

SAMSUNG

SINGLE Technical Data Book

**Wind-Free 4Way Cassette for America
(R410A, HP)**



Model : Wind-Free 4Way Cassette (600x600) - CNH**NDB (AC***BNNDCH/AA), CXH**ADB (AC***BXADCH/AA)
Wind-Free 4Way Cassette - CNH**4DB (AC***BN4DCH/AA), CXH**ADB (AC***BXADCH/AA)

History

Version	Modification	Date	Remark
Ver.1.0	Released 2021 CAC Wind-Free 4Way Cassette for North America	21. 10. 21	
Ver.2.0	Updated the Max Heat Line up	21. 12. 04	
Ver.2.1	Updated the format	21. 12. 28	
Ver.2.2	Updated drain pipe spec	22. 02. 22	
Ver.2.3	Modified data on specification page.	22. 12. 12	
Ver.2.4	Updated fresh air knockout note	23. 02. 24	F/A Knockout

Features & Benefits

CAC - World-class energy efficiency

Maintain optimal comfort and control with energy and cost-efficient technologies

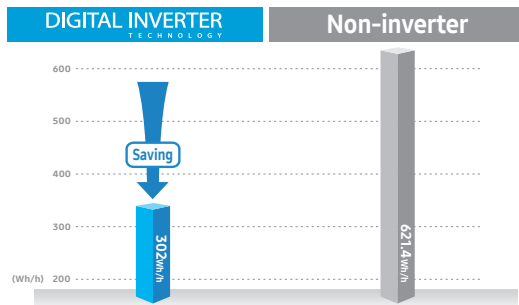
Featuring a suite of energy-optimizing technologies, Samsung CAC Single delivers top-class energy efficiency to support business in saving costs and the environment.

Quick, efficient heating and cooling

Smart inverter technology offers powerful, quick cooling and heating with minimal electricity consumption, which means real cost savings and less energy waste.

Up to 50 percent less energy use

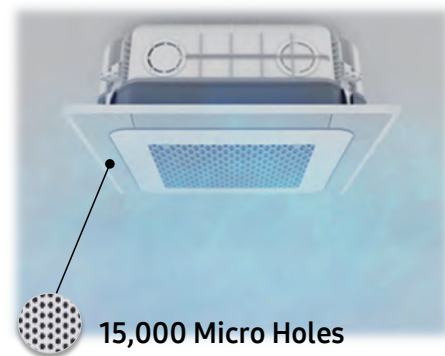
After reaching changes its operation mode to economical. By avoiding inefficient and frequent switching on and off of the compressor, the digital inverter saves up to 50 percent in energy consumption compared to non-inverter air conditioners.



Wind-Free Cooling with Micro holes

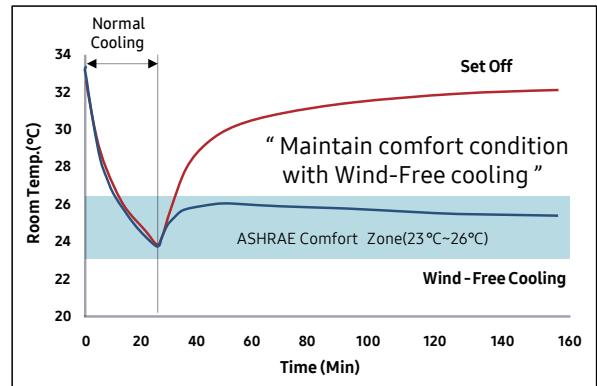
- The Wind-Free Air conditioner pushes air out through 15,000 micro holes in the panel, producing a dispersed and gentle flow of air actually defined as “still air” and the key here is all of those holes create a still, cooled air flow that infiltrates the room gently and softly.
- ※ Still Air condition : According to ASHRAE, If velocity of wind is lower than 0.15m/s, People can not detect wind. And they define that condition is “Still Air”

No Direct Wind & Cold Draft



※ Wind-Free 4Way(600x600) : 9,000 Micro Holes

[Comparison of Room Temp.]



※ Internal Test (14.0kW Model @ 122m²)

Features & Benefits

CAC Single - Superior performance

Stabilize the atmosphere with broad temperature allowance and control

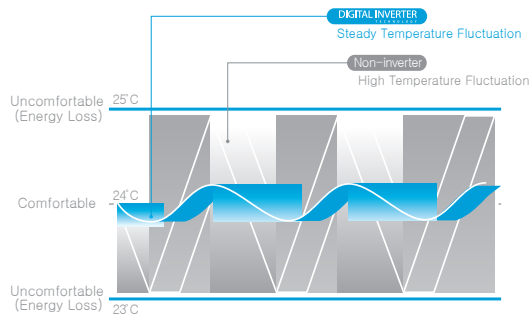
Samsung is dedicated to supporting comfortable living and working environments based on the strength of its technologies. With a single unit, CAC Single delivers reliable comfort and control over multiple areas to ensure a pleasant atmosphere in any climate.

Wide temperature performance

No matter how extreme the temperature, the high-performing CAC Single can handle the condition—without the need for an additional unit. Featuring a wide temperature allowance, it can cool in heat of up to 50 and provide warmth in the freezing cold of -20°C to ensure a constant and comfortable home environment.

Ideal comfort in minutes

The CAC Single digital inverter air conditioner works at maximum capacity at startup. As soon as the temperature reaches the desired or set temperature, CAC Single performs fine adjustments to cope with any changes. This means less temperature fluctuation and ideal comfort in a matter of minutes.



Versatile piping installation

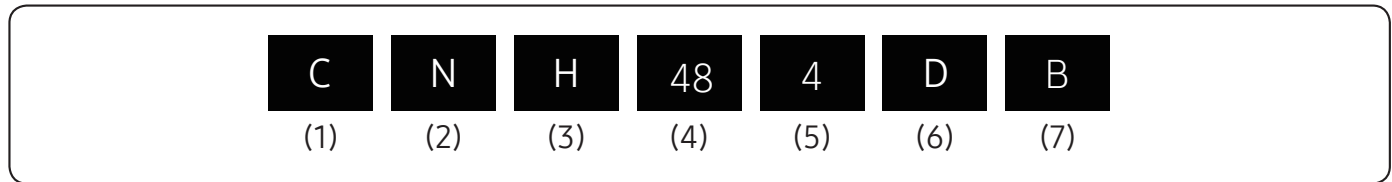
CAC Single outdoor units offer a selection of pipe directions. The internal pipe connection ports allow four different pipe directions, supporting a neater, more organized-looking unit upon installation.



Nomenclature

US Code

Model Name



(1) Classification

C	CAC
---	-----

(2) Product Type

N	Indoor Unit
X	Outdoor Unit

(3) Mode

A	Universal
C	Cooling Only
H	Heat Pump

(4) Capacity

	X1,000 Btu/h (2 digits)
--	-------------------------

(5-1) Product Notation (Indoor Unit)

1	1 Way Cassette / Wind-Free 1Way Cassette
N	4 Way Cassette (600x600) Wind-Free 4 Way Cassette (600x600)
4	4 Way Cassette, 360 Cassette Wind-Free 4 Way Cassette
L	LSP Duct
H	HSP Duct
C	Ceiling
J	Console
A	AR9500 (Wall Mounted)
T	MAX4 (Wall Mounted)
Z	Multi-position AHU

(5-2) Feature1 (Outdoor Unit)

A	Inv+Side+General Temp
S	Inv+Side+Low Temp
Q	Inv+Side+Tropical Temp
F	Inv+Top+Tropical Temp

(6) Feature

F	Flagship
S	Standard
D	Deluxe
P	Premium
C	Deluxe + Low Temp.

(7) Version

B	2022
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Nomenclature

Indoor Unit

Model Name



(1) Classification

AC	CAC
----	-----

(2) Capacity

X1,000 Btu/h (3 digits)

(3) Version

B	2022
---	------

(4) Product Type

N	Indoor Unit
X	Outdoor Unit

(5) Product Notation

1	1 Way Cassette
N	4 Way Cassette (600x600) Wind-Free 4 Way Cassette (600x600)
4	4 Way Cassette, 360 Cassette Wind-Free 4 Way Cassette
L	LSP Duct
H	HSP Duct
C	Ceiling
J	Console
A	AR9500 (Wall Mounted)
T	MAX4 (Wall Mounted)
Z	Multi-position AHU

(6) Feature

F	Flagship
S	Standard
D	Deluxe
P	Premium

(7) Rating Voltage

C	1Φ, 208-230V,60Hz
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(8) Mode

C	Cooling Only
H	Heat Pump

Nomenclature

Outdoor Unit

Model Name

AC	048	B	X	A	D	C	H	/	AA
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

(1) Classification

AC	CAC
----	-----

(2) Capacity

x 1000 Btu/h (3 digits)

(3) Version

B	2022
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(4) Product Type

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

(5) Feature1

A	Inv+Side+General Temp
S	Inv+Side+Low Temp
Q	Inv+Side+Tropical Temp
F	Inv+Top+Tropical Temp

(6) Feature2

F	Flagship
S	Standard
D	Deluxe
P	Premium
C	Deluxe + Low Temp.

(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)

Line-up




Indoor unit

Model	Capacity (kBtu/h)		
	9	12	18
Wind-Free 4Way Cassette (600 x 600)			







Model	Capacity (kBtu/h)					
	18	24	30	36	42	48
Wind-Free 4Way Cassette						

Outdoor Unit

Wind-Free 4Way Cassette (600x600)

Model	Capacity (kBtu/h)		
	9	12	18
1Phase			

Wind-Free 4Way Cassette

Model	Capacity (kBtu/h)					
	18	24	30	36	42	48
CXH**ADB (AC***BXADCH/AA)						

Contents

Wind-Free 4Way Cassette (600x600)	10
Wind-Free 4Way Cassette	26
Outdoor Units	50
Installation	73

Wind-Free 4Way Cassette (600x600)

1. Specification	12
2. Summary Table	14
3. Capacity Table	15
4. Dimensional Drawing	18
5. Center of Gravity	19
6. Electrical Wiring Diagram	20
7. Sound Data	21
8. Temperature and air flow distribution	23

Features & Benefits

Wind-Free 4Way Cassette (600x600)

Add chic flair to your interior design with a stylish yet powerful AC system

Samsung's advanced Wind-Free 4Way Cassette (600 x 600) builds on the aesthetic appeal and performance of the standard Wind-Free 4Way Cassette with an enhanced design. The Wind-Free 4Way Cassette (600 x 600) comes in a variety of patterns to complement any interior. The stylish cassette unit visually harmonizes with the indoor space, while efficient cooling and heating performance make it a dependable and practical air conditioning solution.



The Wind-Free 4Way Cassette (600 x 600) indoor air conditioning system provides high-performance heating and cooling in an elegant design with features such as:

- **Tasteful design and compact, lightweight build.** Create a polished ambiance with a discreetly sized design and a choice of attractive panel patterns.
- **Enhanced comfort control.** Optimize comfort and save energy with optional motion detection.
- **Low maintenance and powerful airflow.** Ease installation and maintenance and maximize airflow with an efficient design and robust performance.

Wind-Free 4Way Cassette (600 x 600) - Tasteful design, Compact, Lightweight build

Refine the interior with an elegant, compact design

The enhanced Samsung Wind-Free 4Way Cassette (600 x 600) indoor air conditioner features a selection of simple panel patterns to blend seamlessly into any interior design. Its uniquely lightweight frame blends effortlessly and beautifully into any décor, while clever blade construction keeps the unit clean for a tidy appearance.

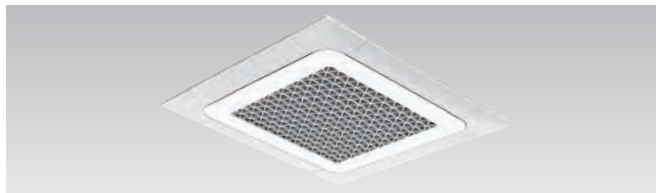
Attractive panel and display

The Wind-Free 4Way Cassette (600 x 600) features a fashionable panel with a simple, beveled corner design. The rounded panel frame promotes a neat, tidy look for an aesthetic flair that blends perfectly with any ambience.



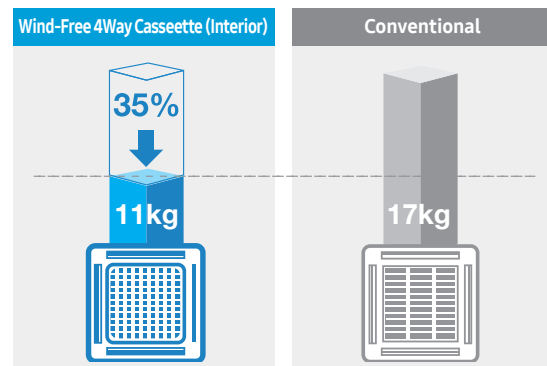
Ultra-compact size

Samsung's Wind-Free 4Way Cassette (600 x 600) air conditioner can be installed on a single standard ceiling tile (600W x 600D) which helps minimize installation time and effort.



Light, robust design

The Samsung Wind-Free 4Way Cassette (600 x 600) indoor unit is now lighter in weight at 11kg. It is the lightest indoor unit in the industry, about 35 percent lighter than our conventional products.



*Based on 3.5kW

1. Specification

Wind-Free 4Way Cassette (600x600)

Model Name		Indoor Unit		AC009BNNNDCH/AA	AC012BNNNDCH/AA	AC018BNNNDCH/AA	
US Code		Outdoor Unit		AC009BXADCH/AA	AC012BXADCH/AA	AC018BXADCH/AA	
Indoor Unit		Outdoor Unit		CNH09NDB	CNH12NDB	CNH18NDB	
Outdoor Unit		Outdoor Unit		CXH09ADB	CXH12ADB	CXH18ADB	
System	Mode		-	Heat Pump	Heat Pump	Heat Pump	
	Performance	Capacity (Min/Std/Max)	Cooling	kW	1.00 / 2.67 / 4.10	1.03 / 3.17 / 4.25	1.61 / 5.10 / 6.15
				Btu/h	3,400 / 9,100 / 14,000	3,500 / 10,800 / 14,500	5,500 / 17,400 / 21,000
				US RT	0.28 / 0.76 / 1.17	0.29 / 0.90 / 1.21	0.46 / 1.45 / 1.75
			Heating	kW	0.85 / 2.93 / 4.40	0.88 / 3.96 / 4.54	0.97 / 5.86 / 6.89
				Btu/h	2,900 / 10,000 / 15,000	3,000 / 13,500 / 15,500	3,300 / 20,000 / 23,500
				US RT	0.24 / 0.83 / 1.25	0.25 / 1.13 / 1.29	0.28 / 1.67 / 1.96
	Power	Power Input (Min/Std/Max)	Cooling	kW	0.19 / 0.70 / 1.46	0.19 / 0.86 / 1.48	0.37 / 1.58 / 2.35
				Heating	0.15 / 0.68 / 1.75	0.15 / 1.07 / 1.80	0.29 / 2.02 / 3.60
			Current Input (Min/Std/Max)	Cooling	A	1.3 / 3.3 / 6.5	1.3 / 4.1 / 6.6
		Heating		A	1.1 / 3.2 / 7.9	1.1 / 4.8 / 8.0	1.8 / 9.1 / 16.0
		Current	MCA	A	10.9	10.9	20.1
			MOP	A	15	15	25
	Efficiency	EER2	Cooling	-	3.81	3.66	3.22
			Cooling(US)	(Btu/h)/W	13.00	12.50	11.00
		COP2	Heating	W/W	4.30	3.70	2.90
		SEER2	-	22.0	21.5	19.3	
		HSPF2	-	9.5	9.5	8.1	
	Pipe Connections	Liquid Pipe		Type	Flare	Flare	Flare
				Φ, mm(inch)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)
		Gas Pipe		Type	Flare	Flare	Flare
				Φ, mm(inch)	9.52 (3/8)	9.52 (3/8)	12.7 (1/2)
		Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
		Pipe Length (ODU-IDU)	Standard	m (ft)	7.5 (24.6)	7.5 (24.6)	7.5 (24.6)
				Max.	20 (65.6)	20 (65.6)	50 (164.0)
	Chargeless		Elevation	m (ft)	15 (49.2)	15 (49.2)	30 (98.4)
			m (ft)	7.5 (24.6)	7.5 (24.6)	7.5 (24.6)	
	Wiring Connections	Communication	Min.	mm ²	0.75	0.75	0.75
			Remark	-	F1,F2	F1,F2	F1,F2
	Refrigerant	Type		-	R410A	R410A	R410A
Factory Charging		kg	1.15	1.15	2		
Option Code	Standard		-	0153FF-1910C8-271A23-370040	0153FF-1930F9-272328-370000	0153FF-19345D-25343B-370000	
	Install		-	020010-100001-200000-300000	020010-100001-200000-300000	020010-100001-200000-300000	
Indoor Unit	Power Supply		Φ,#,V,Hz	1,2,208-230,60	1,2,208-230,60	1,2,208-230,60	
	Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube
		Material	Fin	-	Al	Al	Al
			Tube	-	Cu	Cu	Cu
	Fin Treatment		-	Green Hydrophile	Green Hydrophile	Green Hydrophile	
	Fan	Type		-	Turbo	Turbo	Turbo
		Quantity		EA	1	1	1
		Air Flow Rate	H/M/L	m ³ /min	8.0/7.0/6.0	9.2/8.0/6.4	10.5/9.5/8.5
				ft ³ /min	283/247/212	325/283/226	371/336/300
				l/s	133/117/100	153/133/107	175/158/142
	External Static Pressure	Min/Std/Max	In Wg	-	-	-	
	Fan Motor	Type		-	BLDC	BLDC	BLDC
		Output		W x n	65 x 1	65 x 1	65 x 1
	Drain	Drain Pipe		Φ, mm	OD26.67	OD26.67	OD26.67
	Sound	Sound Pressure Level	H/M/L	dB(A)	31/28/25	34/30/25	39/34/29
				Sound Power Level	dB(A)	48	51
	External Dimension	Net Weight		kg(lbs)	11.6 (25.6)	11.6 (25.6)	11.6 (25.6)
		Gross Weight		kg(lbs)	13.8 (30.4)	13.8 (30.4)	13.8 (30.4)
		Net Dimensions (WxHxD)		mm	575 x 250 x 575	575 x 250 x 575	575 x 250 x 575
				inch	22.64 x 9.84 x 22.64	22.64 x 9.84 x 22.64	22.64 x 9.84 x 22.64
Gross Dimensions (WxHxD)		mm	623 x 298 x 653	623 x 298 x 653	623 x 298 x 653		
		inch	24.53 x 11.73 x 25.71	24.53 x 11.73 x 25.71	24.53 x 11.73 x 25.71		

1. Specification

Wind-Free 4Way Cassette (600x600)

Model Name		Indoor Unit		AC009BNNDCH/AA	AC012BNNDCH/AA	AC018BNNDCH/AA
		Outdoor Unit		AC009BXADCH/AA	AC012BXADCH/AA	AC018BXADCH/AA
US Code		Indoor Unit		CNH09NDB	CNH12NDB	CNH18NDB
		Outdoor Unit		CXH09ADB	CXH12ADB	CXH18ADB
Indoor Unit	Casing	Material		-	Polypropylene	Polypropylene
		Model Name		-	PC4SUFMUN	PC4SUFMUN
	Panel	Type		-	Wind-Free Type	Wind-Free Type
		Material		-	HIPS	HIPS
		Color		-	DA White	DA White
		Net Weight	kg(lbs)	-	2.7 (6.0)	2.7 (6.0)
		Gross Weight	kg(lbs)	-	3.9 (8.6)	3.9 (8.6)
		Net Dimensions (WxHxD)	mm	-	620 x 46 x 620	620 x 46 x 620
			inch	-	24.41 x 1.81 x 24.41	24.41 x 1.81 x 24.41
	Gross Dimensions (WxHxD)	mm	-	670 x 120 x 655	670 x 120 x 655	
		inch	-	26.38 x 4.72 x 25.79	26.38 x 4.72 x 25.79	
	Control System	Infrared remote control		-	AR-EH04U	AR-EH04U
		Wired remote control		-	MWR-WG00UN / MWR-SH11UN	MWR-WG00UN / MWR-SH11UN
	Drain Pump	Drain Pump		-	Included	Included
Max.lifting Height / Displacement		in / gal/h	29-5/16 6.34gal/h	29-5/16 6.34gal/h		
Additional Accessories	Air Filter		-	Removable / Washable	Removable / Washable	
Power Supply				Φ,#,V,Hz	1,2,208-230,60	1,2,208-230,60
Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	
	Material	Fin	-	Al	Al	
		Tube	-	Cu	Cu	
Fin Treatment		-	Green Hydrophile	Green Hydrophile		
Compressor	Model		-	KTN130D42UFR	KTN130D42UFR	
	Type		-	BLDC	BLDC	
	Output		kW	1.04	1.04	
	Oil	Type	-	POE	POE	
Initial Charge		cc (fl oz)	-	350	350	
Fan	Type		-	Propeller	Propeller	
	Discharge direction		-	Front	Front	
	Quantity		EA	1	1	
	Air Flow Rate	H/M/L	m ³ /min	30	30	
			ft ³ /min	1,060	1,060	
l/s			500	500		
Fan Motor	Type		-	BLDC	BLDC	
	Output		W x n	40 x 1	125 x 1	
Sound	Sound Pressure	Cooling	dB(A)	46	47	
	Level	Heating	dB(A)	47	48	
	Sound Power Level		dB(A)	59	61	
External Dimension	Net Weight		kg(lbs)	33.3 (74.3)	33.3 (74.3)	
	Gross Weight		kg(lbs)	35.6 (78.5)	35.6 (78.5)	
	Net Dimensions (WxHxD)	mm	-	790 x 548 x 285	790 x 548 x 285	
		inch	-	31.10 x 21.57 x 11.22	31.10 x 21.57 x 11.22	
	Gross Dimensions (WxHxD)	mm	-	913 x 622 x 371	913 x 622 x 371	
inch		-	35.94 x 24.49 x 14.61	35.94 x 24.49 x 14.61		
Casing	Material	Body	-	Steel	Steel	
Operating Temp.	Cooling		°C (°F)	-18~50 (0~122)	-18~50 (0~122)	
	Heating		°C (°F)	-25~24 (-13~75)	-25~24 (-13~75)	

NOTE

- Specification may be subject to change without prior notice.
 - 1) Performances are based on the following test conditions.
 - Cooling : Indoor temperature : 80°F(26.7°C) DB, 67°F(19.4°C) WB, Outdoor temperature : 95°F(35°C) DB, 75°F(23.9°C) WB
 - Heating : Indoor temperature : 70°F(21.1°C) DB, 60°F(15.6°C) WB, Outdoor temperature : 47°F(8.3°C) DB, 43°F(6.1°C) WB
 - Equivalent refrigerant piping length 7.5m(24.6ft), Level differences : 0m(0ft)
 - 2) Select wire size based on the value of MCA
 - 3) Sound pressure level is obtained in an anechoic room.
 - Sound pressure level is a relative value, depending on the distance and acoustic environment.
 - Sound pressure level may differ depending on operation condition.
 - dBA = A-weighted sound pressure level / Reference acoustic pressure 0 dB = 20uPa
 - 4) Sound power level is an absolute value that a sound source generates.
 - dBA = A-weighted sound power level
 - Reference power : 1pW / Measured according to ISO 3741
 - 5) These products contain R410A which is fluorinated greenhouse gas.

2. Summary Table

Wind-Free 4Way Cassette (600x600)

Performance Characteristics

Model Code	Net Weight (lbs)	Capacity		Fan Speed	Airflow (Cooling/Heating) (CFM)	Sound Pressure Level (dBA)	Sound Power Level (dBA)	
		Cooling (Btu/h)	Heating (Btu/h)					
CNH09NDB (AC009BNNDCH/AA)	25.6	Max.	14,000	15,000	High	283 / 283	31	48
		Std.	9,100	10,000	Mid	247 / 247	28	-
		Min.	4,300	2,900	Low	212 / 212	25	-
CNH12NDB (AC012BNNDCH/AA)	25.6	Max.	14,500	15,500	High	325 / 325	34	51
		Std.	10,800	13,500	Mid	283 / 283	30	-
		Min.	3,500	3,000	Low	226 / 226	25	-
CNH18NDB (AC018BNNDCH/AA)	25.6	Max.	21,000	23,500	High	371 / 371	39	56
		Std.	17,400	20,000	Mid	336 / 336	34	-
		Min.	5,500	3,300	Low	300 / 300	29	-

NOTE

- Sound data is based on cooling operation.

Electric Characteristics

Model		Outdoor Unit				Input Current (Amperes)			Power Supply		
Indoor Unit	Outdoor Unit	Rated	Voltage range		Outdoor Unit		Indoor Unit	Total	MCA(A)	MOP(A)	
		Hz	Volts	Min.	Max	Cooling					Heating
CNH09NDB (AC009BNNDCH/AA)	CXH09ADB (AC009BXADCH/AA)	60	208 to 230	187	253	8.74	8.74	0.30	9.04	10.9	15
CNH12NDB (AC012BNNDCH/AA)	CXH12ADB (AC012BXADCH/AA)	60	208 to 230	187	253	8.74	8.74	0.30	9.04	10.9	15
CNH18NDB (AC018BNNDCH/AA)	CXH18ADB (AC018BXADCH/AA)	60	208 to 230	187	253	17.94	17.94	0.30	18.24	20.1	25

NOTE

- MCA : Minimum circuit amperes
- MOP : Maximum Overcurrent Protective Device
- Select wire size based on the value of MCA

3. Capacity Table

Wind-Free 4Way Cassette (600x600)

(1) CNH09NDB(AC009BNNDCH/AA) + CXH09ADB (AC009BXADCH/AA)

Cooling

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

Outdoor Temp. (°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	10.1	8.0	0.69	10.6	8.2	0.71	11.0	8.5	0.72	11.4	8.8	0.74	11.6	8.7	0.74	12.2	8.6	0.75	12.8	8.4	0.76
70	11.3	8.7	0.66	11.9	9.0	0.67	12.4	9.3	0.69	12.7	9.6	0.70	13.0	9.5	0.71	13.6	9.4	0.71	14.3	9.2	0.73
95	8.1	5.8	0.66	8.5	6.0	0.67	8.8	6.2	0.69	9.1	6.4	0.70	9.3	6.3	0.71	9.7	6.2	0.71	10.2	6.1	0.73
115	10.1	7.8	1.22	10.6	8.0	1.24	11.0	8.3	1.27	11.4	8.5	1.30	11.6	8.4	1.31	12.2	8.4	1.32	12.8	8.2	1.35
122	7.6	6.7	1.02	8.1	6.9	1.04	8.4	7.1	1.06	8.6	7.3	1.09	8.8	7.3	1.10	9.3	7.2	1.11	9.7	7.1	1.13

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB)											
	61		64		68		70		72		75	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-13	6.6	1.12	6.5	1.11	6.5	1.10	6.4	1.09	6.3	1.08	6.3	1.07
-4	9.0	1.24	8.9	1.22	8.8	1.21	8.7	1.20	8.6	1.19	8.5	1.18
14	13.9	1.86	13.7	1.84	13.6	1.82	13.5	1.80	13.3	1.78	13.2	1.76
32	14.5	1.52	14.4	1.50	14.2	1.49	14.1	1.47	14.0	1.46	13.8	1.44
47	10.3	0.70	10.2	0.69	10.1	0.69	10.0	0.68	9.9	0.67	9.8	0.67
75.2	17.2	1.24	17.0	1.22	16.8	1.21	16.7	1.20	16.5	1.19	16.3	1.18

NOTE

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

3. Capacity Table

Wind-Free 4Way Cassette (600x600)

(2) CNH12NDB(AC012BNNDCH/AA) + CXH12ADB (AC012BXADCH/AA)

Cooling

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

Outdoor Temp. (°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	10.5	8.3	0.73	11.1	8.6	0.74	11.5	8.9	0.76	11.9	9.1	0.77	12.1	9.1	0.78	12.7	9.0	0.79	13.4	8.8	0.81
70	11.9	9.2	0.69	12.6	9.5	0.70	13.1	9.8	0.72	13.5	10.1	0.73	13.8	10.0	0.74	14.5	9.9	0.75	15.2	9.7	0.76
95	9.6	6.9	0.81	10.1	7.1	0.83	10.5	7.3	0.84	10.8	7.6	0.86	11.0	7.5	0.87	11.6	7.4	0.88	12.1	7.3	0.89
115	10.5	8.1	1.30	11.1	8.4	1.32	11.5	8.6	1.35	11.9	8.9	1.38	12.1	8.8	1.39	12.7	8.7	1.40	13.4	8.6	1.43
122	8.1	7.1	1.09	8.5	7.3	1.12	8.9	7.6	1.14	9.2	7.8	1.16	9.4	7.7	1.17	9.8	7.6	1.18	10.3	7.5	1.21

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB)											
	61		64		68		70		72		75	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-13	7.0	1.10	6.9	1.09	6.8	1.08	6.8	1.07	6.7	1.06	6.6	1.05
-4	9.2	1.29	9.1	1.28	9.0	1.26	8.9	1.25	8.8	1.24	8.7	1.23
14	14.6	1.82	14.5	1.80	14.3	1.78	14.2	1.77	14.0	1.75	13.9	1.73
32	15.3	1.49	15.1	1.47	15.0	1.46	14.9	1.44	14.7	1.43	14.6	1.42
47	13.9	1.10	13.8	1.09	13.6	1.08	13.5	1.07	13.4	1.06	13.2	1.05
75.2	18.1	1.21	17.9	1.20	17.7	1.19	17.6	1.18	17.4	1.17	17.2	1.15

NOTE

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

3. Capacity Table

Wind-Free 4Way Cassette (600x600)

(3) CNH18NDB(AC018BNNDCH/AA) + CXH18ADB (AC018BXADCH/AA)

Cooling

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

Outdoor Temp. (°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	15.4	11.1	1.12	16.2	11.5	1.14	16.9	11.8	1.16	17.4	12.2	1.19	17.7	12.1	1.20	18.6	11.9	1.21	19.6	11.7	1.23
70	19.2	13.9	1.26	20.3	14.3	1.29	21.1	14.8	1.32	21.8	15.2	1.34	22.2	15.1	1.36	23.3	14.9	1.37	24.5	14.6	1.40
95	15.4	11.1	1.49	16.2	11.5	1.52	16.9	11.8	1.55	17.4	12.2	1.58	17.7	12.1	1.60	18.6	11.9	1.61	19.6	11.7	1.64
115	16.9	13.5	2.97	17.8	13.9	3.03	18.6	14.3	3.10	19.1	14.7	3.16	19.5	14.6	3.19	20.5	14.4	3.22	21.5	14.2	3.29
122	13.9	11.4	2.60	14.6	11.8	2.66	15.2	12.2	2.71	15.7	12.5	2.77	16.0	12.4	2.79	16.8	12.3	2.82	17.6	12.0	2.88

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB)											
	61		64		68		70		72		75	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-13	14.4	2.71	14.3	2.68	14.1	2.65	14.0	2.63	13.9	2.60	13.7	2.57
-4	17.5	3.33	17.3	3.29	17.2	3.26	17.0	3.23	16.8	3.20	16.7	3.17
14	24.7	4.06	24.5	4.02	24.2	3.98	24.0	3.94	23.8	3.90	23.5	3.86
32	24.3	3.43	24.1	3.40	23.8	3.37	23.6	3.33	23.4	3.30	23.1	3.27
47	20.6	2.08	20.4	2.06	20.2	2.04	20.0	2.02	19.8	2.00	19.6	1.98
75.2	26.8	2.29	26.5	2.27	26.3	2.24	26.0	2.22	25.7	2.20	25.5	2.18

NOTE

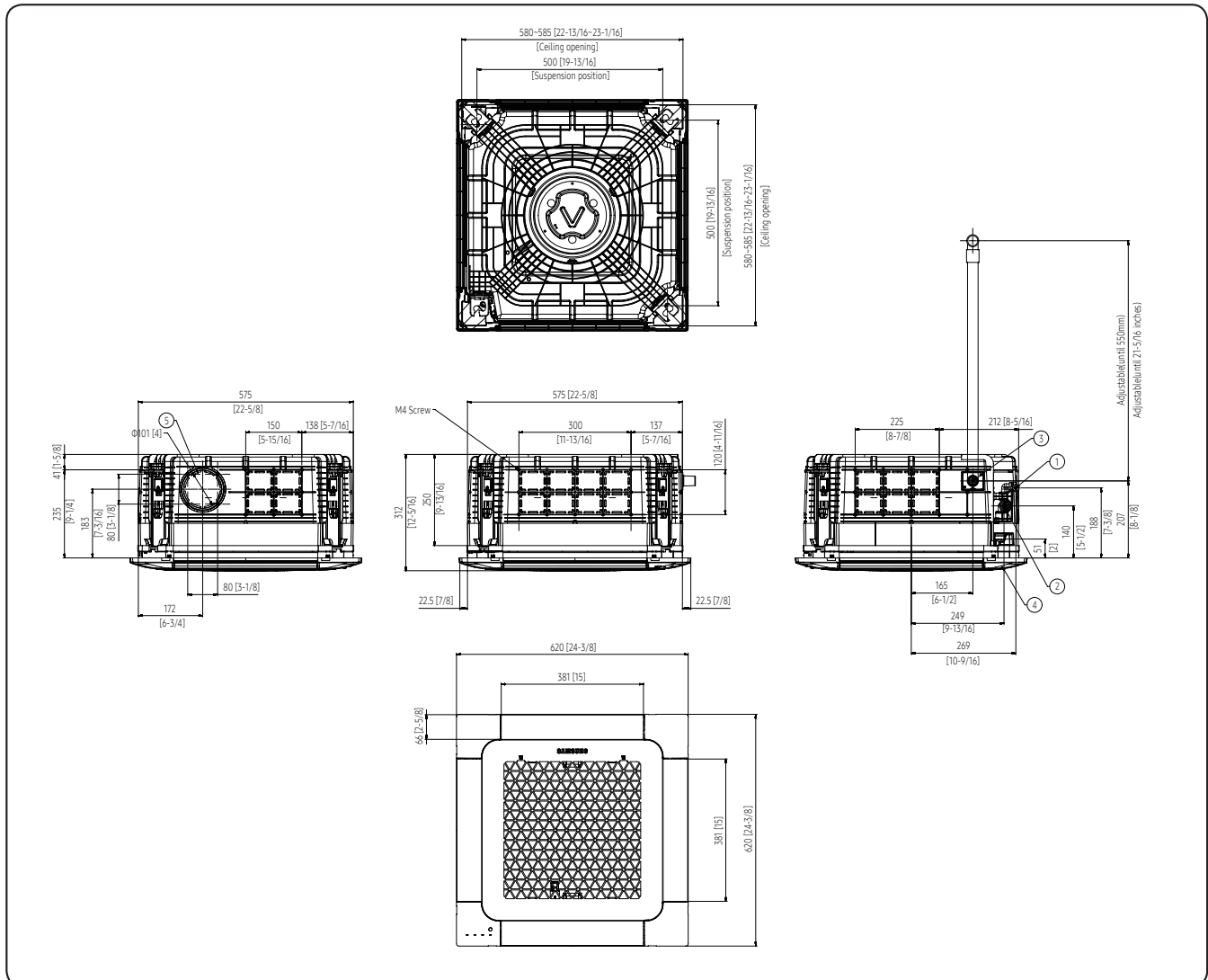
- The performance table shows the average value of each conditions.

