

**SAMSUNG**

# VRF Technical Data Book

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



Model :AC\*\*\*NN4DCH/AA (Indoor Unit), AC\*\*\*JXSCCH/AA (Outdoor Unit)

# History

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Version	Modification	Date	Remark
Ver.1.0	Released CAC Wind-Free 4Way Cassette for North America (Low Ambient)	18.03.20	
Ver.1.1	Updated Capacity Table and Temperature and air flow distribution page	18.05.29	
Ver.1.2	Updated the panel model name in specification page	19.01.22	

# Features & Benefits

## CAC - World-class energy efficiency

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

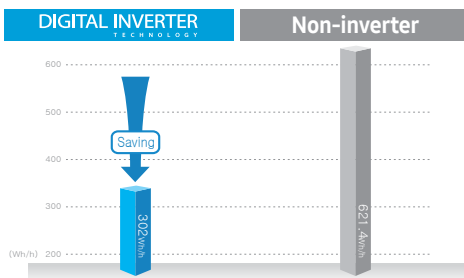
Featuring a suite of energy-optimizing technologies, Samsung CAC Single delivers top-class energy efficiency to support business in saving costs and the environment.

### 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

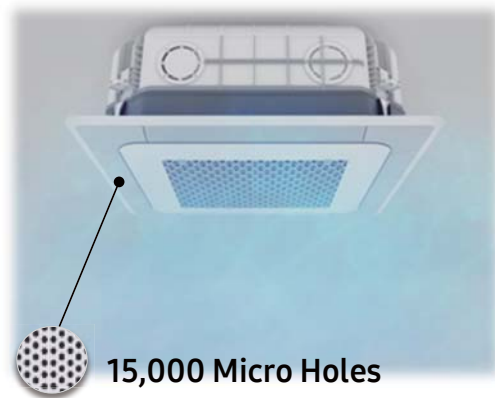
After reaching changes its operation mode to economical. By avoiding inefficient and frequent switching on and off of the compressor, the digital inverter saves up to 50 percent in energy consumption compared to non-inverter air conditioners.



### Wind-Free Cooling with Micro holes

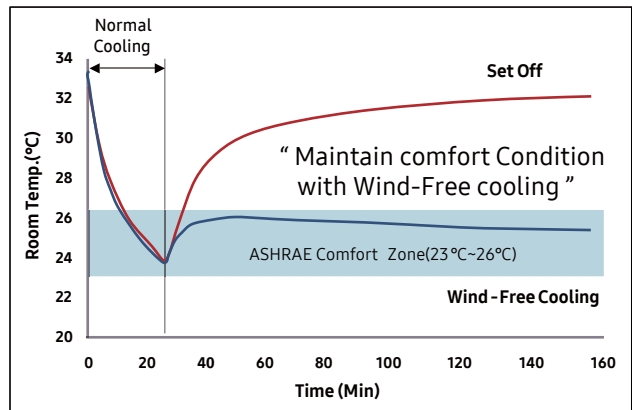
- The Wind-Free Air conditioner pushes air out through 15,000 micro holes in the panel, producing a dispersed and gentle flow of air actually defined as “still air” and the key here is all of those holes create a still, cooled air flow that infiltrates the room gently and softly.
- ※ Still Air condition : 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 @ 122m<sup>2</sup>)

# Features & Benefits

## CAC Single - Superior performance

### Stabilize the atmosphere with broad temperature allowance and control

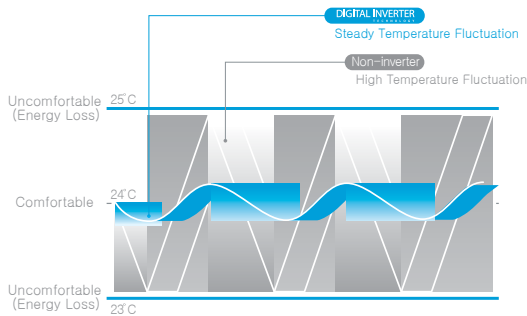
Samsung is dedicated to supporting comfortable living and working environments based on the strength of its technologies. With a single unit, CAC Single delivers reliable comfort and control over multiple areas to ensure a pleasant atmosphere in any climate.

### 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

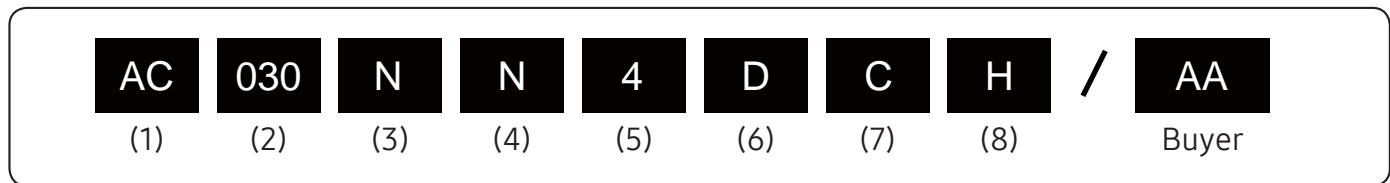
CAC Single outdoor units offer a selection of pipe directions. The internal pipe connection ports allow four different pipe directions, supporting a neater, more organized-looking unit upon installation.



# Nomenclature

## Indoor Unit

### Model Name



#### (1) Classification

AC	CAC
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#### (2) Capacity

x 1/10 kW (3 digits)
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#### (3) Version

H	2014
J	2015
K	2016
M	2017
N	2018

#### (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
M	MSP Duct
C	Ceiling
J	Console
A	A3050 (Wall Mounted)

#### (6) Feature

F	Flagship
S	Standard
D	Deluxe
P	Premium

#### (7) Rating Voltage

K	1Φ, 220~240V, 50/60Hz
C	1Φ, 208-230V, 60Hz

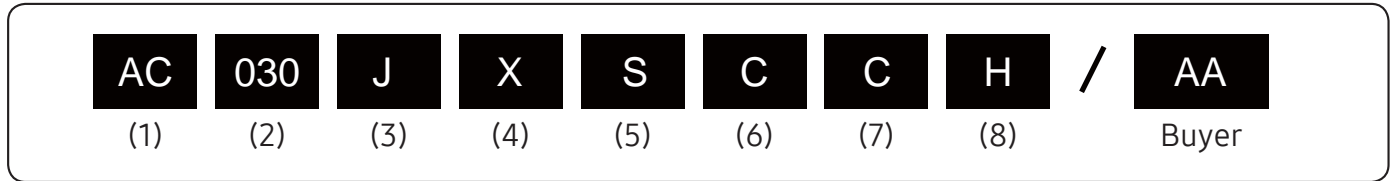
#### (8) Mode

H	Heat Pump
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# Nomenclature

## Outdoor Unit

### Model Name



#### (1) Classification

AC	Single
AM	VRF

#### (2) Capacity

x 1000 Btu/h (3 digits)
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#### (3) Version

F	2013
H	2014
J	2015

#### (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

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## Indoor unit

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Model	Capacity (kBtu/h)	
	30	36
Wind-Free 4Way CST		

## Outdoor Unit

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Model	Capacity (kBtu/h)	
	30	36
1Phase		

# Contents

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Wind-Free 4Way Cassette	9
Outdoor Units	22

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# Wind-Free 4Way Cassette

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1. Specification	11
2. Summary Table	14
3. Capacity Table	15
4. Dimensional Drawing	17
5. Center of Gravity	18
6. Electrical Wiring Diagram	19
7. Sound Data	20
8. Temperature and air flow distribution	21

# 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:

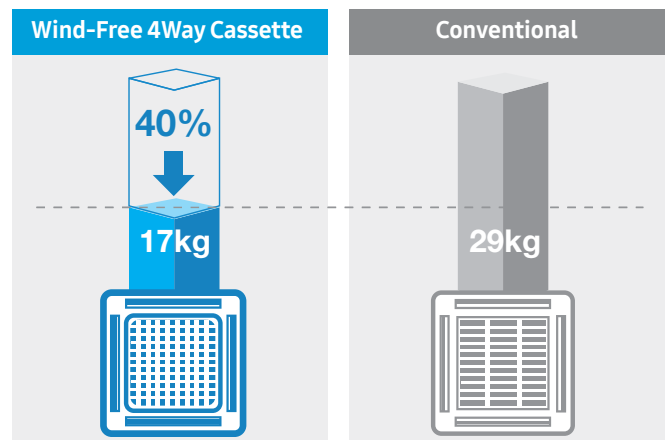
- **Stylishly clean design.** Add panache to interior spaces with a choice of clean, streamlined panel patterns in a lightweight build.
- **Robust operation.** Control the atmosphere perfectly with an advanced design for superior airflow and cooling/heating performance.
- **Low maintenance and simple 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

Type				Wind-Free 4Way Cassette	Wind-Free 4Way Cassette	
System	Model Name	Indoor Unit		AC030NN4DCH/AA	AC036NN4DCH/AA	
		Outdoor Unit		AC030JXSCCH/AA	AC036JXSCCH/AA	
System	Mode			-	Heat Pump	
	Performance	Capacity (Min/Std/Max)	Cooling	kW	3.81 / 8.79 / 10.55	4.10 / 10.55 / 12.31
				Btu/h	13,000 / 30,000 / 36,000	14,000 / 36,000 / 42,000
				US RT	1.08 / 2.50 / 3.00	1.17 / 3.00 / 3.50
			Heating	kW	3.22 / 9.38 / 11.43	3.52 / 11.72 / 14.07
				Btu/h	11,000 / 32,000 / 39,000	12,000 / 40,000 / 48,000
				US RT	0.92 / 2.67 / 3.25	1.00 / 3.33 / 4.00
	Power	Power Input (Min/Std/Max)	Cooling	kW	0.87 / 2.29 / 3.20	0.93 / 2.79 / 3.60
			Heating	kW	0.72 / 2.44 / 5.00	0.72 / 3.22 / 5.50
		Current Input (Min/Std/Max)	Cooling	A	4.80 / 11.00 / 14.00	4.80 / 13.40 / 17.00
			Heating	A	3.70 / 11.60 / 22.50	3.70 / 15.40 / 23.00
		Current	MCA	A	26.31	26.31
			MOP	A	45.00	45.00
	Efficiency	EER	Cooling	-	3.84	3.78
			Cooling (US)	(Btu/h)/W	13.10	12.90
		COP	Heating	W/W	3.84	3.64
		SEER		-	21	20
		HSPF		-	10.1	10.4
	Piping Connections	Liquid Pipe	Type		Flare connection	Flare connection
			Φ, mm (inch)		9.52 (3/8")	9.52 (3/8")
Gas Pipe		Type		Flare connection	Flare connection	
		Φ, mm (inch)		15.88 (5/8")	15.88 (5/8")	
Heat Insulation		-		Both liquid and gas pipes	Both liquid and gas pipes	
Piping length (ODU-IDU)		Standard	m (ft)		7.5(24.6)	7.5(24.6)
			Max.		75 (246)	75 (246)
			Elevation		30 (98)	30 (98)
	Chargeless		7.5(24.6)	7.5(24.6)		
Wiring connections	Communication	Min.	mm <sup>2</sup>	0.75	0.75	
		Remark	-	F1, F2	F1, F2	
Refrigerant	Type		-	R410A	R410A	
	Factory Charging	kg		2.9	2.9	
		lbs		6.39	6.39	
Indoor Unit	Power Supply		Ø, #, 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
	Fan	Type		-	Turbo	Turbo
		Quantity		EA	1	1
		Air Flow Rate		CMM	23.8	28.9
				CFM	840	1,020
			l/s	396.4	481.4	
Fan Motor	Type		-	BLDC Motor	BLDC Motor	
	Output		W x n	97 x 1	97 x 1	
Drain	Drain Pipe		Φ, mm	VP25 (OD 32,ID 25)	VP25 (OD 32,ID 25)	

# 1. Specification

## Wind-Free 4Way Cassette

Type				Wind-Free 4Way Cassette	Wind-Free 4Way Cassette	
Indoor Unit	Model Name	Indoor Unit		AC030NN4DCH/AA	AC036NN4DCH/AA	
		Outdoor Unit		AC030JXSCCH/AA	AC036JXSCCH/AA	
	Sound	Sound Pressure Level	H/M/L/(Silent)	dB(A)	38 / 35 / 32	43 / 38 / 33
		Sound Power Level		dB(A)	53	58
	External Dimension	Net Weight		kg (lbs)	18.5 (40.79)	18.5 (40.79)
		Shipping Weight		kg (lbs)	22.0 (48.50)	22.0 (48.50)
		Net Dimensions (WxHxD)		mm	840 x 288 x 840	840 x 288 x 840
				inch	33.07 x 11.34 x 33.07	33.07 x 11.34 x 33.07
		Shipping Dimensions (WxHxD)		mm	898 x 357 x 898	898 x 357 x 898
				inch	35.35 x 14.06 x 35.35	35.35 x 14.06 x 35.35
	Casing	Material		-	Polypropylene	Polypropylene
	Panel	Model Name		-	PC4NUFMAN PC4NUFMUN	PC4NUFMAN PC4NUFMUN
		Type		-	Wind-Free Type	Wind-Free Type
		Material		-	HIPS	HIPS
		Color		-	DA White	DA White
		Net Weight		kg (lbs)	6.3 (13.89)	6.3 (13.89)
		Shipping Weight		kg (lbs)	8.7 (19.18)	8.7 (19.18)
		Net Dimensions (WxHxD)		mm	950 x 64 x 950	950 x 64 x 950
				inch	37.4 x 2.5 x 37.4	37.4 x 2.5 x 37.4
	Shipping 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-EH03E	AR-EH03E	
	Wired remote control		-	MWR-WE13N	MWR-WE13N	
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		Ø, #, V, Hz	1,2,208-230,60	1,2,208-230,60	
	Heat Exchanger	Type		-	FMC	FMC
		Material	Fin	-	Al	Al
			Tube	-	Al	Al
		Fin Treatment		-	Hybrid Coating	Hybrid Coating
	Compressor	Model Name		-	UG5T450FUEJX	UG5T450FUEJX
		Type		-	BLDC Rotary	BLDC Rotary
		Output		kW	4.12	4.12
		Oil	Type	-	PVE	PVE
			Initial charge	cc (fl oz)	1700	1700
	Fan	Type		-	Propeller	Propeller
		Discharge direction		-	Front	Front
		Quantity		EA	2	2
Air Flow Rate		CMM	125.0	125.0		
		CFM	4,414.5	4,414.5		
		l/s	2083.3	2083.3		
Fan Motor	Type		-	BLDC Motor	BLDC Motor	
	Output		W x n	125 x 2	125 x 2	

