SAMSUNG

SINGLE
Technical Data Book

Duct **for America**

(R410A, HP)

Model : Slim Duct - CNH**LDB (AC***BNLDCH/AA), CXH**ADB (AC***BXADCH/AA)
Duct S - CNH**HDB (AC***BNHDCH/AA), CXH**ADB (AC***BXADCH/AA)

History

Version	Modification	Date	Remark
Ver.1.0	Released 2021 CAC Duct for North America	21. 10. 30	
Ver.1.1	Modified the Features & Benefits page	21. 11. 22	
Ver.1.2	Modified the some data in specification page.	22. 12. 12	

Features & Benefits

CAC - World-class energy efficiency

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

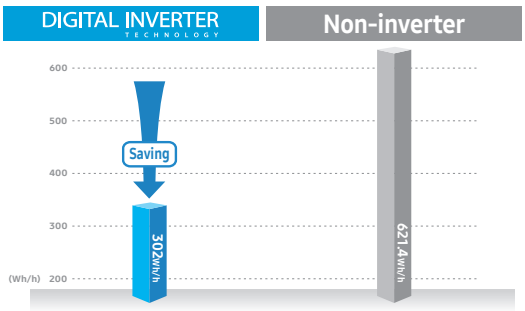
Featuring a suite of energy-optimizing technologies, Samsung CAC Single delivers top-class energy efficiency to support business in saving costs and the environment.

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

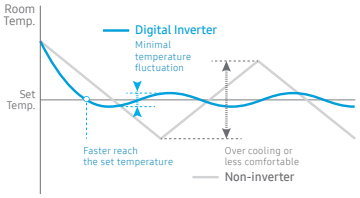
After reaching changes its operation mode to economical.
By avoiding inefficient and frequent switching on and off of the compressor, the digital inverter saves up to 50 percent in energy consumption compared to non-inverter air conditioners.



Automatically save energy & money

Digital Inverter Technology

Save money every day with Samsung's highly energy-efficient Digital Inverter technology. Unlike conventional fixed-speed compressors, which frequently shut off and switch on, the compressor automatically adjusts its speed in response to changes in the surrounding room temperature. So it helps to ensure optimum comfort by maintaining the desired temperature, with little fluctuation. And it optimizes power usage, which reduces energy consumption and saves you money.



Features & Benefits

CAC Single - Superior performance

Stabilize the atmosphere with broad temperature allowance and control

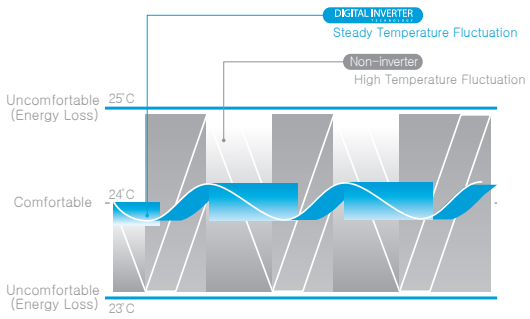
Samsung is dedicated to supporting comfortable living and working environments based on the strength of its technologies. With a single unit, CAC Single delivers reliable comfort and control over multiple areas to ensure a pleasant atmosphere in any climate.

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	48	H	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	(Wind-Free) 4 Way Cassette (600x600)
4	(Wind-Free) 4 Way Cassette
6	360 Cassette
L	Slim 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	048	B	N	H	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 / Wind-Free 1Way Cassette
N	(Wind-Free) 4 Way Cassette (600x600)
4	(Wind-Free) 4 Way Cassette
6	360 Cassette
L	Slim 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	048	B	X	A	D	C	H	/	AA
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

(1) Classification

AC	CAC

(2) Capacity

x 1000 Btu/h (3 digits)

(3) Version

B	2022

(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
Slim Duct			

Model	Capacity (kBtu/h)		
	9/12	18/24/30	36/42/48
Duct S			

Outdoor Unit

Model	Capacity (kBtu/h)			
	9	12	18	24
1Phase				

Model	Capacity (kBtu/h)			
	30	36	42	48
1Phase				

Contents

Slim Duct

Features & Benefits

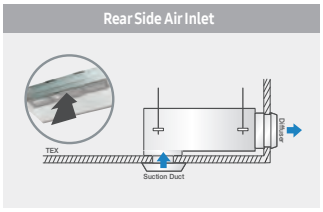
Slim Duct

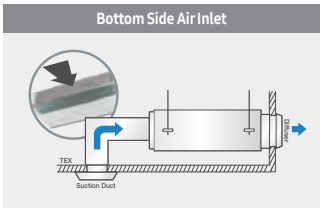
Temper any environment with industry-best lightweight design and optimized airflow

The new Samsung Slim Duct visually blends into the ceiling while providing powerful cool and warm airflow. It's also easy to install and maintain in any interior regardless of the surrounding environment with its compact size and weight—the lightest in the industry.

Flexible setup

The air inlet can be set up either on the bottom or rear of the unit, giving users greater flexibility in installation.





High Lift-Up Drain Pump

Factory imbedded drain pump lifts the condensed water up to 750mm and gives benefit of easy installation.

Easy access, easy maintenance

Slim Duct features a flexible design that enables users to easily access its parts to maintain the unit.

1. Specification

Slim Duct

Model Name		Indoor Unit			AC009BNLDCH/AA	AC012BNLDCH/AA	AC018BNLDCH/AA
		Outdoor Unit			AC009BXADCH/AA	AC012BXADCH/AA	AC018BXADCH/AA
US Code		Indoor Unit			CNH09LDB	CNH12LDB	CNH18LDB
		Outdoor Unit			CXH09ADB	CXH12ADB	CXH18ADB
System	Mode			-	Heat Pump	Heat Pump	Heat Pump
	Performance	Capacity (Min/Std/Max)	Cooling	kW	0.88 / 2.64 / 3.81	0.94 / 3.52 / 4.10	1.61 / 5.28 / 6.45
				Btu/h	3,000 / 9,000 / 13,000	3,200 / 12,000 / 14,000	5,500 / 18,000 / 22,000
				US RT	0.25 / 0.75 / 1.08	0.27 / 1.00 / 1.17	0.46 / 1.50 / 1.83
			Heating	kW	0.85 / 3.52 / 4.69	0.88 / 4.10 / 4.98	0.88 / 5.86 / 7.33
				Btu/h	2,900 / 12,000 / 16,000	3,000 / 14,000 / 17,000	3,000 / 20,000 / 25,000
				US RT	0.24 / 1.00 / 1.33	0.25 / 1.17 / 1.42	0.25 / 1.67 / 2.08
	Power	Power Input (Min/Std/Max)	Cooling	kW	0.18 / 0.64 / 1.32	0.19 / 1.00 / 1.34	0.40 / 1.49 / 2.44
			Heating		0.16 / 1.00 / 2.02	0.17 / 1.14 / 2.10	0.30 / 1.83 / 3.61
		Current Input (Min/Std/Max)	Cooling	A	1.2 / 3.3 / 5.9	1.3 / 4.7 / 5.9	2.4 / 6.7 / 10.8
			Heating		1.1 / 4.7 / 9.0	1.1 / 5.1 / 9.3	1.8 / 8.2 / 16.0
		Current	MCA	A	10.9	10.9	20.1
			MOP	A	15	15	25
	Efficiency	EER2	Cooling	-	4.10	3.52	3.55
			Cooling(US)	(Btu/h)/W	14.00	12.00	12.10
		COP2	Heating	W/W	3.50	3.60	3.20
		SEER2		-	21.8	21.5	20.0
		HSPF2		-	9.9	9.8	7.5
	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		-	01C3FC-1C546B-271A23-370000	01C3FC-1C55F0-272328-370000	01C3FC-1C583D-23343C-370000
		Install		-	020010-120000-200000-300000	020010-120000-200000-300000	020010-120000-200000-300000
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		-	Sirocco	Sirocco	Sirocco
		Quantity		EA	2	2	3
		Air Flow Rate	H/M/L	m^3/min	8/6.5/5.5	11.3/10/8.5	17/13/10
				ft^3/min	283/230/194	399/353/300	600/459/353
				l/s	133/108/92	188/167/142	283/217/167
		External Static Pressure	Min/Std/Max	In Wg	0.01/0.1/0.24	0.01/0.1/0.24	0.01/0.1/0.24
	Fan Motor	Type		-	BLDC	BLDC	BLDC
		Output		W x n	84 x 1	84 x 1	84 x 1
	Drain	Drain Pipe		Φ, mm	OD26.67	OD26.67	OD26.67
	Sound	Sound Pressure Level	H/M/L	dB(A)	33/30/26	34/31/27	35/32/28
		Sound Power Level		dB(A)	50	51	52
	External Dimension	Net Weight		kg(lbs)	18.9 (41.7)	18.9 (41.7)	22.4 (49.4)
		Gross Weight		kg(lbs)	22.2 (48.9)	22.2 (48.9)	25.9 (57.1)
		Net Dimensions (WxHxD)		mm	900 x 199 x 440	900 x 199 x 440	1100 x 199 x 440
				inch	35.43 x 7.83 x 15.75	35.43 x 7.83 x 15.75	43.31 x 7.83 x 15.75
		Gross Dimensions (WxHxD)		mm	1151 x 280 x 544	1151 x 280 x 544	1351 x 280 x 544
				inch	45.31 x 11.02 x 21.42	45.31 x 11.02 x 21.42	53.19 x 11.02 x 21.42

1. Specification

Slim Duct

Model Name		Indoor Unit			AC009BNLDCH/AA	AC012BNLDCH/AA	AC018BNLDCH/AA
		Outdoor Unit			AC009BXADCH/AA	AC012BXADCH/AA	AC018BXADCH/AA
US Code		Indoor Unit			CNH09LDB	CNH12LDB	CNH18LDB
		Outdoor Unit			CXH09ADB	CXH12ADB	CXH18ADB
Indoor Unit	Casing	Material		-	Steel	Steel	Steel
	Control System	Infrared remote control		-	AR-EH04U	AR-EH04U	AR-EH04U
		Wired remote control		-	MWR-WG00UN / MWR-SH11UN	MWR-WG00UN / MWR-SH11UN	MWR-WG00UN / MWR-SH11UN
	Drain Pump	Drain Pump		-	included	included	included
		Max.lifting Height / Displacement		in / gal/h	29.53 / 6.34	29.53 / 6.34	29.53 / 6.34
	Additional Accessories	Air Filter		-	Removal / Washable	Removal / Washable	Removal / 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	1,060	1,060	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	1023 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		℃ (℉)	-18~50 (0~122)	-18~50 (0~122)	-18~50 (0~122)
		Heating		℃ (℉)	-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 7.5m(24.6ft), Level differences : 0m(0ft))
  2) Select wire size based on the value of MCA
  3) Sound pressure level is obtained in an anechoic room.
     - Sound pressure level is a relative value, depending on the distance and acoustic environment.
     - Sound pressure level may differ depending on operation condition.
     - dBA = A-weighted sound pressure level / Reference acoustic pressure 0 dB = 20uPa
  4) Sound power level is an absolute value that a sound source generates.
     - dBA = A-weighted sound power level
     - Reference power : 1pW / Measured according to ISO 3741
  5) These products contain R410A which is fluorinated greenhouse gas.

2. Summary Table

Slim Duct

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)				
CNH09LDB (AC009BNLDCH/AA)	41.7	Max.	13,000	16,000	High	283 / 283	33	50
		Std.	9,100	12,000	Mid	230 / 230	30	-
		Min.	3,000	2,900	Low	194 / 194	26	-
CNH12LDB (AC012BNLDCH/AA)	41.7	Max.	14,000	17,000	High	399 / 399	34	51
		Std.	12,000	14,000	Mid	353 / 353	31	-
		Min.	3,200	3,000	Low	300 / 300	27	-
CNH18LDB (AC018BNLDCH/AA)	49.4	Max.	22,000	25,000	High	600 / 600	35	52
		Std.	18,000	20,000	Mid	459 / 459	32	-
		Min.	5,500	3,000	Low	353 / 353	28	-

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				
CNH09LDB (AC009BNLDCH/AA)	CXH09ADB (AC009BXADCH/AA)	60	208 to 230	187	253	8.74	8.74	1.06	9.8	10.9	15
CNH12LDB (AC012BNLDCH/AA)	CXH12ADB (AC012BXADCH/AA)	60	208 to 230	187	253	8.74	8.74	1.06	9.8	10.9	15
CNH18LDB (AC018BNLDCH/AA)	CXH18ADB (AC018BXADCH/AA)	60	208 to 230	187	253	17.94	17.94	1.06	19.0	20.1	25

NOTE

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

3. Capacity Table

Slim Duct

(1) CNH09LDB(AC009BNLDCH/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	0.69	12.2	9.5	0.71	12.7	9.7	0.72	13.1	10.0	0.74	13.3	9.9	0.74	14.0	9.8	0.75	14.7	9.7	0.77
70	11.9	9.2	0.66	12.6	9.5	0.68	13.1	9.8	0.69	13.5	10.1	0.70	13.8	10.0	0.71	14.5	9.9	0.72	15.2	9.7	0.73
95	8.0	5.7	0.60	8.4	5.9	0.61	8.7	6.1	0.63	9.0	6.3	0.64	9.2	6.2	0.65	9.6	6.2	0.65	10.1	6.1	0.67
115	10.4	8.5	1.45	10.9	8.8	1.48	11.3	9.1	1.51	11.7	9.4	1.54	11.9	9.3	1.55	12.5	9.2	1.57	13.2	9.0	1.60
122	8.0	7.4	1.14	8.4	7.6	1.17	8.7	7.9	1.19	9.0	8.1	1.22	9.2	8.0	1.23	9.6	7.9	1.24	10.1	7.8	1.27

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	1.26	6.8	1.25	6.7	1.23	6.7	1.22	6.6	1.21	6.5	1.20
-4	9.8	1.42	9.7	1.41	9.6	1.39	9.5	1.38	9.4	1.37	9.3	1.35
14	13.7	1.86	13.6	1.84	13.4	1.82	13.3	1.80	13.2	1.78	13.0	1.77
32	14.4	1.56	14.2	1.54	14.1	1.53	14.0	1.51	13.8	1.50	13.7	1.48
47	12.4	1.03	12.2	1.02	12.1	1.01	12.0	1.00	11.9	0.99	11.8	0.98
75.2	17.8	1.32	17.6	1.30	17.5	1.29	17.3	1.28	17.1	1.27	16.9	1.25

NOTE

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

3. Capacity Table

Slim Duct

(2) CNH12LDB(AC012BNLDCH/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	0.75	12.9	10.0	0.77	13.4	10.3	0.78	13.8	10.6	0.80	14.1	10.5	0.81	14.8	10.4	0.82	15.5	10.2	0.83
70	12.7	9.9	0.71	13.4	10.2	0.72	14.0	10.5	0.74	14.4	10.8	0.75	14.7	10.7	0.76	15.4	10.6	0.77	16.2	10.4	0.78
95	10.6	7.7	0.94	11.2	7.9	0.96	11.6	8.1	0.98	12.0	8.4	1.00	12.2	8.3	1.01	12.9	8.2	1.02	13.5	8.1	1.04
115	10.8	8.9	1.51	11.4	9.2	1.54	11.9	9.5	1.57	12.2	9.8	1.60	12.5	9.7	1.62	13.1	9.6	1.63	13.8	9.4	1.66
122	8.5	7.9	1.22	8.9	8.1	1.25	9.3	8.4	1.27	9.6	8.6	1.30	9.8	8.6	1.31	10.3	8.5	1.33	10.8	8.3	1.35

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	1.23	7.1	1.22	7.1	1.21	7.0	1.20	6.9	1.19	6.9	1.17
-4	10.2	1.38	10.1	1.37	10.0	1.35	9.9	1.34	9.8	1.33	9.7	1.31
14	14.4	1.82	14.3	1.80	14.1	1.78	14.0	1.77	13.9	1.75	13.7	1.73
32	15.1	1.53	15.0	1.51	14.8	1.50	14.7	1.48	14.6	1.47	14.4	1.45
47	14.4	1.17	14.3	1.16	14.1	1.15	14.0	1.14	13.9	1.13	13.7	1.12
75.2	18.8	1.29	18.6	1.28	18.4	1.27	18.2	1.25	18.0	1.24	17.8	1.23

NOTE

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

3. Capacity Table

Slim Duct

(3) CNH18LDB(AC018BNLDCH/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	1.05	16.8	11.9	1.07	17.5	12.2	1.10	18.0	12.6	1.12	18.4	12.5	1.13	19.3	12.3	1.14	20.2	12.1	1.16
70	19.9	14.4	1.19	21.0	14.8	1.22	21.8	15.3	1.24	22.5	15.8	1.27	23.0	15.6	1.28	24.1	15.4	1.29	25.3	15.1	1.32
95	15.9	11.5	1.40	16.8	11.9	1.43	17.5	12.2	1.46	18.0	12.6	1.49	18.4	12.5	1.50	19.3	12.3	1.52	20.2	12.1	1.55
115	17.5	13.9	2.80	18.4	14.3	2.86	19.2	14.8	2.92	19.8	15.2	2.98	20.2	15.1	3.01	21.2	14.9	3.04	22.3	14.6	3.10
122	14.3	11.8	2.45	15.1	12.2	2.50	15.7	12.6	2.56	16.2	13.0	2.61	16.5	12.8	2.63	17.4	12.7	2.66	18.2	12.4	2.71

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	2.73	14.3	2.71	14.1	2.68	14.0	2.65	13.9	2.63	13.7	2.60
-4	17.0	2.98	16.8	2.95	16.7	2.92	16.5	2.89	16.3	2.86	16.2	2.83
14	24.3	3.58	24.1	3.55	23.8	3.51	23.6	3.48	23.4	3.44	23.1	3.41
32	23.9	3.11	23.7	3.08	23.4	3.05	23.2	3.02	23.0	2.99	22.7	2.96
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	2.07	26.5	2.05	26.3	2.03	26.0	2.01	25.7	1.99	25.5	1.97

NOTE

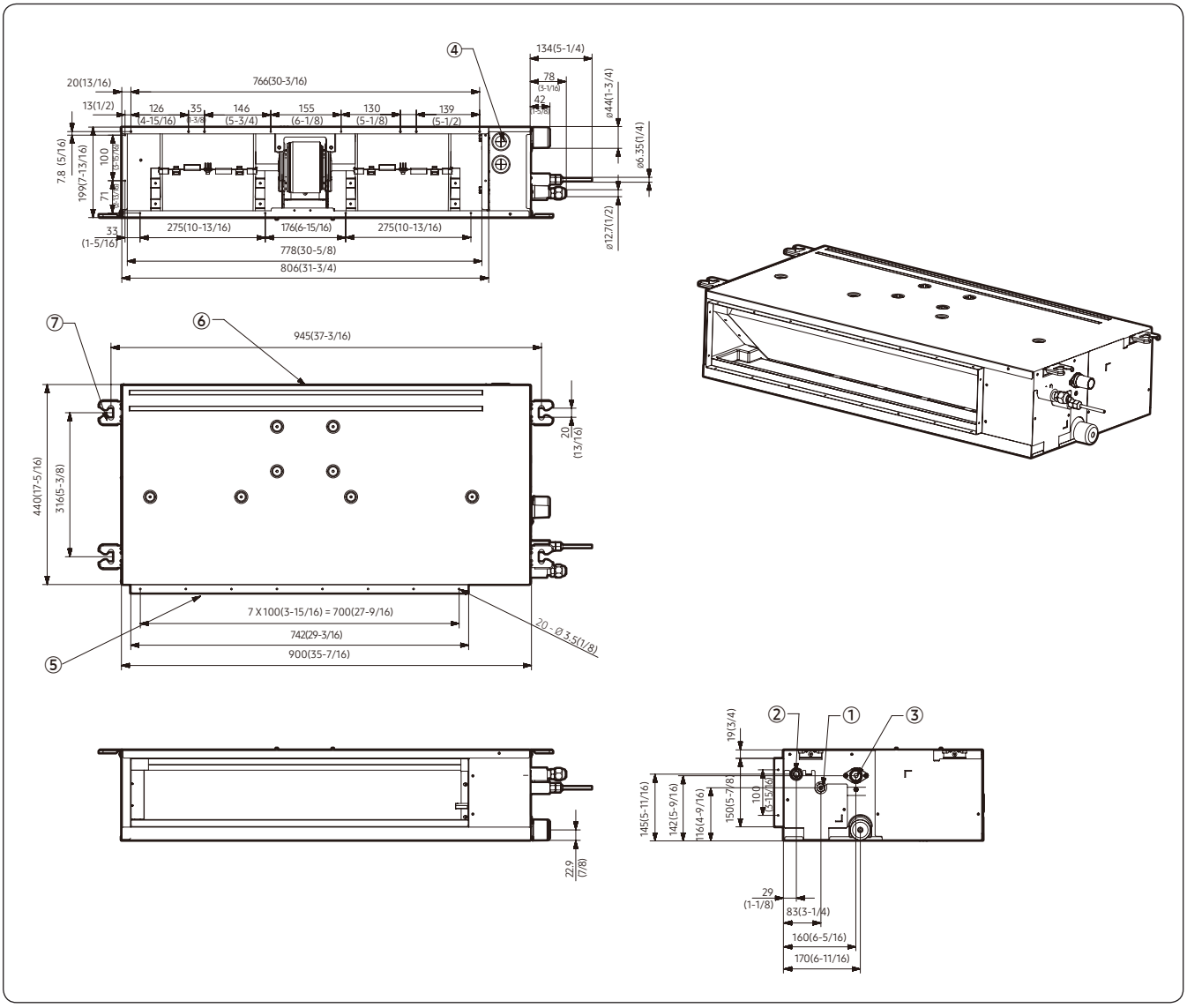
- The performance table shows the average value of each conditions.

4. Dimensional Drawing

Slim Duct

CNH09LDB(AC009BNLDCH/AA), CNH12LDB(AC012BNLDCH/AA)

Units : mm [inches]



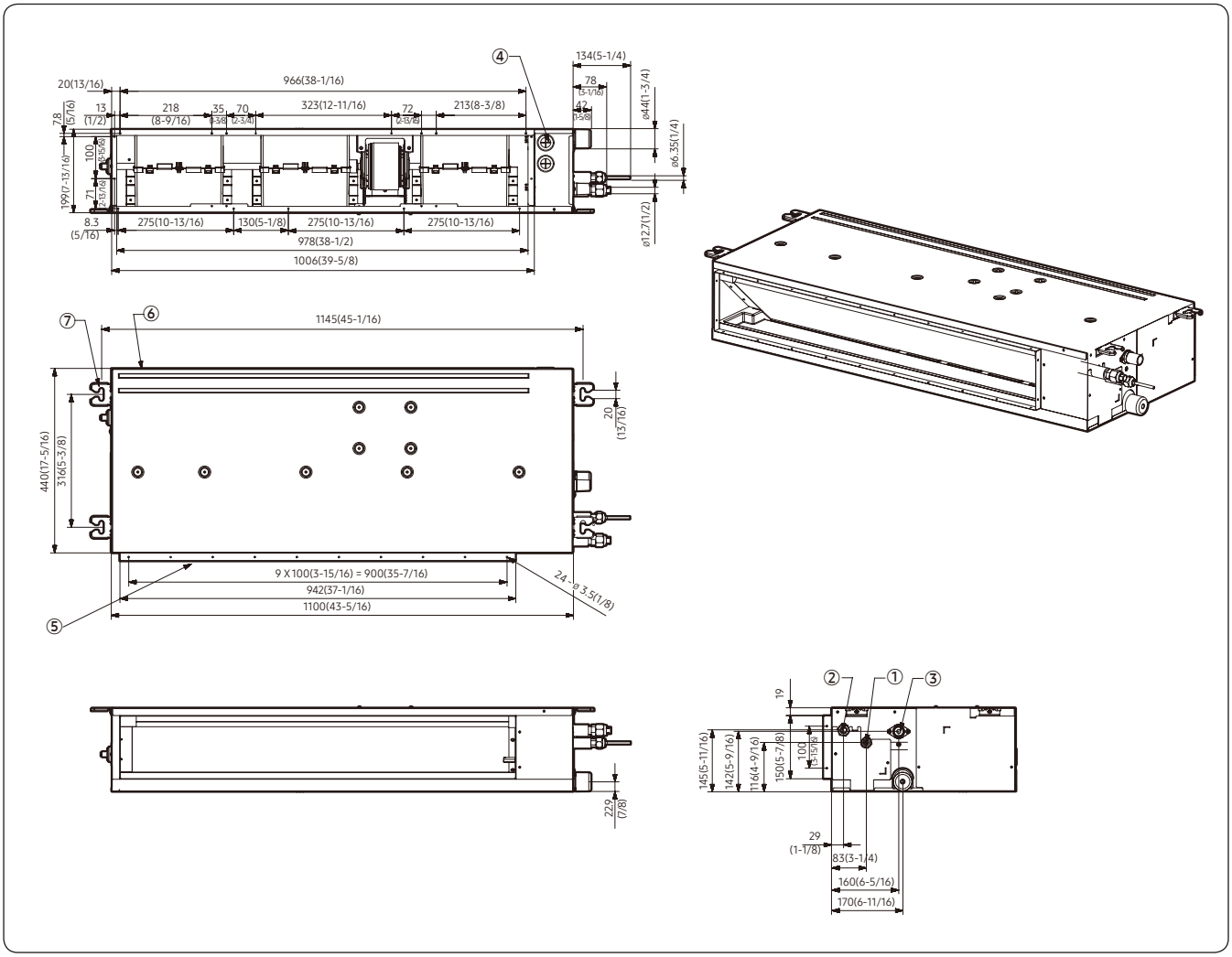
No.	Name	Description
①	Refrigerant Liquid Pipe	Φ6.35 mm(1/4")
②	Refrigerant Gas Pipe	Φ9.52 mm(3/8")
③	Condensate Drain	3/4"[OD26.67mm(1.05")]
④	Power & Comm. Wiring Conduits	-
⑤	Supply Air Flange	-
⑥	Return Air Flange	-
⑦	Hook	-

4. Dimensional Drawing

Slim Duct

CNH18LDB(AC018BNLDCH/AA)

Units : mm [inches]

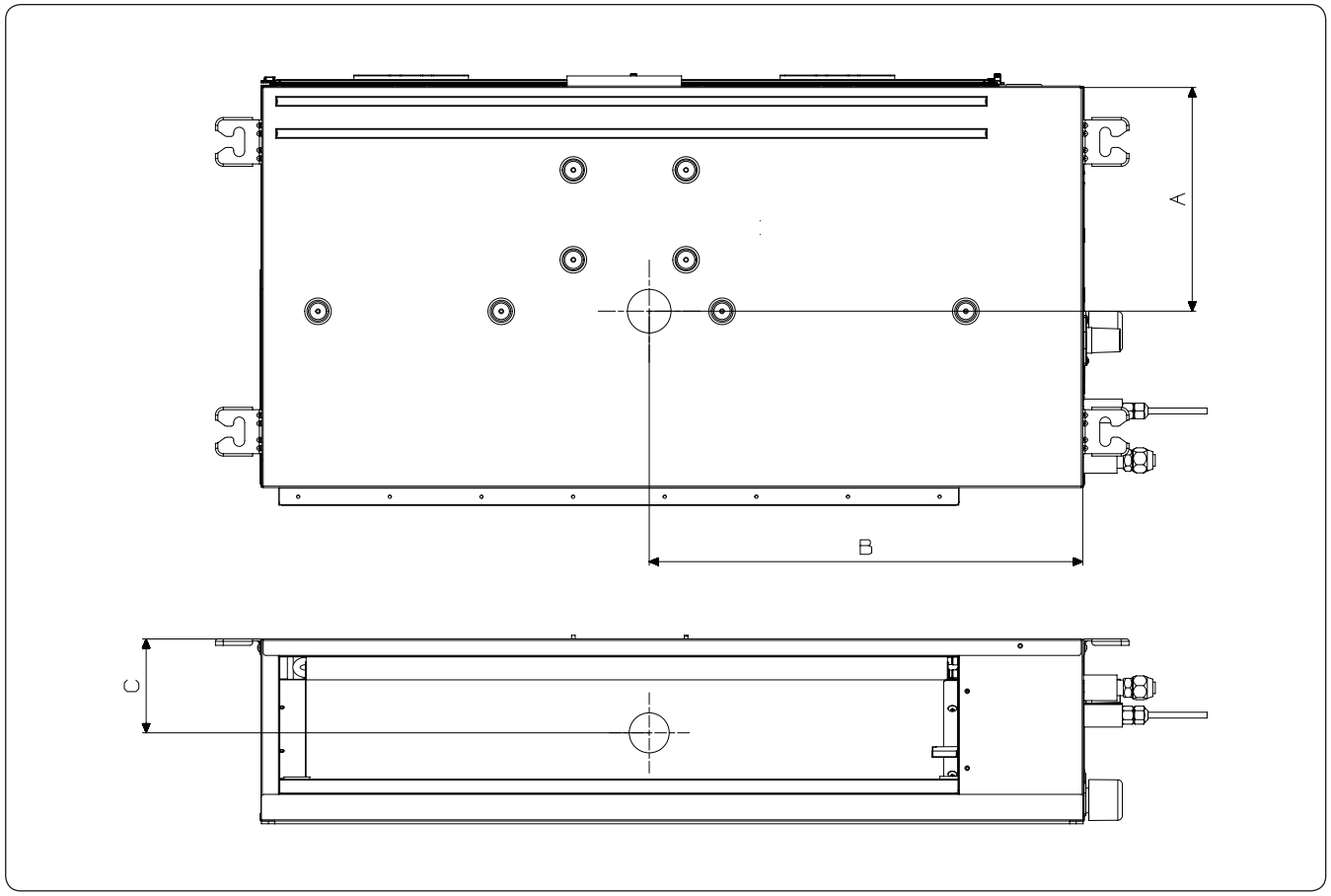


No.	Name	Description
①	Refrigerant Liquid Pipe	Φ6.35 mm(1/4")
②	Refrigerant Gas Pipe	Φ12.7 mm(1/2")
③	Condensate Drain	3/4"[OD26.67mm(1.05")]
④	Power & Comm. Wiring Conduits	-
⑤	Supply Air Flange	-
⑥	Return Air Flange	-
⑦	Hook	-