4. Dimensional Drawing

Wind-Free 4Way Cassette (600x600)

CNH09NDB(AC009BNNDCH/AA), CNH12NDB(AC012BNNDCH/AA), CNH18NDB(AC018BNNDCH/AA)

Units : mm [inches]



No.	Name	Description	
		CNH09/12NDB (AC009/012BNNDCH/AA)	CNH18NDB (AC018BNNDCH/AA)
1	Liquid pipe connection	Φ 6.35mm(1/4")	
2	Gas pipe connection	Φ 9.52mm(3/8")	Φ 12.7mm(1/2")
3	Drain pipe connection	3/4"[OD26.67mm(1.05")]	
4	Power supply & Communication wiring conduit		
5	Fresh air intake knockout	Φ101mm(4") , Use M4 Screw	
6	Sub duct connection	Not supported for WindFree models	

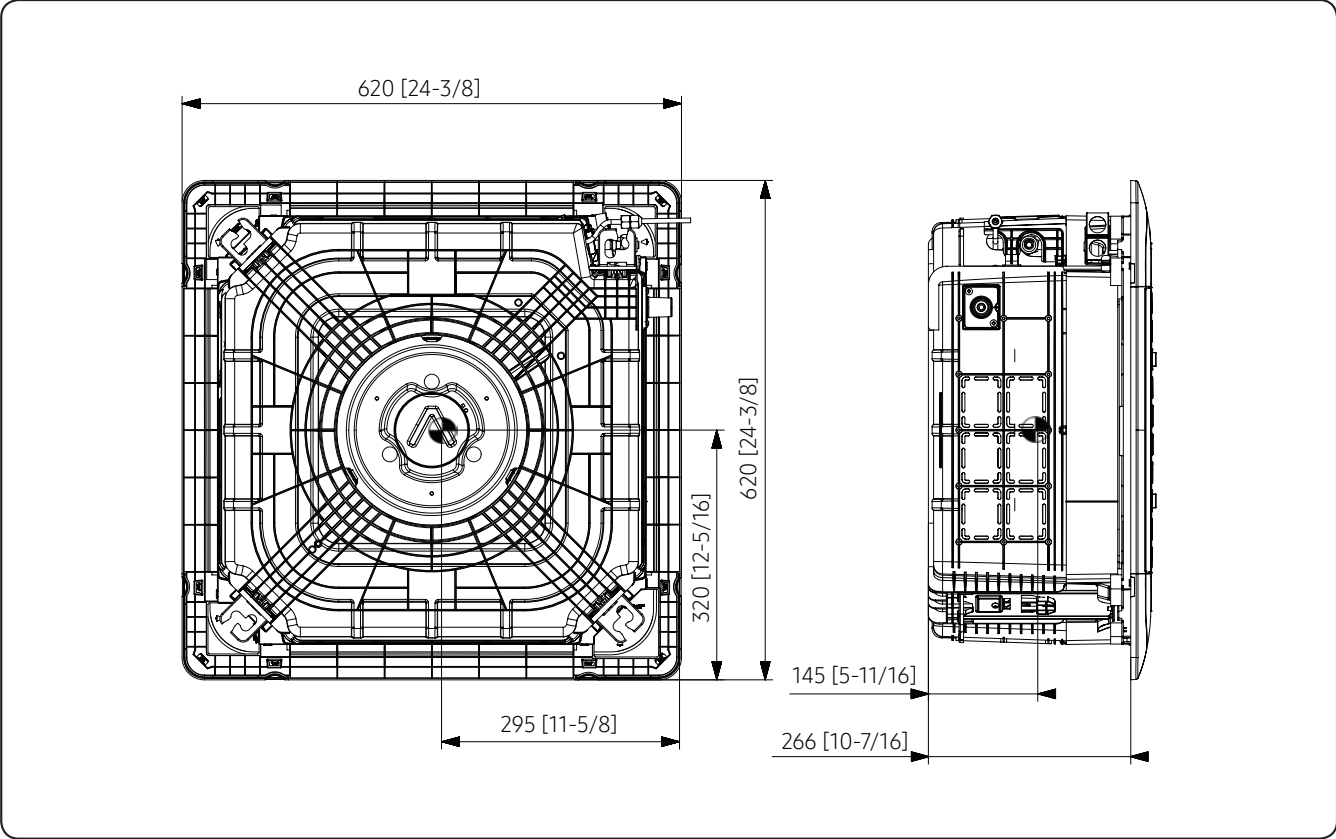
NOTE

- As for suspension bolt, please use M8 ~ M10. (Procured at local site)

5. Center of Gravity

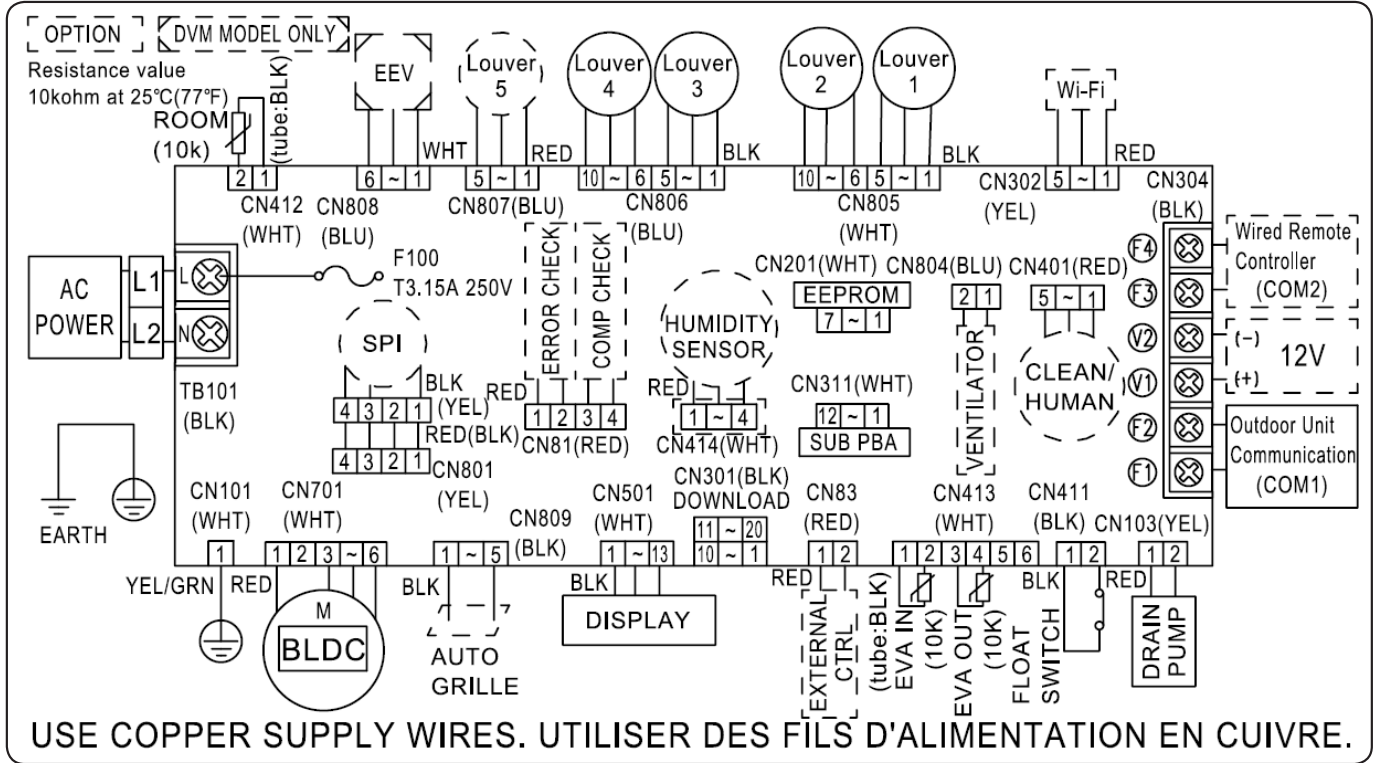
Wind-Free 4Way Cassette (600x600)

Units : mm [inches]



6. Electrical Wiring Diagram

Wind-Free 4Way Cassette (600x600)



SUB PBA	Printed Circuit Board(SUB)	SPI	S-Plasma ion	ROOM(10K)	Thermistor ROOM OUT(10K)
M-BLDC	BLDC Motor	EEV	Electronic Expansion Valve	EVA-IN(10K)	Thermistor EVA IN(10K)
		EXT_CONTROL	EXTERNAL_CONTROL	EVA-OUT(10K)	Thermistor EVA OUT(10K)

NOTE

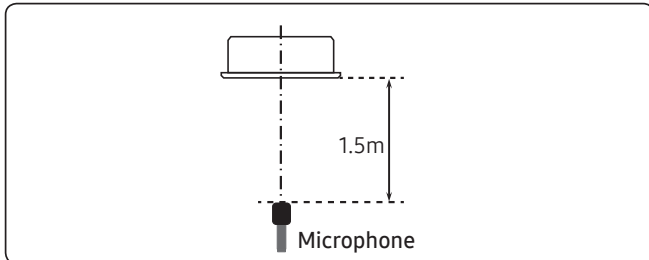
- This wiring diagram applies only to the Indoor unit.
- Symbols show as follow :
blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue: grn: green
- For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.
- ⊕ Protective earth(screw), □□□: connector, $\frac{N}{\text{wire}}$: The wire quantity

7. Sound Data

Wind-Free 4Way Cassette (600x600)

Sound Pressure level

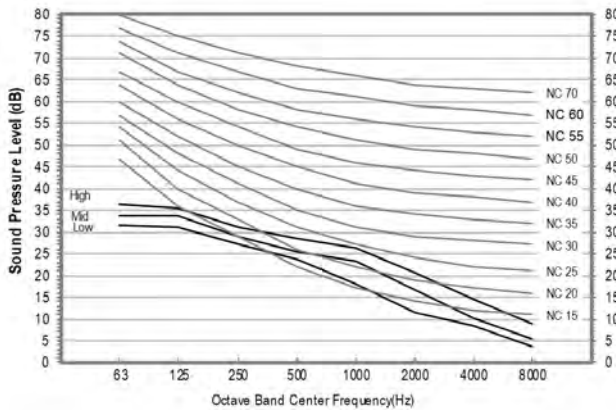
Unit: dB(A)



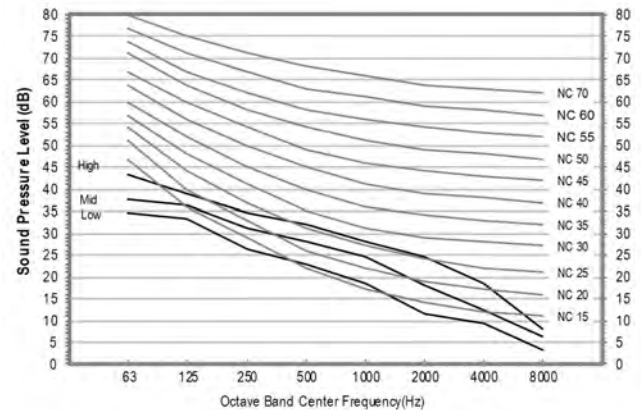
Model	High	Mid	Low
CNH09NDB(AC009BNNDCH/AA)	31	28	25
CNH12NDB(AC012BNNDCH/AA)	34	30	25
CNH18NDB(AC018BNNDCH/AA)	39	34	29

- NC Curve

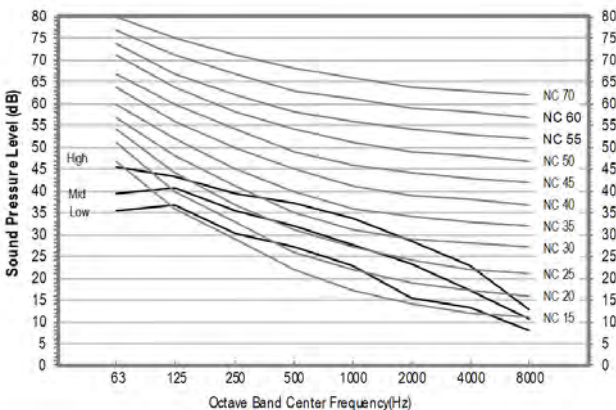
1) CNH09NDB(AC009BNNDCH/AA)



2) CNH12NDB(AC012BNNDCH/AA)



3) CNH18NDB(AC018BNNDCH/AA)



NOTE

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

7. Sound Data

Wind-Free 4Way Cassette (600x600)

Sound Power level

Unit: dB(A)

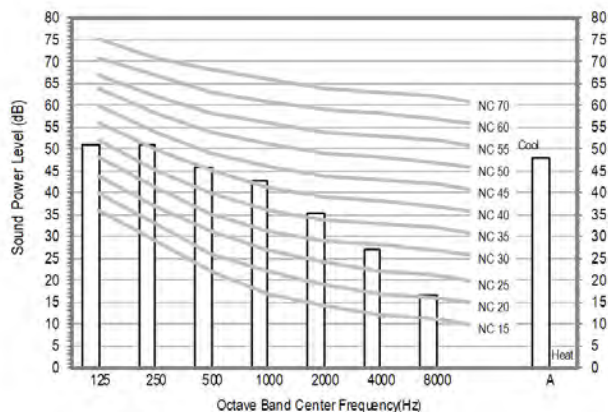
NOTE

- Specifications may be subject to change without prior notice
 - Sound power level is an absolute value that a sound source generates.
 - dBA = A-weighted sound power level.
 - Reference power : 1pW.
 - Measured according to ISO 3741.

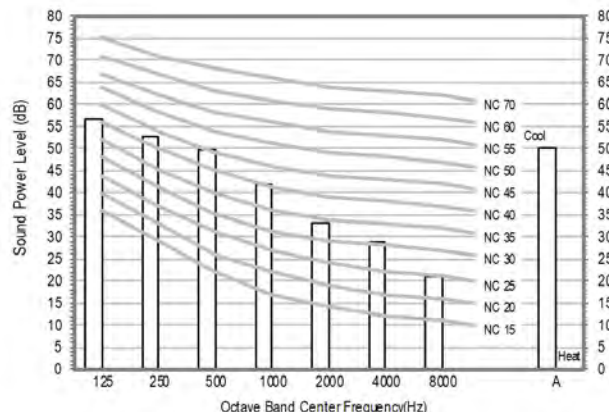
Model	Cooling
CNH09NDB(AC009BNNDCH/AA)	48
CNH12NDB(AC012BNNDCH/AA)	51
CNH18NDB(AC018BNNDCH/AA)	56

• NC Curve

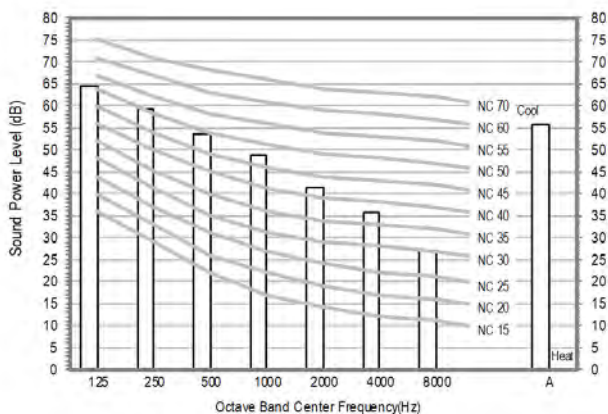
1) CNH09NDB(AC009BNNDCH/AA)



2) CNH12NDB(AC012BNNDCH/AA)



3) CNH18NDB(AC018BNNDCH/AA)

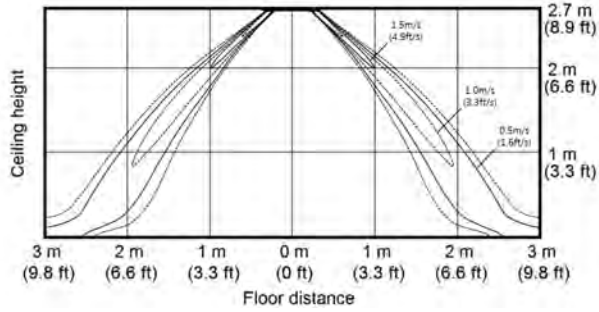


8. Temperature and air flow distribution

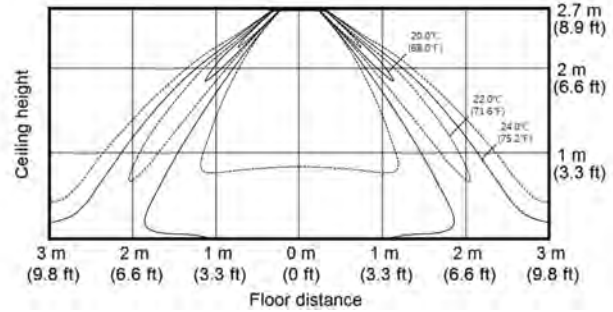
Wind-Free 4Way Cassette (600x600)

CNH09NDB(AC009BNNDCH/AA)

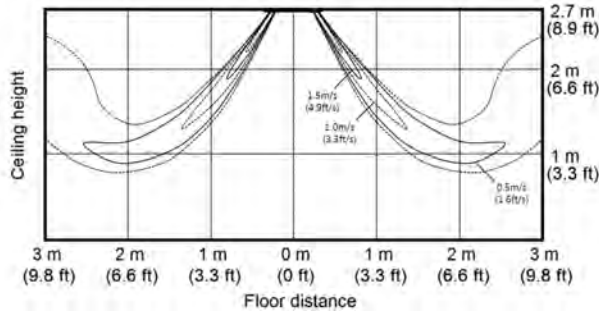
- Cooling Air Velocity distribution
(Discharge angle : 41 degree)



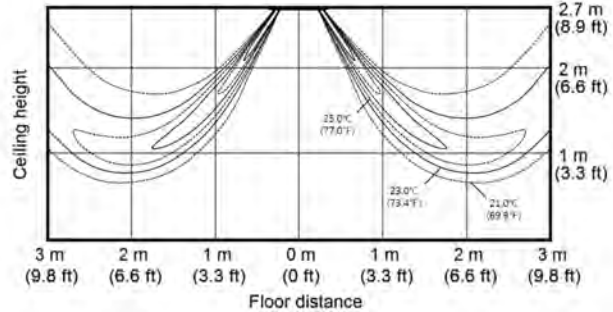
- Cooling temperature distribution
(Discharge angle : 41 degree)



- Heating Air Velocity distribution
(Discharge angle : 56 degree)



- Heating temperature distribution
(Discharge angle : 56 degree)

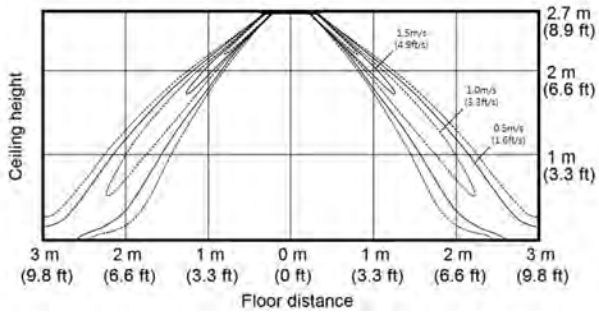


8. Temperature and air flow distribution

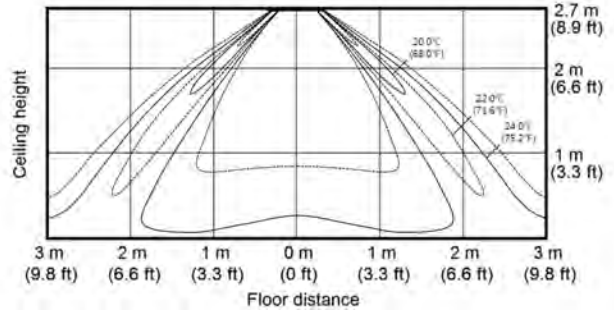
Wind-Free 4Way Cassette (600x600)

CNH12NDB(AC012BNNDCH/AA)

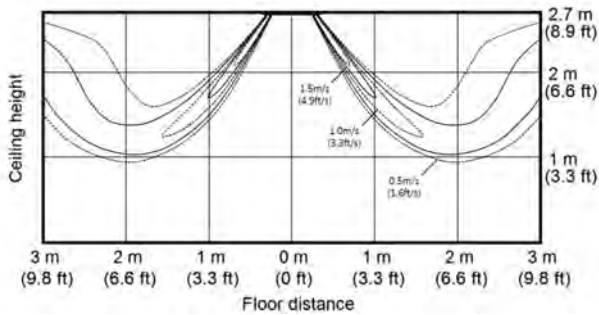
- Cooling Air Velocity distribution
(Discharge angle : 41 degree)



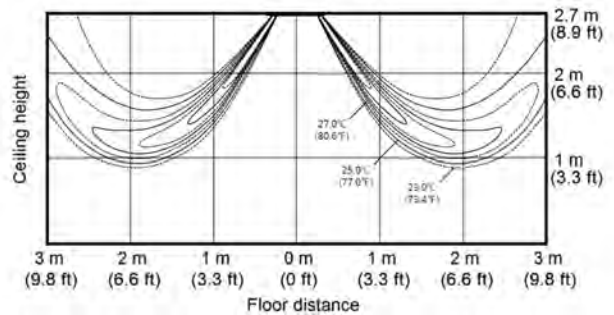
- Cooling temperature distribution
(Discharge angle : 41 degree)



- Heating Air Velocity distribution
(Discharge angle : 56 degree)



- Heating temperature distribution
(Discharge angle : 56 degree)

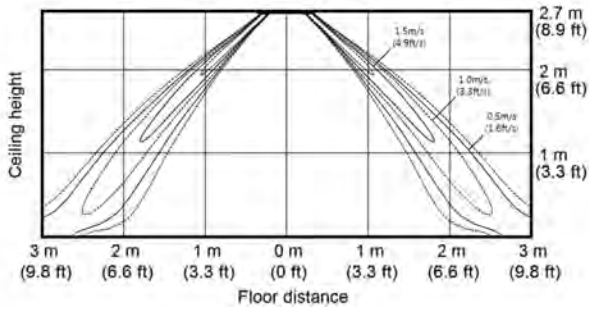


8. Temperature and air flow distribution

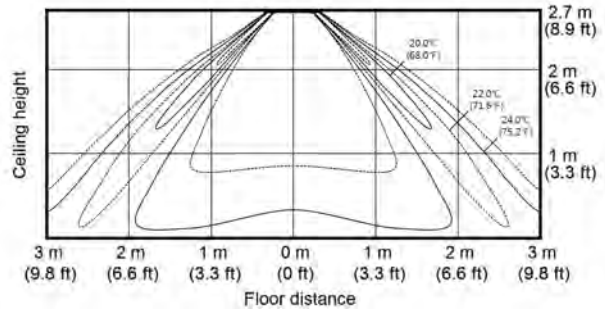
Wind-Free 4Way Cassette (600x600)

CNH18NDB(AC018BNNDCH/AA)

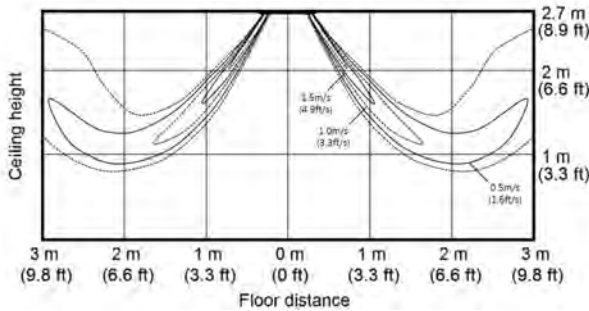
- Cooling Air Velocity distribution
(Discharge angle : 41 degree)



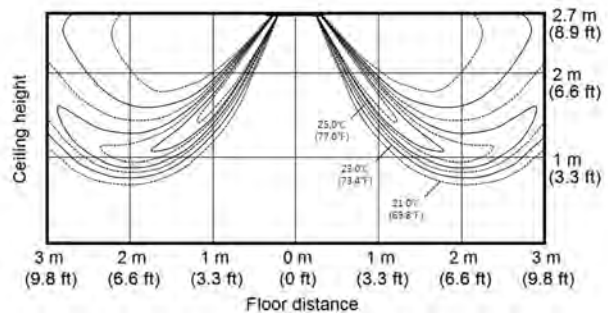
- Cooling temperature distribution
(Discharge angle : 41 degree)



- Heating Air Velocity distribution
(Discharge angle : 56 degree)



- Heating temperature distribution
(Discharge angle : 56 degree)



Wind-Free 4Way Cassette

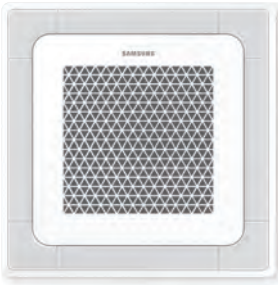
1. Specification	28
2. Summary Table	34
3. Capacity Table	35
4. Dimensional Drawing	43
5. Center of Gravity	45
6. Electrical Wiring Diagram	46
7. Sound Data	47
8. Temperature and air flow distribution	51

Features & Benefits

Wind-Free 4Way Cassette

Stage a beautiful yet comfortable environment

With its newly improved design, Wind-Free 4Way Cassette supports a clean, aesthetically appealing atmosphere and adds a sense of sophistication to work and living spaces. Not only is this unit attractively designed, but it also uses advanced technologies to optimize comfort in any environment.



Wind-Free 4Way Cassette - Stylishly clean design

Aesthetic panel and display

Wind-Free 4Way Cassette offers two different pattern designs for the panel. The simple display design with rounded corners adds a chic sophistication to the interior.



The Samsung Wind-Free 4Way Cassette indoor air conditioning system delivers polish, comfort and efficiency with features such as:

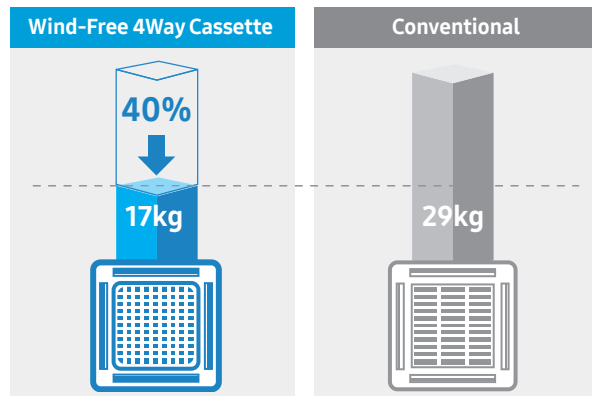
- **Stylishly clean design.** Add panache to interior spaces with a choice of clean, streamlined panel patterns in a lightweight build.
- **Robust operation.** Control the atmosphere perfectly with an advanced design for superior airflow and cooling/heating performance.
- **Low maintenance and simple installation.** Ease installation and minimize maintenance with a detachable, no-drip design.

Neat and clean design

The indoor Wind-Free 4Way Cassette boasts a smart design that promotes a neat and clean look. The completely hermetic blade structure keeps the indoor unit clean by preventing dust or other foreign substances from entering it. The internal parts of the indoor unit are also out of sight when the blade is shut, thus improving the unit's appearance.

Lightweight build

The Samsung Wind-Free 4Way Cassette indoor unit is now lighter in weight at 17 kg. It is one of the lightest indoor units in the industry, about 40 percent lighter than conventional products.



*Based on 10kW

1. Specification

Wind-Free 4Way Cassette

Model Name		Indoor Unit		AC018BN4DCH/AA	AC024BN4DCH/AA	AC030BN4DCH/AA		
		Outdoor Unit		AC018BXADCH/AA	AC024BXADCH/AA	AC030BXADCH/AA		
US Code		Indoor Unit		CNH184DB	CNH244DB	CNH304DB		
		Outdoor Unit		CXH18ADB	CXH24ADB	CXH30ADB		
System	Mode			-	Heat Pump	Heat Pump	Heat Pump	
	Performance	Capacity (Min/Std/Max)	Cooling	kW	1.76 / 5.28 / 7.62	2.34 / 7.03 / 9.38	2.64 / 8.79 / 10.26	
				Btu/h	6000 / 18000 / 26000	8000 / 24000 / 32000	9000 / 30000 / 35000	
				US RT	0.50 / 1.50 / 2.17	0.67 / 2.00 / 2.67	0.75 / 2.50 / 2.92	
			Heating	kW	1.61 / 5.86 / 9.09	2.05 / 7.91 / 11.72	2.20 / 9.38 / 12.60	
				Btu/h	5500 / 20000 / 31000	7000 / 27000 / 40000	7500 / 32000 / 43000	
				US RT	0.46 / 1.67 / 2.58	0.58 / 2.25 / 3.33	0.63 / 2.67 / 3.58	
	Power	Power Input (Min/Std/Max)	Cooling	kW	0.52 / 1.30 / 2.42	0.44 / 1.90 / 3.15	0.61 / 2.73 / 4.25	
					Heating	0.30 / 1.40 / 4.50	0.35 / 2.47 / 5.33	0.39 / 2.76 / 5.40
			Current Input (Min/Std/Max)	Cooling	A	3.2 / 5.9 / 10.8	2.3 / 8.6 / 14.0	3.8 / 12.2 / 18.9
		Heating		1.9 / 6.4 / 20.0		2.2 / 11.2 / 23.6	2.4 / 12.4 / 24.0	
		Current	MCA	A	20.1	24.1	24.0	
			MOP	A	25	30	30	
	Efficiency	EER2	Cooling	-	4.04	3.69	3.22	
			Cooling(US)	(Btu/h)/W	13.80	12.60	11.00	
		COP2	Heating	W/W	4.20	3.20	3.40	
		SEER2	-	-	23.6	21.0	20.7	
		HSPF2	-	-	8.5	8.6	8.8	
	Pipe Connections	Liquid Pipe	Type	-	Flare	Flare	Flare	
			Φ, mm(inch)	-	6.35 (1/4)	6.35 (1/4)	9.52 (3/8)	
		Gas Pipe	Type	-	Flare	Flare	Flare	
			Φ, mm(inch)	-	12.7 (1/2)	15.88 (5/8)	15.88 (5/8)	
		Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes	
		Pipe Length (ODU-IDU)	Standard	m (ft)	m (ft)	7.5 (24.6)	7.5 (24.6)	7.5 (24.6)
				Max.	m (ft)	50 (164.0)	50 (164.0)	50 (164.0)
			Chargeless	Elevation	m (ft)	30 (98.4)	30 (98.4)	30 (98.4)
				m (ft)	7.5 (24.6)	7.5 (24.6)	7.5 (24.6)	
	Wiring Connections	Communication	Min.	mm ²	0.75	0.75	0.75	
			Remark	-	F1,F2	F1,F2	F1,F2	
	Refrigerant	Type		-	R410A	R410A	R410A	
		Factory Charging		kg	2.0	2.6	2.6	
				lbs	4.41	5.73	5.73	
	Option Code	Standard	-	-	0143FF-1950C6-2F343B-370020	0143FF-1950C6-27484F-370020	0143FF-195418-275A5E-370040	
Install		-	-	020010-100001-200000-300000	020010-100001-200000-300000	020010-100001-200000-300000		
Indoor Unit	Power Supply			Φ,#,V,Hz	1,2,208-230,60	1,2,208-230,60	1,2,208-230,60	
	Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube	
		Material	Fin	-	Al	Al	Al	
			Tube	-	Cu	Cu	Cu	
		Fin Treatment		-	Green Hydrophile	Green Hydrophile	Green Hydrophile	
	Fan	Type		-	Turbo	Turbo	Turbo	
		Quantity		EA	1	1	1	
		Air Flow Rate	H/M/L	m ³ /min	24.0/21.0/18.0	24.0/21.0/18.0	28.2/23.6/17.8	
				ft ³ /min	848/742/636	848/742/636	996/833/629	
				l/s	400/350/300	400/350/300	470/393/297	
	External Static Pressure	Min/Std/Max	In Wg	-	-	-		
	Fan Motor	Type		-	BLDC	BLDC	BLDC	
		Output		W x n	65 x 1	65 x 1	97 x 1	
	Drain	Drain Pipe		Φ, mm	OD26.67	OD26.67	OD26.67	
	Sound	Sound Pressure Level	H/M/L	dB(A)	36/33/30	36/33/30	37/34/30	
					Sound Power Level	dB(A)	53	53
	External Dimension	Net Weight		kg(lbs)	15.9 (35.1)	16 (35.3)	19.0 (41.9)	
		Gross Weight		kg(lbs)	19.4 (42.8)	19.5 (43)	22.2 (48.9)	
		Net Dimensions (WxHxD)	mm		840 x 246 x 840	840 x 246 x 840	840 x 288 x 840	
			inch		33.07 x 9.69 x 33.07	33.07 x 9.69 x 33.07	33.07 x 11.34 x 33.07	
		Gross Dimensions (WxHxD)	mm		898 x 316 x 898	898 x 316 x 898	898 x 357 x 898	
inch			35.35 x 12.44 x 35.35	35.35 x 12.44 x 35.35	35.35 x 14.06 x 35.35			

1. Specification

Wind-Free 4Way Cassette

Model Name		Indoor Unit		AC018BN4DCH/AA	AC024BN4DCH/AA	AC030BN4DCH/AA
		Outdoor Unit		AC018BXADCH/AA	AC024BXADCH/AA	AC030BXADCH/AA
US Code		Indoor Unit		CNH184DB	CNH244DB	CNH304DB
		Outdoor Unit		CXH18ADB	CXH24ADB	CXH30ADB
Indoor Unit	Casing	Material		-	Polypropylene	Polypropylene
		Model Name		-	PC4NUFMUN	PC4NUFMUN
	Panel	Type		-	Wind-Free Type	Wind-Free Type
		Material		-	HIPS	HIPS
		Color		-	DA White	DA White
		Net Weight		kg(lbs)	6.3 (13.9)	6.3 (13.9)
		Gross Weight		kg(lbs)	8.7 (19.2)	8.7 (19.2)
		Net Dimensions (WxHxD)		mm	950 x 48 x 950	950 x 48 x 950
				inch	37.4 x 1.9 x 37.4	37.4 x 1.9 x 37.4
		Gross Dimensions (WxHxD)		mm	1,010 x 117 x 1,000	1,010 x 117 x 1,000
	inch			39.8 x 4.6 x 39.4	39.8 x 4.6 x 39.4	
	Control System	Infrared remote control		-	AR-EH04U	AR-EH04U
		Wired remote control		-	MWR-WG00UN / MWR-SH11UN	MWR-WG00UN / MWR-SH11UN
	Drain Pump	Drain Pump		-	Included	Included
Max.lifting Height / Displacement		in / gal/h	29-5/16 6.34gal/h	29-5/16 6.34gal/h		
Additional Accessories	Air Filter		-	Removable / Washable	Removable / Washable	
Outdoor Unit	Power Supply		Φ,#,V,Hz	1,2,208-230,60	1,2,208-230,60	
	Heat Exchanger	Type		-	Fin & Tube	Fin & Tube
		Material	Fin	-	Al	Al
			Tube	-	Cu	Cu
	Fin Treatment		-	Anti-Corrosion	Anti-Corrosion	
	Compressor	Model		-	UG8T265FXAEW	UG8T300FUBJUSG
		Type		-	Twin BLDC	Twin BLDC
		Output		kW	2.32	2.82
		Oil	Type	-	POE	POE
	Initial Charge		cc (fl oz)	700	1200	
	Fan	Type		-	Propeller	Propellar
		Discharge direction		-	Front	Front
		Quantity		EA	1	1
		Air Flow Rate	H/M/L	m ³ /min	61	76
				ft ³ /min	2,154	2,684
	l/s			1,017	1,267	
	Fan Motor	Type		-	BLDC	BLDC
		Output		W x n	125 x 1	125 x 1
	Sound	Sound Pressure	Cooling	dB(A)	48	50
		Level	Heating	dB(A)	48	52
		Sound Power Level		dB(A)	62	65
	External Dimension	Net Weight		kg(lbs)	53.7 (118.4)	72.0 (158.7)
		Gross Weight		kg(lbs)	57.7 (127.2)	77.0 (169.8)
Net Dimensions (WxHxD)		mm	880 x 798 x 310	940 x 998 x 330		
		inch	34.65 x 31.42 x 12.20	37.01 x 39.29 x 12.99		
Gross Dimensions (WxHxD)		mm	1023 x 881 x 413	995 x 1096 x 426		
		inch	40.28 x 34.69 x 16.26	39.17 x 43.15 x 16.77		
Casing	Material	Body	-	Steel	Steel	
Operating Temp.	Cooling		°C (°F)	-18~50 (0~122)	-18~50 (0~122)	
	Heating		°C (°F)	-25~24 (-13~75)	-25~24 (-13~75)	

NOTE

- Specification may be subject to change without prior notice.
 - 1) Performances are based on the following test conditions.
 - Cooling : Indoor temperature : 80°F(26.7°C) DB, 67°F(19.4°C) WB, Outdoor temperature : 95°F(35°C) DB, 75°F(23.9°C) WB
 - Heating : Indoor temperature : 70°F(21.1°C) DB, 60°F(15.6°C) WB, Outdoor temperature : 47°F(8.3°C) DB, 43°F(6.1°C) WB
 - Equivalent refrigerant piping length 7.5m(24.6ft), Level differences : 0m(0ft)
 - 2) Select wire size based on the value of MCA.
 - 3) Sound pressure level is obtained in an anechoic room.
 - Sound pressure level is a relative value, depending on the distance and acoustic environment.
 - Sound pressure level may differ depending on operation condition.
 - dBA = A-weighted sound pressure level / Reference acoustic pressure 0 dB = 20uPa
 - 4) Sound power level is an absolute value that a sound source generates.
 - dBA = A-weighted sound power level
 - Reference power : 1pW / Measured according to ISO 3741
 - 5) These products contain R410A which is fluorinated greenhouse gas.