# 1. Specification

## Wind-Free 4Way Cassette

Type				Wind-Free 4Way Cassette	Wind-Free 4Way Cassette	
Outdoor Unit	Model Name	Indoor Unit		AC030NN4DCH/AA	AC036NN4DCH/AA	
		Outdoor Unit		AC030JXSCCH/AA	AC036JXSCCH/AA	
	Sound	Sound Pressure Level	Cooling	dB(A)	49	51
			Heating	dB(A)	50	53
		Sound Power Level	dB(A)	64	66	
	External Dimension	Net Weight		kg (lbs)	96.0 (211.64)	96.0 (211.64)
		Shipping Weight		kg (lbs)	106.0 (233.69)	106.0 (233.69)
		Net Dimensions (W×H×D)		mm	940 x 1,420 x 330	940 x 1,420 x 330
				inch	37.01 x 55.91 x 12.99	37.01 x 55.91 x 12.99
		Shipping Dimensions (W×H×D)		mm	995 x 1,598 x 426	995 x 1,598 x 426
	inch			39.17 x 62.91 x 16.77	39.17 x 62.91 x 16.77	
	Casing	Material	Body	-	EGI Steel Plate	EGI Steel Plate
Operating Temp. Range	Cooling		°C (°F)	-20.0~46.0 (-4.0~ 114.8)	-20.0~46.0 (-4.0~ 114.8)	
	Heating		°C (°F)	-25.0~24.0 (-13.0 ~ 75.0)	-25.0~24.0 (-13.0 ~ 75.0)	

### 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 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)				
AC030NN4DCH	40.79	Max.	36,000	39,000	High	840 / 840	38	53
		Std.	30,000	32,000	Mid	715 / 715	35	-
		Min.	13,000	11,000	Low	590 / 590	32	-
AC036NN4DCH	40.79	Max.	42,000	48,000	High	1,020 / 1,020	43	58
		Std.	36,000	40,000	Mid	840 / 840	38	-
		Min.	14,000	12,000	Low	620 / 620	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	Volts	Min.	Max.	Cooling	Heating				
AC030NN4DCH	AC030JXSCCH	60	208 to 230	187	253	25.31	25.31	1.00	26.31	26.31	45.00
AC036NN4DCH	AC036JXSCCH	60	208 to 230	187	253	25.31	25.31	1.00	26.31	26.31	45.00

#### NOTE

- MCA : Minimum circuit amperes
- MOP: Maximum overcurrent protective device (A)
- Select wire size based on the value of MCA

# 3. Capacity Table

## Wind-Free 4Way Cassette

### (1) AC030NN4DCH/AA + AC030JXSCCH/AA

#### Cooling

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

Outdoor temperature (°F, DB)	Indoor Temperature (°F, WB)																				
	68/57			72/61			77/64			80/67			82/70			86/72			90/75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
-4	32.1	25.7	1.3	32.9	26.3	1.3	33.7	26.9	1.4	34.5	27.6	1.4	34.8	27.9	1.4	35.7	28.5	1.4	36.2	29.0	1.5
70	31.8	25.4	1.5	32.6	26.1	1.5	33.4	26.7	1.6	34.2	27.4	1.6	34.5	27.6	1.6	35.4	28.3	1.7	35.9	28.7	1.7
95	27.9	22.3	2.1	28.6	22.9	2.2	29.3	23.4	2.2	30.0	24.0	2.3	30.3	24.2	2.3	31.0	24.8	2.4	31.5	25.2	2.4
115	24.9	19.9	3.0	25.5	20.4	3.0	26.2	20.9	3.1	26.8	21.4	3.2	27.1	21.7	3.2	27.7	22.2	3.3	28.1	22.5	3.4

#### Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB)											
	61.0		64.0		68.0		70.0		72.0		75.0	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-13	29.5	5.2	29.2	5.1	28.9	5.1	28.6	5.0	28.3	5.0	28.0	4.9
-4	32.5	5.5	32.1	5.4	31.8	5.4	31.5	5.3	31.2	5.2	30.9	5.2
5	38.5	5.6	38.2	5.5	37.8	5.5	37.4	5.4	37.0	5.3	36.7	5.3
14	38.6	5.3	38.3	5.2	37.9	5.2	37.5	5.1	37.1	5.0	36.8	5.0
23	38.6	4.9	38.3	4.9	37.9	4.8	37.5	4.8	37.1	4.8	36.8	4.7
32	37.0	3.7	36.6	3.7	36.2	3.6	35.9	3.6	35.5	3.6	35.2	3.5
41	35.5	2.7	35.2	2.7	34.8	2.6	34.5	2.6	34.2	2.6	33.8	2.5
47	33.0	2.5	32.6	2.5	32.3	2.5	32.0	2.4	31.7	2.4	31.4	2.4
55	37.9	2.6	37.5	2.6	37.2	2.5	36.8	2.5	36.4	2.5	36.1	2.5
65	43.8	2.7	43.4	2.7	42.9	2.6	42.5	2.6	42.1	2.6	41.7	2.5
75.2	49.2	2.7	48.8	2.7	48.3	2.6	47.8	2.6	47.3	2.6	46.8	2.5

#### NOTE

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

# 3. Capacity Table

## Wind-Free 4Way Cassette

### (2) AC036NN4DCH/AA+ AC036JXSCCH/AA

#### Cooling

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

Outdoor temperature (°F, DB)	Indoor temperature (°F, WB)																							
	68/57			72/61			77/64			80/67			82/70			86/72			90/75					
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI			
-4	38.5	30.8	2.1	39.4	31.5	2.2	40.4	32.3	2.2	41.4	33.1	2.3	41.8	33.5	2.3	42.8	34.3	2.4	43.5	34.8	2.4	43.5	34.8	2.4
70	35.8	28.6	2.2	36.7	29.3	2.3	37.6	30.1	2.3	38.5	30.8	2.4	38.9	31.1	2.4	39.8	31.9	2.5	40.4	32.3	2.5	40.4	32.3	2.5
95	33.5	26.8	2.6	34.3	27.4	2.7	35.1	28.1	2.7	36.0	28.8	2.8	36.4	29.1	2.8	37.2	29.8	2.9	37.8	30.2	2.9	37.8	30.2	2.9
115	31.1	24.9	3.5	31.9	25.5	3.6	32.7	26.2	3.7	33.5	26.8	3.8	33.8	27.1	3.8	34.6	27.7	3.9	35.2	28.1	4.0	35.2	28.1	4.0

#### 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
-13	32.5	5.6	32.1	5.5	31.8	5.5	31.5	5.4	31.2	5.3	30.9	5.3
-4	37.2	5.6	36.8	5.5	36.5	5.5	36.1	5.4	35.7	5.3	35.4	5.3
5	40.2	5.6	39.8	5.6	39.4	5.5	39.0	5.5	38.6	5.4	38.2	5.4
14	43.1	5.3	42.6	5.2	42.2	5.2	41.8	5.1	41.4	5.0	41.0	5.0
23	44.5	4.9	44.1	4.9	43.6	4.8	43.2	4.8	42.8	4.8	42.3	4.7
32	44.8	4.6	44.4	4.6	43.9	4.5	43.5	4.5	43.1	4.5	42.6	4.4
41	43.8	3.8	43.4	3.8	42.9	3.7	42.5	3.7	42.1	3.7	41.7	3.6
47	41.2	3.4	40.8	3.4	40.4	3.3	40.0	3.3	39.6	3.3	39.2	3.2
55	46.2	3.4	45.7	3.4	45.2	3.3	44.8	3.3	44.4	3.3	43.9	3.2
65	48.9	3.5	48.5	3.5	48.0	3.4	47.5	3.4	47.0	3.4	46.6	3.3
75.2	51.6	3.6	51.1	3.6	50.6	3.5	50.1	3.5	49.6	3.5	49.1	3.4

#### NOTE

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

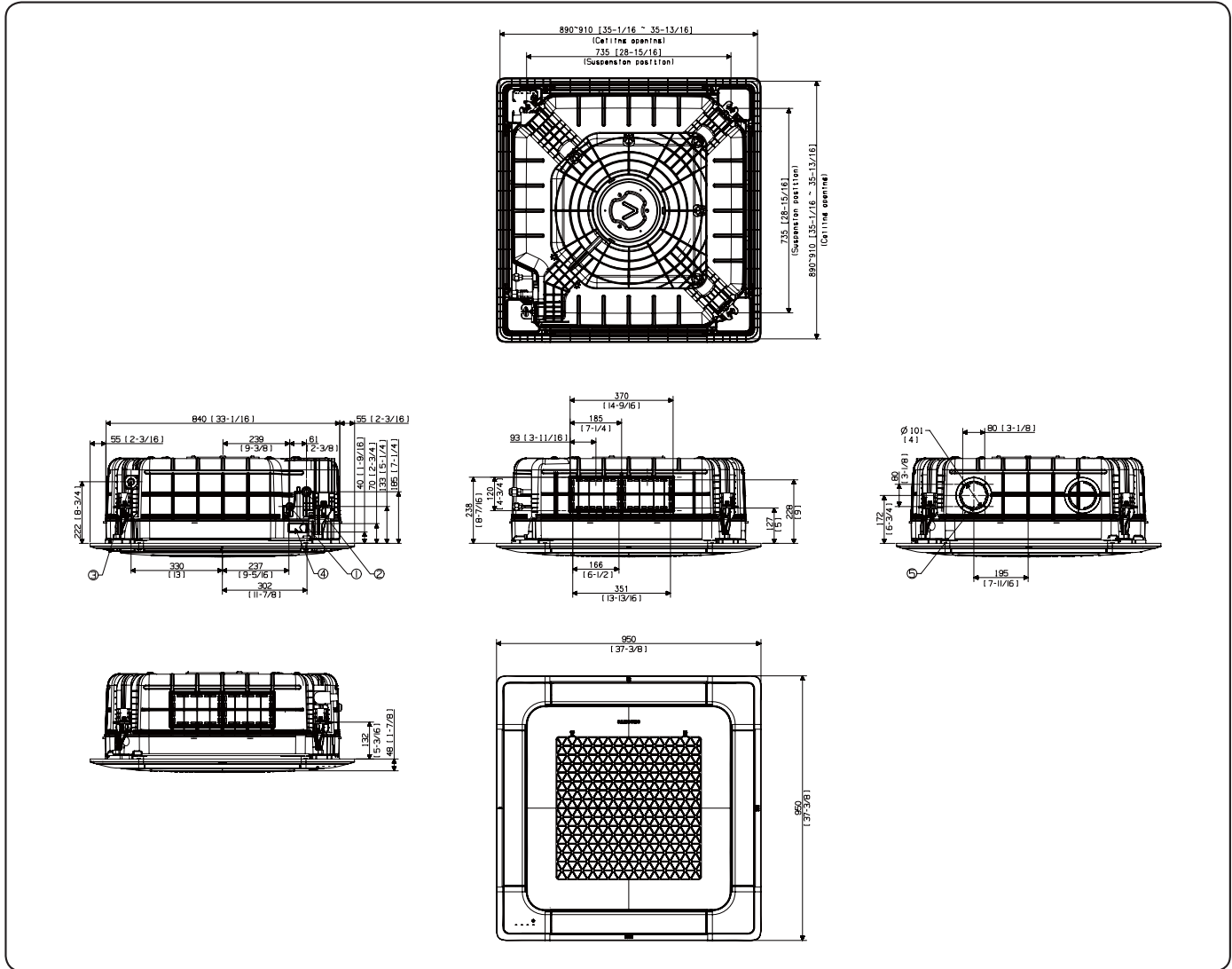


# 4. Dimensional Drawing

## Wind-Free 4Way Cassette

AC030/036NN4DCH/AA

Units : mm [inches]



No.	Name	Description
1	Liquid pipe connection	Φ9.52(3/8)
2	Gas pipe connection	Φ15.88(5/8)
3	Drain pipe connection	VP-25(OD32, ID25)
4	Power supply & Communication wiring conduit	
5	Fresh air intake knockout hole	Φ10[4], Use M4 Screw