5. Center of Gravity

Slim Duct

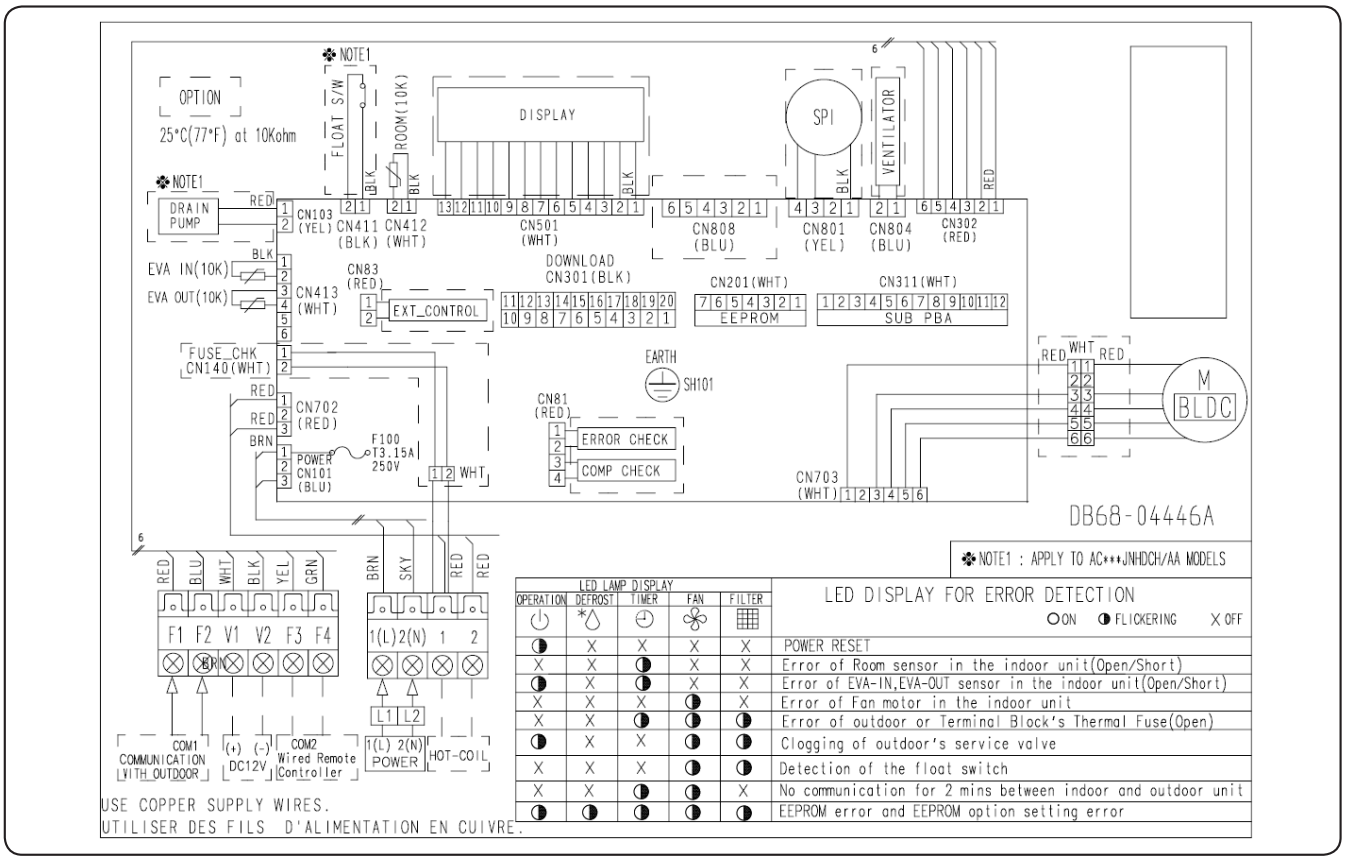
Units : mm [inches]



Model	A	B	C
CNH09/12LDB(AC009/012BNLDCH/AA)	233 [9-3/16]	436 [17-3/16]	100 [3-15/16]
CNH18LDB(AC018BNLDCH/AA)	240 [9-7/16]	540 [21-1/4]	100 [3-15/16]

6. Electrical Wiring Diagram

Slim Duct



MAIN PBA	Printed circuit board(MAIN)	EEV	Electronic Expansion Valve	ROOM (10K)	Thermistor ROOM in (10K)
EXT_CONTROL	EXTERNAL CONTROL	EVA-IN (10K)	Thermistor EVA IN(10K)	EVA-OUT (10K)	Thermistor EVA OUT(10K)
M-BLDC	BLDC Motor				

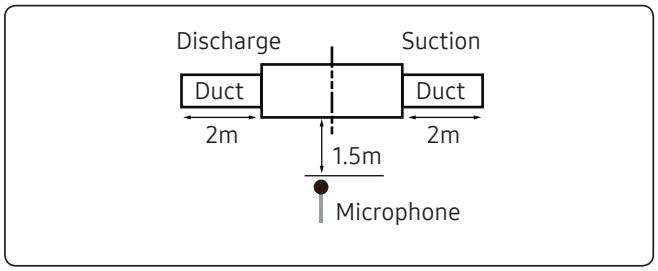
NOTE

- 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)

7. Sound Data

Slim Duct

Sound Pressure level

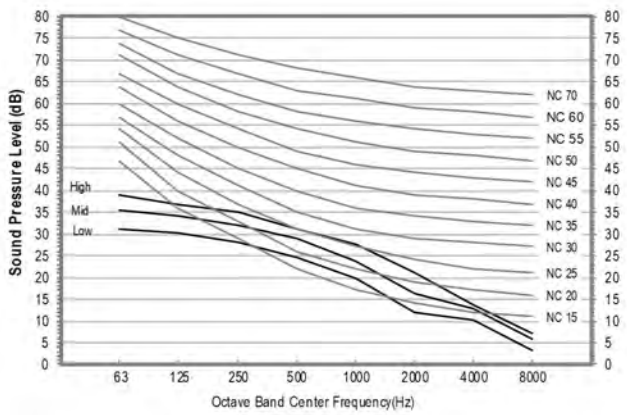


Unit: dB(A)

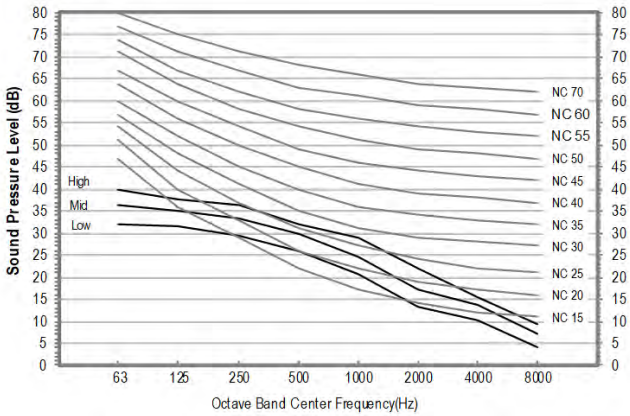
Model	High	Mid	Low
CNH09LDB(AC009BNLDCH/AA)	33	30	26
CNH12LDB(AC012BNLDCH/AA)	34	31	27
CNH18LDB(AC018BNLDCH/AA)	35	32	28

- NC Curve

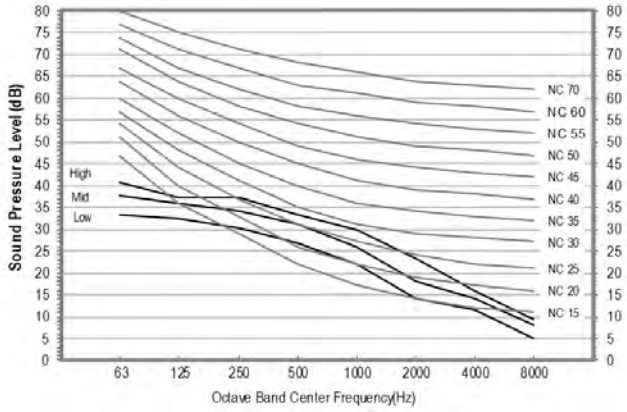
1) CNH09LDB(AC009BNLDCH/AA)



2) CNH12LDB(AC012BNLDCH/AA)



3) CNH18LDB(AC018BNLDCH/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

Slim Duct

Sound Power level

NOTE

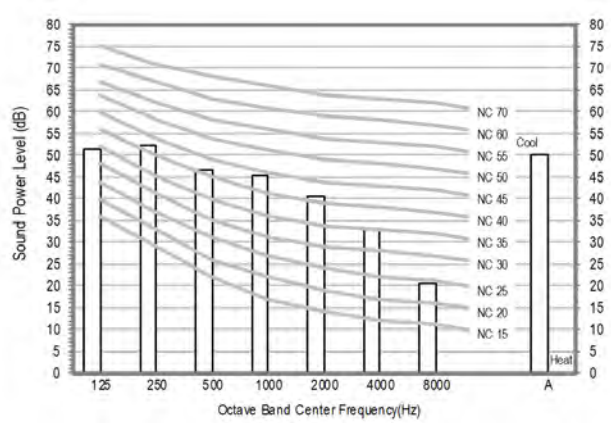
- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

Unit: dB(A)

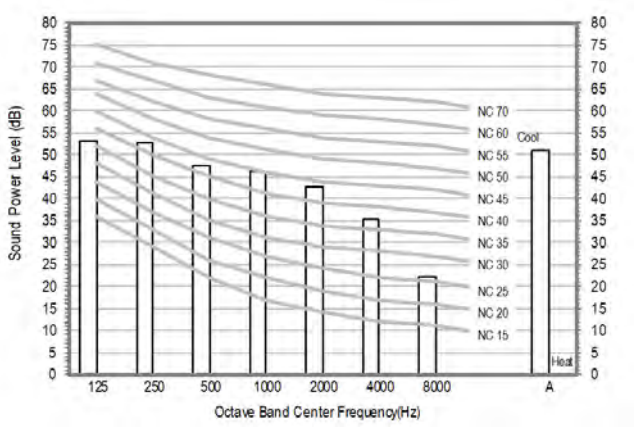
Model	Cooling
CNH09LDB(AC009BNLDCH/AA)	50
CNH12LDB(AC012BNLDCH/AA)	51
CNH18LDB(AC018BNLDCH/AA)	52

- NC Curve

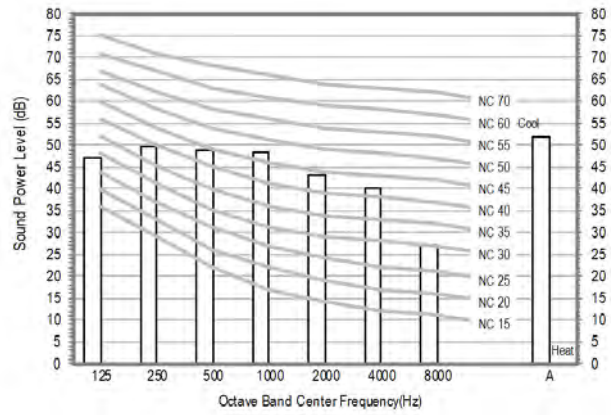
1) CNH09LDB(AC009BNLDCH/AA)



2) CNH12LDB(AC012BNLDCH/AA)



3) CNH18LDB(AC018BNLDCH/AA)

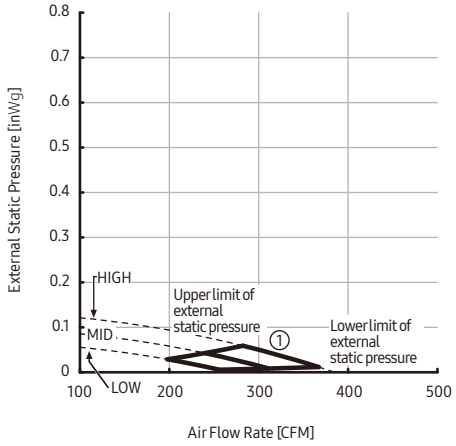


8. Fan Characteristics

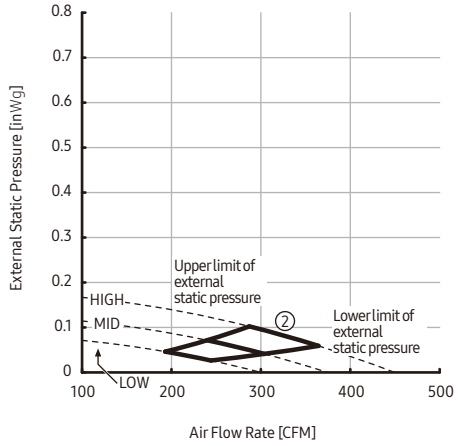
Slim Duct

1) AC009BNLDCH

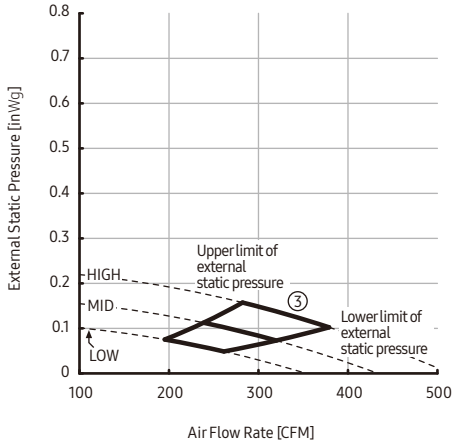
①	External Static Pressure(inWg)	Option Code
	0.01≤ P ≤0.06	01C3FC-1C5407-271A23-370000



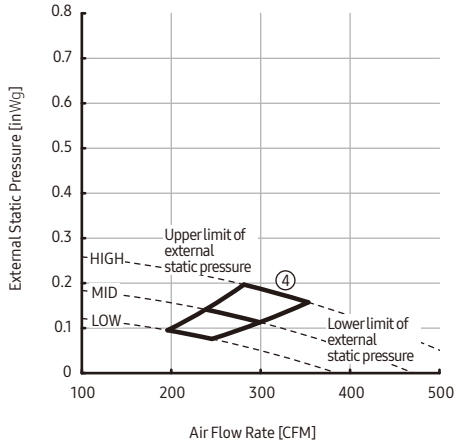
②	External Static Pressure(inWg)	Option Code
	0.06 < P ≤0.1	01C3FC-1C546B-271A23-370000



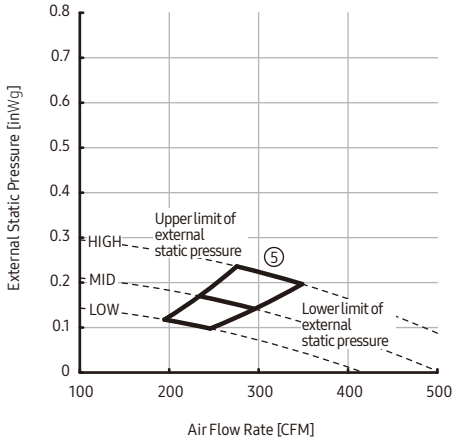
③	External Static Pressure(inWg)	Option Code
	0.1 < P ≤0.16	01C3FC-1C55C0-271A23-370000



④	External Static Pressure(inWg)	Option Code
	0.16 < P ≤0.2	01C3FC-1C5903-271A23-370000



⑤	External Static Pressure(inWg)	Option Code
	0.2 < P ≤0.24	01C3FC-1C5945-271A23-370000

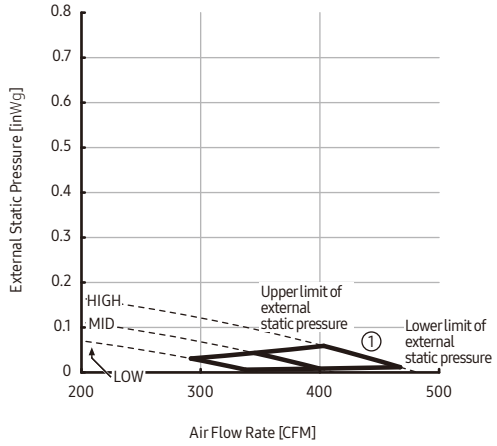


8. Fan Characteristics

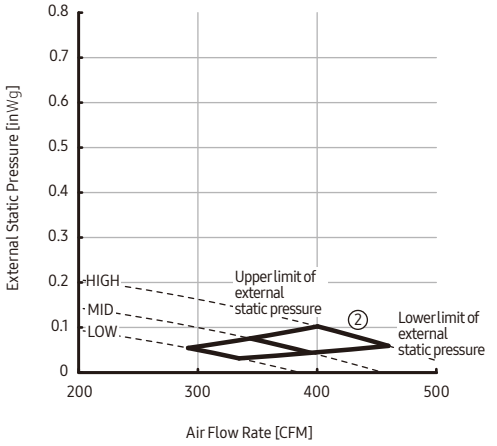
Slim Duct

2) AC012BNLDCH

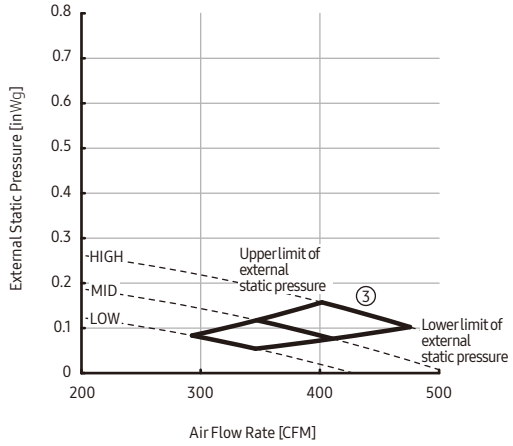
①	External Static Pressure(inWg)	Option Code
	0.01≤ P ≤0.06	01C3FC-1C54BC-272328-370000



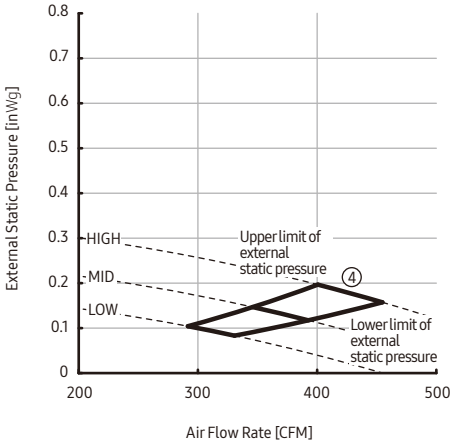
②	External Static Pressure(inWg)	Option Code
	0.06 < P ≤0.1	01C3FC-1C55F0-272328-370000



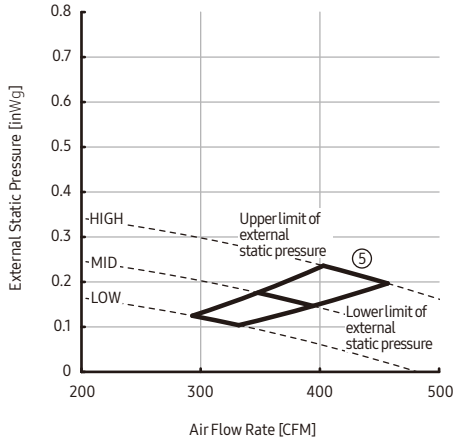
③	External Static Pressure(inWg)	Option Code
	0.1 < P ≤0.16	01C3FC-1C5944-272328-370000



④	External Static Pressure(inWg)	Option Code
	0.16 < P ≤0.2	01C3FC-1C5986-272328-370000



⑤	External Static Pressure(inWg)	Option Code
	0.2 < P ≤0.24	01C3FC-1C59B9-272328-370000

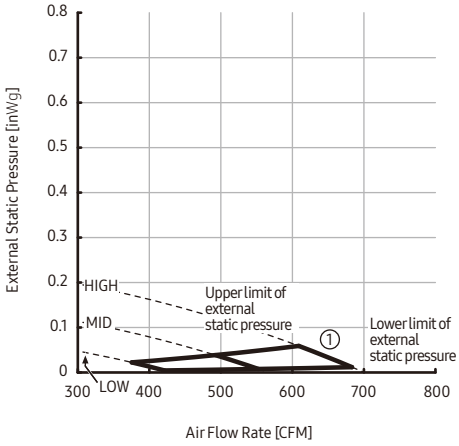


8. Fan Characteristics

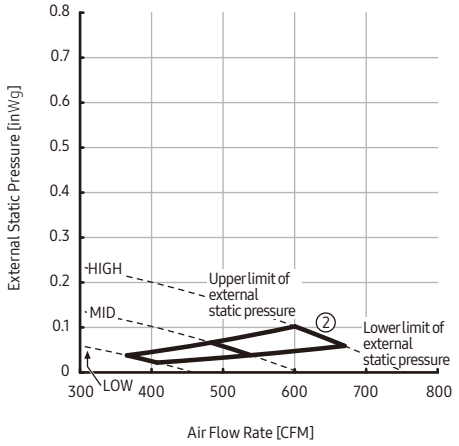
Slim Duct

3) AC018BNLDCH

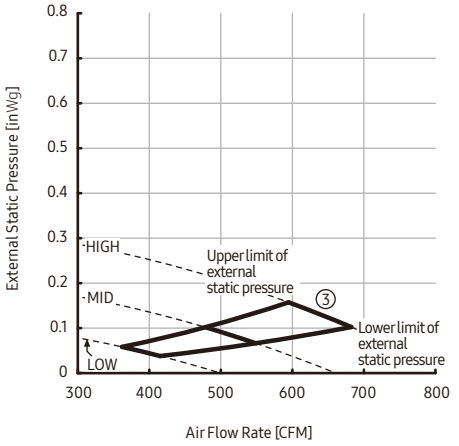
①	External Static Pressure(inWg)	Option Code
	0.01≤ P ≤0.06	01C3FC-1C54FB-23343C-370000



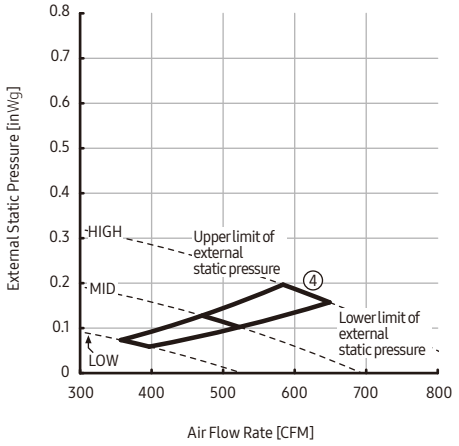
②	External Static Pressure(inWg)	Option Code
	0.06 < P ≤0.1	01C3FC-1C583D-23343C-370000



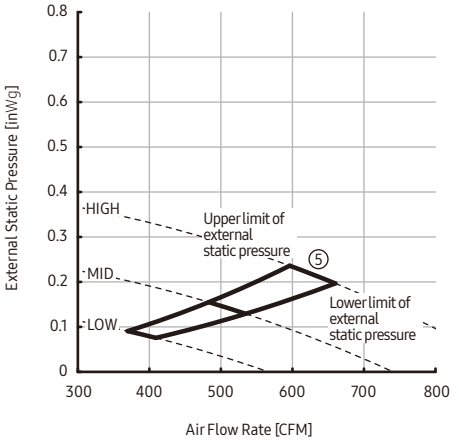
③	External Static Pressure(inWg)	Option Code
	0.1 < P ≤0.16	01C3FC-1C5980-23343C-370000



④	External Static Pressure(inWg)	Option Code
	0.16 < P ≤0.2	01C3FC-1C59B2-23343C-370000



⑤	External Static Pressure(inWg)	Option Code
	0.2 < P ≤0.24	01C3FC-1C59F5-23343C-370000



Duct S

Features & Benefits

Duct S

Overview

Samsung Ducted Type air conditioning units are a smart solution for low-maintenance, consistent cooling and heating performance in any environment. Their compact, slim frame blends seamlessly into ceilings, enhancing the beauty of the interior space and affording users more flexible installation options. Offering a comprehensive lineup, Samsung Ducted Type air conditioning units offer just the right solution for every need--from the office or shop to the restaurant kitchen.

Experience performance and convenient comfort for any weather condition

Samsung Duct S delivers unparalleled cooling and heating and flexible management with customizable comfort settings in any climate—all year round. Plus, it boasts a slim, compact size and multiple access points for easy setup exactly where needed.

Smart pressure control

Samsung Ducted Type units feature a smart pressure control system. This system adjusts the fan speed based on the external static pressure (ESP), delivering consistent cooling and heating power, regardless of the surrounding environment.

Convenient installation

The optional lift-up drain pump lifts condensed water up to 27.6 inch, compared to a limit of 29.5 inch on conventional models, for flexible and convenient installation.

The Duct S indoor air conditioning unit delivers smooth, consistent operation and convenience with features such as:

- Efficient operation. Stage the desired atmosphere with energy-efficient performance and customized airflow.
- Smart management. Cool spaces efficiently and manage the air conditioning unit even while away, with features designed for efficiency and control.
- Easy, flexible setup. Install and maintain even multiple units with a compact and easily accessible design.

1. Specification

Duct S

Model Name		Indoor Unit			AC009BNHDCH/AA	AC012BNHDCH/AA	AC018BNHDCH/AA
		Outdoor Unit			AC009BXADCH/AA	AC012BXADCH/AA	AC018BXADCH/AA
US Code		Indoor Unit			CNH09HDB	CNH12HDB	CNH18HDB
		Outdoor Unit			CXH09ADB	CXH12ADB	CXH18ADB
System	Mode			-	Heat Pump	Heat Pump	Heat Pump
	Performance	Capacity (Min/Std/Max)	Cooling	kW	0.97 / 2.64 / 4.10	1.03 / 3.52 / 4.40	1.76 / 5.28 / 7.03
				Btu/h	3,300 / 9,000 / 14,000	3,500 / 12,000 / 15,000	6,000 / 18,000 / 24,000
				US RT	0.28 / 0.75 / 1.17	0.29 / 1.00 / 1.25	0.50 / 1.50 / 2.00
			Heating	kW	0.82 / 3.52 / 4.40	0.88 / 4.10 / 5.28	1.47 / 5.86 / 8.79
				Btu/h	2,800 / 12,000 / 15,000	3,000 / 14,000 / 18,000	5,000 / 20,000 / 30,000
				US RT	0.23 / 1.00 / 1.25	0.25 / 1.17 / 1.50	0.42 / 1.67 / 2.50
	Power	Power Input (Min/Std/Max)	Cooling	kW	0.21 / 0.72 / 1.44	0.21 / 1.08 / 1.48	0.42 / 1.50 / 2.48
			Heating		0.16 / 1.00 / 2.00	0.17 / 1.17 / 2.20	0.35 / 1.68 / 4.30
		Current Input (Min/Std/Max)	Cooling	A	1.4 / 3.6 / 6.4	1.4 / 5.2 / 6.6	2.5 / 6.6 / 11.0
			Heating		1.1 / 4.8 / 8.9	1.1 / 5.3 / 9.8	2.0 / 7.6 / 19.0
		Current	MCA	A	10.9	10.9	20.1
			MOP	A	15	15	25
	Efficiency	EER2	Cooling	-	3.66	3.25	3.52
			Cooling(US)	(Btu/h)/W	12.5	11.1	12
		COP2	Heating	W/W	3.5	3.5	3.5
		SEER2		-	18.8	18.5	18.0
		HSPF2		-	8.9	9.1	8.1
	Pipe Connections	Liquid Pipe		Type	Flare	Flare	Flare
				Φ, mm(inch)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)
		Gas Pipe		Type	Flare	Flare	Flare
				Φ, mm(inch)	9.52 (3/8)	9.52 (3/8)	12.7 (1/2)
		Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
		Pipe Length (ODU-IDU)	Standard	m (ft)	7.5 (24.6)	7.5 (24.6)	7.5 (24.6)
			Max.	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		-	01B3FC-1C5970-271A23-370000	01B3FC-1C5981-272328-370000	01B3FC-1C5997-2F343C-370020
		Install		-	020010-120000-200000-300000	020010-120000-200000-300000	020010-120000-200000-300000
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		-	Hydrophile	Hydrophile	Hydrophile
	Fan	Type		-	Sirocco	Sirocco	Sirocco
		Quantity		EA	2	2	3
		Air Flow Rate	H/M/L	m^3/min	8.4/7.3 /6.9	11.3/8.9/7.3	17.5/15.2/13.5
				ft^3/min	297/258/244	399/314/258	618/537/477
				l/s	140/122/115	188/148/122	292/253/225
		External Static Pressure	Min/Std/Max	In Wg	0.1/0.58/0.6	0.1/0.58/0.6	0.1/0.58/0.8
	Fan Motor	Type		-	BLDC	BLDC	BLDC
		Output		W x n	153	153	153
	Drain	Drain Pipe		Φ, mm	OD26.67	OD26.67	OD26.67
	Sound	Sound Pressure Level	H/M/L(Silent)	dB(A)	41/35/28	42/36/29	40/36/32
		Sound Power Level		dB(A)	61	62	61
	External Dimension	Net Weight		kg(lbs)	26.7 (58.9)	26.7 (58.9)	34.9 (76.9)
		Gross Weight		kg(lbs)	30.7 (67.7)	30.7 (67.7)	39.4 (86.9)
		Net Dimensions (WxHxD)		mm	850 x 250 x 700	850 x 250 x 700	1200 x 250 x 700
				inch	33.46 x 9.84 x 27.56	33.46 x 9.84 x 27.56	47.24 x 9.84 x 27.56
		Gross Dimensions (WxHxD)		mm	1064 x 320 x 784	1064 x 320 x 784	1429 x 320 x 779
				inch	41.89 x 12.60 x 30.87	41.89 x 12.60 x 30.87	56.26 x 12.60 x 30.67

1. Specification

Duct S

Model Name		Indoor Unit			AC009BNHDCH/AA	AC012BNHDCH/AA	AC018BNHDCH/AA
		Outdoor Unit			AC009BXADCH/AA	AC012BXADCH/AA	AC018BXADCH/AA
US Code		Indoor Unit			CNH09HDB	CNH12HDB	CNH18HDB
		Outdoor Unit			CXH09ADB	CXH12ADB	CXH18ADB
Indoor Unit	Casing	Material		-	Steel	Steel	Steel
	Control System	Infrared remote control		-	AR-EH04U	AR-EH04U	AR-EH04U
		Wired remote control		-	MWR-WG00UN / MWR-SH11UN	MWR-WG00UN / MWR-SH11UN	MWR-WG00UN / MWR-SH11UN
	Drain Pump	Drain Pump		-	included	included	included
		Max.lifting Height / Displacement		in / gal/h	29.53 / 6.34	29.53 / 6.34	29.53 / 6.34
	Additional Accessories	Air Filter		-	-	-	-
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	1,060	1,060	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	1023 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		℃ (℉)	-18~50 (0~122)	-18~50 (0~122)	-18~50 (0~122)
		Heating		℃ (℉)	-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 7.5m(24.6ft), Level differences : 0m(0ft))
  2) Select wire size based on the value of MCA
  3) Sound pressure level is obtained in an anechoic room.
     - Sound pressure level is a relative value, depending on the distance and acoustic environment.
     - Sound pressure level may differ depending on operation condition.
     - dBA = A-weighted sound pressure level / Reference acoustic pressure 0 dB = 20uPa
  4) Sound power level is an absolute value that a sound source generates.
     - dBA = A-weighted sound power level
     - Reference power : 1pW / Measured according to ISO 3741
  5) These products contain R410A which is fluorinated greenhouse gas.