1. Specification

Wind-Free 4Way Cassette

Model Name		Indoor Unit		AC036BN4DCH/AA	AC042BN4DCH/AA	AC048BN4DCH/AA		
US Code		Indoor Unit		CNH364DB	CNH424DB	CNH484DB		
		Outdoor Unit		CXH36ADB	CXH42ADB	CXH48ADB		
System	Mode		-		Heat Pump	Heat Pump	Heat Pump	
	Performance	Capacity (Min/Std/Max)	Cooling	kW	3.22 / 10.55 / 12.60	3.37 / 12.31 / 13.77	3.52 / 14.07 / 15.24	
				Btu/h	11000 / 36000 / 43000	11500 / 42000 / 47000	12000 / 48000 / 52000	
				US RT	0.92 / 3.00 / 3.58	0.96 / 3.50 / 3.92	1.00 / 4.00 / 4.33	
			Heating	kW	3.66 / 11.72 / 15.24	3.66 / 13.77 / 17.00	3.81 / 15.83 / 17.58	
				Btu/h	12500 / 40000 / 52000	12500 / 47000 / 58000	13000 / 54000 / 60000	
				US RT	1.04 / 3.33 / 4.33	1.04 / 3.92 / 4.83	1.08 / 4.50 / 5.00	
	Power	Power Input (Min/Std/Max)	Cooling	kW	0.90 / 3.13 / 4.30	0.91 / 4.20 / 5.68	0.95 / 5.78 / 6.50	
				Heating	0.67 / 3.09 / 5.40	0.68 / 3.83 / 7.00	0.70 / 5.11 / 7.34	
			Current Input (Min/Std/Max)	Cooling	A	4.7 / 14.2 / 19.1	4.8 / 18.6 / 25.2	5.0 / 25.6 / 28.8
		Heating		A	3.5 / 14.0 / 24.0	3.6 / 17.0 / 31.1	3.7 / 22.7 / 32.0	
		Current	MCA	A	24.5	32.2	32.8	
			MOP	A	35	40	40	
	Efficiency	EER2	Cooling	-	3.37	2.93	2.43	
			Cooling(US)	(Btu/h)/W	11.50	10.00	8.30	
		COP2	Heating	W/W	3.80	3.60	3.10	
		SEER2	-	-	20.5	19.1	17.8	
		HSPF2	-	-	8.8	8.7	8.6	
	Pipe Connections	Liquid Pipe	Type	-	Flare	Flare	Flare	
			Φ, mm(inch)	-	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)	
		Gas Pipe	Type	-	Flare	Flare	Flare	
			Φ, mm(inch)	-	15.88 (5/8)	15.88 (5/8)	15.88 (5/8)	
		Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes	
		Pipe Length (ODU-IDU)	Standard	m (ft)	m (ft)	7.5 (24.6)	7.5 (24.6)	7.5 (24.6)
				Max.	m (ft)	75 (246.0)	75 (246.0)	75 (246.0)
			Chargeless	Elevation	m (ft)	m (ft)	30 (98.4)	30 (98.4)
	Chargeless			m (ft)	m (ft)	7.5 (24.6)	7.5 (24.6)	7.5 (24.6)
	Wiring Connections	Communication	Min.	mm ²	0.75	0.75	0.75	
			Remark	-	F1,F2	F1,F2	F1,F2	
	Refrigerant	Type	-	-	R-410A	R-410A	R-410A	
Factory Charging		kg	kg	2.9	3.4	3.4		
		lbs	lbs	6.39	7.50	7.50		
Option Code	Standard	-	-	0143FF-19546A-276975-370040	0143FF-19547B-277D8A-370040	0143FF-19548C-278C9B-370040		
	Install	-	-	020010-100001-200000-300000	020010-100001-200000-300000	020010-100001-200000-300000		
Indoor Unit	Power Supply		Φ,#,V,Hz	1,2,208-230,60	1,2,208-230,60	1,2,208-230,60		
	Heat Exchanger	Type	-	Fin & Tube	Fin & Tube	Fin & Tube		
		Material	Fin	-	Al	Al	Al	
			Tube	-	Cu	Cu	Cu	
		Fin Treatment		-	Green Hydrophile	Green Hydrophile	Green Hydrophile	
	Fan	Type	-	-	Turbo (3D)	Turbo (3D)	Turbo (3D)	
		Quantity		EA	1	1	1	
		Air Flow Rate	H/M/L	m ³ /min	m ³ /min	34.2/25.8/19.0	35.3/27.0/20.1	36.5/28.2/21.2
				ft ³ /min	ft ³ /min	1208/911/671	1247/954/710	1289/996/749
				l/s	l/s	570/430/317	588/450/335	608/470/353
	External Static Pressure	Min/Std/Max	In Wg	-	-	-		
	Fan Motor	Type	-	-	BLDC	BLDC	BLDC	
		Output		W x n	97 x 1	97 x 1	97 x 1	
	Drain	Drain Pipe		Φ, mm	OD26.67	OD26.67	OD26.67	
	Sound	Sound Pressure Level	H/M/L	dB(A)	43 / 38 / 33	44 / 40 / 34	45 / 40 / 35	
				Sound Power Level	dB(A)	59	60	61
	External Dimension	Net Weight		kg(lbs)	21.2 (46.7)	21.2 (46.7)	21.2 (46.7)	
		Gross Weight		kg(lbs)	24.8 (54.7)	24.8 (54.7)	24.8 (54.7)	
		Net Dimensions (WxHxD)	mm		840 x 288 x 840	840 x 288 x 840	840 x 288 x 840	
			inch		33.07 x 11.34 x 33.07	33.07 x 11.34 x 33.07	33.07 x 11.34 x 33.07	
Gross Dimensions (WxHxD)		mm		898 x 357 x 898	898 x 357 x 898	898 x 357 x 898		
		inch		35.35 x 14.06 x 35.35	35.35 x 14.06 x 35.35	35.35 x 14.06 x 35.35		

1. Specification

Wind-Free 4Way Cassette

Model Name		Indoor Unit		AC036BN4DCH/AA	AC042BN4DCH/AA	AC048BN4DCH/AA	
US Code		Indoor Unit		CNH364DB	CNH424DB	CNH484DB	
		Outdoor Unit		CXH36ADB	CXH42ADB	CXH48ADB	
Indoor Unit	Casing	Material	-	Polypropylene	Polypropylene	Polypropylene	
		Model Name	-	PC4NUFMUN	PC4NUFMUN	PC4NUFMUN	
	Panel	Type	-	Wind-Free Type	Wind-Free Type	Wind-Free Type	
		Material	-	HIPS	HIPS	HIPS	
		Color	-	DA White	DA White	DA White	
		Net Weight	kg(lbs)	6.3 (13.9)	6.3 (13.9)	6.3 (13.9)	
		Gross Weight	kg(lbs)	8.7 (19.2)	8.7 (19.2)	8.7 (19.2)	
		Net Dimensions (WxHxD)	mm	950 x 48 x 950	950 x 48 x 950	950 x 48 x 950	
			inch	37.4 x 1.9 x 37.4	37.4 x 1.9 x 37.4	37.4 x 1.9 x 37.4	
	Gross Dimensions (WxHxD)	mm	1,010 x 117 x 1,000	1,010 x 117 x 1,000	1,010 x 117 x 1,000		
		inch	39.8 x 4.6 x 39.4	39.8 x 4.6 x 39.4	39.8 x 4.6 x 39.4		
	Control System	Infrared remote control	-	AR-EH04U	AR-EH04U	AR-EH04U	
		Wired remote control	-	MWR-WG00UN / MWR-SH11UN	MWR-WG00UN / MWR-SH11UN	MWR-WG00UN / MWR-SH11UN	
Drain Pump	Drain Pump	-	Included	Included	Included		
	Max.lifting Height / Displacement	in / gal/h	29-5/16 6.34gal/h	29-5/16 6.34gal/h	29-5/16 6.34gal/h		
Additional Accessories	Air Filter	-	Removable / Washable	Removable / Washable	Removable / Washable		
Outdoor Unit	Power Supply		Φ,#,V,Hz	1,2,208-230,60	1,2,208-230,60	1,2,208-230,60	
	Heat Exchanger	Type	-	Fin & Tube	Fin & Tube	Fin & Tube	
		Material	Fin	-	Al	Al	Al
			Tube	-	Cu	Cu	Cu
	Fin Treatment		-	Anti-Corrosion	Anti-Corrosion	Anti-Corrosion	
	Compressor	Model		-	UG5TK1450FJXSG	UG5TK1450FJXSG	UG5TK1450FJXSG
		Type		-	Twin BLDC	Twin BLDC	Twin BLDC
		Output		kW	4.19	4.19	4.19
		Oil	Type	-	PVE	PVE	PVE
	Initial Charge		cc (fl oz)	1700	1700	1700	
	Fan	Type		-	Propellar	Propellar	Propellar
		Discharge direction		-	Front	Front	Front
		Quantity		EA	2	2	2
Air Flow Rate		H/M/L	m ³ /min	100	100	100	
			ft ³ /min	3,532	3,532	3,532	
	l/s		1,667	1,667	1,667		
Fan Motor	Type		-	BLDC	BLDC	BLDC	
	Output		W x n	125 x 2	125 x 2	125 x 2	
Sound	Sound Pressure	Cooling	dB(A)	52	53	56	
	Level	Heating	dB(A)	54	55	58	
	Sound Power Level		dB(A)	69	70	72	
External Dimension	Net Weight		kg(lbs)	86.0 (189.6)	88.5 (195.1)	88.5 (195.1)	
	Gross Weight		kg(lbs)	95.5 (210.5)	98.0 (216.1)	98.0 (216.1)	
	Net Dimensions (WxHxD)	mm	940 x 1210 x 330	940 x 1210 x 330	940 x 1210 x 330		
		inch	37.01 x 47.64 x 12.99	37.01 x 47.64 x 12.99	37.01 x 47.64 x 12.99		
	Gross Dimensions (WxHxD)	mm	995 x 1388 x 426	995 x 1388 x 426	995 x 1388 x 426		
inch		39.17 x 54.65 x 16.77	39.17 x 54.65 x 16.77	39.17 x 54.65 x 16.77			
Casing	Material	Body	-	Steel	Steel	Steel	
	Operating Temp.	Cooling	°C (°F)	-18~50 (0~122)	-18~50 (0~122)	-18~50 (0~122)	
Heating		°C (°F)	-20~24 (-4~75)	-20~24 (-4~75)	-20~24 (-4~75)		

NOTE

- Specification may be subject to change without prior notice.
 - 1) Performances are based on the following test conditions.
 - Cooling : Indoor temperature : 80°F(26.7°C) DB, 67°F(19.4°C) WB, Outdoor temperature : 95°F(35°C) DB, 75°F(23.9°C) WB
 - Heating : Indoor temperature : 70°F(21.1°C) DB, 60°F(15.6°C) WB, Outdoor temperature : 47°F(8.3°C) DB, 43°F(6.1°C) WB
 - Equivalent refrigerant piping length 7.5m(24.6ft), Level differences : 0m(0ft)
 - 2) Select wire size based on the value of MCA.
 - 3) Sound pressure level is obtained in an anechoic room.
 - Sound pressure level is a relative value, depending on the distance and acoustic environment.
 - Sound pressure level may differ depending on operation condition.
 - dBA = A-weighted sound pressure level / Reference acoustic pressure 0 dB = 20uPa
 - 4) Sound power level is an absolute value that a sound source generates.
 - dBA = A-weighted sound power level
 - Reference power : 1pW / Measured according to ISO 3741
 - 5) These products contain R410A which is fluorinated greenhouse gas.

2. Summary Table

Wind-Free 4Way Cassette

Performance Characteristics

Model Code	Net Weight (lbs)	Capacity		Fan Speed	Airflow (Cooling/Heating) (CFM)	Sound Pressure Level (dBA)	Sound Power Level (dBA)	
		Cooling (Btu/h)	Heating (Btu/h)					
CNH184DB (AC018BN4DCH/AA)	35.1	Max.	26,000	31,000	High	848 / 848	36	53
		Std.	18,000	20,000	Mid	742 / 742	33	-
		Min.	6,000	5,500	Low	636 / 636	30	-
CNH244DB (AC024BN4DCH/AA)	35.3	Max.	32,000	40,000	High	848 / 848	36	53
		Std.	24,000	27,000	Mid	742 / 742	33	-
		Min.	8,000	7,000	Low	636 / 636	30	-
CNH304DB (AC030BN4DCH/AA)	41.9	Max.	35,000	43,000	High	996 / 996	37	53
		Std.	30,000	32,000	Mid	833 / 833	34	-
		Min.	9,000	7,500	Low	629 / 629	30	-
CNH364DB (AC036BN4DCH/AA)	46.7	Max.	43,000	52,000	High	1,208 / 1,208	43	59
		Std.	36,000	40,000	Mid	911 / 911	38	-
		Min.	11,000	12,500	Low	671 / 671	33	-
CNH424DB (AC042BN4DCH/AA)	46.7	Max.	47,000	58,000	High	1,247 / 1,247	44	60
		Std.	42,000	47,000	Mid	954 / 954	40	-
		Min.	11,500	12,500	Low	710 / 710	34	-
CNH484DB (AC048BN4DCH/AA)	46.7	Max.	52,000	60,000	High	1,289 / 1,289	45	61
		Std.	48,000	54,000	Mid	996 / 996	40	-
		Min.	12,000	13,000	Low	749 / 749	35	-

NOTE

- Sound data is based on cooling operation.

Electric Characteristics

Model		Outdoor Unit				Input Current (Amperes)			Power Supply		
Indoor Unit	Outdoor Unit	Rated	Voltage range		Outdoor Unit		Indoor Unit	Total	MCA(A)	MOP(A)	
		Hz	Volts	Min.	Max	Cooling					Heating
CNH184DB (AC018BN4DCH/AA)	CXH18ADB (AC018BXADCH/AA)	60	208 to 230	187	253	17.94	17.94	0.79	18.73	20.1	25
CNH244DB (AC024BN4DCH/AA)	CXH24ADB (AC024BXADCH/AA)	60	208 to 230	187	253	21.94	21.94	0.79	22.73	24.1	30
CNH304DB (AC030BN4DCH/AA)	CXH30ADB (AC030BXADCH/AA)	60	208 to 230	187	253	21.50	21.50	0.79	22.29	24.0	30
CNH364DB (AC036BN4DCH/AA)	CXH36ADB (AC036BXADCH/AA)	60	208 to 230	187	253	20.88	20.88	0.79	21.67	24.5	35
CNH424DB (AC042BN4DCH/AA)	CXH42ADB (AC042BXADCH/AA)	60	208 to 230	187	253	28.63	28.63	0.79	29.42	32.2	40
CNH484DB (AC048BN4DCH/AA)	CXH48ADB (AC048BXADCH/AA)	60	208 to 230	187	253	28.63	28.63	0.79	29.42	32.8	40

NOTE

- MCA : Minimum circuit amperes
- MOP: Maximum Overcurrent Protective Device
- Select wire size based on the value of MCA

3. Capacity Table

Wind-Free 4Way Cassette

(1) CNH184DB(AC018BN4DCH/AA) + CXH18ADB (AC018BXADCH/AA)

Cooling

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

Outdoor Temp. (°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	15.9	11.5	0.92	16.8	11.9	0.94	17.5	12.2	0.96	18.0	12.6	0.98	18.4	12.5	0.98	19.3	12.3	0.99	20.2	12.1	1.01
70	19.9	14.4	0.98	21.0	14.8	1.00	21.8	15.3	1.02	22.5	15.8	1.04	23.0	15.6	1.05	24.1	15.4	1.06	25.3	15.1	1.08
95	15.9	11.5	1.22	16.8	11.9	1.25	17.5	12.2	1.27	18.0	12.6	1.30	18.4	12.5	1.31	19.3	12.3	1.33	20.2	12.1	1.35
115	16.2	12.1	2.02	17.1	12.4	2.06	17.8	12.8	2.10	18.4	13.2	2.15	18.7	13.1	2.17	19.7	13.0	2.19	20.6	12.7	2.23
122	14.3	11.8	1.96	15.1	12.2	2.00	15.7	12.6	2.04	16.2	13.0	2.08	16.5	12.8	2.10	17.4	12.7	2.12	18.2	12.4	2.16

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB)											
	61		64		68		70		72		75	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-13	14.4	1.88	14.3	1.86	14.1	1.84	14.0	1.82	13.9	1.80	13.7	1.78
-4	20.6	3.20	20.4	3.17	20.2	3.14	20.0	3.11	19.8	3.08	19.6	3.05
14	26.8	3.46	26.5	3.43	26.3	3.39	26.0	3.36	25.7	3.33	25.5	3.29
32	24.7	2.31	24.5	2.29	24.2	2.26	24.0	2.24	23.8	2.22	23.5	2.20
47	20.6	1.44	20.4	1.43	20.2	1.41	20.0	1.40	19.8	1.39	19.6	1.37
75.2	26.8	1.66	26.5	1.64	26.3	1.63	26.0	1.61	25.7	1.59	25.5	1.58

NOTE

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

3. Capacity Table

Wind-Free 4Way Cassette

(2) CNH244DB(AC024BN4DCH/AA) + CXH24ADB (AC024BXADCH/AA)

Cooling

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

Outdoor Temp. (°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	26.5	19.2	1.07	27.9	19.8	1.09	29.1	20.4	1.12	30.0	21.0	1.14	30.6	20.8	1.15	32.1	20.6	1.16	33.7	20.2	1.19
70	23.8	17.2	1.34	25.0	17.7	1.37	26.1	18.3	1.40	26.9	18.8	1.43	27.4	18.6	1.44	28.8	18.4	1.45	30.2	18.1	1.48
95	21.2	15.3	1.79	22.3	15.8	1.82	23.3	16.3	1.86	24.0	16.8	1.90	24.5	16.6	1.92	25.7	16.5	1.94	27.0	16.1	1.98
115	21.7	17.9	3.13	22.8	18.4	3.19	23.7	19.0	3.26	24.5	19.6	3.33	25.0	19.4	3.36	26.2	19.2	3.39	27.5	18.8	3.46
122	18.0	15.8	2.77	19.0	16.3	2.83	19.8	16.8	2.89	20.4	17.3	2.95	20.8	17.2	2.97	21.8	17.0	3.00	22.9	16.7	3.06

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB)											
	61		64		68		70		72		75	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-13	16.7	2.29	16.5	2.27	16.4	2.25	16.2	2.22	16.0	2.20	15.9	2.18
-4	27.8	4.89	27.5	4.85	27.3	4.80	27.0	4.75	26.7	4.70	26.5	4.66
14	27.8	4.45	27.5	4.41	27.3	4.37	27.0	4.32	26.7	4.28	26.5	4.24
32	30.6	3.31	30.3	3.28	30.0	3.24	29.7	3.21	29.4	3.18	29.1	3.15
47	27.8	2.54	27.5	2.52	27.3	2.49	27.0	2.47	26.7	2.45	26.5	2.42
75.2	37.6	3.18	37.2	3.15	36.8	3.12	36.5	3.09	36.1	3.06	35.7	3.03

NOTE

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

3. Capacity Table

Wind-Free 4Way Cassette

(3) CNH304DB(AC030BN4DCH/AA) + CXH30ADB (AC030BXADCH/AA)

Cooling

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

Outdoor Temp. (°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	33.2	24.0	1.54	34.9	24.7	1.57	36.4	25.5	1.61	37.5	26.3	1.64	38.3	26.0	1.65	40.2	25.7	1.67	42.2	25.2	1.70
70	29.7	21.5	1.93	31.3	22.1	1.97	32.6	22.8	2.01	33.6	23.5	2.05	34.3	23.3	2.07	36.0	23.1	2.09	37.8	22.6	2.13
95	26.5	19.2	2.57	27.9	19.8	2.62	29.1	20.4	2.68	30.0	21.0	2.73	30.6	20.8	2.76	32.1	20.6	2.78	33.7	20.2	2.84
115	23.9	19.7	3.34	25.1	20.3	3.41	26.2	21.0	3.48	27.0	21.6	3.55	27.5	21.4	3.58	28.9	21.2	3.62	30.4	20.7	3.69
122	19.9	17.5	2.95	21.0	18.0	3.02	21.8	18.6	3.08	22.5	19.1	3.14	23.0	18.9	3.17	24.1	18.7	3.20	25.3	18.4	3.27

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	28.0	4.58	27.7	4.54	27.5	4.49	27.2	4.45	26.9	4.41	26.7	4.36
14	33.0	4.98	32.6	4.93	32.3	4.88	32.0	4.83	31.7	4.78	31.4	4.73
32	36.3	3.70	35.9	3.66	35.6	3.62	35.2	3.59	34.8	3.55	34.5	3.52
47	33.0	2.84	32.6	2.82	32.3	2.79	32.0	2.76	31.7	2.73	31.4	2.71
75.2	44.5	3.55	44.1	3.52	43.6	3.48	43.2	3.45	42.8	3.42	42.3	3.38

NOTE

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

3. Capacity Table

Wind-Free 4Way Cassette

(4) CNH364DB(AC036BN4DCH/AA) + CXH36ADB (AC036BXADCH/AA)

Cooling

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

Outdoor Temp. (°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	36.6	26.4	2.95	38.6	27.3	3.01	40.2	28.1	3.07	41.4	29.0	3.13	42.2	28.7	3.16	44.3	28.4	3.19	46.6	27.8	3.26
70	38.2	27.6	2.65	40.2	28.5	2.71	41.9	29.3	2.76	43.2	30.2	2.82	44.1	29.9	2.85	46.3	29.6	2.87	48.6	29.0	2.93
95	31.8	23.0	2.95	33.5	23.7	3.01	34.9	24.4	3.07	36.0	25.2	3.13	36.7	24.9	3.16	38.6	24.7	3.19	40.5	24.2	3.26
115	28.7	23.7	3.54	30.2	24.4	3.61	31.4	25.1	3.68	32.4	25.9	3.76	33.0	25.7	3.79	34.7	25.4	3.83	36.4	24.9	3.91
122	23.9	20.9	2.65	25.1	21.6	2.71	26.2	22.3	2.76	27.0	23.0	2.82	27.5	22.7	2.85	28.9	22.5	2.87	30.4	22.0	2.93

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	34.0	4.92	33.7	4.88	33.3	4.83	33.0	4.78	32.7	4.73	32.3	4.68
14	37.1	4.14	36.7	4.10	36.4	4.06	36.0	4.02	35.6	3.98	35.3	3.94
32	47.4	3.98	46.9	3.94	46.5	3.90	46.0	3.86	45.5	3.82	45.1	3.79
47	41.2	3.18	40.8	3.15	40.4	3.12	40.0	3.09	39.6	3.06	39.2	3.03
75.2	47.4	2.87	46.9	2.84	46.5	2.81	46.0	2.78	45.5	2.75	45.1	2.73

NOTE

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

3. Capacity Table

Wind-Free 4Way Cassette

(5) CNH424DB(AC042BN4DCH/AA) + CXH42ADB (AC042BXADCH/AA)

Cooling

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

Outdoor Temp. (°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
0	42.7	30.9	3.95	45.0	31.8	4.03	46.9	32.8	4.12	48.3	33.8	4.20	49.3	33.5	4.24	51.7	33.1	4.28	54.3	32.5	4.37
70	44.6	32.2	3.56	46.9	33.2	3.63	48.9	34.2	3.70	50.4	35.3	3.78	51.4	34.9	3.82	54.0	34.6	3.86	56.7	33.9	3.93
95	37.2	26.8	3.95	39.1	27.7	4.03	40.7	28.5	4.12	42.0	29.4	4.20	42.8	29.1	4.24	45.0	28.8	4.28	47.2	28.2	4.37
115	31.6	26.1	4.35	33.2	26.9	4.44	34.6	27.7	4.53	35.7	28.6	4.62	36.4	28.3	4.67	38.2	28.0	4.71	40.1	27.4	4.81
122	26.0	22.8	3.36	27.4	23.5	3.43	28.5	24.2	3.50	29.4	25.0	3.57	30.0	24.7	3.61	31.5	24.5	3.64	33.1	24.0	3.71

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
-4	41.6	6.20	41.2	6.14	40.8	6.08	40.4	6.02	40.0	5.96	39.6	5.90
14	46.0	5.33	45.5	5.27	45.1	5.22	44.7	5.17	44.2	5.12	43.8	5.07
32	55.7	4.93	55.1	4.88	54.6	4.84	54.1	4.79	53.5	4.74	53.0	4.69
47	48.4	3.95	47.9	3.91	47.5	3.87	47.0	3.83	46.5	3.79	46.1	3.75
75.2	55.7	3.55	55.1	3.52	54.6	3.48	54.1	3.45	53.5	3.41	53.0	3.38

NOTE

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

3. Capacity Table

Wind-Free 4Way Cassette

(6) CNH484DB(AC048BN4DCH/AA) + CXH48ADB (AC048BXADCH/AA)

Cooling

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

Outdoor Temp. (°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	48.8	35.3	5.44	51.4	36.4	5.55	53.5	37.5	5.66	55.2	38.6	5.78	56.3	38.3	5.84	59.1	37.9	5.90	62.1	37.1	6.01
70	51.0	36.8	4.90	53.6	37.9	5.00	55.9	39.1	5.10	57.6	40.3	5.20	58.8	39.9	5.25	61.7	39.5	5.31	64.8	38.7	5.41
95	42.5	30.7	5.44	44.7	31.6	5.55	46.6	32.6	5.66	48.0	33.6	5.78	49.0	33.3	5.84	51.4	32.9	5.90	54.0	32.3	6.01
115	34.0	28.0	5.17	35.8	28.9	5.27	37.2	29.8	5.38	38.4	30.7	5.49	39.2	30.4	5.55	41.1	30.1	5.60	43.2	29.5	5.71
122	27.6	24.2	4.35	29.1	25.0	4.44	30.3	25.7	4.53	31.2	26.5	4.62	31.8	26.3	4.67	33.4	26.0	4.72	35.1	25.5	4.81

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	41.8	6.23	41.4	6.17	41.0	6.11	40.6	6.05	40.2	5.99	39.8	5.93
14	50.1	6.84	49.6	6.78	49.1	6.71	48.6	6.64	48.1	6.58	47.6	6.51
32	64.0	6.58	63.3	6.52	62.7	6.45	62.1	6.39	61.5	6.32	60.9	6.26
47	55.6	5.26	55.1	5.21	54.5	5.16	54.0	5.11	53.5	5.06	52.9	5.01
75.2	64.0	4.74	63.3	4.69	62.7	4.64	62.1	4.60	61.5	4.55	60.9	4.51

NOTE

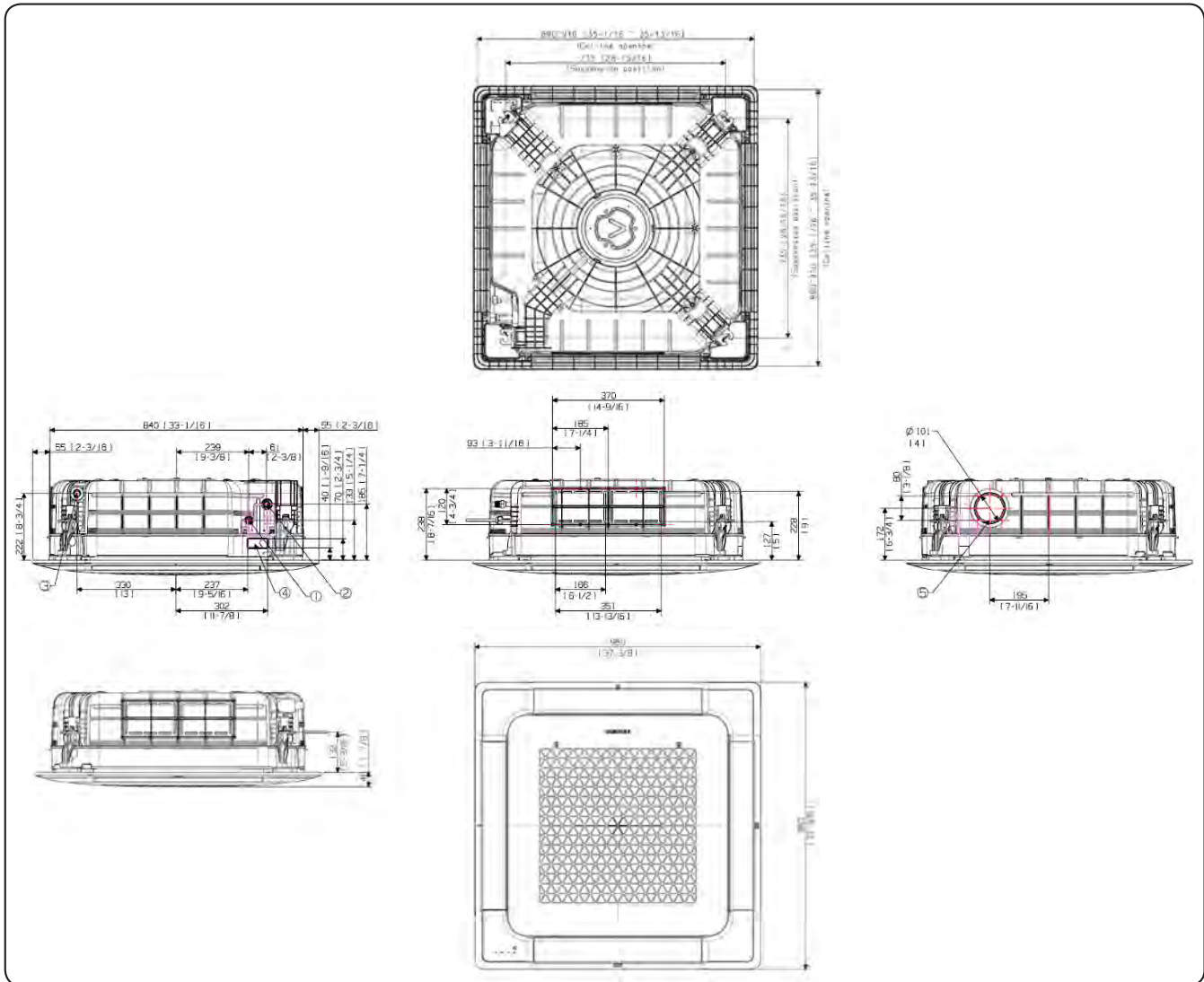
- The performance table shows the average value of each conditions.

4. Dimensional Drawing

Wind-Free 4Way Cassette

CNH184DB (AC018BN4DCH/AA), CNH244DB (AC024BN4DCH/AA)

Units : mm [inches]



No.	Name	Description	
		CNH184DB (AC018BN4DCH/AA)	CNH244DB (AC024BN4DCH/AA)
1	Liquid pipe connection	Φ 6.35mm(1/4")	
2	Gas pipe connection	Φ 12.7mm(1/2")	Φ 15.88mm(5/8")
3	Drain pipe connection	3/4 " [OD 26.67 (1.05")]	
4	Power supply & Communication wiring conduit		
5	Fresh air intake knockout hole	Φ101mm(4") , Use M4 Screw	

NOTE

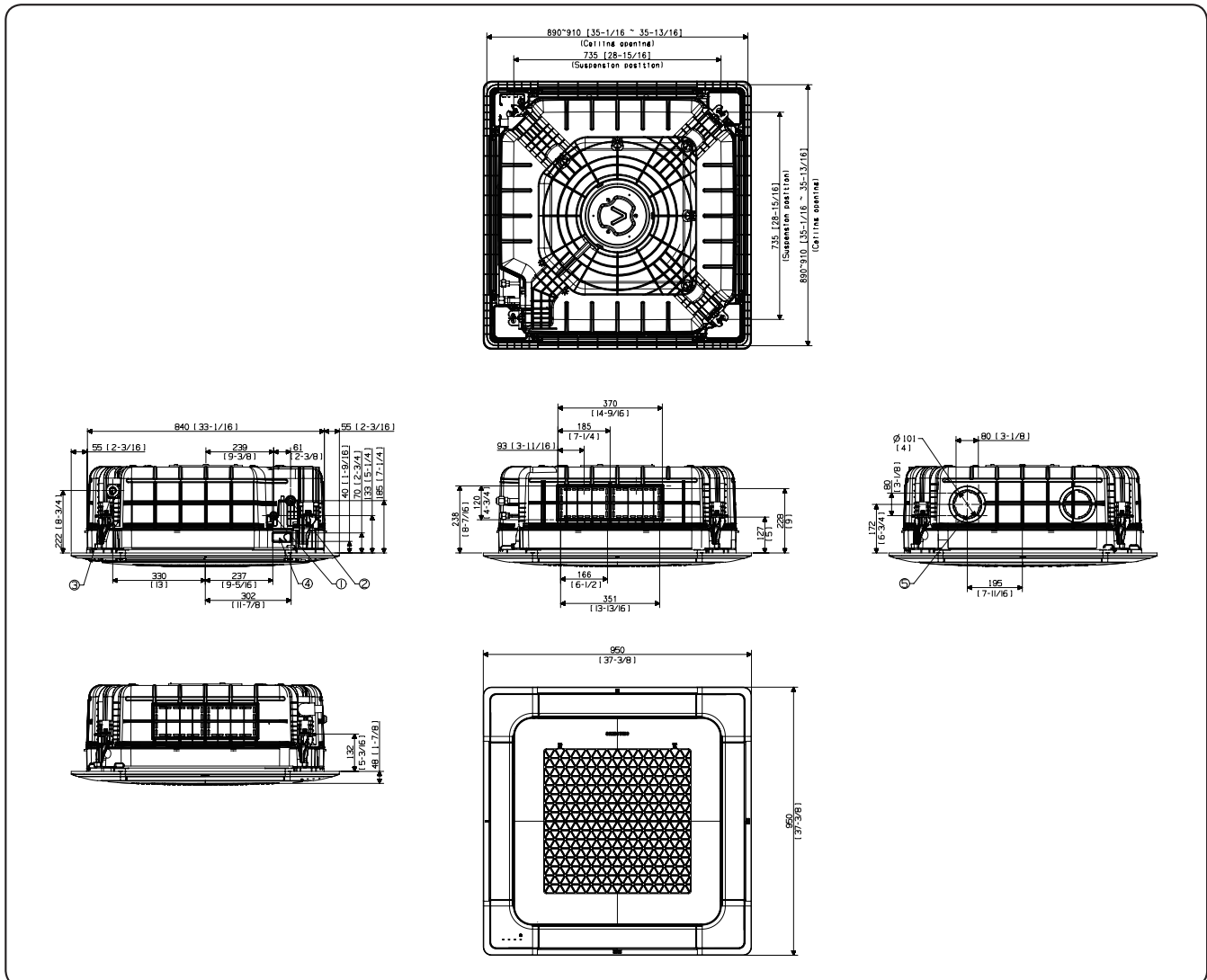
- As for suspension bolt, please use M8 ~ M10.
(Procured at local site)

4. Dimensional Drawing

Wind-Free 4Way Cassette

CNH304DB (AC030BN4DCH/AA), CNH364DB (AC036BN4DCH/AA),
 CNH424DB (AC042BN4DCH/AA), CNH484DB (AC048BN4DCH/AA)

Units : mm [inches]



No.	Name	Description
1	Liquid pipe connection	Φ 9.52mm(3/8")
2	Gas pipe connection	Φ 15.88mm(5/8")
3	Drain pipe connection	3/4" [OD 26.67 mm (1.05")]
4	Power supply & Communication wiring conduit	
5	Fresh air intake knockout hole	Φ101mm(4") , Use M4 Screw

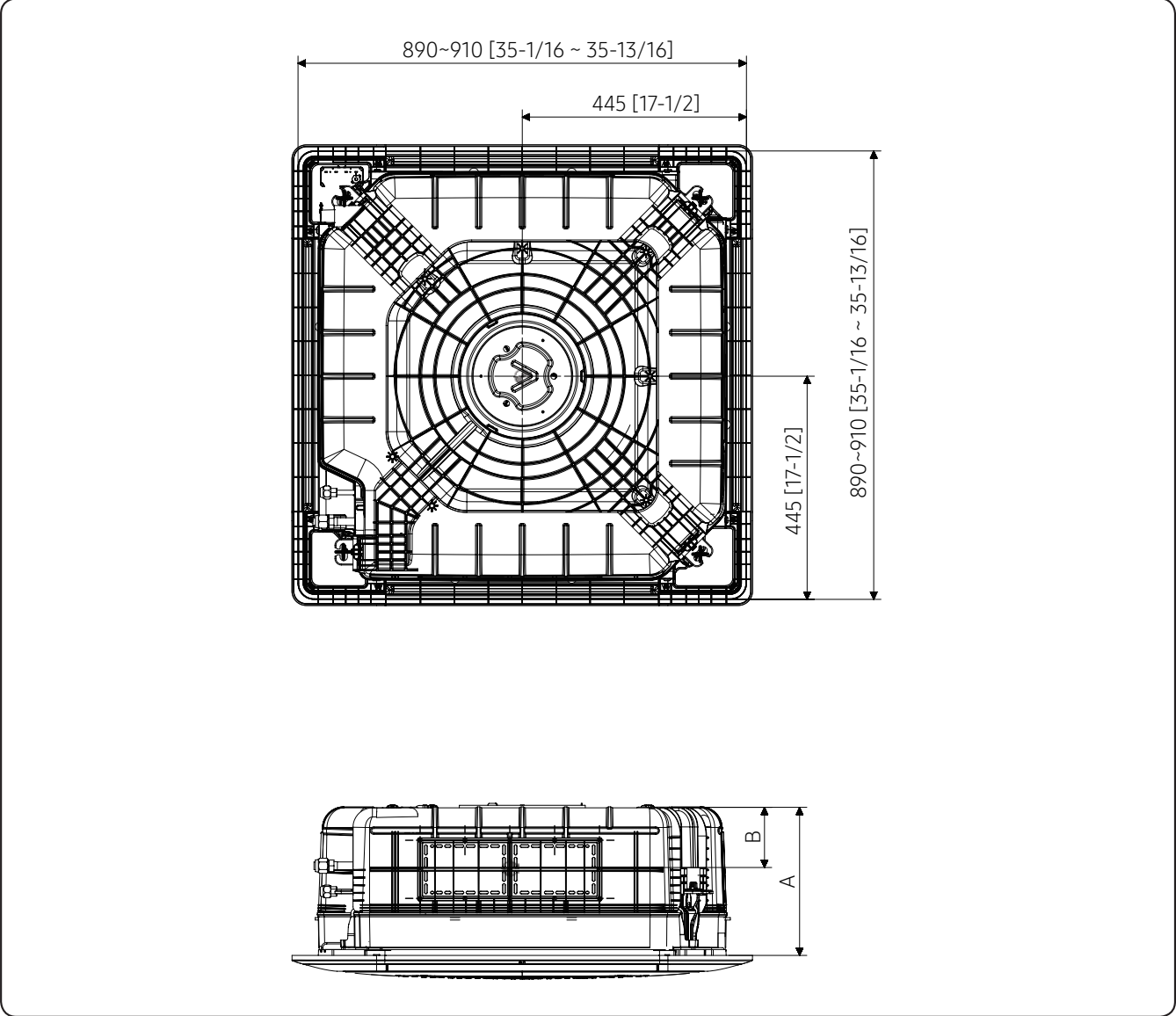
NOTE

- As for suspension bolt, please use M8 ~ M10. (Procured at local site)