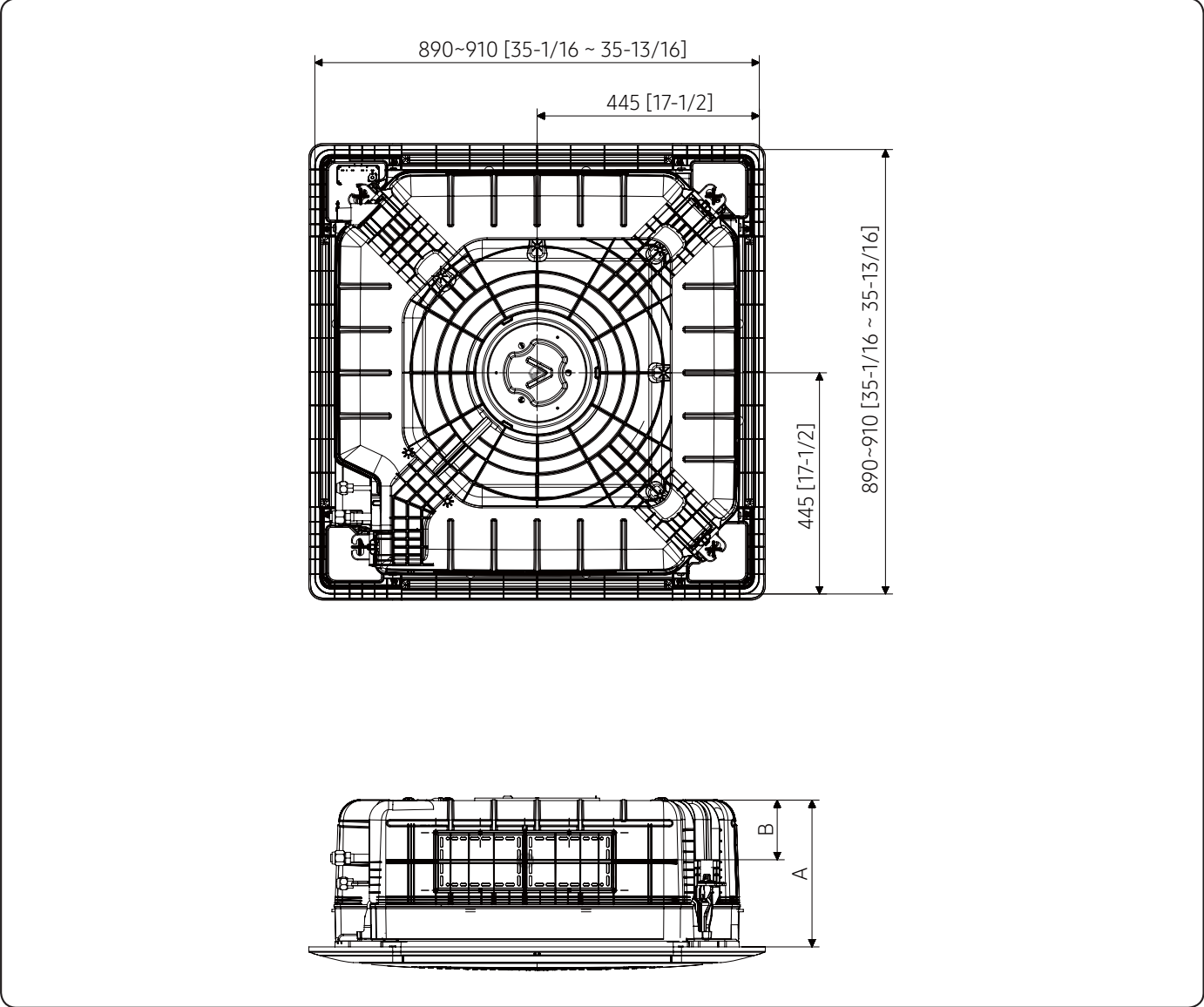
### NOTE

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

# 5. Center of Gravity

## Wind-Free 4Way Cassette

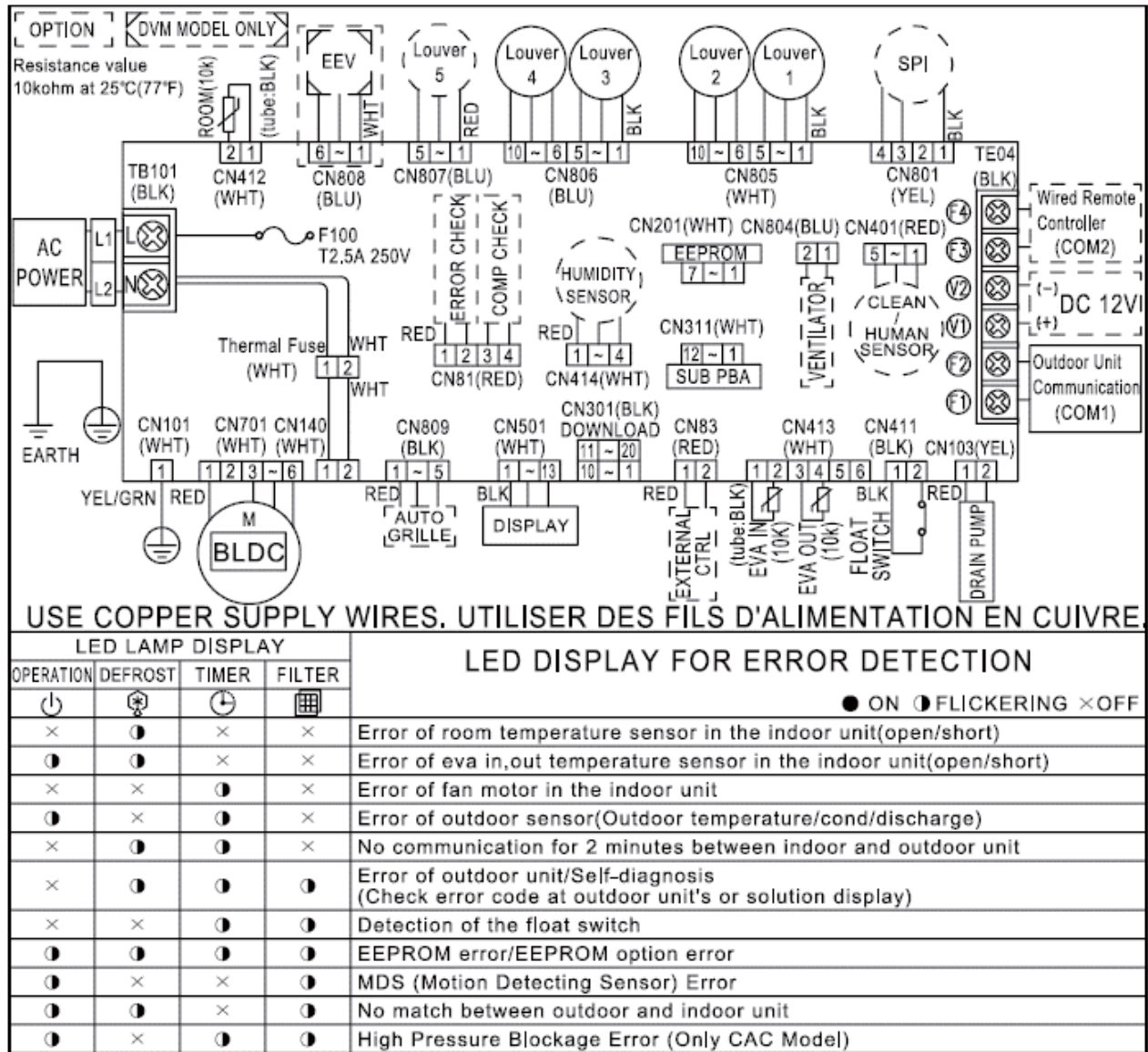
Units : mm [inches]



A	B
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

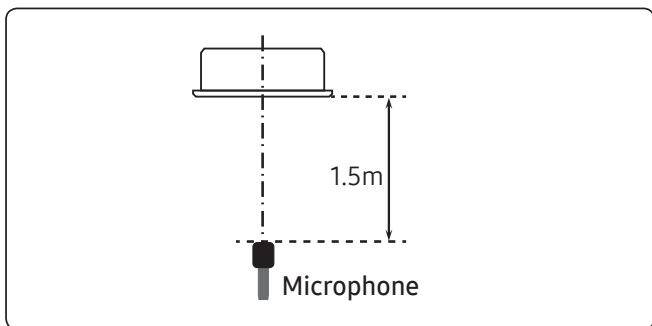
- This wiring diagram applies only to the Indoor unit.
- Symbols show as follow :  
blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue: grn: green
- For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.
- ⊕ Protective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

# 7. Sound Data

## Wind-Free 4Way Cassette

### Sound Pressure level

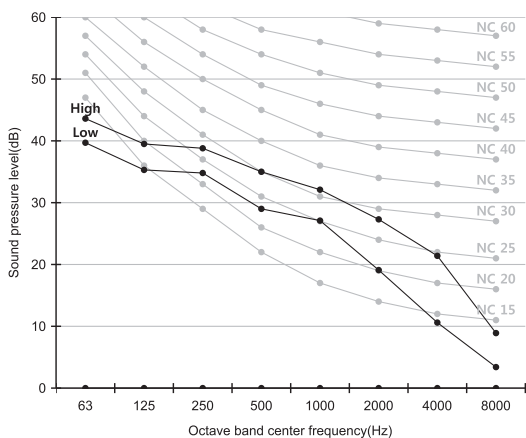
Unit: dB(A)



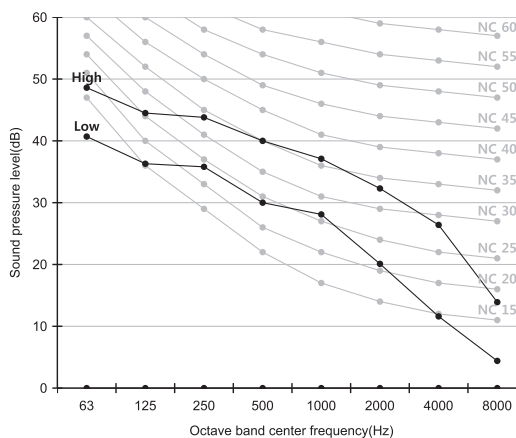
Model	High	LOW
AC030NN4DCH/AA	38	32
AC036NN4DCH/AA	43	33

- NC Curve

1) AC030NN4DCH/AA



2) AC036NN4DCH/AA



**NOTE**

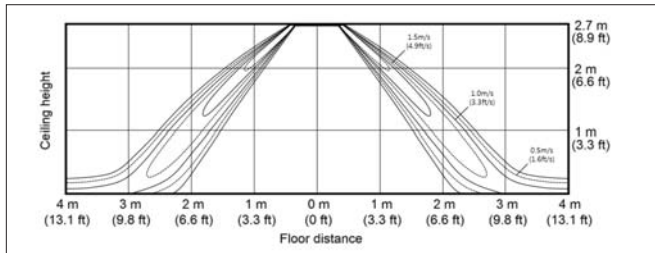
- Specifications may be subject to change without prior notice.
  - Sound pressure level is obtained in an anechoic room.
  - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  - Sound pressure level may differ depending on operation condition.
  - dBA = A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

# 8. Temperature and air flow distribution

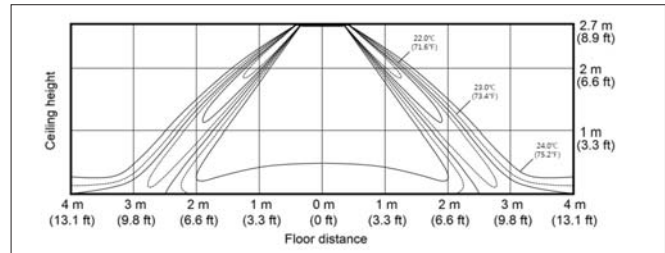
## Wind-Free 4Way Cassette

### AC030NN4DCH/AA

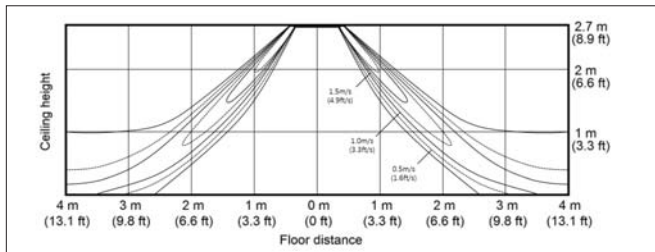
- Cooling Air Velocity distribution  
(Discharge angle : 37 degree)



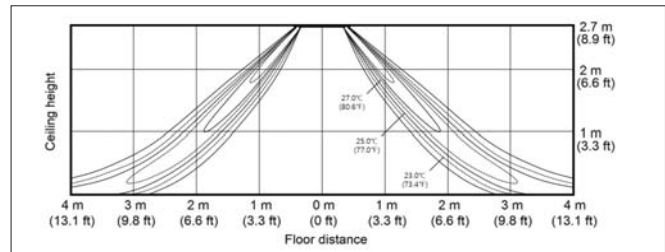
- Cooling temperature distribution  
(Discharge angle : 37 degree)



