltage Sensor error
E500	Heatsink Over Heat error
E308	*Smart Install Uninstalled error
E554	Loading failure / Total Leakage of Refrigerant of Outdoor Unit
E556	Outdoor Unit power set option error
E557	When DPM mode, Product option are not same between indoor units
E590	Inverter EEPROM loading error
E901	Water inlet(PHE) temp sensor error(ShortOpen)
E902	Water outlet(PHE) temp sensor error(ShortOpen)
E906	Refrigerant gas inlet temp sensor error(ShortOpen



# 6 Sound pressure level

## Indoor : Multi-position AHU



Unit: dB(A)

Model	High	Low
AC018KNZDCH/AA (ODU : AC018JXADCH/AA)	38	32
AC024KNZDCH/AA (ODU : AC024JXADCH/AA)	41	35
AC030KNZDCH/AA (ODU : AC030JXADCH/AA)	41	35
AC036KNZDCH/AA (ODU : AC036JXADCH/AA)	42	36

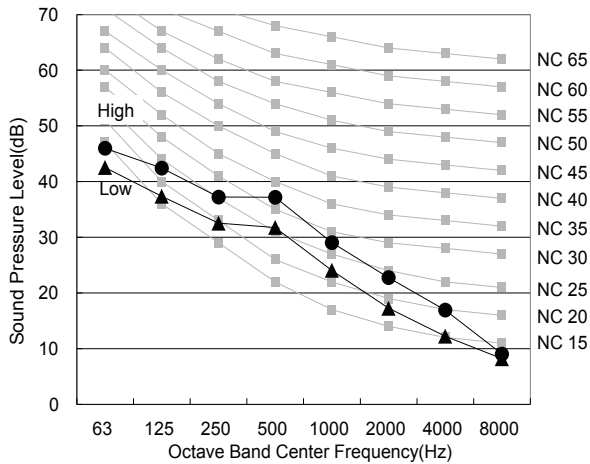
### Note

\* Specifications may be subject to change without prior notice

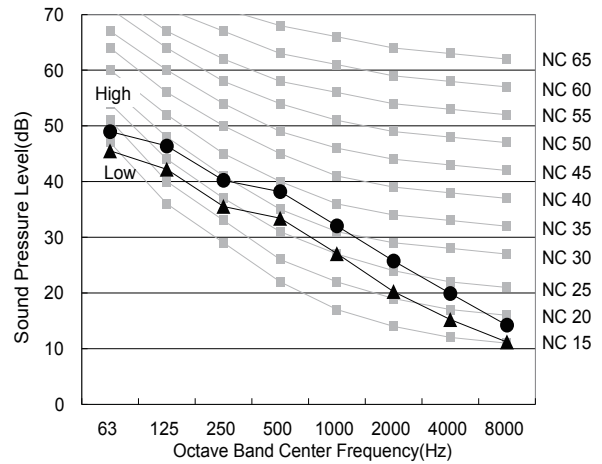
- 1) These operation values were obtained in an anechoic room.
- 2) Sound pressure level is a relative value, depending on the distance and acoustic environment.
- 3) Sound pressure level may differ depending on operation condition.

## NC curve

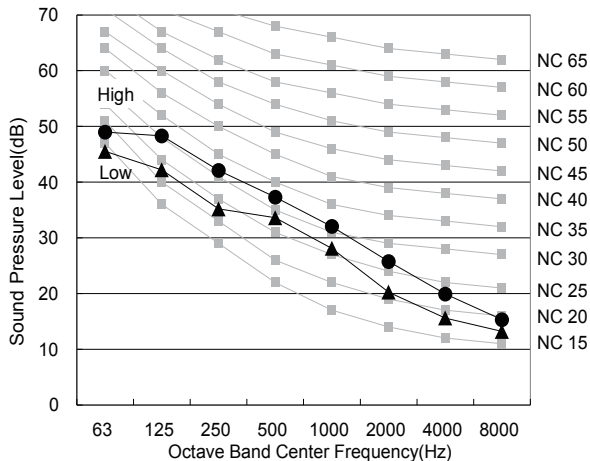
1) AC018KNZDCH/AA (ODU : AC018JXADCH/AA)



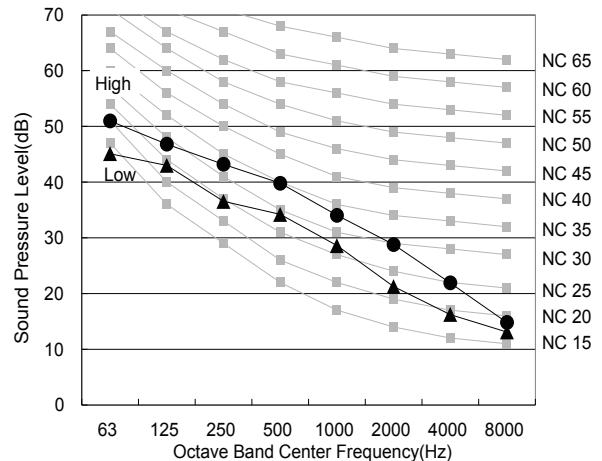
2) AC024KNZDCH/AA (ODU : AC024JXADCH/AA)



3) AC030KNZDCH/AA (ODU : AC030JXADCH/AA)

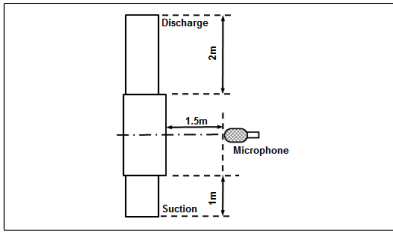


4) AC036KNZDCH/AA (ODU : AC036JXADCH/AA)



# 6 Sound pressure level

## Indoor : Multi-position AHU



Unit: dB(A)

Model	High	Low
AC042KNZDCH/AA (ODU : AC042JXADCH/AA)	42	36
AC048KNZDCH/AA (ODU : AC048JXADCH/AA)	43	38
AC054KNZDCH/AA (ODU : AC054JXADCH/AA)	45	39