1. Specification

Duct S

Model Name		Indoor Unit			AC024BNHDCH/AA	AC030BNHDCH/AA	AC036BNHDCH/AA
		Outdoor Unit			AC024BXADCH/AA	AC030BXADCH/AA	AC036BXADCH/AA
US Code		Indoor Unit			CNH24HDB	CNH30HDB	CNH36HDB
		Outdoor Unit			CXH24ADB	CXH30ADB	CXH36ADB
System	Mode			-	Heat Pump	Heat Pump	Heat Pump
	Performance	Capacity (Min/Std/Max)	Cooling	kW	2.46 / 7.03 / 9.38	2.52 / 8.79 / 9.96	3.37 / 10.55 / 12.90
				Btu/h	8,400 / 24,000 / 32,000	8,600 / 30,000 / 34,000	11,500 / 36,000 / 44,000
				US RT	0.70 / 2.00 / 2.67	0.72 / 2.50 / 2.83	0.96 / 3.00 / 3.67
			Heating	kW	2.05 / 7.91 / 11.43	2.32 / 9.38 / 12.02	3.08 / 11.72 / 16.41
				Btu/h	7,000 / 27,000 / 39,000	7,900 / 32,000 / 41,000	10,500 / 40,000 / 56,000
				US RT	0.58 / 2.25 / 3.25	0.66 / 2.67 / 3.42	0.88 / 3.33 / 4.67
	Power	Power Input (Min/Std/Max)	Cooling	kW	0.46 / 2.0 / 3.13	0.65 / 2.91 / 3.83	0.88 / 3.36 / 4.35
			Heating		0.36 / 2.51 / 5.30	0.51 / 2.84 / 5.40	0.65 / 3.45 / 5.79
		Current Input (Min/Std/Max)	Cooling	A	2.4 / 9.5 / 14.2	3.5 / 13.3 / 17.2	4.8 / 15.4 / 19.3
			Heating		2.3 / 11.3 / 23.5	3.1 / 13.0 / 24.0	3.5 / 15.6 / 24.0
		Current	MCA	A	24.1	24.0	24.5
			MOP	A	30	30	35
	Efficiency	EER2	Cooling	-	3.52	3.02	3.14
			Cooling(US)	(Btu/h)/W	12	10.30	10.70
		COP2	Heating	W/W	3.1	3.30	3.40
		SEER2		-	19.5	18.2	19
		HSPF2		-	8.4	8.4	8.4
	Pipe Connections	Liquid Pipe		Type	Flare	Flare	Flare
				Φ, mm(inch)	6.35 (1/4)	9.52 (3/8)	9.52 (3/8)
		Gas Pipe		Type	Flare	Flare	Flare
				Φ, mm(inch)	15.88 (5/8)	15.88 (5/8)	15.88 (5/8)
		Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
		Pipe Length (ODU-IDU)	Standard	m (ft)	7.5 (24.6)	7.5 (24.6)	7.5 (24.6)
			Max.	m (ft)	50 (164.0)	50 (164.0)	75 (246.0)
			Elevation	m (ft)	30 (98.4)	30 (98.4)	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	R-410A
		Factory Charging		kg	2.6	2.6	2.9
				lbs	5.73	5.73	6.39
	Option Code	Standard		-	01B3FC-1C5998-27484F-370020	01B3FC-1C59B9-275A5E-370020	01B3FC-1C5933-276975-370045
		Install		-	020010-120000-200000-300000	020010-120000-200000-300000	020010-120000-200000-300000
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		-	Sirocco	Sirocco	Sirocco
		Quantity		EA	3	3	3
		Air Flow Rate	H/M/L	m^3/min	21.2/19/16.8	26/21.5/17	33/29/24
				ft^3/min	749/671/593	918/759/600	1165/1024/848
				l/s	353/317/280	433/358/283	550/483/400
		External Static Pressure	Min/Std/Max	In Wg	0.1/0.58/0.8	0.1/0.58/0.8	0.12/0.58/0.8
	Fan Motor	Type		-	BLDC	BLDC	BLDC
		Output		W x n	153	153	244
	Drain	Drain Pipe		Φ, mm	OD26.67	OD26.67	OD26.67
	Sound	Sound Pressure Level	H/M/L(Silent)	dB(A)	41/37/33	41/37/33	43/39/35
		Sound Power Level		dB(A)	62	63	65
	External Dimension	Net Weight		kg(lbs)	35.0 (77.2)	35.0 (77.2)	44.0 (97.0)
		Gross Weight		kg(lbs)	39.5 (87.1)	39.5 (87.1)	50.0 (110.2)
		Net Dimensions (WxHxD)		mm	1200 x 250 x 700	1200 x 250 x 700	1300 x 300 x 700
				inch	47.24 x 9.84 x 27.56	47.24 x 9.84 x 27.56	51.18 x 11.81 x 27.56
		Gross Dimensions (WxHxD)		mm	1429 x 320 x 779	1429 x 320 x 779	1529 x 370 x 779
				inch	56.26 x 12.60 x 30.67	56.26 x 12.60 x 30.67	60.20 x 14.57 x 30.67

1. Specification

Duct S

Model Name		Indoor Unit			AC024BNHDCH/AA	AC030BNHDCH/AA	AC036BNHDCH/AA
		Outdoor Unit			AC024BXADCH/AA	AC030BXADCH/AA	AC036BXADCH/AA
US Code		Indoor Unit			CNH24HDB	CNH30HDB	CNH36HDB
		Outdoor Unit			CXH24ADB	CXH30ADB	CXH36ADB
Indoor Unit	Casing	Material		-	Steel	Steel	Steel
	Control System	Infrared remote control		-	AR-EH04U	AR-EH04U	AR-EH04U
		Wired remote control		-	MWR-WG00UN / MWR-SH11UN	MWR-WG00UN / MWR-SH11UN	MWR-WG00UN / MWR-SH11UN
	Drain Pump	Drain Pump		-	included	included	included
		Max.lifting Height / Displacement		in / gal/h	29.53 / 6.34	29.53 / 6.34	29.53 / 6.34
	Additional Accessories	Air Filter		-	-	-	-
Outdoor Unit	Power Supply			Φ,#,V,Hz	1,2,208-230,60	1,2,208-230,60	1,2,208-230,60
	Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube
		Material	Fin	-	Al	Al	Al
			Tube	-	Cu	Cu	Cu
		Fin Treatment		-	Anti-Corrosion	Anti-Corrosion	Anti-Corrosion
	Compressor	Model		-	UG8T300FUBJUSG	UG8T300FUBJUSG	UG5TK1450FJXSG
		Type		-	Twin BLDC	Twin BLDC	Twin BLDC
		Output		kW	2.82	2.82	4.19
		Oil	Type	-	POE	POE	PVE
			Initial Charge	cc (fl oz)	1200	1200	1700
	Fan	Type		-	Propellar	Propellar	Propellar
		Discharge direction		-	Front	Front	Front
		Quantity		EA	1	1	2
		Air Flow Rate	H/M/L	m^3/min	76	76	100
				ft^3/min	2,684	2,684	3,532
				l/s	1,267	1,267	1,667
	Fan Motor	Type		-	BLDC	BLDC	BLDC
		Output		W x n	125 x 1	125 x 1	125 x 2
	Sound	Sound Pressure Level	Cooling	dB(A)	50	50	52
			Heating	dB(A)	52	52	54
		Sound Power Level		dB(A)	65	67	69
	External Dimension	Net Weight		kg(lbs)	72.0 (158.7)	72.0 (158.7)	86.0(189.6)
		Gross Weight		kg(lbs)	77.0 (169.8)	77.0 (169.8)	95.5(210.5)
		Net Dimensions (WxHxD)		mm	940 x 998 x 330	940 x 998 x 330	940 x 1210 x 330
				inch	37.0 x 39.3 x 13.0	37.0 x 39.3 x 13.0	37.0 x 47.6 x 13.0
		Gross Dimensions (WxHxD)		mm	995 x 1096 x 426	995 x 1096 x 426	995 x 1388 x 426
				inch	39.2 x 43.1 x 16.8	39.2 x 43.1 x 16.8	39.2 x 54.6 x 16.8
	Casing	Material	Body	-	Steel	Steel	Steel
	Operating Temp.	Cooling		℃ (℉)	-18~50 (0~122)	-18~50 (0~122)	-18~50 (0~122)
		Heating		℃ (℉)	-25~24 (-13~75)	-20~24 (-4~75)	-20~24 (-4~75)

NOTE

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

1. Specification

Duct S

Model Name		Indoor Unit			AC042BNHDCH/AA	AC048BNHDCH/AA
		Outdoor Unit			AC042BXADCH/AA	AC048BXADCH/AA
US Code		Indoor Unit			CNH42HDB	CNH48HDB
		Outdoor Unit			CXH42ADB	CXH48ADB
System	Mode			-	Heat Pump	Heat Pump
	Performance	Capacity (Min/Std/Max)	Cooling	kW	3.52 / 12.31 / 13.48	3.66 / 14.07 / 14.95
				Btu/h	12,000 / 42,000 / 46,000	12,500 / 48,000 / 51,000
				US RT	1.00 / 3.50 / 3.83	1.04 / 4.00 / 4.25
			Heating	kW	3.22 / 13.77 / 18.46	3.37 / 15.83 / 19.05
				Btu/h	11,000 / 47,000 / 63,000	11,500 / 54,000 / 65,000
				US RT	0.92 / 3.92 / 5.25	0.96 / 4.50 / 5.42
	Power	Power Input (Min/Std/Max)	Cooling	kW	0.92 / 4.57 / 5.49	0.96 / 6.00 / 6.50
			Heating		0.72 / 4.30 / 7.53	0.75 / 5.65 / 7.67
		Current Input (Min/Std/Max)	Cooling	A	5.0 / 20.3 / 24.4	5.2 / 26.6 / 28.8
			Heating		3.9 / 19.1 / 32.0	4.1 / 25.1 / 32.0
		Current	MCA	A	32.2	32.8
			MOP	A	40	40
	Efficiency	EER2	Cooling	-	2.70	2.34
			Cooling(US)	(Btu/h)/W	9.20	8.00
		COP2	Heating	W/W	3.20	2.80
		SEER2		-	18.1	16.8
		HSPF2		-	8.4	8.1
	Pipe Connections	Liquid Pipe		Type	Flare	Flare
				Φ, mm(inch)	9.52 (3/8)	9.52 (3/8)
		Gas Pipe		Type	Flare	Flare
				Φ, mm(inch)	15.88 (5/8)	15.88 (5/8)
		Heat Insulation		-	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)
			Max.	m (ft)	75 (246.0)	75 (246.0)
			Elevation	m (ft)	30 (98.4)	30 (98.4)
			Chargeless	m (ft)	7.5 (24.6)	7.5 (24.6)
	Wiring Connections	Communication	Min.	mm^2	0.75	0.75
			Remark	-	F1,F2	F1,F2
	Refrigerant	Type		-	R-410A	R-410A
		Factory Charging		kg	3.4	3.4
				lbs	7.50	7.50
	Option Code	Standard		-	01B3FC-1C5943-277D8A-370045	01B3FC-1C5954-278C9B-370045
		Install		-	020010-120000-200000-300000	020010-120000-200000-300000
Indoor Unit	Power Supply			Φ,#,V,Hz	1,2,208-230,60	1,2,208-230,60
	Heat Exchanger	Type		-	Fin & Tube	Fin & Tube
		Material	Fin	-	Al	Al
			Tube	-	Cu	Cu
		Fin Treatment		-	Green Hydrophile	Green Hydrophile
	Fan	Type		-	Sirocco	Sirocco
		Quantity		EA	3	3
		Air Flow Rate	H/M/L	m^3/min	35/31/26	36/32/27
				ft^3/min	1236/1095/918	1271/1130/954
				l/s	583/517/433	600/533/450
		External Static Pressure	Min/Std/Max	In Wg	0.12/0.58/0.8	0.12/0.58/0.8
	Fan Motor	Type		-	BLDC	BLDC
		Output		W x n	244	244
	Drain	Drain Pipe		Φ, mm	OD26.67	OD26.67
	Sound	Sound Pressure Level	H/M/L(Silent)	dB(A)	44/41/38	45/43/41
		Sound Power Level		dB(A)	66	67
	External Dimension	Net Weight		kg(lbs)	44.0 (97.0)	44.0 (97.0)
		Gross Weight		kg(lbs)	50.0 (110.2)	50.0 (110.2)
		Net Dimensions (WxHxD)		mm	1300 x 300 x 700	1300 x 300 x 700
				inch	51.18 x 11.81 x 27.56	51.18 x 11.81 x 27.56
		Gross Dimensions (WxHxD)		mm	1529 x 370 x 779	1529 x 370 x 779
				inch	60.20 x 14.57 x 30.67	60.20 x 14.57 x 30.67

1. Specification

Duct S

Model Name		Indoor Unit			AC042BNHDCH/AA	AC048BNHDCH/AA
		Outdoor Unit			AC042BXADCH/AA	AC048BXADCH/AA
US Code		Indoor Unit			CNH42HDB	CNH48HDB
		Outdoor Unit			CXH42ADB	CXH48ADB
Indoor Unit	Casing	Material		-	Steel	Steel
	Control System	Infrared remote control		-	AR-EH04U	AR-EH04U
		Wired remote control		-	MWR-WG00UN / MWR-SH11UN	MWR-WG00UN / MWR-SH11UN
	Drain Pump	Drain Pump		-	included	included
		Max.lifting Height / Displacement		in / gal/h	29.53 / 6.34	29.53 / 6.34
	Additional Accessories	Air Filter		-	-	-
Outdoor Unit	Power Supply			Φ,#,V,Hz	1,2,208-230,60	1,2,208-230,60
	Heat Exchanger	Type		-	Fin & Tube	Fin & Tube
		Material	Fin	-	Al	Al
			Tube	-	Cu	Cu
		Fin Treatment		-	Anti-Corrosion	Anti-Corrosion
	Compressor	Model		-	UG5TK1450FJXSG	UG5TK1450FJXSG
		Type		-	Twin BLDC	Twin BLDC
		Output		kW	4.19	4.19
		Oil	Type	-	PVE	PVE
			Initial Charge	cc (fl oz)	1700	1700
	Fan	Type		-	Propellar	Propellar
		Discharge direction		-	Front	Front
		Quantity		EA	2	2
		Air Flow Rate	H/M/L	m^3/min	100	100
				ft^3/min	3,532	3,532
				l/s	1,667	1,667
	Fan Motor	Type		-	BLDC	BLDC
		Output		W x n	125 x 2	125 x 2
	Sound	Sound Pressure Level	Cooling	dB(A)	53	56
			Heating	dB(A)	55	58
		Sound Power Level		dB(A)	70	72
	External Dimension	Net Weight		kg(lbs)	88.5(195.1)	88.5(195.1)
		Gross Weight		kg(lbs)	98.0(216.1)	98.0(216.1)
		Net Dimensions (WxHxD)		mm	940 x 1210 x 330	940 x 1210 x 330
				inch	37.0 x 47.6 x 13.0	37.0 x 47.6 x 13.0
		Gross Dimensions (WxHxD)		mm	995 x 1388 x 426	995 x 1388 x 426
				inch	39.2 x 54.6 x 16.8	39.2 x 54.6 x 16.8
	Casing	Material	Body	-	Steel	Steel
	Operating Temp.	Cooling		°C (°F)	-18~50 (0~122)	-18~50 (0~122)
		Heating		°C (°F)	-20~24 (-4~75)	-20~24 (-4~75)

NOTE

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

2. Summary Table

Duct S

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)				
CNH09HDB (AC009BNHDCH/AA)	58.9	Max.	14,000	15,000	High	297 / 297	41	61
		Std.	9,000	12,000	Mid	258 / 258	35	-
		Min.	3,300	2,800	Low	244 / 244	28	-
CNH12HDB (AC012BNHDCH/AA)	58.9	Max.	15,000	18,000	High	399 / 399	42	62
		Std.	12,000	14,000	Mid	314 / 314	36	-
		Min.	3,500	3,000	Low	258 / 258	29	-
CNH18HDB (AC018BNHDCH/AA)	76.9	Max.	24,000	30,000	High	618 / 618	40	61
		Std.	18,000	20,000	Mid	537 / 537	36	-
		Min.	6,000	5,000	Low	477 / 477	32	-
CNH24HDB (AC024BNHDCH/AA)	77.2	Max.	32,000	39,000	High	749 / 749	41	62
		Std.	24,000	27,000	Mid	671 / 671	37	-
		Min.	8,400	7,000	Low	593 / 593	33	-
CNH30HDB (AC030BNHDCH/AA)	77.2	Max.	34,000	41,000	High	918 / 918	41	63
		Std.	30,000	32,000	Mid	759 / 759	37	-
		Min.	8,600	7,900	Low	600 / 600	33	-
CNH36HDB (AC036BNHDCH/AA)	97.0	Max.	44,000	56,000	High	1,165 / 1,165	43	65
		Std.	36,000	40,000	Mid	1,024 / 1,024	39	-
		Min.	11,500	10,500	Low	848 / 848	35	-
CNH42HDB (AC042BNHDCH/AA)	97.0	Max.	46,000	63,000	High	1,236 / 1,236	44	66
		Std.	42,000	47,000	Mid	1,095 / 1,095	41	-
		Min.	12,000	11,000	Low	918 / 918	38	-
CNH48HDB (AC048BNHDCH/AA)	97.0	Max.	51,000	65,000	High	1,271 / 1,271	45	67
		Std.	48,000	54,000	Mid	1,130 / 1,130	43	-
		Min.	12,500	11,500	Low	954 / 954	41	-

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				
CNH09HDB (AC009BNHDCH/AA)	CXH09ADB (AC009BXADCH/AA)	60	208 to 230	187	253	8.74	8.74	2.10	10.84	10.9	15
CNH12HDB (AC012BNHDCH/AA)	CXH12ADB (AC012BXADCH/AA)	60	208 to 230	187	253	8.74	8.74	2.10	10.84	10.9	15
CNH18HDB (AC018BNHDCH/AA)	CXH18ADB (AC018BXADCH/AA)	60	208 to 230	187	253	17.94	17.94	2.10	20.04	20.1	25
CNH24HDB (AC024BNHDCH/AA)	CXH24ADB (AC024BXADCH/AA)	60	208 to 230	187	253	21.94	21.94	2.10	24.04	24.1	30
CNH30HDB (AC030BNHDCH/AA)	CXH30ADB (AC030BXADCH/AA)	60	208 to 230	187	253	21.50	21.50	2.10	23.60	24.0	30
CNH36HDB (AC036BNHDCH/AA)	CXH36ADB (AC036BXADCH/AA)	60	208 to 230	187	253	20.88	20.88	3.50	24.38	24.5	35
CNH42HDB (AC042BNHDCH/AA)	CXH42ADB (AC042BXADCH/AA)	60	208 to 230	187	253	28.63	28.63	3.50	32.13	32.2	40
CNH48HDB (AC048BNHDCH/AA)	CXH48ADB(AC048BXADCH/AA)	60	208 to 230	187	253	28.63	28.63	3.50	32.13	32.8	40

NOTE

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

3. Capacity Table

Duct S

(1) CNH09HDB(AC009BNHDCH/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	11.1	8.9	0.81	11.7	9.1	0.83	12.2	9.4	0.85	12.6	9.7	0.86	12.9	9.6	0.87	13.5	9.5	0.88	14.2	9.3	0.90
70	12.3	9.5	0.75	13.0	9.8	0.76	13.5	10.1	0.78	14.0	10.5	0.79	14.2	10.4	0.80	14.9	10.3	0.81	15.7	10.0	0.82
95	8.0	5.7	0.68	8.4	5.9	0.69	8.7	6.1	0.71	9.0	6.3	0.72	9.2	6.2	0.73	9.6	6.2	0.73	10.1	6.1	0.75
115	11.1	8.6	1.42	11.7	8.9	1.45	12.2	9.2	1.48	12.6	9.5	1.51	12.9	9.4	1.53	13.5	9.3	1.54	14.2	9.1	1.57
122	8.4	7.3	1.19	8.8	7.6	1.21	9.2	7.8	1.23	9.5	8.0	1.26	9.6	8.0	1.27	10.1	7.9	1.29	10.6	7.7	1.31

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	1.10	6.8	1.09	6.7	1.08	6.7	1.07	6.6	1.06	6.5	1.05
-4	9.6	1.40	9.5	1.39	9.4	1.37	9.3	1.36	9.2	1.35	9.1	1.33
14	14.4	1.82	14.2	1.80	14.1	1.78	14.0	1.77	13.8	1.75	13.7	1.73
32	15.1	1.49	14.9	1.47	14.8	1.46	14.6	1.45	14.5	1.43	14.3	1.42
47	12.4	1.03	12.2	1.02	12.1	1.01	12.0	1.00	11.9	0.99	11.8	0.98
75.2	17.8	1.21	17.6	1.20	17.5	1.19	17.3	1.18	17.1	1.17	16.9	1.15

NOTE

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

3. Capacity Table

Duct S

(2) CNH12HDB(AC012BNHDCH/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	11.7	9.3	0.91	12.3	9.6	0.93	12.8	9.9	0.95	13.2	10.2	0.97	13.5	10.1	0.98	14.1	10.0	0.99	14.8	9.8	1.01
70	13.3	10.3	0.86	14.0	10.6	0.88	14.6	10.9	0.90	15.0	11.3	0.92	15.3	11.1	0.93	16.1	11.0	0.94	16.9	10.8	0.96
95	10.6	7.7	1.02	11.2	7.9	1.04	11.6	8.1	1.06	12.0	8.4	1.08	12.2	8.3	1.09	12.9	8.2	1.10	13.5	8.1	1.12
115	11.7	9.0	1.63	12.3	9.3	1.66	12.8	9.6	1.69	13.2	9.9	1.73	13.5	9.8	1.75	14.1	9.7	1.76	14.8	9.5	1.80
122	9.0	7.9	1.37	9.5	8.2	1.40	9.9	8.4	1.43	10.2	8.7	1.46	10.4	8.6	1.47	10.9	8.5	1.49	11.5	8.3	1.52

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	1.21	7.1	1.19	7.1	1.18	7.0	1.17	6.9	1.16	6.9	1.15
-4	10.3	1.35	10.2	1.34	10.1	1.32	10.0	1.31	9.9	1.30	9.8	1.28
14	15.1	1.99	15.0	1.97	14.8	1.95	14.7	1.93	14.6	1.91	14.4	1.89
32	15.9	1.63	15.7	1.61	15.6	1.60	15.4	1.58	15.2	1.56	15.1	1.55
47	14.4	1.21	14.3	1.19	14.1	1.18	14.0	1.17	13.9	1.16	13.7	1.15
75.2	18.8	1.33	18.6	1.31	18.4	1.30	18.2	1.29	18.0	1.27	17.8	1.26

NOTE

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

3. Capacity Table

Duct S

(3) CNH18HDB(AC018BNHDCH/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	1.06	16.8	11.9	1.08	17.5	12.2	1.10	18.0	12.6	1.13	18.4	12.5	1.14	19.3	12.3	1.15	20.2	12.1	1.17
70	19.9	14.4	1.13	21.0	14.8	1.15	21.8	15.3	1.18	22.5	15.8	1.20	23.0	15.6	1.21	24.1	15.4	1.22	25.3	15.1	1.25
95	15.9	11.5	1.41	16.8	11.9	1.44	17.5	12.2	1.47	18.0	12.6	1.50	18.4	12.5	1.52	19.3	12.3	1.53	20.2	12.1	1.56
115	16.2	12.1	2.33	17.1	12.4	2.38	17.8	12.8	2.43	18.4	13.2	2.48	18.7	13.1	2.50	19.7	13.0	2.52	20.6	12.7	2.57
122	14.3	11.8	2.26	15.1	12.2	2.30	15.7	12.6	2.35	16.2	13.0	2.40	16.5	12.8	2.42	17.4	12.7	2.45	18.2	12.4	2.50

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	2.25	14.3	2.23	14.1	2.21	14.0	2.18	13.9	2.16	13.7	2.14
-4	20.6	3.13	20.4	3.10	20.2	3.07	20.0	3.04	19.8	3.01	19.6	2.98
14	26.8	4.15	26.5	4.11	26.3	4.07	26.0	4.03	25.7	3.99	25.5	3.95
32	24.7	2.77	24.5	2.74	24.2	2.71	24.0	2.69	23.8	2.66	23.5	2.63
47	20.6	1.73	20.4	1.71	20.2	1.70	20.0	1.68	19.8	1.66	19.6	1.65
75.2	26.8	1.99	26.5	1.97	26.3	1.95	26.0	1.93	25.7	1.91	25.5	1.89

NOTE

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

3. Capacity Table

Duct S

(4) CNH24HDB(AC024BNHDCH/AA) + CXH24ADB (AC024BXADCH/AA)

Cooling

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

Outdoor Temp. (°F, DB)	Indoor Temperature (°F, DB / WB)																				
	68 / 57			72 / 61			77 / 64			80 / 67			82 / 70			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
0	26.5	19.2	1.13	27.9	19.8	1.15	29.1	20.4	1.18	30.0	21.0	1.20	30.6	20.8	1.21	32.1	20.6	1.22	33.7	20.2	1.25
70	23.8	17.2	1.41	25.0	17.7	1.44	26.1	18.3	1.47	26.9	18.8	1.50	27.4	18.6	1.52	28.8	18.4	1.53	30.2	18.1	1.56
95	21.2	15.3	1.88	22.3	15.8	1.92	23.3	16.3	1.96	24.0	16.8	2.00	24.5	16.6	2.02	25.7	16.5	2.04	27.0	16.1	2.08
115	22.3	18.4	3.39	23.5	19.0	3.46	24.4	19.6	3.53	25.2	20.2	3.60	25.7	20.0	3.64	27.0	19.8	3.67	28.3	19.4	3.75
122	19.1	16.8	3.11	20.1	17.3	3.17	21.0	17.8	3.23	21.6	18.4	3.30	22.0	18.2	3.33	23.1	18.0	3.37	24.3	17.6	3.43

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	16.7	2.23	16.5	2.30	16.4	2.28	16.2	2.26	16.0	2.24	15.9	2.21
-4	27.8	4.78	27.5	4.73	27.3	4.69	27.0	4.64	26.7	4.59	26.5	4.55
14	27.8	4.53	27.5	4.48	27.3	4.44	27.0	4.39	26.7	4.35	26.5	4.31
32	30.6	3.36	30.3	3.33	30.0	3.30	29.7	3.26	29.4	3.23	29.1	3.20
47	27.8	2.59	27.5	2.56	27.3	2.54	27.0	2.51	26.7	2.48	26.5	2.46
75.2	37.6	3.23	37.2	3.20	36.8	3.17	36.5	3.14	36.1	3.11	35.7	3.08

NOTE

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

3. Capacity Table

Duct S

(5) CNH30HDB(AC030BNHDCH/AA) + CXH30ADB (AC030BXADCH/AA)

Cooling

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

Outdoor Temp. (°F, DB)	Indoor Temperature (°F, DB / WB)																				
	68 / 57			72 / 61			77 / 64			80 / 67			82 / 70			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
0	33.2	24.0	1.64	34.9	24.7	1.68	36.4	25.5	1.71	37.5	26.3	1.75	38.3	26.0	1.76	40.2	25.7	1.78	42.2	25.2	1.82
70	29.7	21.5	2.05	31.3	22.1	2.10	32.6	22.8	2.14	33.6	23.5	2.18	34.3	23.3	2.20	36.0	23.1	2.23	37.8	22.6	2.27
95	26.5	19.2	2.74	27.9	19.8	2.79	29.1	20.4	2.85	30.0	21.0	2.91	30.6	20.8	2.94	32.1	20.6	2.97	33.7	20.2	3.03
115	23.9	19.7	3.56	25.1	20.3	3.63	26.2	21.0	3.71	27.0	21.6	3.78	27.5	21.4	3.82	28.9	21.2	3.86	30.4	20.7	3.94
122	19.9	17.5	3.15	21.0	18.0	3.21	21.8	18.6	3.28	22.5	19.1	3.35	23.0	18.9	3.38	24.1	18.7	3.41	25.3	18.4	3.48

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
-4	28.0	4.65	27.7	4.60	27.5	4.56	27.2	4.51	26.9	4.46	26.7	4.42
14	33.0	5.12	32.6	5.07	32.3	5.02	32.0	4.97	31.7	4.92	31.4	4.87
32	36.3	3.80	35.9	3.77	35.6	3.73	35.2	3.69	34.8	3.66	34.5	3.62
47	33.0	2.93	32.6	2.90	32.3	2.87	32.0	2.84	31.7	2.81	31.4	2.78
75.2	44.5	3.66	44.1	3.62	43.6	3.59	43.2	3.55	42.8	3.51	42.3	3.48

NOTE

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

3. Capacity Table

Duct S

(6) CNH36HDB(AC036BNHDCH/AA) + CXH36ADB (AC036BXADCH/AA)