5. Center of Gravity

Wind-Free 4Way Cassette

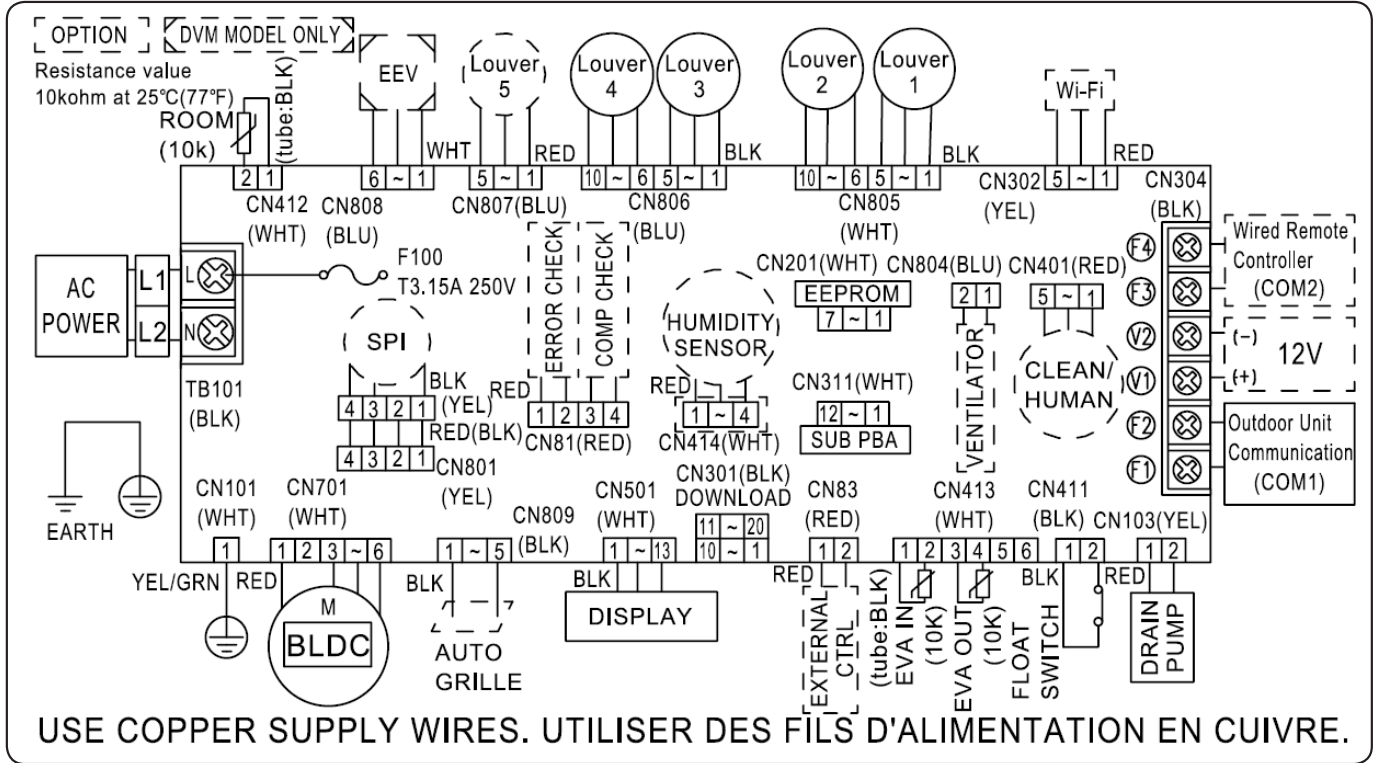
Units : mm [inches]



	A	B
~ 24kBtu/h	265 [10-7/16]	114 [4-1/2]
30~ 48kBtu/h	305 [12]	130 [5-1/8]

6. Electrical Wiring Diagram

Wind-Free 4Way Cassette



SUB PBA	Printed Circuit Board(SUB)	SPI	S-Plasma ion	ROOM(10K)	Thermistor ROOM OUT(10K)
M-BLDC	BLDC Motor	EEV	Electronic Expansion Valve	EVA-IN(10K)	Thermistor EVA IN(10K)
		EXT_CONTROL	EXTERNAL_CONTROL	EVA-OUT(10K)	Thermistor EVA OUT(10K)

NOTE

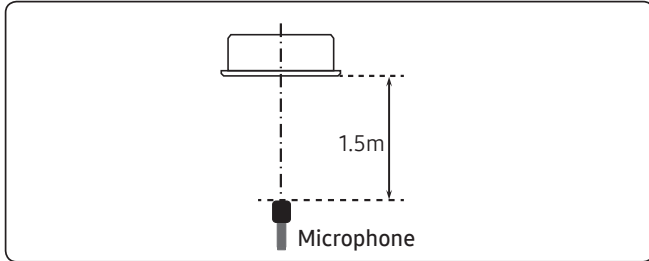
- This wiring diagram applies only to the Indoor unit.
- Symbols show as follow :
blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue: grn: green
- For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.
- Protective earth(screw), : connector, : The wire quantity

7. Sound Data

Wind-Free 4Way Cassette

Sound Pressure level

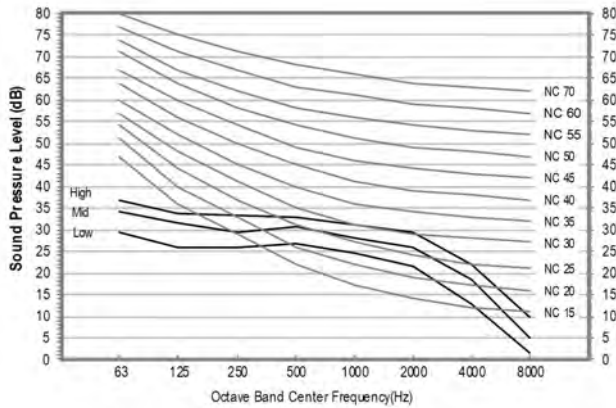
Unit: dB(A)



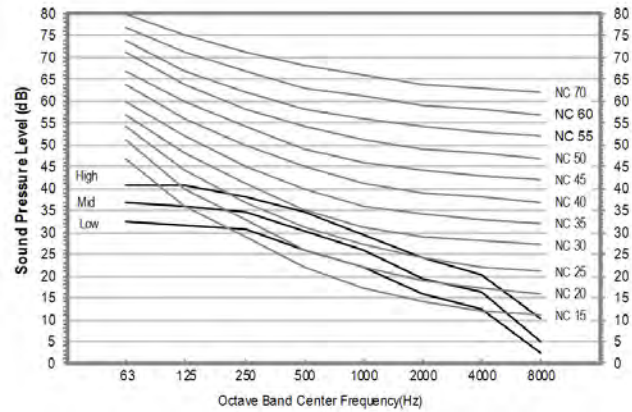
Model	High	Mid	Low
CNH184DB (AC018BN4DCH/AA)	36	33	30
CNH244DB (AC024BN4DCH/AA)	36	33	30
CNH304DB (AC030BN4DCH/AA)	37	34	30
CNH364DB (AC036BN4DCH/AA)	43	38	33

- NC Curve

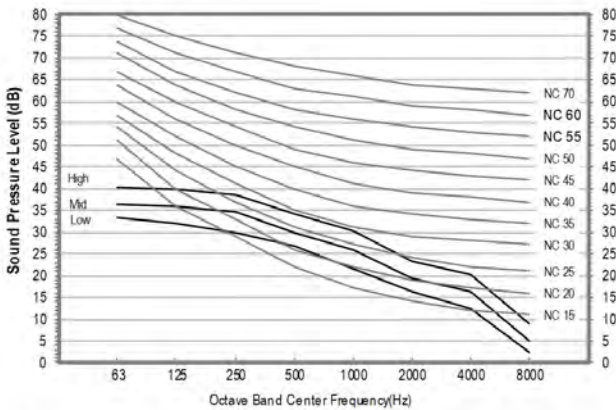
1) CNH184DB (AC018BN4DCH/AA)



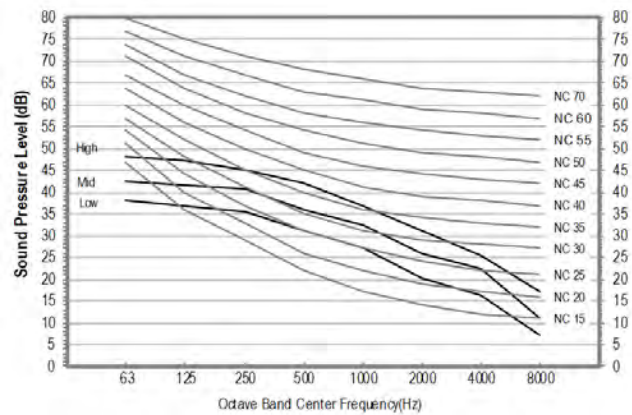
2) CNH244DB (AC024BN4DCH/AA)



3) CNH304DB (AC030BN4DCH/AA)



4) CNH364DB (AC036BN4DCH/AA)



NOTE

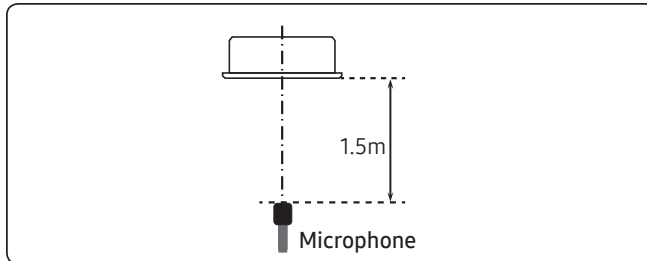
- Specifications may be subject to change without prior notice.
 - Sound pressure level is obtained in an anechoic room.
 - Sound pressure level is a relative value, depending on the distance and acoustic environment.
 - Sound pressure level may differ depending on operation condition.
 - dB(A) = A weighted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

7. Sound Data

Wind-Free 4Way Cassette

Sound Pressure level

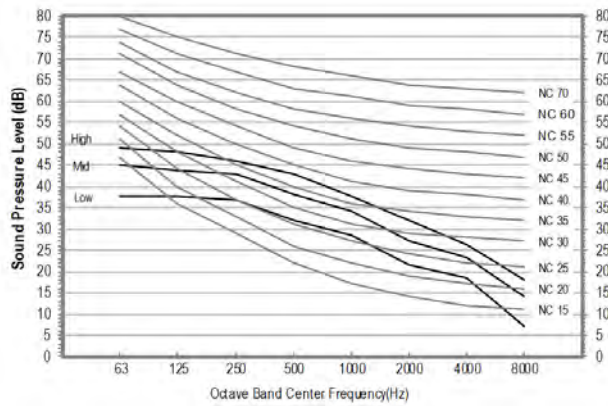
Unit: dB(A)



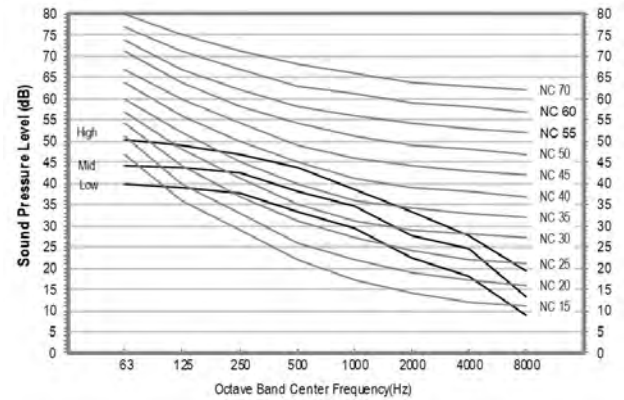
Model	High	Mid	Low
CNH424DB (AC042BN4DCH/AA)	44	40	34
CNH484DB (AC048BN4DCH/AA)	45	40	35

- NC Curve

5) CNH424DB (AC042BN4DCH/AA)



6) CNH484DB (AC048BN4DCH/AA)



NOTE

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

7. Sound Data

Wind-Free 4Way Cassette

Sound Power level

NOTE

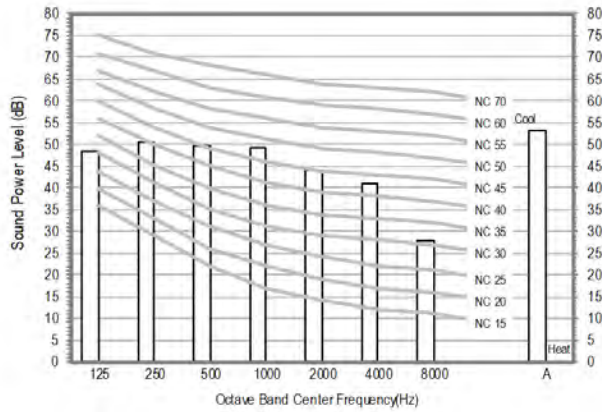
Unit: dB(A)

- Specifications may be subject to change without prior notice
 - Sound power level is an absolute value that a sound source generates.
 - dBA = A-weighted sound power level.
 - Reference power : 1pW.
 - Measured according to ISO 3741.

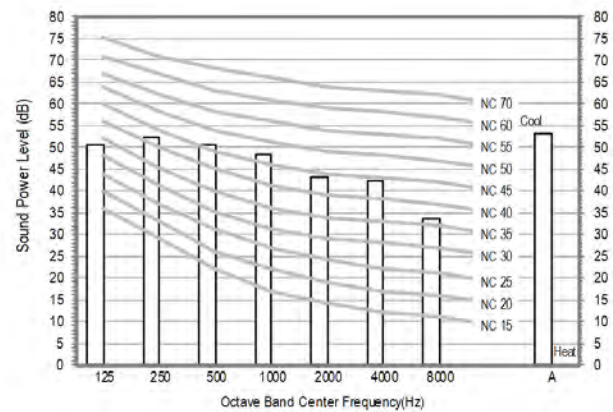
Model	Cooling
CNH184DB (AC018BN4DCH/AA)	53
CNH244DB (AC024BN4DCH/AA)	53
CNH304DB (AC030BN4DCH/AA)	53
CNH364DB (AC036BN4DCH/AA)	59

• NC Curve

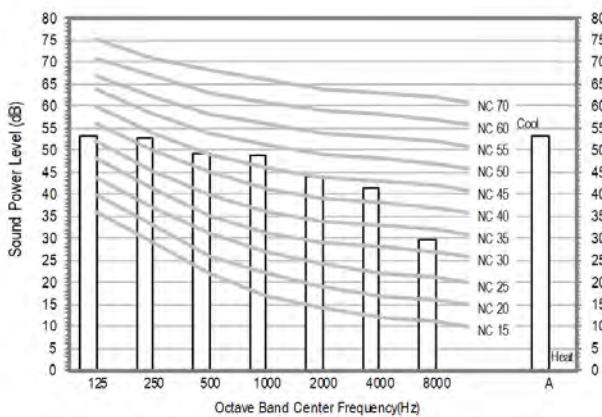
1) CNH184DB (AC018BN4DCH/AA)



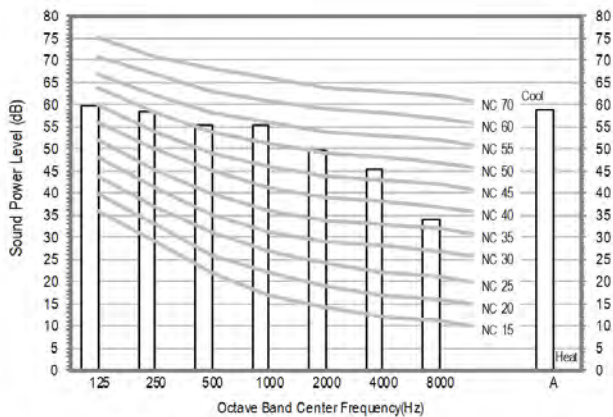
2) CNH244DB (AC024BN4DCH/AA)



3) CNH304DB (AC030BN4DCH/AA)



4) CNH364DB (AC036BN4DCH/AA)



7. Sound Data

Wind-Free 4Way Cassette

Sound Power level

Unit: dB(A)

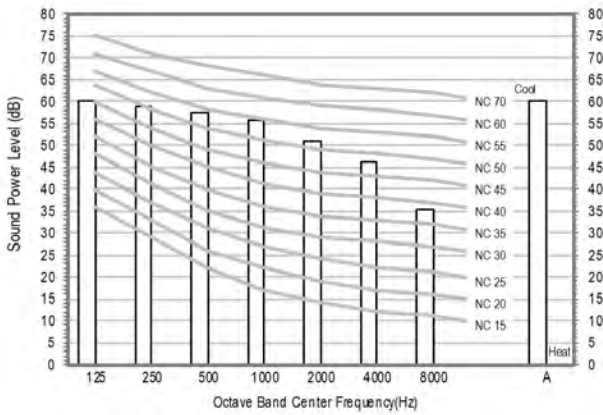
NOTE

- Specifications may be subject to change without prior notice
 - Sound power level is an absolute value that a sound source generates.
 - dBA = A-weighted sound power level.
 - Reference power : 1pW.
 - Measured according to ISO 3741.

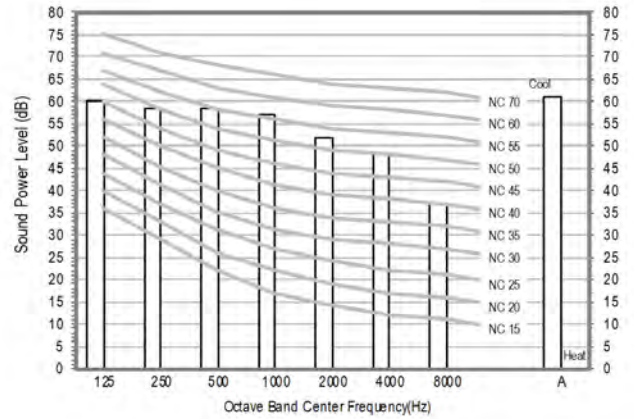
Model	Cooling
CNH424DB (AC042BN4DCH/AA)	60
CNH484DB (AC048BN4DCH/AA)	61

- NC Curve

5) CNH424DB (AC042BN4DCH/AA)



6) CNH484DB (AC048BN4DCH/AA)

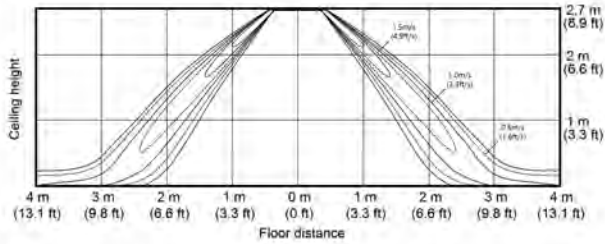


8. Temperature and air flow distribution

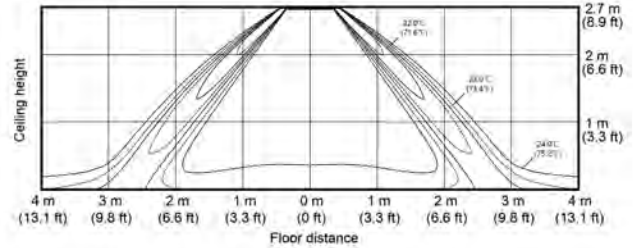
Wind-Free 4Way Cassette

CNH184DB (AC018BN4DCH/AA)

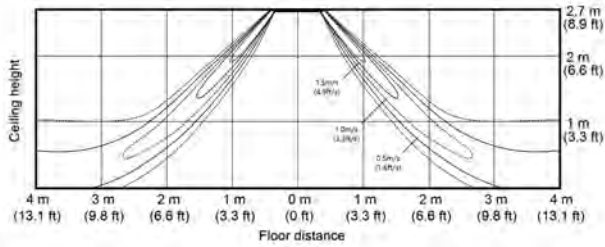
- Cooling Air Velocity distribution
(Discharge angle : 45 degree)



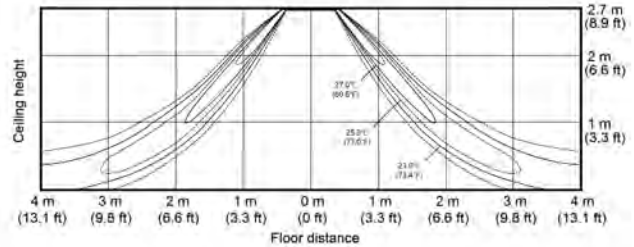
- Cooling temperature distribution
(Discharge angle : 45 degree)



- Heating Air Velocity distribution
(Discharge angle : 52 degree)

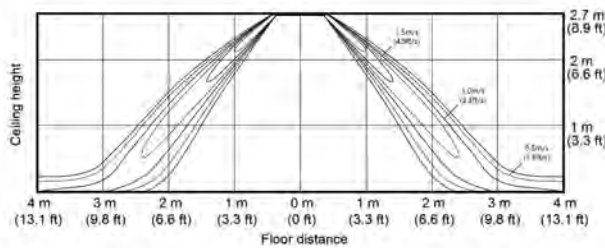


- Heating temperature distribution
(Discharge angle : 52 degree)

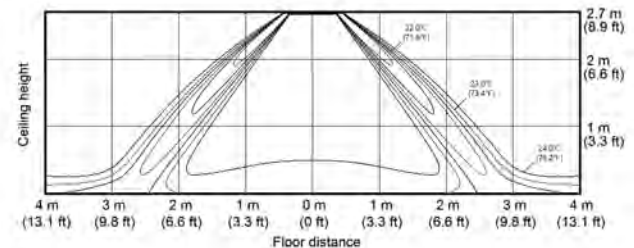


CNH244DB (AC024BN4DCH/AA)

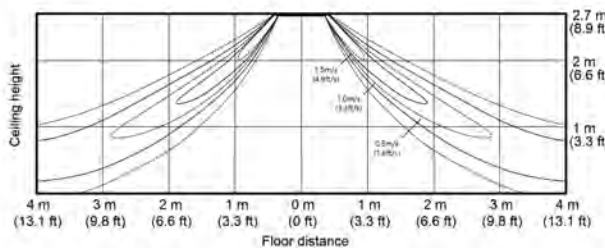
- Cooling Air Velocity distribution
(Discharge angle : 45 degree)



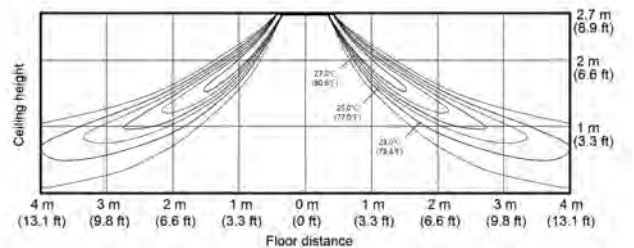
- Cooling temperature distribution
(Discharge angle : 45 degree)



- Heating Air Velocity distribution
(Discharge angle : 52 degree)



- Heating temperature distribution
(Discharge angle : 52 degree)

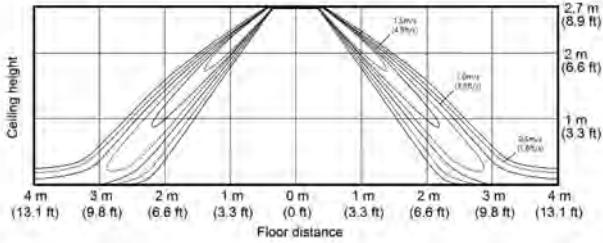


8. Temperature and air flow distribution

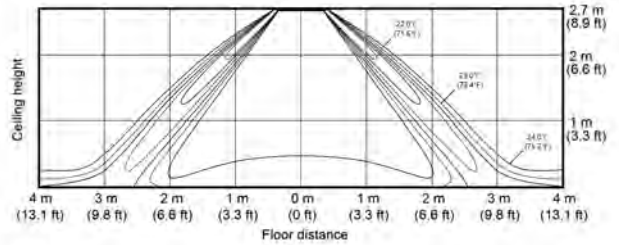
Wind-Free 4Way Cassette

CNH304DB (AC030BN4DCH/AA)

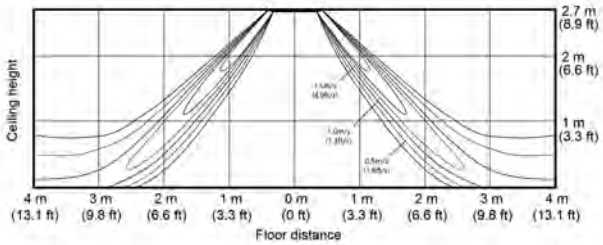
- Cooling Air Velocity distribution
(Discharge angle : 45 degree)



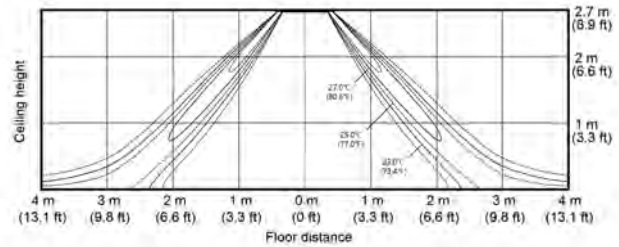
- Cooling temperature distribution
(Discharge angle : 45 degree)



- Heating Air Velocity distribution
(Discharge angle : 52 degree)

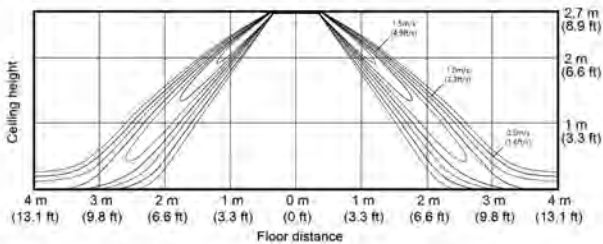


- Heating temperature distribution
(Discharge angle : 52 degree)

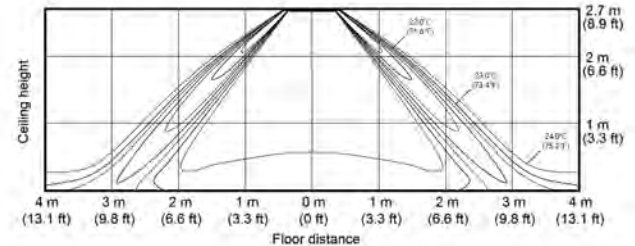


CNH364DB (AC036BN4DCH/AA)

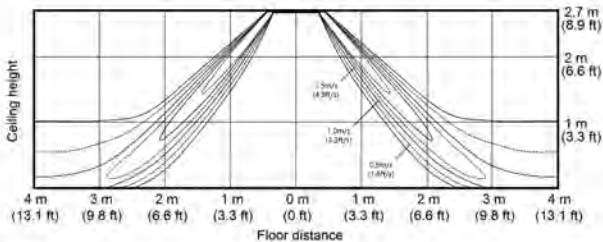
- Cooling Air Velocity distribution
(Discharge angle : 45 degree)



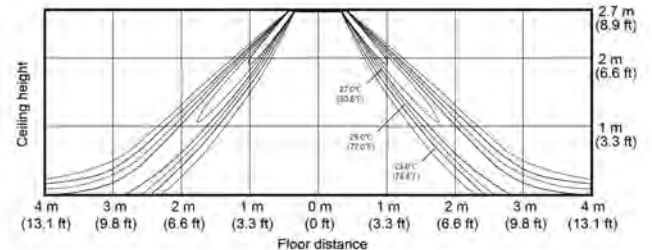
- Cooling temperature distribution
(Discharge angle : 45 degree)



- Heating Air Velocity distribution
(Discharge angle : 52 degree)



- Heating temperature distribution
(Discharge angle : 52 degree)

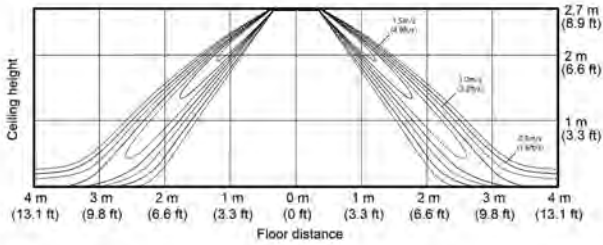


8. Temperature and air flow distribution

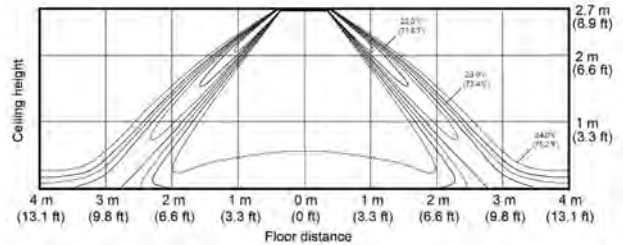
Wind-Free 4Way Cassette

CNH424DB (AC042BN4DCH/AA)

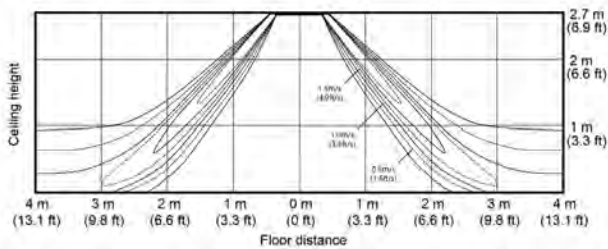
- Cooling Air Velocity distribution
(Discharge angle : 45 degree)



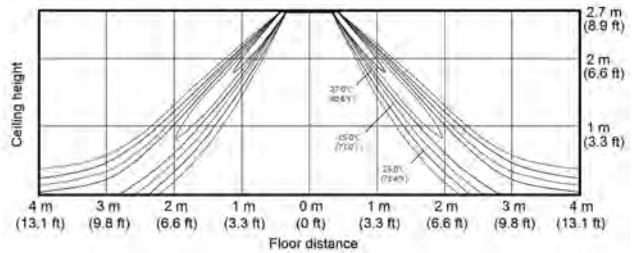
- Cooling temperature distribution
(Discharge angle : 45 degree)



- Heating Air Velocity distribution
(Discharge angle : 52 degree)

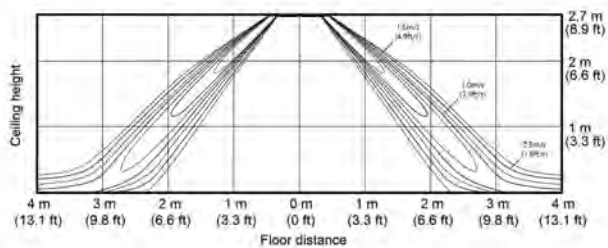


- Heating temperature distribution
(Discharge angle : 52 degree)

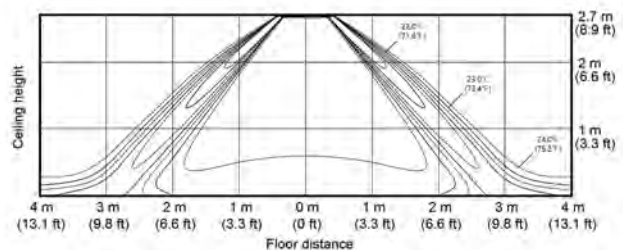


CNH484DB (AC048BN4DCH/AA)

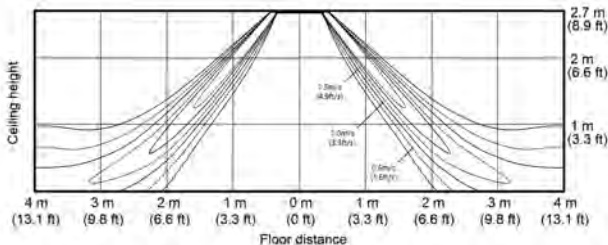
- Cooling Air Velocity distribution
(Discharge angle : 45 degree)



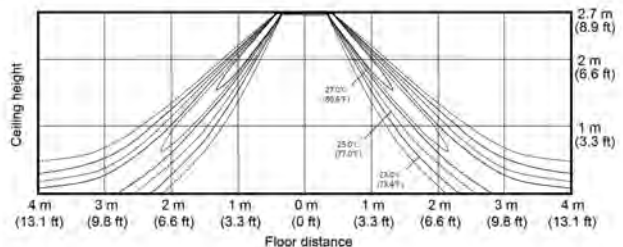
- Cooling temperature distribution
(Discharge angle : 45 degree)



- Heating Air Velocity distribution
(Discharge angle : 52 degree)



- Heating temperature distribution
(Discharge angle : 52 degree)



Outdoor Units

1. Summary Table	55
2. Dimensional Drawing	56
3. Center of Gravity	61
4. Electrical Wiring Diagram	64
5. Sound Data	67
6. Capacity Correction	73
7. Operation Range	77
8. Piping Diagram	78

1. Summary Table

Outdoor Units

Performance Characteristics

Capacity (Btu/h)	Model Code	Net Size (WxHxD inch)	Net Weight (lbs)	Airflow (CFM)	Sound Pressure Level (dBA)		Sound Power Level (dBA)
					Cooling	Heating	
9,000	CXH09ADB (AC009BXADCH/AA)	31.10 x 21.57 x 11.22	74.3	1,059	46	47	59
12,000	CXH12ADB (AC012BXADCH/AA)	31.10 x 21.57 x 11.22	74.3	1,059	47	48	61
18,000	CXH18ADB (AC018BXADCH/AA)	34.65 x 31.42 x 12.20	118.4	2,154	48	48	62
24,000	CXH24ADB (AC024BXADCH/AA)	37.01 x 39.29 x 12.99	158.7	2,684	50	52	65
30,000	CXH30ADB (AC030BXADCH/AA)	37.01 x 39.29 x 12.99	158.7	2,684	50	52	67
36,000	CXH36ADB (AC036BXADCH/AA)	37.01 x 47.64 x 12.99	189.6	3,532	52	54	69
42,000	CXH42ADB (AC042BXADCH/AA)	37.01 x 47.64 x 12.99	195.1	3,532	53	55	70
48,000	CXH48ADB (AC048BXADCH/AA)	37.01 x 47.64 x 12.99	195.1	3,532	56	58	72

NOTE

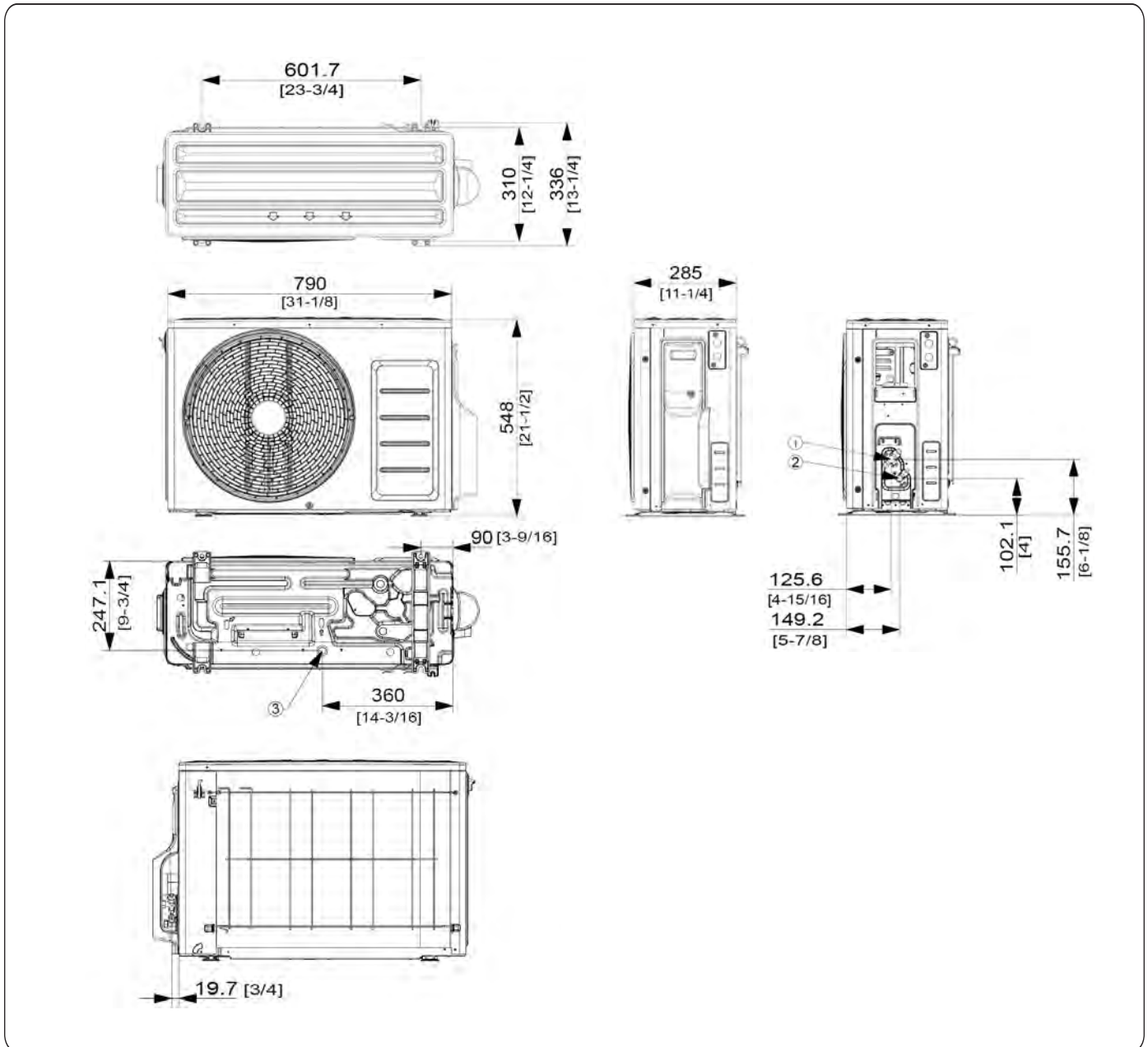
- Sound power level is based on cooling operation.