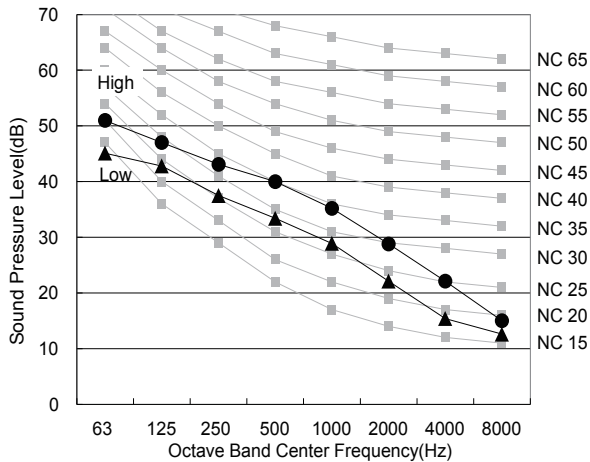
### Note

\* Specifications may be subject to change without prior notice

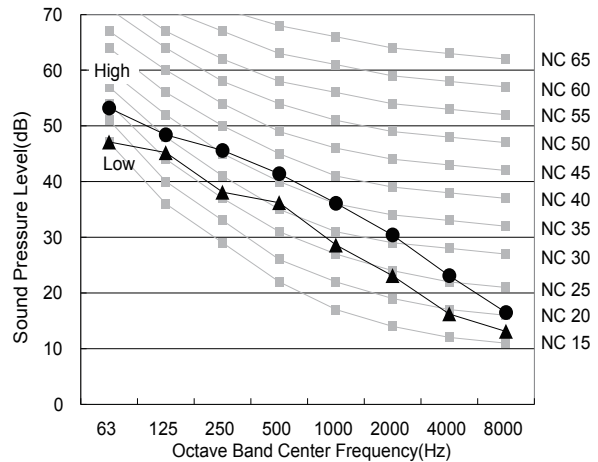
- 1) These operation values were obtained in an anechoic room.
- 2) Sound pressure level is a relative value, depending on the distance and acoustic environment.
- 3) Sound pressure level may differ depending on operation condition.

## NC curve

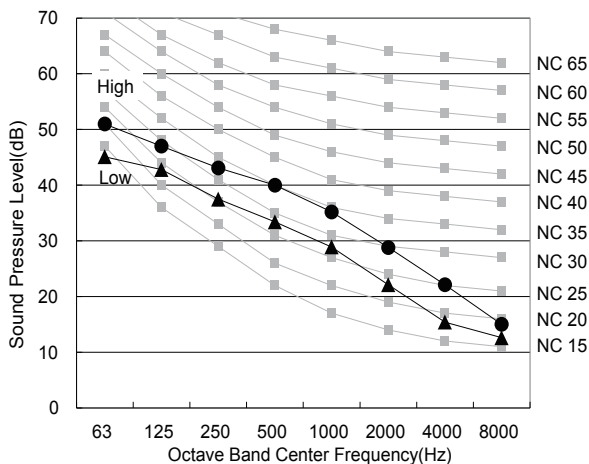
1) AC042KNZDCH/AA (ODU : AC042JXADCH/AA)



2) AC048KNZDCH/AA (ODU : AC048JXADCH/AA)

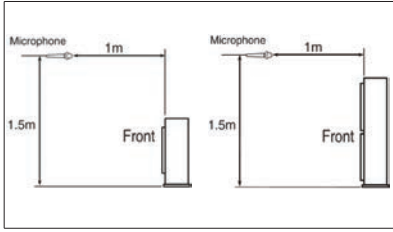


3) AC054KNZDCH/AA (ODU : AC054KXADCH/AA)



# 6 Sound pressure level

## Outdoor



Unit: dB(A)

Model	Cooling
AC018JXADCH/AA (IDU : AC018KNZDCH/AA)	48
AC024JXADCH/AA (IDU : AC024KNZDCH/AA)	50
AC030JXADCH/AA (IDU : AC030KNZDCH/AA)	50
AC036JXADCH/AA (IDU : AC036KNZDCH/AA)	49

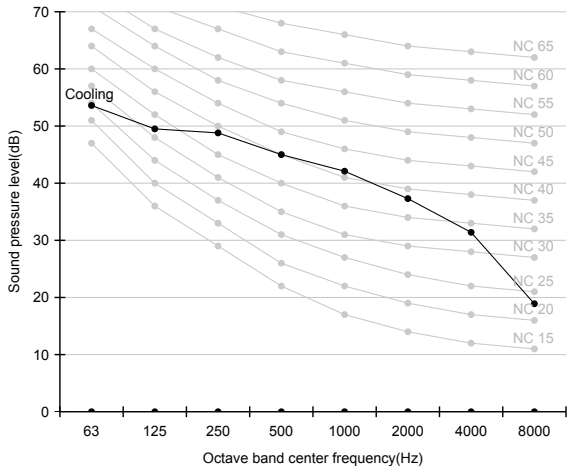
### Note

\* Specifications may be subject to change without prior notice

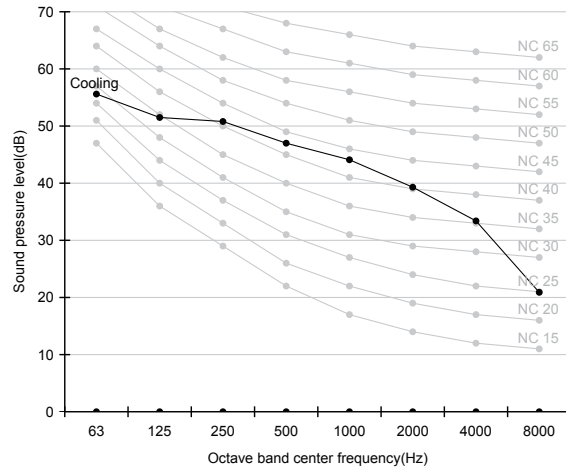
- 1) These operation values were obtained in an anechoic room.
- 2) Sound pressure level is a relative value, depending on the distance and acoustic environment.
- 3) Sound pressure level may differ depending on operation condition.