Cooling

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

Outdoor Temp. (°F, DB)	Indoor Temperature (°F, DB / WB)																				
	68 / 57			72 / 61			77 / 64			80 / 67			82 / 70			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
0	36.6	26.4	3.16	38.6	27.3	3.23	40.2	28.1	3.29	41.4	29.0	3.36	42.2	28.7	3.39	44.3	28.4	3.43	46.6	27.8	3.50
70	38.2	27.6	2.85	40.2	28.5	2.90	41.9	29.3	2.96	43.2	30.2	3.02	44.1	29.9	3.05	46.3	29.6	3.08	48.6	29.0	3.15
95	31.8	23.0	3.16	33.5	23.7	3.23	34.9	24.4	3.29	36.0	25.2	3.36	36.7	24.9	3.39	38.6	24.7	3.43	40.5	24.2	3.50
115	28.7	23.7	3.79	30.2	24.4	3.87	31.4	25.1	3.95	32.4	25.9	4.03	33.0	25.7	4.07	34.7	25.4	4.11	36.4	24.9	4.19
122	23.9	20.9	2.85	25.1	21.6	2.90	26.2	22.3	2.96	27.0	23.0	3.02	27.5	22.7	3.05	28.9	22.5	3.08	30.4	22.0	3.15

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
-4	34.0	5.10	33.7	5.05	33.3	5.00	33.0	4.95	32.7	4.90	32.3	4.85
14	37.1	4.62	36.7	4.58	36.4	4.53	36.0	4.49	35.6	4.44	35.3	4.40
32	39.2	3.73	38.8	3.70	38.4	3.66	38.0	3.62	37.6	3.59	37.2	3.55
47	41.2	3.55	40.8	3.52	40.4	3.48	40.0	3.45	39.6	3.42	39.2	3.38
75.2	47.4	3.20	46.9	3.17	46.5	3.14	46.0	3.11	45.5	3.07	45.1	3.04

NOTE

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

3. Capacity Table

Duct S

(7) CNH42HDB(AC042BNHDCH/AA) + CXH42ADB (AC042BXADCH/AA)

Cooling

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

Outdoor Temp. (°F, DB)	Indoor Temperature (°F, DB / WB)																				
	68 / 57			72 / 61			77 / 64			80 / 67			82 / 70			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
0	42.7	30.9	4.30	45.0	31.8	4.39	46.9	32.8	4.48	48.3	33.8	4.57	49.3	33.5	4.62	51.7	33.1	4.66	54.3	32.5	4.75
70	44.6	32.2	3.87	46.9	33.2	3.95	48.9	34.2	4.03	50.4	35.3	4.11	51.4	34.9	4.15	54.0	34.6	4.20	56.7	33.9	4.28
95	37.2	26.8	4.30	39.1	27.7	4.39	40.7	28.5	4.48	42.0	29.4	4.57	42.8	29.1	4.62	45.0	28.8	4.66	47.2	28.2	4.75
115	31.6	26.1	4.73	33.2	26.9	4.83	34.6	27.7	4.93	35.7	28.6	5.03	36.4	28.3	5.08	38.2	28.0	5.13	40.1	27.4	5.23
122	26.0	22.8	3.66	27.4	23.5	3.73	28.5	24.2	3.81	29.4	25.0	3.88	30.0	24.7	3.92	31.5	24.5	3.96	33.1	24.0	4.04

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
-4	41.6	6.48	41.2	6.42	40.8	6.35	40.4	6.29	40.0	6.23	39.6	6.16
14	46.0	5.98	45.5	5.92	45.1	5.86	44.7	5.81	44.2	5.75	43.8	5.69
32	46.0	4.65	45.5	4.61	45.1	4.56	44.7	4.52	44.2	4.47	43.8	4.43
47	48.4	4.43	47.9	4.39	47.5	4.34	47.0	4.30	46.5	4.26	46.1	4.21
75.2	55.7	3.99	55.1	3.95	54.6	3.91	54.1	3.87	53.5	3.83	53.0	3.79

NOTE

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

3. Capacity Table

Duct S

(8) CNH48HDB(AC048BNHDCH/AA) + CXH48ADB (AC048BXADCH/AA)

Cooling

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

Outdoor Temp. (°F, DB)	Indoor Temperature (°F, DB / WB)																				
	68 / 57			72 / 61			77 / 64			80 / 67			82 / 70			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
0	48.8	35.3	5.65	51.4	36.4	5.76	53.5	37.5	5.88	55.2	38.6	6.00	56.3	38.3	6.06	59.1	37.9	6.12	62.1	37.1	6.24
70	51.0	36.8	5.08	53.6	37.9	5.19	55.9	39.1	5.29	57.6	40.3	5.40	58.8	39.9	5.45	61.7	39.5	5.51	64.8	38.7	5.62
95	42.5	30.7	5.65	44.7	31.6	5.76	46.6	32.6	5.88	48.0	33.6	6.00	49.0	33.3	6.06	51.4	32.9	6.12	54.0	32.3	6.24
115	34.0	28.0	5.36	35.8	28.9	5.47	37.2	29.8	5.59	38.4	30.7	5.70	39.2	30.4	5.76	41.1	30.1	5.81	43.2	29.5	5.93
122	27.6	24.2	4.52	29.1	25.0	4.61	30.3	25.7	4.70	31.2	26.5	4.80	31.8	26.3	4.85	33.4	26.0	4.90	35.1	25.5	4.99

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
-4	41.8	6.50	41.4	6.44	41.0	6.37	40.6	6.31	40.2	6.25	39.8	6.18
14	50.1	7.57	49.6	7.49	49.1	7.42	48.6	7.35	48.1	7.27	47.6	7.20
32	52.9	6.11	52.3	6.05	51.8	5.99	51.3	5.93	50.8	5.87	50.3	5.81
47	55.6	5.82	55.1	5.76	54.5	5.71	54.0	5.65	53.5	5.59	52.9	5.54
75.2	64.0	5.24	63.3	5.19	62.7	5.14	62.1	5.09	61.5	5.03	60.9	4.98

NOTE

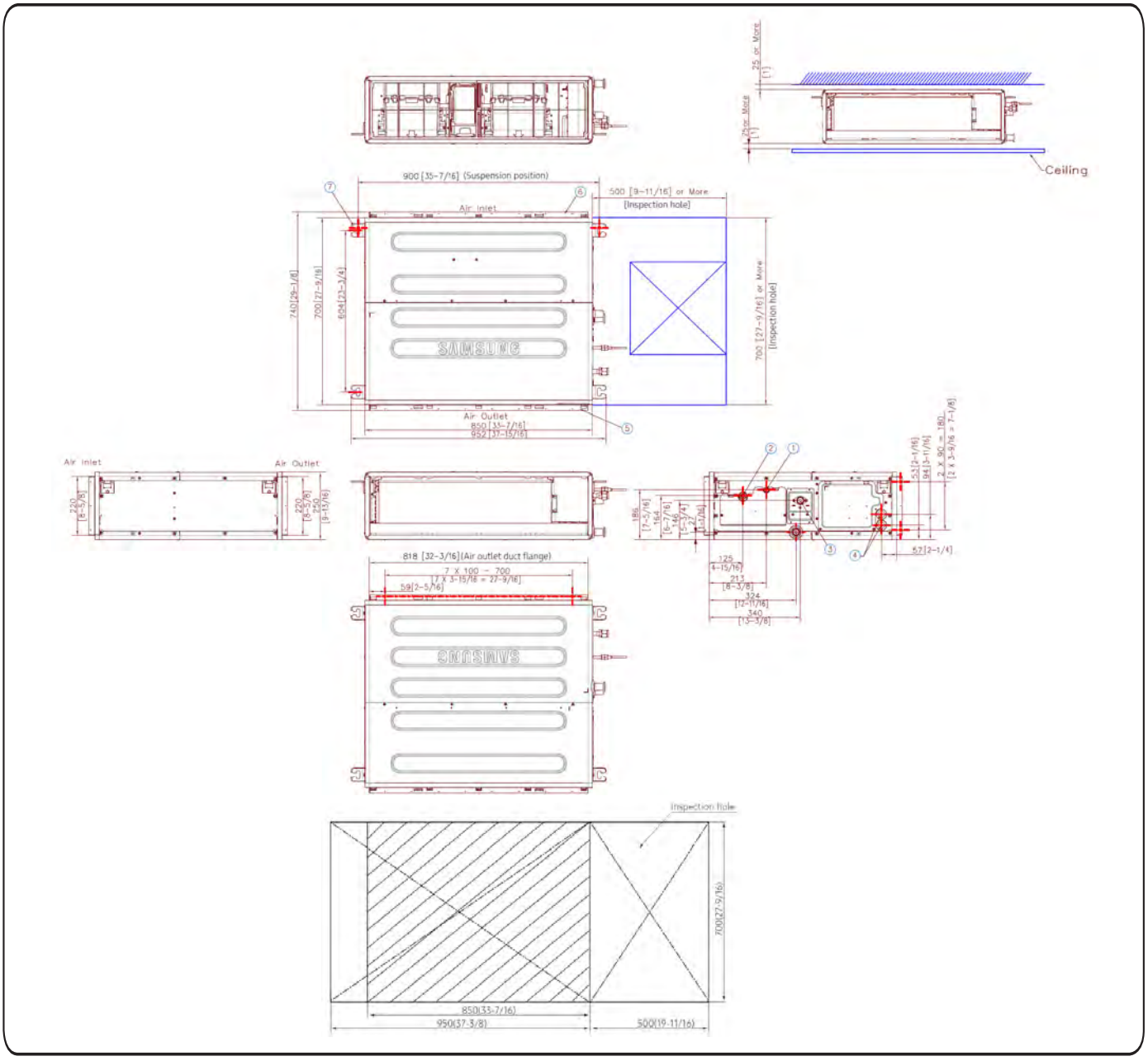
- The performance table shows the average value of each conditions.

4. Dimensional Drawing

Duct S

CNH09HDB (AC009BNHDCH/AA), CNH12HDB (AC012BNHDCH/AA)

Units : mm (inches)



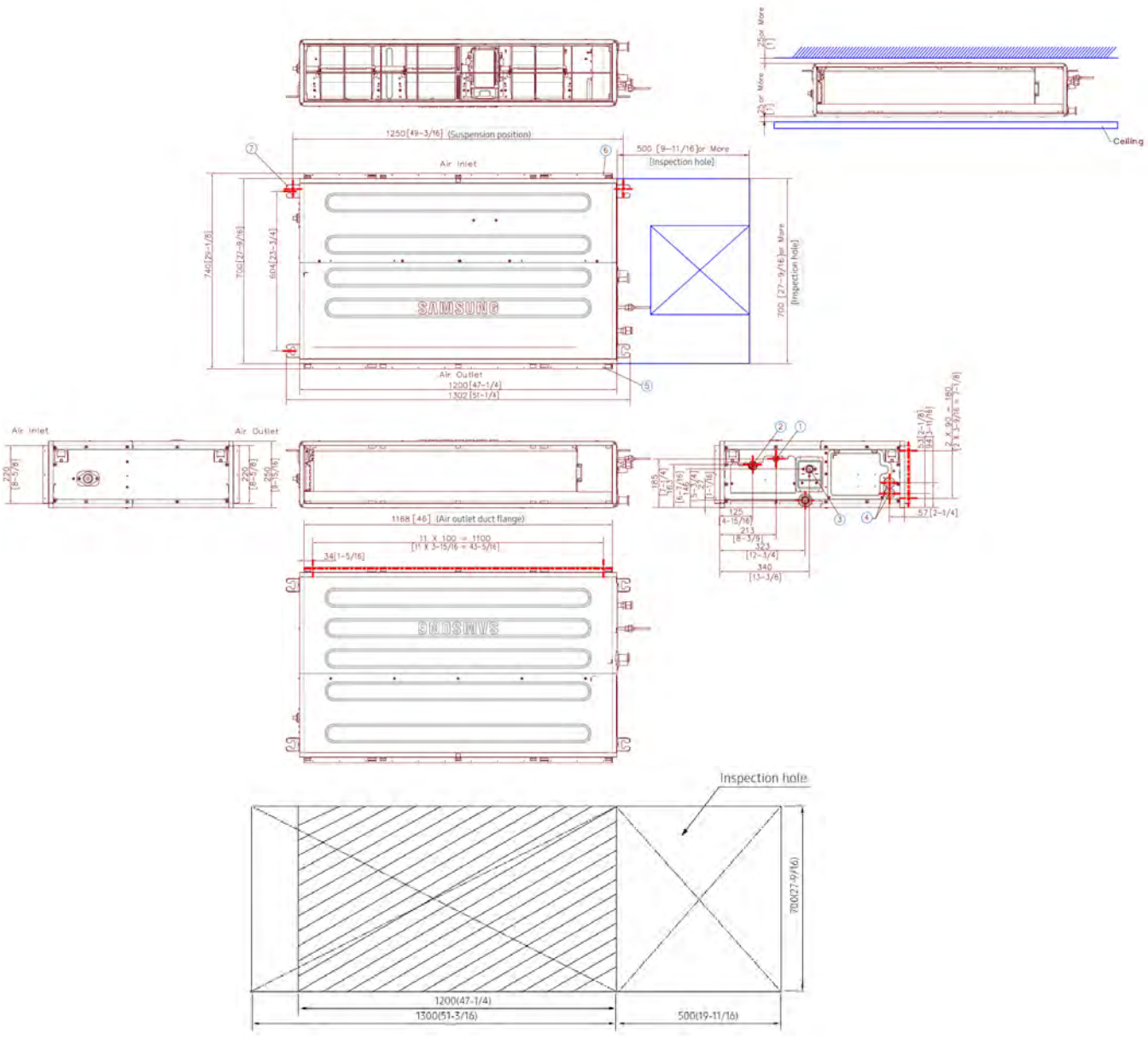
NO	Name	Description
1	Liquid pipe connection	Φ6.35 mm(1/4")
2	Gas pipe connection	Φ9.52 mm(3/8")
3	Drain pipe connection	3/4"[OD26.67mm(1.05")]
4	Power supply connection	-
5	Air discharge flange	-
6	Air suction flange	-
7	Hook	M8~M10

4. Dimensional Drawing

Duct S

CNH18HDB (AC018BNHDCH/AA), CNH24HDB (AC024BNHDCH/AA), CNH30HDB (AC030BNHDCH/AA)

Units : mm (inches)



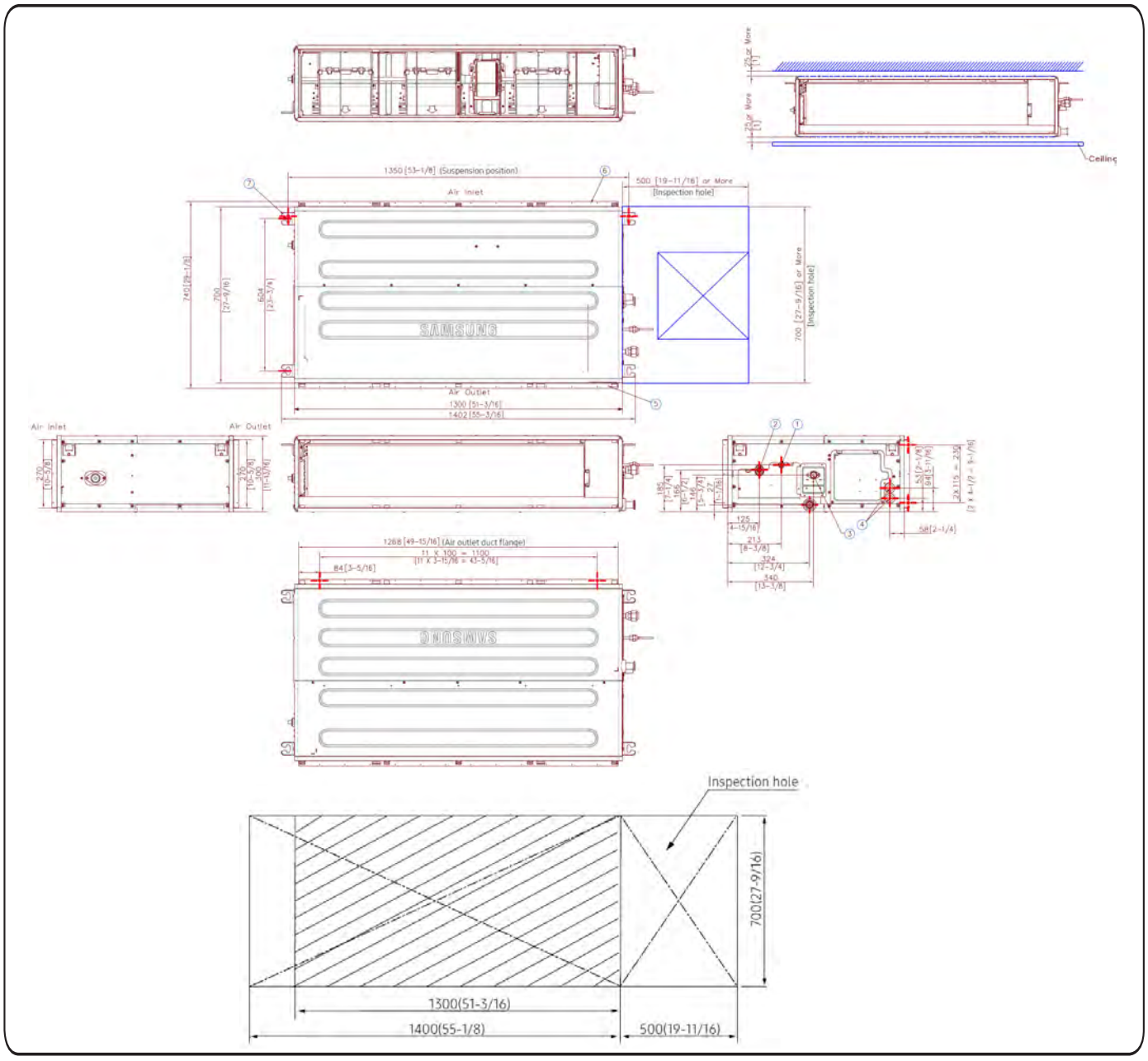
NO	Name	Description		
		CNH18HDB (AC018BNHDCH/AA)	CNH24HDB (AC024BNHDCH/AA)	CNH30HDB (AC030BNHDCH/AA)
1	Liquid pipe connection	Φ6.35 mm(1/4")		Φ9.52 mm(3/8")
2	Gas pipe connection	Φ12.7 mm(1/2")	Φ15.88 mm(5/8")	
3	Drain pipe connection	3/4"[OD26.67mm(1.05")]		
4	Power supply connection	-		
5	Air discharge flange	-		
6	Air suction flange	-		
7	Hook	M8~M10		

4. Dimensional Drawing

Duct S

CNH36HDB (AC036BNHDCH/AA), CNH42HDB (AC042BNHDCH/AA), CNH48HDB (AC048BNHDCH/AA)

Units : mm (inches)

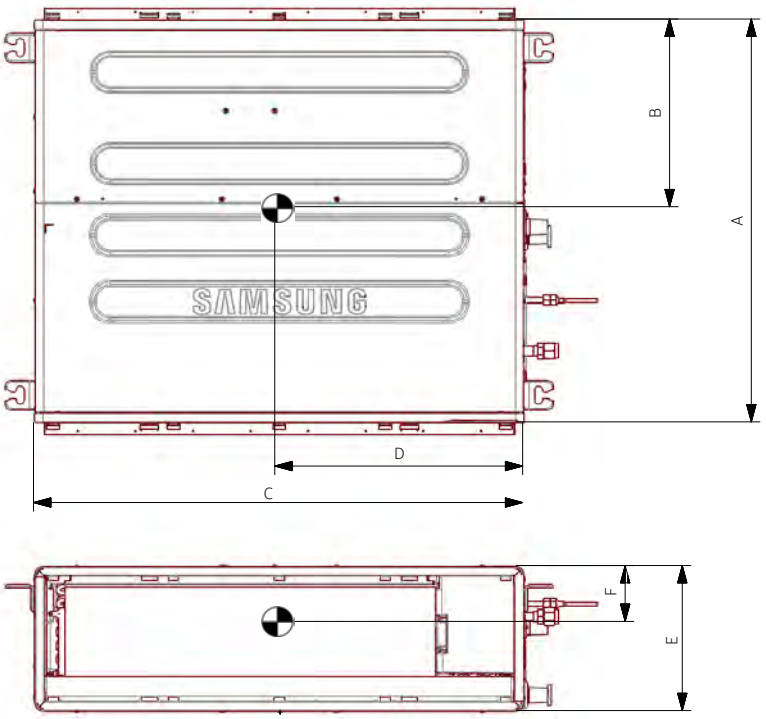


NO	Name	Description
1	Liquid pipe connection	Φ9.52 mm(3/8")
2	Gas pipe connection	Φ15.88 mm(5/8")
3	Drain pipe connection	3/4"[OD26.67mm(1.05")]
4	Power supply connection	-
5	Air discharge flange	-
6	Air suction flange	-
7	Hook	M8~M10

5. Center of Gravity

Duct S

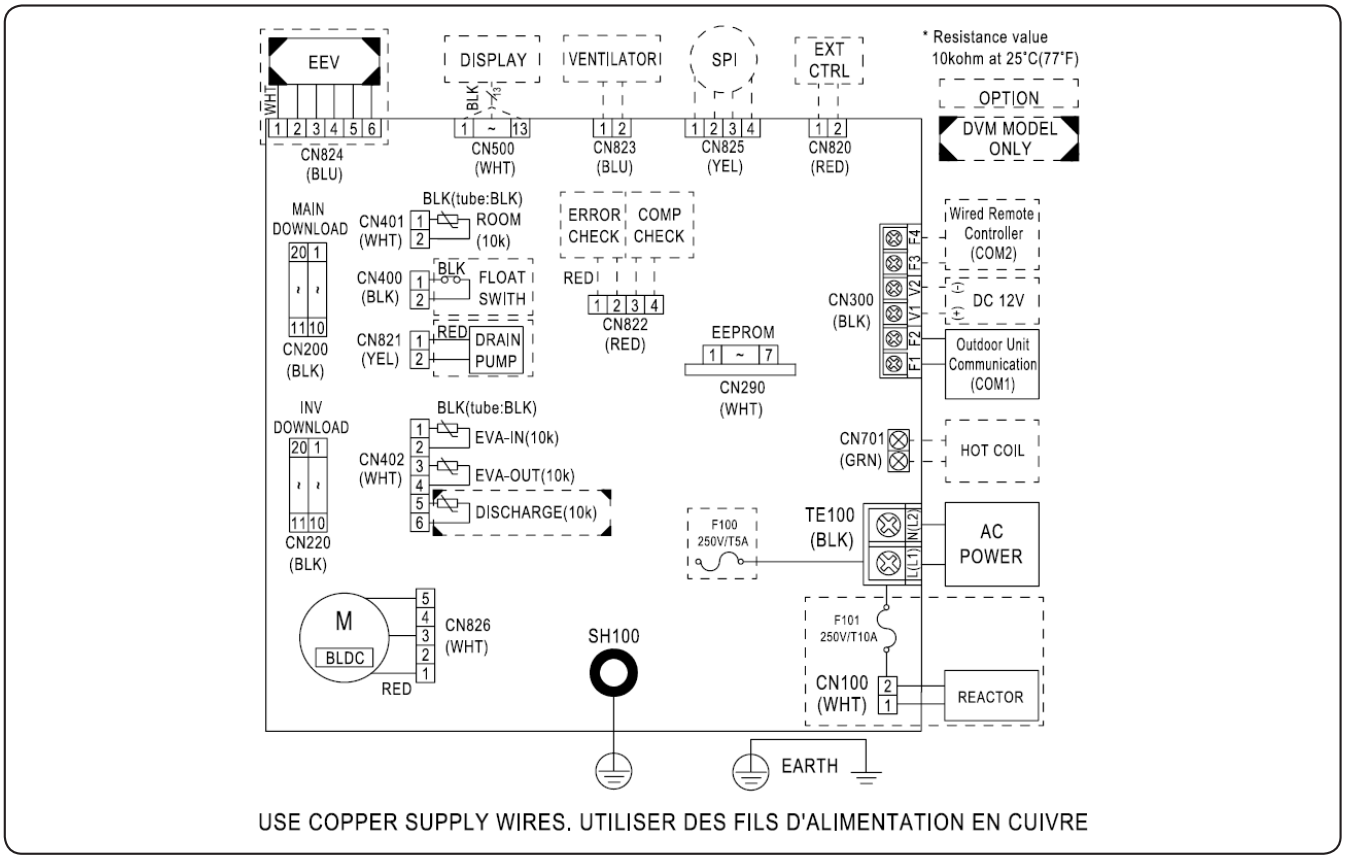
Units : mm [inches]



Model	A	B	C	D	E	F
CNH09HDB (AC009BNHDCH/AA) CNH12HDB (AC012BNHDCH/AA)	700 [27-9/16]	335 [14]	900 [35-7/16]	405 [15-15/16]	252 [9-15/16]	125 [4-15/16]
CNH18HDB (AC018BNHDCH/AA) CNH24HDB (AC024BNHDCH/AA) CNH30HDB (AC030BNHDCH/AA)	700 [27-9/16]	265 [10-7/16]	1250 [49-3/16]	565 [18-5/16]	252 [9-15/16]	125 [4-15/16]
CNH36HDB (AC036BNHDCH/AA) CNH42HDB (AC042BNHDCH/AA) CNH48HDB (AC048BNHDCH/AA)	700 [27-9/16]	265 [10-7/16]	1350 [53-1/8]	650 [25-5/8]	301 [11-13/16]	150 [5-15/16]

6. Electrical Wiring Diagram

Duct S



MAIN PBA	Printed circuit board(MAIN)	EEV	Electronic Expansion Valve	ROOM (10K)	Thermistor ROOM in (10K)
EXT_CONTROL	EXTERNAL CONTROL	EVA-IN (10K)	Thermistor EVA IN(10K)	EVA-OUT (10K)	Thermistor EVA OUT(10K)
M-BLDC	BLDC Motor	DISCHARGE(10K)	Thermistor DISCHARGE		

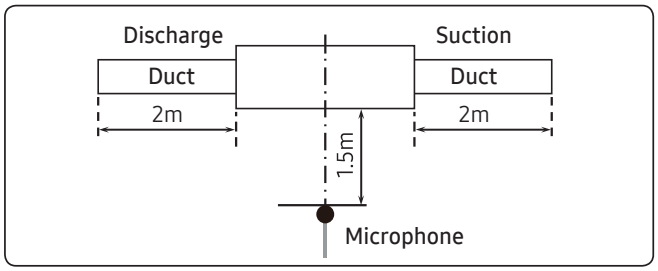
NOTE

- 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)

7. Sound Data

Duct S

Sound Pressure level

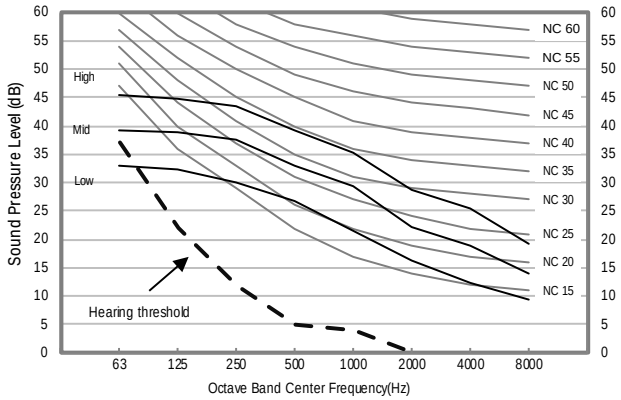


Unit: dB(A)

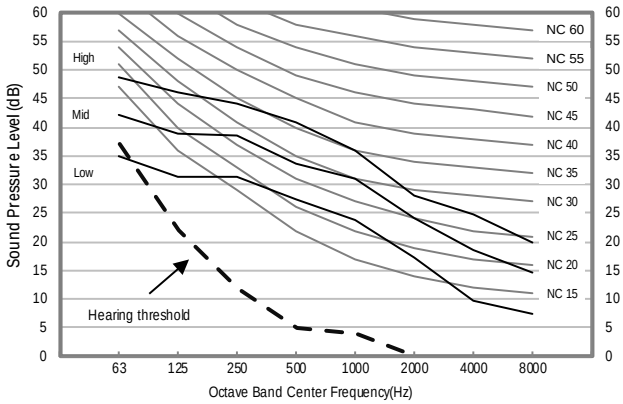
Model	High	Mid	Low
CNH09HDB (AC009BNHDCH/AA)	30	27	23
CNH12HDB (AC012BNHDCH/AA)	31	28	25
CNH18HDB (AC018BNHDCH/AA)	34	30	26
CNH24HDB (AC024BNHDCH/AA)	36	32	28

- NC Curve

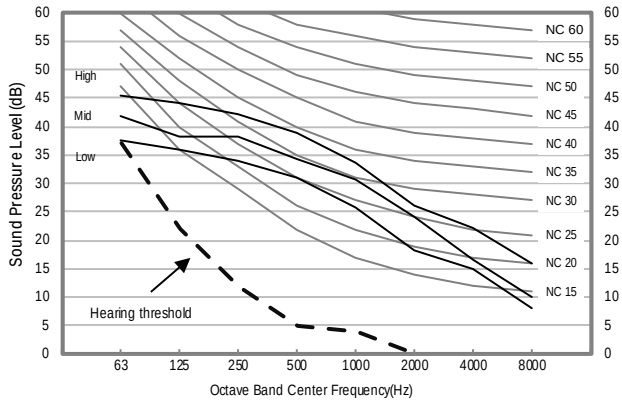
1) CNH09HDB (AC009BNHDCH/AA)



