SAMSUNG

SINGLE
Technical Data Book

Wind-Free 1Way Cassette for America

(R410A, HP)

Model : Wind-Free 1Way Cassette - CNH**1DB (AC***BN1DCH/AA), CXH**ADB (AC***BXADCH/AA)

History

Version	Modification	Date	Remark
Ver.1.0	Released 2021 CAC Wind-Free 1Way Cassette for North America	21. 08. 31	
Ver.1.1	Modified some data	21. 10. 21	
Ver.1.2	Modified the typo in specification page.	21. 11. 22	

Features & Benefits

CAC - World-class energy efficiency

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

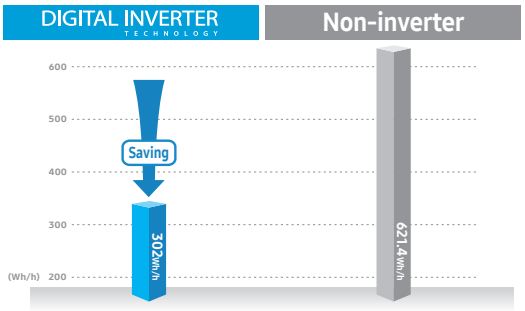
Featuring a suite of energy-optimizing technologies, Samsung CAC Single delivers top-class energy efficiency to support business in saving costs and the environment.

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.

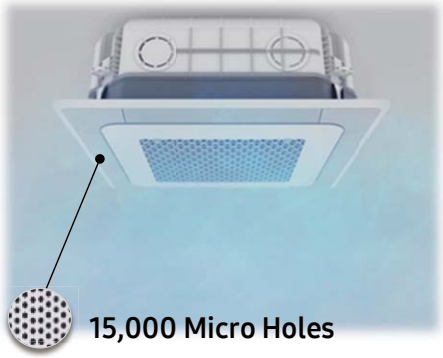


Wind-Free Cooling with Micro holes

- 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.

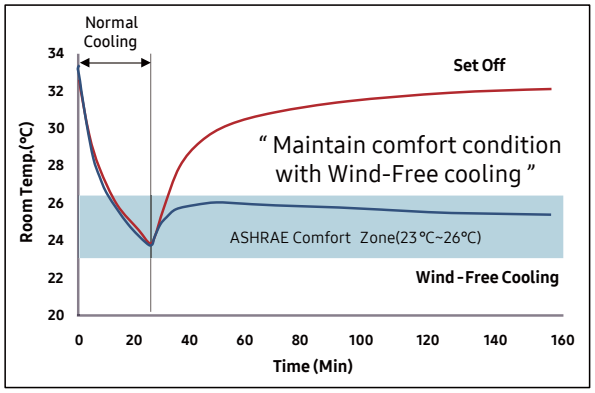
※ Still Air condition : According to ASHRAE, If velocity of wind is lower than 0.15m/s, People can not detect wind. And they define that condition is “Still Air”

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

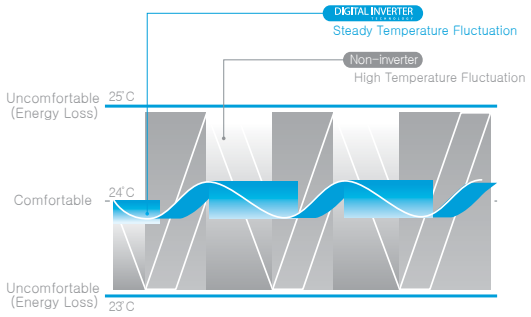
Samsung is dedicated to supporting comfortable living and working environments based on the strength of its technologies. With a single unit, CAC Single delivers reliable comfort and control over multiple areas to ensure a pleasant atmosphere in any climate.

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

C	N	H	09	1	D	B
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(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

(7) Version

B	2022

Nomenclature

Indoor Unit

Model Name

AC	09	B	N	1	D	C	H	/	AA
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

(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

(8) Mode

C	Cooling Only
H	Heat Pump

Nomenclature

Outdoor Unit

Model Name

AC	009	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

(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

(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 1Way Cassette			

Outdoor Unit

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

Contents

Wind-Free 1Way Cassette

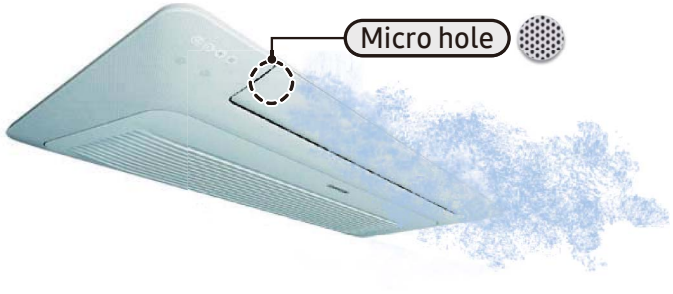
Wind-Free 1Way Cassette

Features & Benefits

Wind-Free 1Way Cassette

1. Wind-Free cooling

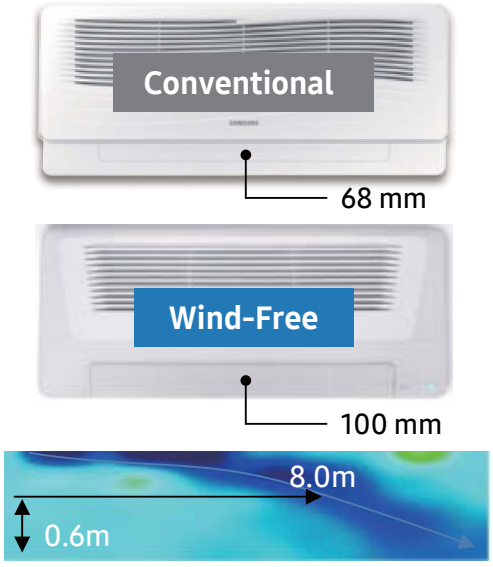
Comfort wind implementation by Wind-Free cooling



※ Wind-Free implementation : Still air by the velocity of flow below 0.15m/s.

2. Big blad

Max. 8m Horizontal reach



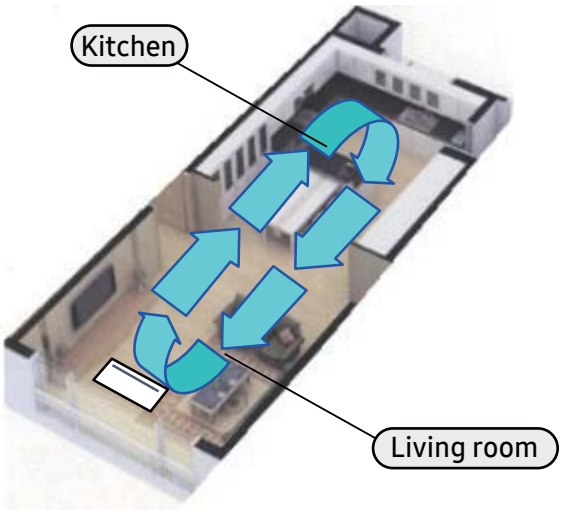
※ Blade enlargement about 47% compare to conventional product

※ Reach : 8m (Height 0.6m, Wind speed 0.3m/s)
Conventional product (Samsung) : 5m

※ Based on Wind-Free 1Way 7.1kW

3. Even cooling

Even cooling For spacious space



※ Expand the blade angle from 30˚ to 80˚
Conventional product (Samsung) : 40~80 ˚

1. Specification

Wind-Free 1Way Cassette

Model Name		Indoor Unit			AC009BN1DCH/AA	AC012BN1DCH/AA	AC018BN1DCH/AA
		Outdoor Unit			AC009BXADCH/AA	AC012BXADCH/AA	AC018BXADCH/AA
US Code		Indoor Unit			CNH091DB	CNH121DB	CNH181DB
		Outdoor Unit			CXH09ADB	CXH12ADB	CXH18ADB
System	Mode			-	Heat Pump	Heat Pump	Heat Pump
	Performance	Capacity (Min/Std/Max)	Cooling	kW	0.79 / 2.64 / 3.66	0.85 / 3.52 / 3.78	1.99 / 5.28 / 5.57
				Btu/h	2,700 / 9,000 / 12,500	2,900 / 12,000 / 12,900	6,800 / 18,000 / 19,000
				US RT	0.23 / 0.75 / 1.04	0.24 / 1.00 / 1.08	0.57 / 1.50 / 1.58
			Heating	kW	0.70 / 3.52 / 5.28	0.85 / 4.10 / 5.86	1.06 / 5.86 / 8.21
				Btu/h	2,400 / 12,000 / 18,000	2,900 / 14,000 / 20,000	3,600 / 20,000 / 28,000
				US RT	0.20 / 1.00 / 1.50	0.24 / 1.17 / 1.67	0.30 / 1.67 / 2.33
	Power	Power Input (Min/Std/Max)	Cooling	kW	0.15 / 0.67 / 1.30	0.16 / 1.12 / 1.37	0.40 / 1.62 / 2.54
			Heating		0.13 / 1.17 / 2.15	0.16 / 1.41 / 2.31	0.33 / 1.83 / 4.60
		Current Input (Min/Std/Max)	Cooling	A	1.1 / 3.3 / 5.8	1.1 / 5.1 / 6.1	2.4 / 7.3 / 11.3
			Heating		1.1 / 5.5 / 9.5	1.1 / 6.3 / 10.0	2.0 / 8.2 / 20.0
		Current	MCA	A	9	9	18.4
			MOP	A	15	15	25
	Efficiency	EER	Cooling	-	3.93	3.14	3.25
			Cooling(US)	(Btu/h)/W	13.40	10.70	11.10
		COP	Heating	W/W	3.00	2.90	3.20
		SEER		-	21.8	19.3	19.6
		HSPF		-	13.5	9.7	9.7
	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.	m (ft)	20 (65.6)	20 (65.6)	50 (164.0)
			Elevation	m (ft)	15 (49.2)	15 (49.2)	30 (98.4)
			Chargeless	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
				lbs	2.54	2.54	4.41
	Option Code	Standard		-	0173FC-1930F8-271A23-371120	0173FC-19344D-272328-371120	0183FC-19342C-2A343B-372560
		Install		-	020010-100031-200000-300000	020010-100051-200000-300000	020010-100051-200000-300000
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		-	Cross Flow	Cross Flow	Cross Flow
		Quantity		EA	1	1	1
		Air Flow Rate	H/M/L	m^3/min	7.3/6.5/5.8	9.0/8.2/7.2	14.0/13.0/12.0
				ft^3/min	258/230/205	318/290/254	494/459/424
				l/s	122/108/97	150/137/120	233/217/200
		External Static Pressure	Min/Std/Max	In Wg	-	-	-
	Fan Motor	Type		-	BLDC	BLDC	BLDC
		Output		W x n	27 x 1	27 x 1	62 x 1
	Drain	Drain Pipe		Φ, mm	VP25 (OD 32,ID 25)	VP25 (OD 32,ID 25)	VP25 (OD 32,ID 25)
	Sound	Sound Pressure Level	H/M/L/Silent	dB(A)	32/29/26/25	35/32/29/28	38/35/33/31
		Sound Power Level		dB(A)	52	55	56
	External Dimension	Net Weight		kg(lbs)	9.3 (20.5)	9.3 (20.5)	13.4 (29.5)
		Gross Weight		kg(lbs)	12.2 (26.9)	12.2 (26.9)	16.6 (36.6)
		Net Dimensions (WxHxD)		mm	970 x 135 x 410	970 x 135 x 410	1,200 x 138 x 450
				inch	38.19 x 5.31 x 16.14	38.19 x 5.31 x 16.14	47.24 x 5.43 x 17.72
		Gross Dimensions (WxHxD)		mm	1,173 x 231 x 487	1,173 x 231 x 487	1,435 x 224 x 525
				inch	46.18 x 9.09 x 19.17	46.18 x 9.09 x 19.17	56.50 x 8.82 x 20.67

1. Specification

Wind-Free 1Way Cassette

Model Name		Indoor Unit			AC009BN1DCH/AA	AC012BN1DCH/AA	AC018BN1DCH/AA
		Outdoor Unit			AC009BXADCH/AA	AC012BXADCH/AA	AC018BXADCH/AA
US Code		Indoor Unit			CNH091DB	CNH121DB	CNH181DB
		Outdoor Unit			CXH09ADB	CXH12ADB	CXH18ADB
Indoor Unit	Casing	Material		-	Plastic	Plastic	Plastic
	Panel	Model Name		-	PC1NWFMUN	PC1NWFMUN	PC1BWFMUN
		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)	4.3 (9.5)	4.3 (9.5)	5.0 (11.0)
		Gross Weight		kg(lbs)	6.3 (13.9)	6.3 (13.9)	7.0 (15.4)
		Net Dimensions (WxHxD)		mm	1,198 x 35 x 500	1,198 x 35 x 500	1,410 x 35 x 500
				inch	47.17 x 1.38 x 19.69	47.17 x 1.38 x 19.69	55.51 x 1.38 x 19.69
		Gross Dimensions (WxHxD)		mm	1,262 x 122 x 566	1,262 x 122 x 566	1,474 x 122 x 566
				inch	49.69 x 4.80 x 22.28	49.69 x 4.80 x 22.28	58.03 x 4.80 x 22.28
	Control System	Infrared remote control		-	AR-EH04U	AR-EH04U	AR-EH04U
		Wired remote control		-	MWR-WE13UN	MWR-WE13UN	MWR-WE13UN
	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		-	Green Hydrophile	Green Hydrophile	Anti-Corrosion
	Compressor	Model		-	KTN130D42UFR	KTN130D42UFR	UG8T265FXAEW
		Type		-	BLDC	BLDC	Twin BLDC
		Output		kW	1.04	1.04	2.32
		Oil	Type	-	POE	POE	POE
			Initial Charge	cc (fl oz)	350	350	700
	Fan	Type		-	Propeller	Propeller	Propeller
		Discharge direction		-	Front	Front	Front
		Quantity		EA	1	1	1
		Air Flow Rate	H/M/L	m^3/min	30	30	61
				ft^3/min	1,059	1,059	2,154
				l/s	500	500	1,017
	Fan Motor	Type		-	BLDC	BLDC	BLDC
		Output		W x n	40 x 1	40 x 1	125 x 1
	Sound	Sound Pressure Level	Cooling	dB(A)	46	47	48
			Heating	dB(A)	47	48	48
		Sound Power Level		dB(A)	59	61	62
	External Dimension	Net Weight		kg(lbs)	33.3 (74.3)	33.3 (74.3)	53.7(118.4)
		Gross Weight		kg(lbs)	35.6 (78.5)	35.6 (78.5)	57.7(127.2)
		Net Dimensions (WxHxD)		mm	790 x 548 x 285	790 x 548 x 285	880 x 798 x 310
				inch	31.10 x 21.57 x 11.22	31.10 x 21.57 x 11.22	34.65 x 31.42 x 12.20
		Gross Dimensions (WxHxD)		mm	913 x 622 x 371	913 x 622 x 371	1,023 x 881 x 413
				inch	35.94 x 24.49 x 14.61	35.94 x 24.49 x 14.61	40.28 x 34.69 x 16.26
	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)	-25~24 (-13~75)	-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 5m(16.4ft), 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 1Way 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)				
CNH091DB (AC009BN1DCH/AA)	20.5	Max.	12,500	18,000	High	258 / 258	32	52
		Std.	9,000	12,000	Mid	230 / 230	29	-
		Min.	2,700	2,400	Low	205 / 205	26	-
CNH121DB (AC012BN1DCH/AA)	20.5	Max.	12,900	20,000	High	318 / 318	35	55
		Std.	12,000	14,000	Mid	290 / 290	32	-
		Min.	2,900	2,900	Low	254 / 254	29	-
CNH181DB (AC018BN1DCH/AA)	29.5	Max.	19,000	28,000	High	494 / 494	38	56
		Std.	18,000	20,000	Mid	459 / 459	35	-
		Min.	6,800	3,600	Low	424 / 424	33	-

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	Voltz	Min.	Max	Cooling	Heating				
CNH091DB (AC009BN1DCH/AA)	CXH09ADB (AC009BXADCH/AA)	60	208 to 230	187	253	8.74	8.74	0.26	9.0	9.0	15
CNH121DB (AC012BN1DCH/AA)	CXH12ADB (AC012BXADCH/AA)	60	208 to 230	187	253	8.74	8.74	0.26	9.0	9.0	15
CNH181DB (AC018BN1DCH/AA)	CXH18ADB (AC018BXADCH/AA)	60	208 to 230	187	253	17.94	17.94	0.42	18.36	18.4	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 1Way Cassette