## NC curve

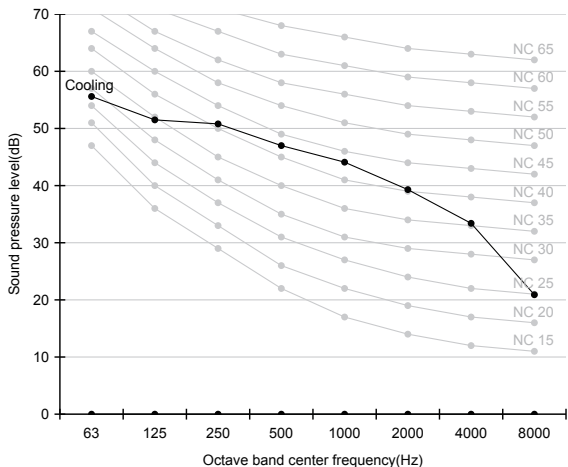
1) AC018JXADCH/AA (IDU : AC018KNZDCH/AA)



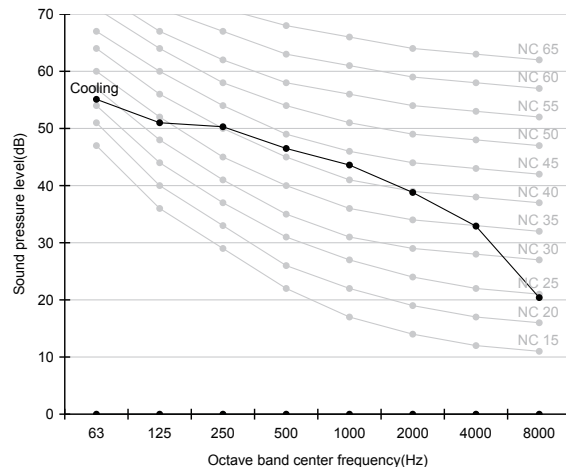
2) AC024JXADCH/AA (IDU : AC024KNZDCH/AA)



3) AC030JXADCH/AA (IDU : AC030KNZDCH/AA)

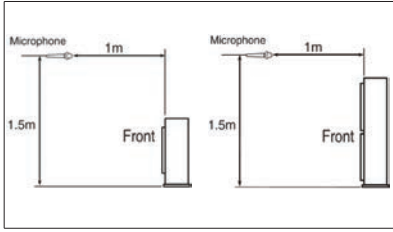


4) AC036JXADCH/AA (IDU : AC036KNZDCH/AA)



# 6 Sound pressure level

## Outdoor



Unit: dB(A)

Model	Cooling
AC042JXADCH/AA (IDU : AC042KNZDCH/AA)	51
AC048JXADCH/AA (IDU : AC048KNZDCH/AA)	53
AC054KXADCH/AA (IDU : AC054KNZDCH/AA)	56

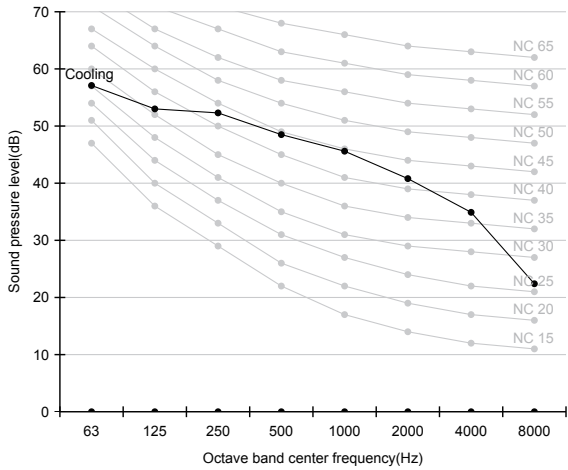
### Note

\* Specifications may be subject to change without prior notice

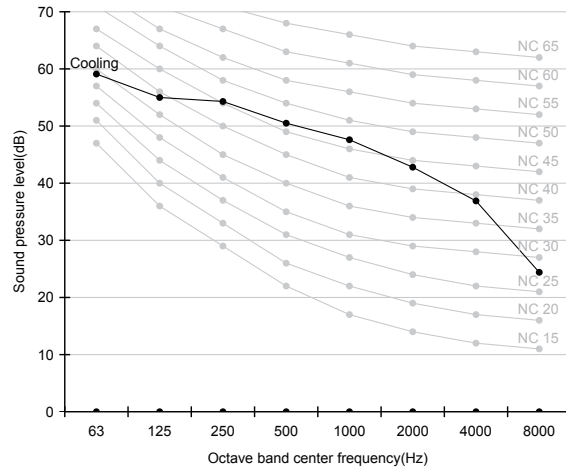
- 1) These operation values were obtained in an anechoic room.
- 2) Sound pressure level is a relative value, depending on the distance and acoustic environment.
- 3) Sound pressure level may differ depending on operation condition.

## NC curve

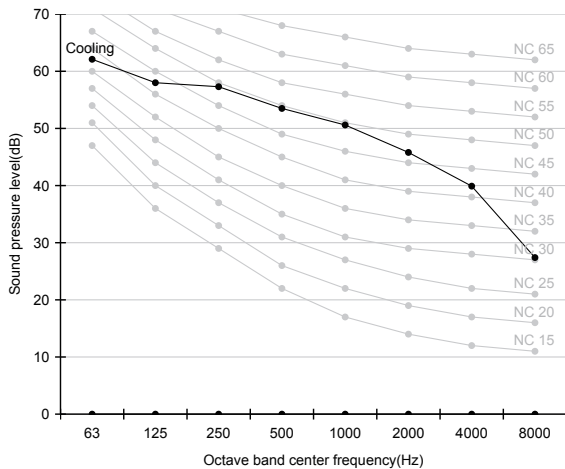
1) AC042JXADCH/AA (IDU : AC042KNZDCH/AA)



2) AC048JXADCH/AA (IDU : AC048KNZDCH/AA)