2. Dimensional Drawing

Outdoor Units

CXH09ADB (AC009BXADCH/AA), CXH12ADB (AC012BXADCH/AA)

Units : mm [inches]



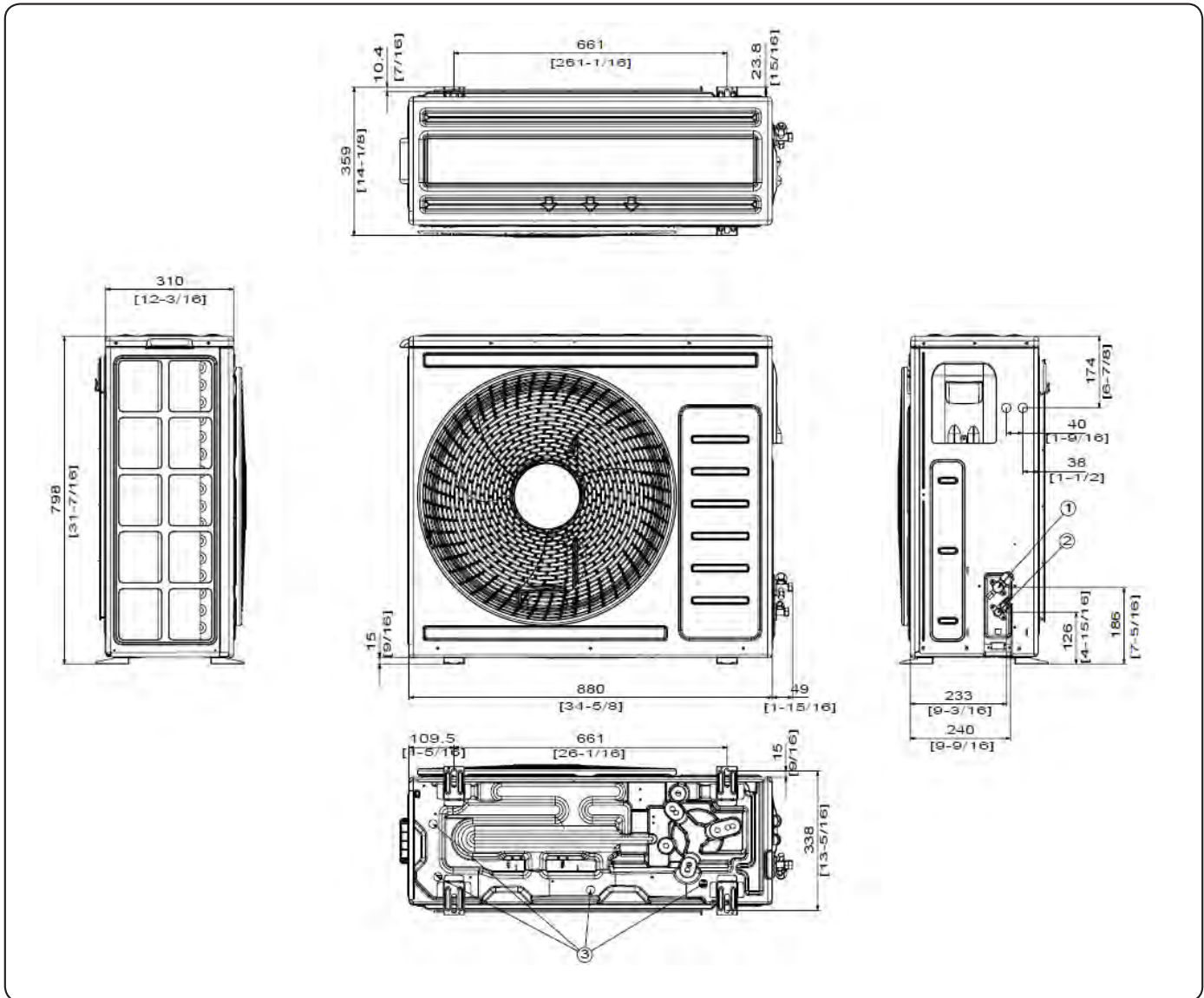
No.	Name	Description
1	Refrigerant gas pipe	Φ 9.52mm(3/8")
2	Refrigerant liquid pipe	Φ 6.35mm(1/4")
3	Drain Hole	-

2. Dimensional Drawing

Outdoor Units

CXH18ADB (AC018BXADCH/AA)

Units : mm [inches]



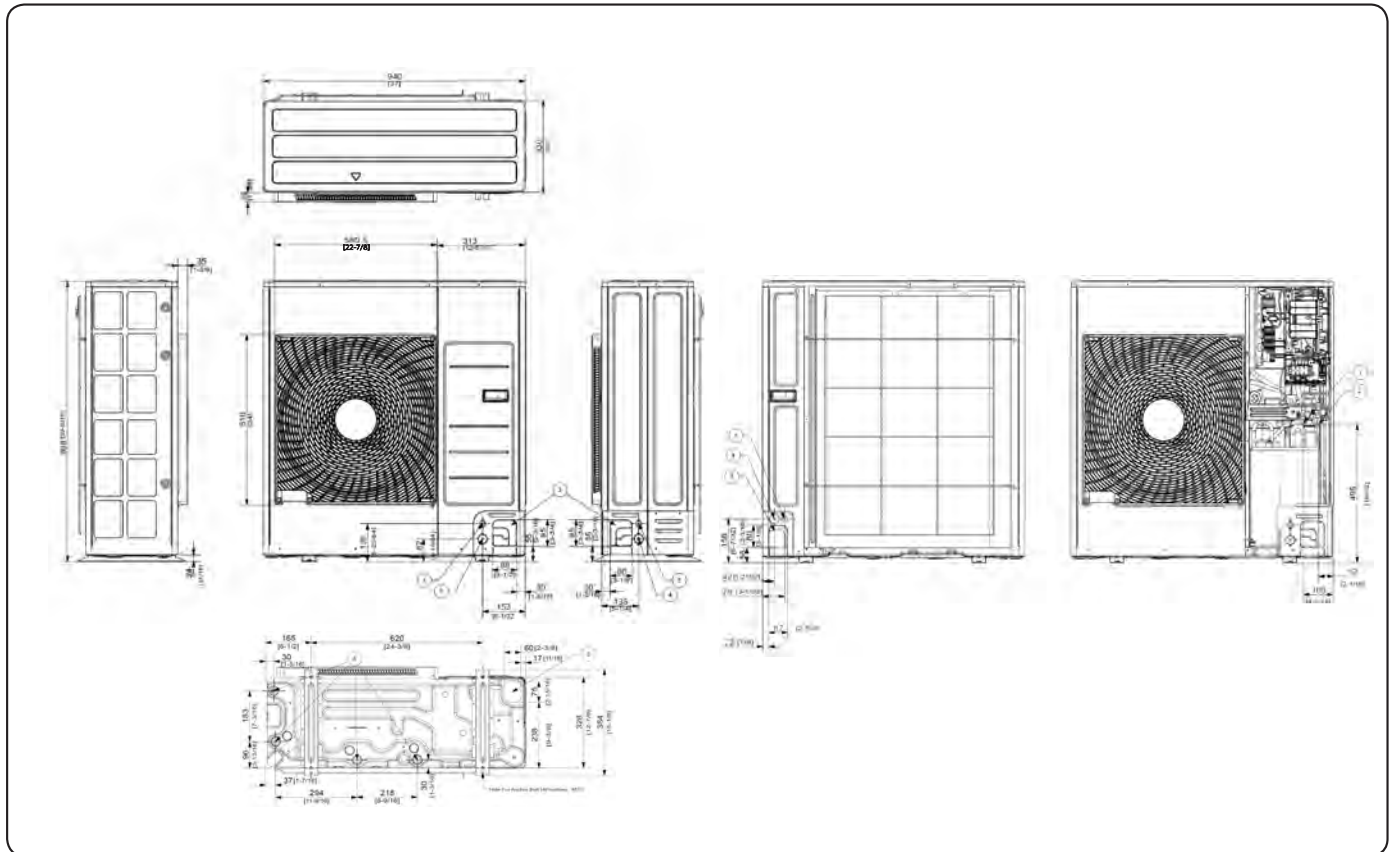
No.	Name	Description
1	Refrigerant liquid pipe	Φ 12.7mm(1/2")
2	Refrigerant gas pipe	Φ 6.35mm(1/4")
3	Drain hole	-

2. Dimensional Drawing

Outdoor Units

CXH24ADB (AC024BXADCH/AA), CXH30ADB (AC030BXADCH/AA)

Units : mm [inches]



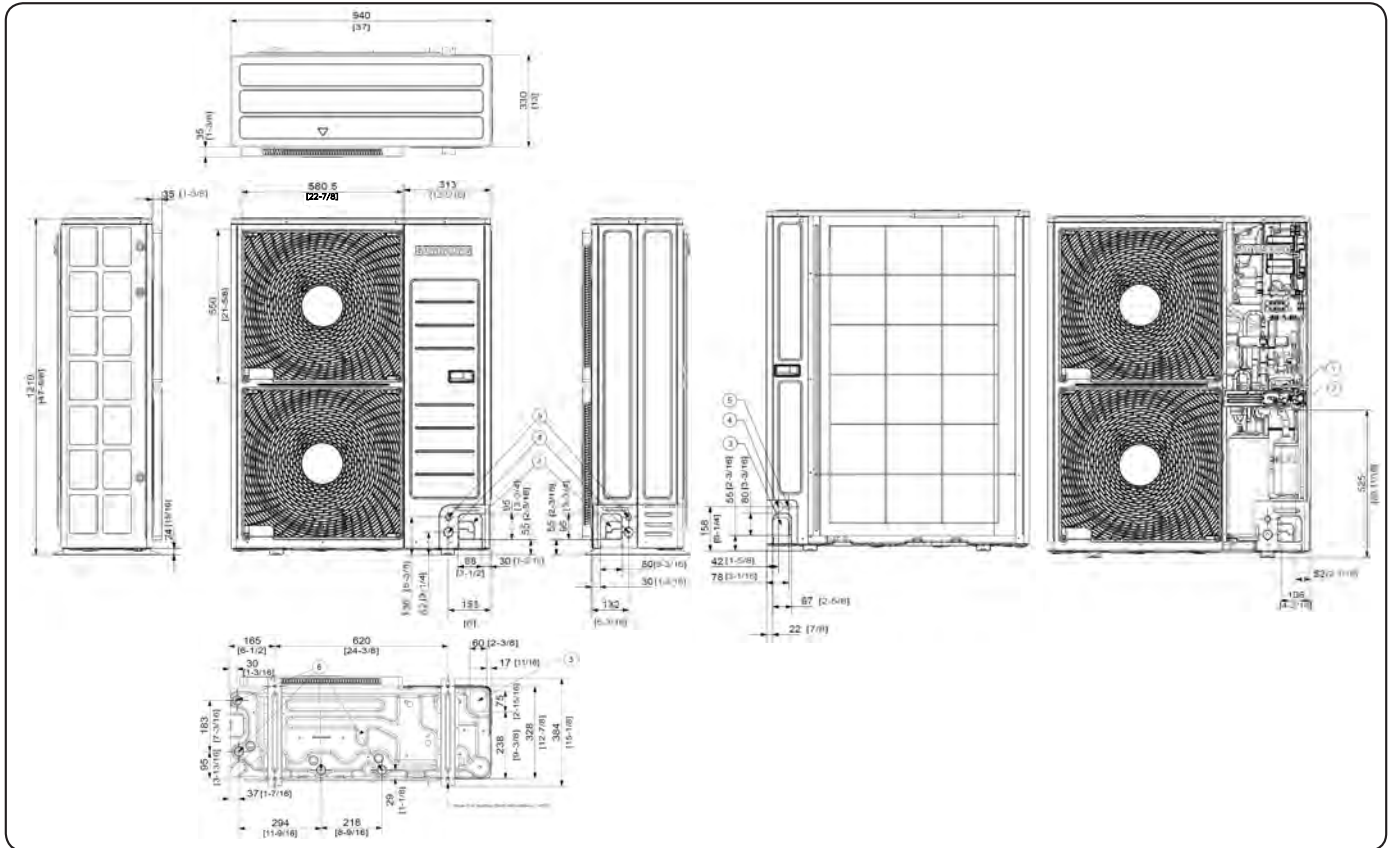
No.	Name	Description	
		CXH24ADB (AC024BXADCH/AA)	CXH30ADB (AC030BXADCH/AA)
1	Refrigerant liquid pipe	Φ 6.35mm(1/4")	Φ 9.52mm(3/8")
2	Refrigerant gas pipe	Φ 15.88mm(5/8")	
3	Piping intake knockout hole	Front / Side / Rear / Bottom	
4	Power wiring conduit	Front / Side / Rear , Φ 34mm(1-3/8")	
5	Communication wiring conduit	Front / Side / Rear , Φ 22mm(7/8")	
6	Drain Hole	- Connect with the provided drain plug if applicable	

2. Dimensional Drawing

Outdoor Units

CXH36ADB (AC036BXADCH/AA), CXH42ADB (AC042BXADCH/AA), CXH48ADB (AC048BXADCH/AA)

Units : mm [inches]



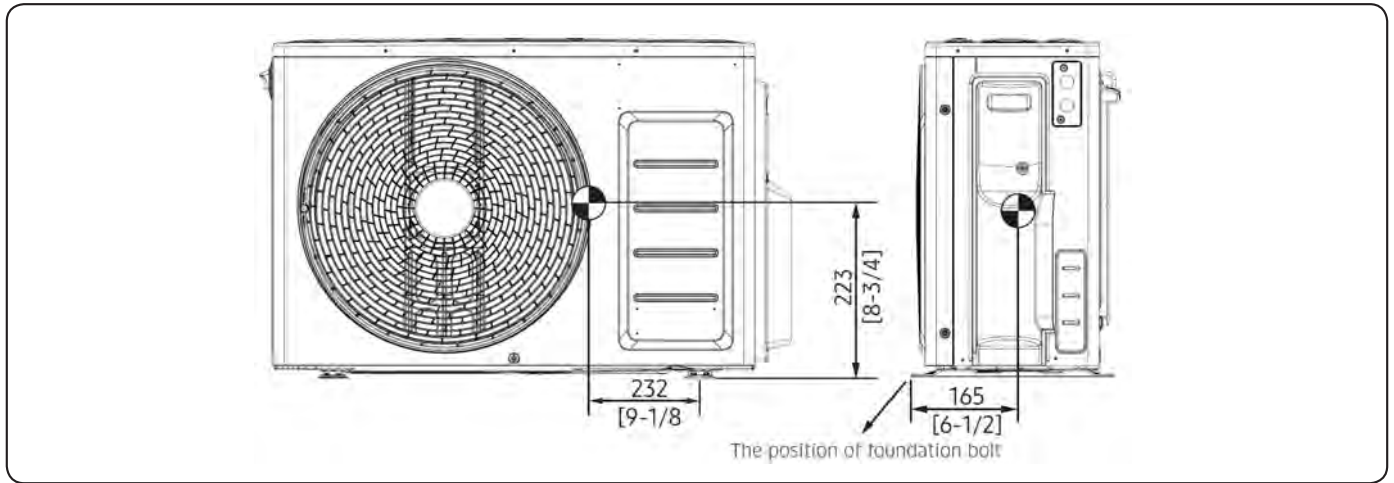
No.	Name	Description
1	Refrigerant liquid pipe	Φ 9.52mm(3/8")
2	Refrigerant gas pipe	Φ 15.88mm(5/8")
3	Piping intake knockout hole	Front / Side / Rear / Bottom
4	Power wiring conduit	Front / Side / Rear , Φ 34mm(1-3/8")
5	Communication wiring conduit	Front / Side / Rear , Φ 22mm(7/8")
6	Drain Hole	Connect with the provided drain plug if applicable

3. Center of Gravity

Outdoor Units

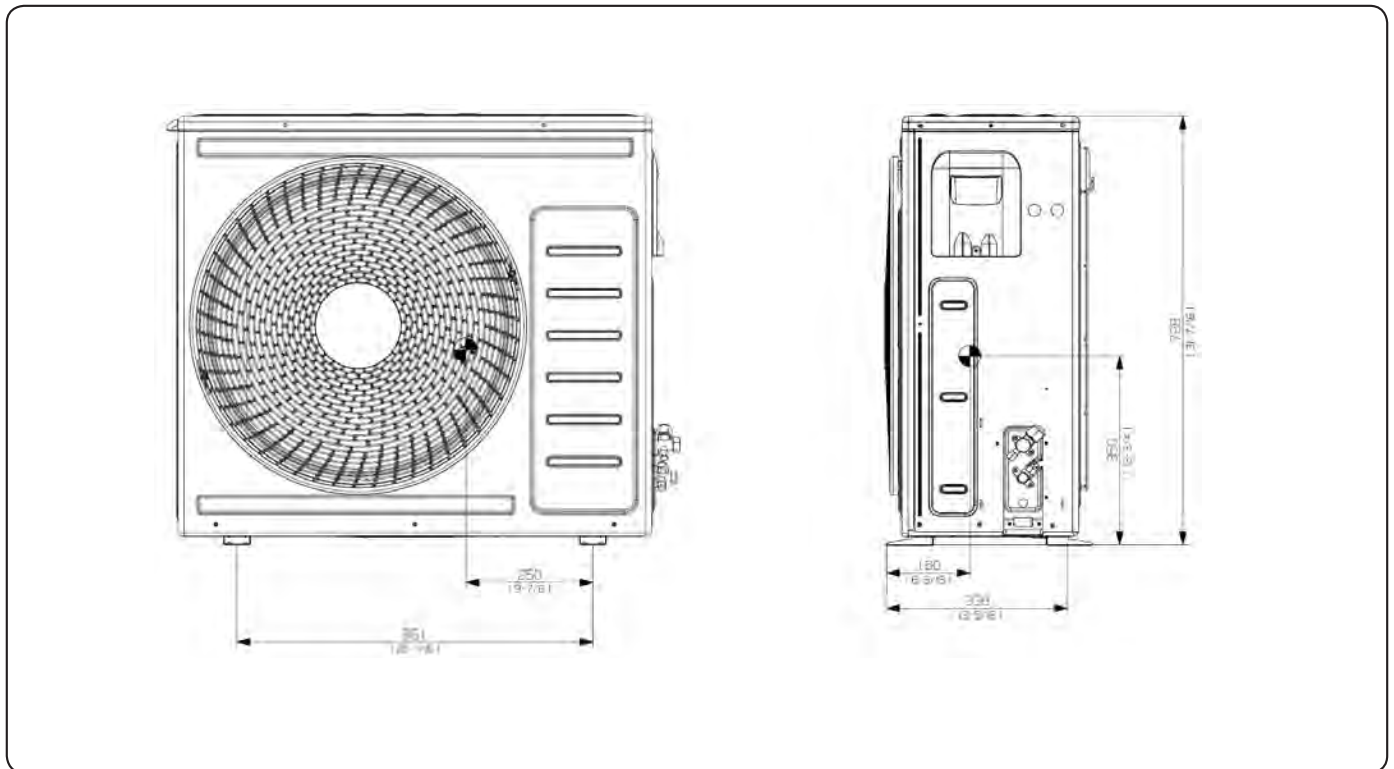
CXH09ADB (AC009BXADCH/AA), CXH12ADB (AC012BXADCH/AA)

Units : mm [inches]



CXH18ADB (AC018BXADCH/AA)

Units : mm [inches]

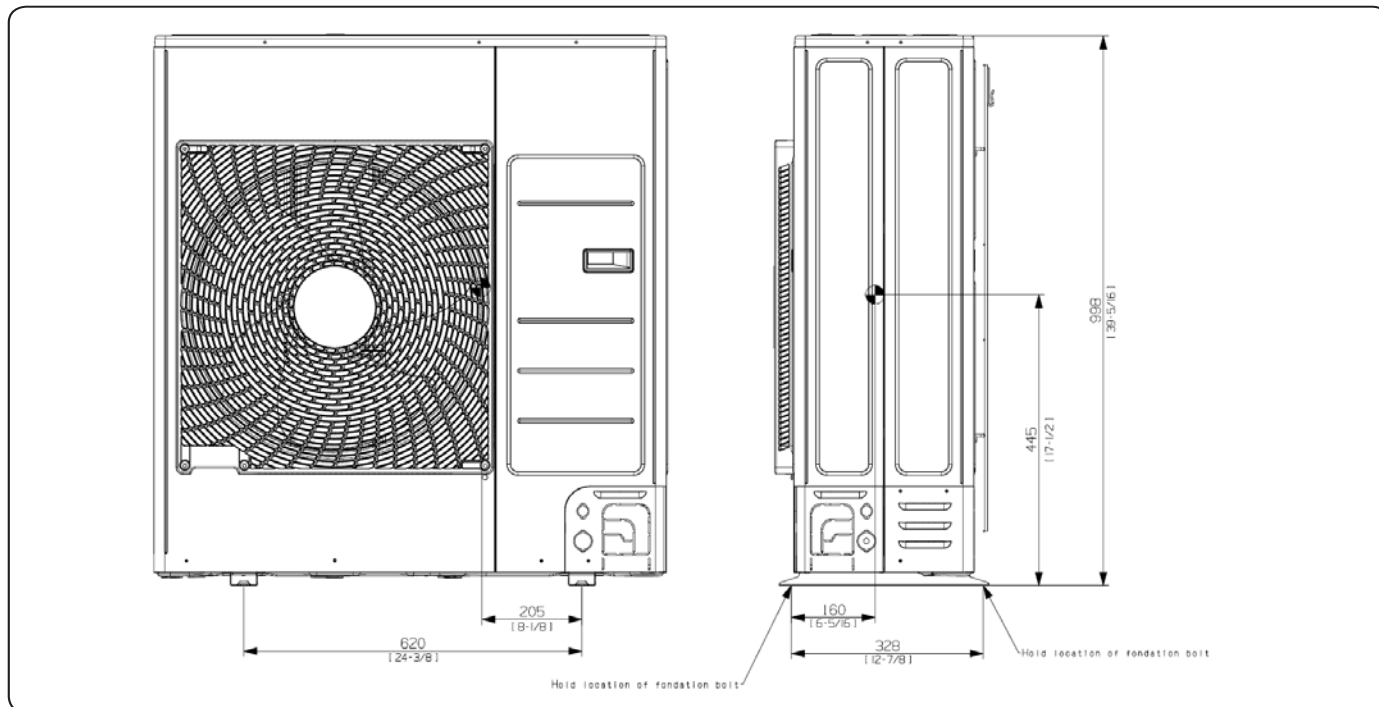


3. Center of Gravity

Outdoor Units

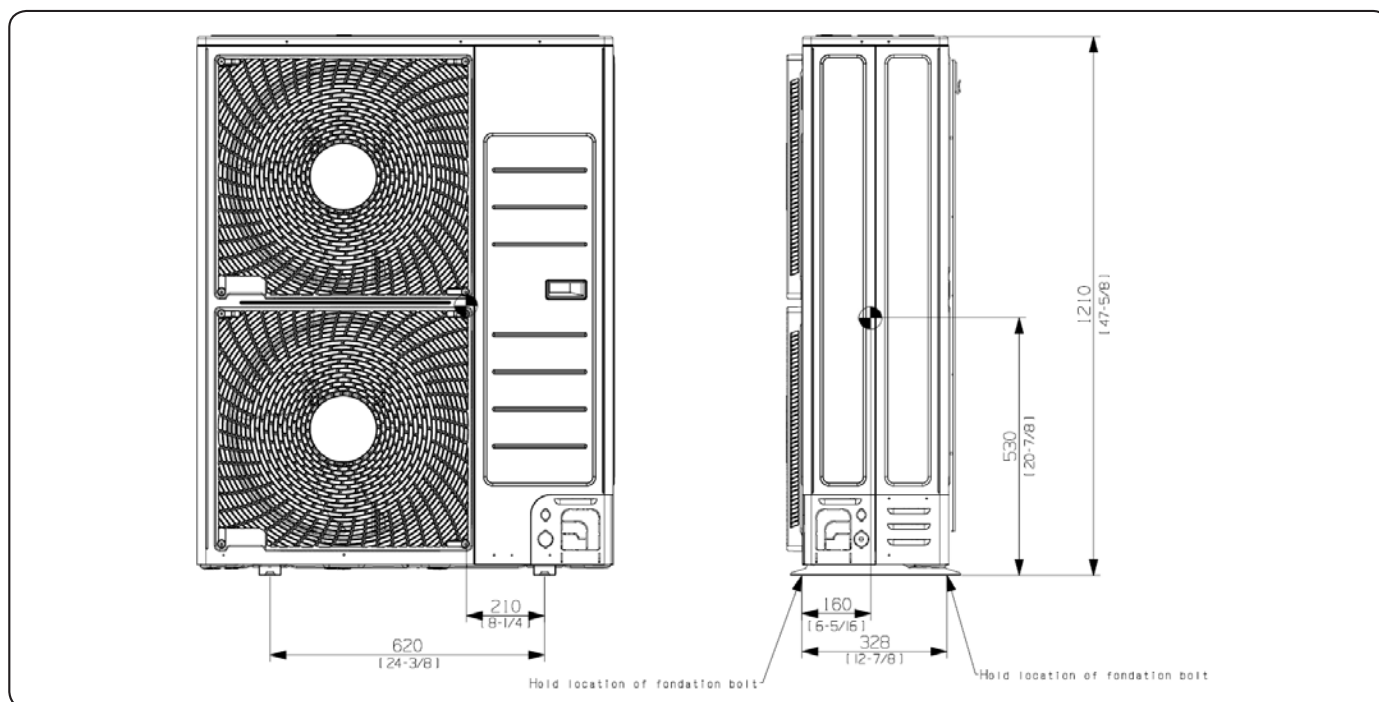
CXH24ADB (AC024BXADCH/AA), CXH30ADB (AC030BXADCH/AA)

Units : mm [inches]



CXH36ADB (AC036BXADCH/AA), CXH42ADB (AC042BXADCH/AA), CXH48ADB (AC048BXADCH/AA)

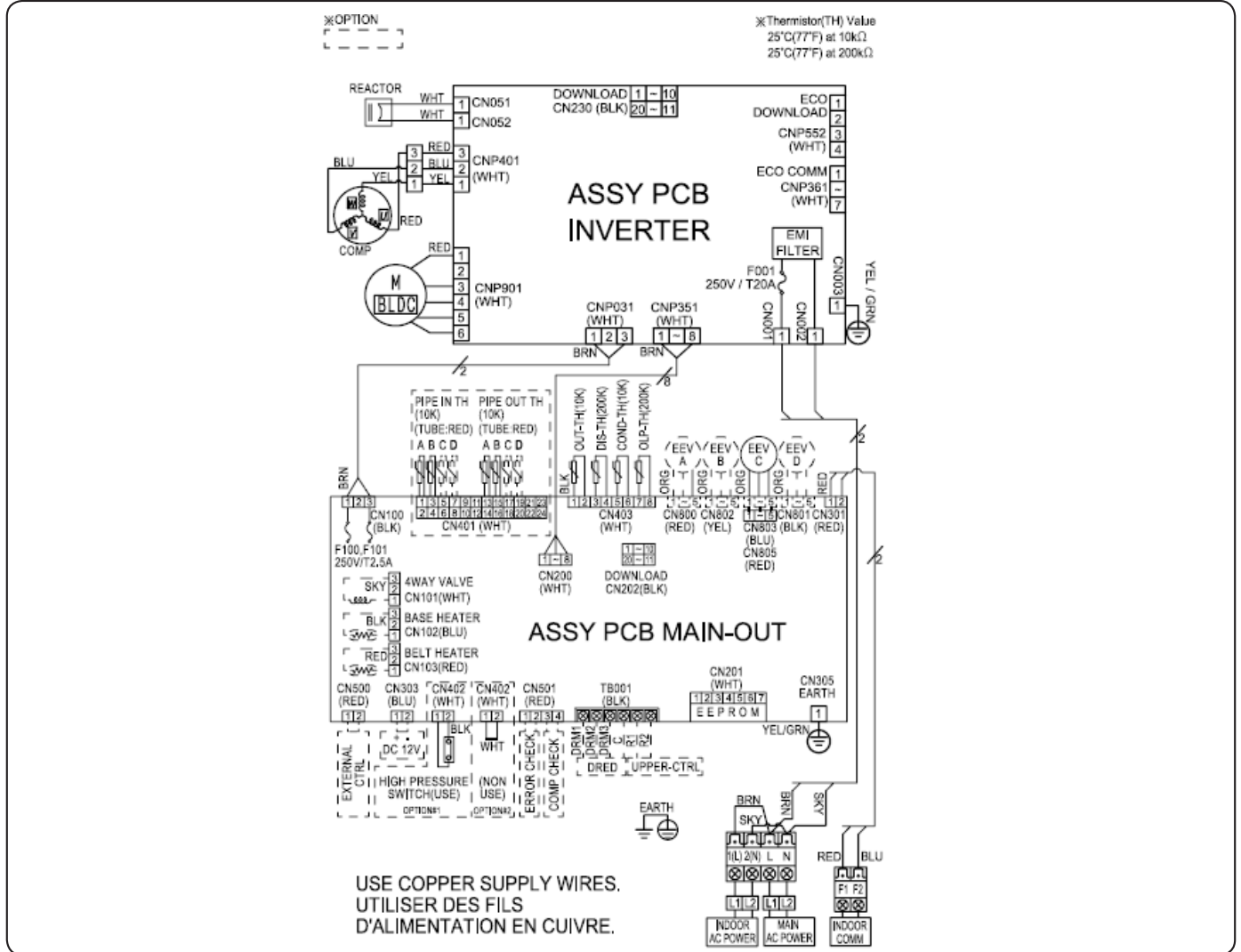
Units : mm [inches]



4. Electrical Wiring Diagram

Outdoor Units

CXH09ADB (AC009BXADCH/AA), CXH12ADB (AC012BXADCH/AA)



MAIN PCB	Printed circuit board(MAIN)	EEV	Electronic Expansion Valve
INVERTER PCB	Printed circuit board(INVERTER)	M-BLDC	BLDC Motor
OLT-TH(200K)	Thermistor OLP	DIS-TH(200K)	Thermistor DISCHARGE
OUT-TH(10K)	Thermistor AMBIENT	COND-TH(10K)	Thermistor CONDENSOR

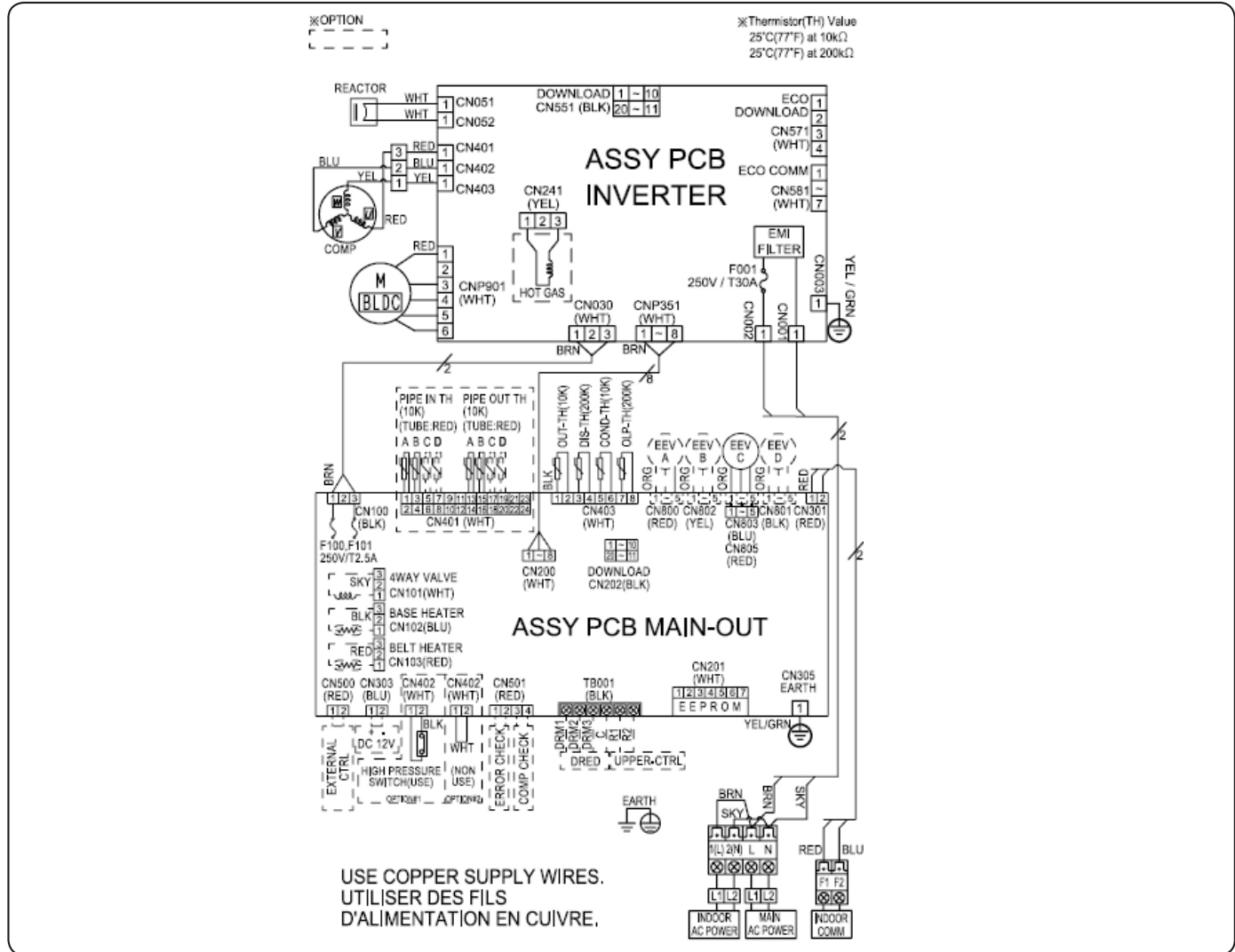
NOTE

- This wiring diagram applies only to the outdoor unit.
- Colors blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue
- When operating, don't short circuit the protection device (High Pressure switch)
- For connection wiring indoor-outdoor transmission F1-F2, outdoor-outdoor transmission OF1-OF2, refer to the installation manual.
- Protective earth(screw), : connector, : The wire quantity

4. Electrical Wiring Diagram

Outdoor Units

CXH18ADB (AC018BXADCH/AA)



MAIN PCB	Printed circuit board(MAIN)	EEV	Electronic Expansion Valve
INVERTER PCB	Printed circuit board(INVERTER)	M-BLDC	BLDC Motor
OLT-TH(200K)	Thermistor OLP	DIS-TH(200K)	Thermistor DISCHARGE
OUT-TH(10K)	Thermistor AMBIENT	COND-TH(10K)	Thermistor CONDENSOR