(1) CHN091DB(AC009BN1DCH/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	11.5	9.2	0.79	12.2	9.5	0.80	12.7	9.7	0.82	13.1	10.0	0.84	13.3	9.9	0.85	14.0	9.8	0.85	14.7	9.7	0.87
70	12.3	9.5	0.76	13.0	9.8	0.77	13.5	10.1	0.79	14.0	10.5	0.80	14.2	10.4	0.81	14.9	10.3	0.82	15.7	10.0	0.84
95	8.0	5.7	0.63	8.4	5.9	0.64	8.7	6.1	0.66	9.0	6.3	0.67	9.2	6.2	0.68	9.6	6.2	0.68	10.1	6.1	0.70
115	10.4	8.5	1.58	10.9	8.8	1.61	11.3	9.1	1.64	11.7	9.4	1.68	11.9	9.3	1.69	12.5	9.2	1.71	13.2	9.0	1.74
122	8.0	7.0	1.29	8.4	7.2	1.32	8.7	7.4	1.35	9.0	7.7	1.37	9.2	7.6	1.39	9.6	7.5	1.40	10.1	7.3	1.43

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB)											
	61		64		68		70		22		24	
	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	6.9	1.56	6.8	1.54	6.7	1.53	6.7	1.51	6.6	1.50	6.5	1.48
-4	9.2	1.58	9.1	1.56	9.0	1.55	8.9	1.53	8.8	1.51	8.7	1.50
14	13.7	2.30	13.6	2.27	13.4	2.25	13.3	2.23	13.2	2.21	13.0	2.18
32	14.4	1.93	14.2	1.91	14.1	1.89	14.0	1.87	13.8	1.85	13.7	1.83
47	12.4	1.21	12.2	1.19	12.1	1.18	12.0	1.17	11.9	1.16	11.8	1.15
75.2	17.8	1.63	17.6	1.61	17.5	1.60	17.3	1.58	17.1	1.57	16.9	1.55

(2) CHN121DB(AC012BN1DCH/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	12.2	9.7	0.84	12.9	10.0	0.86	13.4	10.3	0.88	13.8	10.6	0.90	14.1	10.5	0.90	14.8	10.4	0.91	15.5	10.2	0.93
70	12.7	9.9	0.79	13.4	10.2	0.81	14.0	10.5	0.82	14.4	10.8	0.84	14.7	10.7	0.85	15.4	10.6	0.86	16.2	10.4	0.87
95	10.6	7.7	1.05	11.2	7.9	1.08	11.6	8.1	1.10	12.0	8.4	1.12	12.2	8.3	1.13	12.9	8.2	1.14	13.5	8.1	1.17
115	10.8	8.9	1.69	11.4	9.2	1.72	11.9	9.5	1.76	12.2	9.8	1.79	12.5	9.7	1.81	13.1	9.6	1.83	13.8	9.4	1.86
122	8.5	7.4	1.37	8.9	7.7	1.40	9.3	7.9	1.43	9.6	8.2	1.46	9.8	8.1	1.47	10.3	8.0	1.49	10.8	7.8	1.51

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB)											
	61		64		68		70		22		24	
	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	7.2	1.53	7.1	1.51	7.1	1.50	7.0	1.48	6.9	1.47	6.9	1.45
-4	9.3	1.54	9.2	1.52	9.1	1.50	9.0	1.49	8.9	1.48	8.8	1.46
14	14.4	2.25	14.3	2.23	14.1	2.21	14.0	2.19	13.9	2.16	13.7	2.14
32	15.1	1.89	15.0	1.87	14.8	1.85	14.7	1.83	14.6	1.81	14.4	1.80
47	14.4	1.45	14.3	1.44	14.1	1.42	14.0	1.41	13.9	1.40	13.7	1.38
75.2	18.8	1.60	18.6	1.58	18.4	1.57	18.2	1.55	18.0	1.54	17.8	1.52

NOTE

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

3. Capacity Table

Wind-Free 1Way Cassette

(3) CHN181DB(AC018BN1DCH/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	1.14	16.8	11.9	1.17	17.5	12.2	1.19	18.0	12.6	1.22	18.4	12.5	1.23	19.3	12.3	1.24	20.2	12.1	1.26
70	19.9	14.4	1.30	21.0	14.8	1.32	21.8	15.3	1.35	22.5	15.8	1.38	23.0	15.6	1.39	24.1	15.4	1.40	25.3	15.1	1.43
95	15.9	11.5	1.52	16.8	11.9	1.56	17.5	12.2	1.59	18.0	12.6	1.62	18.4	12.5	1.64	19.3	12.3	1.65	20.2	12.1	1.69
115	17.5	13.9	3.05	18.4	14.3	3.11	19.2	14.8	3.18	19.8	15.2	3.24	20.2	15.1	3.27	21.2	14.9	3.30	22.3	14.6	3.37
122	14.3	11.8	2.67	15.1	12.2	2.72	15.7	12.6	2.78	16.2	13.0	2.84	16.5	12.8	2.86	17.4	12.7	2.89	18.2	12.4	2.95

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB)											
	61		64		68		70		22		24	
	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	2.45	14.3	2.43	14.1	2.40	14.0	2.38	13.9	2.36	13.7	2.33
-4	20.6	3.63	20.4	3.59	20.2	3.56	20.0	3.52	19.8	3.48	19.6	3.45
14	25.8	4.34	25.5	4.29	25.3	4.25	25.0	4.21	24.8	4.17	24.5	4.13
32	23.7	2.92	23.5	2.89	23.2	2.86	23.0	2.84	22.8	2.81	22.5	2.78
47	20.6	1.89	20.4	1.87	20.2	1.85	20.0	1.83	19.8	1.81	19.6	1.79
75.2	26.8	2.17	26.5	2.15	26.3	2.13	26.0	2.10	25.7	2.08	25.5	2.06

NOTE

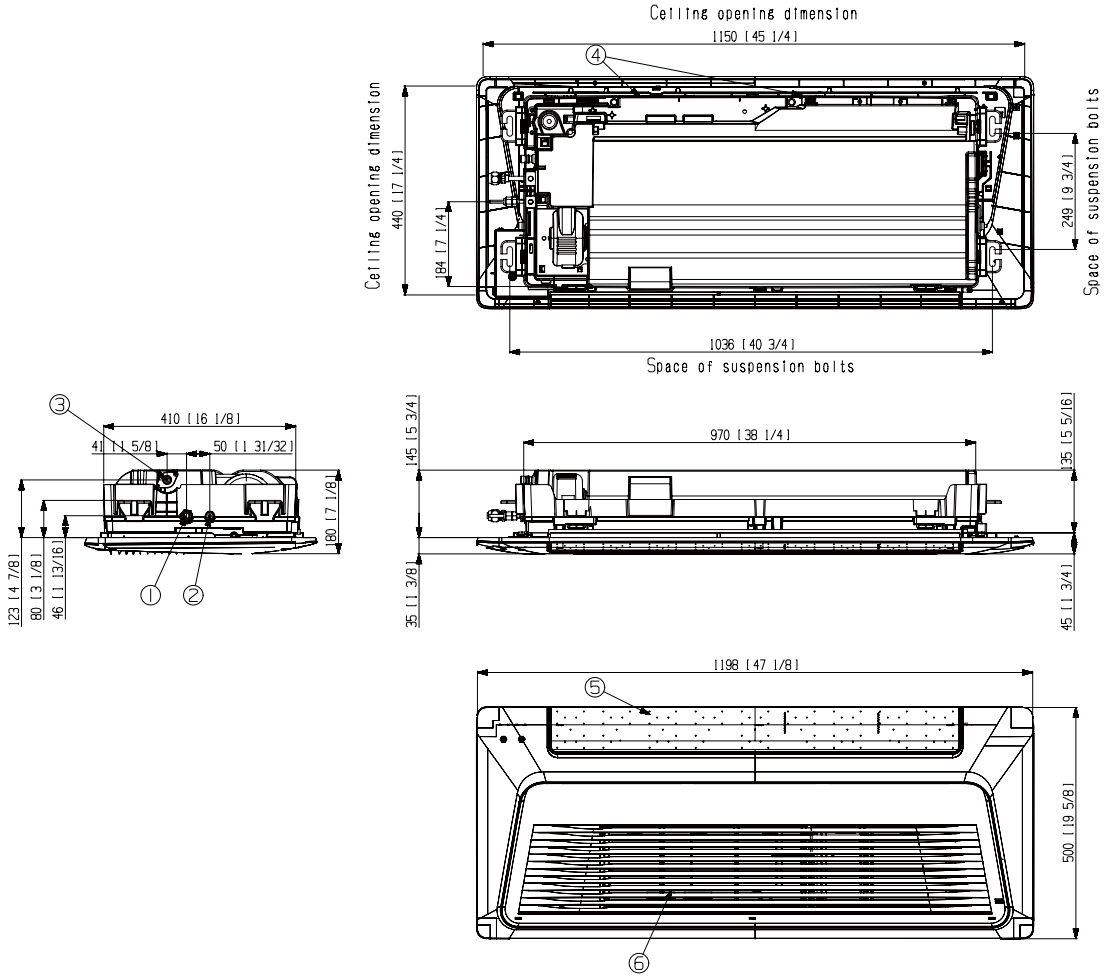
- The performance table shows the average value of each conditions.

4. Dimensional Drawing

Wind-Free 1Way Cassette

CNH091DB (AC009BN1DCH/AA), CNH121DB (AC012BN1DCH/AA)

Units : mm [inches]



No.	Name	Description
1	Gas pipe connection	Φ 9.52mm(3/8")
2	Liquid pipe connection	Φ 6.35mm(1/4")
3	Drain pipe connection	VP25 [OD32mm(1.26"), ID25mm(0.98")]
4	Power supply & Communication wiring conduit	-
5	Air outlet louver	-
6	Air inlet grille	-

NOTE

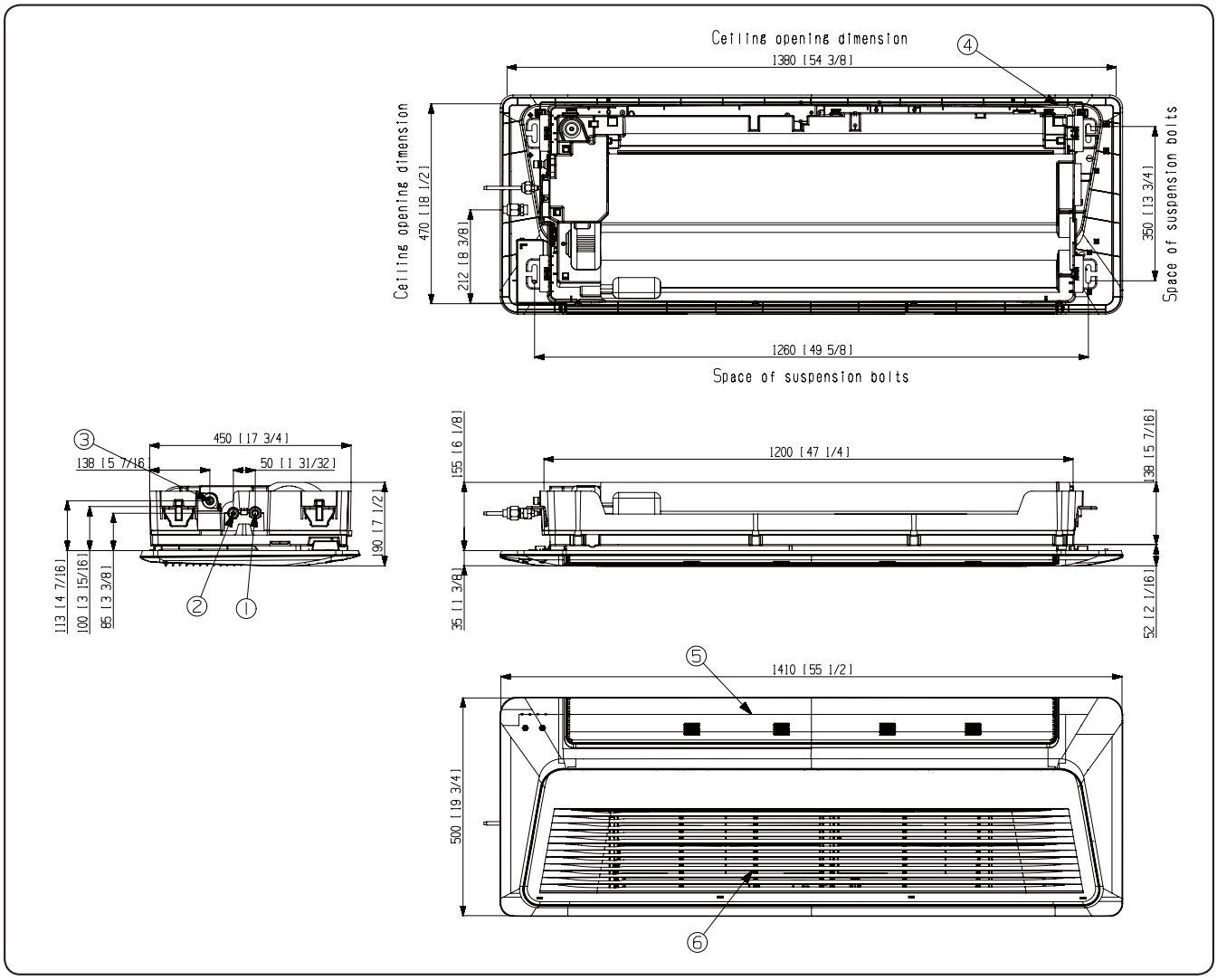
- As for suspension bolt, please use M8 ~ M10.
  (Procured at local site)

4. Dimensional Drawing

Wind-Free 1Way Cassette

CNH181DB (AC018BN1DCH/AA)

Units : mm [inches]



No.	Name	Description
1	Gas pipe connection	Ø 12.7mm(1/2")
2	Liquid pipe connection	Ø 6.35mm(1/4")
3	Drain pipe connection	VP25 [OD32mm(1.26"), ID25mm(0.98")]
4	Power supply & Communication wiring conduit	-
5	Air outlet louver	-
6	Air inlet grille	-