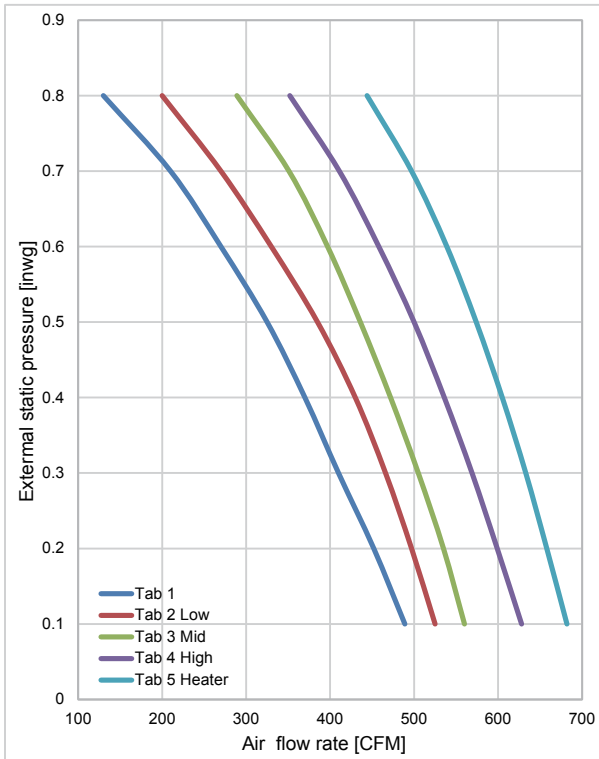
3) AC054KXADCH/AA (IDU : AC054KNZDCH/A)