- Heating Air Velocity distribution  
(Discharge angle : 43 degree)

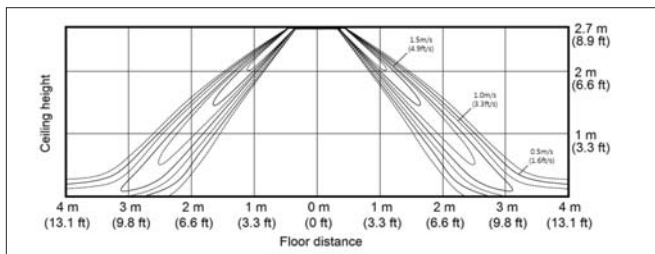


- Heating temperature distribution  
(Discharge angle : 43 degree)

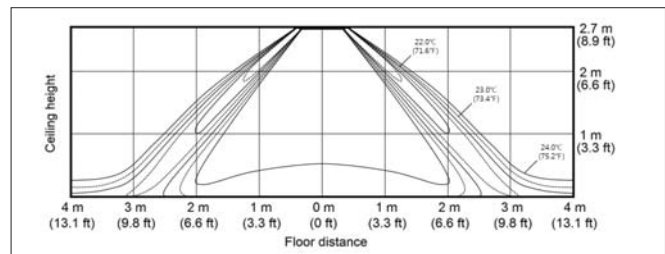


### AC036NN4DCH/AA

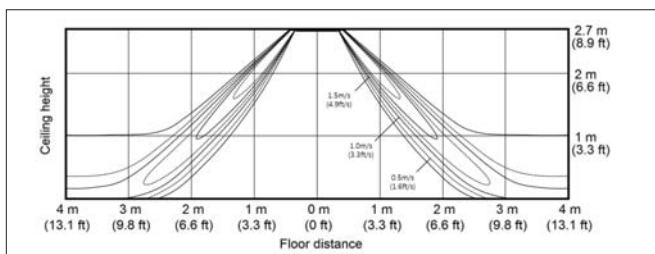
- Cooling Air Velocity distribution  
(Discharge angle : 37 degree)



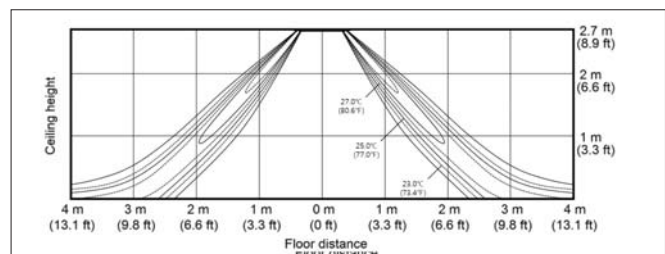
- Cooling temperature distribution  
(Discharge angle : 37 degree)



- Heating Air Velocity distribution  
(Discharge angle : 43 degree)



- Heating temperature distribution  
(Discharge angle : 43 degree)



# Outdoor Units

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## Outdoor Units

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1. Summary Table	23
2. Dimensional Drawing	24
3. Center of Gravity	25
4. Electrical Wiring Diagram	26
5. Sound Data	27
6. Capacity Correction	28
7. Operation Range	30
8. Piping Diagram	31

# 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	
30,000	AC030JXSCCH	37.01 x 55.91 x 12.99	211.64	4,414	49	50	64
36,000	AC036JXSCCH	37.01 x 55.91 x 12.99	211.64	4,414	51	53	66

 **NOTE**

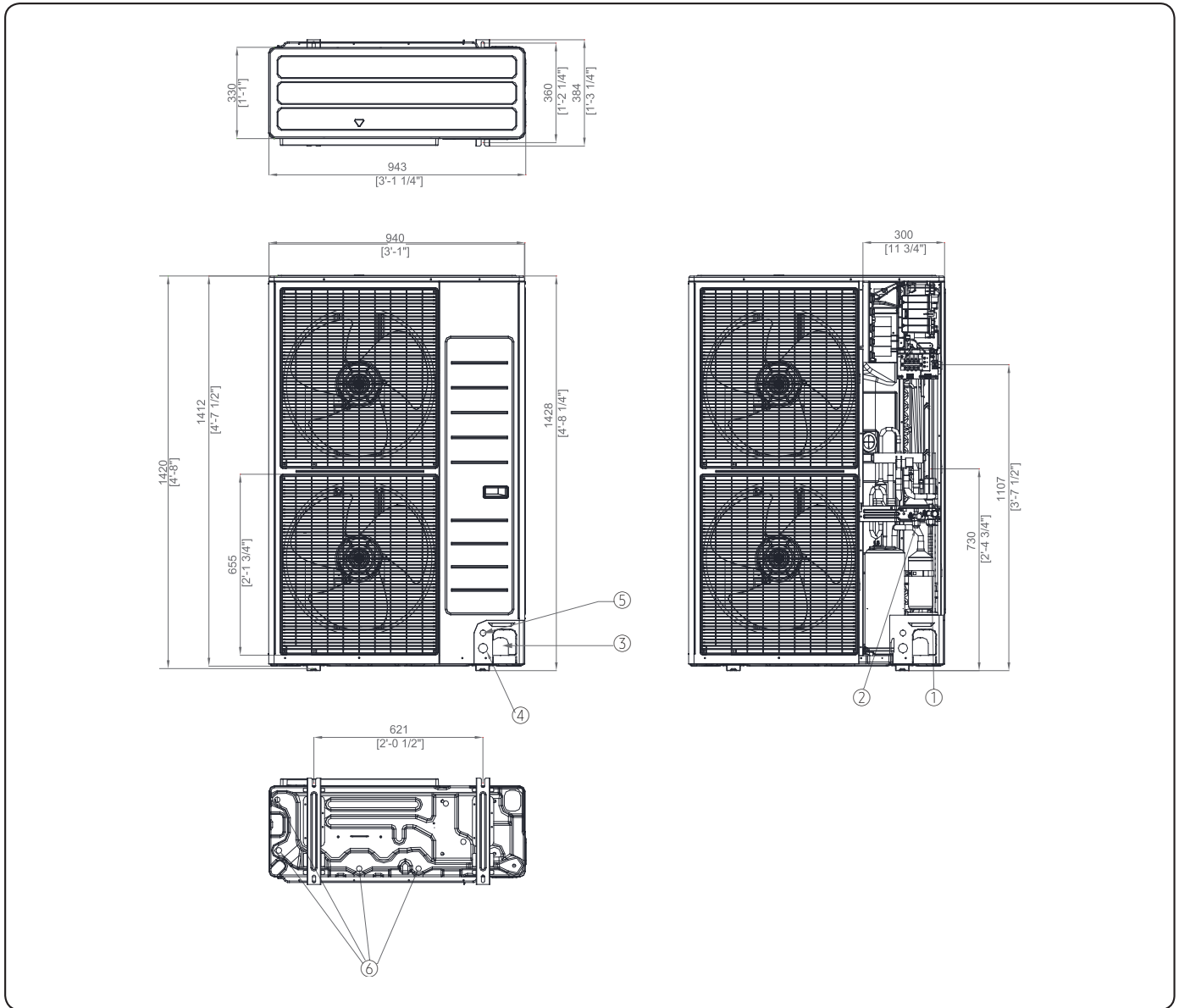
- Sound power level is based on cooling operation.

# 2. Dimensional Drawing

## Outdoor Units

AC030JXSCCH/AA, AC036JXSCCH/AA

Units : mm [inches]



No.	Table of descriptions	
1	Refrigerant gas pipe	15.88 (5/8")
2	Refrigerant liquid pipe	9.52 (3/8")
3	Piping intake knockout hole	Front / Side / Rear / Bottom
4	Power wiring conduit	Front / Side / Rear, $\Phi$ 34 [1-3/8]
5	Communication wiring conduit	Front / Side / Rear, $\Phi$ 22 [7/8]
6	Drain Hole	Connect with the provided drain plug