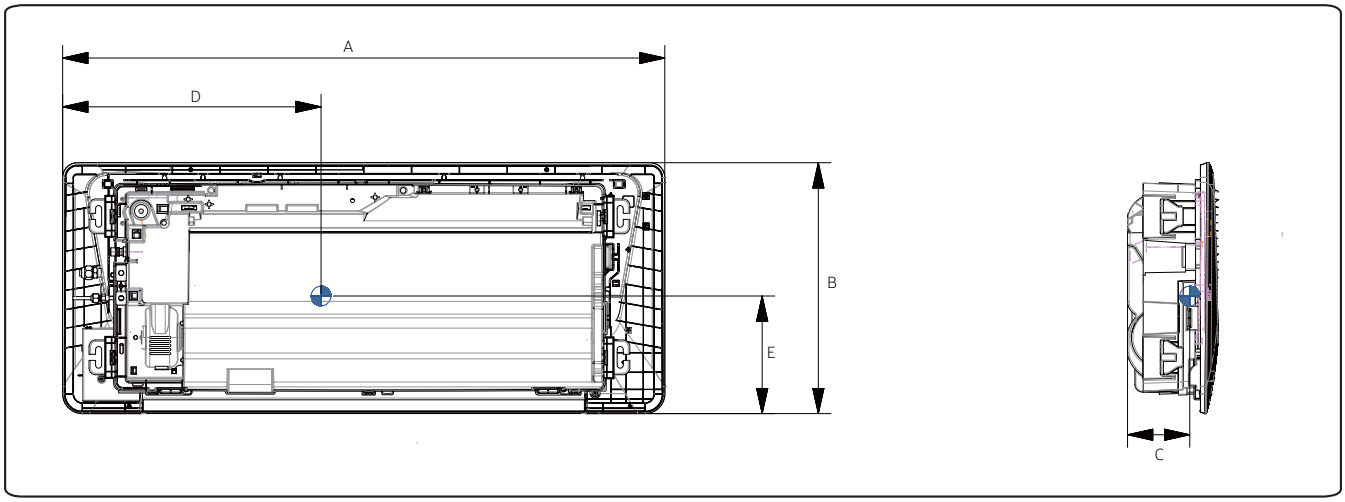
NOTE

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

5. Center of Gravity

Wind-Free 1Way Cassette

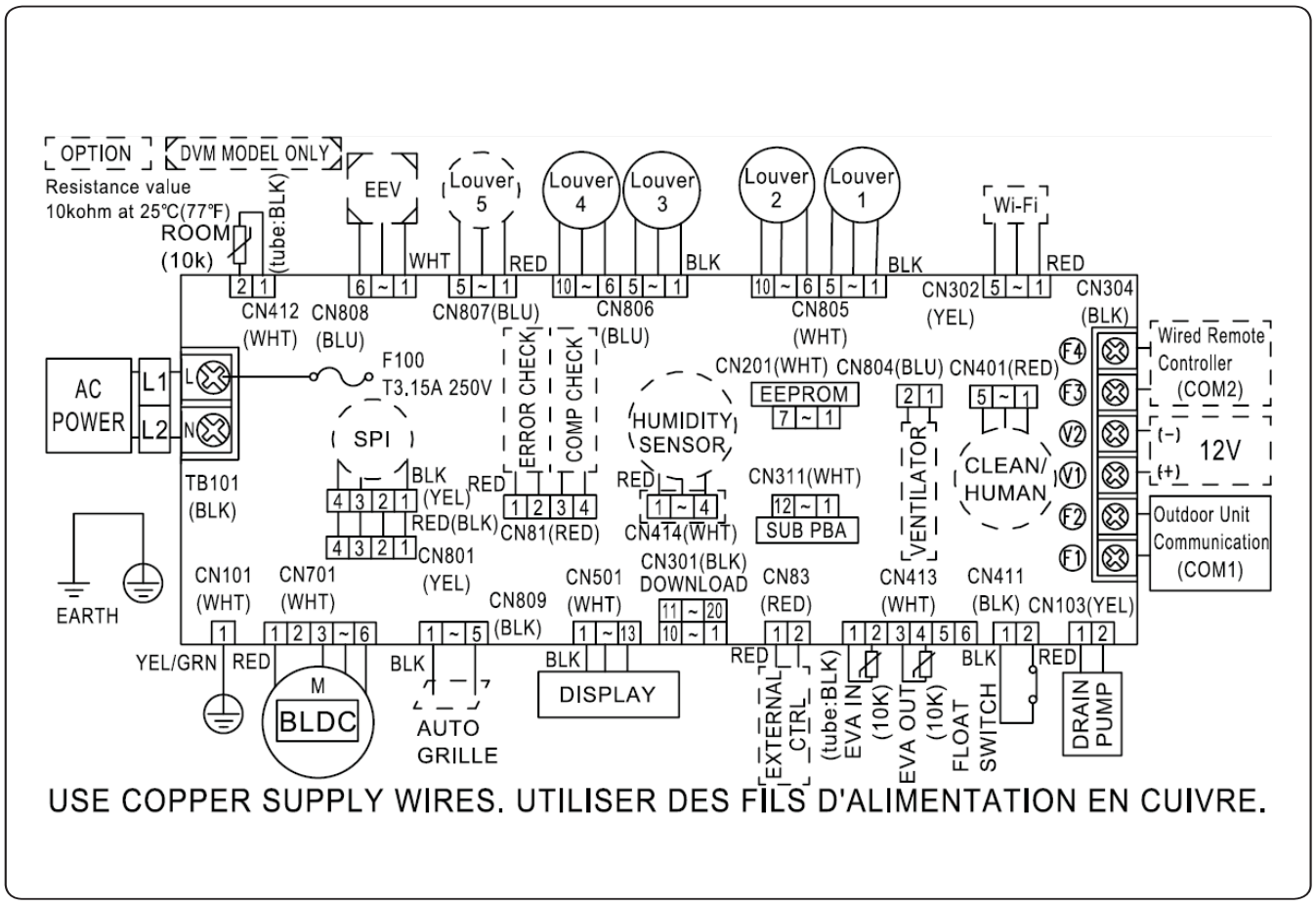
Units : mm [inches]



Model	A	B	C	D	E
CNH091DB (AC009BN1DCH/AA) CNH121DB (AC012BN1DCH/AA)	1,198 [47-3/16]	500 [19-11/16]	108 [4-1/2]	555 [21-7/8]	200 [7-7/8]
CNH181DB (AC018BN1DCH/AA)	1,410 [55-1/2]	500 [19-11/16]	108 [4-1/2]	755 [29-3/8]	200 [7-7/8]

6. Electrical Wiring Diagram

Wind-Free 1Way Cassette



M-BLDC	BLDC Motor	SPI	S-Plasma ion	ROOM(10K)	Thermistor ROOM OUT(10K)
WiFi	Option WiFi Module	EEV	Electronic Expansion Valve	EVA-IN(10K)	Thermistor EVA IN(10K)
F1/F2	Out To Indoor Communication	EXT_CONTROL	EXTERNAL_CONTROL	EVA-OUT(10K)	Thermistor EVA OUT(10K)

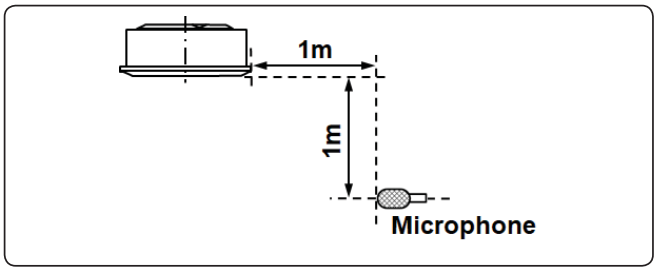
NOTE

- 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, N : The wire quantity

7. Sound Data

Wind-Free 1Way Cassette

Sound Pressure level

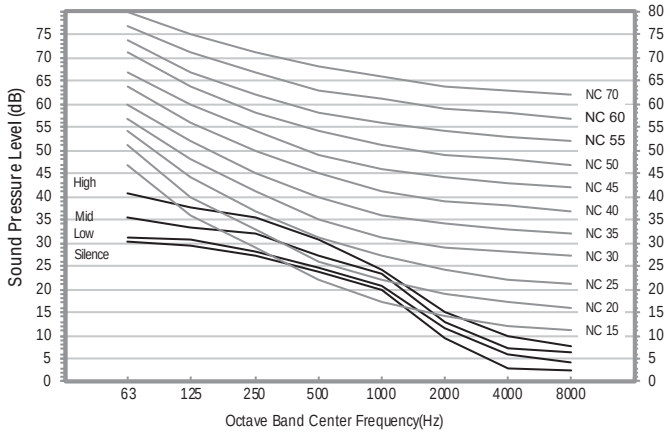


Unit: dB(A)

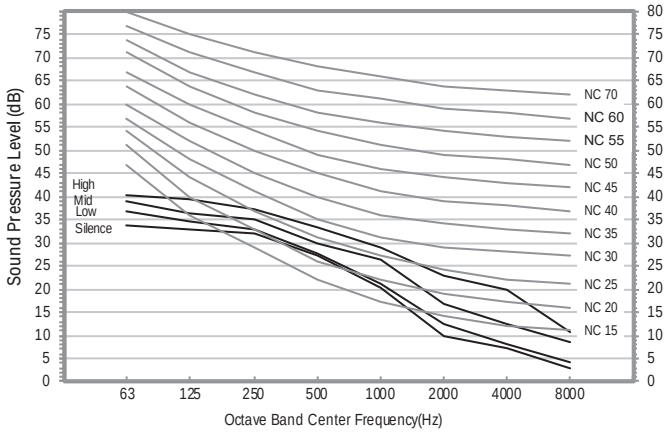
Model	High	Mid	Low	Silence
CNH091DB (AC009BN1DCH/AA)	32	29	26	25
CNH121DB (AC012BN1DCH/AA)	35	32	29	28
CNH181DB (AC018BN1DCH/AA)	38	35	33	31

- NC Curve

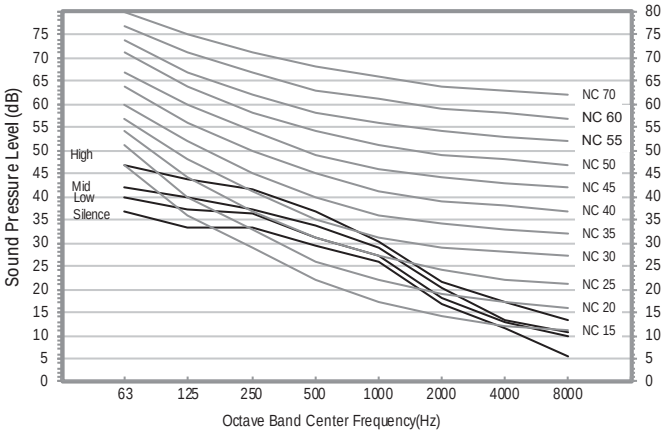
1) CNH091DB (AC009BN1DCH/AA)



2) CNH121DB (AC012BN1DCH/AA)



3) CNH181DB (AC018BN1DCH/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 1Way Cassette

Sound Power level

NOTE

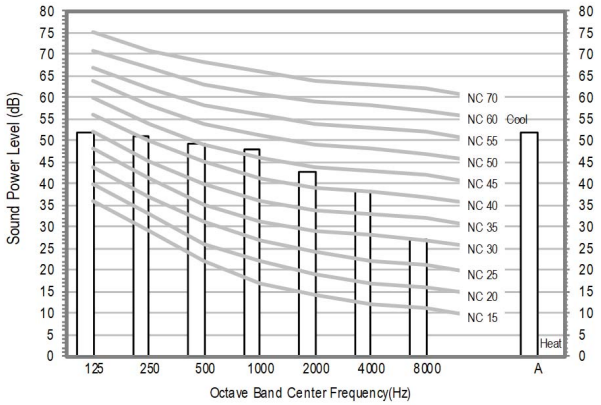
- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

Unit: dB(A)

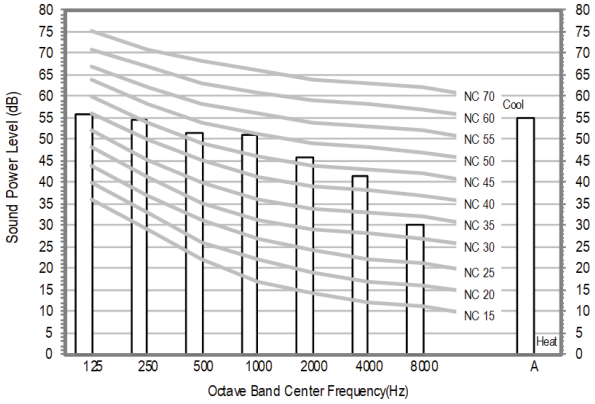
Model	Cooling
CNH091DB (AC009BN1DCH/AA)	52
CNH121DB (AC012BN1DCH/AA)	55
CNH181DB (AC018BN1DCH/AA)	56

- NC Curve

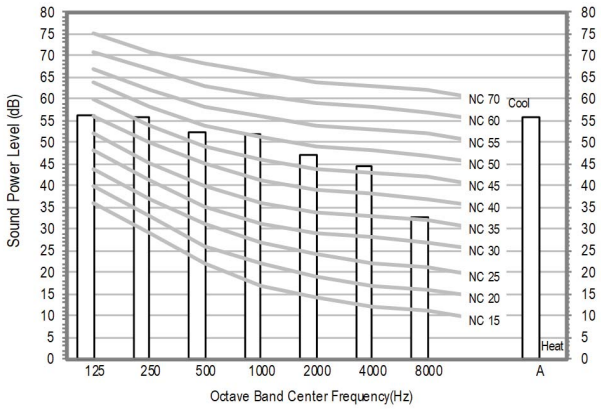
1) CNH091DB (AC009BN1DCH/AA)



2) CNH121DB (AC012BN1DCH/AA)



3) CNH181DB (AC018BN1DCH/AA)



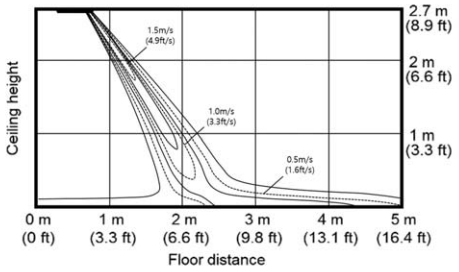
8. Temperature and air flow distribution

Wind-Free 1Way Cassette

CNH091DB (AC009BN1DCH/AA)

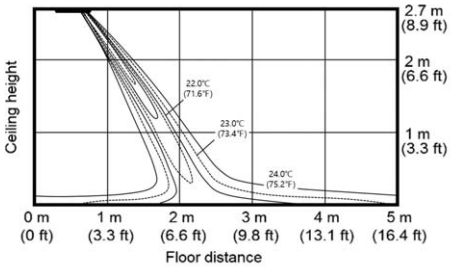
- Cooling Air Velocity distribution

  (Discharge angle : 60 degree)



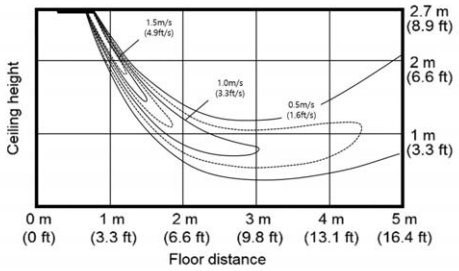
- Cooling temperature distribution

  (Discharge angle : 60 degree)



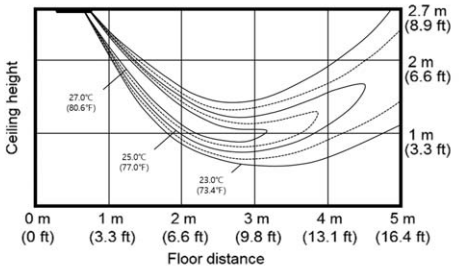
- Heating Air Velocity distribution

  (Discharge angle : 60 degree)



- Heating temperature distribution

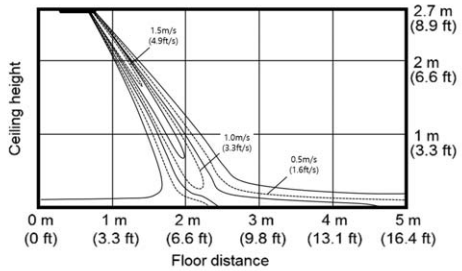
  (Discharge angle : 60 degree)



CNH121DB (AC012BN1DCH/AA)

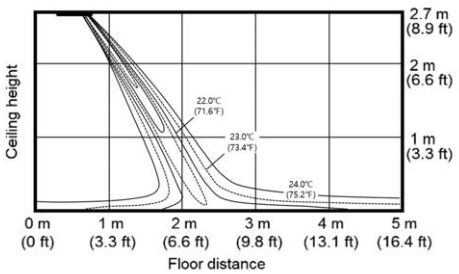
- Cooling Air Velocity distribution

  (Discharge angle : 60 degree)



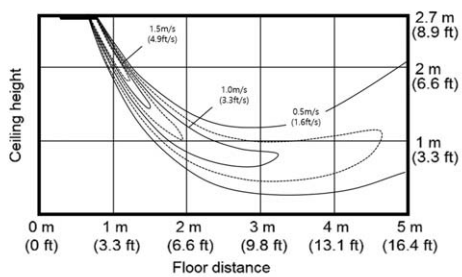
- Cooling temperature distribution

  (Discharge angle : 60 degree)



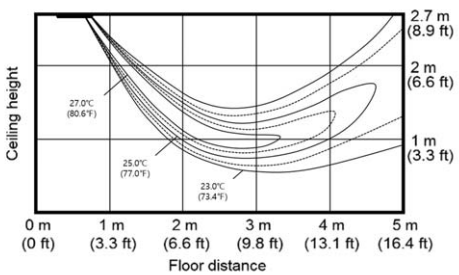
- Heating Air Velocity distribution

  (Discharge angle : 60 degree)



- Heating temperature distribution

  (Discharge angle : 60 degree)

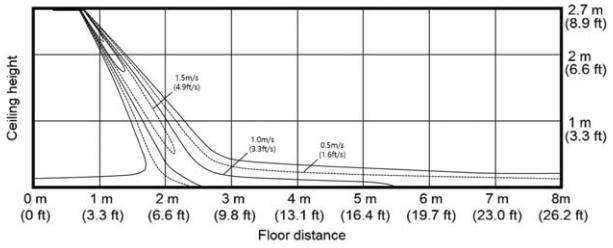


8. Temperature and air flow distribution

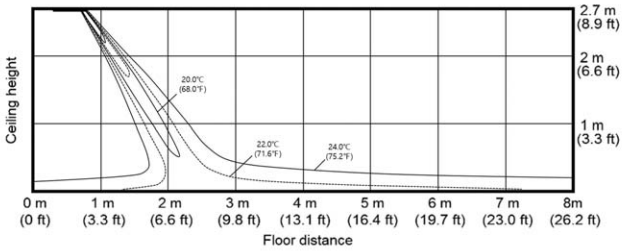
Wind-Free 1Way Cassette

CNH181DB (AC018BN1DCH/AA)

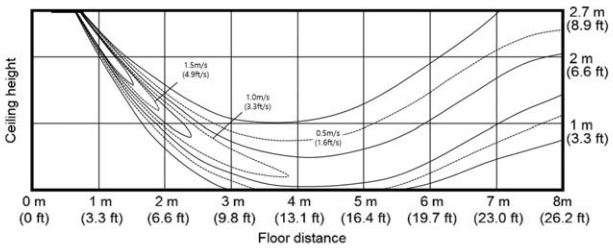
- Cooling Air Velocity distribution
  (Discharge angle : 60 degree)