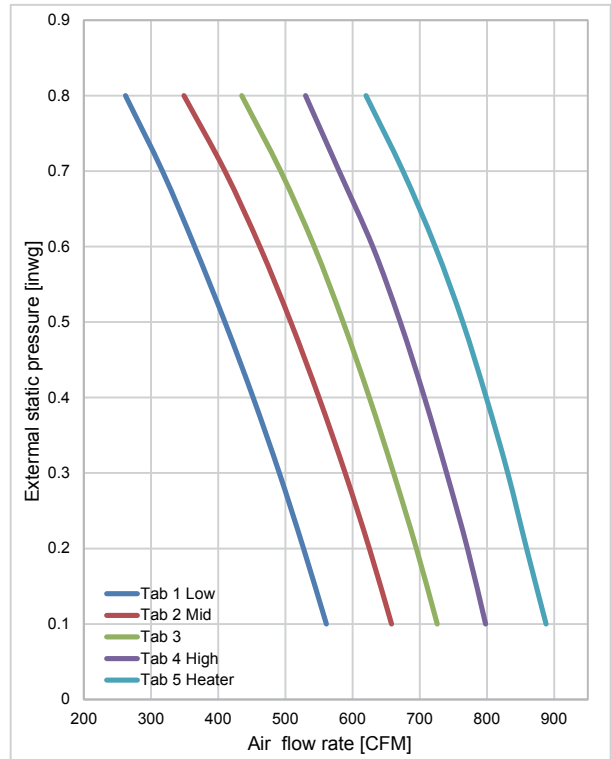
# 7 Recommended operation range

## Multi-position AHU

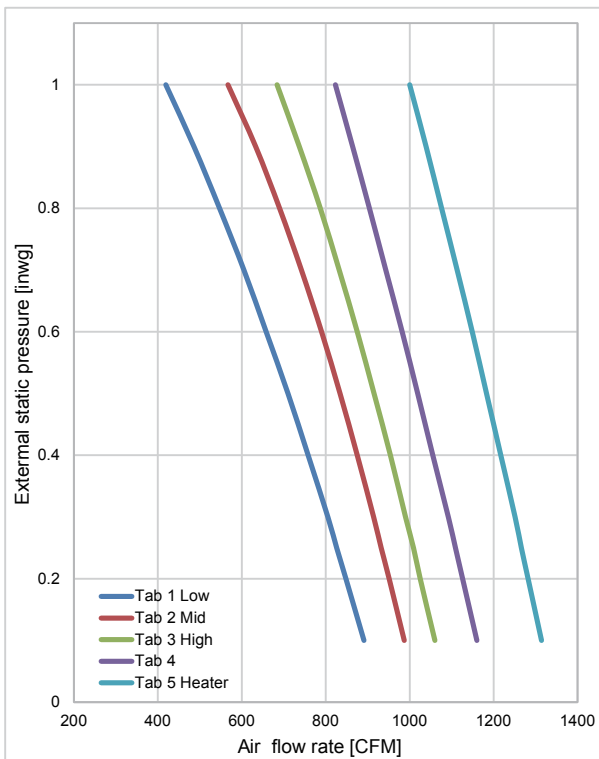
1) AC018KNZDCH/AA



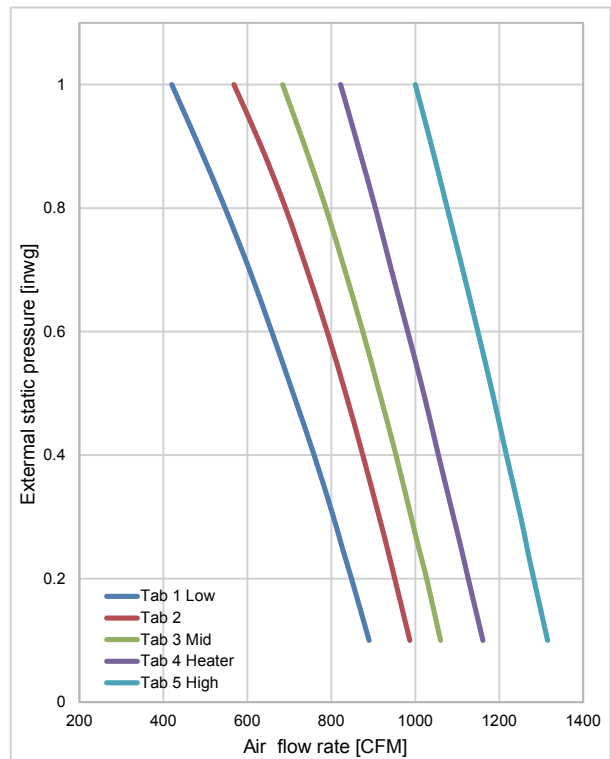
2) AC024KNZDCH/AA



3) AC030KNZDCH/AA



4) AC036KNZDCH/AA



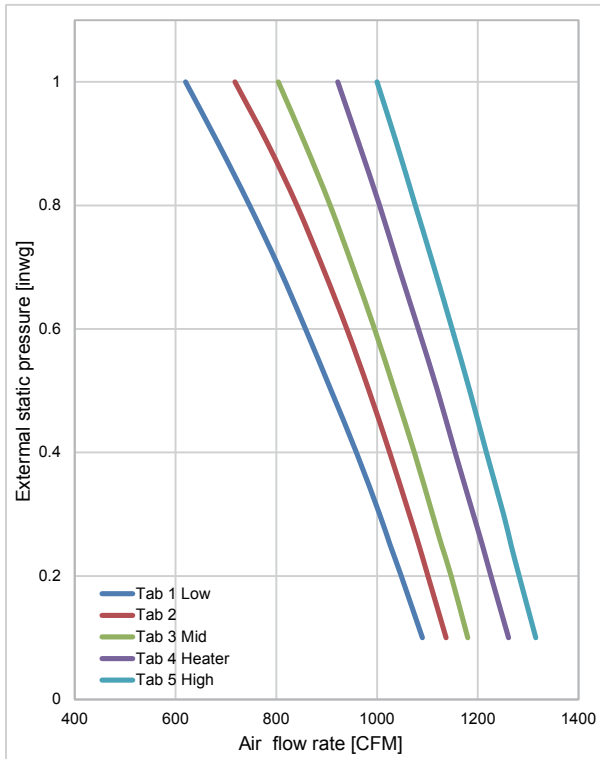
### Note

- The speed taps can be adjusted according to installation conditions.