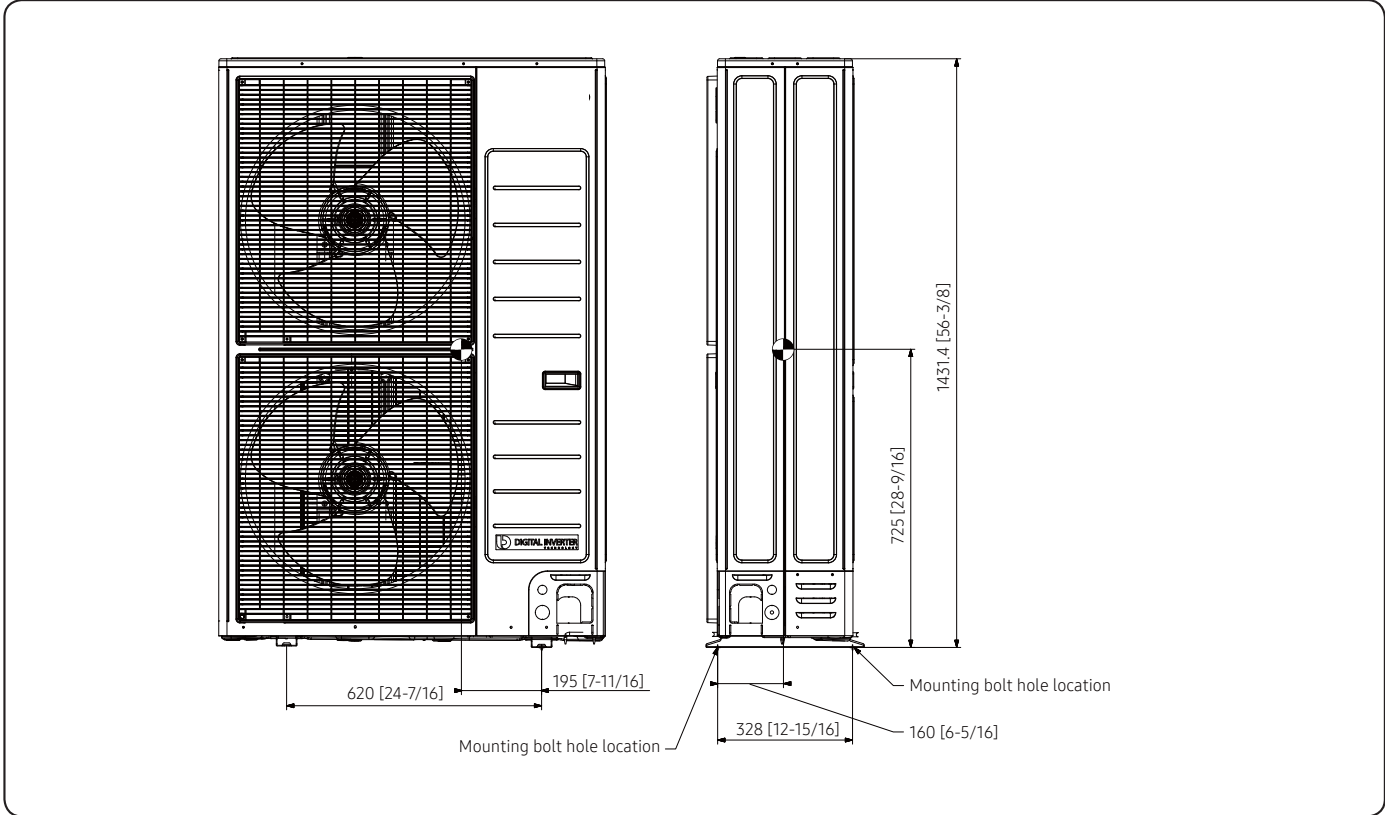


# 3. Center of Gravity

## Outdoor Units

AC030JXSCCH/AA, AC036JXSCCH/AA

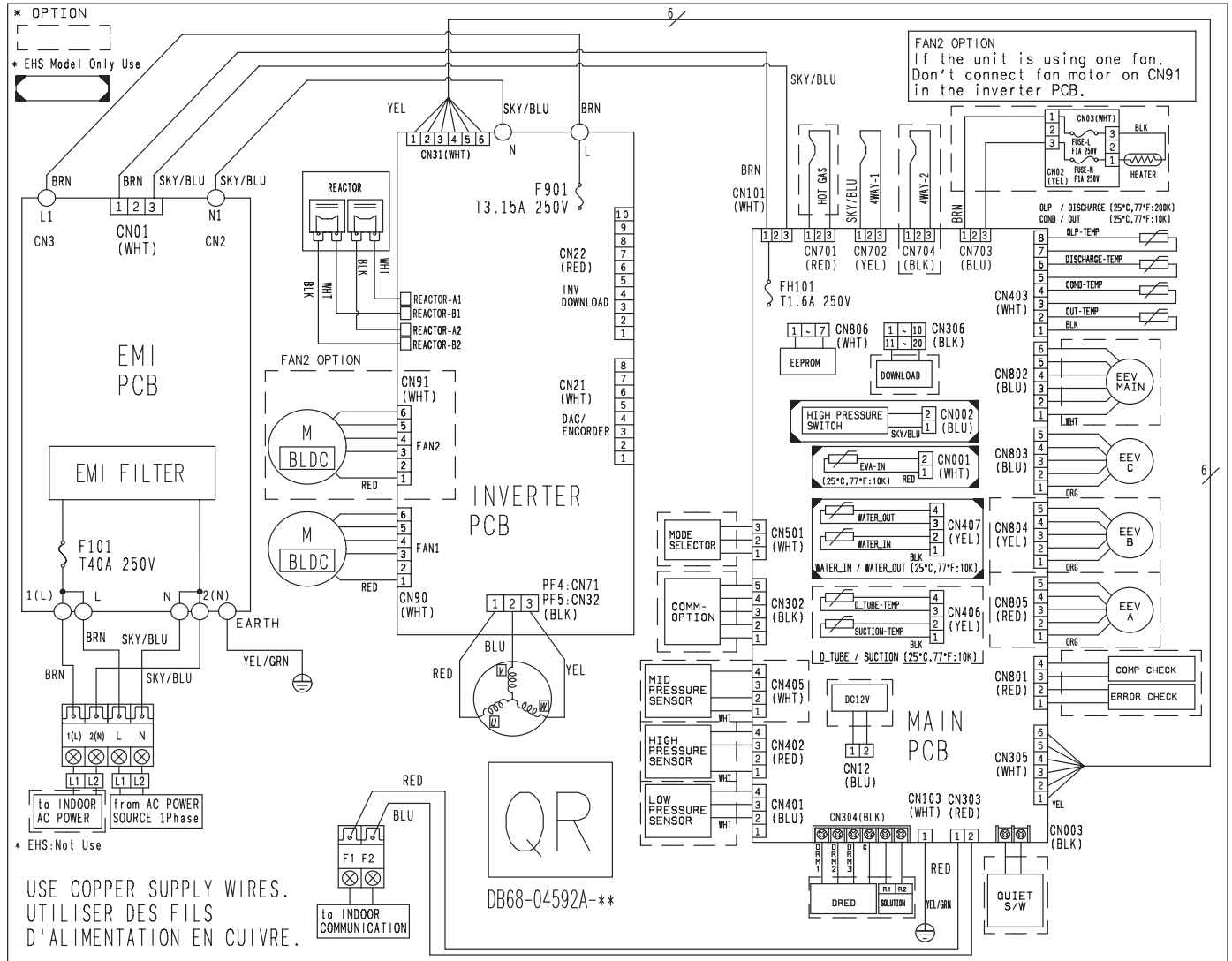
Units : mm [inches]



# 4. Electrical Wiring Diagram

## Outdoor Units

### AC030JXSCCH/AA, AC036JXSCCH/AA



BLDC	Brushless DC Motor	COMP CHECK	Outdoor COMP Operating Check
4WAY	4way Valve	ERROR CHECK	Outdoor Error Check

### NOTE

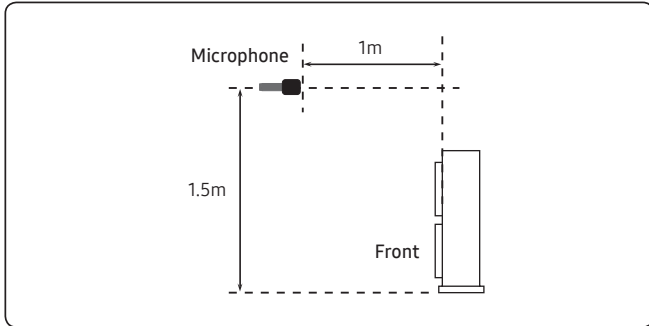
- This wiring diagram applies only to the outdoor unit.
- Colors blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue
- When operating, don't short circuit the protection device (High Pressure switch)
- For connection wiring indoor-outdoor transmission F1-F2, outdoor-outdoor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

# 5. Sound Data

## Outdoor Units

### Sound Pressure level

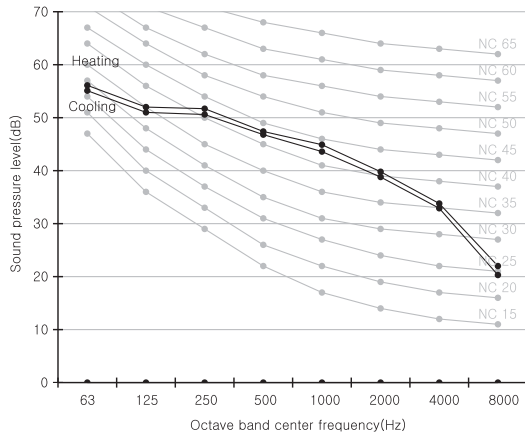
Unit: dB(A)



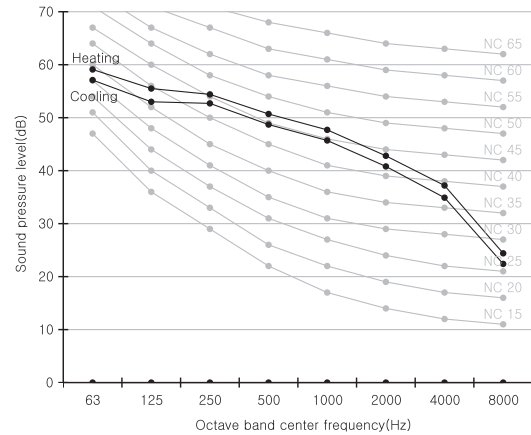
Model	Cooling	Heating
AC030JXSCCH/AA	49	50
AC036JXSCCH/AA	51	53

- NC Curve

1) AC030JXSCCH/AA



2) AC036JXSCCH/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

# 6. Capacity Correction

## Outdoor Units

AC030NN4DCH/AA + AC030JXSCCH/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	

# 6. Capacity Correction

## Outdoor Units

AC036NN4DCH/AA + AC036JXSCCH/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

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## Outdoor Units

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Mode	Indoor Unit Temperature(DB)	Outdoor Unit Temperature(DB)	Indoor Unit Humidity(RH)
Cooling	18°C to 32°C (64°F to 90°F)	-20°C to 46°C (-4°F to 114.8°F)	80% or less
Heating	18°C to 32°C (64°F to 90°F)	-20°C to 46°C (-4°F to 114.8°F)	-
Drying	30°C(86°F) or less	-25°C to 24°C (-13°F to 75°F)	-

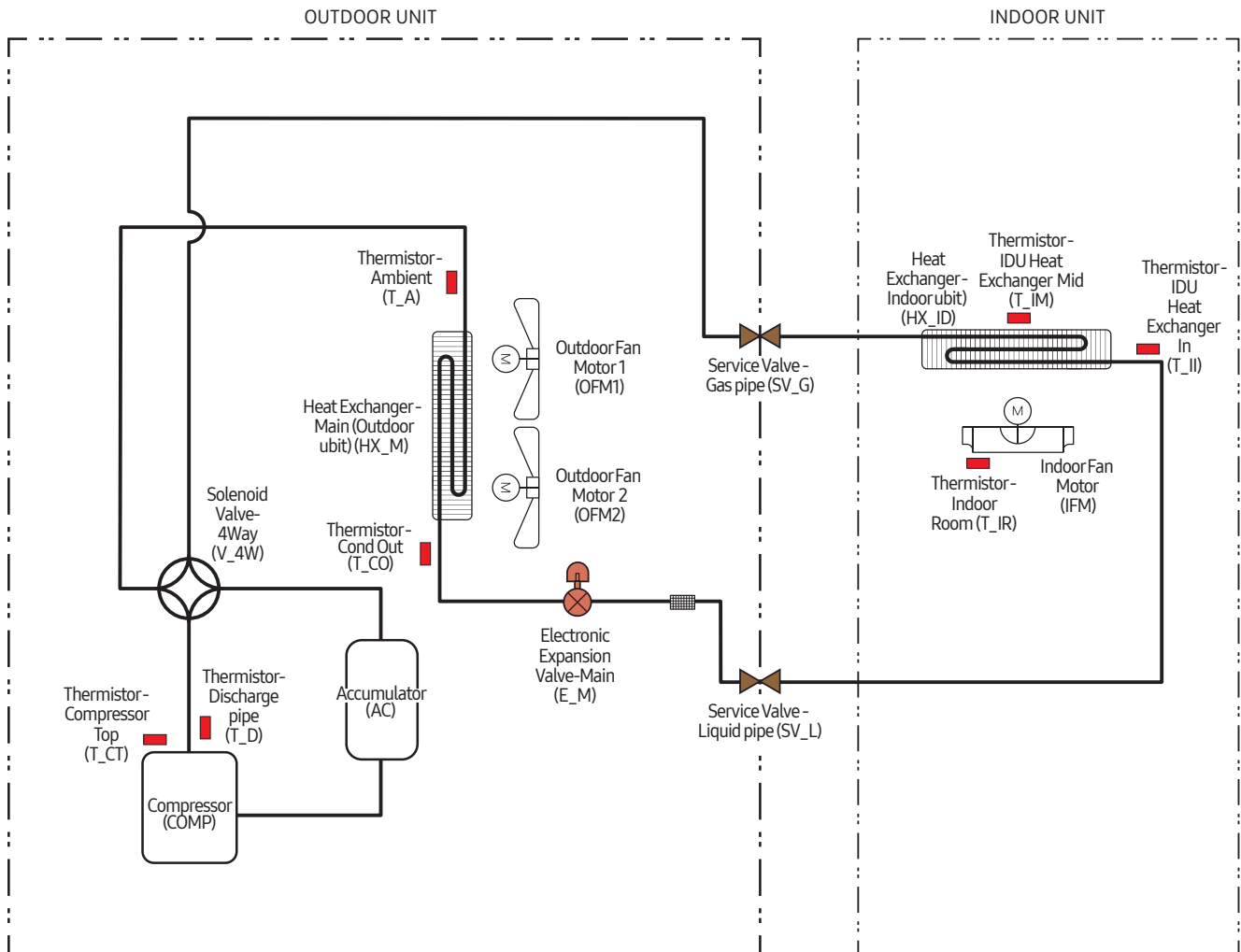
 **NOTE**

- 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

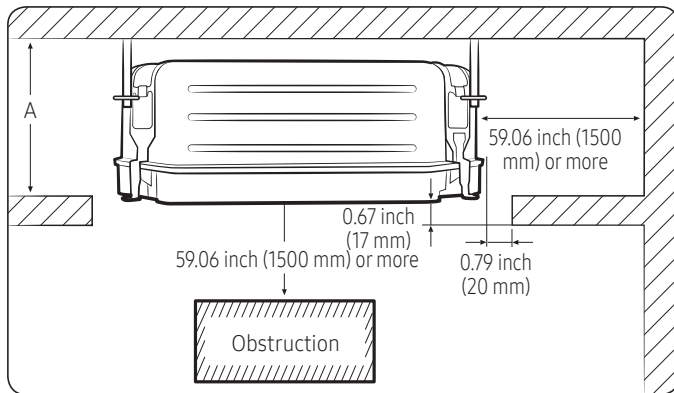
AC030JXSCCH/AA, AC036JXSCCH/AA



# Installation

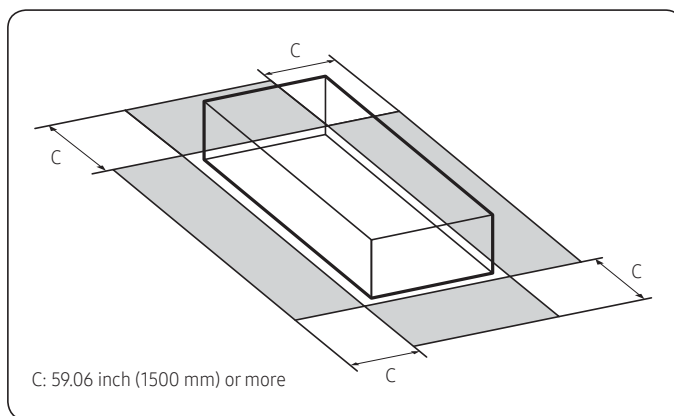
## 1. Indoor Unit (4Way Cassette Type)

### Spacing requirements



[Unit: inch(mm)]

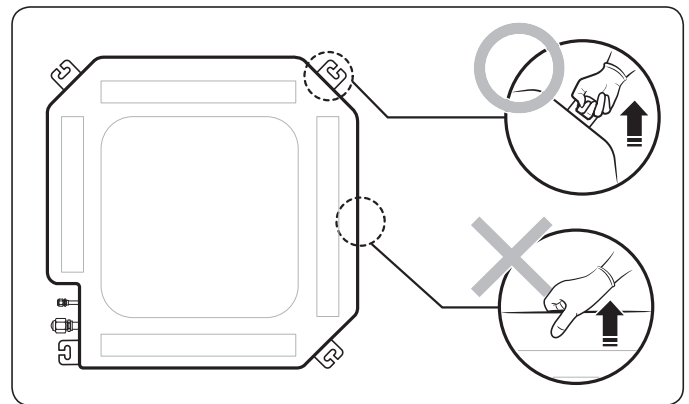
Model	AC018NN4DCH AC024NN4DCH	AC030NN4DCH AC036NN4DCH AC042NN4DCH AC048NN4DCH
A	9.88 (251)	13.19 (335)



C: 59.06 inch (1500 mm) or more

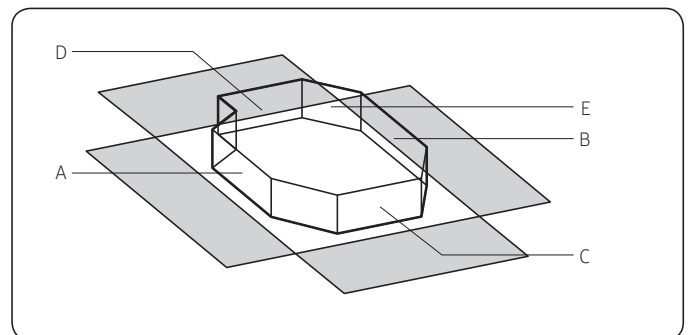
### ⚠ CAUTION

- 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 hold the discharge while carrying the indoor unit to avoid the possibility of breakage.
- You must hold the hanger plate on the corner and carry the indoor 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 0.39 inch (10 mm) thick polyethylene insulation or a similar type of insulation to the body of the indoor unit.