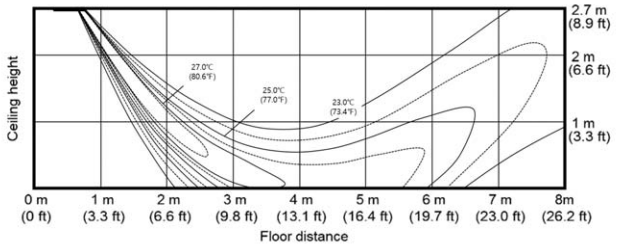
- Cooling temperature distribution
  (Discharge angle : 60 degree)



- Heating Air Velocity distribution
  (Discharge angle : 60 degree)



- Heating temperature distribution
  (Discharge angle : 60 degree)



Outdoor Units

Outdoor Units

1. Summary Table

Outdoor Units

Performance Characteristics

Capacity/ Btu/hh	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

NOTE

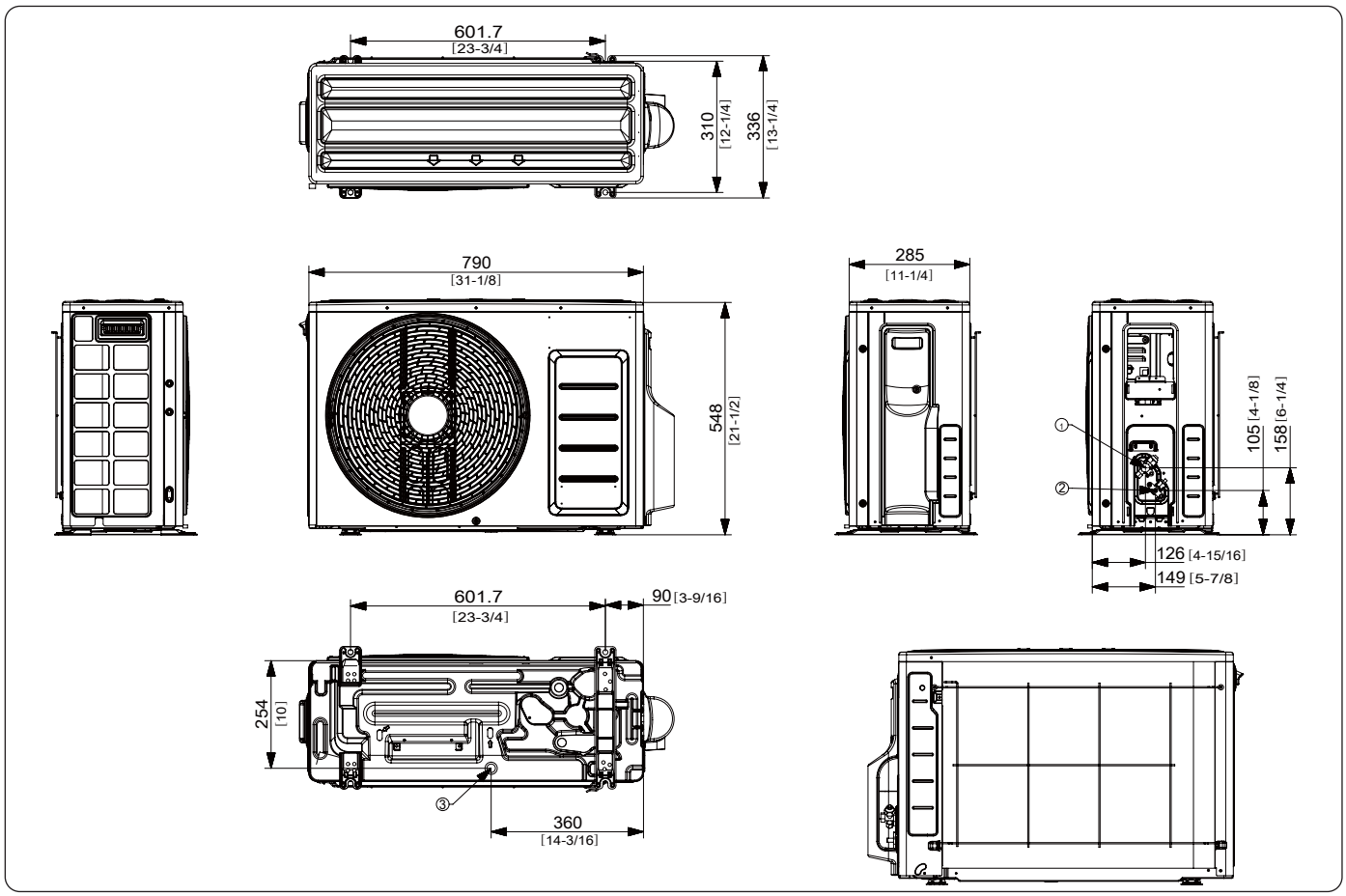
- Sound power level is based on cooling operation.

2. Dimensional Drawing

Outdoor Units

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

Units : mm [inches]



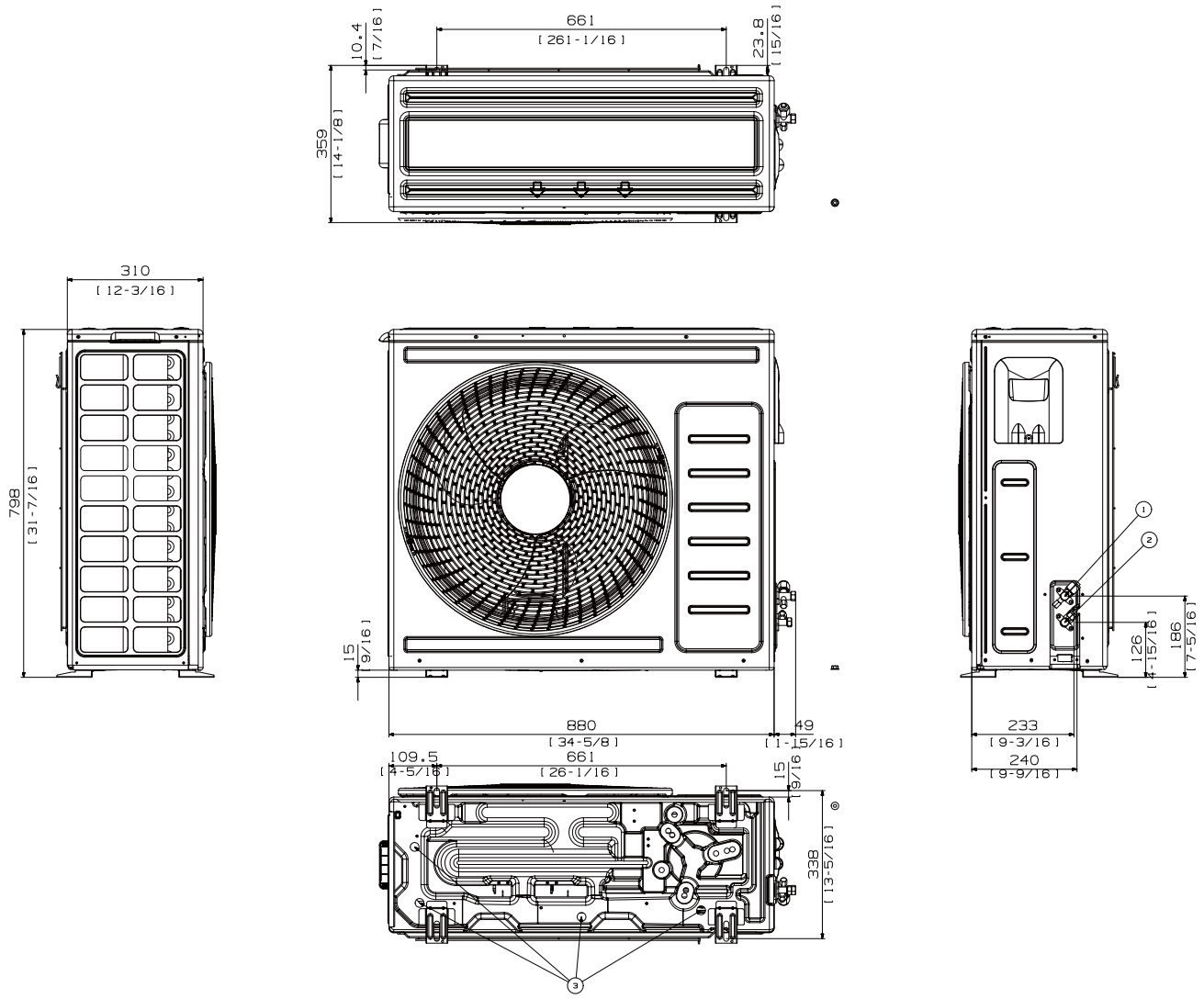
No.	Name	Description
1	Refrigerant gas pipe	Φ 9.52mm(3/8")
2	Refrigerant liquid pipe	Φ 6.35mm(1/4")
3	Drain Hole	-

2. Dimensional Drawing

Outdoor Units

CXH18ADB (AC018BXADCH/AA)

Units : mm [inches]



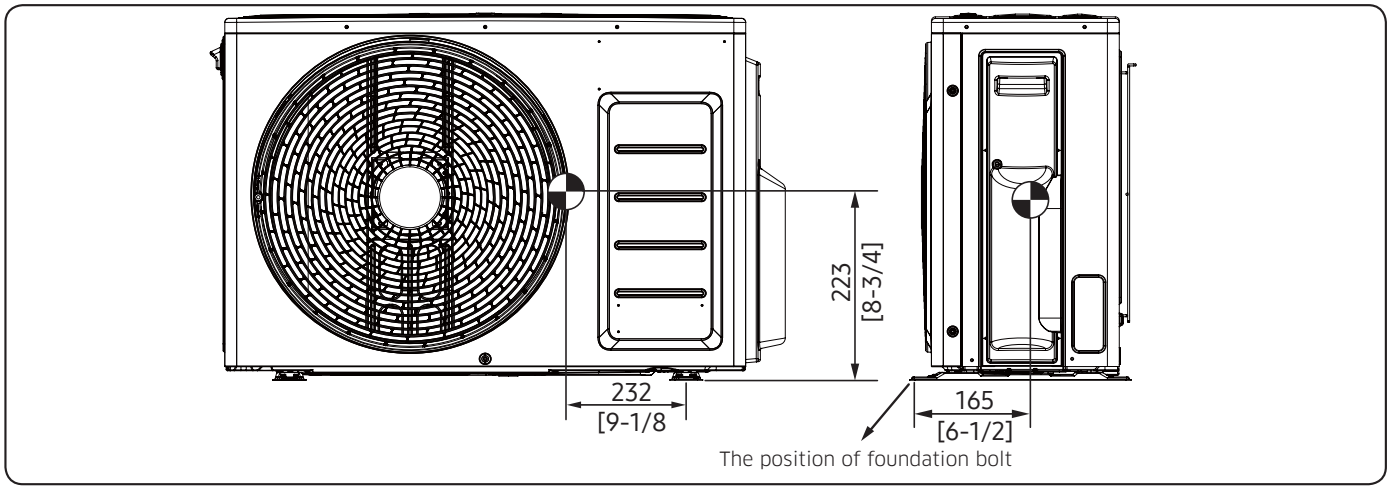
No.	Name	Description
1	Refrigerant liquid pipe	Φ 12.7mm(1/2")
2	Refrigerant gas pipe	Φ 6.35mm(1/4")
3	Drain hole	-

3. Center of Gravity

Outdoor Units

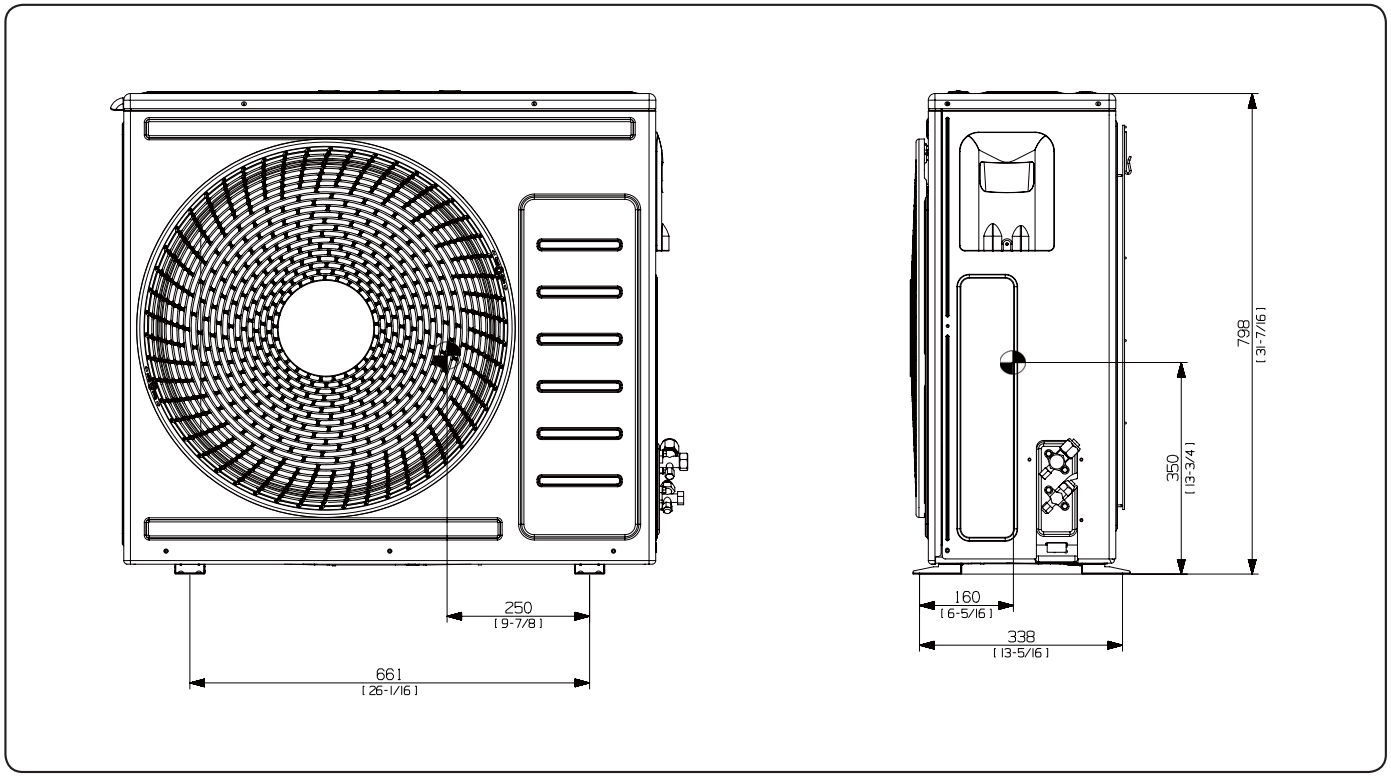
CXH09ADB (AC009BXADCH/AA), CXH12ADB (AC012BXADCH/AA)

Units : mm [inches]



CXH18ADB (AC018BXADCH/AA)

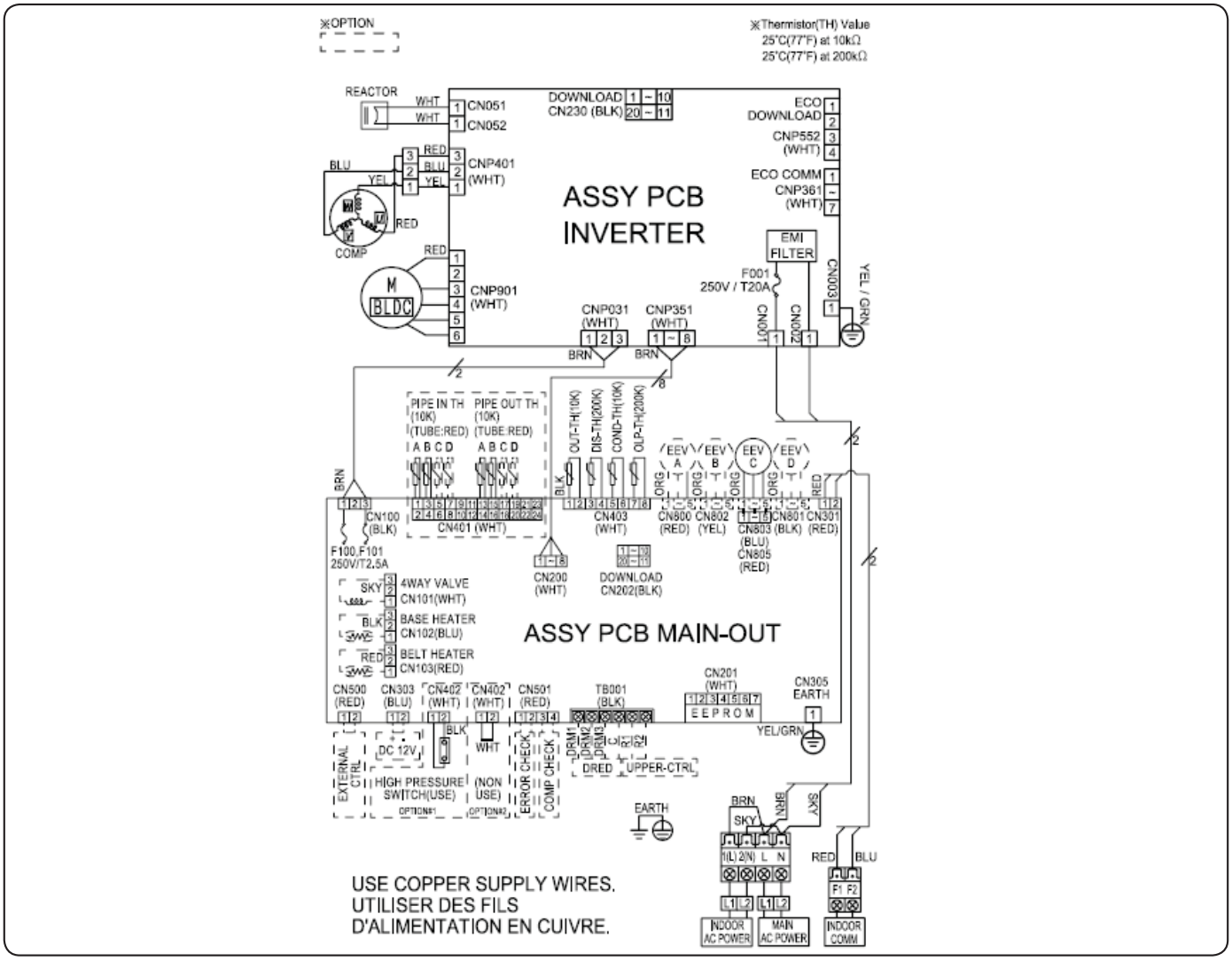
Units : mm [inches]