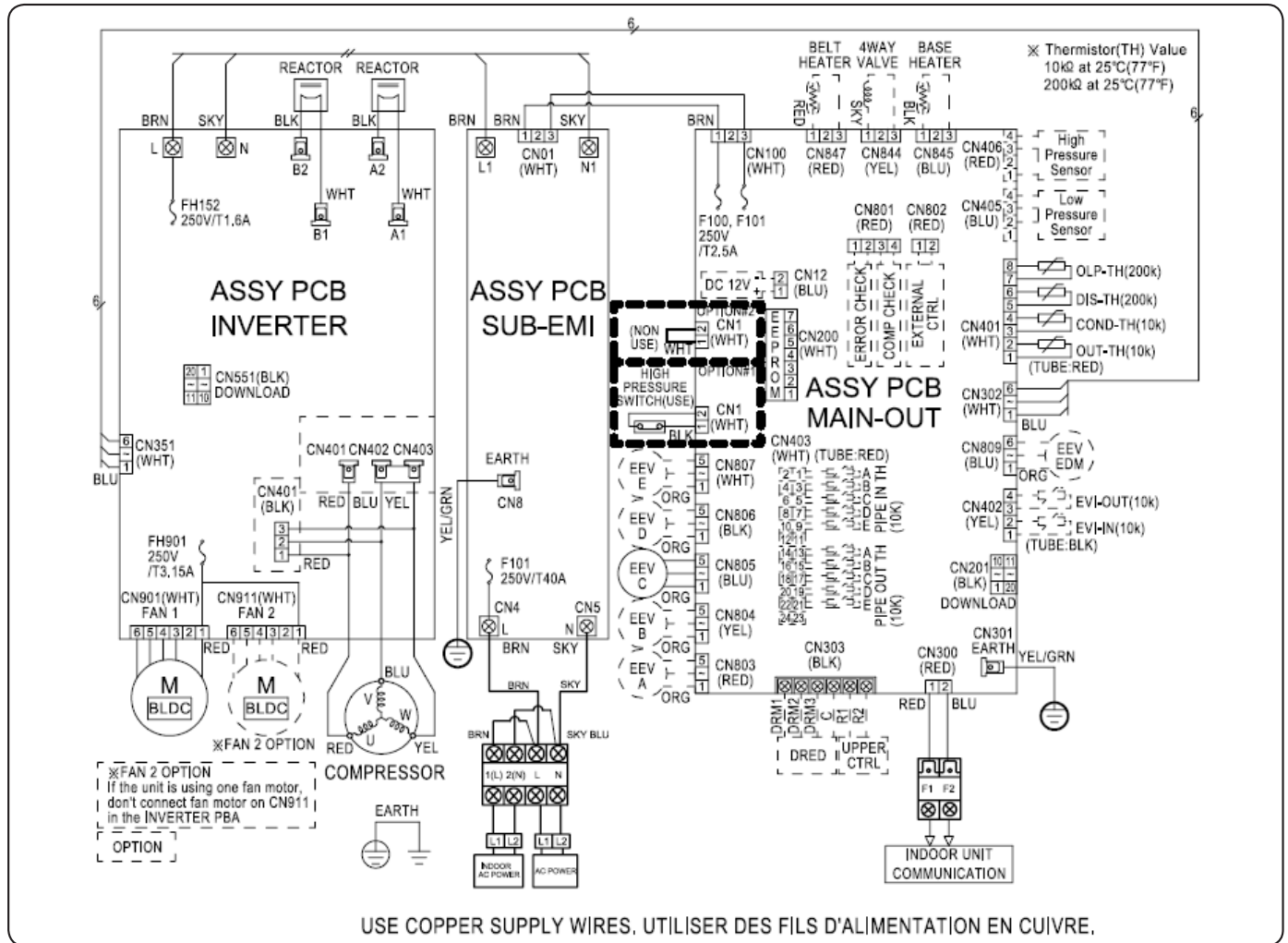
NOTE

- This wiring diagram applies only to the outdoor unit.
- Colors blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue
- When operating, don't short circuit the protection device (High Pressure switch)
- For connection wiring indoor-outdoor transmission F1-F2, outdoor-outdoor transmission OF1-OF2, refer to the installation manual.
- Protective earth(screw), : connector, $\frac{N}{\text{---}}$: The wire quantity

4. Electrical Wiring Diagram

Outdoor Units

CXH24ADB (AC024BXADCH/AA), CXH30ADB (AC030BXADCH/AA), CXH36ADB (AC036BXADCH/AA), CXH42ADB (AC042BXADCH/AA)
 CXH48ADB (AC048BXADCH/AA)



MAIN PCB	Printed circuit board(MAIN)	EEV	Electronic Expansion Valve
INVERTER PCB	Printed circuit board(INVERTER)	M-BLDC	BLDC Motor
EMI	Printed circuit board(EMI)	DIS-TH(200K)	Thermistor DISCHARGE
OLT-TH(200K)	Thermistor OLP	COND-TH(10K)	Thermistor CONDENSOR
OUT-TH(10K)	Thermistor AMBIENT		

NOTE

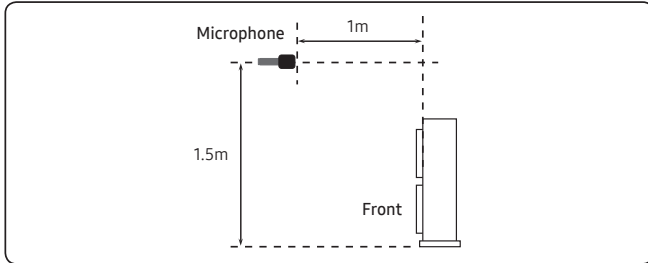
- This wiring diagram applies only to the outdoor unit.
- Colors blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue
- When operating, don't shortcircuit the protection device (High Pressure switch)
- For connection wiring indoor-outdoor transmission F1-F2, outdoor-outdoor transmission OF1-OF2, refer to the installation manual.
- Protective earth(screw), : connector, : The wire quantity

5. Sound Data

Outdoor Units

Sound Pressure level

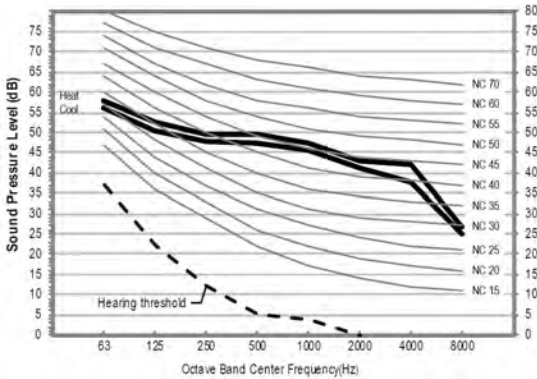
Unit: dB(A)



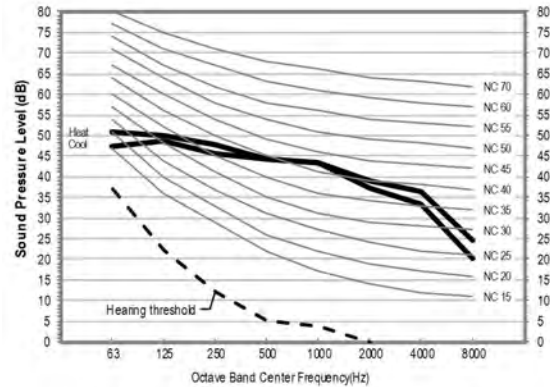
Model	Cooling	Heating
CXH09ADB (AC009BXADCH/AA)	46	47
CXH12ADB (AC012BXADCH/AA)	47	48
CXH18ADB (AC018BXADCH/AA)	48	48
CXH24ADB (AC024BXADCH/AA)	50	52

- NC Curve

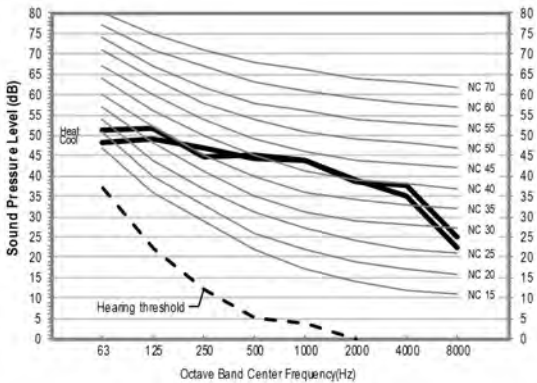
1) CXH09ADB (AC009BXADCH/AA)



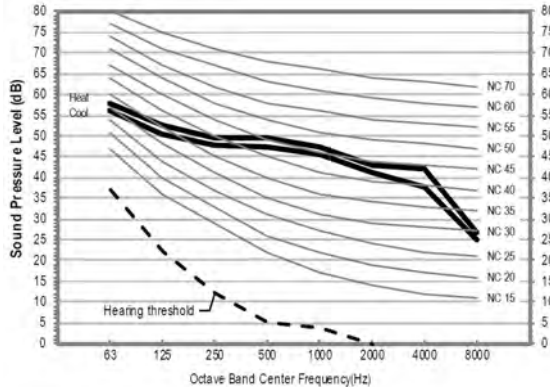
2) CXH12ADB (AC012BXADCH/AA)



3) CXH18ADB (AC018BXADCH/AA)



4) CXH24ADB (AC024BXADCH/AA)



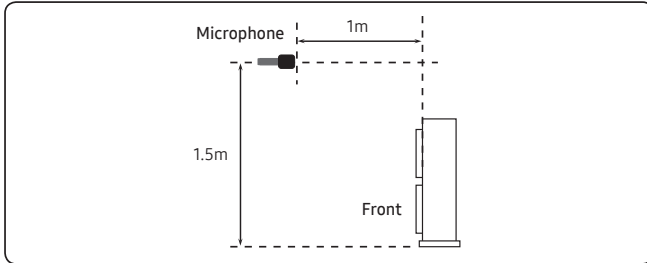
NOTE

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

5. Sound Data

Outdoor Units

Sound Pressure level

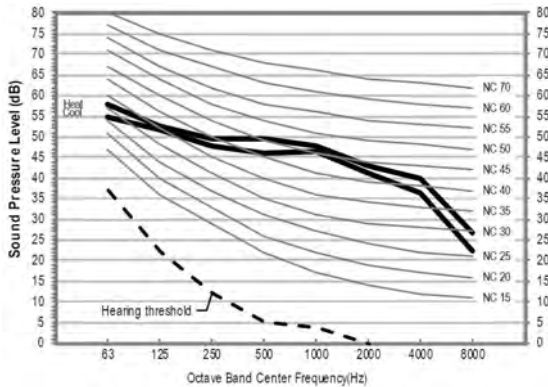


Unit: dB(A)

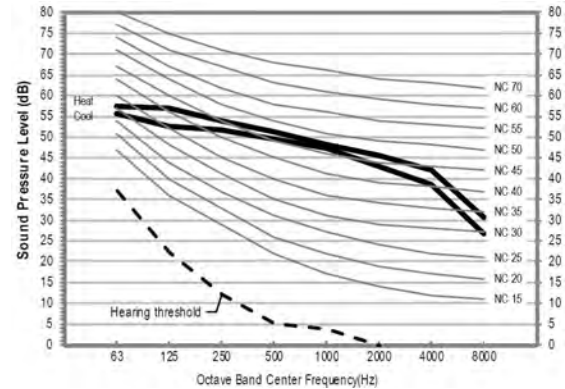
Model	Cooling	Heating
CXH30ADB (AC030BXADCH/AA)	50	52
CXH36ADB (AC036BXADCH/AA)	52	54
CXH42ADB (AC042BXADCH/AA)	53	55
CXH48ADB (AC048BXADCH/AA)	56	58

- NC Curve

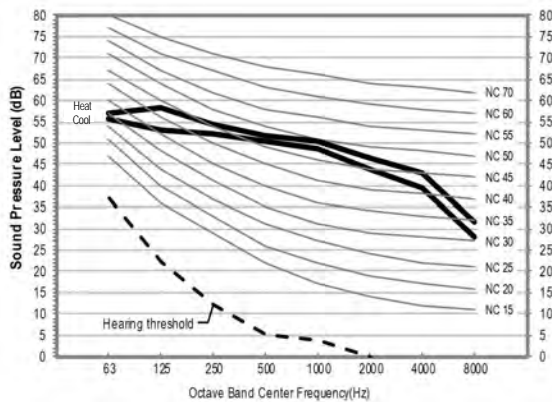
1) CXH30ADB (AC030BXADCH/AA)



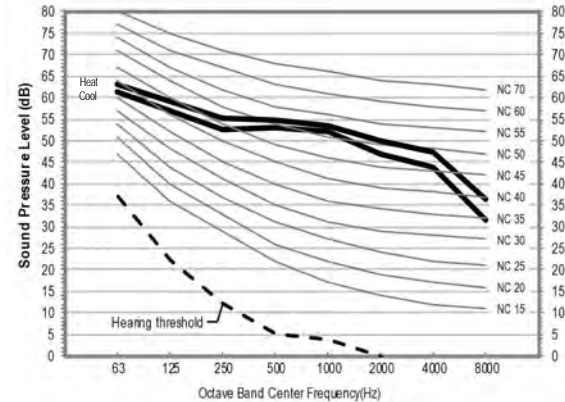
2) CXH36ADB (AC036BXADCH/AA)



3) CXH42ADB (AC042BXADCH/AA)



4) CXH48ADB (AC048BXADCH/AA)



NOTE

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

5. Sound Data

Outdoor Units

Sound Power level



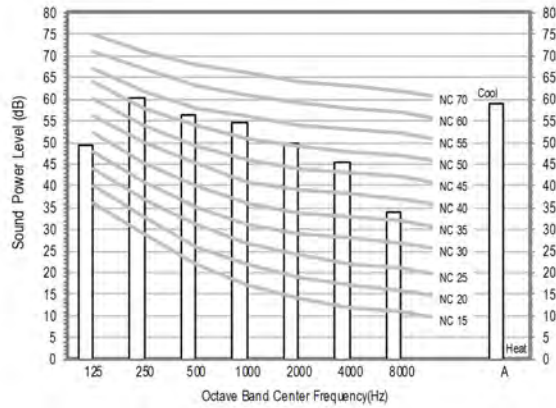
- Specifications may be subject to change without prior notice
 - Sound power level is an absolute value that a sound source generates.
 - dBA = A-weighted sound power level.
 - Reference power : 1pW.
 - Measured according to ISO 3741.

Unit: dB(A)

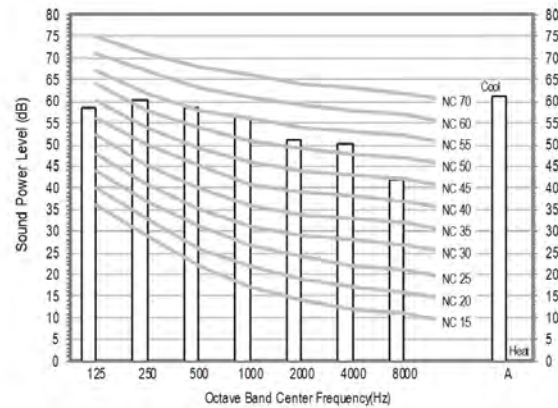
Model	Cooling
CXH09ADB (AC009BXADCH/AA)	59
CXH12ADB (AC012BXADCH/AA)	61
CXH18ADB (AC018BXADCH/AA)	62
CXH24ADB (AC024BXADCH/AA)	65

- NC Curve

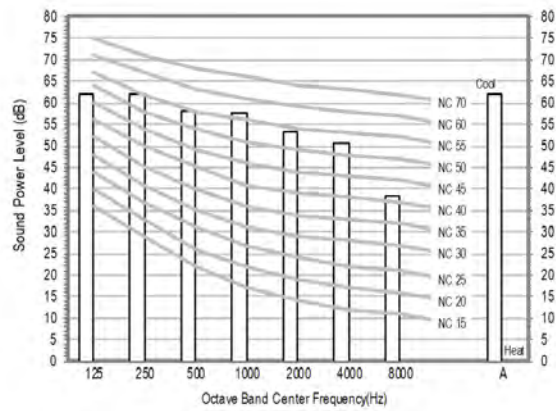
1) CXH09ADB (AC009BXADCH/AA)



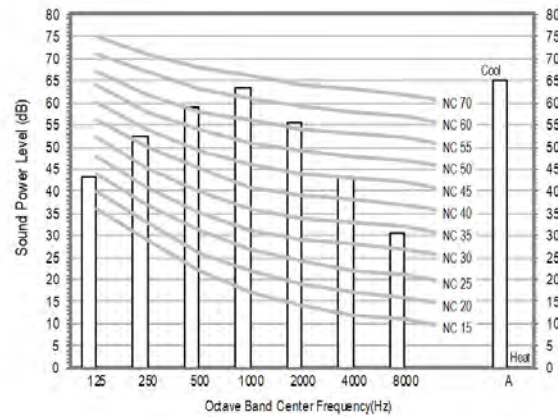
2) CXH12ADB (AC012BXADCH/AA)



3) CXH18ADB (AC018BXADCH/AA)



4) CXH24ADB (AC024BXADCH/AA)



5. Sound Data

Outdoor Units

Sound Power level

Unit: dB(A)

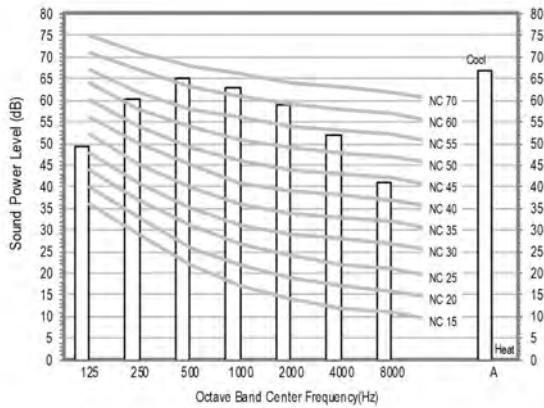
NOTE

- Specifications may be subject to change without prior notice
 - Sound power level is an absolute value that a sound source generates.
 - dBA = A-weighted sound power level.
 - Reference power : 1pW.
 - Measured according to ISO 3741.

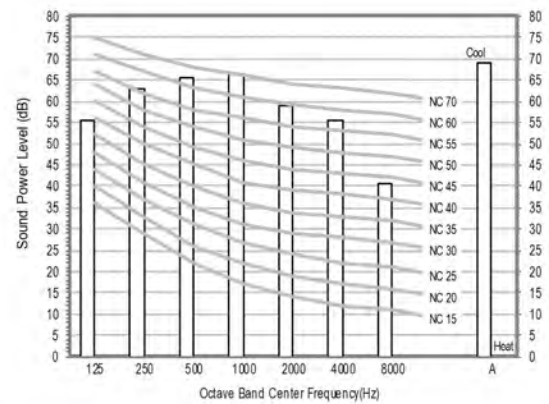
Model	Cooling
CXH30ADB (AC030BXADCH/AA)	67
CXH36ADB (AC036BXADCH/AA)	69
CXH42ADB (AC042BXADCH/AA)	70
CXH48ADB (AC048BXADCH/AA)	72

• NC Curve

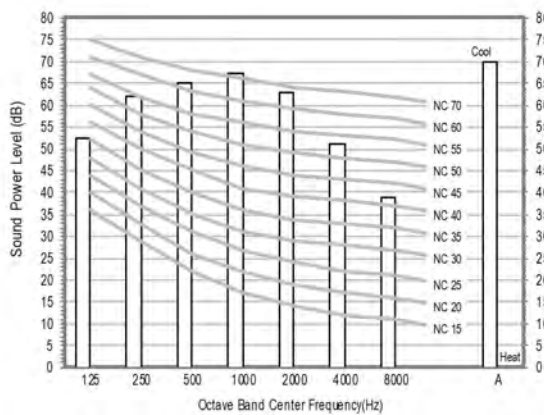
1) CXH30ADB (AC030BXADCH/AA)



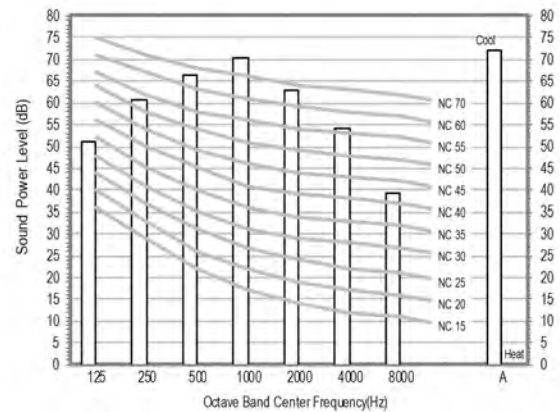
2) CXH36ADB (AC036BXADCH/AA)



3) CXH42ADB (AC042BXADCH/AA)



4) CXH48ADB (AC048BXADCH/AA)



6. Capacity Correction

Outdoor Units

CNH09NDB(AC009BNNDCH/AA)+CXH09ADB(AC009BXADCH/AA)
 CNH12NDB(AC012BNNDCH/AA)+CXH12ADB(AC012BXADCH/AA)

Cooling



		Pipe Length (ft)			
		24.6	32.8	49.2	65.6
Level Difference (ft)	49.2	-	-	0.95	0.93
	32.8	-	0.98	0.95	0.93
	16.4	1.00	0.98	0.95	0.93
	0.0	1.00	0.98	0.95	0.93
	-16.4	1.00	0.97	0.95	0.93
	-32.8	-	0.95	0.94	0.92
	-49.2	-	-	0.93	0.91

Heating



		Pipe Length (ft)			
		24.6	32.8	49.2	65.6
Level Difference (ft)	49.2	-	-	0.94	0.91
	32.8	-	0.97	0.94	0.91
	16.4	1.00	0.97	0.94	0.91
	0.0	1.00	0.97	0.94	0.91
	-16.4	1.00	0.97	0.94	0.91
	-32.8	-	0.97	0.94	0.91
	-49.2	-	-	0.94	0.91

6. Capacity Correction

Outdoor Units

CNH18NDB(AC018BNNDCH/AA)+CXH18ADB(AC018BXADCH/AA)
 CNH184DB(AC018BN4DCH/AA)+CXH18ADB(AC018BXADCH/AA)
 CNH244DB(AC024BN4DCH/AA)+CXH24ADB(AC024BXADCH/AA)
 CNH304DB(AC030BN4DCH/AA)+CXH30ADB(AC030BXADCH/AA)

Cooling



		Pipe Length (ft)									
		24.6	32.8	49.2	65.6	82.0	98.4	114.8	131.2	147.6	164.0
Level Difference (ft)	98.4	-	-	-	-	-	0.94	0.93	0.92	0.91	0.90
	82.0	-	-	-	-	0.96	0.94	0.93	0.92	0.91	0.90
	65.6	-	-	-	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	49.2	-	-	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	32.8	-	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	16.4	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	0.0	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-16.4	1.00	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.90	0.88
	-32.8	-	0.98	0.97	0.96	0.95	0.94	0.92	0.91	0.89	0.87
	-49.2	-	-	0.97	0.96	0.94	0.93	0.92	0.90	0.88	0.85
	-65.6	-	-	-	0.95	0.94	0.93	0.91	0.89	0.87	0.83
	-82.0	-	-	-	-	0.94	0.92	0.91	0.89	0.86	0.82
-98.4	-	-	-	-	-	0.92	0.90	0.88	0.85	0.80	

Heating



		Pipe Length (ft)									
		24.6	32.8	49.2	65.6	82.0	98.4	114.8	131.2	147.6	164.0
Level Difference (ft)	98.4	-	-	-	-	-	0.94	0.93	0.92	0.91	0.90
	82.0	-	-	-	-	0.96	0.94	0.93	0.92	0.91	0.90
	65.6	-	-	-	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	49.2	-	-	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	32.8	-	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	16.4	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	0.0	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-16.4	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-32.8	-	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-49.2	-	-	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-65.6	-	-	-	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-82.0	-	-	-	-	0.96	0.94	0.93	0.92	0.91	0.90
-98.4	-	-	-	-	-	0.94	0.93	0.92	0.91	0.90	

6. Capacity Correction

Outdoor Units

CNH364DB(AC036BN4DCH/AA)+CXH36ADB(AC036BXADCH/AA)
 CNH424DB(AC042BN4DCH/AA)+CXH42ADB(AC042BXADCH/AA)
 CNH484DB(AC048BN4DCH/AA)+CXH48ADB(AC048BXADCH/AA)

Cooling



		Pipe Length (ft)														
		16.4	32.8	49.2	65.6	82.0	98.4	114.8	131.2	147.6	164.0	180.4	196.9	213.3	229.7	246.1
Level Difference (ft)	98.4	-	-	-	-	-	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	82.0	-	-	-	-	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	65.6	-	-	-	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	49.2	-	-	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
	32.8	-	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
	16.4	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
	0.0	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
	-16.4	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
	-32.8	-	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.93	0.92	0.91	0.90	0.89	0.87	0.85
	-49.2	-	-	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
	-65.6	-	-	-	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	-	-	-	-	0.95	0.94	0.93	0.93	0.92	0.91	0.90	0.88	0.87	0.85	0.81
-98.4	-	-	-	-	-	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.86	0.84	0.80	

Heating



		Pipe Length (ft)														
		16.4	32.8	49.2	65.6	82.0	98.4	114.8	131.2	147.6	164.0	180.4	196.9	213.3	229.7	246.1
Level Difference (ft)	98.4	-	-	-	-	-	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	82.0	-	-	-	-	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	65.6	-	-	-	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	49.2	-	-	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
	32.8	-	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
	16.4	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
	0.0	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
	-16.4	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
	-32.8	-	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
	-49.2	-	-	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
	-65.6	-	-	-	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	-	-	-	-	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
-98.4	-	-	-	-	-	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88	

7. Operation Range

Outdoor Units

CXH**ADB(AC***BXADCH/AA)

Mode		Indoor temperature	Outdoor temperature	Indoor humidity
Cooling		18°C to 32°C (64°F to 90°F)	-18°C to 50°C (0°F to 122°F)	80% or less
Drying		18°C to 32°C (64°F to 90°F)	-18°C to 50°C (0°F to 122°F)	80% or less
Heating	~ 24kBtu/h	30°C(86°F) or less	-25°C to 24°C (-13°F to 75°F)	-
	30 ~ 48kBtu/h		-20°C to 24°C (-4°F to 75°F)	-

NOTE

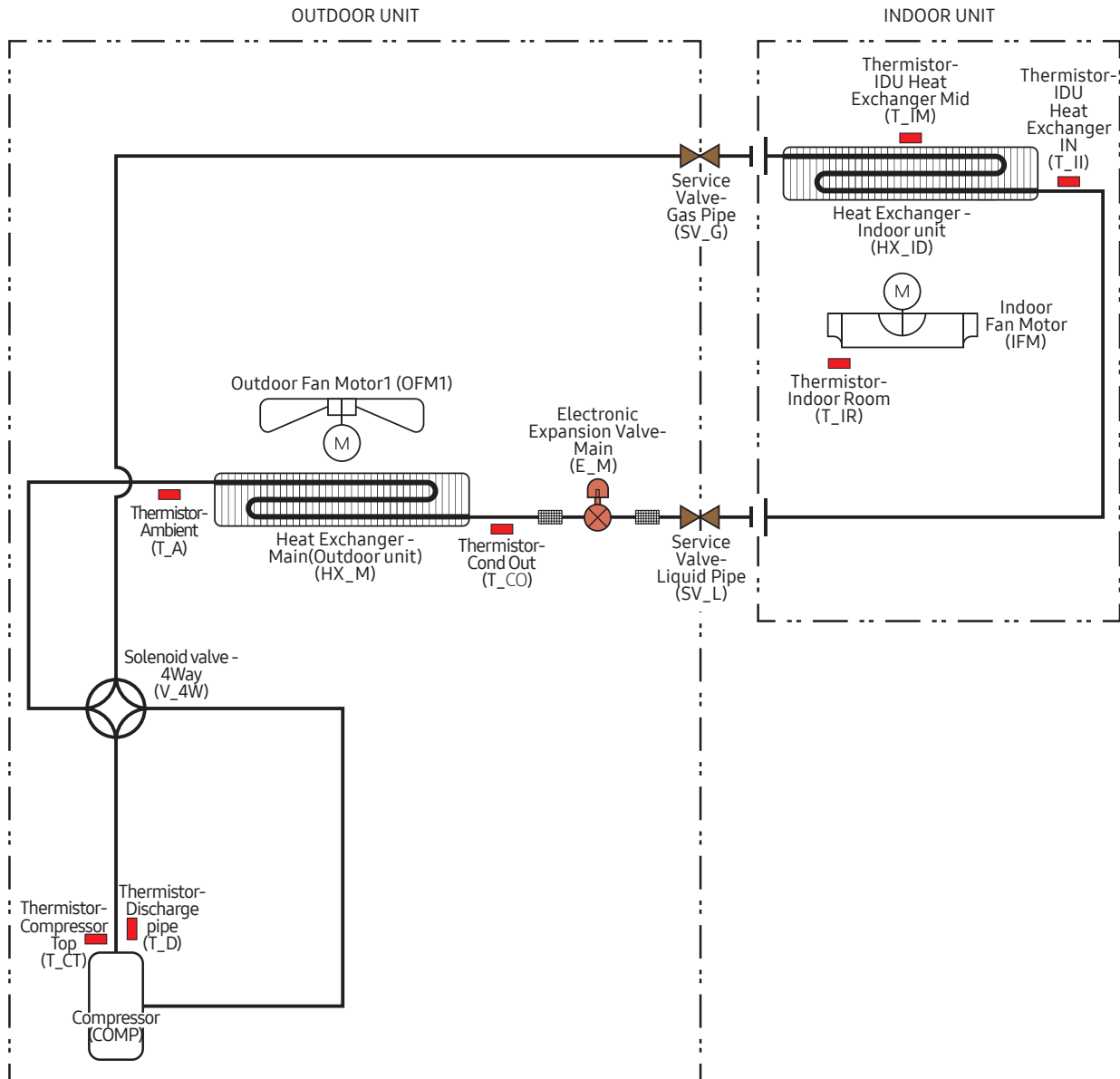
- The assumed installation conditions are follows
 - The pipe length(including elbow) is 7.5m(24.6ft).
 - The level difference is 0 m.

8. Piping Diagram

Outdoor Units

CNH09NDB(AC009BNNDCH/AA)+CXH09ADB(AC009BXADCH/AA)

CNH12NDB(AC012BNNDCH/AA)+CXH12ADB(AC012BXADCH/AA)

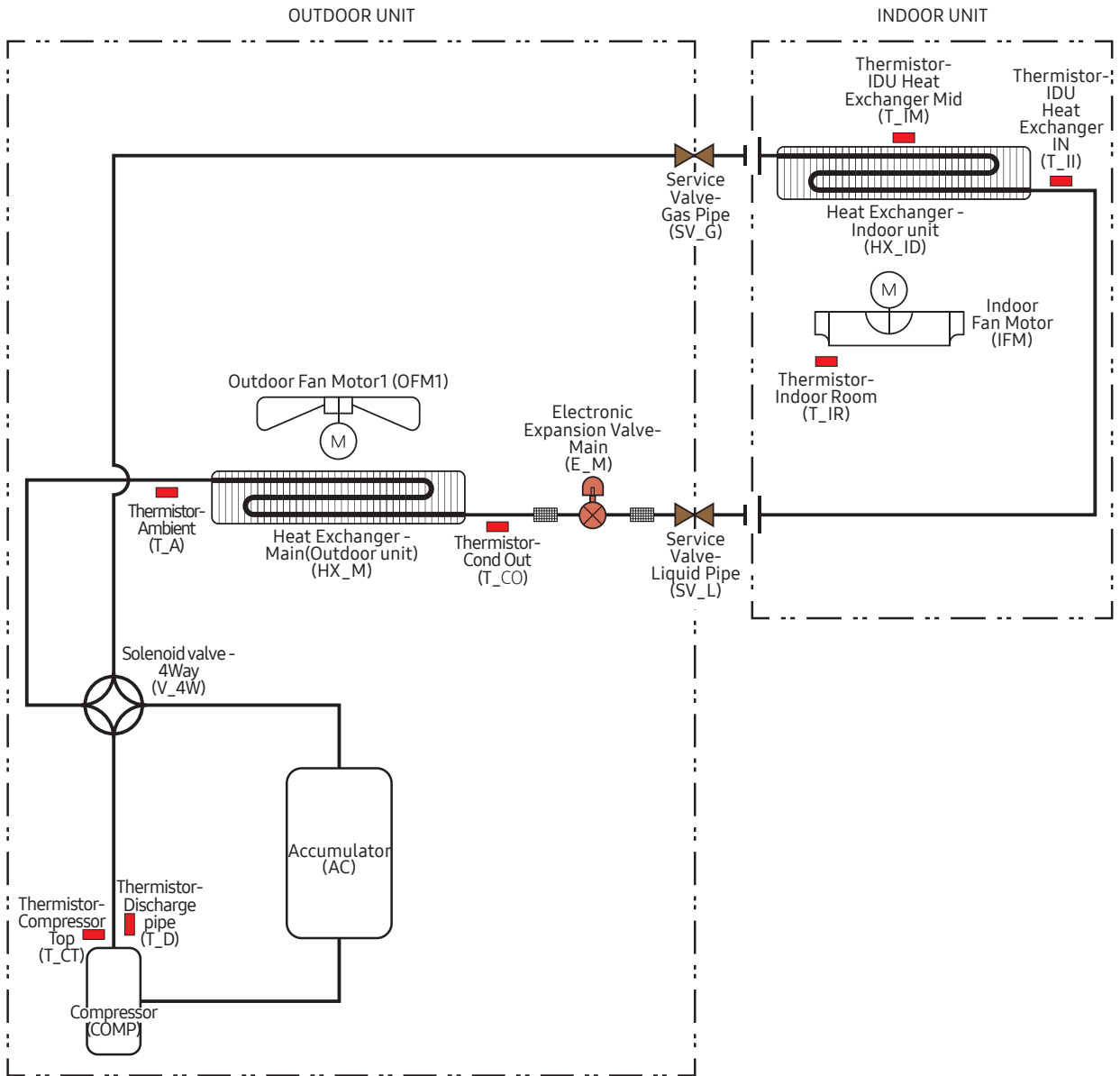


8. Piping Diagram

Outdoor Units

CNH18NDB(AC018BNNDCH/AA)+CXH18ADB(AC018BXADCH/AA)

CNH184DB(AC018BN4DCH/AA)+CXH18ADB(AC018BXADCH/AA)

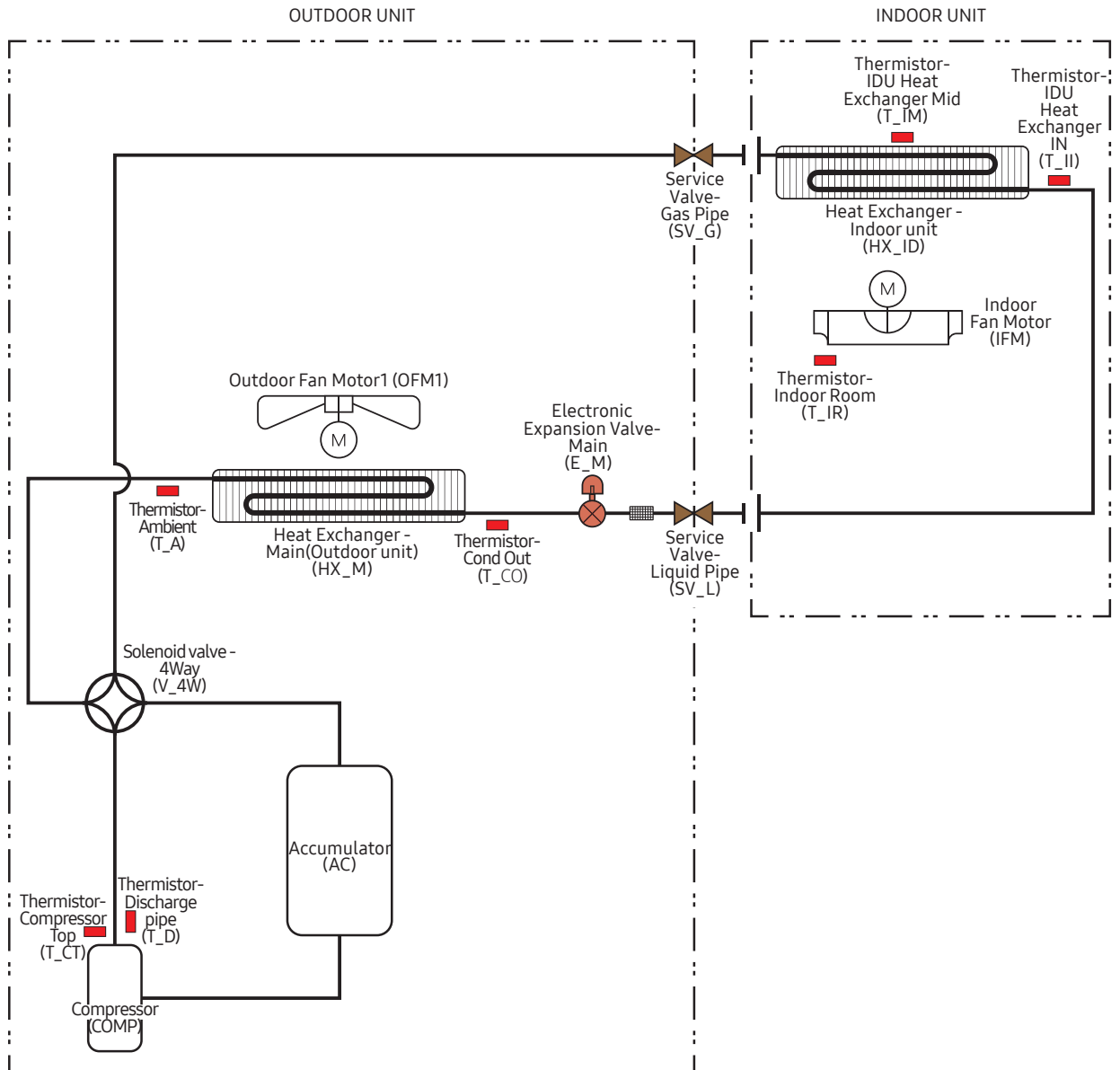


8. Piping Diagram

Outdoor Units

CNH244DB(AC024BN4DCH/AA)+CXH24ADB(AC024BXADCH/AA)

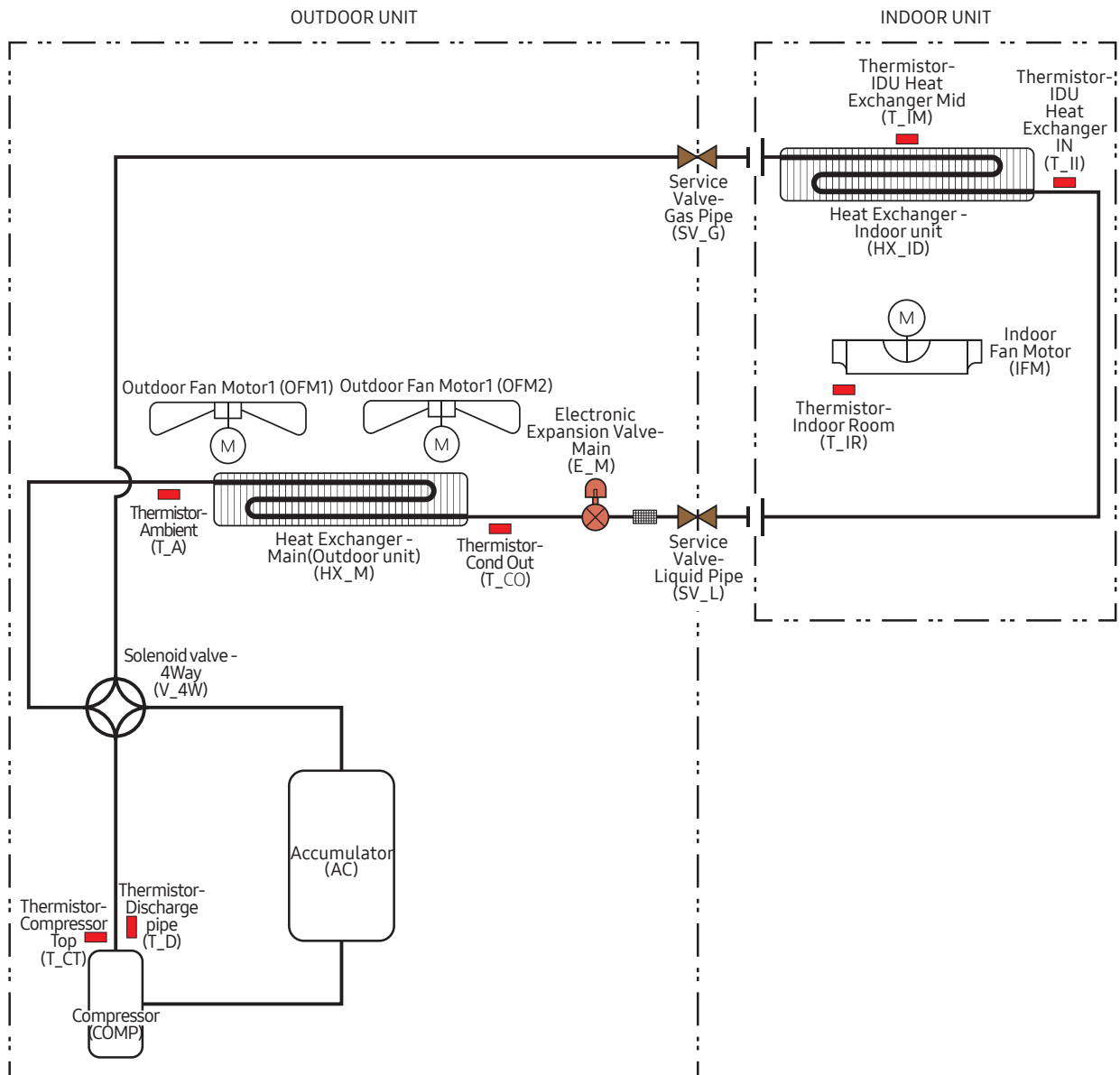
CNH304DB(AC030BN4DCH/AA)+CXH30ADB(AC030BXADCH/AA)



8. Piping Diagram

Outdoor Units

CNH364DB(AC036BN4DCH/AA)+CXH36ADB(AC036BXADCH/AA)
 CNH424DB(AC042BN4DCH/AA)+CXH42ADB(AC042BXADCH/AA)
 CNH484DB(AC048BN4DCH/AA)+CXH48ADB(AC048BXADCH/AA)



Installation

Indoor Units

Choosing the installation location

Installation location requirements

- There must be no obstacles near the air inlet and outlet.
- Install the indoor unit on a ceiling that can support its weight.
- Maintain sufficient clearance around the indoor unit.
- Before installing the indoor unit, be sure to check whether the chosen location is well-drained.
- The indoor unit must be installed such that it is beyond public access and is not touchable by users.
- A vibration-resistant location that is not inclined (If the indoor unit is installed on a structure that is not sturdy, it may fall and get damaged or cause injury.)
- Where it is not exposed to direct sunshine.
- Where the air filter can be removed and cleaned easily.