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



# Installation

## NOTE

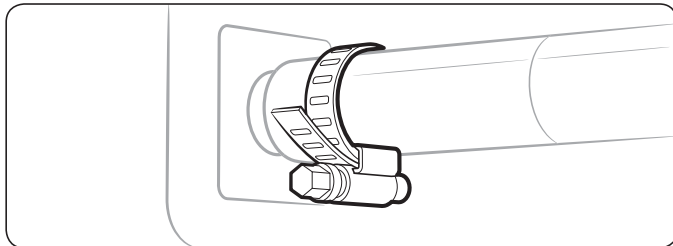
- A: Reference for the outer circumference of the unit (When insulating the body of the indoor unit, use A as the reference for its outer circumference.)

[Unit: inch(mm)]

Indoor unit	A	B	C	D	E	
4 way Cassette <S> 33.07x8.03x33.07 (840x204x840)	AC018NN4DCH	35.83X5.94 (910X151)	37.00X5.94 (940X151)	24.02X5.94 (610X151)	25.59X5.94 (650X151)	34.25X34.25 (870X870)
	AC024NN4DCH					
4 way Cassette <L> 33.07x11.34x33.07 (840x288x840)	AC030NN4DCH					
	AC036NN4DCH					
	AC042NN4DCH	35.83X9.25 (910X235)	37.00X9.25 (940X235)	24.02X9.25 (610X235)	25.59X9.25 (650X235)	34.25X34.25 (870X870)
4 way Cassette <L+> 33.07x11.34x33.07 (840x288x840)	AC048NN4DCH					

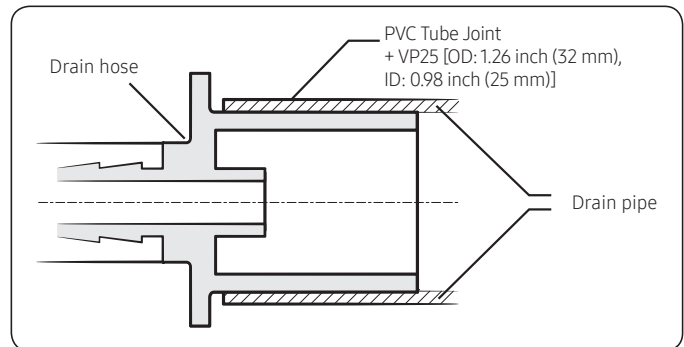
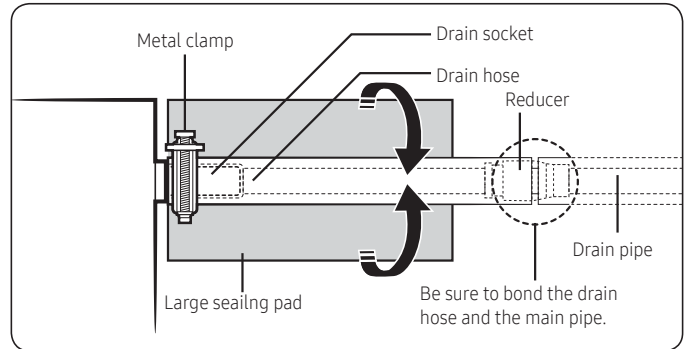
## Installing the drain hose and drain pipe

- 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).

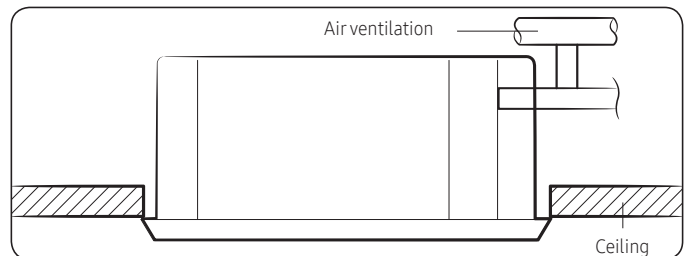
- 5 Push the drain hose up to insulation when connecting the drain hose to drain socket.



## CAUTION

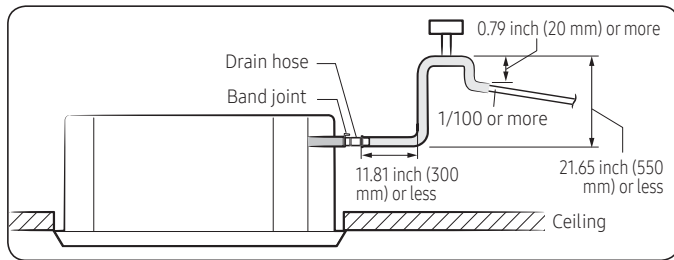
Check that the indoor unit is level with the ceiling by using the leveller.

- Install air ventilation to drain condensation smoothly.

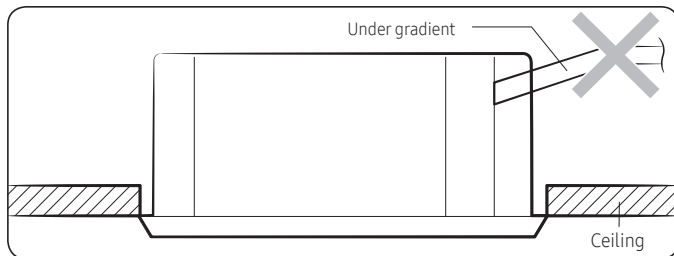


# Installation

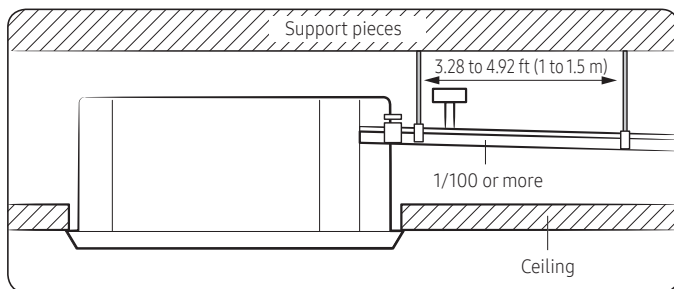
- If it is necessary to increase the height of the drain pipe, install the drain pipe straight within 11.81 inch (300 mm) from the drain hose port. If it is raised higher than 21.65 inch (550 mm), there may be water leaks.



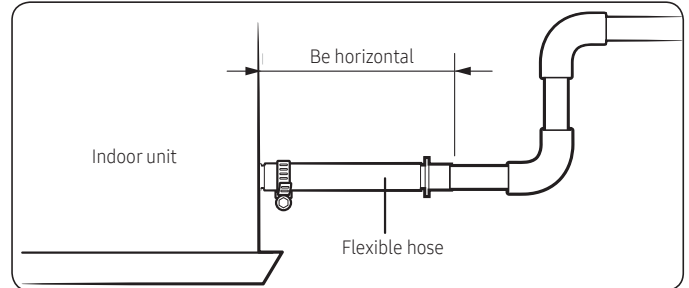
- Do not give the hose an upward gradient beyond the connection port. This will cause water to flow backwards when the unit is stopped, resulting in water leaks.



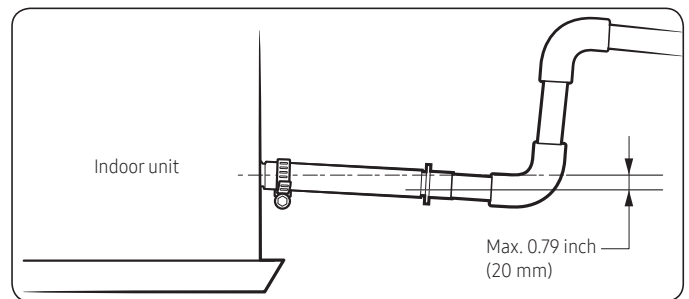
- Do not apply force to the piping on the unit side when connecting the drain hose. The hose should not be allowed to hang loose from its connection to the unit. Fasten the hose to a wall, frame or other support as close to the unit as possible.



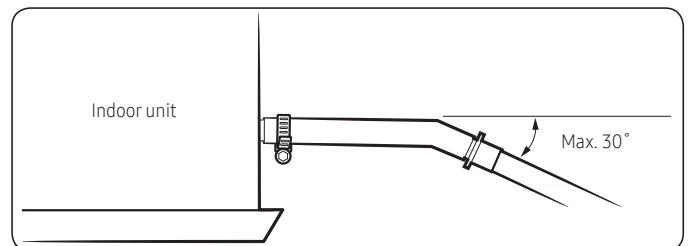
- Install horizontally.



- Max. allowable axis gap.



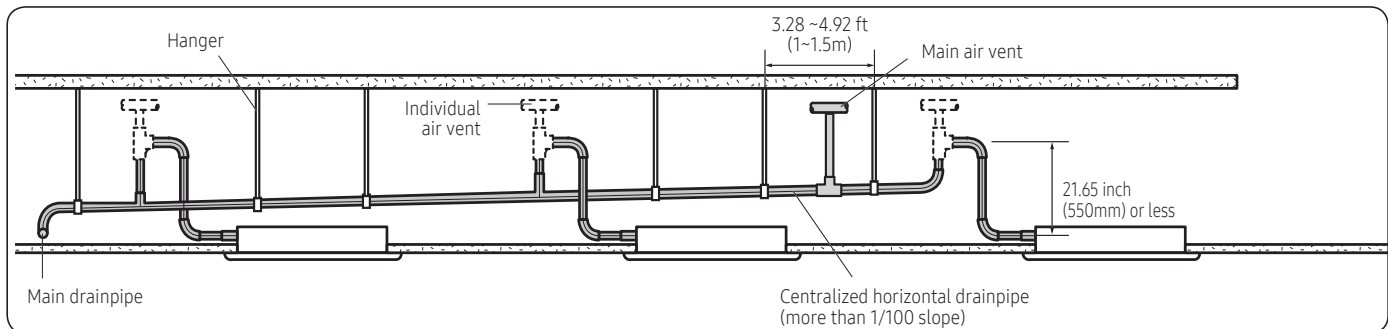
- Max. allowable bending angle.



## NOTE

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

# Installation



## 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.

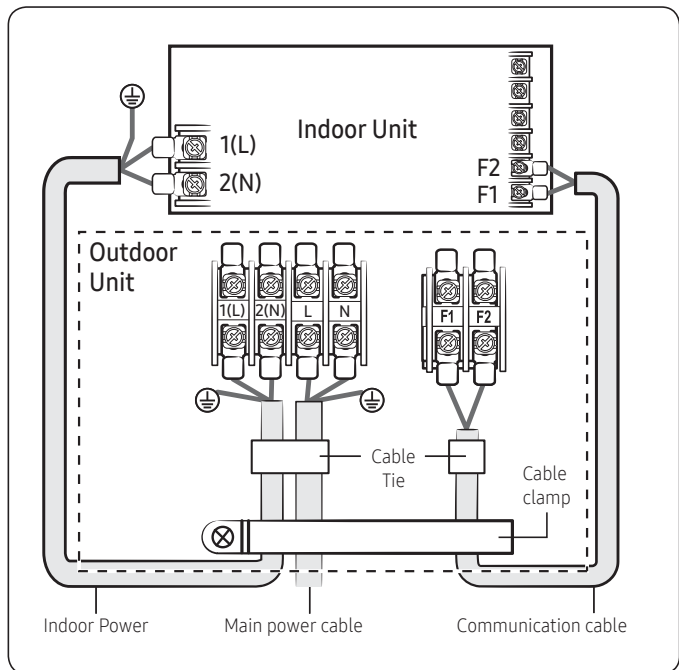
### ⚠ CAUTION

- 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 H07 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.