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
EMI PCB	Printed circuit board(EMI)	OLP-TEMP	Thermistor OLP

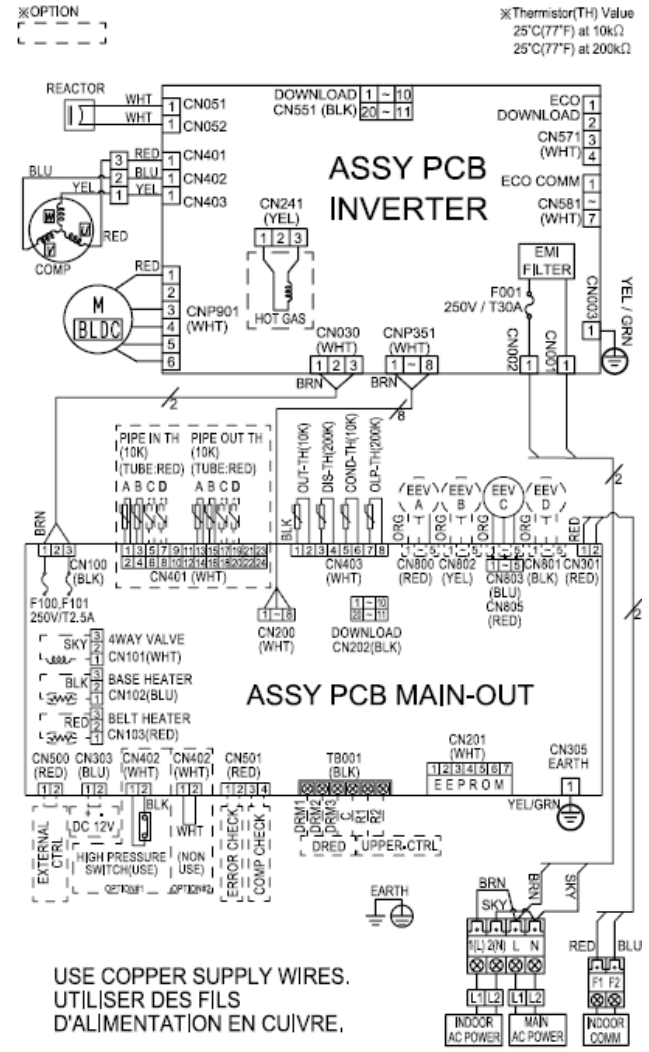
NOTE

- 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, ⫽N : 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
EMI PCB	Printed circuit board(EMI)	OLP-TEMP	Thermistor OLP

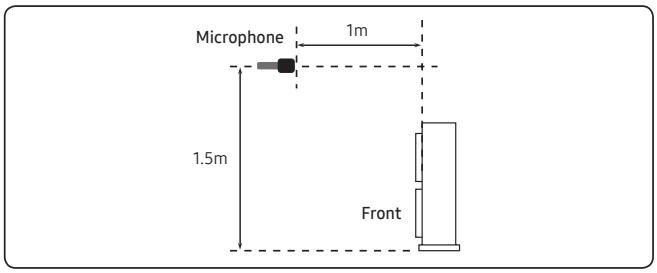
NOTE

- 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, ⫽N : The wire quantity

5. Sound Data

Outdoor Units

Sound Pressure level

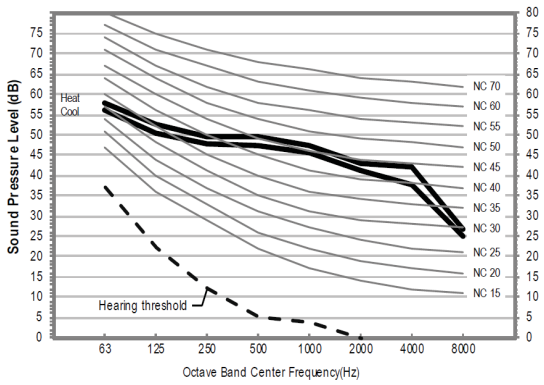


Unit: dB(A)

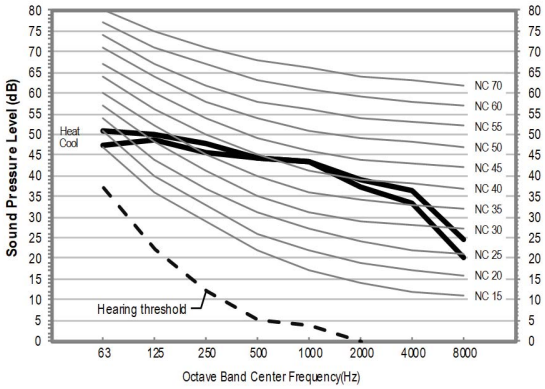
Model	Cooling	Heating
CXH09ADB (AC009BXADCH/AA)	46	47
CXH12ADB (AC012BXADCH/AA)	47	48
CXH18ADB (AC018BXADCH/AA)	48	48

- NC Curve

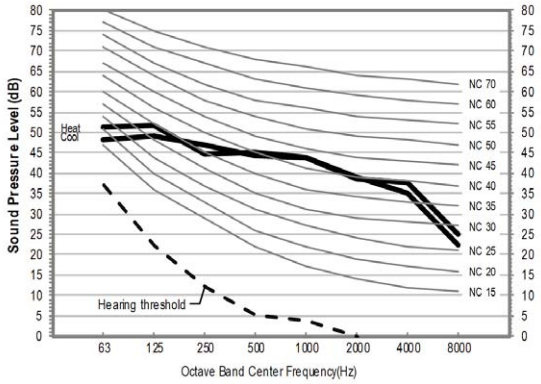
1) CXH09ADB (AC009BXADCH/AA)



2) CXH12ADB (AC012BXADCH/AA)



3) CXH18ADB (AC018BXADCH/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

NOTE

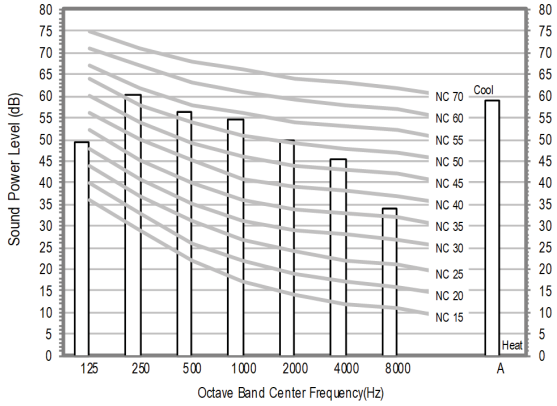
- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

Unit: dB(A)

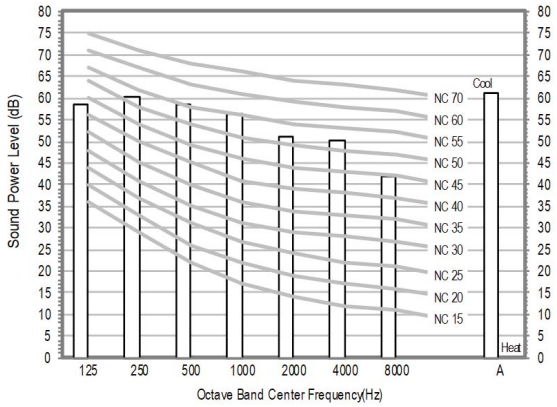
Model	Cooling
CXH09ADB (AC009BXADCH/AA)	52
CXH12ADB (AC012BXADCH/AA)	55
CXH18ADB (AC018BXADCH/AA)	56

- NC Curve

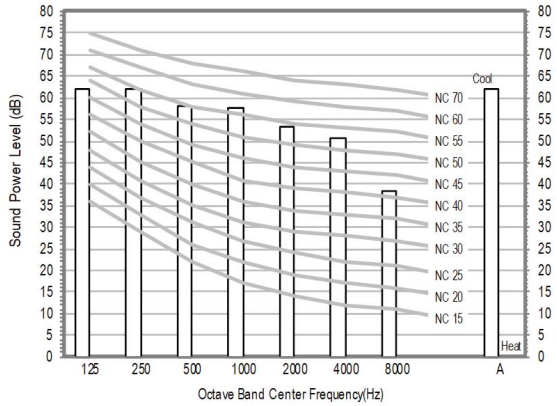
1) CXH09ADB (AC009BXADCH/AA)



2) CXH12ADB (AC012BXADCH/AA)



3) CXH18ADB (AC018BXADCH/AA)



6. Capacity Correction

Outdoor Units

CNH091DB(AC009BN1DCH/AA)+CXH09ADB(AC009BXADCH/AA)
CNH121DB(AC012BN1DCH/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

CNH181DB(AC018BN1DCH/AA)+CXH18ADB(AC018BXADCH/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

7. Operation Range

Outdoor Units

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	30°C(86°F) or less	-25°C to 24°C (-13°F to 75°F)	-

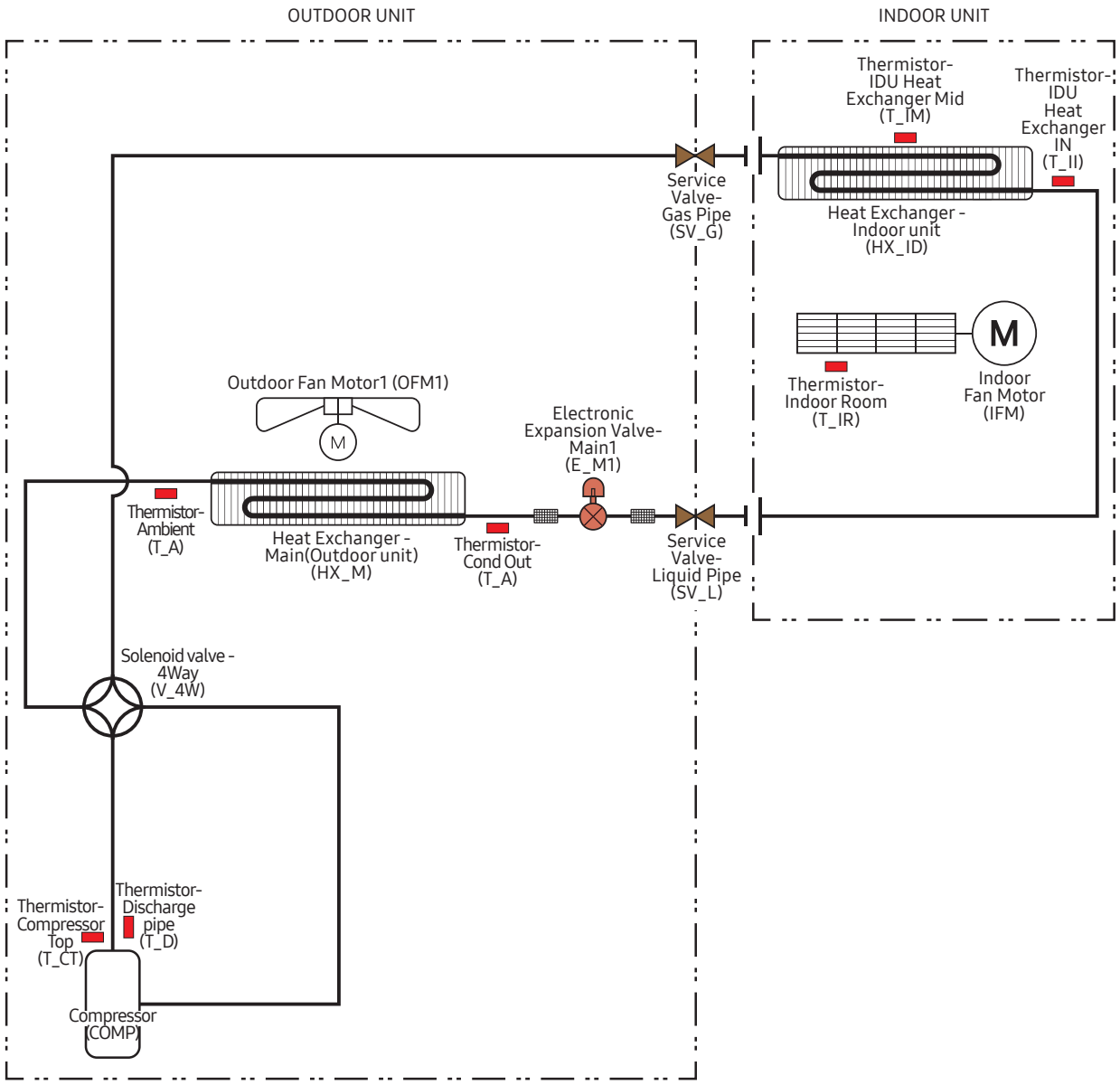
NOTE

- 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

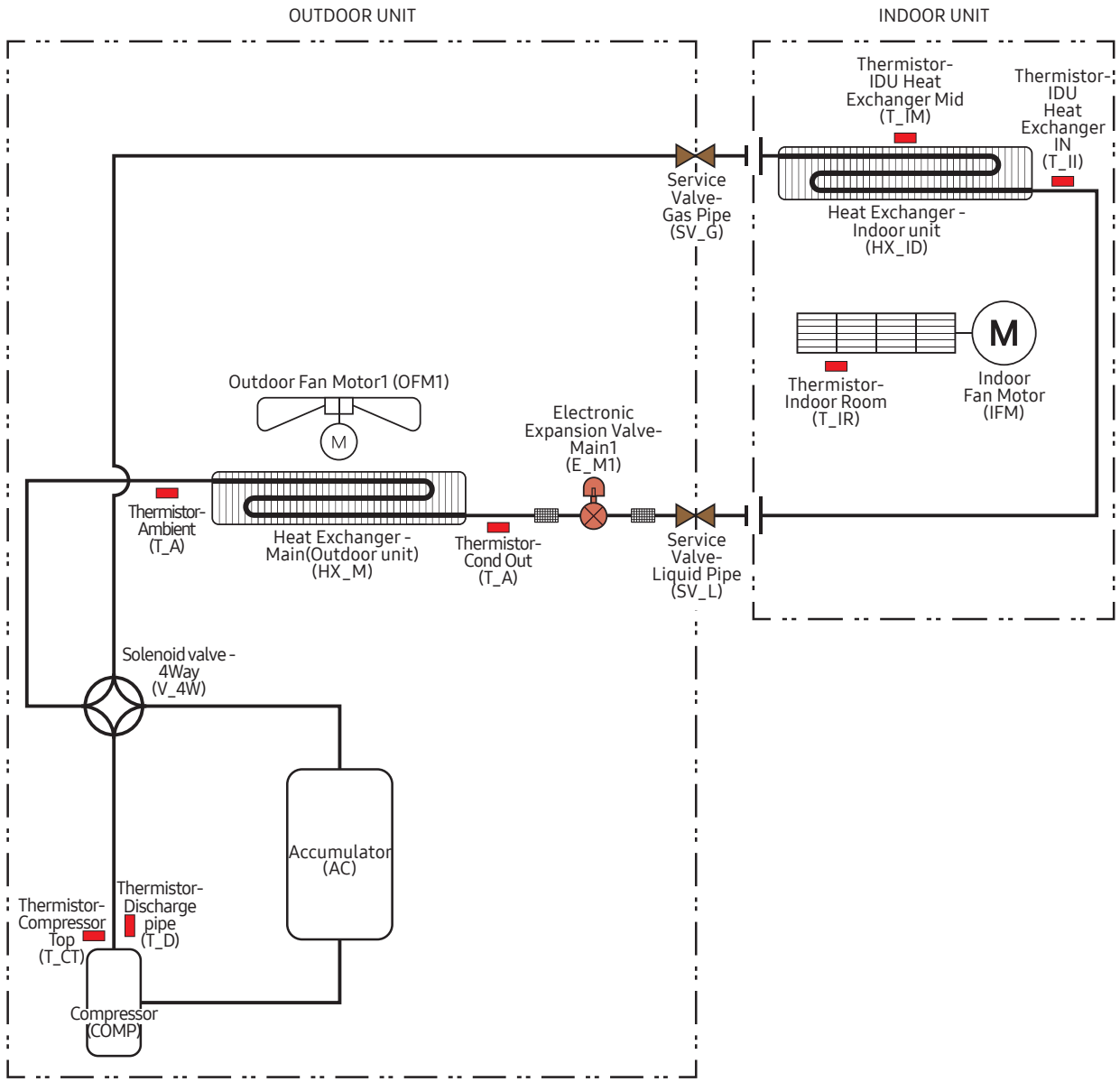
CNH091DB(AC009BN1DCH/AA)+CXH09ADB(AC009BXADCH/AA)
CNH121DB(AC012BN1DCH/AA)+CXH12ADB(AC012BXADCH/AA)



8. Piping Diagram

Outdoor Units

CNH181DB(AC018BN1DCH/AA)+CXH18ADB(AC018BXADCH/AA)



Installation

Wind-Free 1Way Cassette

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.