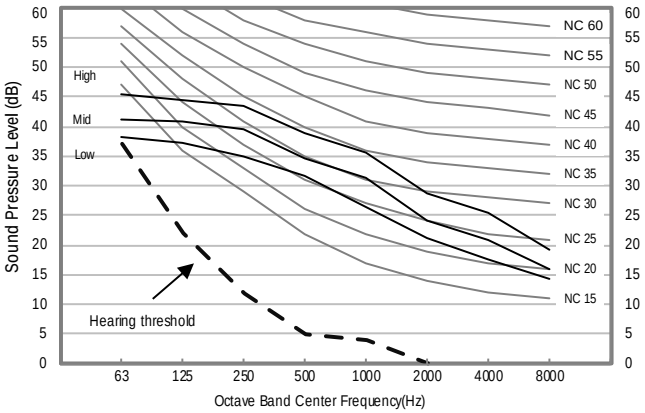
2) CNH12HDB (AC012BNHDCH/AA)



3) CNH18HDB (AC018BNHDCH/AA)



4) CNH24HDB (AC024BNHDCH/AA)



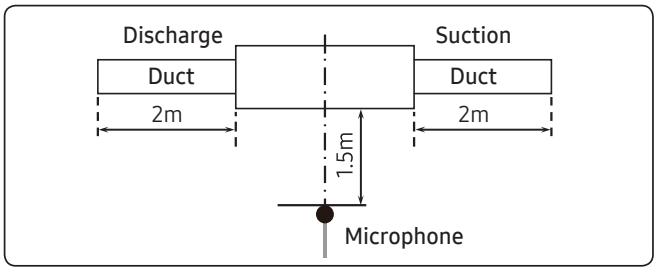
NOTE

- 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

Duct S

Sound Pressure level

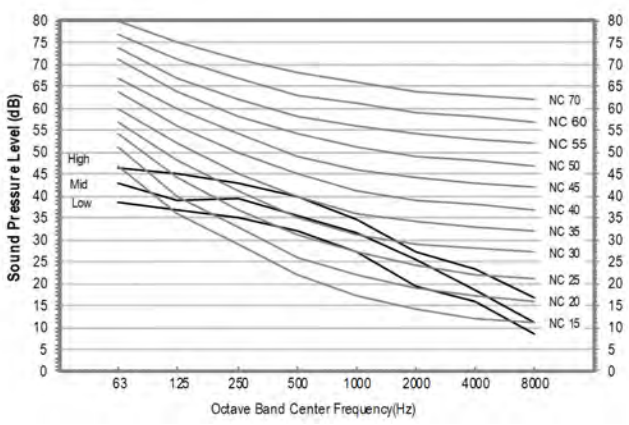


Unit: dB(A)

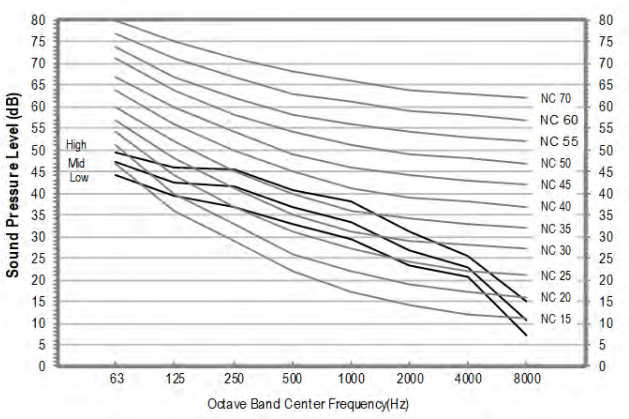
Model	High	Mid	Low
CNH30HDB (AC030BNHDCH/AA)	41	37	33
CNH36HDB (AC036BNHDCH/AA)	43	39	35
CNH42HDB (AC042BNHDCH/AA)	44	41	38
CNH48HDB (AC048BNHDCH/AA)	45	43	41

- NC Curve

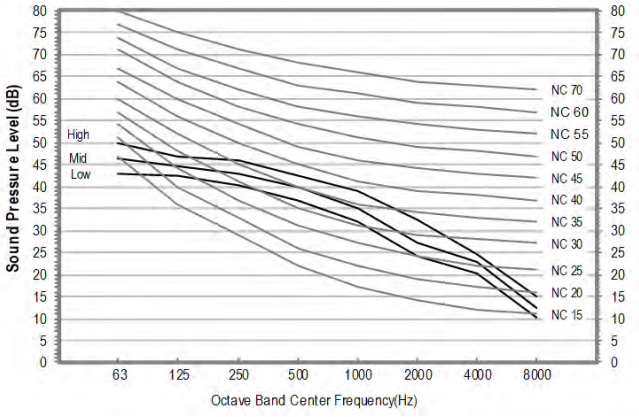
1) CNH30HDB (AC030BNHDCH/AA)



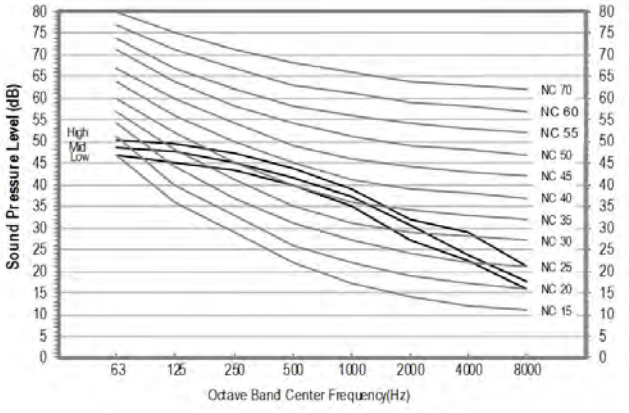
2) CNH36HDB (AC036BNHDCH/AA)



3) CNH42HDB (AC042BNHDCH/AA)



4) CNH48HDB (AC048BNHDCH/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

Duct S

Sound Power level

NOTE

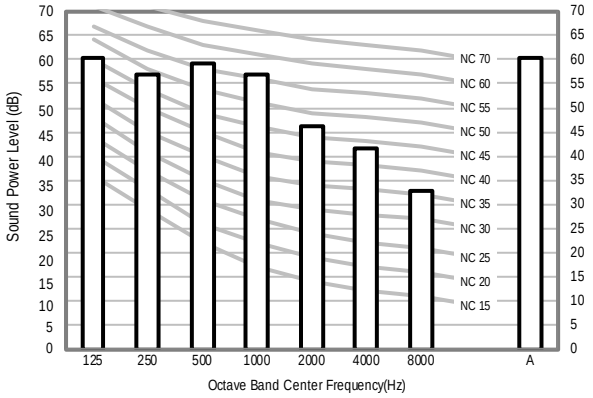
- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

Unit: dB(A)

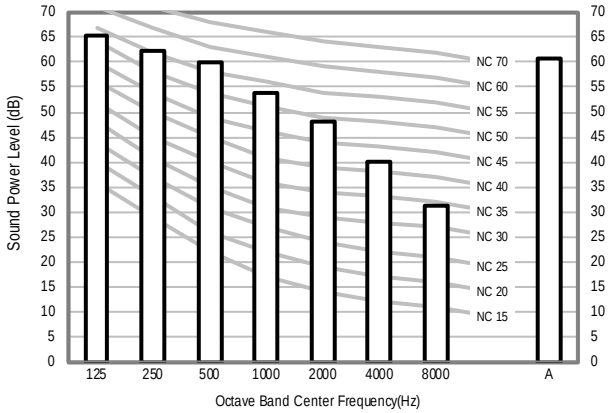
Model	Cooling
CNH09HDB (AC009BNHDCH/AA)	49
CNH12HDB (AC012BNHDCH/AA)	50
CNH18HDB (AC018BNHDCH/AA)	56
CNH24HDB (AC024BNHDCH/AA)	58

- NC Curve

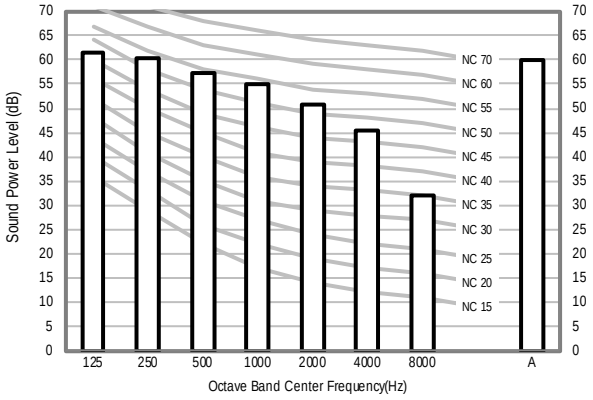
1) CNH09HDB (AC009BNHDCH/AA)



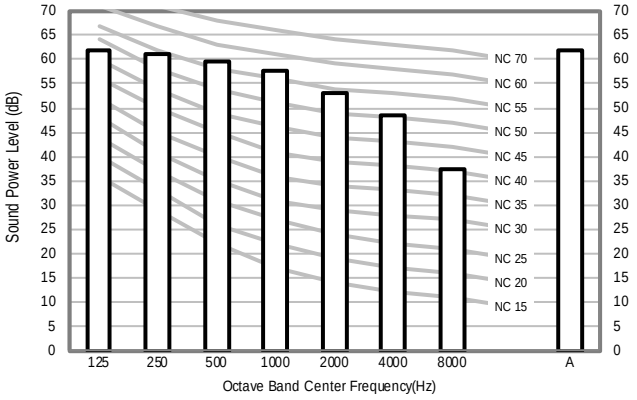
2) CNH12HDB (AC012BNHDCH/AA)



3) CNH18HDB (AC018BNHDCH/AA)



4) CNH24HDB (AC024BNHDCH/AA)



7. Sound Data

Duct S

Sound Power level

NOTE

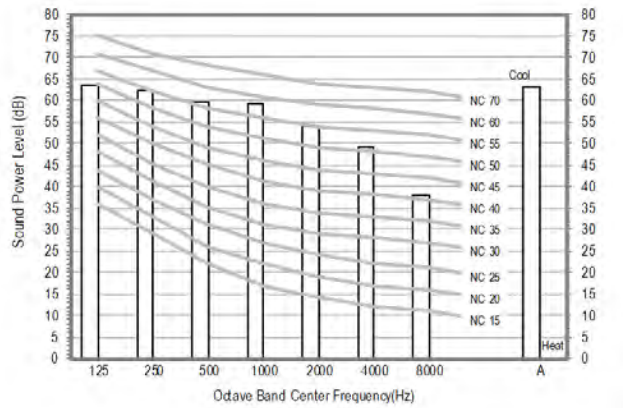
- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

Unit: dB(A)

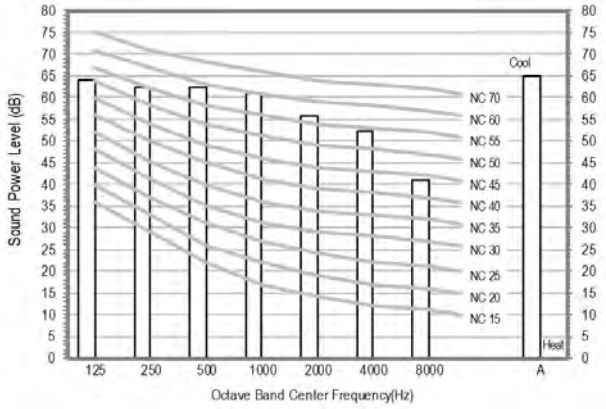
Model	Cooling
CNH30HDB (AC030BNHDCH/AA)	63
CNH36HDB (AC036BNHDCH/AA)	65
CNH42HDB (AC042BNHDCH/AA)	66
CNH48HDB (AC048BNHDCH/AA)	67

- NC Curve

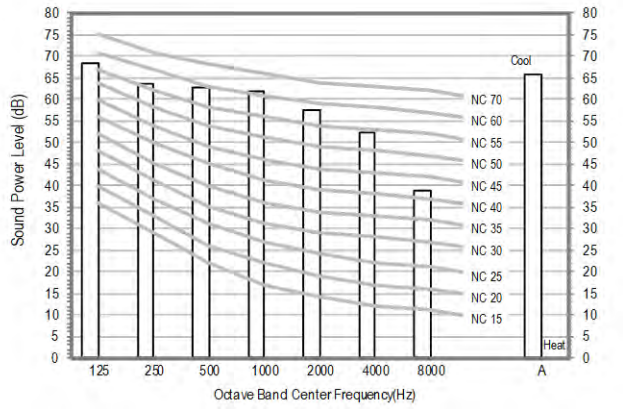
1) CNH30HDB (AC030BNHDCH/AA)



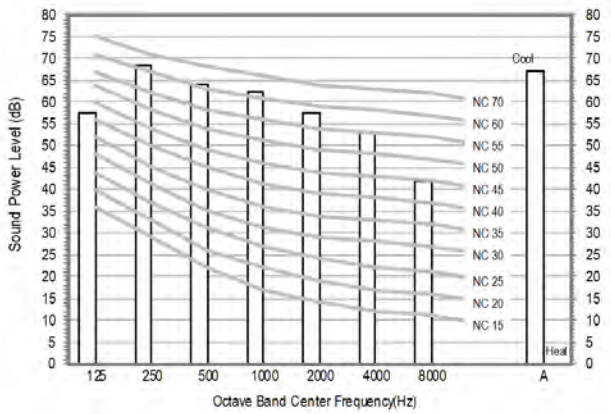
2) CNH36HDB (AC036BNHDCH/AA)



3) CNH42HDB (AC042BNHDCH/AA)



4) CNH48HDB (AC048BNHDCH/AA)

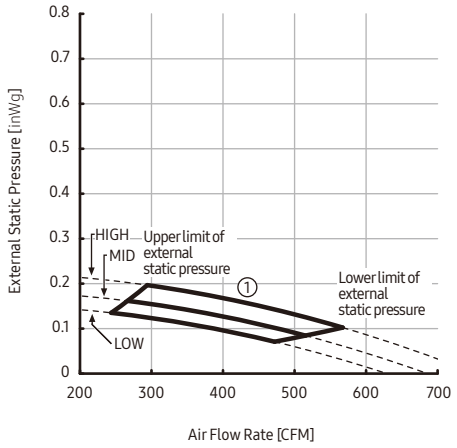


8. Temperature and air flow distribution

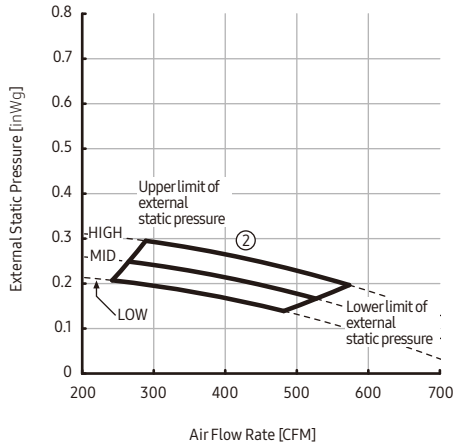
Duct S

CNH09HDB (AC009BNHDCH/AA)

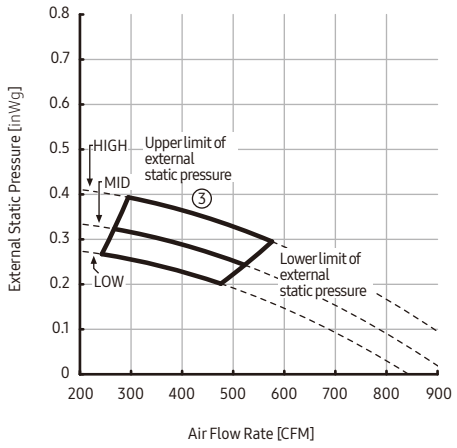
①	External Static Pressure(inWg)	Option Code
	0.1≤ P ≤0.2	01B3FC-1C50D3-271A23-370000



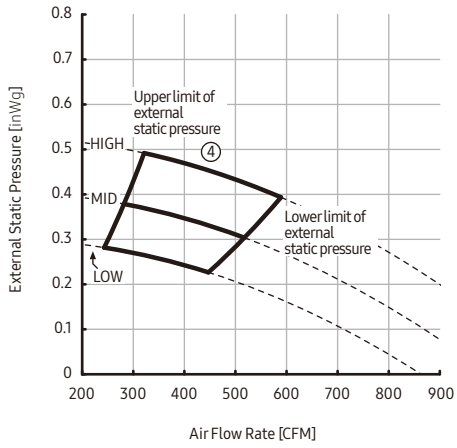
②	External Static Pressure(inWg)	Option Code
	0.2 < P ≤0.3	01B3FC-1C5466-271A23-370000



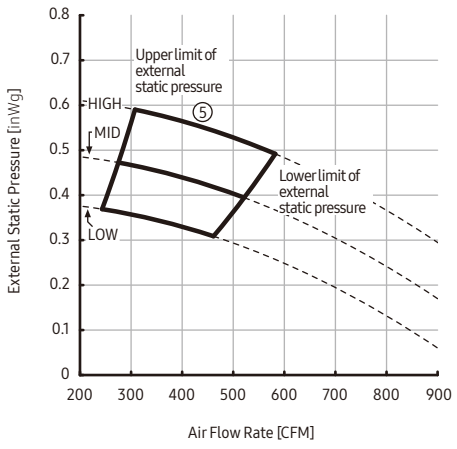
③	External Static Pressure(inWg)	Option Code
	0.3 < P ≤0.4	01B3FC-1C54D9-271A23-370000



④	External Static Pressure(inWg)	Option Code
	0.4 < P ≤0.5	01B3FC-1C582C-271A23-370000



⑤	External Static Pressure(inWg)	Option Code
	0.5 < P ≤0.6	01B3FC-1C5970-271A23-370000

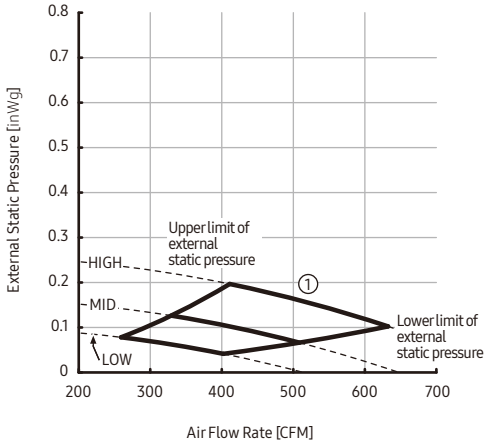


8. Temperature and air flow distribution

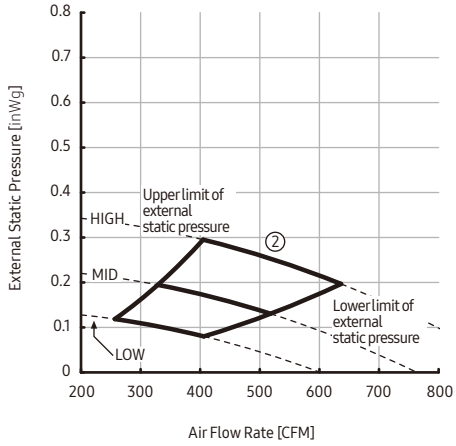
Duct S

CNH12HDB (AC012BNHDCH/AA)

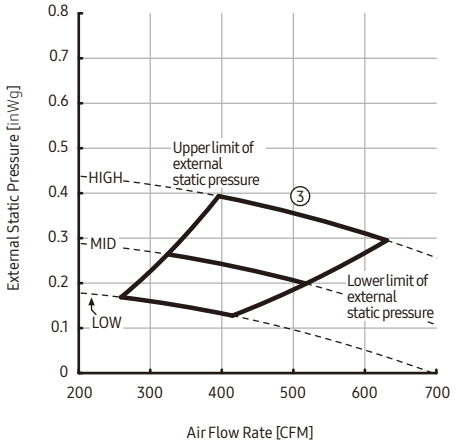
①	External Static Pressure(inWg)	Option Code
	0.1≤ P ≤0.2	01B3FC-1C5404-272328-370000



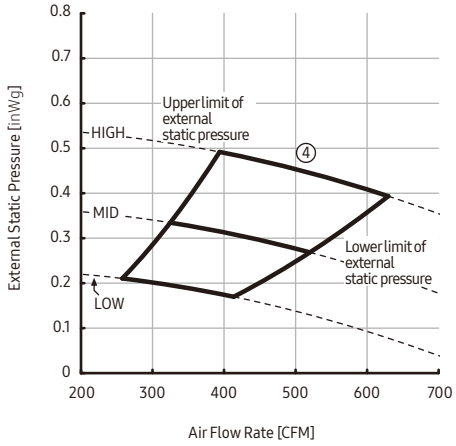
②	External Static Pressure(inWg)	Option Code
	0.2 < P ≤0.3	01B3FC-1C5477-272328-370000



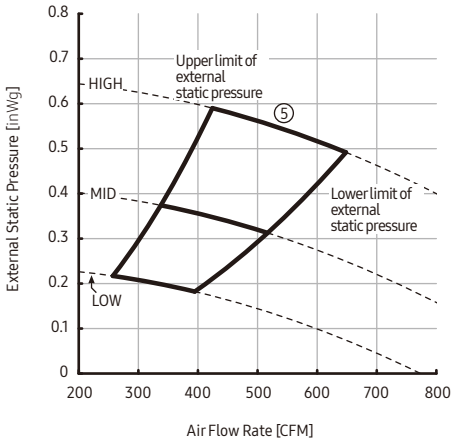
③	External Static Pressure(inWg)	Option Code
	0.3 < P ≤0.4	01B3FC-1C54EA-272328-370000



④	External Static Pressure(inWg)	Option Code
	0.4 < P ≤0.5	01B3FC-1C583D-272328-370000



⑤	External Static Pressure(inWg)	Option Code
	0.5 < P ≤0.6	01B3FC-1C5981-272328-370000

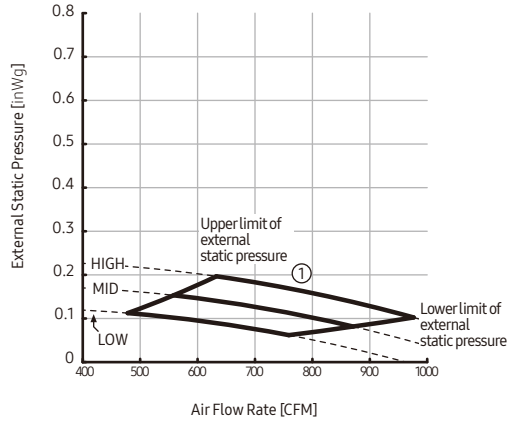


8. Temperature and air flow distribution

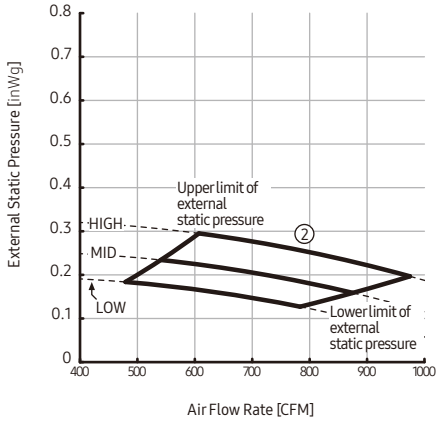
Duct S

CNH18HDB (AC018BNHDCH/AA)

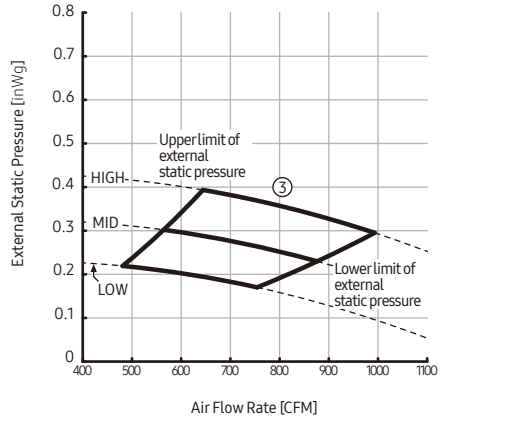
①	External Static Pressure(inWg)	Option Code
	0.1≤ P ≤0.2	01B3FC-1C5416-2F343C-370020



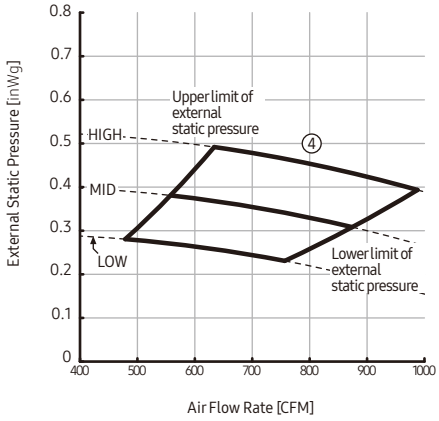
②	External Static Pressure(inWg)	Option Code
	0.2 < P ≤0.3	01B3FC-1C547A-2F343C-370020



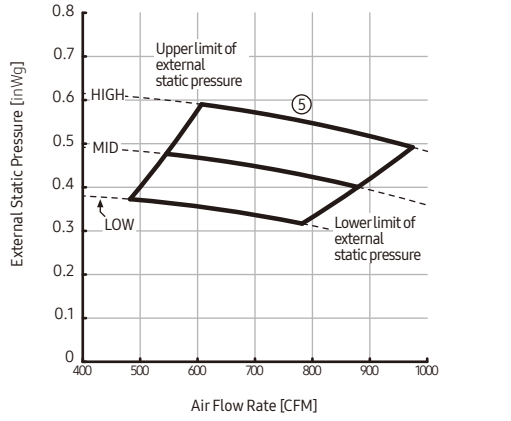
③	External Static Pressure(inWg)	Option Code
	0.3 < P ≤0.4	01B3FC-1C54DF-2F343C-370020



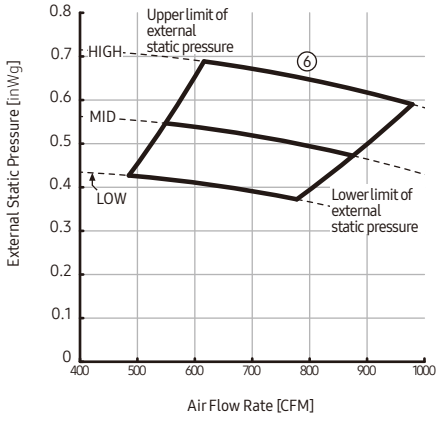
④	External Static Pressure(inWg)	Option Code
	0.4 < P≤0.5	01B3FC-1C5933-2F343C-370020



⑤	External Static Pressure(inWg)	Option Code
	0.5 < P ≤0.6	01B3FC-1C5997-2F343C-370020



⑥	External Static Pressure(inWg)	Option Code
	0.6 < P ≤0.7	01B3FC-1C59FB-2F343C-370020

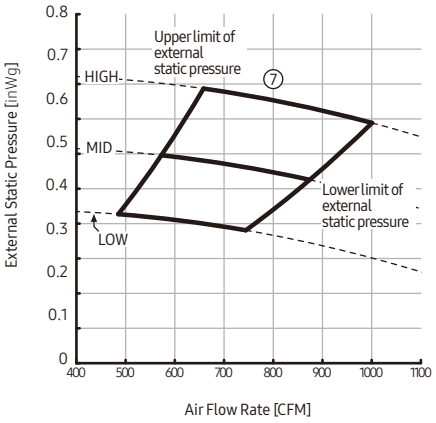


8. Temperature and air flow distribution

Duct S

CNH18HDB (AC018BNHDCH/AA)

	External Static Pressure(inWg)	Option Code
⑦	0.7 < P ≤0.8	01B3FC-1C5E50-2F343C-370020

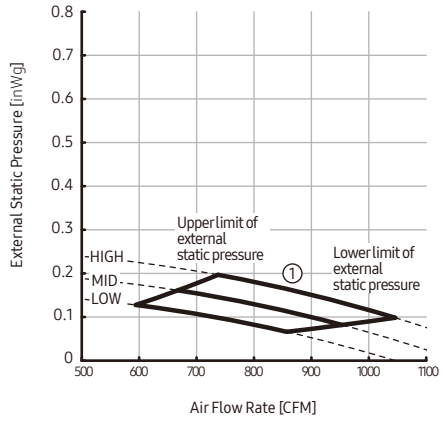


8. Temperature and air flow distribution

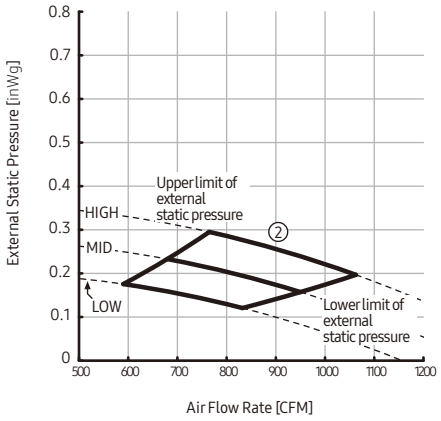
Duct S

CNH24HDB (AC024BNHDCH/AA)

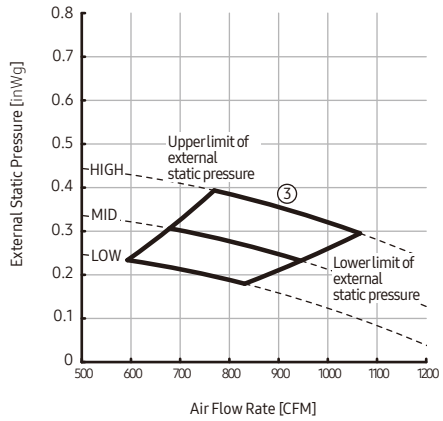
①	External Static Pressure(inWg)	Option Code
	0.1≤ P ≤0.2	01B3FC-1C542A-27484F-370020



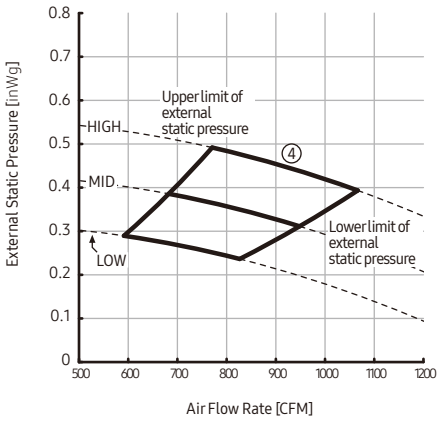
②	External Static Pressure(inWg)	Option Code
	0.2 < P ≤0.3	01B3FC-1C548E-27484F-370020