### 1 phase

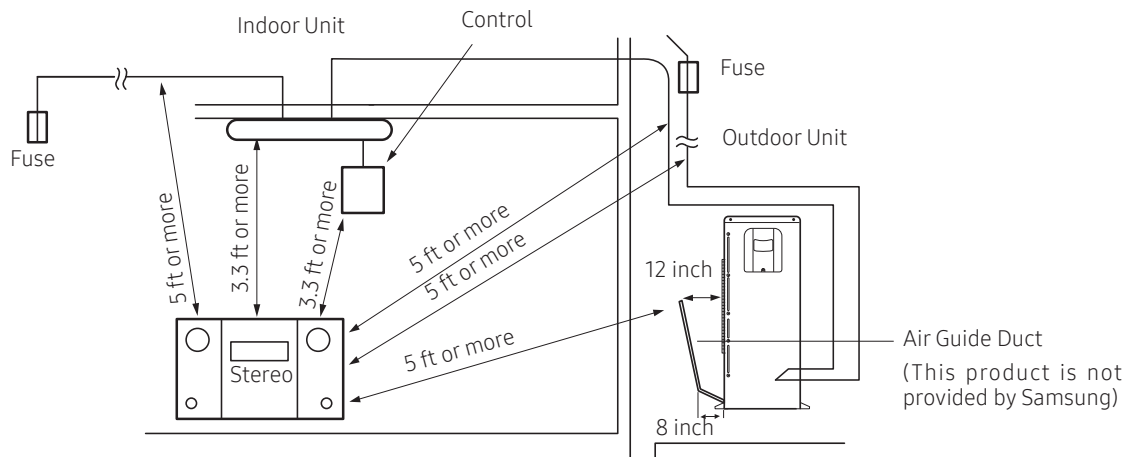


Indoor power supply		
Power supply	Max/Min(V)	Indoor power cable
208 to 230V, 60 Hz	±10%	0.0023 in <sup>2</sup> (1.5 mm <sup>2</sup> ), 3 wires
Communication cable		
0.0012 to 0.0023 in <sup>2</sup> (0.75 to 1.5 mm <sup>2</sup> ), 2 wires		

# Installation

## 2. Outdoor Unit

- The outdoor unit must not be placed on its side or upside down, as the compressor lubrication oil will run into the cooling circuit and seriously damage the unit.
- Choose a location that is dry and sunny, but not exposed to direct sunlight or strong winds.
- Do not block any passageways or thoroughfares.
- Choose a location where the noise of the air conditioner when running and the discharged air do not disturb any neighbours.
- Choose a position that enables the pipes and cables to be easily connected to the indoor unit.
- Install the outdoor unit on a flat, stable surface that can support its weight and does not generate any unnecessary noise and vibration.
- Position the outdoor 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..



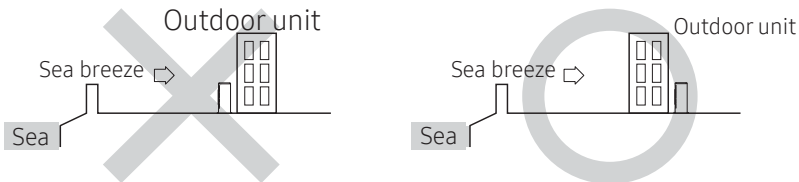
- If the outdoor unit is installed at a height, ensure that its base is firmly fixed in position.
- When you install the outdoor unit at wayside, you should install it above 6.6 ft height or make sure that the heat from the outdoor unit shouldn't be in direct contact with passersby.



- 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.

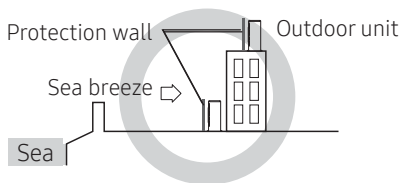
# Installation

- When installing the outdoor unit near seashore, make sure it is not directly exposed to sea breeze. If you can not find a adequate place without direct see breeze, protection wall should be constructed.
  - Install the outdoor unit in a place (such as near buildings etc.) where it can be protected from sea breeze which can damage the outdoor unit.



- If you cannot avoid installing the outdoor unit by the seashore, construct a protection wall around to block the sea breeze.

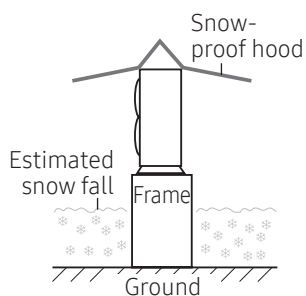
Protection wall should be constructed with a solid material such as concrete to block the sea breeze and the height and the width of the wall should be 1.5 times larger than the size of the outdoor unit. Also, secure over 27.6 inch between the protection wall and the outdoor unit for exhausted air to ventilate.



- Install the outdoor unit in a place where water can drain smoothly.
- If you cannot find a place satisfying above conditions, please contact manufacturer. Make sure to clean the sea water and the dust on the outdoor unit heat exchanger and spread corrosion inhibitor on heat exchanger. (At least one time per one year.)



- 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.

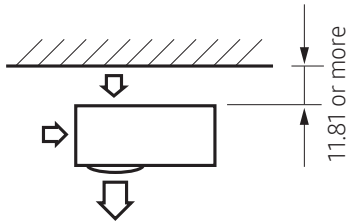


# Installation

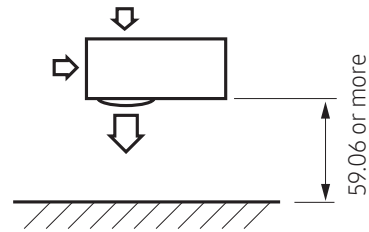
## Space Requirements for Outdoor Unit

### When installing 1 outdoor unit

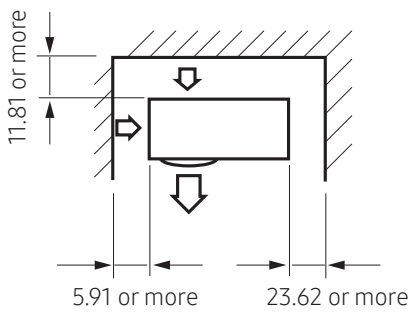
(Unit : inch)



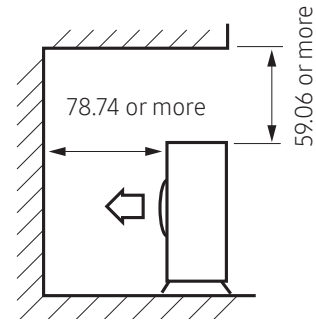
※ When the air outlet is opposite the wall



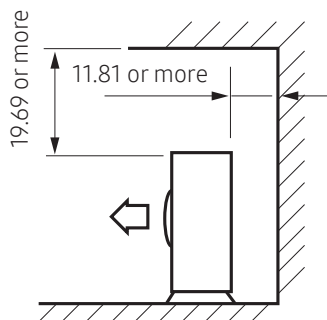
※ When the air outlet is towards the wall



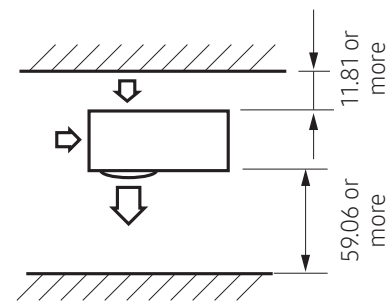
※ When 3 sides of the outdoor unit are blocked by a wall



※ The upper part of the outdoor unit and the air outlet is towards the wall



※ The upper part of the outdoor unit and the air outlet is opposite the wall

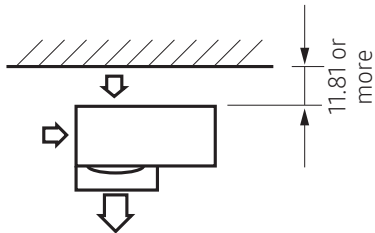


※ When front and rear side of the outdoor unit is towards the wall

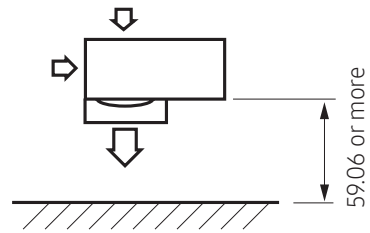
# Installation

## When installing 1 outdoor unit (with wind baffle)

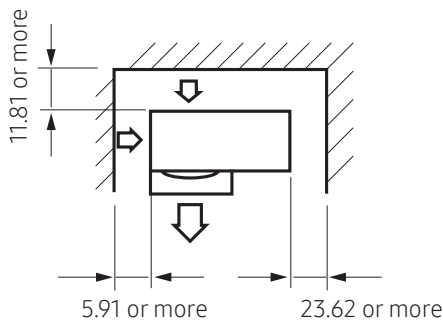
(Unit : inch)



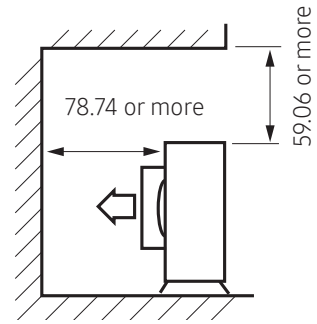
※ When the air outlet is opposite the wall



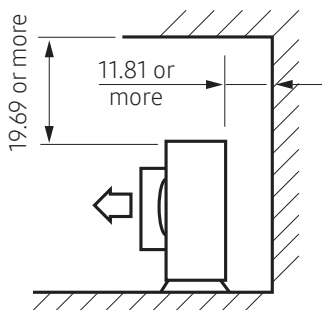
※ When the air outlet is towards the wall



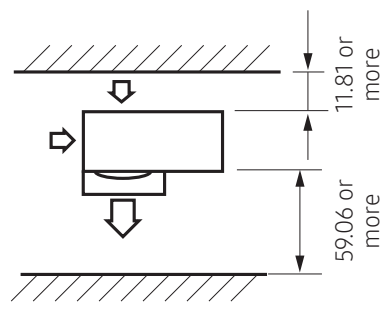
※ When 3 sides of the outdoor unit are blocked by the wall



※ The upper part of the outdoor unit and the air outlet is towards the wall



※ The upper part of the outdoor unit and the air outlet is opposite the wall

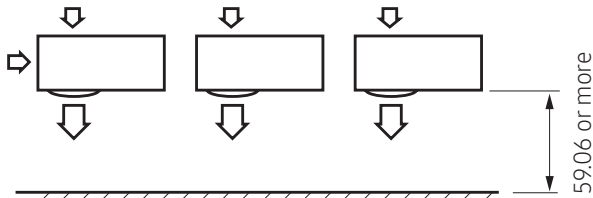


※ When front and rear side of the outdoor unit is towards the wall

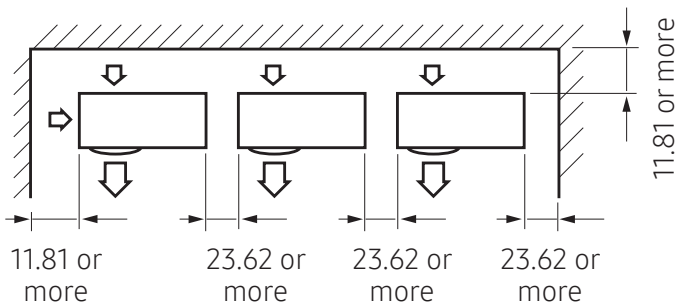
# Installation

## When installing more than 1 outdoor unit

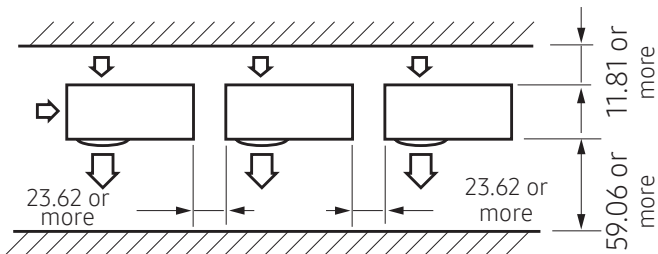
(Unit : inch)



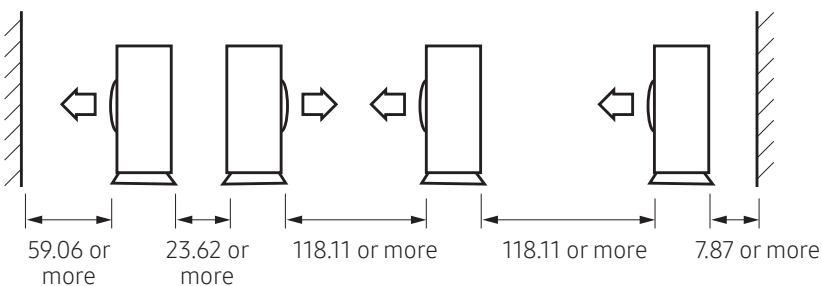
※ When the air outlet is towards the wall



※ When 3 sides of the outdoor unit are blocked by a wall



※ When front and rear side of the outdoor unit is towards a wall



※ When 3 sides of the outdoor unit are blocked by a wall

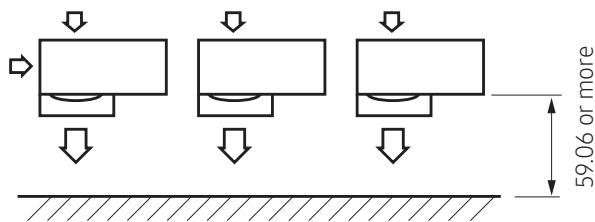
**CAUTION** • The units must be installed according to the distances specified above in order to permit accessibility from each side to guarantee correct operation and for future maintenance or repair. The unit's parts must be safely accessible and completely removable.