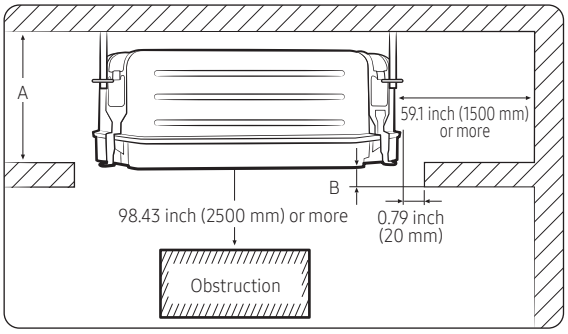
⚠ CAUTION

- As a rule, the unit cannot be installed at a height of less that 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

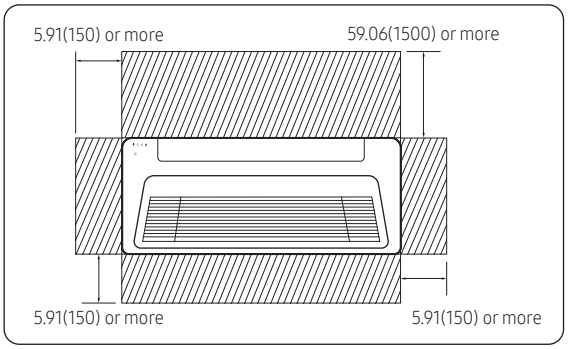


Unit: inch(mm)

	AC009BN1DCH AC012BN1DCH AC018BN1DCH
A	6.69 (170)
B	0.59 (15)

1 way Cassette

Unit: inch(mm)



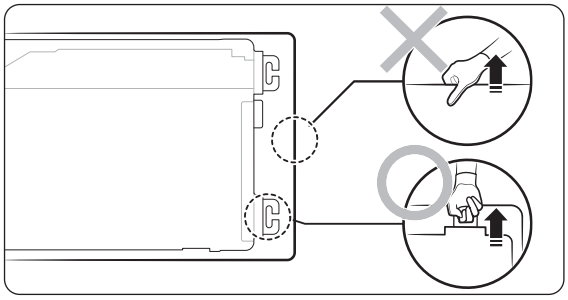
⚠ CAUTION

- 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.

Installation

Wind-Free 1Way Cassette

1 way Cassette

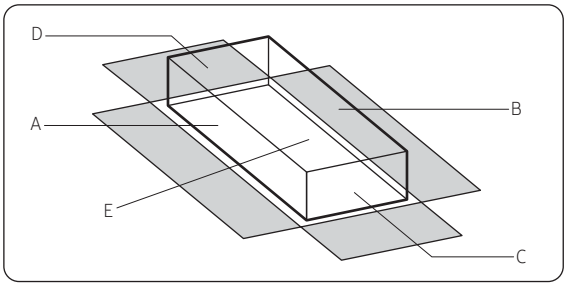


Optional: Insulating the body of the indoor unit

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.

1 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.)

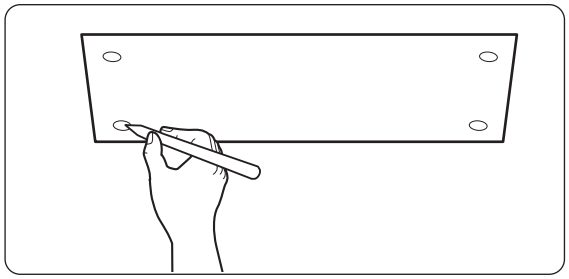
Unit: inch(mm)

Indoor unit		A	B	C	D	E
1 way Cassette	AC009BN1DCH AC012BN1DCH	38.98X6.10 (990x155)	38.98X6.10 (990x155)	16.93X6.10 (430x155)	16.93X6.10 (430x155)	38.98X16.93 (990x430)
	AC018BN1DCH	48.03X6.10 (1220x155)	48.03X6.10 (1220x155)	18.50X6.10 (470x155)	18.50X6.10 (470x155)	48.03X18.50 (1220x470)

Installing the indoor unit

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

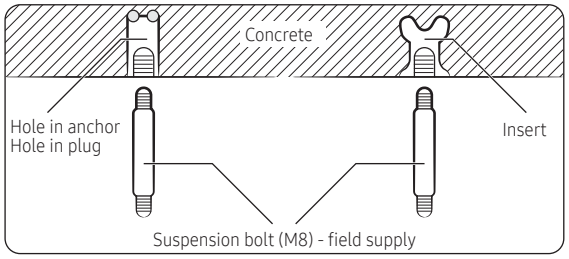
1 Place the pattern sheet on the ceiling at the location where you want to install the indoor unit.



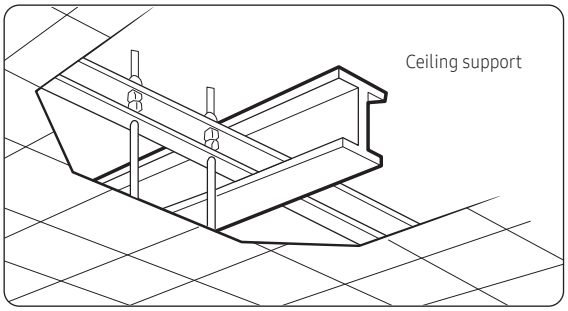
NOTE

- 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.



Installation

Wind-Free 1Way Cassette

⚠ 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.

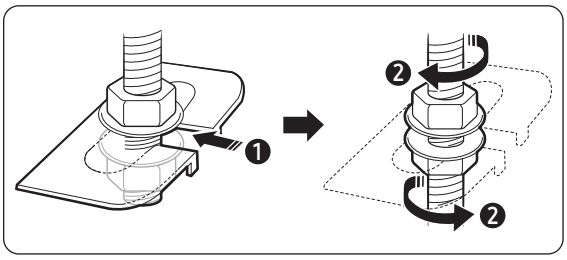
4 Screw eight nuts and washers to the suspension bolts, making space for hanging the indoor unit.

⚠ 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.

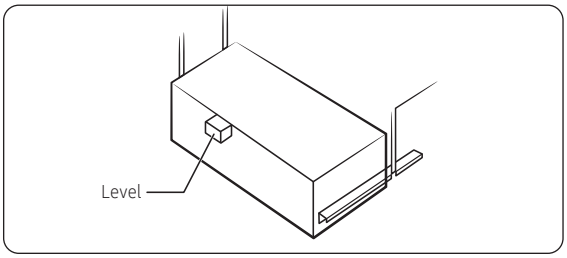
5 Hang the indoor unit to the suspension bolts between two nuts. Screw the nuts to suspend the unit.

1 way Cassette



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.



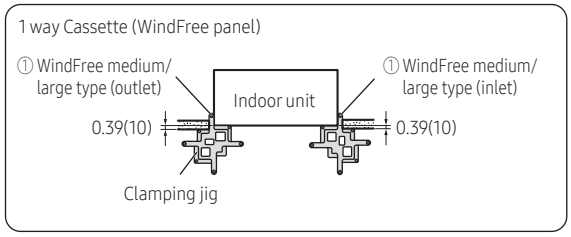
7 Adjust the unit to the appropriate position, taking into account the installation area for the front panel.

- 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 plastic

1 way Cassette

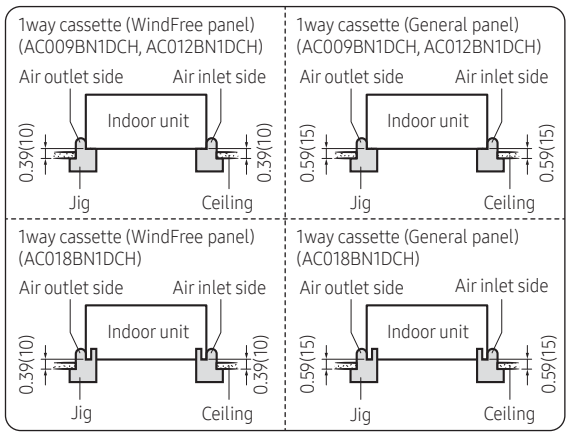
Unit : inch(mm)



When the installation template is made of paper

1 way Cassette

Unit: inch(mm)

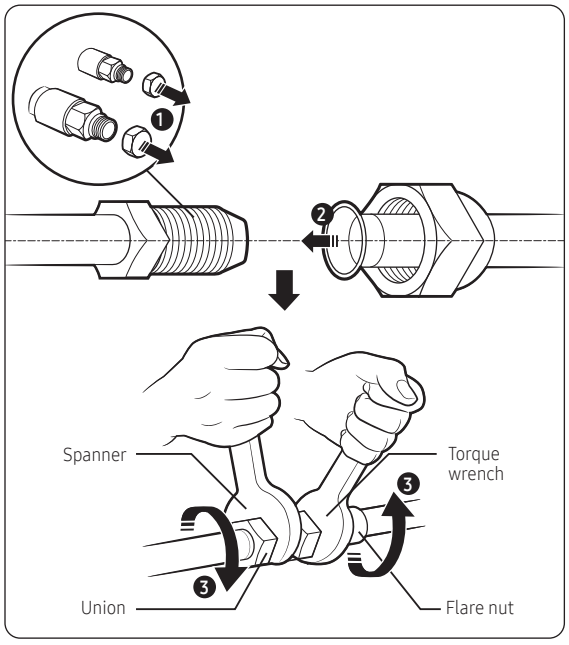


Connecting the assembly pipes to the refrigerant pipes

There are two refrigerant pipes of different diameters :

- A smaller one for the liquid refrigerant.
- A larger one for the gas refrigerant. The inside of copper pipe must be clean and has no dust.

1 Remove the two pinch pipes and connect the field refrigerant pipes. Tighten the flare nuts, first manually and then with a torque wrench and a backup wrench applying the following torque.



Outer Diameter (mm)		Torque	
mm	inch	N·m	lbf.ft
Ø6.35	1/4	14 to 18	10.3 to 13.3
Ø9.52	3/8	34 to 42	25.1 to 31.0
Ø12.70	1/2	49 to 61	36.1 to 45.0
Ø15.88	5/8	68 to 82	50.2 to 60.5
Ø19.05	3/4	100 to 120	73.8 to 88.5

(1N·m=10kgf·cm)

NOTE

- If the pipes must be shortened, see **Step 6 Cutting and flaring the pipes** on page **14**.

2 Be sure to use an insulator thick enough to cover the refrigerant pipes to improve the efficiency of the unit and to prevent condensate water formation on the outside of the pipes falling onto the floor.

3 Cut off any excess foam insulation.

4 Make sure that there are no cracks or waves on the bent area.

5 It is necessary to double the insulation thickness (0.39inch or more) to prevent condensation on the insulator when the installed area is warm and humid.

6 Do not use joints or extensions for the pipes connecting the indoor and outdoor units. The only permitted connections are those for which the units are designed.

⚠ CAUTION

- Connect the indoor and outdoor units using pipes with flared connections (not supplied). For the lines, use insulated, unwelded, degreased and deoxidized copper pipe (Cu DHP type to ISO 1337 or UNI EN 12735-1), suitable for operating pressures of at least 4.2MPa (609.2 psig) and for a burst pressure of at least 20.7MPa (3002.3 psig). Copper pipe for hydro-sanitary applications is completely unsuitable.
- For sizing and limits (height difference, line length, max. bends, refrigerant charge, etc.) see the outdoor unit installation manual.
- All refrigerant connection must be accessible, in order to permit either unit maintenance or removing it completely.
- If the pipes require brazing, make sure that oxygen free nitrogen (OFN) is flowing through the system.
- Nitrogen blowing pressure range is 0.02 to 0.05 MPa (2.9 to 7.3 psig).

Installation

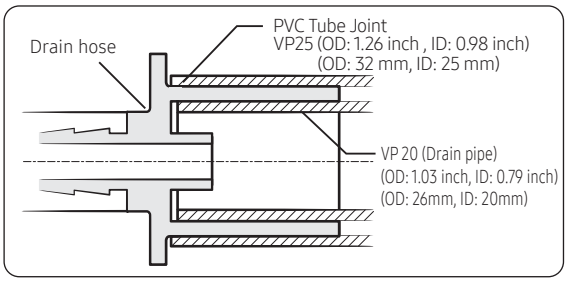
Wind-Free 1Way Cassette

Installing the drain hose and drain pipe

1 way Cassette

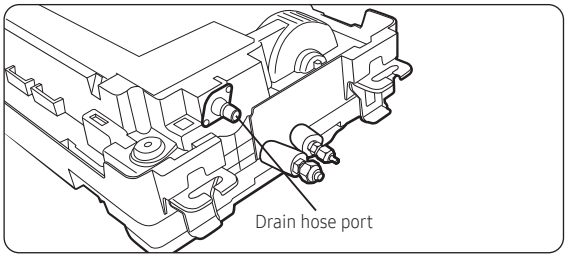
1 Fix the flexible hose to the drain pipe.

- The connection port of the flexible hose and PVC drain pipe must be fixed with PVC adhesives.
  Check out that the connected part doesn't leak.

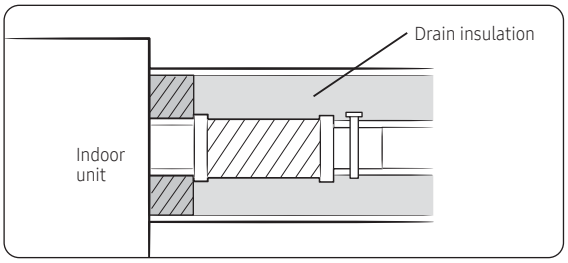


2 Connect the flexible hose to the drain hose port.

- Make sure that a rubber ring is installed on the drain hose port.
- The drain hose port location differs depending on the unit types.



3 Cover the flexible hose with the provided insulation.



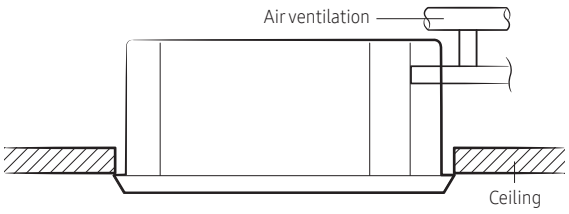
4 Field installed drain lines should be kept as short as possible.

5 Insulate the whole drain pipe inside the building (field supply).
The whole drain pipe must be insulated with 0.2 inch (5mm) (or more) insulation to prevent condensation.

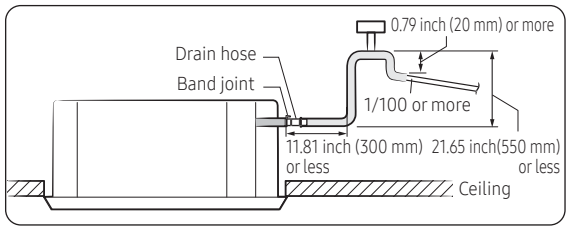
⚠ CAUTION

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

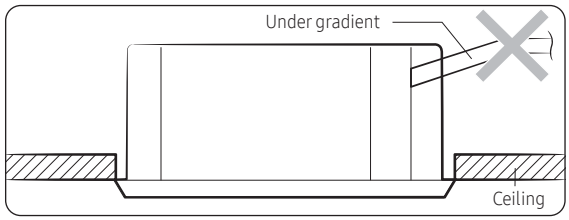
- Install air ventilation to drain condensation smoothly.