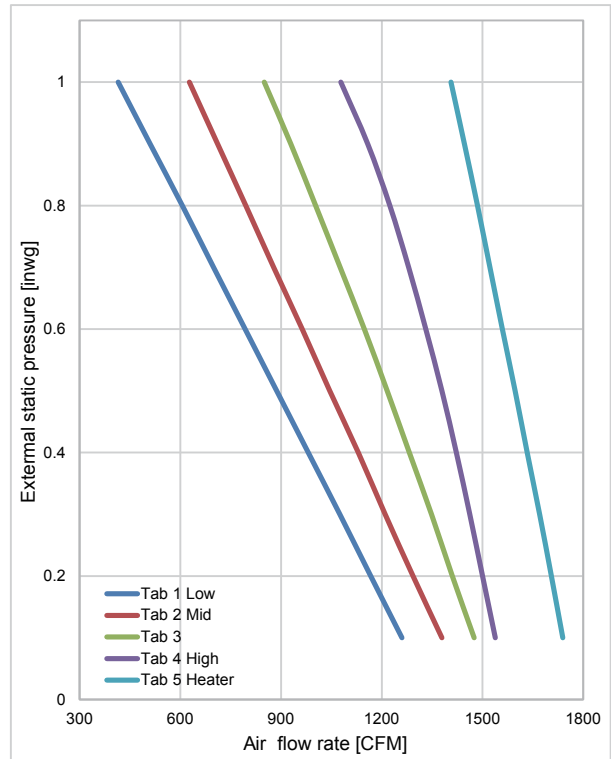
# 7 Recommended operation range

## Multi-position AHU

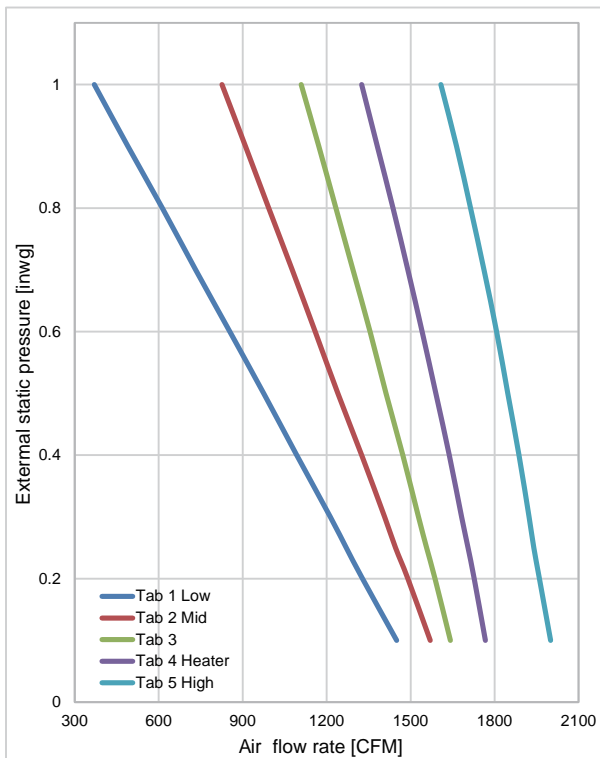
5) AC042KNZDCH/AA



6) AC048KNZDCH/AA



7) AC054KNZDCH/AA



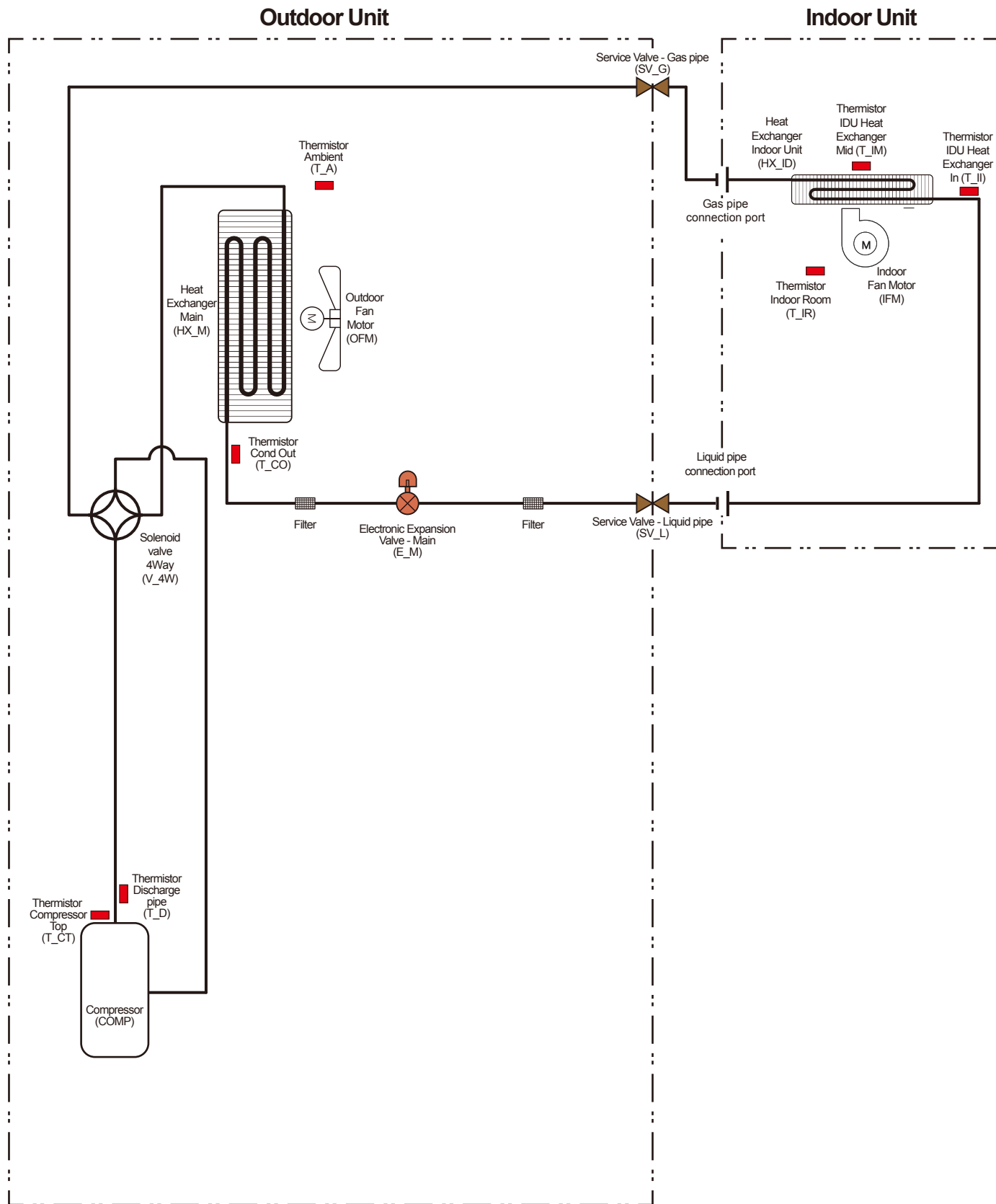
### Note

- The speed taps can be adjusted according to installation conditions.