⚠ CAUTION

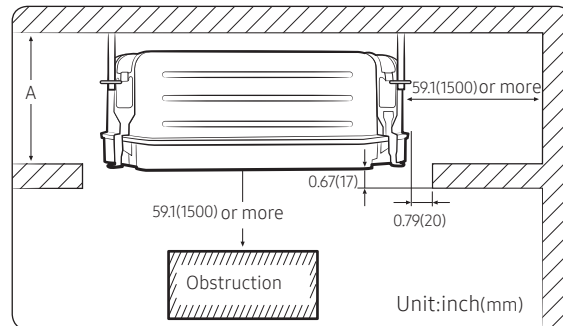
- As a rule, the unit cannot be installed at a height of less than 8.2ft (2.5m).
- If you install a cassette type indoor unit on the ceiling when temperature is over 80.6°F (27°C) and humidity is over 80%, you must apply an extra 0.39inch (10mm) thick polyethylene insulation or a similar type of insulation to the body of the indoor unit.

Do not install the air conditioner in following places.

- A place with exposure to mineral oil, oil vapour or cooking area where there is spray (If oil adheres to the heat exchanger, performance degradation, spray or condensation scattering may occur. If oil adheres to a plastic component, the component may deform or get damaged. Such issues may result in a system failure or refrigerant leak.)
- The place where corrosive gas such as sulphuric acid gas generates from the vent pipe or air outlet.
- The copper pipe or connection pipe may corrode and refrigerant may leak.
- The place where there is a machine that generates electromagnetic waves. The air conditioner may not operate normally due to control system.
- The place where there is a danger of existing combustible gas, carbon fibre or flammable dust.
- The place where thinner or gasoline is handled. Gas may leak and it may cause fire.

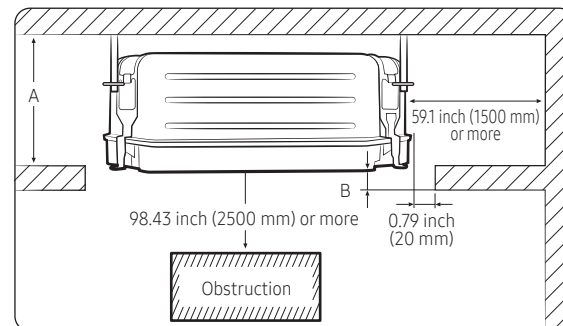
Spacing requirements

4 way Cassette (600x600)



Model	AC009BNNDCH AC012BNNDCH AC018BNNDCH
A	11.69(297)
Net dimension	22.64X9.84X22.64 (575X250X575)

4 way Cassette

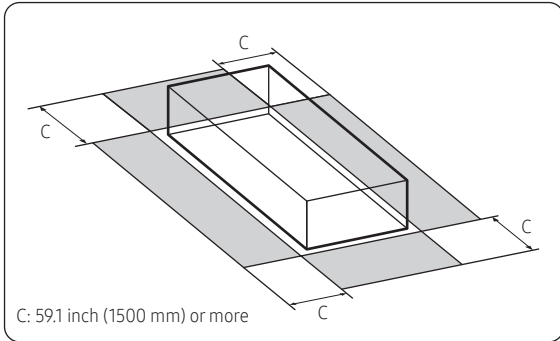


Unit: inch(mm)

	AC018BN4DCH AC024BN4DCH	AC030BN4DCH AC036BN4DCH AC042BN4DCH AC048BN4DCH
A	11.54 (293)	13.19 (335)
B	0.67 (17)	0.67 (17)

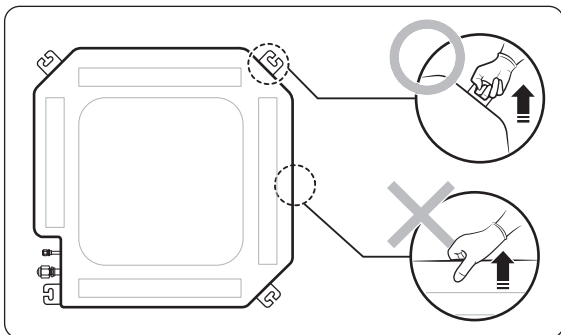
Installation

Indoor Units



⚠ CAUTION

- The indoor unit must be installed according to the specified distances in order to permit accessibility from each side, to guarantee correct operation, maintenance, and repair of the unit.
The components of the indoor unit must be reachable and removable under safe conditions for people and the unit.
- Do not carry the unit by holding the refrigerant or drain pipes to avoid product damage.
- Carry the unit by holding the hanger plates located on the corners of the unit.

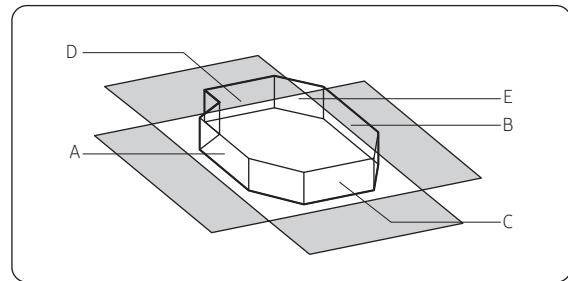


Optional: Insulating the body of the indoor unit

If you install a cassette type indoor unit on the ceiling when temperature is over 80.6 °F (27 °C) and humidity is over 80%, you must apply an extra 10 mm thick polyethylene insulation or a similar type of insulation to the body of the indoor unit.

Cut away the part where pipes are pulled out for the insulating work.

4 way Cassette



Insulate the end of the pipe and some curved area by using separate insulator.

NOTE

- A: Reference for the outer circumference of the unit (When insulating the body of the indoor unit, use A as the reference for its outer circumference.)

4 way Cassette (600x600)

Unit: inch (mm)

A	B	C	D	E
15.75X7.48 (400X190)	15.75X7.48 (400X190)	15.75X7.48 (400X190)	15.75X7.48 (400X190)	21.65X21.65 (550X550)

4 way Cassette

Indoor unit		A	B	C	D	E
4 way Cassette	AC018BN4DCH	35.83X7.60	37.00X7.60	24.02X7.60	25.59X7.60	34.25X34.25
	AC024BN4DCH	(910X193)	(940X193)	(610X193)	(650X193)	(870X870)
	AC030BN4DCH					
	AC036BN4DCH	35.83X9.25	37.00X9.25	24.02X9.25	25.59X9.25	34.25X34.25
	AC042BN4DCH	(910X235)	(940X235)	(610X235)	(650X235)	(870X870)
	AC048BN4DCH					

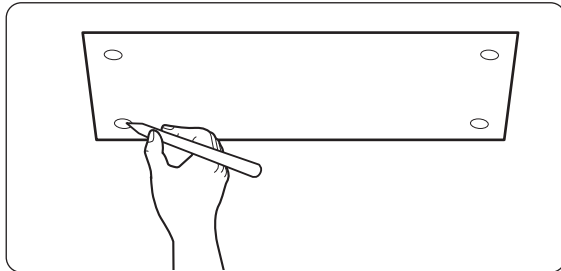
Installation

Indoor Units

Installing the indoor unit

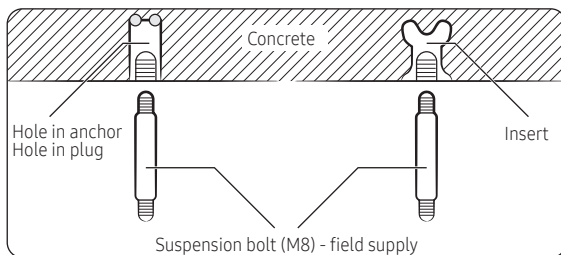
When deciding on the location of the air conditioner the following restrictions must be taken into account.

- 1 Place the pattern sheet on the ceiling at the location where you want to install the indoor unit.

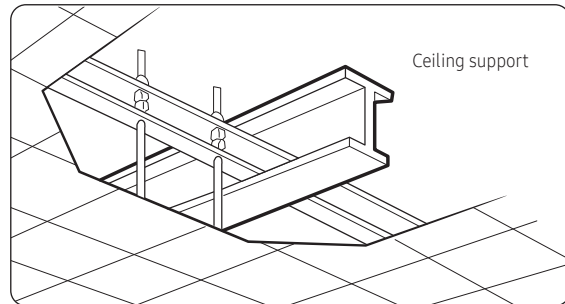


NOTE

- Since the diagram is made of paper, it may shrink or stretch slightly due to temperature or humidity. For this reason, before drilling the holes, be sure to maintain the correct dimensions between the markings.
- 2 Insert bolt anchors, use existing ceiling supports or construct a suitable support as shown in figure.



- 3 Install the suspension bolts, depending on the ceiling type.

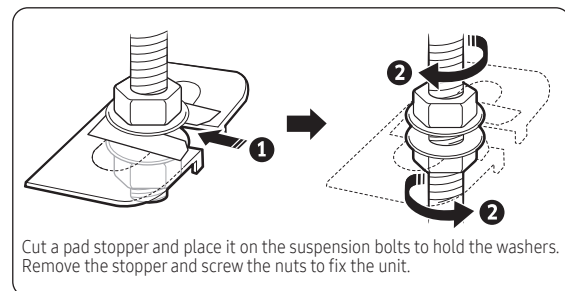


CAUTION

- Make sure that the ceiling is strong enough to support the weight of the indoor unit. Before hanging the unit, test the strength of each attached suspension bolt.
 - If the length of the suspension bolt is more than 4.92ft(1.5m), vibration prevention is recommended. If this is not possible, create an opening on the false ceiling in order to be able to use it to perform the required operations on the indoor unit.
- 4 Screw eight nuts and washers to the suspension bolts, making space for hanging the indoor unit.

CAUTION

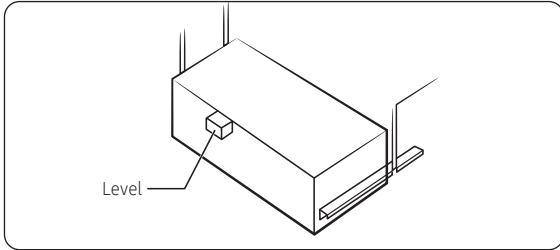
- You must install all of the suspension rods.
 - It is important to leave sufficient space in the false ceiling to allow access for maintenance or repairs to the drainage pipe connection, the refrigerant pipe connection, or to remove the unit if necessary.
- 5 Hang the indoor unit to the suspension bolts between two nuts. Screw the nuts to suspend the unit.



- 6 Check the level of the indoor unit by using a Level.
 - A tilt of the indoor unit may cause malfunction of a built-in float switch and water leaks.

Installation

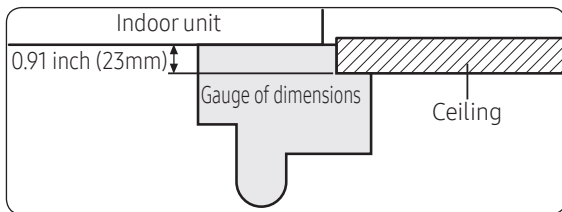
Indoor Units



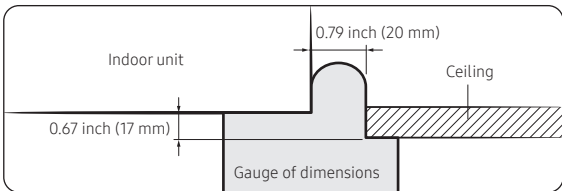
- 7 Adjust the unit to the appropriate position, taking into account the installation area for the front panel.
- Place the pattern sheet on the indoor unit.
 - Adjust the space between the ceiling and the indoor unit by using a Tape measure.
 - Fix the indoor unit securely after adjusting the level of the unit by using a level.
 - Remove the pattern sheet and install the front panel.

When the installation template is made of paper

4 way Cassette (600x600)

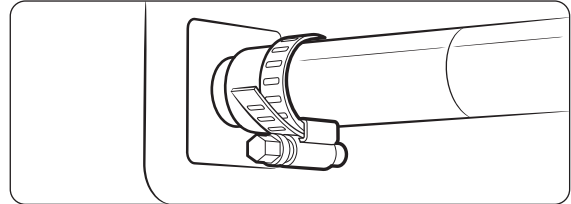


4 way Cassette



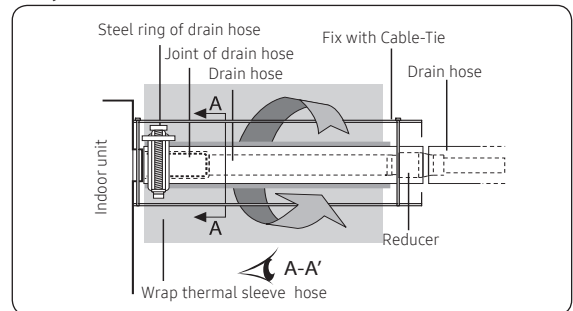
Installing the drain hose and drain pipe

- 1 Push the supplied drain hose as far as possible over the drain socket.
- 2 Tighten the metal clamp as shown in the picture.

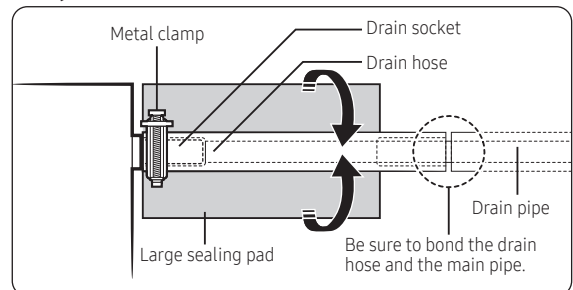


- 3 Wrap the supplied large sealing pad over the metal clamp and drain hose to insulate and fix it with clamps.
- 4 Insulate the complete drain piping inside the building (field supply).
If the drain hose cannot be sufficiently set on a slope, fit the hose with drain raising piping (field supply).
- 5 Push the drain hose up to insulation when connecting the drain hose to drain socket.

4 way Cassette (600x600)



4 way Cassette



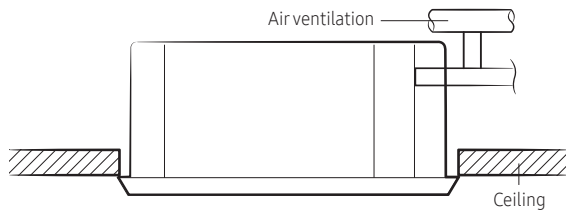
Installation

Indoor Units

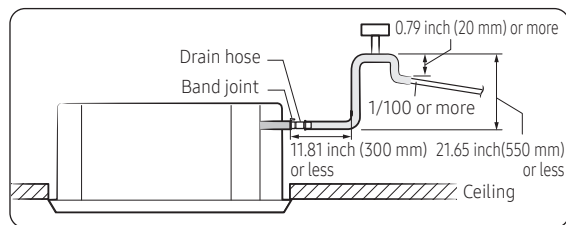
⚠ CAUTION

Check that the indoor unit is level with the ceiling by using a level.

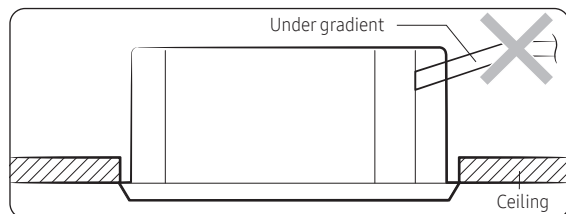
- Install air ventilation to drain condensation smoothly.



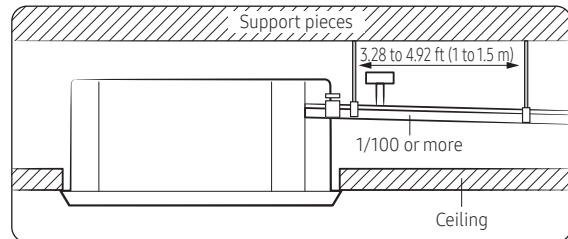
- If it is necessary to increase the height of the drain pipe, install the drain pipe straight within 11.81 inch (300 mm) from the drain hose port. If it is raised higher than 21.65 inch (550 mm), there may be water leaks.



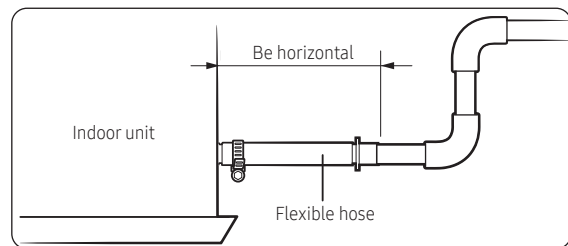
- Do not give the hose an upward gradient beyond the connection port. This will cause water to flow backwards when the unit is stopped, resulting in water leaks.



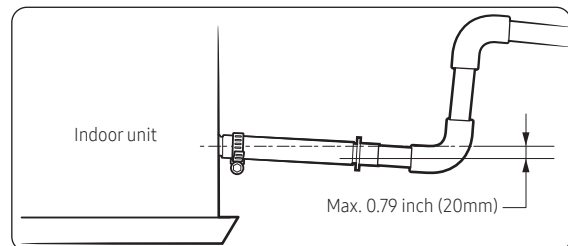
- Do not apply force to the piping on the unit side when connecting the drain hose. The hose should not be allowed to hang loose from its connection to the unit. Fasten the hose to a wall, frame or other support as close to the unit as possible.



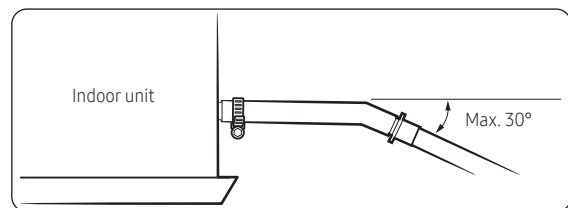
- Install horizontally.



- Max. allowable axis gap



- Max. allowable bending angle

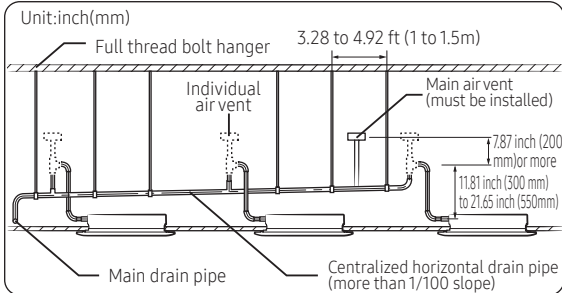


📄 NOTE

- If a concentrated drain pipe is installed, refer to the figure below.

Installation

Indoor Units



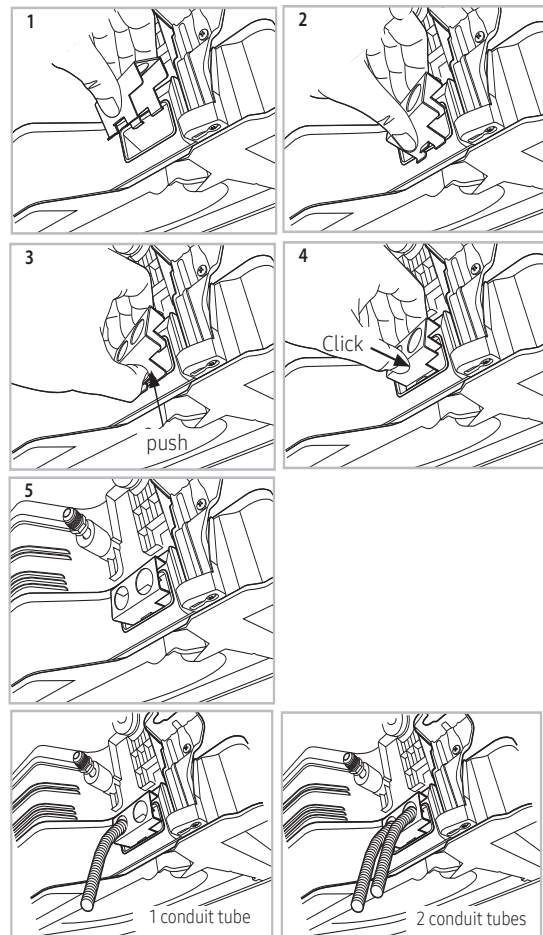
- If 3 or more units are installed, install a main air vent in front of the farthest indoor unit from the main drain pipe.
- To prevent water from flowing back to indoor units, install an individual air vent at the top of each indoor unit.
 - The air vents should be T or 7 shaped to prevent dust or foreign substances from entering.
 - You may not need to install an air vent if the horizontal drain pipe has a proper slope.

Connecting the power and communication cables

Bushing bracket installation

When connecting the power supply wire conduit, the supplied bracket must be installed as shown in the picture below.

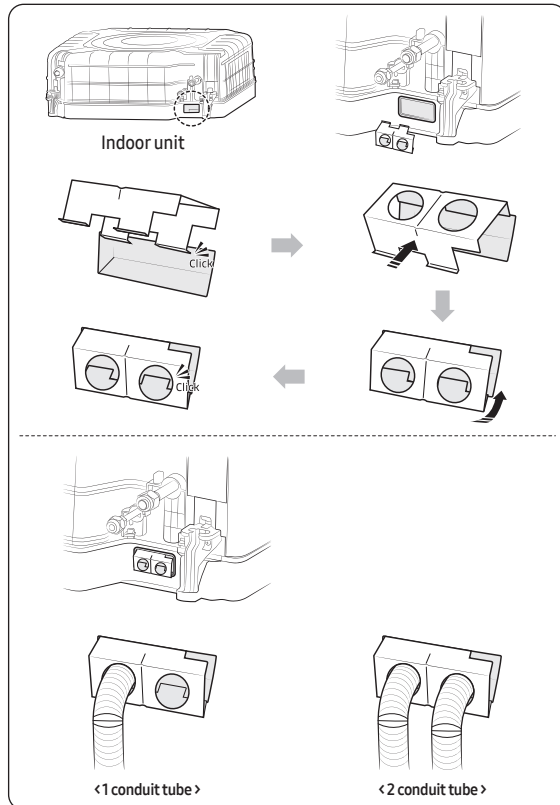
4 way Cassette (600x600)



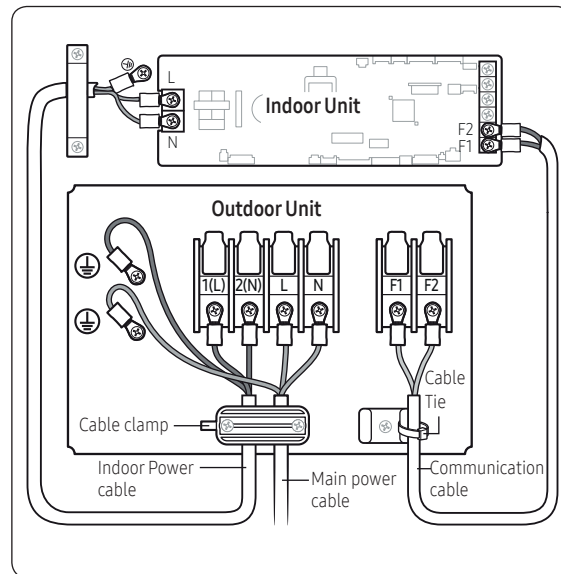
Installation

Indoor Units

4 way Cassette



- 3 Route the other end of the cable to the outdoor unit through the ceiling & the hole on the wall.
- 4 Reassemble the electrical component box cover, carefully tightening the screw.



NOTE

- Please follow national and local electrical codes. Additional electrical connection components may be required.

CAUTION

- Always remember to connect the refrigerant pipes before performing the electric connections. When disconnecting the system, always disconnect the electric cables before disconnecting the refrigerant pipes.
- Always remember to connect the air conditioner to the grounding system before performing the electric connections. Use a crimp ring terminal at the end of each wire.

The indoor unit is powered through the outdoor unit by means of a H05 RN-F connection cable (or a more power model), with insulation in synthetic rubber and a jacket in polychloroprene (neoprene), in accordance with the requirements specified in the standard EN 60335-2-40.

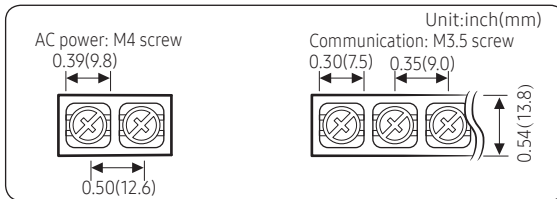
- 1 Remove the screw on the electrical component box and remove the cover plate.
- 2 Route the connection cord through the side of the indoor unit and connect the cable to the terminals refer to the figure below.

Installation

Indoor Units

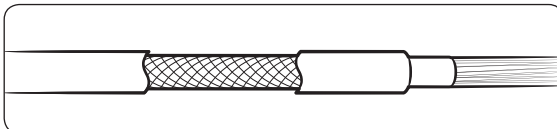
Indoor power supply		
Power supply	Max/Min(V)	Indoor power cable
208 to 230V, 60 Hz	±10%	0.0012 inch ² ↑ (0.75mm ² ↑), 3 wires
Communication cable		
0.0012 inch ² ↑(0.75mm ² ↑), 2 wires		

Unit: inch(mm)



Tightening torque lbf-ft (kgf • cm)	
M3.5	0.58 to 0.87 (8.0 to 12.0)
M4	0.87 to 1.30 (12.0 to 18.0)

- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord. (Code designation IEC:60245 IEC 57 / CENELEC: H05RN-F)
- Since it has the external power supply, refer to the outdoor unit installation manual for MAIN POWER.



⚠ CAUTION

- When installing the indoor unit in a computer room or network room, use the double shielded communication cable (tape aluminum / polyester braid + copper) of FROHH2R type.
- Select the power cable in accordance with relevant local and national.
- Wire size must comply with local and national code.
- You should connect the power cable into the power cable terminal and fasten it with a clamp.
- The unbalanced power must be maintained within 10% of supply rating among whole indoor units.
- If the power is unbalanced greatly, it may shorten the life of the condenser. If the unbalanced power is exceeded by more than 10% of supply rating, the indoor unit will protect itself by stopping and displaying an error code.
- Connect the power cable to the auxiliary circuit breaker. An all pole disconnection from the power supply must be incorporated in the fixed wiring (≥0.12inch (3mm)).

- You must keep the cable in a protection tube.
- Maximum length of power cables are decided within 10% of power drop. If it exceeds, you must consider another power supplying method.
- The circuit breaker (MCCB, ELB) should be considered more capacity if many indoor units are connected from one breaker.
- Use round pressure terminal for connections to the power terminal block.
- For wiring, use the designated power cable and connect it firmly, then secure to prevent outside pressure being exerted on the terminal board.
- Use an appropriate screwdriver for tightening the terminal screws. A screwdriver with a small head will strip the head and make proper tightening impossible.
- Over-tightening the terminal screws may break them.

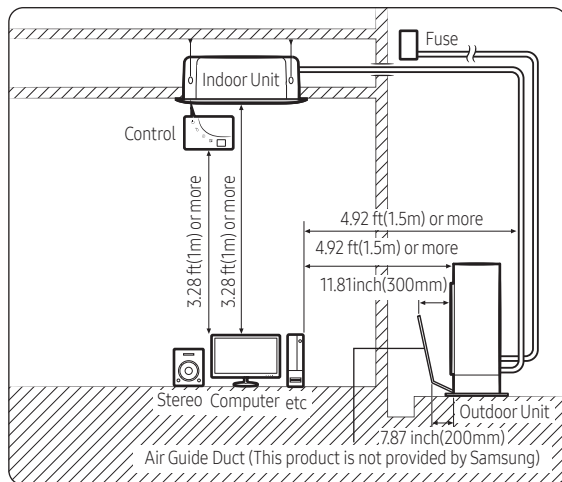
Installation

Outdoor Units

Choosing the installation location

Installation location requirements

- Do not place the outdoor unit on its side or upside down. Failing to do so may cause the compressor lubrication oil to run into the cooling circuit and lead to serious damage to the unit.
- Install the unit in a well-ventilated location away from direct sunlight or strong winds.
- Install the unit in a location that would not obstruct any passageways or thoroughfares.
- Install the unit in a location that would not inconvenience or disturb your neighbors, as they could be affected by the noise or the airflow coming from the unit.
- Install the unit in a location where the pipes and the cables can be easily connected to the indoor unit.
- Install the unit on a flat, stable surface that can withstand the weight of the unit. Otherwise, the unit can generate noise and vibration during operation.
- Install the unit so that the air flow is directed towards the open area.
- Maintain sufficient clearance around the outdoor unit, especially from a radio, computer, stereo system, etc.

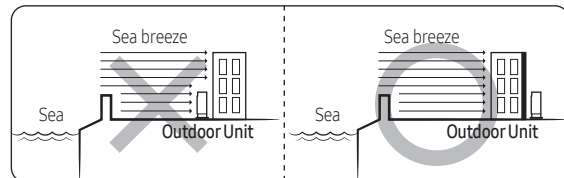


⚠ CAUTION

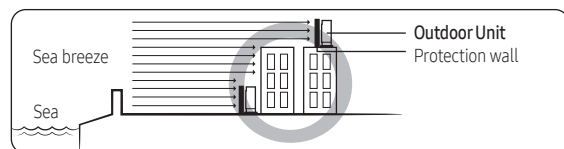
- You have just purchased a system air conditioner and it has been installed by your installation specialist.
- This device must be installed according to the national electrical rules.
- If your outdoor unit exceeds a net weight of 132.2 lb(60 kg), do not install it on a suspended wall, but stand it on a floor.
- The reliability of our product cannot be guaranteed under conditions of "A" or less.

Outdoor Model	"A"
AC009/012/018/024BXADCH	-13°F(-25°C)
AC030/036/042/048BXADCH	-4°F(-20°C)

- When installing the outdoor unit at the seaside, make sure that it is not directly exposed to sea breeze. If you cannot find an adequate place free from direct sea breeze, construct a protection wall or a protective fence.
 - Install the outdoor unit in a place (such as near buildings etc.) where it can be prevented from sea breeze. Failure to do so may cause a damage to the outdoor unit.



- If you cannot avoid installing the outdoor unit at the seaside, construct a protection wall around to block the sea breeze.
- Construct a protection wall with a solid material such as concrete to block the sea breeze. Make sure that the height and the width of the wall are 1.5 times larger than the size of the outdoor unit. Also, secure a space larger than 27.6 inch(700mm) between the protection wall and the outdoor unit for exhausted air to ventilate.



⚠ CAUTION

- Depending on the condition of the power supply, unstable power or voltage may cause malfunction of parts or control system (example: on a boat or places using power supplied from electric generator, etc.).

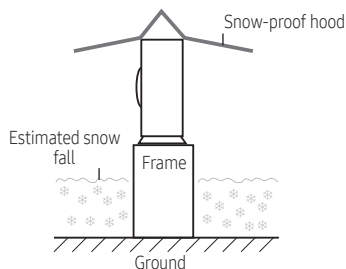
Installation

Outdoor Units

- Install the unit in a place where water can drain smoothly.
- If you have any difficulty finding installation location as prescribed above, contact your manufacturer for details.
- Consider that the salinity particles clinging to the external panels should be sufficiently washed out. Be sure to clean sea water and dust from the outdoor unit heat exchanger and apply a corrosion inhibitor on it at least once a year.
- Because the residual water at the bottom of the outdoor unit significantly promotes corrosion, make sure that the slope does not disturb drainage.
 - Keep the floor level so that rain does not accumulate.
 - Be careful not to block the drain hole due to foreign substance.
- Check the condition of the product periodically.
 - Check the installation site every 3 months and perform anti-corrosion treatment such as R-Pro supplied by SAMSUNG (Code : MOK-220SA) or commercial water repellent grease and wax, etc., based on the product condition.
 - When the product is to be shut down for a long period of time, such as off-peak hours, take appropriate measures like covering the product.
- If the product installed within 1640.4 ft of seashore, special anti-corrosion treatment is required.
 - ※ Please contact your local SAMSUNG representative for further details.

⚠ CAUTION

- In areas with heavy snow fall, piled snow could block the air intake. To avoid this incident, install a frame that is higher than estimated snow fall. In addition, install a snow-proof hood to avoid snow from piling on the outdoor unit.