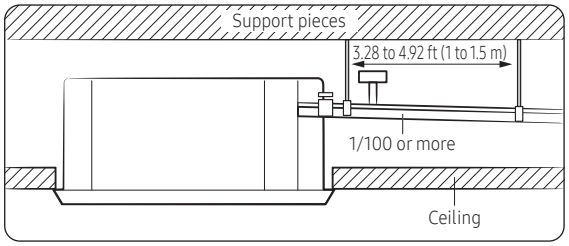
- If it is necessary to increase the height of the drain pipe, install the drain pipe straight within 11.81 inch(300 mm) from the drain hose port. If it is raised higher than 21.65 inch (550 mm), there may be water leaks.



- 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.



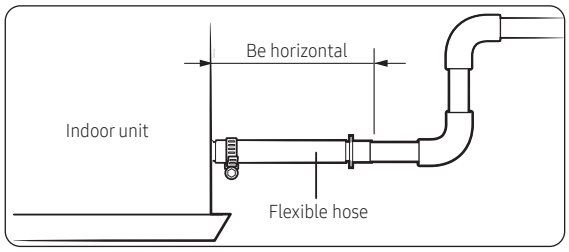
- Do not apply force to the piping on the unit side when connecting the drain hose. The hose should not be allowed to hang loose from its connection to the unit. Fasten the hose to a wall, frame or other support as close to the unit as possible.



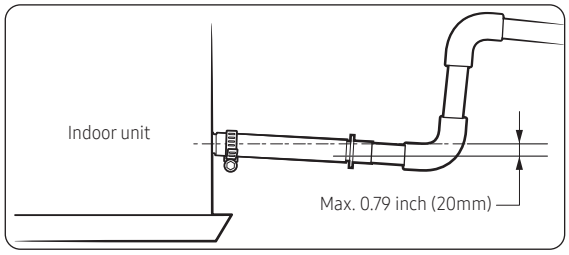
Installation

Wind-Free 1Way Cassette

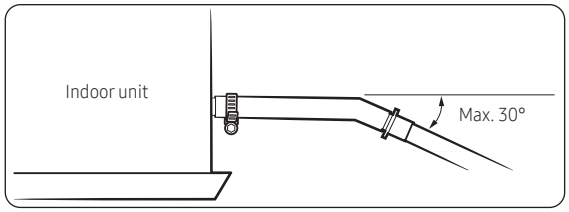
- Install horizontally.



- Max. allowable aixs gap

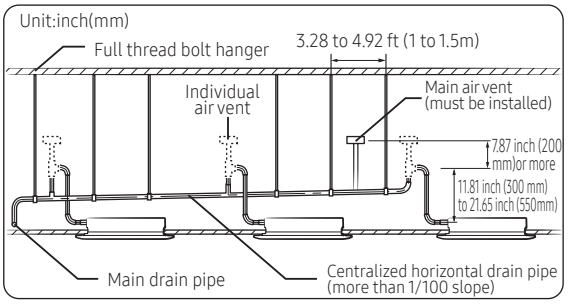


- Max. allowable bending angle



NOTE

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



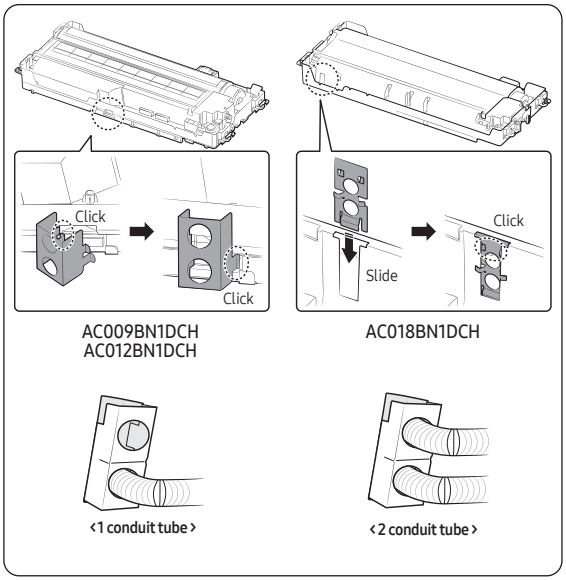
- If 3 or more units are installed, install a main air vent in front of the farthest indoor unit from the main drain pipe.
- To prevent water from flowing back to indoor units, install an individual air vent at the top of each indoor unit.
  - The air vents should be T or 7 shaped to prevent dust or 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.

1 way Cassette



NOTE

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

Installation

Wind-Free 1Way Cassette

Connecting the power and communication cables

⚠ 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.

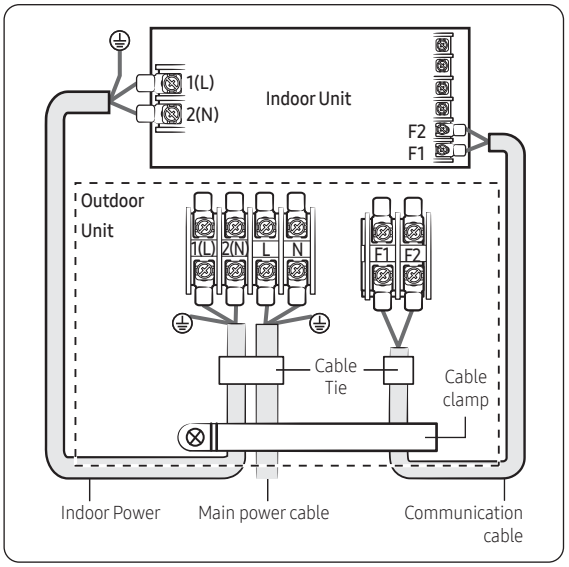
The indoor unit is powered through the outdoor unit by means of a H05 RN-F connection cable (or a more power model), with insulation in synthetic rubber and a jacket in polychloroprene (neoprene), in accordance with the requirements specified in the standard EN 60335-2-40.

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.

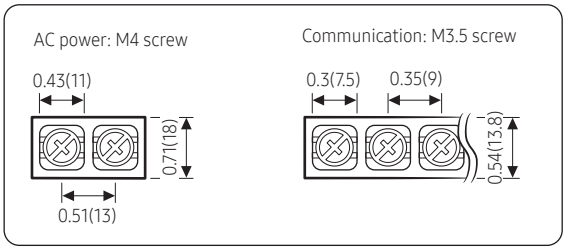
3 Route the other end of the cable to the outdoor unit through the ceiling & the hole on the wall.

4 Reassemble the electrical component box cover, carefully tightening the screw.



Indoor power supply		
Power supply	Max/Min(V)	Indoor power cable
208 to 230V, 60 Hz	±10%	0.0012 inch² ↑ (0.75mm²↑), 3 wires
Communication cable		
0.0012 inch² ↑(0.75mm²↑), 2 wires		

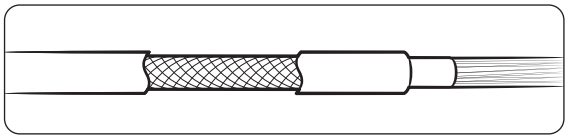
Unit: inch(mm)



	Tightening torque	
	N·m	lbf.ft
M3.5	0.8 to 1.2	0.59 to 0.89
M4	1.2 to 1.8	0.89 to 1.1

(1N·m=10kgf·cm)

- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord.
  - Code designation
    [1-phase] IEC: 60245 IEC 57 / CENELEC: H05RN-F grade or more
- 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.

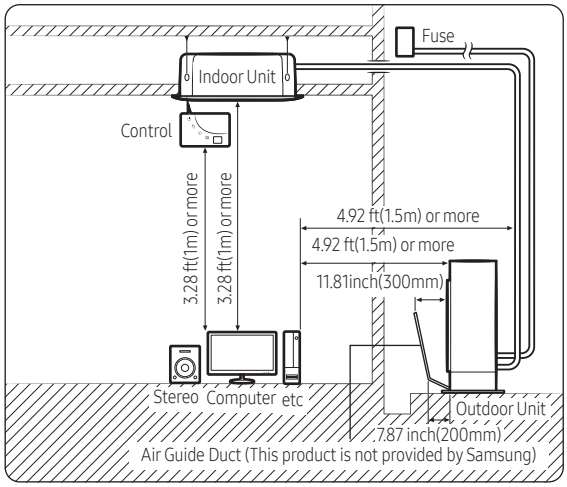
Installation

Outdoor Units

Choosing the installation location

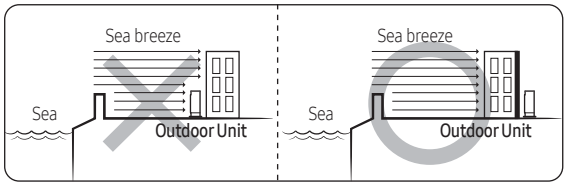
Installation location requirements

- 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.

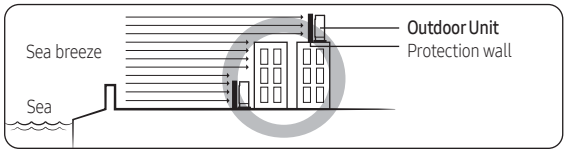


⚠ CAUTION

- 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 -13°F(-25°C) or less.
- 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

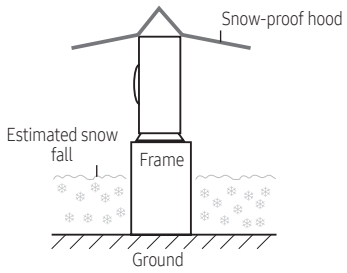
Outdoor Units

- 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.

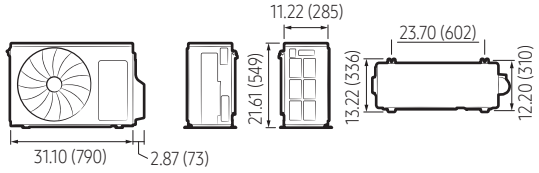


Outdoor unit dimensions

Unit : inch (mm)

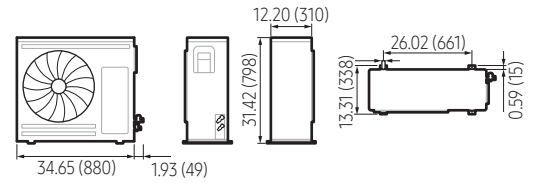
A Type

AC009BXADCH, AC012BXADCH



B Type

AC018BXADCH



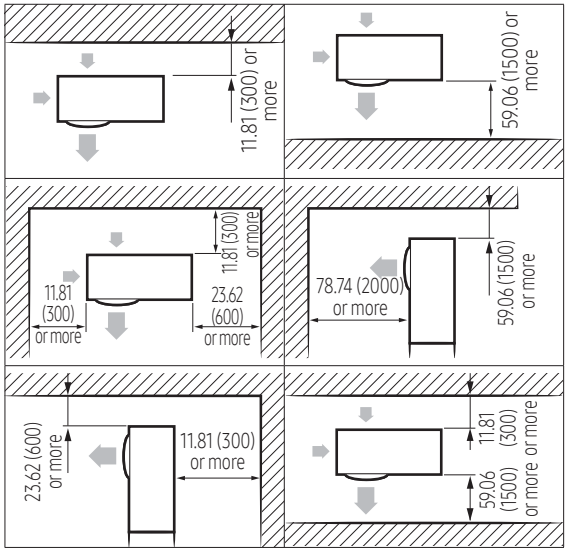
Installation

Outdoor Units

Minimum clearances for the outdoor unit

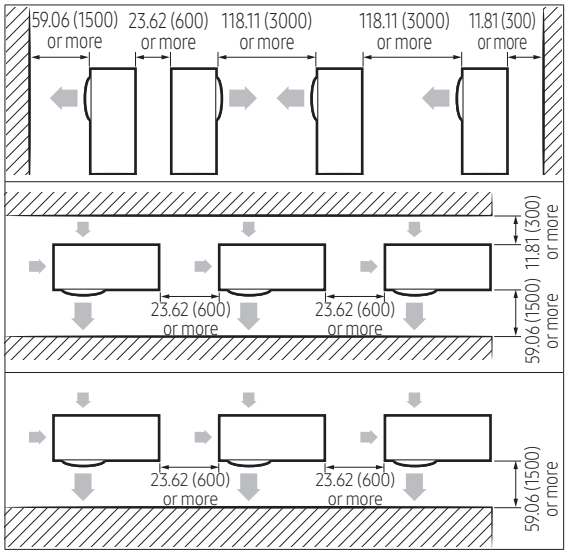
When installing 1 outdoor unit

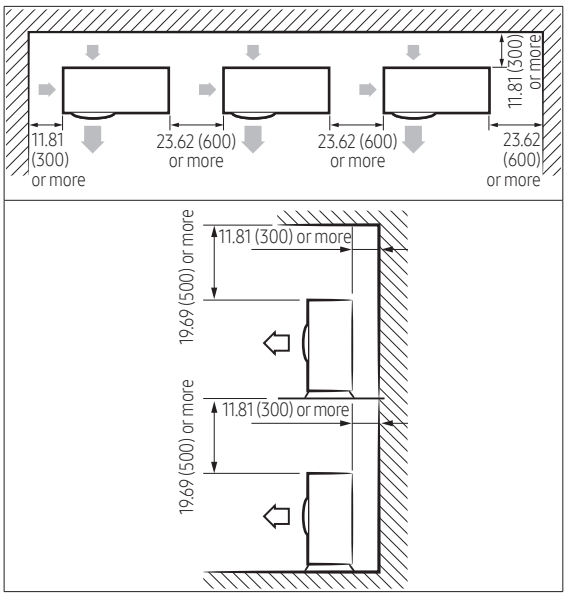
Unit : inch (mm)



When installing more than 1 outdoor unit

Unit : inch (mm)



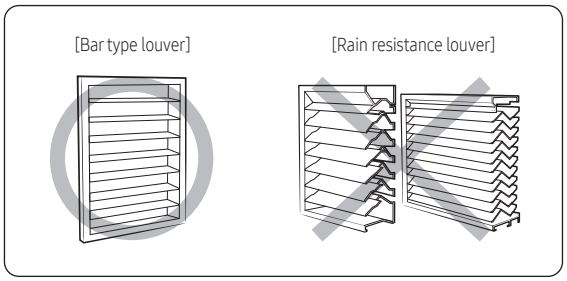


⚠ CAUTION

- 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

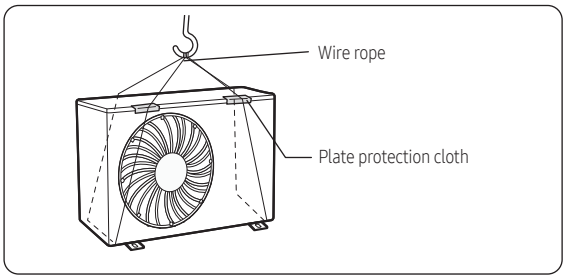
Outdoor Units

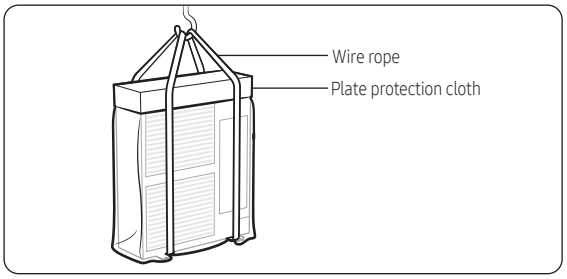
Moving the outdoor unit with wire rope

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.

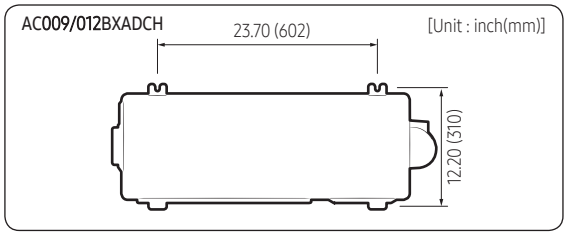
2 Attach the outdoor unit to the appropriate support using anchor bolts.

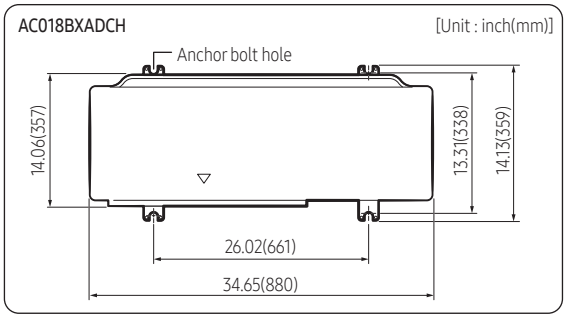
- The ground wire for the telephone line cannot be used to ground the air conditioner.