# 8 Cycle diagram

## Outdoor

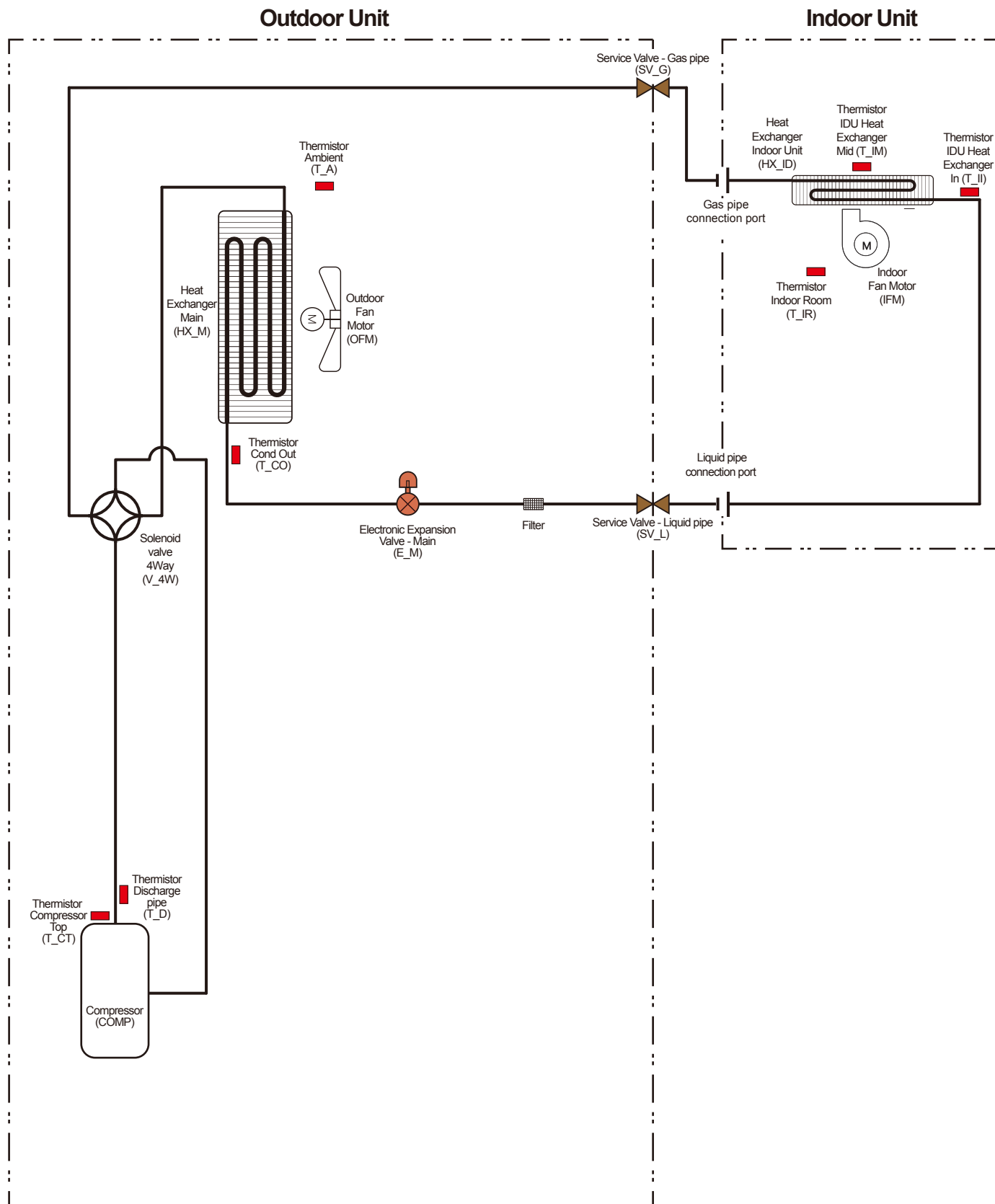
AC018JXADCH/AA



# 8 Cycle diagram

Outdoor

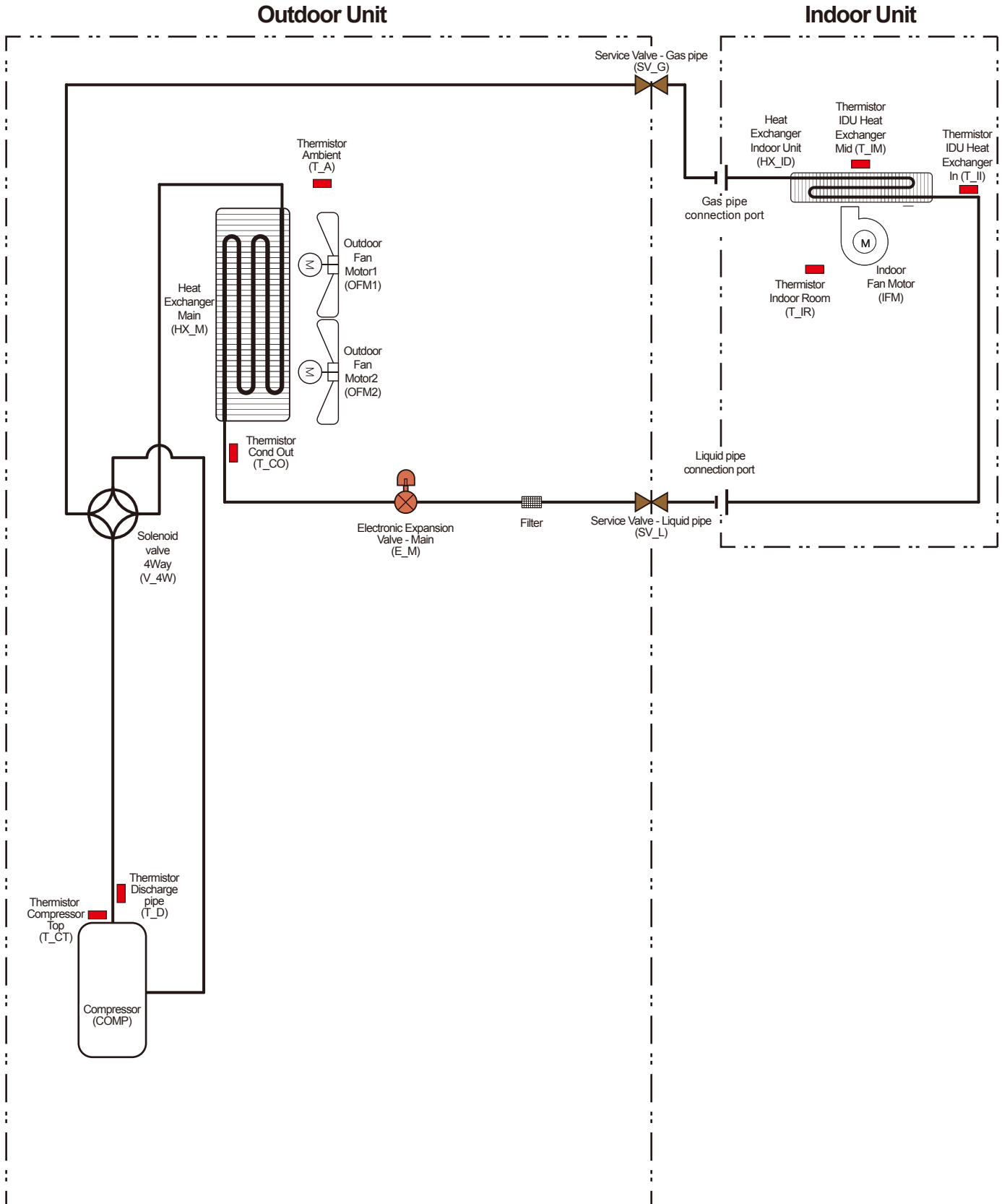
AC024JXADCH/AA, AC030JXADCH/AA





# 8 Cycle diagram

Outdoor AC036JXADCH/AA, AC042JXADCH/AA, AC048JXADCH/AA, AC054KXADCH/AA




# Capacity correction

## Outdoor


AC018KNZDCH/AA + AC018JXADCH/AA

### Cooling



		Pipe Length (ft)					
		16	33	49	66	82	98
Level Difference (ft)	66	-	-	-	0.96	0.94	0.93
	49	-	-	0.97	0.96	0.94	0.93
	33	-	0.99	0.97	0.96	0.94	0.93
	16	1.00	0.99	0.97	0.96	0.94	0.93
	0	1.00	0.99	0.97	0.96	0.94	0.93
	-16	1.00	0.98	0.97	0.95	0.94	0.92
	-33	-	0.97	0.96	0.95	0.94	0.92
	-49	-	-	0.96	0.94	0.93	0.92
	-66	-	-	-	0.94	0.92	0.91


### Heating



		Pipe Length (ft)					
		16	33	49	66	82	98
Level Difference (ft)	66	-	-	-	0.94	0.92	0.90
	49	-	-	0.96	0.94	0.92	0.90
	33	-	0.98	0.96	0.94	0.92	0.90
	16	1.00	0.98	0.96	0.94	0.92	0.90
	0	1.00	0.98	0.96	0.94	0.92	0.90
	-16	1.00	0.98	0.96	0.94	0.92	0.90
	-33	-	0.98	0.96	0.94	0.92	0.90
	-49	-	-	0.96	0.94	0.92	0.90
	-66	-	-	-	0.94	0.92	0.90