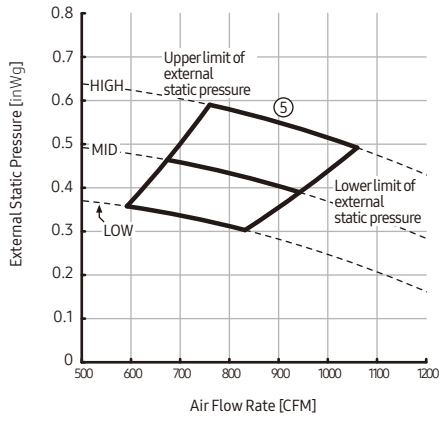
③	External Static Pressure(inWg)	Option Code
	0.3 < P ≤0.4	01B3FC-1C55E1-27484F-370020



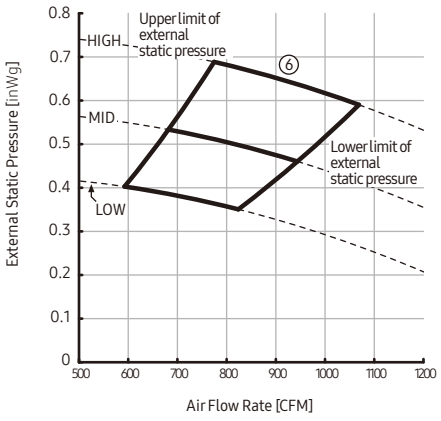
④	External Static Pressure(inWg)	Option Code
	0.4 < P ≤0.5	01B3FC-1C5935-27484F-370020



⑤	External Static Pressure(inWg)	Option Code
	0.5 < P ≤0.6	01B3FC-1C5998-27484F-370020



⑥	External Static Pressure(inWg)	Option Code
	0.6 < P ≤0.7	01B3FC-1C59FC-27484F-370020

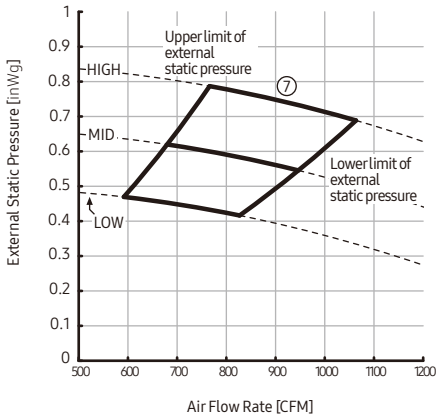


8. Temperature and air flow distribution

Duct S

CNH24HDB (AC024BNHDCH/AA)

⑦	External Static Pressure(inWg)	Option Code
	0.7 < P ≤0.8	01B3FC-1C5D5F-27484F-370020

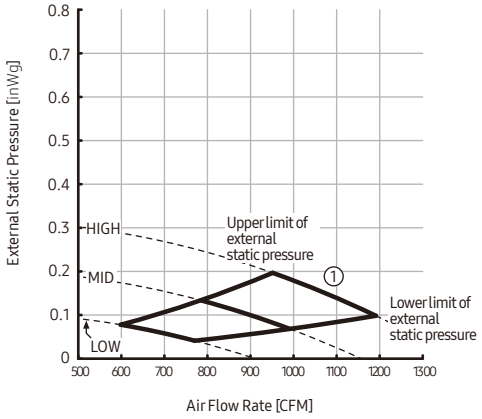


8. Temperature and air flow distribution

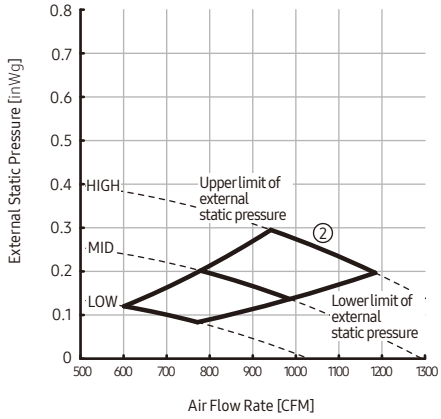
Duct S

CNH30HDB (AC030BNHDCH/AA)

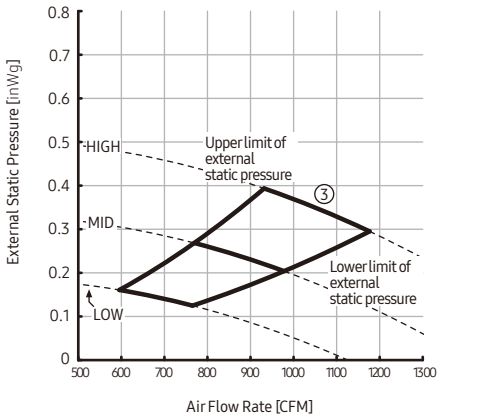
①	External Static Pressure(inWg)	Option Code
	0.1≤ P ≤0.2	01B3FC-1C547B-275A5E-370020



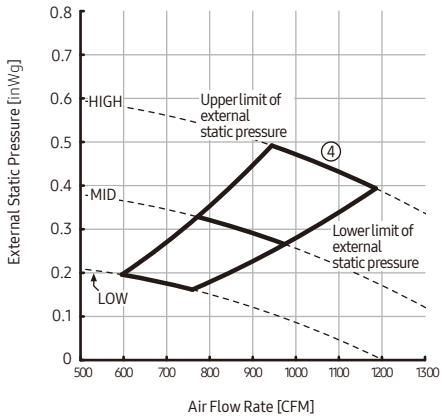
②	External Static Pressure(inWg)	Option Code
	0.2 < P ≤0.3	01B3FC-1C54DE-275A5E-370020



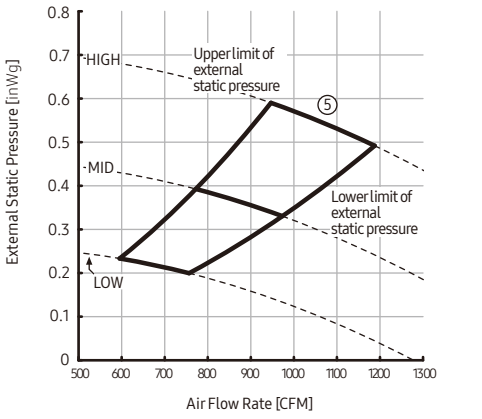
③	External Static Pressure(inWg)	Option Code
	0.3 < P ≤0.4	01B3FC-1C5922-275A5E-370020



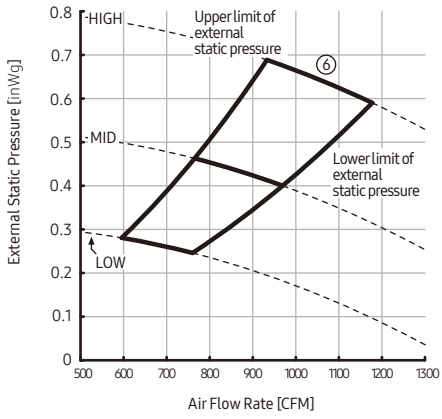
④	External Static Pressure(inWg)	Option Code
	0.4 < P ≤0.5	01B3FC-1C5967-275A5E-370020



⑤	External Static Pressure(inWg)	Option Code
	0.5 < P ≤0.6	01B3FC-1C59B9-275A5E-370020



⑥	External Static Pressure(inWg)	Option Code
	0.6 < P ≤0.7	01B3FC-1C59FC-275A5E-370020

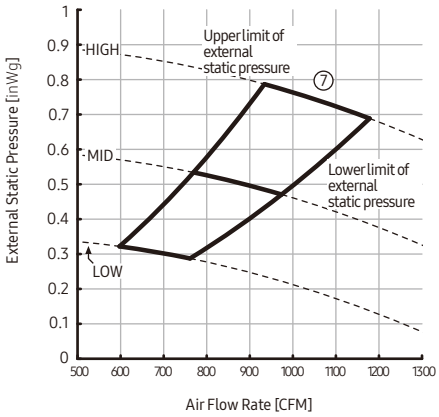


8. Temperature and air flow distribution

Duct S

CNH30HDB (AC030BNHDCH/AA)

	External Static Pressure(inWg)	Option Code
⑦	0.7 < P ≤0.8	01B3FC-1C5D3E-275A5E-370020

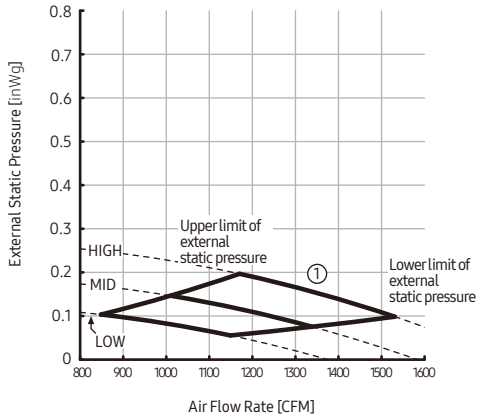


8. Temperature and air flow distribution

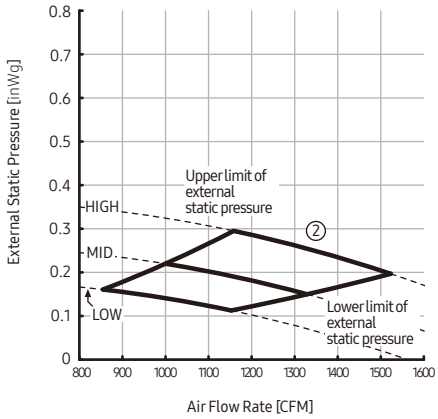
Duct S

CNH36HDB (AC036BNHDCH/AA)

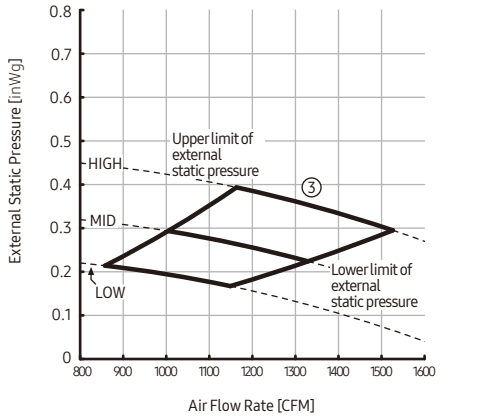
①	External Static Pressure(inWg)	Option Code
	2.5≤ P ≤5	01B3FC-1C5439-276975-370045



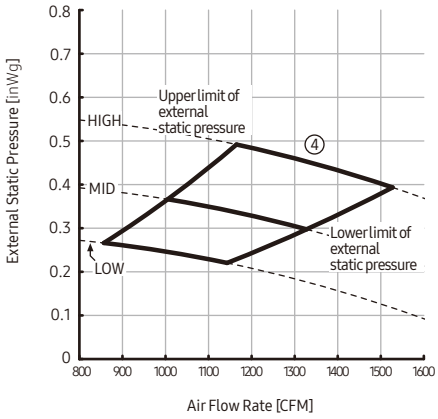
②	External Static Pressure(inWg)	Option Code
	5 < P ≤7.5	01B3FC-1C548C-276975-370045



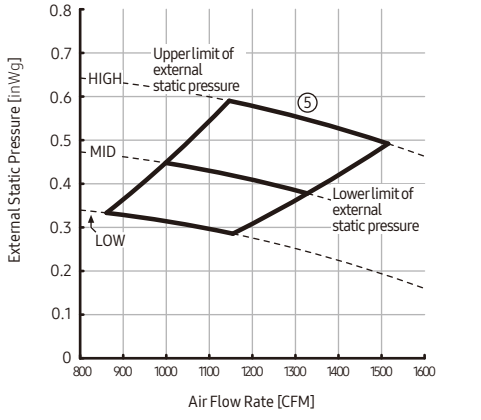
③	External Static Pressure(inWg)	Option Code
	7.5 < P ≤10	01B3FC-1C54CE-276975-370045



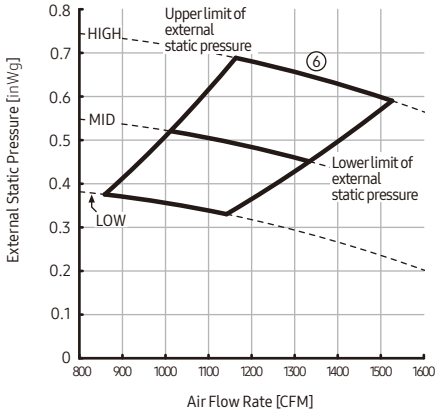
④	External Static Pressure(inWg)	Option Code
	10 < P ≤12.5	01B3FC-1C55F1-276975-370045



⑤	External Static Pressure(inWg)	Option Code
	12.5 < P ≤15	01B3FC-1C5933-276975-370045



⑥	External Static Pressure(inWg)	Option Code
	15 < P ≤17.5	01B3FC-1C5965-276975-370045

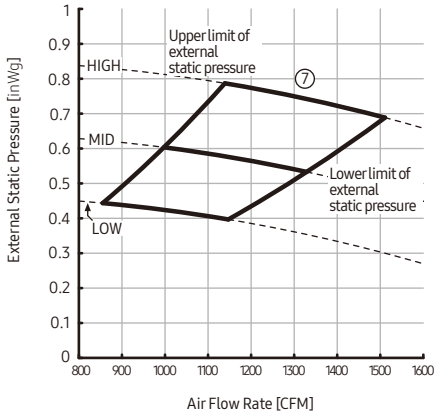


8. Temperature and air flow distribution

Duct S

CNH36HDB (AC036BNHDCH/AA)

⑦	External Static Pressure(inWg)	Option Code
	17.5 < P ≤20	01B3FC-1C59A6-276975-370045

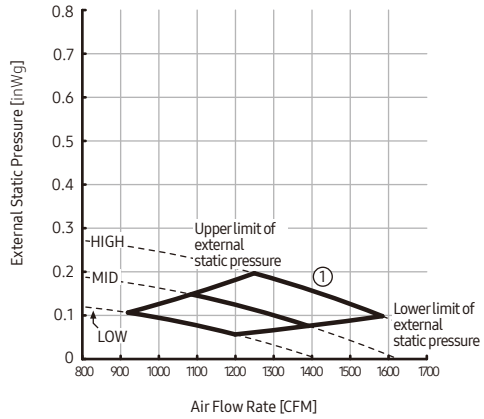


8. Temperature and air flow distribution

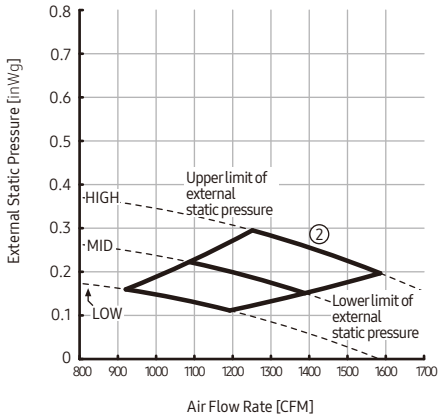
Duct S

CNH42HDB (AC042BNHDCH/AA)

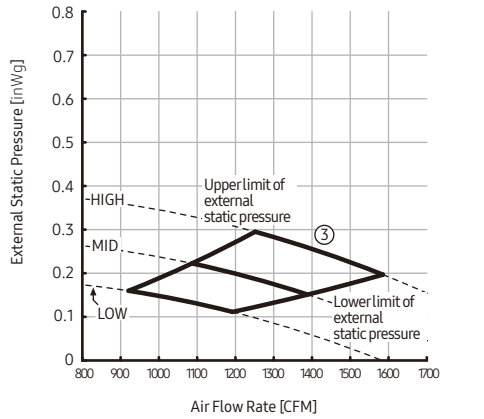
①	External Static Pressure(inWg)	Option Code
	2.5≤ P ≤5	01B3FC-1C5449-277D8A-370045



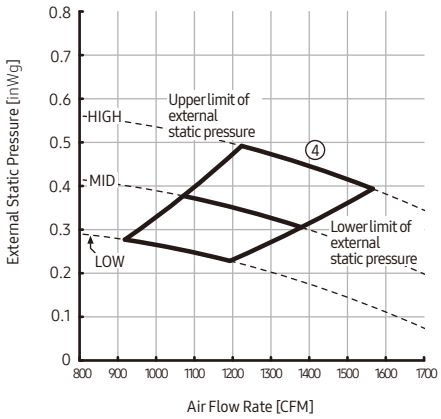
②	External Static Pressure(inWg)	Option Code
	5 < P ≤7.5	01B3FC-1C549C-277D8A-370045



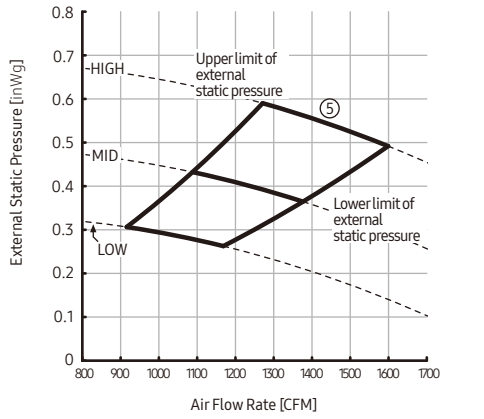
③	External Static Pressure(inWg)	Option Code
	7.5 < P ≤10	01B3FC-1C54DE-277D8A-370045



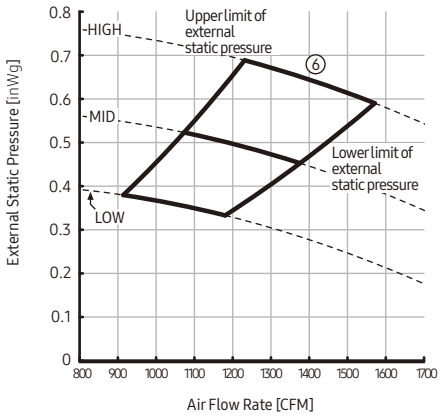
④	External Static Pressure(inWg)	Option Code
	10 < P ≤12.5	01B3FC-1C5901-277D8A-370045



⑤	External Static Pressure(inWg)	Option Code
	12.5 < P ≤15	01B3FC-1C5943-277D8A-370045



⑥	External Static Pressure(inWg)	Option Code
	15 < P ≤17.5	01B3FC-1C5975-277D8A-370045

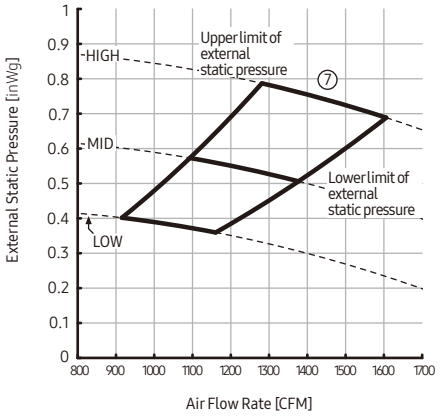


8. Temperature and air flow distribution

Duct S

CNH42HDB (AC042BNHDCH/AA)

⑦	External Static Pressure(inWg)	Option Code
	17.5 < P ≤20	01B3FC-1C59B6-277D8A-370045

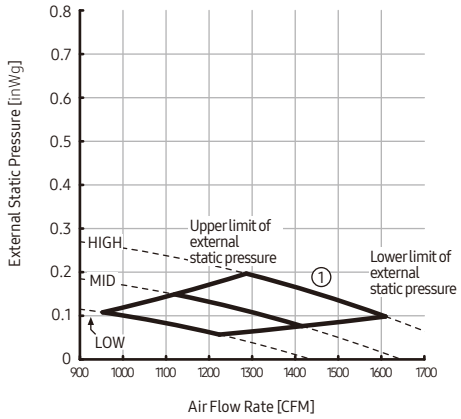


8. Temperature and air flow distribution

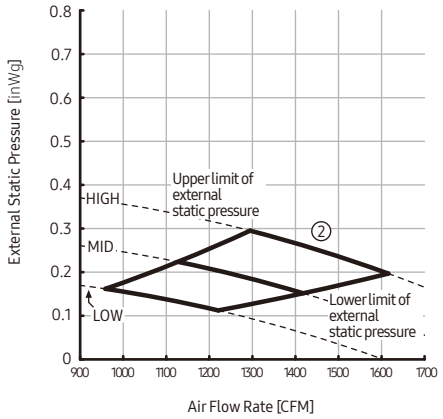
Duct S

CNH48HDB (AC048BNHDCH/AA)

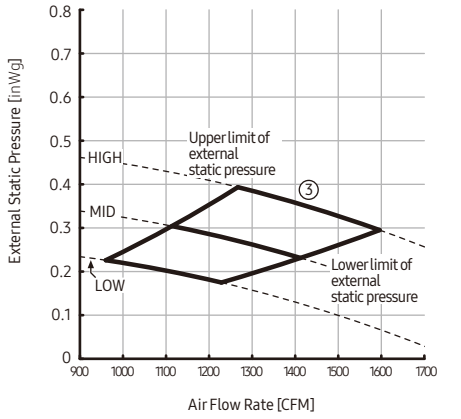
①	External Static Pressure(inWg)	Option Code
	2.5≤ P ≤5	01B3FC-1C545A-278C9B-370045



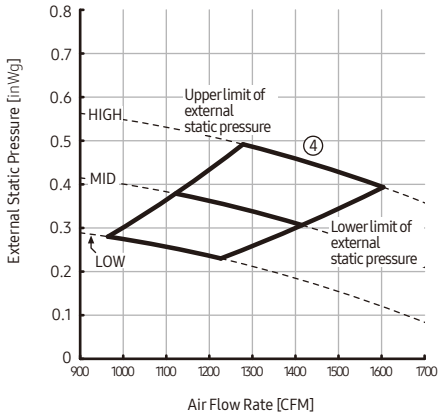
②	External Static Pressure(inWg)	Option Code
	5 < P ≤7.5	01B3FC-1C54AD-278C9B-370045



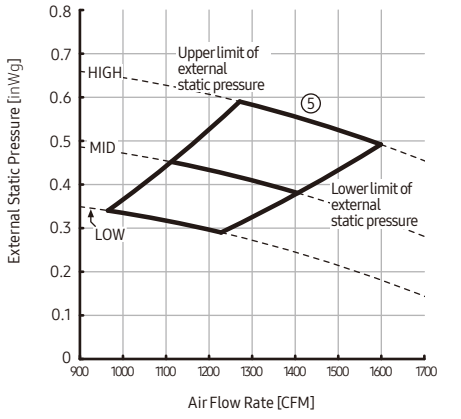
③	External Static Pressure(inWg)	Option Code
	7.5 < P ≤10	01B3FC-1C54EF-278C9B-370045



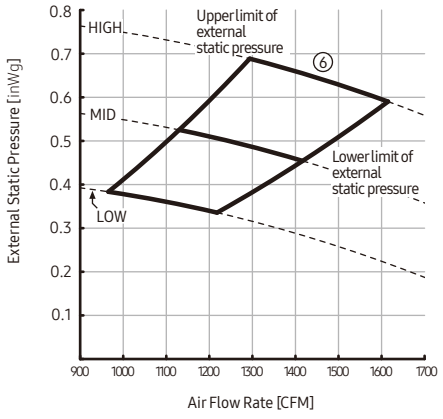
④	External Static Pressure(inWg)	Option Code
	10 < P ≤12.5	01B3FC-1C5912-278C9B-370045



⑤	External Static Pressure(inWg)	Option Code
	12.5 < P ≤15	01B3FC-1C5954-278C9B-370045



⑥	External Static Pressure(inWg)	Option Code
	15 < P ≤17.5	01B3FC-1C5986-278C9B-370045

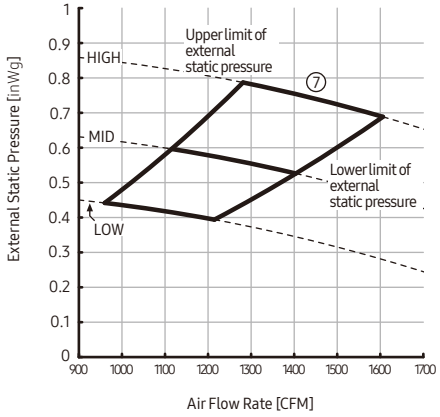


8. Temperature and air flow distribution

Duct S

CNH48HDB (AC048BNHDCH/AA)

⑦	External Static Pressure(inWg)	Option Code
	17.5 < P ≤20	01B3FC-1C59C7-278C9B-370045



Outdoor Units

1. Summary Table

Outdoor Units

Performance Characteristics

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

NOTE

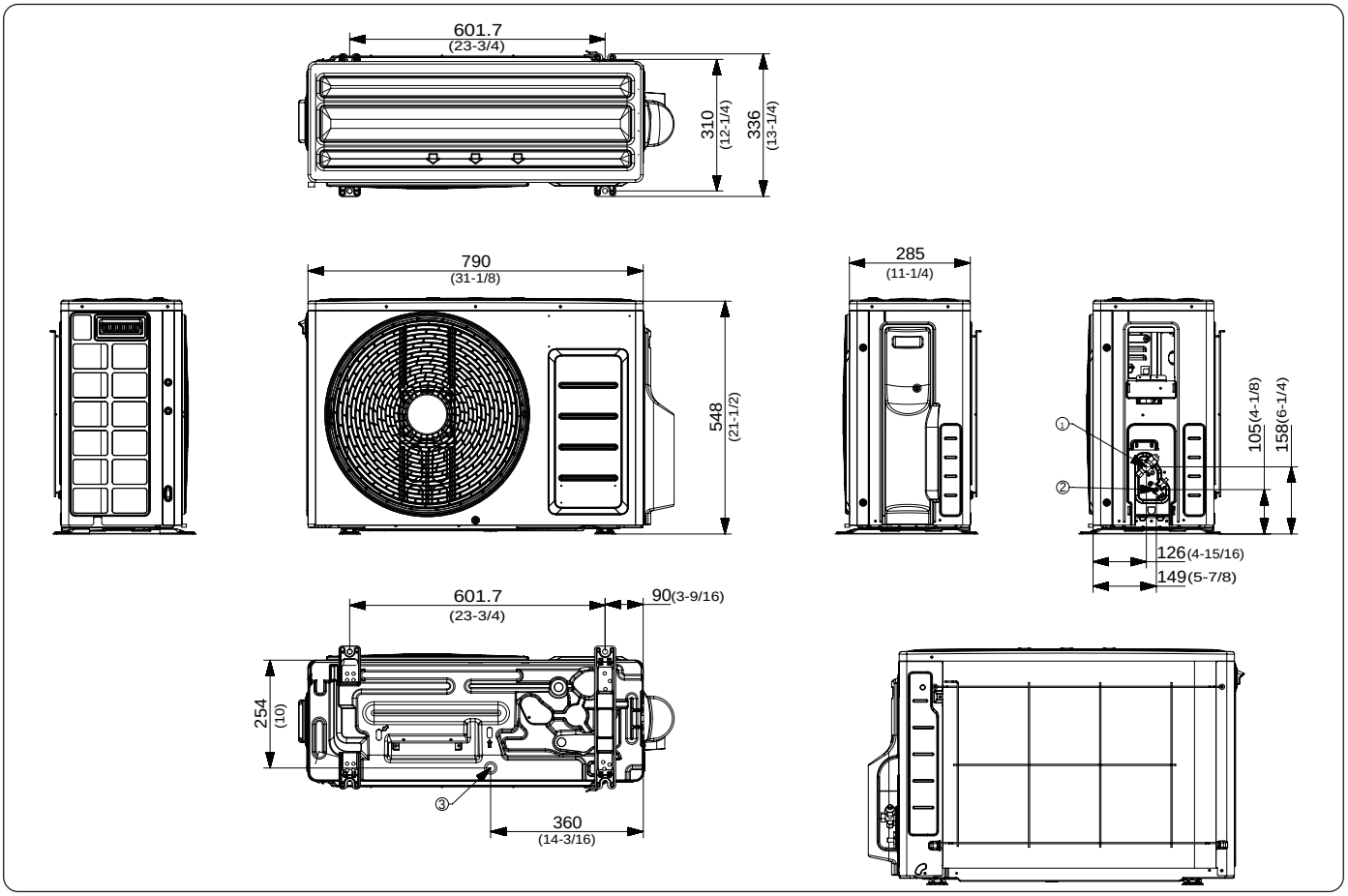
- Sound power level is based on cooling operation.