3 DIf the outdoor unit is exposed to strong winds, install shield plates around the outdoor unit, so that the fan can operate correctly.

NOTE

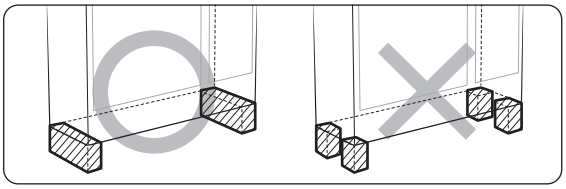
- Install provided rubber legs to prevent vibration and noise.



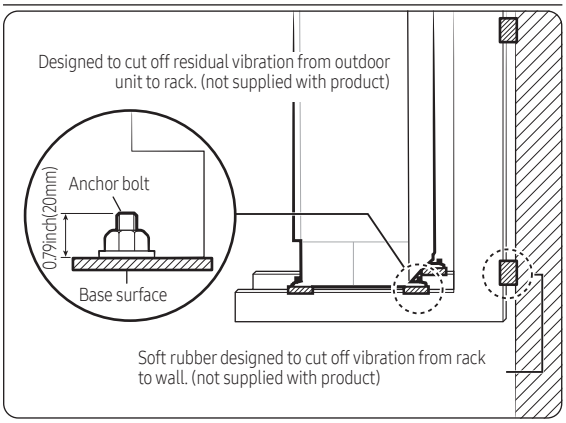


⚠ CAUTION

- 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.

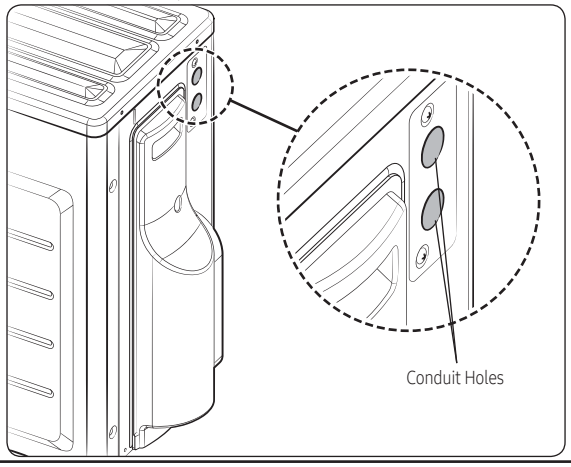
⚠ CAUTION

- 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.

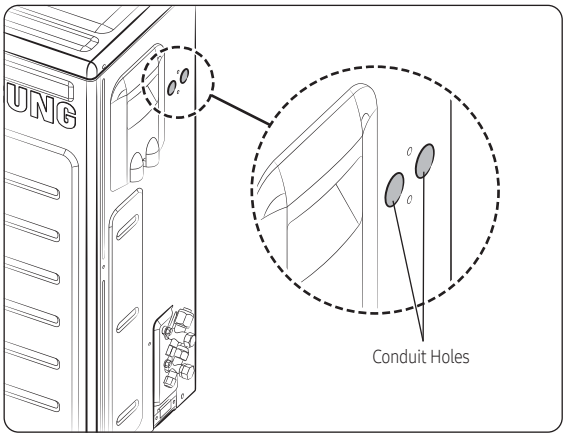
Connecting wire conduits

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)

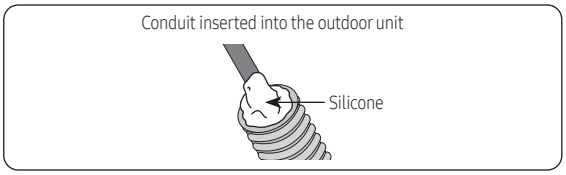


   - AC018BXADCH
     - Drill conduit holes on the side cabinet. (knock out holes)



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.

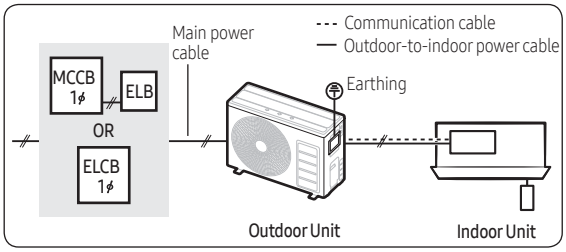


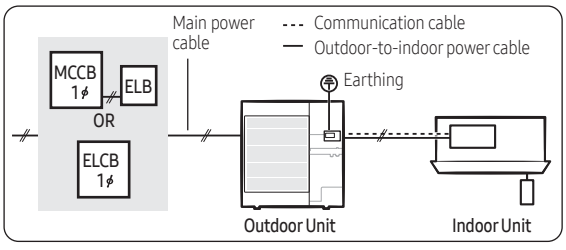
4 Connect the cables to the outdoor units.
For how to connect the cables, refer to the next page.

5 Attach the conduit plate to the product.

Air conditioning system examples

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





Installation

Outdoor Units

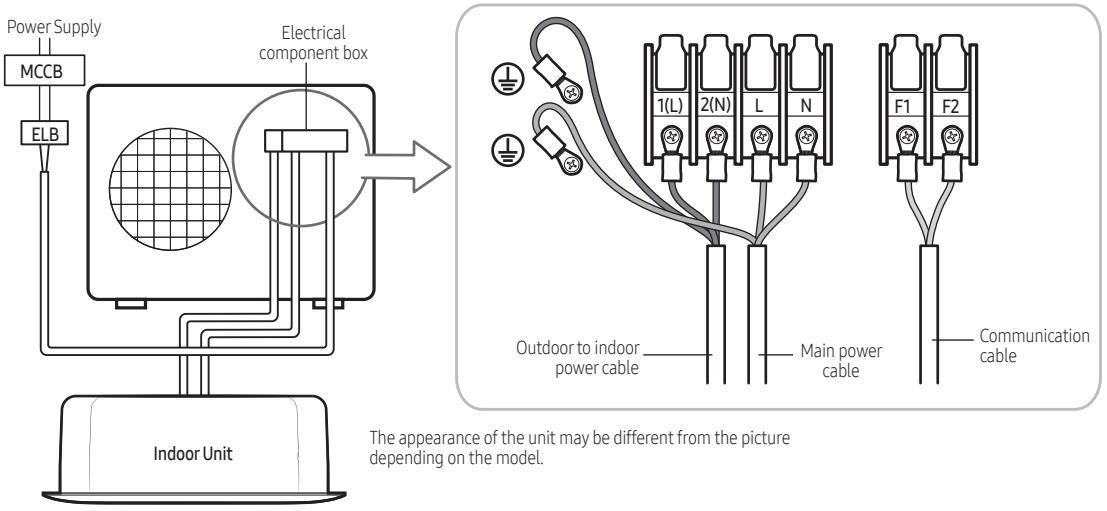
※ The appearance of the unit may be different from the picture depending on the model.

⚠ CAUTION

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

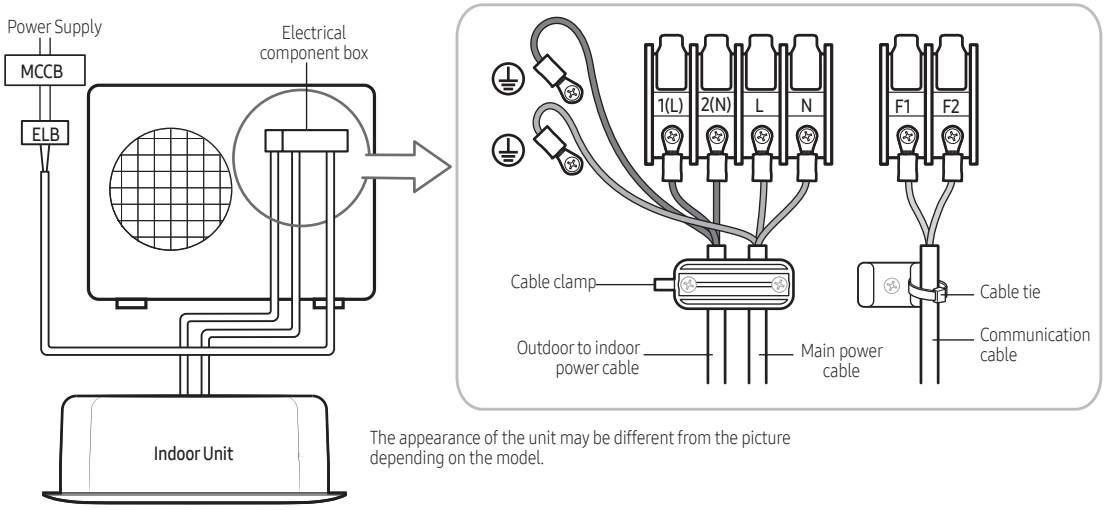
Connecting the main power cable

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



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

When using ELB for AC018BXADCH (1-phase)



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

Installation

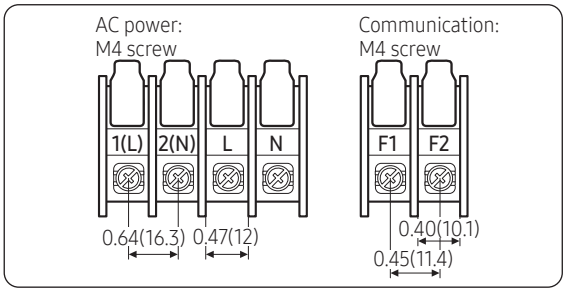
Outdoor Units

⚠ 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 a 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

[Unit : inch(mm)]



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	9.0	15.0
	AC009BNHDCH					2.10	10.9	15.0
	AC009BNJDCH					0.49	9.3	15.0
	AC009BNLDCH					1.06	9.8	15.0
	AC009BNNDCH					0.30	9.1	15.0
AC012BXADCH	AC012BN1DCH		6.0	0.42	-	0.26	9.0	15.0
	AC012BNHDCH					2.10	10.9	15.0
	AC012BNJDCH					0.49	9.3	15.0
	AC012BNLDCH					1.06	9.8	15.0
	AC012BNNDCH					0.30	9.1	15.0
AC018BXADCH	AC018BN1DCH	208~230V/60Hz	12.7	1.25	-	0.42	18.4	25.0
	AC018BN4DCH					0.79	18.8	25.0
	AC018BN6DCH					0.79	18.8	25.0
	AC018BNADCH					0.42	18.4	25.0
	AC018BNHDCH					2.10	20.1	25.0
	AC018BNJDCH					0.49	18.5	25.0
	AC018BNLDCH					1.06	19.1	25.0
	AC018BNNDCH					0.30	18.3	25.0
	AC018BNZDCH					1.50	19.5	25.0
AC024BXADCH	AC024BN4DCH		15.9	1.25	-	0.79	22.8	30.0
	AC024BN6DCH					0.79	22.8	30.0
	AC024BNADCH					0.42	22.4	30.0
	AC024BNHDCH					2.10	24.1	30.0
	AC024BNZDCH					2.10	24.1	30.0
AC030BXADCH	AC030BN4DCH		16.2	1.25	-	0.79	22.3	30.0
	AC030BN6DCH					0.79	22.3	30.0
	AC030BNHDCH					2.10	23.6	30.0
	AC030BNTDCH					0.51	22.1	30.0
	AC030BNZDCH					2.50	24.0	30.0
AC036BXADCH	AC036BN4DCH		14.7	1.25	1.25	0.79	21.7	35.0
	AC036BN6DCH					0.79	21.7	35.0
	AC036BNHDCH					3.50	24.4	35.0
	AC036BNTDCH					0.51	21.4	35.0
	AC036BNZDCH					3.60	24.5	35.0
AC042BXADCH	AC042BN4DCH		20.9	1.25	1.25	0.79	29.5	40.0
	AC042BN6DCH					0.79	29.5	40.0
	AC042BNHDCH					3.50	32.2	40.0
	AC042BNZDCH					3.40	32.1	40.0
AC048BXADCH	AC048BN4DCH		20.9	1.25	1.25	0.79	29.5	40.0
	AC048BN6DCH					0.79	29.5	40.0
	AC048BNHDCH					3.50	32.2	40.0
	AC048BNZDCH					4.10	32.8	40.0

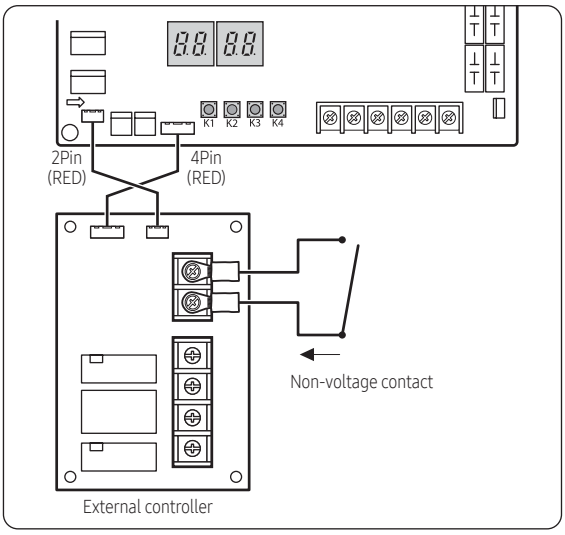
Installation

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 ± 10 %.
- Maxium allowable voltage between phases is 2 %.
- Symbols
  - RLA: Rated Load Ampere (A)
  - MOC: Maximum Operating Current (A)
  - MCA: Minumum 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

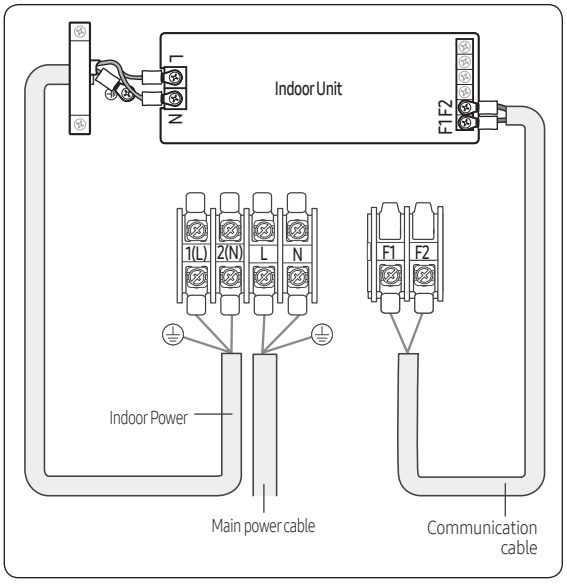


Installation

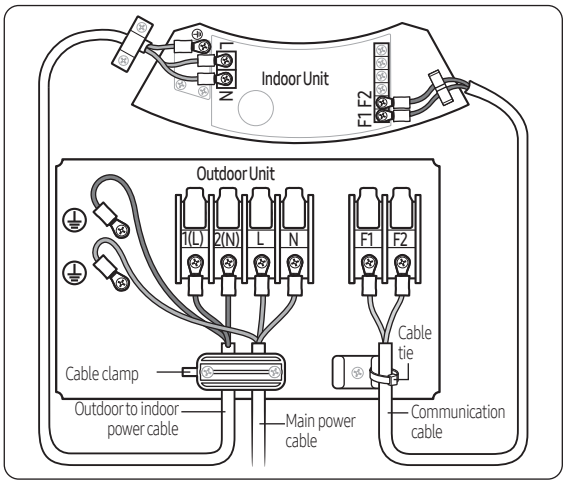
Outdoor Units

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

- AC009/012BXADCH



- AC018BXADCH

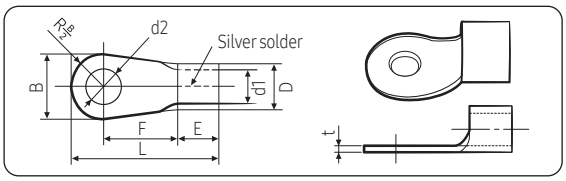


NOTE

- 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	F	L	d2		t
		Standard dimension [mm(inch)]	Allowance [mm(inch)]	Standard dimension [mm(inch)]	Allowance [mm(inch)]	Standard dimension [mm(inch)]	Allowance [mm(inch)]	Min. [mm (inch)]	Min. [mm (inch)]	Max. [mm (inch)]	Standard dimension [mm(inch)]	Allowance [mm(inch)]	Min. [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)							9 (3/8)	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

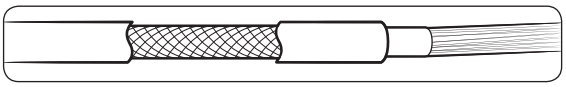
Outdoor Units

Outdoor-to-indoor power and communication cables specifications

- Indoor unit :
  1WAY CST(AC***BN1***)

Indoor power supply		
Power supply	Max/Min (V)	Indoor power cable
1Φ, 208-230V~, 60Hz	±10%	0.0012 inch²↑ (0.75mm² ↑), 3 wires
Communication cable		
0.0012 inch²↑ (0.75mm² ↑), 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.



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