AC024KNZDCH/AA + AC024JXADCH/AA

### Cooling



		Pipe Length (ft)									
		16	33	49	66	82	98	115	131	148	164
Level Difference (ft)	98	-	-	-	-	-	0.94	0.93	0.92	0.91	0.90
	82	-	-	-	-	0.96	0.94	0.93	0.92	0.91	0.90
	66	-	-	-	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	49	-	-	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	33	-	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	16	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	0	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-16	1.00	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.90	0.88
	-33	-	0.98	0.97	0.96	0.95	0.94	0.92	0.91	0.89	0.87
	-49	-	-	0.97	0.96	0.94	0.93	0.92	0.90	0.88	0.85
	-66	-	-	-	0.95	0.94	0.93	0.91	0.89	0.87	0.83
	-82	-	-	-	-	0.94	0.92	0.91	0.89	0.86	0.82
	-98	-	-	-	-	-	0.92	0.90	0.88	0.85	0.80

### Heating




		Pipe Length (ft)									
		16	33	49	66	82	98	115	131	148	164
Level Difference (ft)	98	-	-	-	-	-	0.94	0.93	0.92	0.91	0.90
	82	-	-	-	-	0.96	0.94	0.93	0.92	0.91	0.90
	66	-	-	-	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	49	-	-	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	33	-	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	16	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	0	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-16	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-33	-	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-49	-	-	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-66	-	-	-	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-82	-	-	-	-	0.96	0.94	0.93	0.92	0.91	0.90
	-98	-	-	-	-	-	0.94	0.93	0.92	0.91	0.90

# Capacity correction

## Outdoor


AC030KNZDCH/AA + AC030JXADCH/AA

### Cooling



		Pipe Length (ft)									
		16	33	49	66	82	98	115	131	148	164
Level Difference (ft)	98	-	-	-	-	-	0.94	0.93	0.92	0.91	0.90
	82	-	-	-	-	0.96	0.94	0.93	0.92	0.91	0.90
	66	-	-	-	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	49	-	-	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	33	-	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	16	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	0	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-16	1.00	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.90	0.88
	-33	-	0.98	0.97	0.96	0.95	0.94	0.92	0.91	0.89	0.87
	-49	-	-	0.97	0.96	0.94	0.93	0.92	0.90	0.88	0.85
	-66	-	-	-	0.95	0.94	0.93	0.91	0.89	0.87	0.83
	-82	-	-	-	-	0.94	0.92	0.91	0.89	0.86	0.82
	-98	-	-	-	-	-	0.92	0.90	0.88	0.85	0.80


### Heating



		Pipe Length (ft)									
		16	33	49	66	82	98	115	131	148	164
Level Difference (ft)	98	-	-	-	-	-	0.94	0.93	0.92	0.91	0.90
	82	-	-	-	-	0.96	0.94	0.93	0.92	0.91	0.90
	66	-	-	-	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	49	-	-	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	33	-	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	16	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	0	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-16	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-33	-	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-49	-	-	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-66	-	-	-	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-82	-	-	-	-	0.96	0.94	0.93	0.92	0.91	0.90
	-98	-	-	-	-	-	0.94	0.93	0.92	0.91	0.90


AC036KNZDCH/AA + AC036JXADCH/AA

### Cooling



		Pipe Length (ft)														
		16	33	49	66	82	98	115	131	148	164	180	197	213	230	246
Level Difference (ft)	98	-	-	-	-	-	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	82	-	-	-	-	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	66	-	-	-	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	49	-	-	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	33	-	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	16	1.00	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	0	1.00	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-16	1.00	0.99	0.98	0.97	0.96	0.95	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
	-33	-	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.92	0.91	0.90	0.89	0.87	0.85
	-49	-	-	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.86	0.84
	-66	-	-	-	0.96	0.95	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.86	0.83
	-82	-	-	-	-	0.95	0.94	0.93	0.92	0.92	0.91	0.90	0.88	0.87	0.85	0.81
	-98	-	-	-	-	-	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.86	0.84	0.80

### Heating



		Pipe Length (ft)														
		16	33	49	66	82	98	115	131	148	164	180	197	213	230	246
Level Difference (ft)	98	-	-	-	-	-	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	82	-	-	-	-	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	66	-	-	-	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	49	-	-	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	33	-	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	16	1.00	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	0	1.00	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-16	1.00	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-33	-	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-49	-	-	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-66	-	-	-	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-82	-	-	-	-	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-98	-	-	-	-	-	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88




# Capacity correction

## Outdoor


AC054KNZDCH/AA + AC054KXADCH/AA

### Cooling



		Pipe Length (ft)														
		16	33	49	66	82	98	115	131	148	164	180	197	213	230	246
Level Difference (ft)	98	-	-	-	-	-	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	82	-	-	-	-	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	66	-	-	-	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	49	-	-	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	33	-	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	16	1.00	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	0	1.00	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-16	1.00	0.99	0.98	0.97	0.96	0.95	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
	-33	-	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.92	0.91	0.90	0.89	0.87	0.85
	-49	-	-	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.86	0.84
	-66	-	-	-	0.96	0.95	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.86	0.83
	-82	-	-	-	-	0.95	0.94	0.93	0.92	0.92	0.91	0.90	0.88	0.87	0.85	0.81
	-98	-	-	-	-	-	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.86	0.84	0.80

### Heating



		Pipe Length (ft)														
		16	33	49	66	82	98	115	131	148	164	180	197	213	230	246
Level Difference (ft)	98	-	-	-	-	-	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	82	-	-	-	-	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	66	-	-	-	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	49	-	-	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	33	-	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	16	1.00	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	0	1.00	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-16	1.00	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-33	-	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-49	-	-	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-66	-	-	-	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-82	-	-	-	-	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-98	-	-	-	-	-	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88

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