2. Dimensional Drawing

Outdoor Units

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

Units : mm [inches]



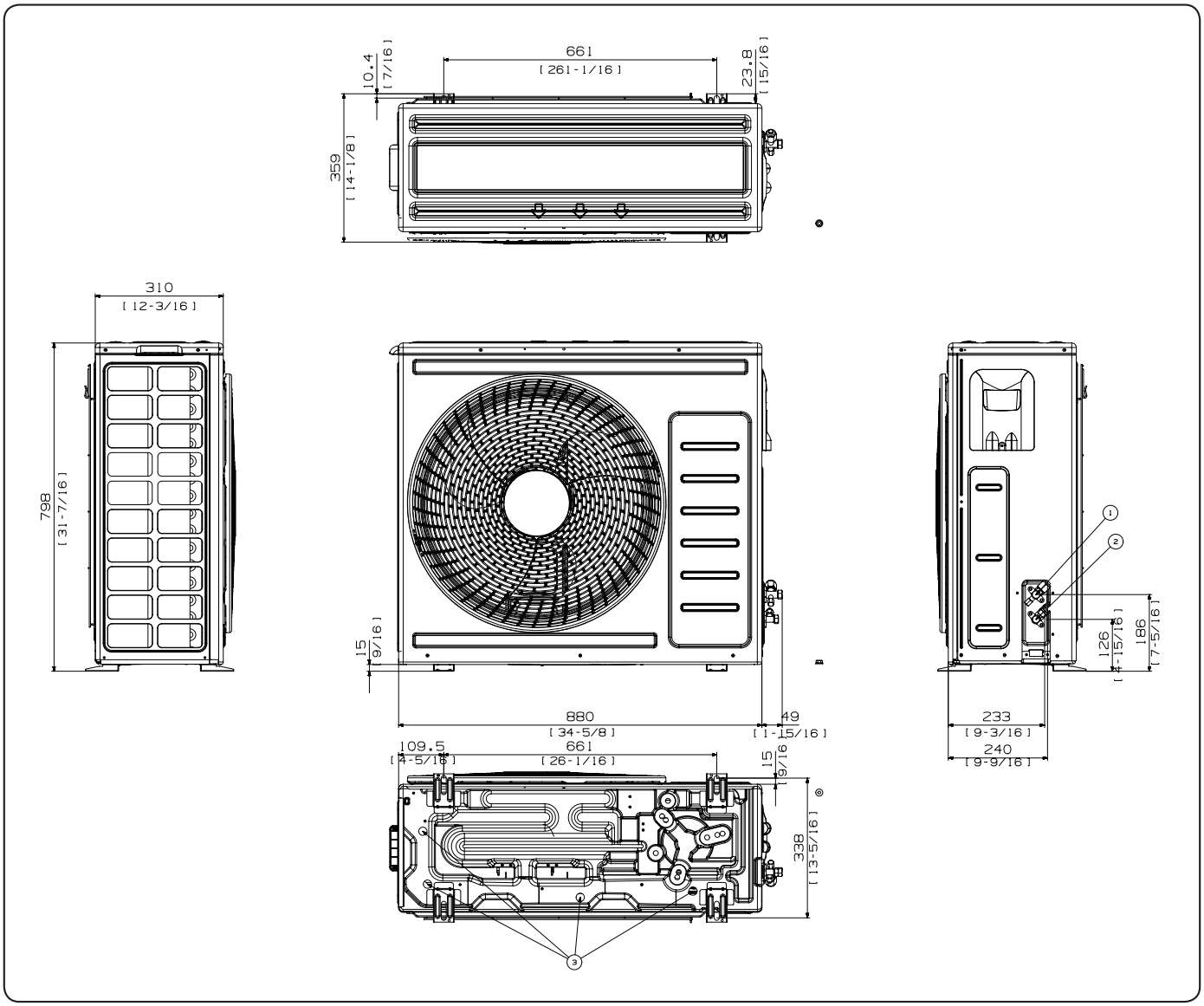
No.	Name	Description
1	Refrigerant gas pipe	Φ 9.52mm(3/8")
2	Refrigerant liquid pipe	Φ 6.35mm(1/4")
3	Drain Hole	-

2. Dimensional D awing

Outdoor Units

CXH18ADB (AC018BXADCH/AA)

Units : mm [inches]



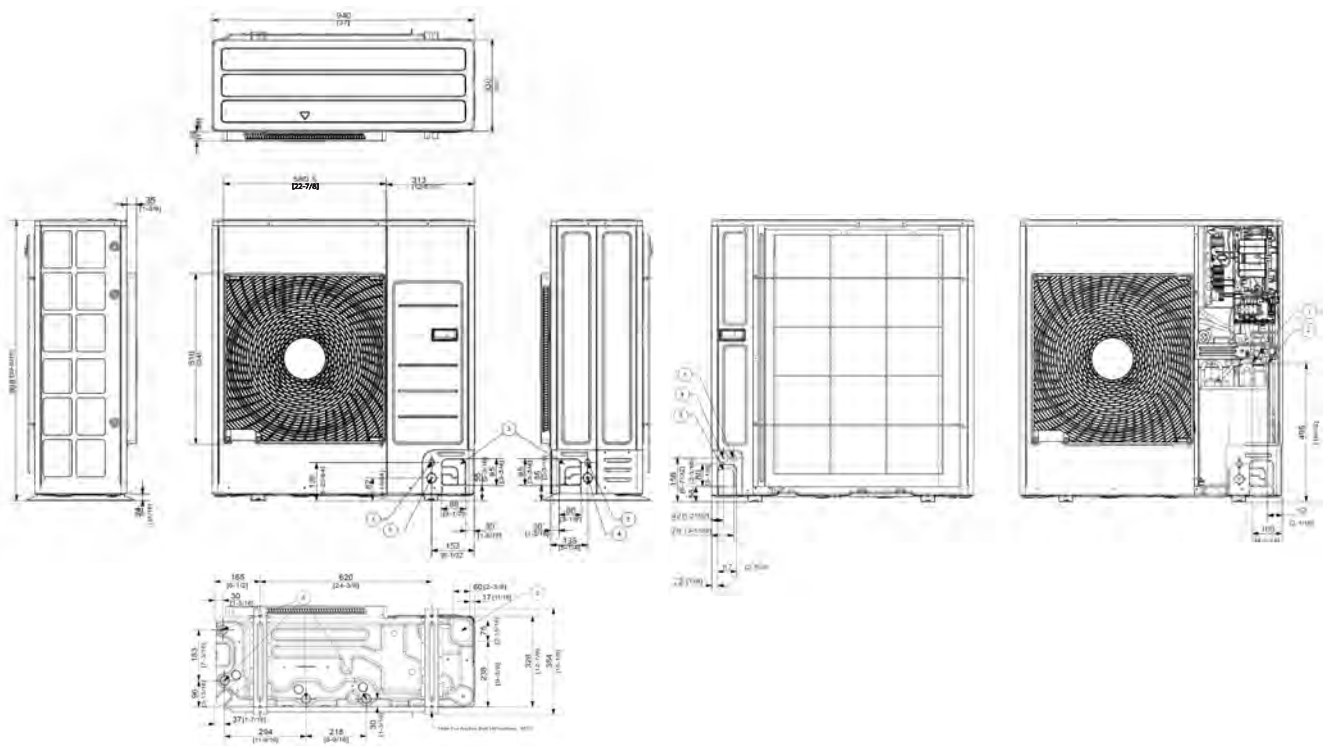
No.	Name	Description
1	Refrigerant liquid pipe	Φ 12.7mm(1/2")
2	Refrigerant gas pipe	Φ 6.35mm(1/4")
3	Drain hole	-

2. Dimensional Drawing

Outdoor Units

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

Units : mm [inches]



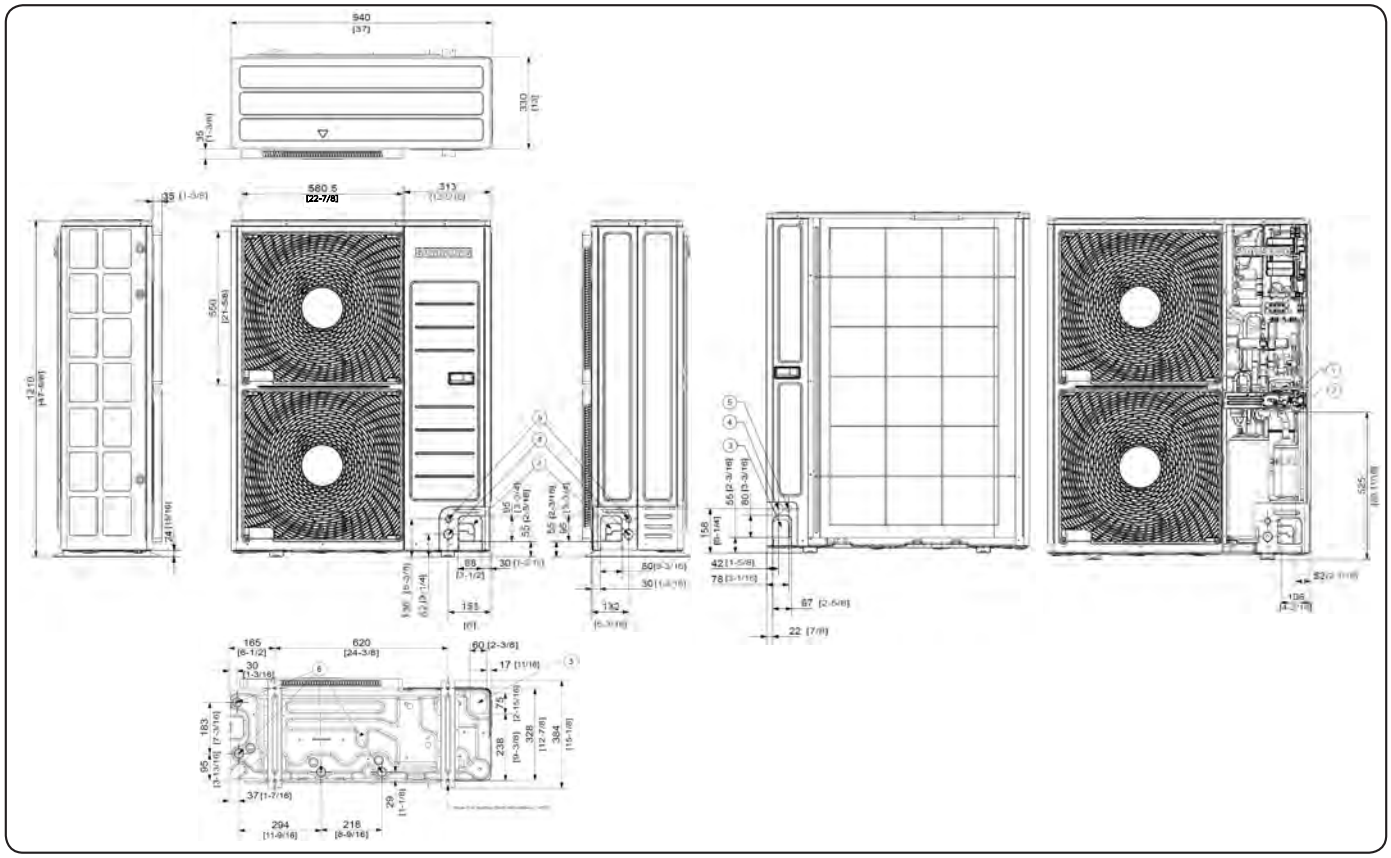
No.	Name	Description	
		CXH24ADB (AC024BXADCH/AA)	CXH30ADB (AC030BXADCH/AA)
1	Refrigerant liquid pipe	Φ 6.35mm(1/4")	Φ 9.52mm(3/8")
2	Refrigerant gas pipe	Φ 15.88mm(5/8")	
3	Piping intake knockout hole	Front / Side / Rear / Bottom	
4	Power wiring conduit	Front / Side / Rear , Φ 34mm(1-3/8")	
5	Communication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

2. Dimensional Drawing

Outdoor Units

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

Units : mm [inches]



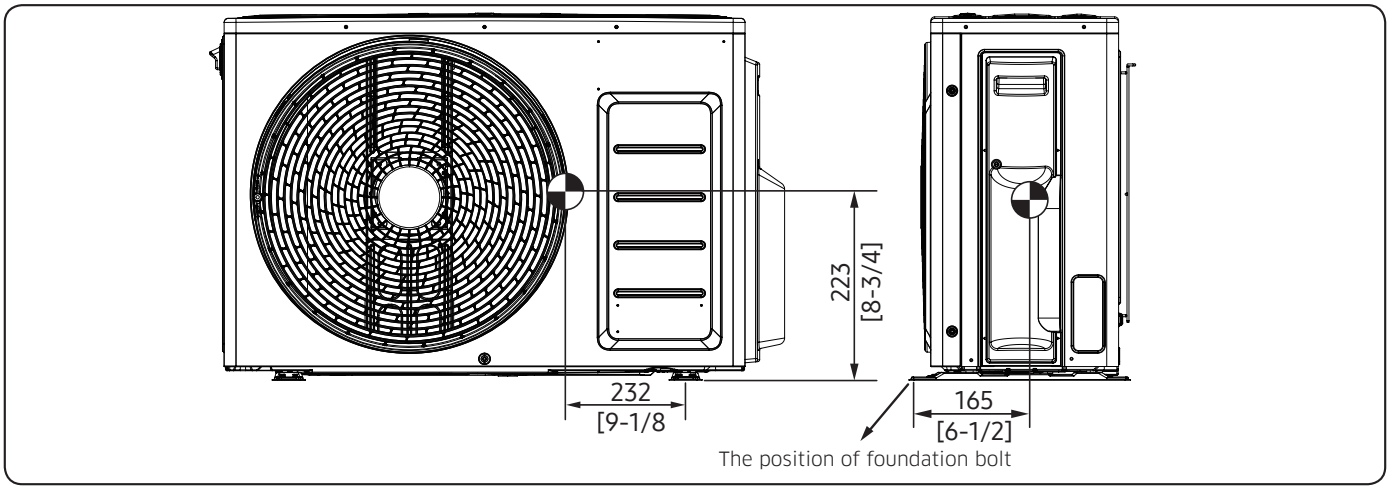
No.	Name	Description
1	Refrigerant liquid pipe	Φ 9.52mm(3/8")
2	Refrigerant gas pipe	Φ 15.88mm(5/8")
3	Piping intake knockout hole	Front / Side / Rear / Bottom
4	Power wiring conduit	Front / Side / Rear , Φ 34mm(1-3/8")
5	Communication wiring conduit	Front / Side / Rear , Φ 22mm(7/8")
6	Drain Hole	Connect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

3. Center of Gravity

Outdoor Units

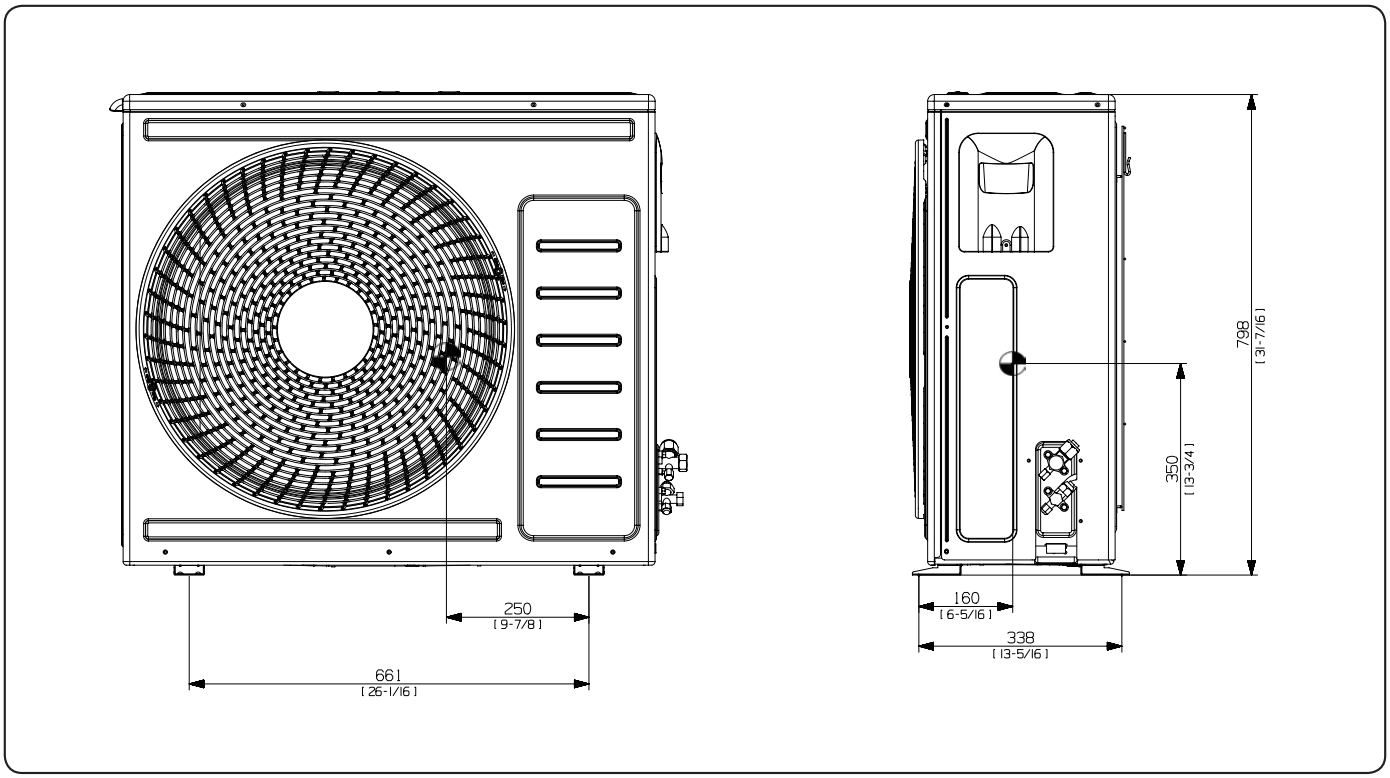
CXH09ADB (AC009BXADCH/AA), CXH12ADB (AC012BXADCH/AA)

Units : mm [inches]



CXH18ADB (AC018BXADCH/AA)

Units : mm [inches]

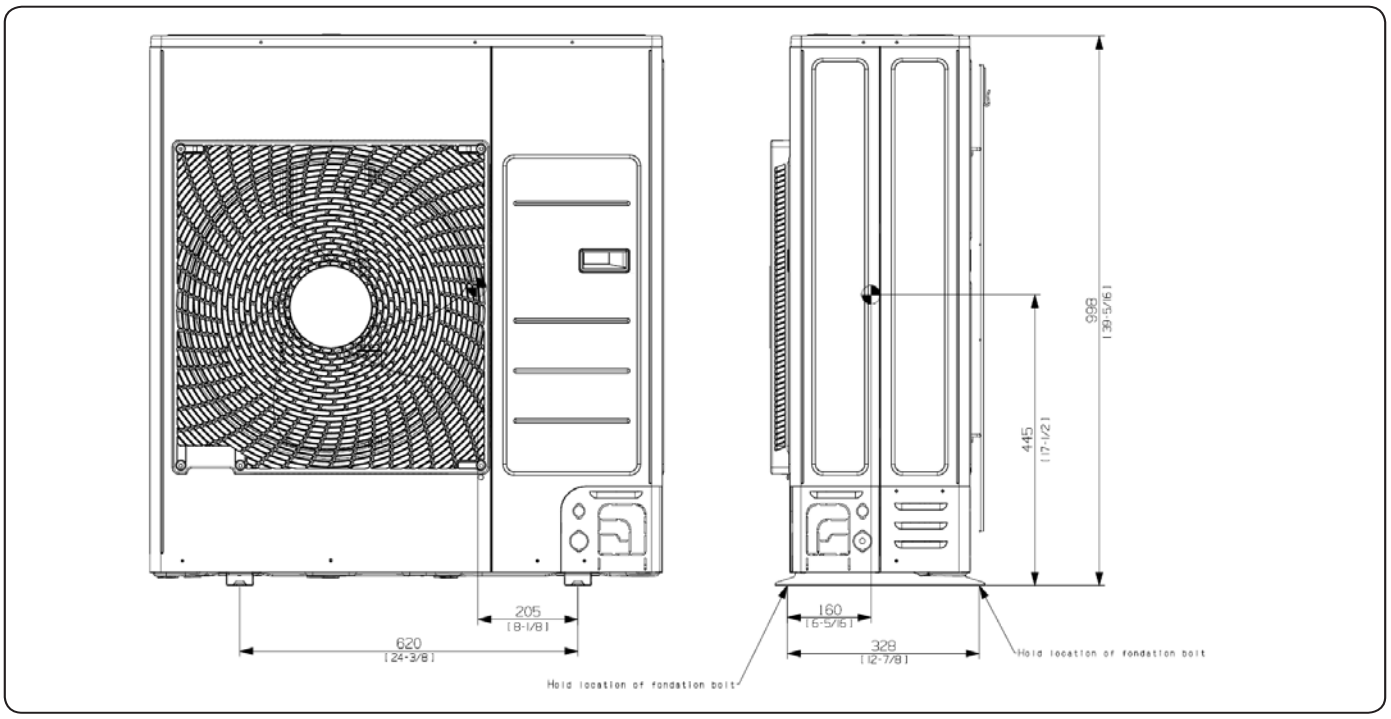


3. Center of Gravity

Outdoor Units

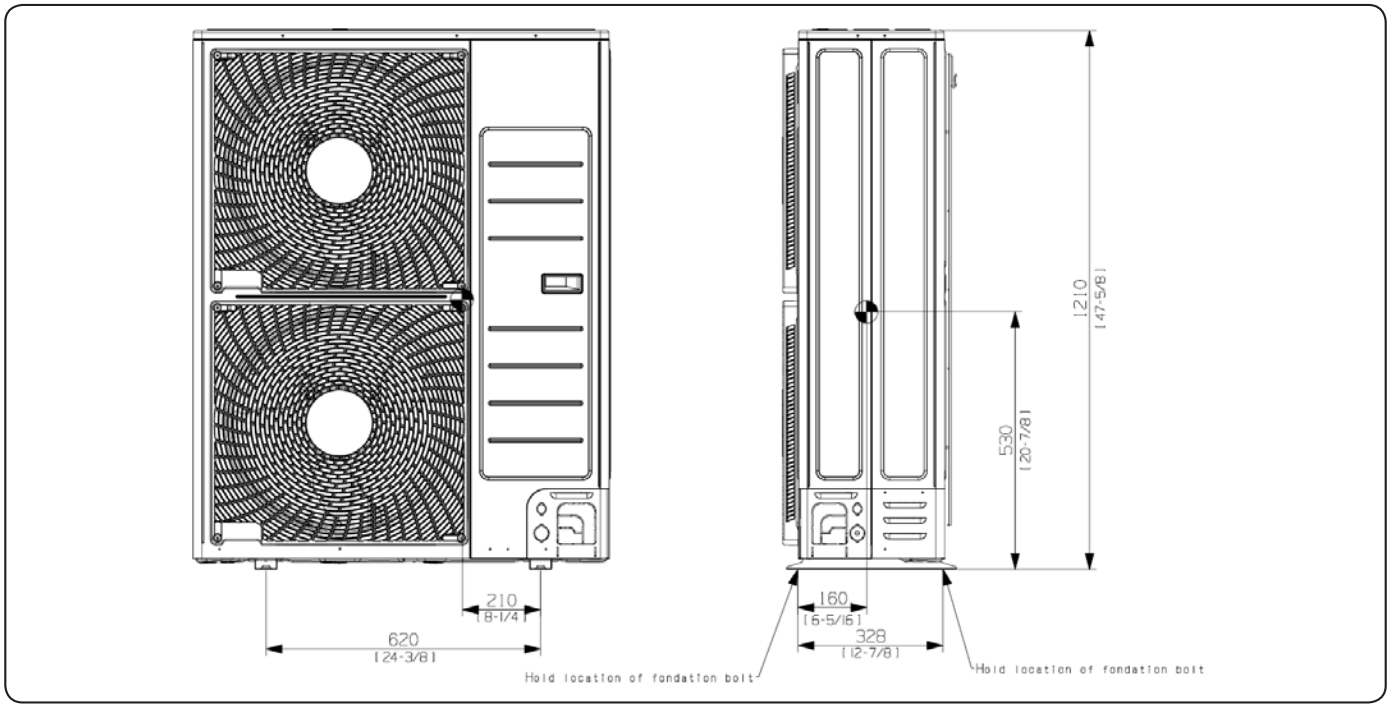
CXH24ADB (AC024BXADCH/AA), CXH30ADB (AC030BXADCH/AA)

Units : mm [inches]



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

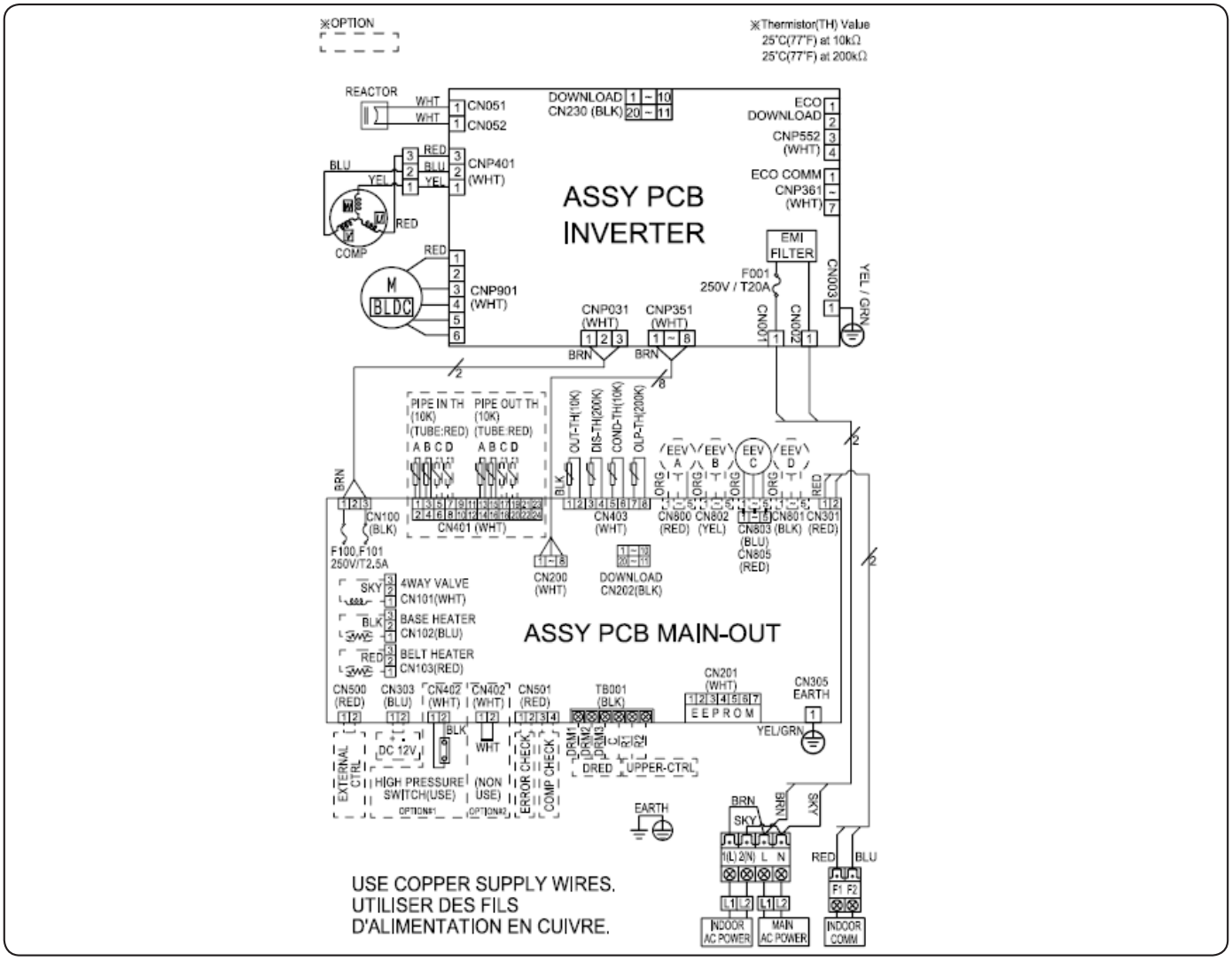
Units : mm [inches]



4. Electrical Wiring Diagram

Outdoor Units

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



MAIN PCB	Printed circuit board(MAIN)	EEV	Electronic Expansion Valve
INVERTER PCB	Printed circuit board(INVERTER)	M-BLDC	BLDC Motor
EMI PCB	Printed circuit board(EMI)	OLP-TEMP	Thermistor OLP