Outdoor unit dimensions

Unit : inch (mm)

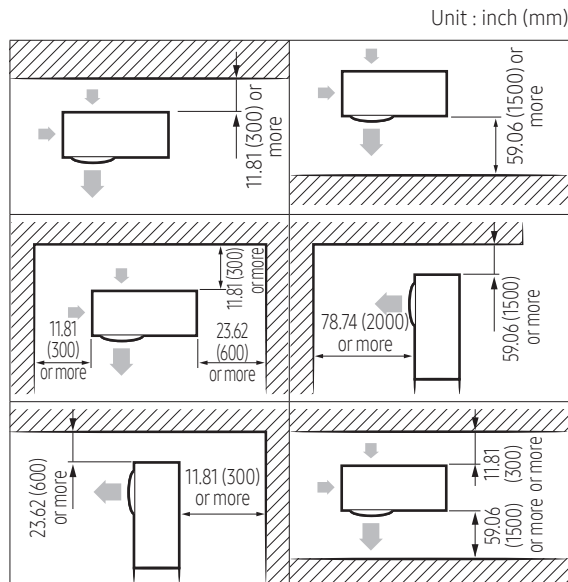
A Type
AC009BXADCH, AC012BXADCH
B Type
AC018BXADCH
C Type
AC024BXADCH, AC030BXADCH
D Type
AC036BXADCH, AC042BXADCH, AC048BXADCH

Installation

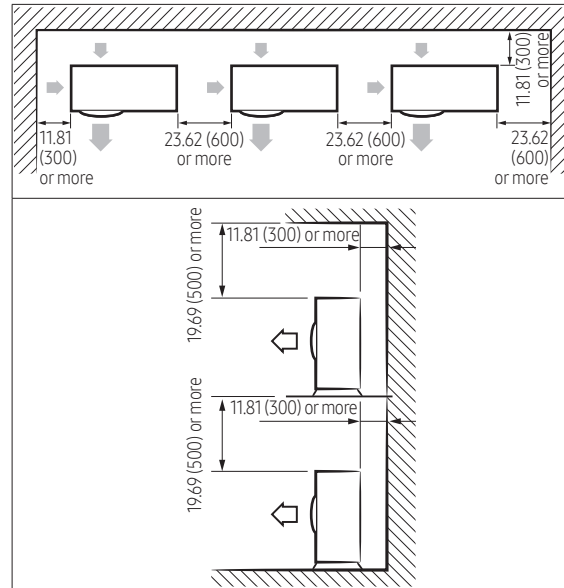
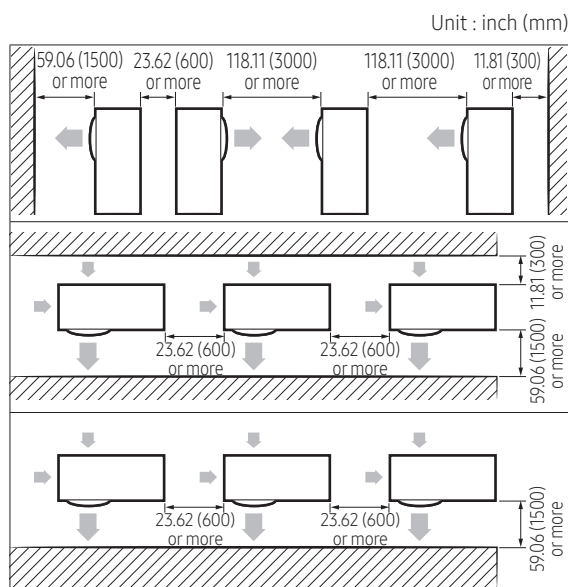
Outdoor Units

Minimum clearances for the outdoor unit

When installing 1 outdoor unit



When installing more than 1 outdoor unit

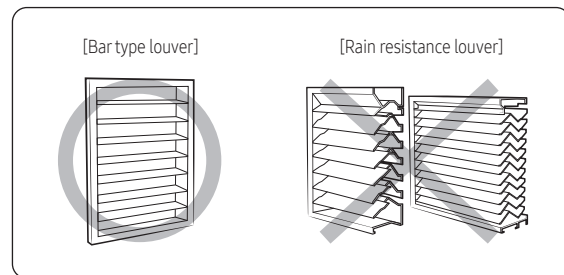


CAUTION

- The outdoor unit must be installed according to the specified distances in order to permit accessibility from each side, to guarantee correct operation, maintenance, and repair of the unit. The components of the outdoor unit must be reachable and removable under safe conditions for people and the unit.

WARNING

- Should adopt bar type louver. Don't use a type of rain resistance louver.



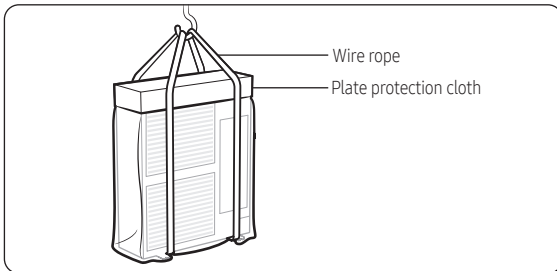
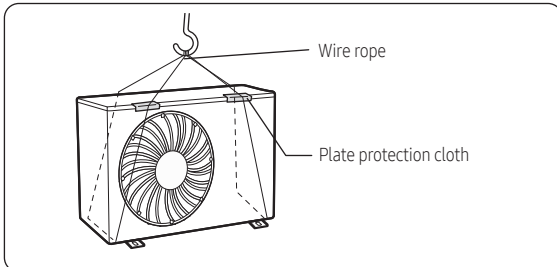
- Louver specifications.
 - Angle criteria : less than 20°
 - Opening ratio criteria : greater than 80%

Installation

Outdoor Units

Moving the outdoor unit with wire rope

- 1 Before carrying the outdoor unit, fasten two wire ropes of 26.25 ft (8m) or longer, as shown in the figure.
- 2 To prevent damages or scratches effectively, insert a piece of cloth between the outdoor unit and the ropes.
- 3 Move the outdoor unit.



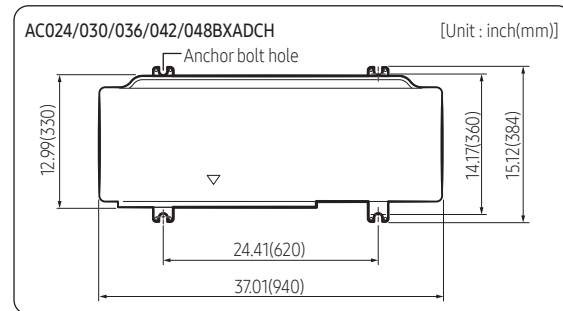
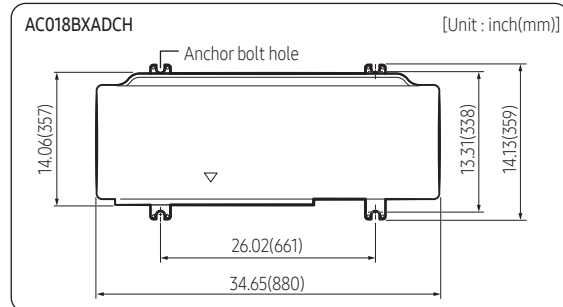
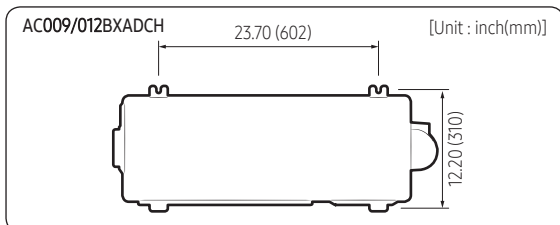
Fixing the outdoor unit in place

Install the outdoor unit on a rigid and stable base to prevent disturbance from any noise caused by vibration. When installing the unit on tall stands or in a location exposed to strong winds, fix the unit securely to the ground or structure.

- 1 Position the outdoor unit so that the air flow is directed towards the outside, as indicated by the arrows on the top of the unit.
- 2 Attach the outdoor unit to the appropriate support using anchor bolts.
 - The ground wire for the telephone line cannot be used to ground the air conditioner.
- 3 If the outdoor unit is exposed to strong winds, install shield plates around the outdoor unit, so that the fan can operate correctly.

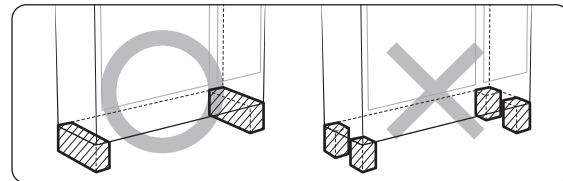
NOTE

- Install provided rubber legs to prevent vibration and noise.

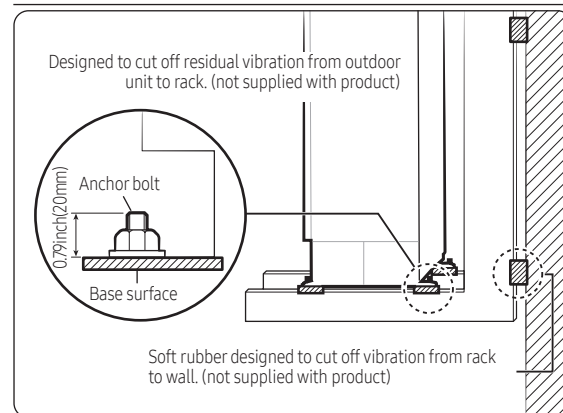


CAUTION

- Install a drain outlet at the lowest end around the base for outdoor unit drainage
- When installing the outdoor unit on the roof, waterproof the unit and check the ceiling strength.



Optional: Fixing the outdoor unit to a wall with a rack



- Install a proper grommet in order to reduce noise and residual vibration transferred by the outdoor unit towards the wall.

Installation

Outdoor Units

CAUTION

- Make sure that the wall can support the weights of the rack and the outdoor unit.
- Install the rack close to the column as much as possible.
- When installing an air guide duct, be sure to check the following:
 - The screws do not damage the copper pipe.
 - The air guide duct is fixed firmly on the guard fan.

Connecting the power cables, communication cable, and controllers

You must connect the following three electrical cables to the outdoor unit:

- The main power cable between the auxiliary circuit breaker and the outdoor unit.
- The outdoor-to-indoor power cable between the outdoor unit and the indoor unit.
- The communication cable between the outdoor unit and the indoor unit.

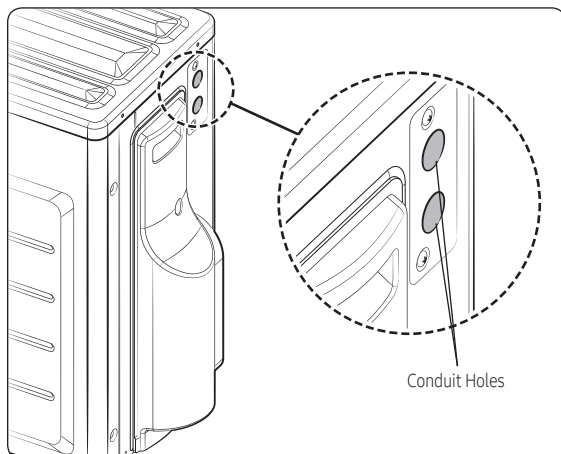
CAUTION

- During installation, make first the refrigerant connections and then the electrical connections. If the unit is being removed, first disconnect the electrical cables and then the refrigerant connections.
- Connect the air conditioner to the earthing system before making the electrical connections.

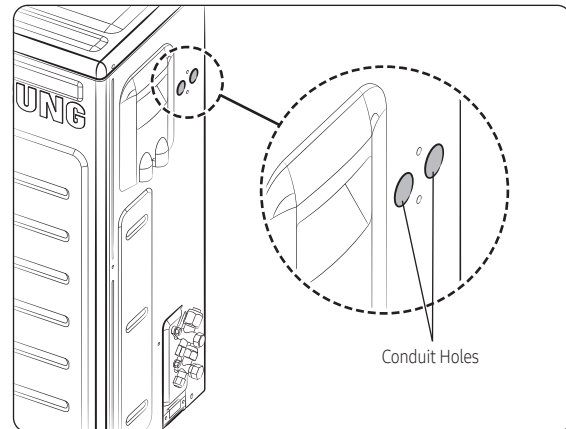
Connecting wire conduits

When connecting cables between the indoor unit and the outdoor unit, use conduits to protect the cables.

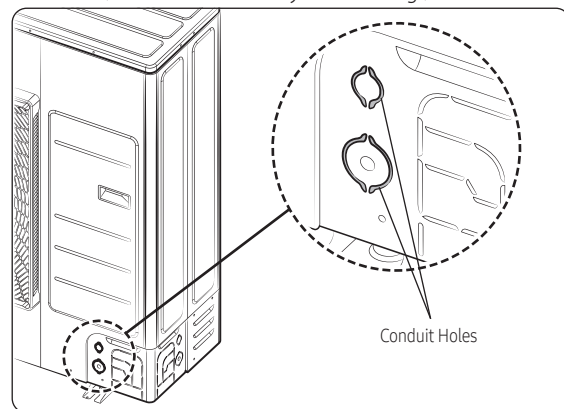
- 1 Drill holes on the conduit plate in accordance with their use and quantity.
 - AC009/012BXADCH
 - Drill conduit holes on the side cabinet. (knock out holes)



- AC018BXADCH
 - Drill conduit holes on the side cabinet. (knock out holes)



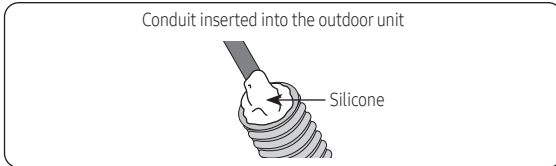
- AC024/030/036/042/048BXADCH
 - Use a nipper to remove conduit holes from the lower part of the cabinet. (Do not remove it by hammering.)



Installation

Outdoor Units

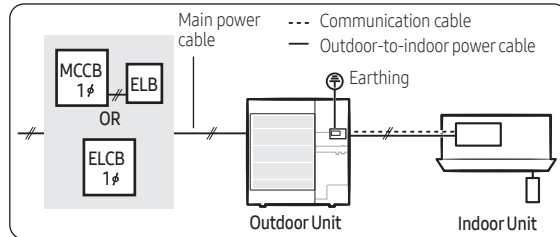
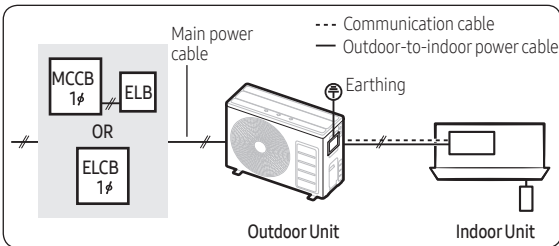
- 2 Insert the cables through the conduits, and then fix the conduits to the conduit plate with the lock nuts.
- 3 Apply silicone to the end of the hose to prevent rain from entering the hose.



- 4 Connect the cables to the outdoor units.
For how to connect the cables, refer to the next page.
- 5 Attach the conduit plate to the product.

Air conditioning system examples

When using earth leakage circuit breaker (ELCB) for a single phase



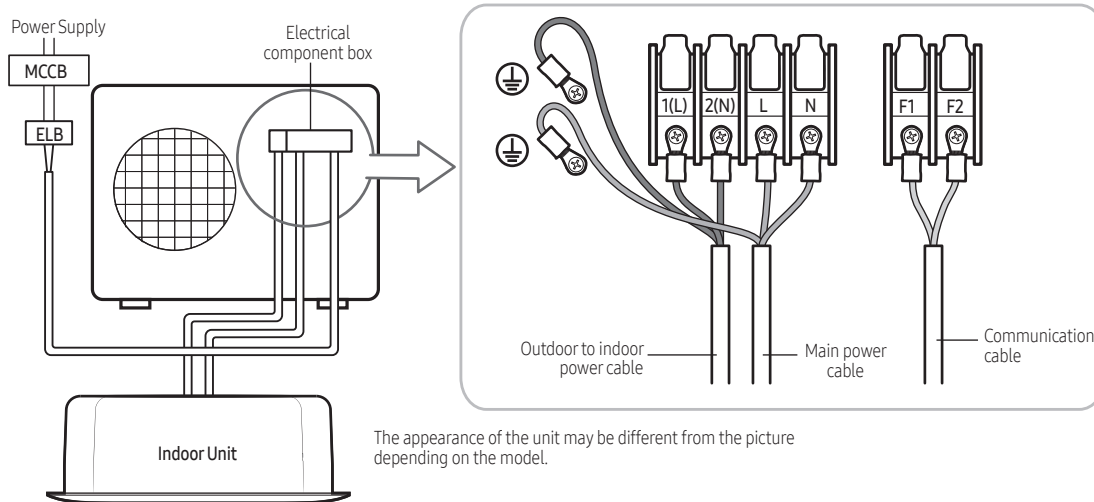
※ The appearance of the unit may be different from the picture depending on the model.

CAUTION

- If the outdoor unit is installed in a location vulnerable to an electric leak or submergence, make sure to install an ELCB.
- AC009/012/018/024BXADCH : ELCB must be installed since this product is equipped with a base heater.

Connecting the main power cable

When using ELB for AC009BXADCH, AC012BXADCH (1-phase)

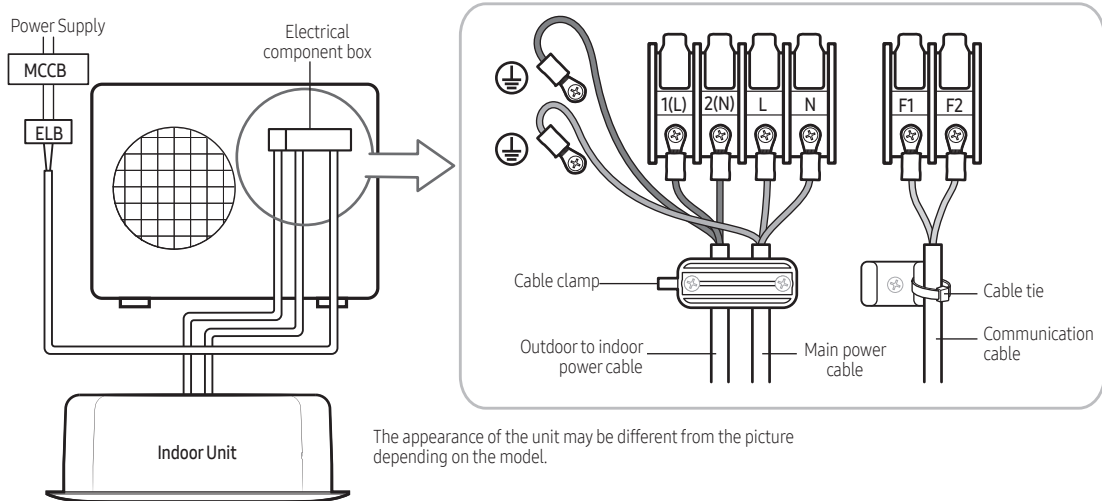


Installation

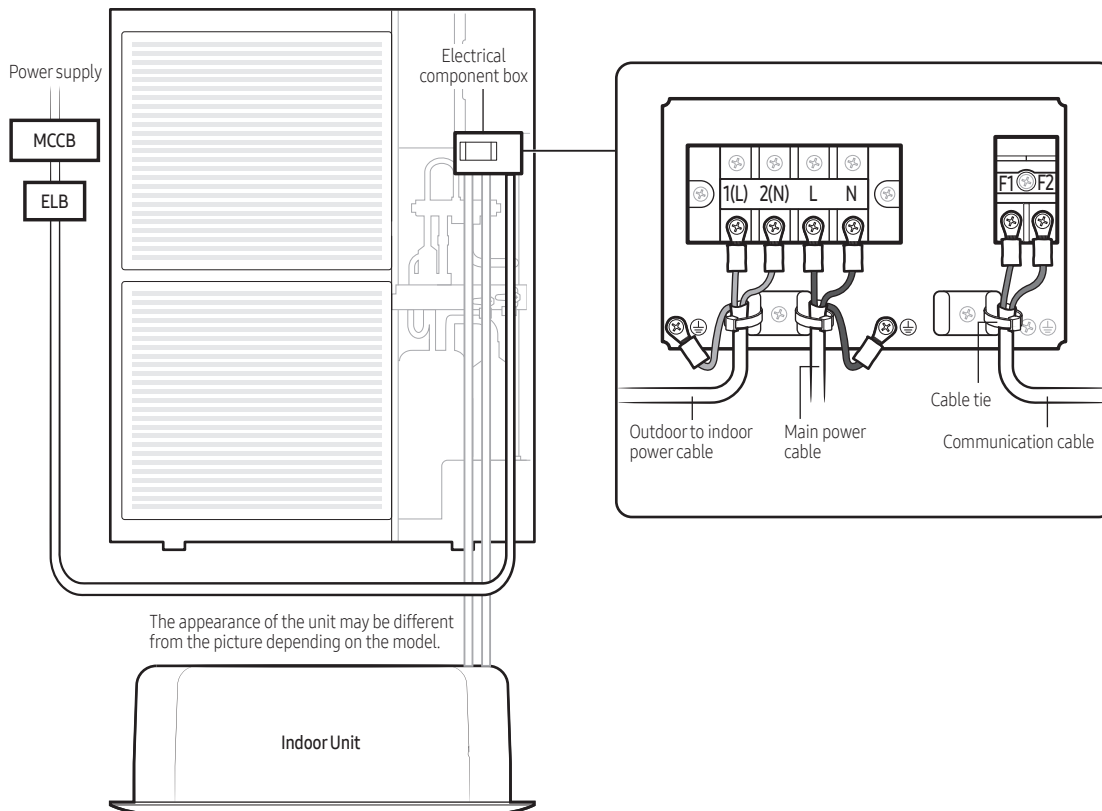
Outdoor Units

Connecting the main power cable

When using ELB for AC018BXADCH (1-phase)



When using ELB for AC024/030/036/042/048BXADCH (1-phase)



Installation

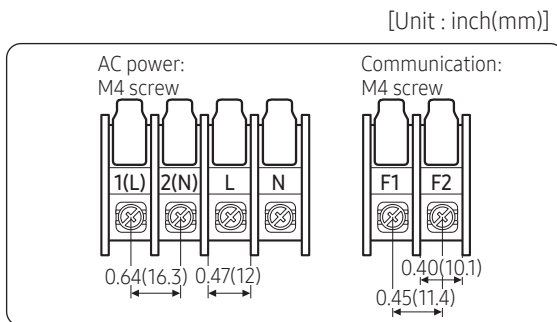
Outdoor Units

⚠ CAUTION

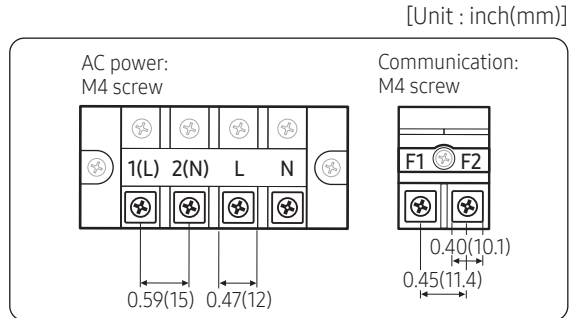
- You should connect the power cable into the power cable terminal and fasten it with a clamp.
- The unbalanced power must be maintained within 2% of supply rating.
- If the power is unbalanced greatly, it may shorten the life of the condenser. If the unbalanced power is exceeded over 4% of supply rating, the indoor unit is protected, stopped and the error mode indicates.
- To protect the product from water and possible shock, you should keep the power cable and the connection cord of the indoor and outdoor units within ducts. (with appropriate IP rating and material selection for your application)
- Ensure that main supply connection is made through a switch that disconnects all poles, with contact gap of at least 0.12 inch(3mm).
- Devices disconnected from the power supply should be completely disconnected in the condition of overvoltage category.
- Keep distances of 1.97 inch(50mm) or more between power cable and communication cable.

Main power terminal block specifications

- AC009/012/018BXADCH (1-phase)



- AC024/030/036/042/048BXADCH (1-phase)



Main power cable specifications

The power cable is not supplied with air conditioner.

- Select the power supply cable in accordance with relevant local and national regulations.
- Wire size must comply with the applicable local and national code.
- Specifications for local wiring power cord and branch wiring are in compliance with local cord.

Installation

Outdoor Units

Single phase

Model		Power Source	RLA (A)	Outdoor		Indoor	MCA (A)	MOP (A)
Outdoor	Indoor			MOC		Rated input current of the power conversion equipment		
				FAN1(A)	FAN2(A)	FAN(A)		
AC009BXADCH	AC009BN1DCH	208~230V/60Hz	6.0	0.42	-	0.26	10.9	15.0
	AC009BNHDCH					2.10		
	AC009BNJDCH					0.49		
	AC009BNLDCH					1.06		
	AC009BNNDCH					0.30		
AC012BXADCH	AC012BN1DCH		6.0	0.42	-	0.26	10.9	15.0
	AC012BNHDCH					2.10		
	AC012BNJDCH					0.49		
	AC012BNLDCH					1.06		
	AC012BNNDCH					0.30		
AC018BXADCH	AC018BN1DCH	208~230V/60Hz	12.7	1.25	-	0.42	20.1	25.0
	AC018BN4DCH					0.79		
	AC018BN6DCH					0.79		
	AC018BNADCH					0.42		
	AC018BNHDCH					2.10		
	AC018BNJDCH					0.49		
	AC018BNLDCH					1.06		
	AC018BNNDCH					0.30		
	AC018BNZDCH					1.50		
AC024BXADCH	AC024BN4DCH	208~230V/60Hz	15.9	1.25	-	0.79	24.1	30.0
	AC024BN6DCH					0.79		
	AC024BNADCH					0.42		
	AC024BNHDCH					2.10		
	AC024BNZDCH					2.10		
AC030BXADCH	AC030BN4DCH	16.2	1.25	-	0.79	24.0	30.0	
	AC030BN6DCH				0.79			
	AC030BNHDCH				2.10			
	AC030BNTDCH				0.51			
	AC030BNZDCH				2.50			
AC036BXADCH	AC036BN4DCH	14.7	1.25	1.25	0.79	24.5	35.0	
	AC036BN6DCH				0.79			
	AC036BNHDCH				3.50			
	AC036BNTDCH				0.51			
	AC036BNZDCH				3.60			
AC042BXADCH	AC042BN4DCH	20.9	1.25	1.25	0.79	32.2	40.0	
	AC042BN6DCH				0.79			
	AC042BNHDCH				3.50			
	AC042BNZDCH				3.40			
AC048BXADCH	AC048BN4DCH	20.9	1.25	1.25	0.79	32.8	40.0	
	AC048BN6DCH				0.79			
	AC048BNHDCH				3.50			
	AC048BNZDCH				4.10			

Installation

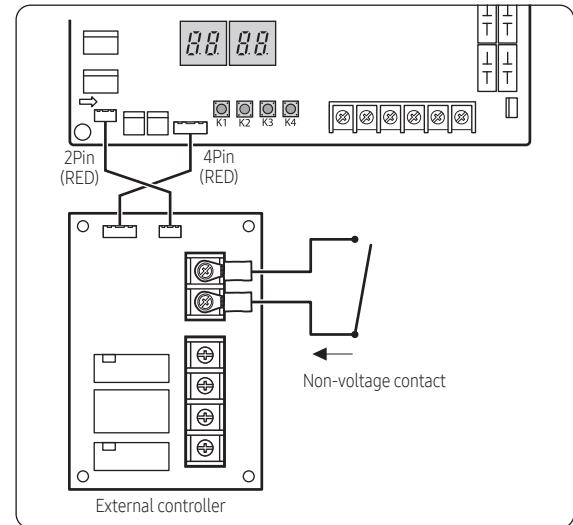
Outdoor Units

NOTE

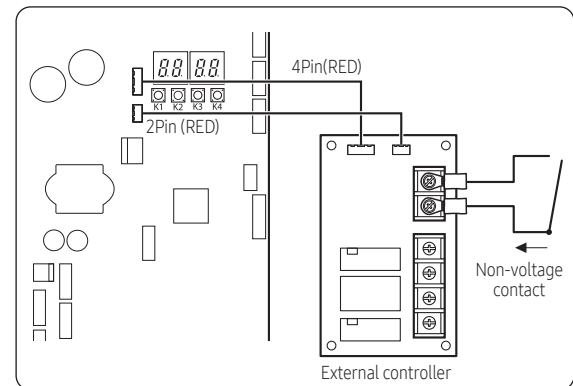
- RLA is based on AHRI 210/240 cooling standard condition [Indoor temp. : 26.7 °C / 80 °F(DB) / 19.46 °C / 67 °F(WB), Outdoor temp. : 35 °C / 95 °F(DB)]
- Voltage tolerance is $\pm 10\%$.
- Maximum allowable voltage between phases is 2 %.
- **Symbols**
 - RLA: Rated Load Ampere (A)
 - MOC: Maximum Operating Current (A)
 - MCA: Minimum Circuit Ampere (A)
 - MOP: Maximum Overcurrent Protective Device (A)
- Voltage range
 - Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
- Maximum allowable voltage variation between phases is 2%.
- Wire size & type must comply with the applicable local and national code.
 - Wire size: Based on the value of MCA.
 - Wire type:
 - 1-phase: 60245 IEC57(IEC) or H05RN-F(CENELEC) grade or more

Silence mode controller wiring diagram with External controller

- AC009/012/018BXADCH



- AC024/030/036/042/048BXADCH

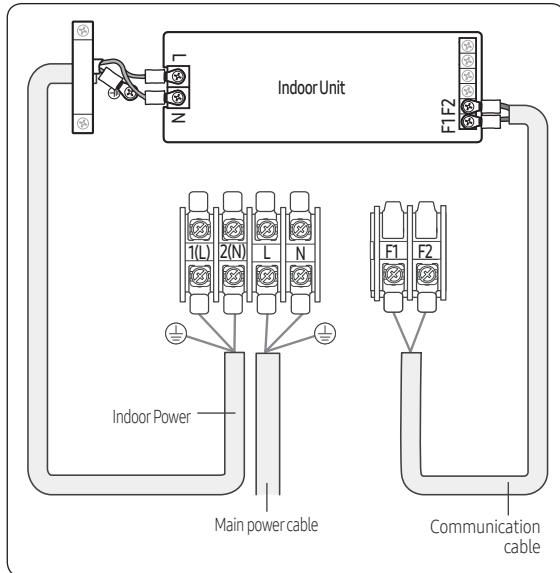


Installation

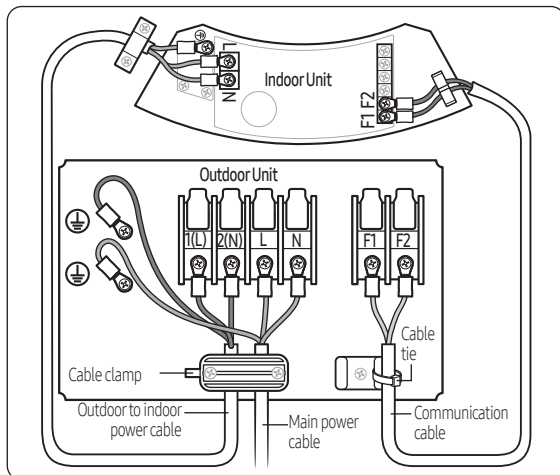
Outdoor Units

Connecting the outdoor-to-indoor power cable and the communication cable

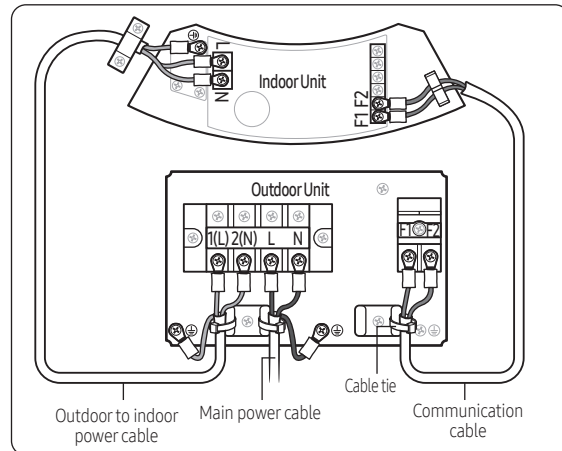
- AC009/012BXADCH



- AC018BXADCH



- AC024/030/036/042/048BXADCH

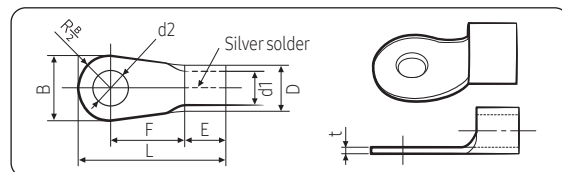


NOTE

- Lay the electrical wiring so that the front cover does not rise up when doing wiring work and attach the front cover securely.
- Ground wire for the indoor unit and outdoor unit connection cable must be clamped to a soft copper tin-plated eyelet terminal with M4 screw hole (NOT SUPPLIED WITH UNIT ACCESSORIES).
- The appearance of the unit may be different from the picture depending on the model.

Outdoor-to-indoor power terminal specifications

- Connect the cables to the terminal board using the compressed ring terminal.
- Cover a solderless ring terminal and a connector part of the power cable and then connect it.



Installation

Outdoor Units

Nominal dimensions for cable [mm2(inch2)]	Nominal dimensions for screw [mm(inch)]	B		D		d1		E Min. [mm (inch)]	F Min. [mm (inch)]	L Max. [mm (inch)]	d2		t Min. [mm (inch)]
		Standard dimension [mm(inch)]	Allowance [mm(inch)]	Standard dimension [mm(inch)]	Allowance [mm(inch)]	Standard dimension [mm(inch)]	Allowance [mm(inch)]				Standard dimension [mm(inch)]	Allowance [mm(inch)]	
4/6 (0.006/ 0.009)	4(3/8)	9.5(3/8)	±0.2 (±0.007)	5.6(1/4)	+0.3(+0.011) -0.2(-0.007)	3.4(1/8)	±0.2 (±0.007)	6 (1/4)	5 (3/16)	20 (3/4)	4.3 (3/16)	+0.2 (+0.007) 0(0)	0.9 (0.03)
	8(3/16)	15(9/16)							28.5 (1-1/8)	8.4 (1-3/16)	+0.4 (+0.015) 0(0)		
10(0.01)	8(3/16)	15(9/16)	±0.2 (±0.007)	7.1(1/4)	+0.3(+0.011) -0.2(-0.007)	4.5(3/16)	±0.2 (±0.007)	7.9 (5/16)	9 (3/8)	30 (1-3/16)	8.4 (1-3/16)	+0.4 (+0.015) 0(0)	1.15 (0.04)
16(0.02)	8(3/16)	16(10/16)	±0.2 (±0.007)	9(3/8)	+0.3(+0.011) -0.2(-0.007)	5.8(1/4)	±0.2 (±0.007)	9.5 (5/16)	13 (1/2)	33 (1-5/16)	8.4 (1-3/16)	+0.4 (+0.015) 0(0)	1.45 (0.05)
25(0.03)	8(3/16)	12(1/2)	±0.3 (±0.011)	11.5(7/16)	+0.5(+0.019) -0.2(-0.007)	7.7(5/16)	±0.2 (±0.007)	11 (3/8)	15 (5/8)	34 (1-3/8)	8.4 (1-3/16)	+0.4 (+0.015) 0(0)	1.7 (0.06)
	8(3/16)	16.5(10/16)							13 (1/2)	8.4 (1-3/16)			
35(0.05)	8(3/16)	16(10/16)	±0.3 (±0.011)	13.3(1/2)	+0.5(+0.019) -0.2(-0.007)	9.4(3/8)	±0.2 (±0.007)	12.5 (1/2)	13 (1/2)	38 (1-1/2)	8.4 (1-3/16)	+0.4 (+0.015) 0(0)	1.8 (0.07)
	8(3/16)	22(7/8)							13 (1/2)	43 (1-11/16)	8.4 (1-3/16)		
50(0.07)	8(3/16)	22(7/8)	±0.3 (±0.011)	13.5(1/2)	+0.5(+0.019) -0.2(-0.007)	11.4(7/16)	±0.3 (±0.011)	17.5 (11/16)	14 (9/16)	50 (2)	8.4 (1-3/16)	+0.4(+0.015) 0(0)	1.8 (0.07)
70(0.10)	8(3/16)	24(1)	±0.4 (±0.015)	17.5(11/16)	+0.5(+0.019) -0.4(-0.015)	13.3(1/2)	±0.4 (±0.015)	18.5 (3/4)	20 (3/4)	51 (2)	8.4 (1-3/16)	+0.4(+0.015) 0(0)	2.0 (0.078)

- Connect the rated cables only.
- Connect using a driver which is able to apply the rated torque to the screws.
- If the terminal is loose, fire may occur caused by arc. If the terminal is connected too firmly, the terminal may be damaged.

	Tightening torque	
	lbf•ft	N•m
M4	0.87 to 1.30	0.8 to 1.2
M5	1.45 to 2.17	2.0 to 3.0

CAUTION

- When connecting cables, you can connect the cables to the electrical part or connect them through the holes below depending on the spot.
- Connect the communication cable between the indoor and outdoor units through a conduit to protect against external forces, and feed the conduit through the wall together with refrigerant piping.
- Remove all burrs at the edge of the knock-out hole and secure the cable to the outdoor knock-out using lining and bushing with an electrical insulation such as rubber and so on.
- Must keep the cable in a protection tube.
- Keep distances of 1.97 inch(50mm) or more between power cable and communication cable.
- When the cables are connected through the hole, remove the Plate bottom.

Installation

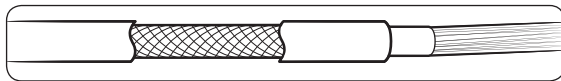
Outdoor Units

Outdoor-to-indoor power and communication cables specifications

- Indoor unit :
4WAY CST(AC***BN4***)
Mini4way CST(AC***BNN***)

Indoor power supply		
Power supply	Max/Min (V)	Indoor power cable
1Φ, 208-230V~, 60Hz	±10%	0.0012 inch ² ↑ (0.75mm ² ↑), 3 wires
Communication cable		
0.0012 inch ² ↑ (0.75mm ² ↑), 2 wires		

- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord. (Code designation IEC:60245 IEC 57 / CENELEC: H05RN-F)
- When installing the indoor unit in a computer room or network room, use the double shielded (tape aluminum / polyester braid + copper) cable of FROHH2R type.





2022.12
Ver.2.3

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