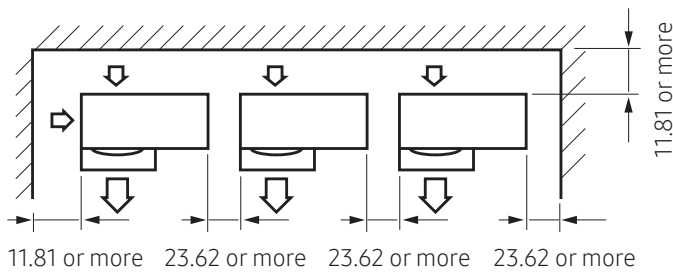
# Installation

## When installing more than 1 outdoor unit (with wind baffle)

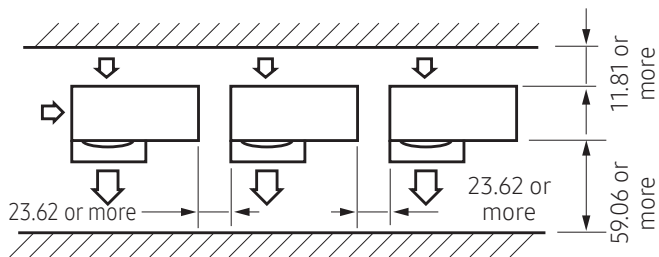
(Unit : inch)



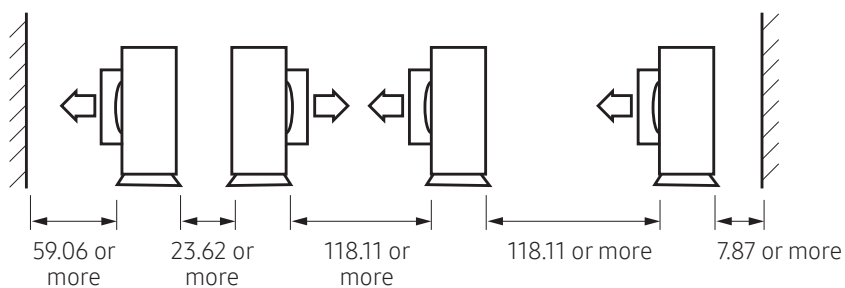
※ When the air outlet is towards a wall



※ When 3 sides of the outdoor unit are blocked by a wall



※ When front and rear side of the outdoor unit is towards a wall



※ When 3 sides of the outdoor unit are blocked by a wall

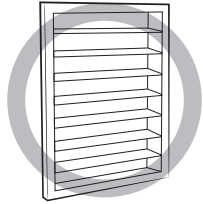
# Installation



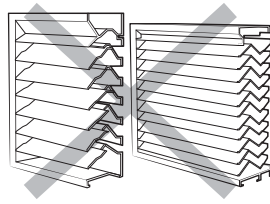
WARNING

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

[Bar type louver]



[Rain resistance louver]



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

## Outdoor unit installation

The outdoor unit must be installed on a rigid and stable base to avoid increased noise levels and vibration. If the outdoor unit is to be installed in a location exposed to strong winds or high above the ground, the unit must be fixed to an appropriate support (wall or ground).

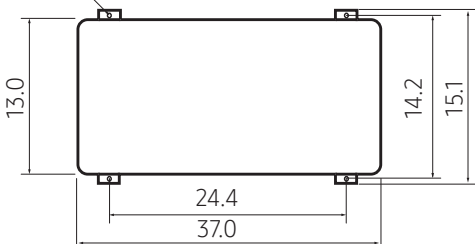
**Fix the outdoor unit with anchor bolts.**



NOTE

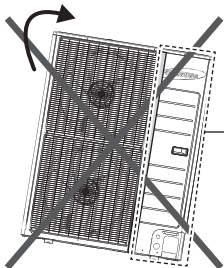
- The anchor bolt must be 0.79 inch or higher from the base surface.

Anchor bolt hole (Unit : inch)



CAUTION

- Make a drain outlet around the base for outdoor unit drainage.
- If the outdoor unit is installed on the roof, you have to check the ceiling strength and waterproof the unit.

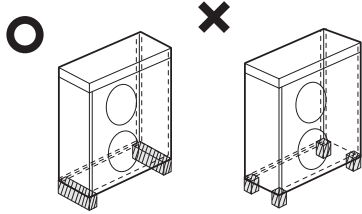


CAUTION

- Make sure that product is level during installation. Especially, product shouldn't be tilted towards the compressor.

# Installation

## Outdoor Unit Support



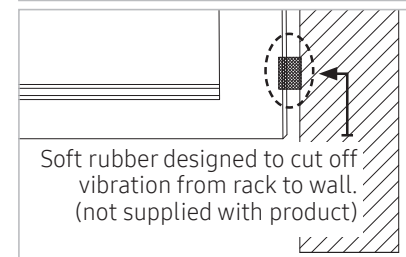
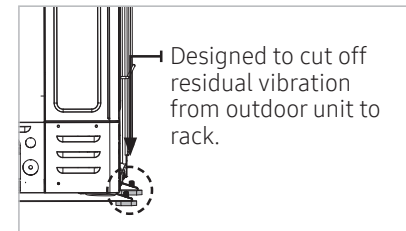
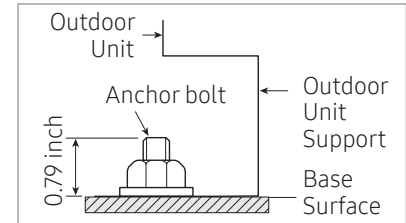
### OUTDOOR UNIT INSTALLED ON THE WALL BY RACK

- Ensure the wall will be able to suspend the weight of rack and outdoor unit ;
- Install the rack close to the column as much as possible ;
- Install proper grommet in order to reduce noise and residual vibration transferred by outdoor unit towards wall.



#### When installing air guide duct

- Check and make sure that screws do not damage the copper pipe.
- Secure air guide duct on guard fan.

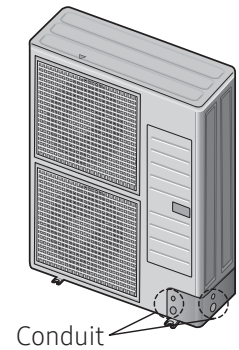


# Installation

## Connecting the cable

### Two electronic cables must be connected to the outdoor unit.

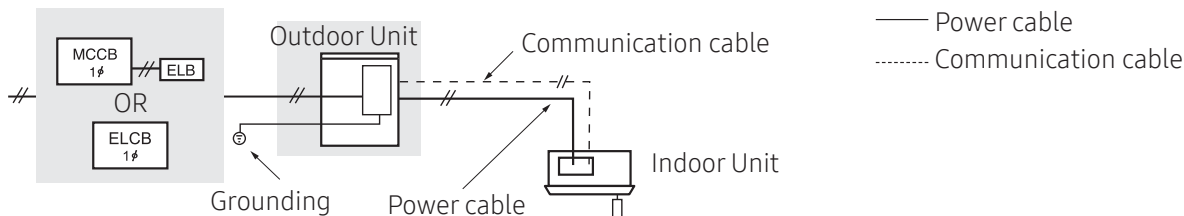
- The connection cord between indoor unit and outdoor unit.
- The power cable between outdoor unit and auxiliary circuit breaker.
- Be sure to run the power supply cable and the communication cable through electrical conduit as seen in the picture.
- Protect the power and communication cable using the protection tube individually.
- Make a knockout hole.
- After making a knockout hole, apply rust resisting paint around the hole.
- Secure the cable tube to the outdoor knockout using the CD connector and bushing.



- During unit installation make refrigerant connections first then electrical connections. If removing the unit disconnect electrical cables first, then refrigerant connections.
- Connect the air conditioner to grounding system before performing the electrical connection.
- When installing the unit, you shouldn't use inter connection wire.

## Example of Air Conditioner System

### When using ELCB for 1 phase



※ If an outdoor unit is installed in a place in danger of an electric leak or submergence, you must install the ELCB.



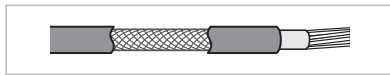
- **AC030JXSCCH, AC036JXSCCH**
  - ELCB must be installed since this product is equipped with a base heater.

# Installation

## Between Indoor unit and Outdoor unit Connection Cable Specifications (Common in use)

Power supply			Communication Cable
Power supply	Max/Min(V)	Indoor Power Cable	
1Φ, 208~230V, 60Hz	±10%	0.0039 in <sup>2</sup> ↑, 3wires	0.0011~0.0023 in <sup>2</sup> , 2wires

- 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 or IEC:60245 IEC 66 / CENELEC: H07RN-F)

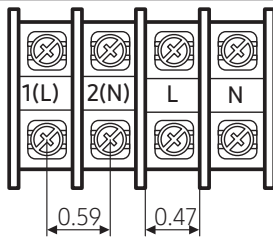


When installing the indoor unit in a computer room or net work room, use the double shielded (Tape aluminum / polyester braid + copper ) cable of FROHH2R type.

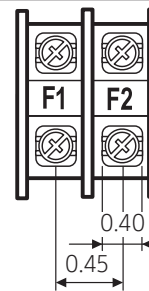
## 1-phase terminal block spec

AC power : M5 screw

Communication : M4 screw



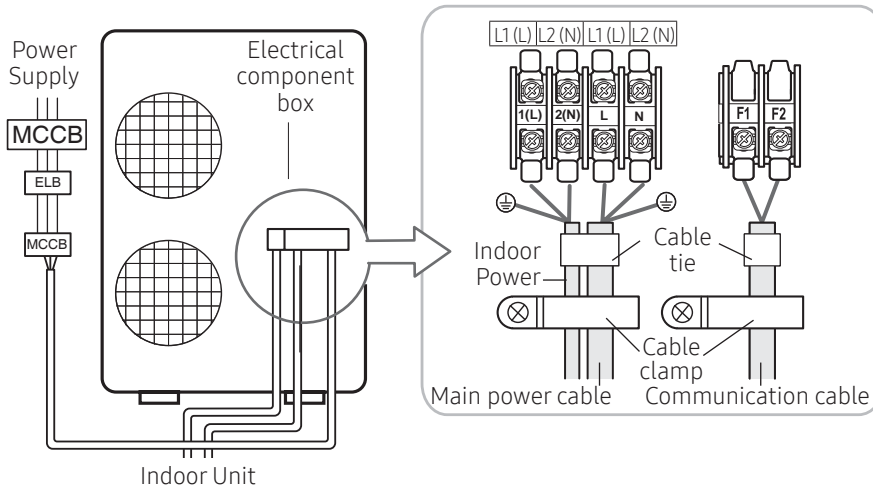
L1 (L)	L2 (N)	L1 (L)	L2 (N)
INDOOR POWER		OUTDOOR POWER	



# Installation

## Wiring Diagram of Power Cable

### When using ELB for 1 phase



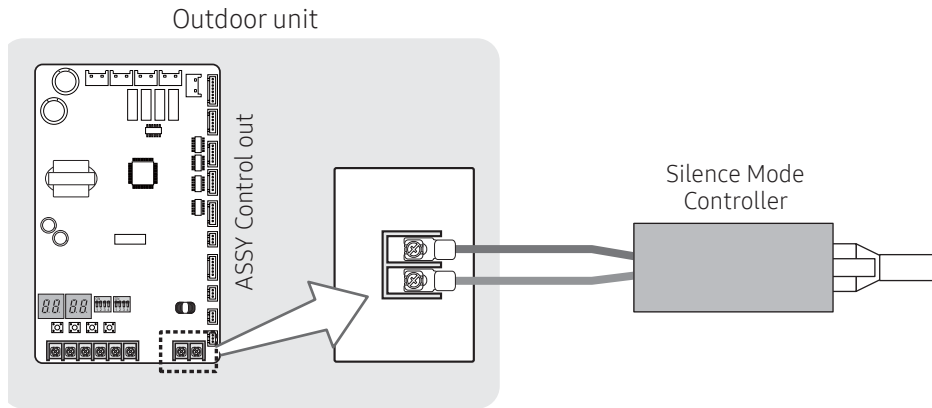
※ The appearance of the unit may be different from the picture depending on the model.



- 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 in.
- Devices disconnected from the power supply should be completely disconnected in the condition of overvoltage category.
- Keep distances of 1.97 in. or more between power cable and communication cable.

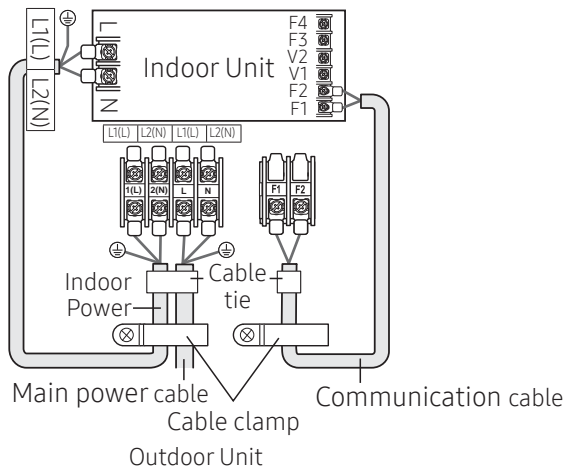
# Installation

## Silence mode controller wiring diagram



## Wiring Diagram of Connection Cord

### 1 phase







- 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).



# Accessory

## Indoor Unit's Accessory

Product	Image	Model	Remark
Panel		PC4NUSKAN	4 Way Cassette (Waffle)
		PC4NUSKFN	4 Way Cassette (Classic)
		PC4NUFMAN PC4NUFMUN	Wind-Free 4 Way Cassette
Motion detect Sensor		MCR-SMC	Wind-Free 4Way Cassette

- In case you want to know more information of the accessories or the controllers including the Line up & Comaptibility Table, please refer to each TDB on [pvi.samsung.com](http://pvi.samsung.com) site.



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