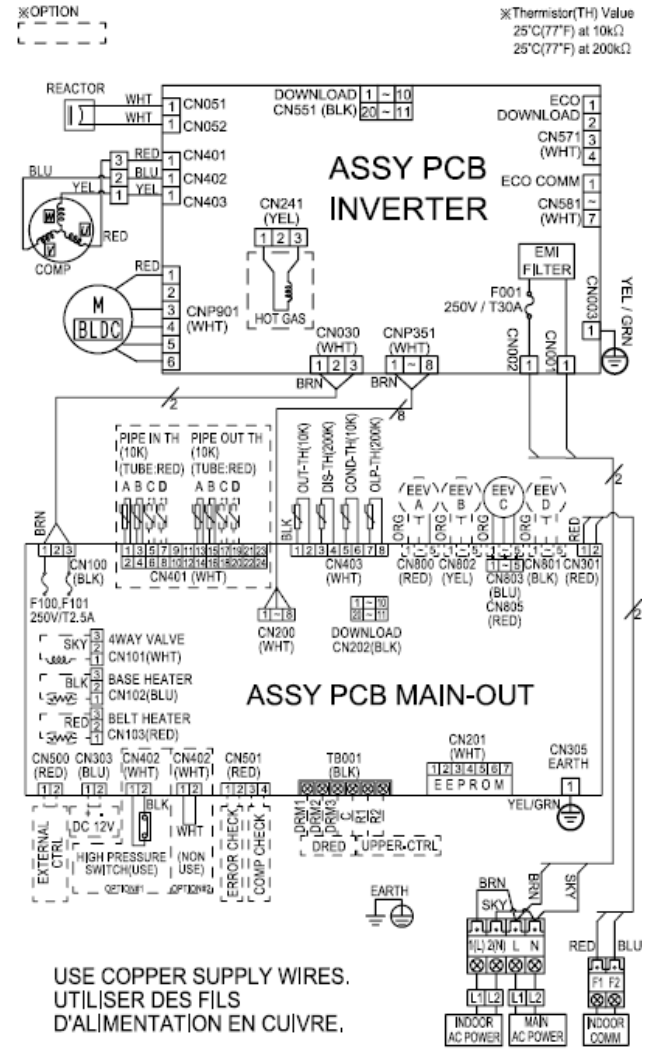
NOTE

- 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

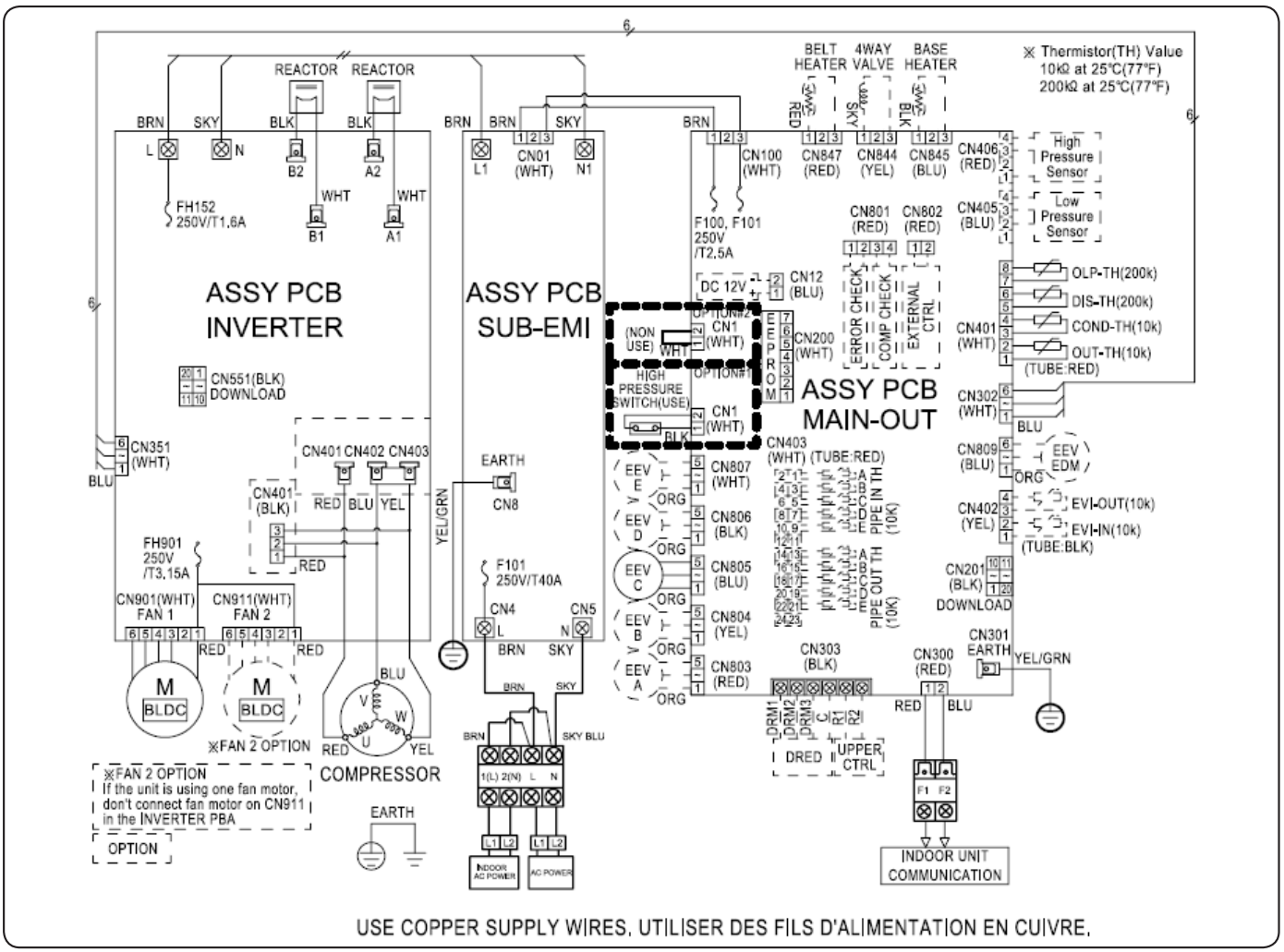
NOTE

- 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

4. Electrical Wiring Diagram

Outdoor Units

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



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

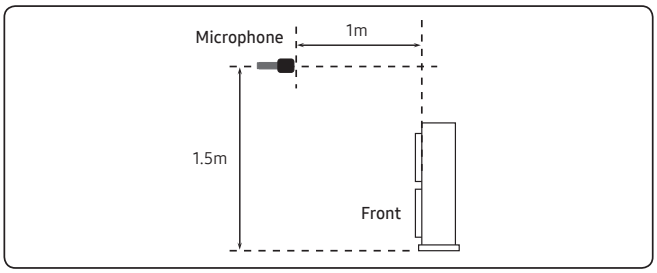
NOTE

- 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 shortcircuit the protection device (High Pressure switch)
- For connection wiring indoor-outdoor transmission F1-F2, outdoor-outdoor transmission OF1-OF2, refer to the installation manual.
- ⏚ Protective earth(screw), ▭▭▭ : connector, N : The wire quantity

5. Sound Data

Outdoor Units

Sound Pressure level

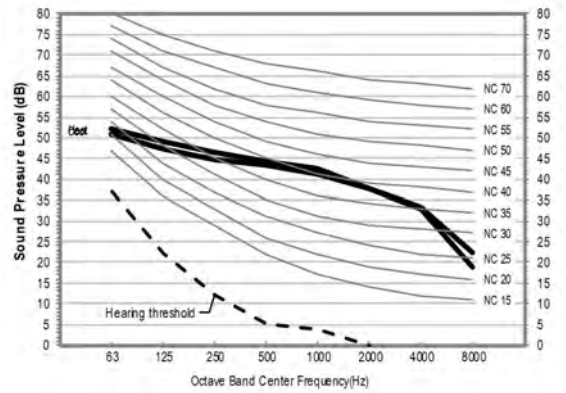


Unit: dB(A)

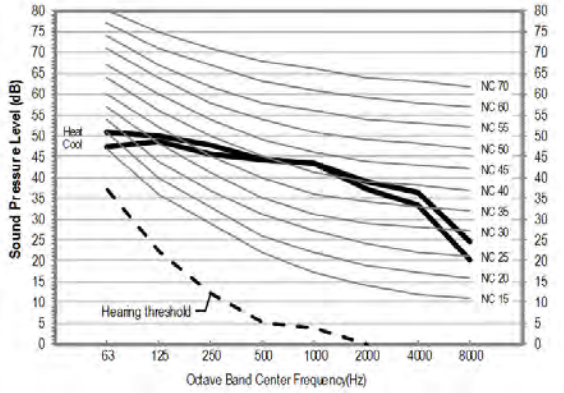
Model	Cooling	Heating
CXH09ADB (AC009BXADCH/AA)	46	47
CXH12ADB (AC012BXADCH/AA)	47	48
CXH18ADB (AC018BXADCH/AA)	48	48
CXH24ADB (AC024BXADCH/AA)	50	52

- NC Curve

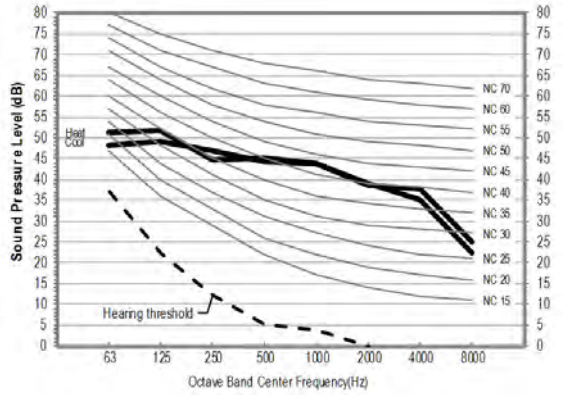
1) CXH09ADB (AC009BXADCH/AA)



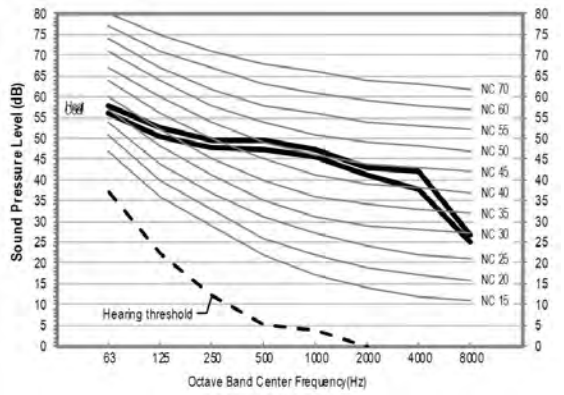
2) CXH12ADB (AC012BXADCH/AA)



3) CXH18ADB (AC018BXADCH/AA)



4) CXH24ADB (AC024BXADCH/AA)



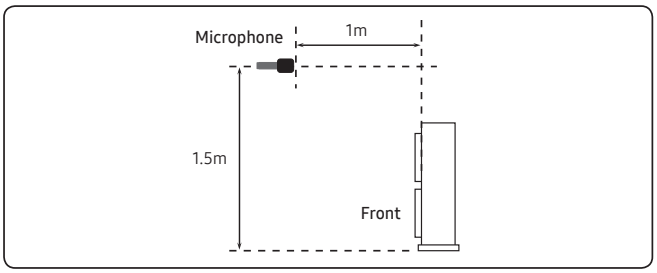
NOTE

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

5. Sound Data

Outdoor Units

Sound Pressure level

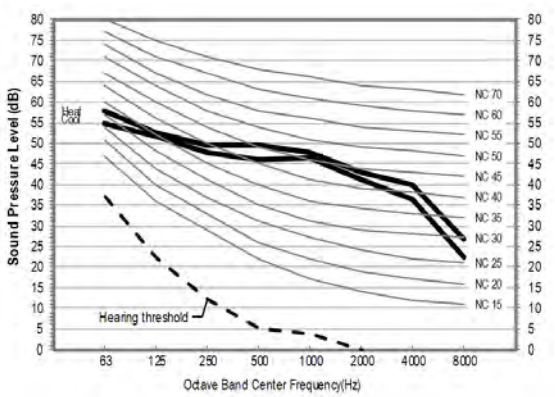


Unit: dB(A)

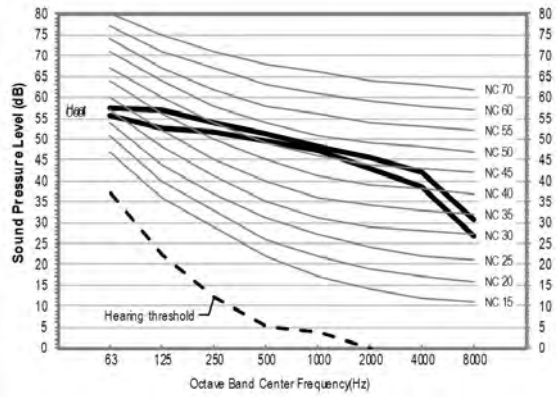
Model	Cooling	Heating
CXH30ADB (AC030BXADCH/AA)	50	52
CXH36ADB (AC036BXADCH/AA)	52	54
CXH42ADB (AC042BXADCH/AA)	53	55
CXH48ADB (AC048BXADCH/AA)	56	58

- NC Curve

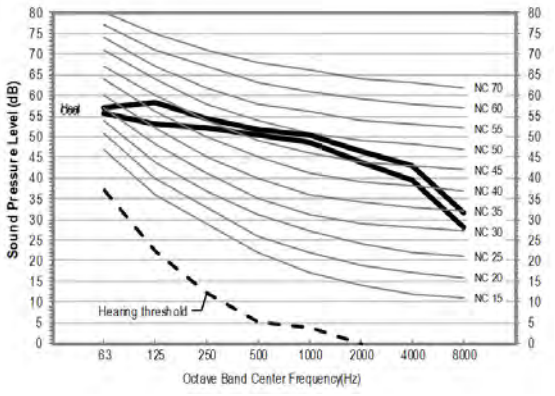
1) CXH30ADB (AC030BXADCH/AA)



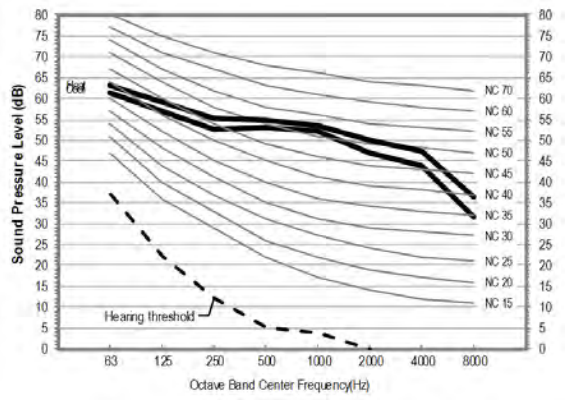
2) CXH36ADB (AC036BXADCH/AA)



3) CXH42ADB (AC042BXADCH/AA)



4) CXH48ADB (AC048BXADCH/AA)



NOTE

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

5. Sound Data

Outdoor Units

Sound Power level

NOTE

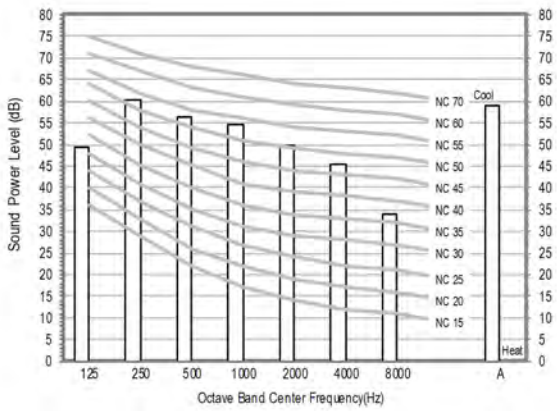
- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

Unit: dB(A)

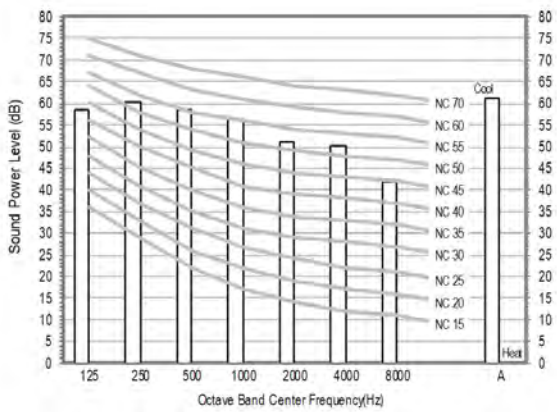
Model	Cooling
CXH09ADB (AC009BXADCH/AA)	59
CXH12ADB (AC012BXADCH/AA)	61
CXH18ADB (AC018BXADCH/AA)	62
CXH24ADB (AC024BXADCH/AA)	65

- NC Curve

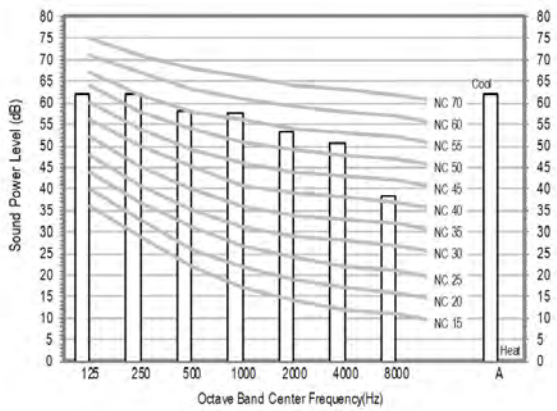
1) CXH09ADB (AC009BXADCH/AA)



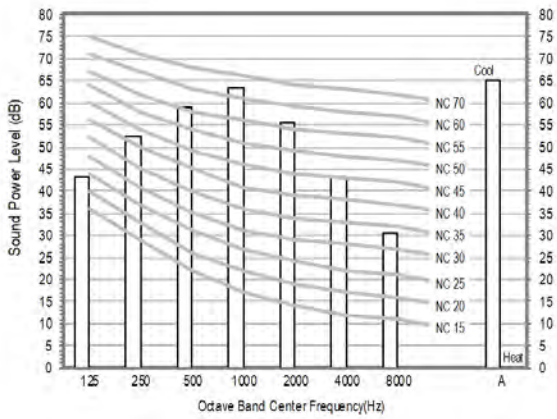
2) CXH12ADB (AC012BXADCH/AA)



3) CXH18ADB (AC018BXADCH/AA)



4) CXH24ADB (AC024BXADCH/AA)



5. Sound Data

Outdoor Units

Sound Power level

NOTE

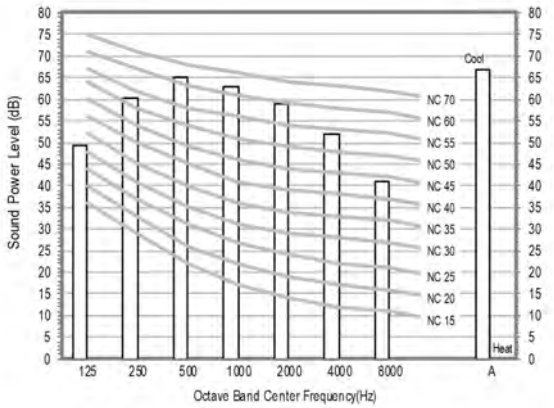
- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

Unit: dB(A)

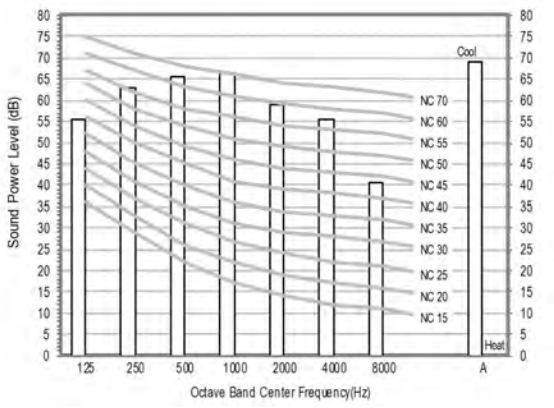
Model	Cooling
CXH30ADB (AC030BXADCH/AA)	67
CXH36ADB (AC036BXADCH/AA)	69
CXH42ADB (AC042BXADCH/AA)	70
CXH48ADB (AC048BXADCH/AA)	72

- NC Curve

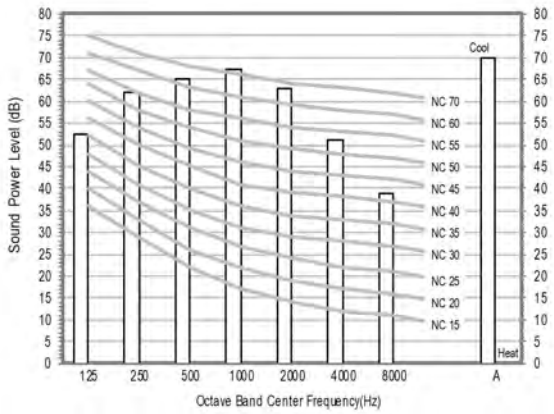
1) CXH30ADB (AC030BXADCH/AA)



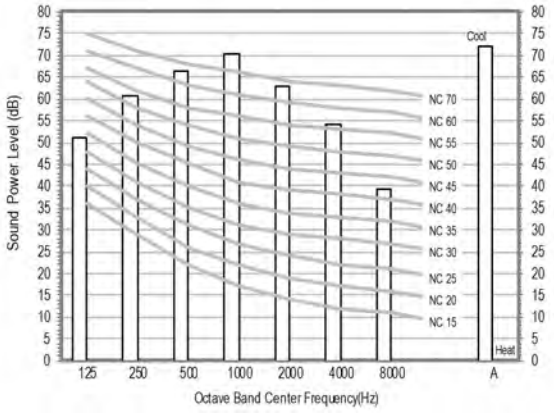
2) CXH36ADB (AC036BXADCH/AA)



3) CXH42ADB (AC042BXADCH/AA)



4) CXH48ADB (AC048BXADCH/AA)

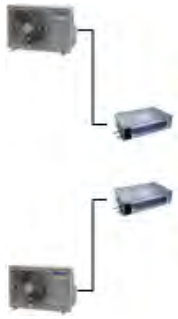


6. Capacity Correction

Outdoor Units

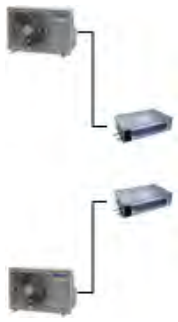
CNH09LDB(AC009BNLDCH/AA)+CXH09ADB(AC009BXADCH/AA)
CNH12LDB(AC012BNLDCH/AA)+CXH12ADB(AC012BXADCH/AA)
CNH09HDB(AC009BNHDCH/AA)+CXH09ADB(AC009BXADCH/AA)
CNH12HDB(AC012BNHDCH/AA)+CXH12ADB(AC012BXADCH/AA)

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

CNH18LDB(AC018BNLDCH/AA)+CXH18ADB(AC018BXADCH/AA)
CNH18HDB(AC018BNHDCH/AA)+CXH18ADB(AC018BXADCH/AA)
CNH24HDB(AC024BNHDCH/AA)+CXH24ADB(AC024BXADCH/AA)
CNH30HDB(AC030BNHDCH/AA)+CXH30ADB(AC030BXADCH/AA)

Cooling

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

Heating

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

6. Capacity Correction

Outdoor Units

CNH36HDB(AC036BNHDCH/AA)+CXH36ADB(AC036BXADCH/AA)
CNH42HDB(AC042BNHDCH/AA)+CXH42ADB(AC042BXADCH/AA)
CNH48HDB(AC048BNHDCH/AA)+CXH48ADB(AC048BXADCH/AA)

Cooling

		Pipe Length (ft)														
		16.4	32.8	49.2	65.6	82.0	98.4	114.8	131.2	147.6	164.0	180.4	196.9	213.3	229.7	246.1
Level Difference (ft)	98.4	-	-	-	-	-	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	82.0	-	-	-	-	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	65.6	-	-	-	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	49.2	-	-	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	32.8	-	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	16.4	1.00	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	0.0	1.00	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-16.4	1.00	0.99	0.98	0.97	0.96	0.95	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
	-32.8	-	0.98	0.98	0.97	0.96	0.95	0.94	0.93	0.93	0.92	0.91	0.90	0.89	0.87	0.85
	-49.2	-	-	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.86	0.84
	-65.6	-	-	-	0.96	0.95	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.86	0.83
	-82.0	-	-	-	-	0.95	0.94	0.93	0.93	0.92	0.91	0.90	0.88	0.87	0.85	0.81
	-98.4	-	-	-	-	-	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.86	0.84	0.80

Heating

		Pipe Length (ft)														
		16.4	32.8	49.2	65.6	82.0	98.4	114.8	131.2	147.6	164.0	180.4	196.9	213.3	229.7	246.1
Level Difference (ft)	98.4	-	-	-	-	-	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	82.0	-	-	-	-	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	65.6	-	-	-	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	49.2	-	-	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	32.8	-	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	16.4	1.00	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	0.0	1.00	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-16.4	1.00	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-32.8	-	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-49.2	-	-	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-65.6	-	-	-	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-82.0	-	-	-	-	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
	-98.4	-	-	-	-	-	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88

7. Operation Range

Outdoor Units

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)	-
Heating	~ 24kBtu/h	30°C(86°F) or less	-25°C to 24°C (-13°F to 75°F)	-
	30 ~ 48kBtu/h		-20°C to 24°C (-4°F to 75°F)	-

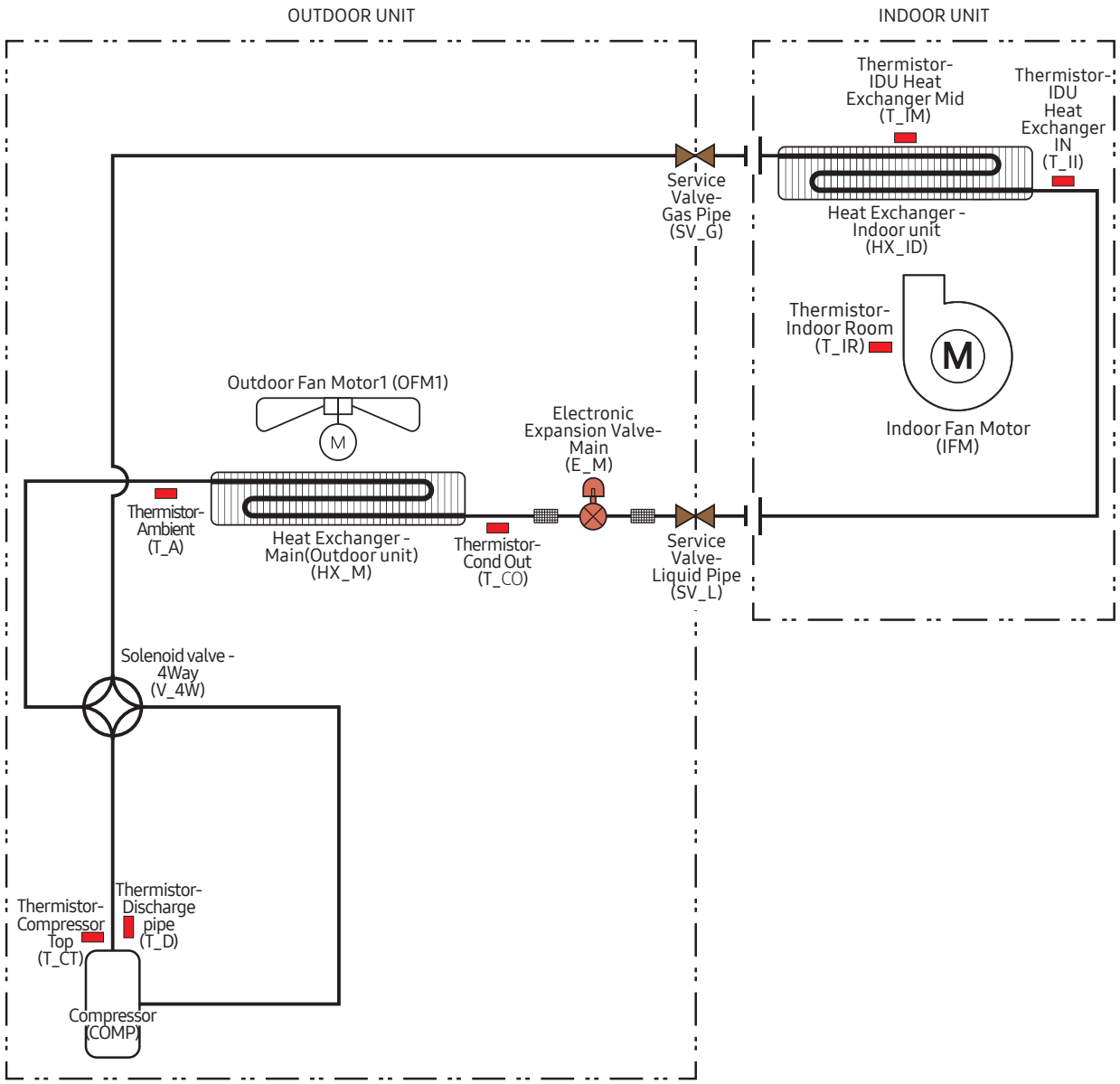
NOTE

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

8. Piping Diagram

Outdoor Units

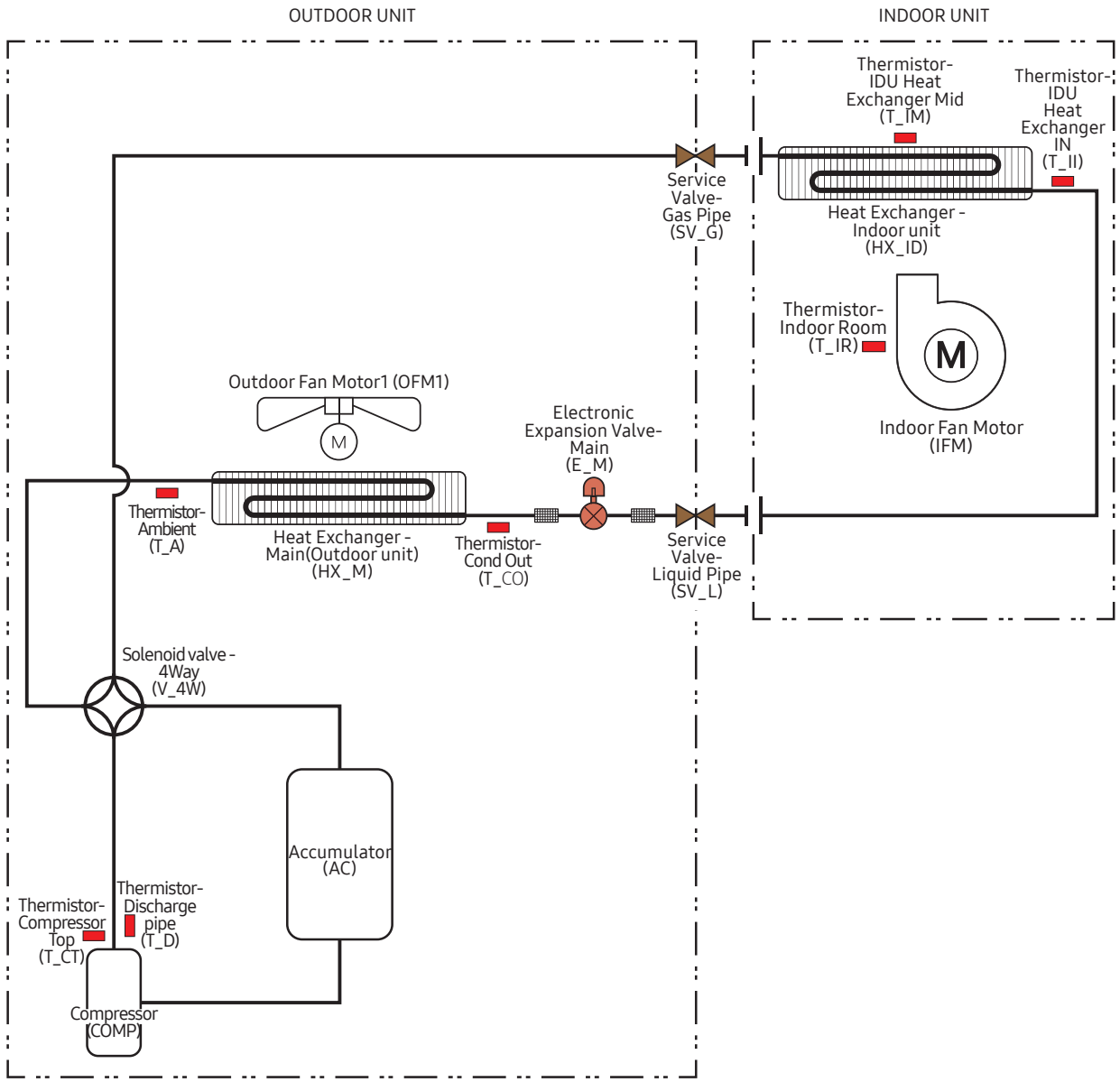
CNH09LDB(AC009BNLDCH/AA)+CXH09ADB(AC009BXADCH/AA)
CNH12LDB(AC012BNLDCH/AA)+CXH12ADB(AC012BXADCH/AA)
CNH09HDB(AC009HNLDCH/AA)+CXH09ADB(AC009BXADCH/AA)
CNH12HDB(AC012HNLDCH/AA)+CXH12ADB(AC012BXADCH/AA)



8. Piping Diagram

Outdoor Units

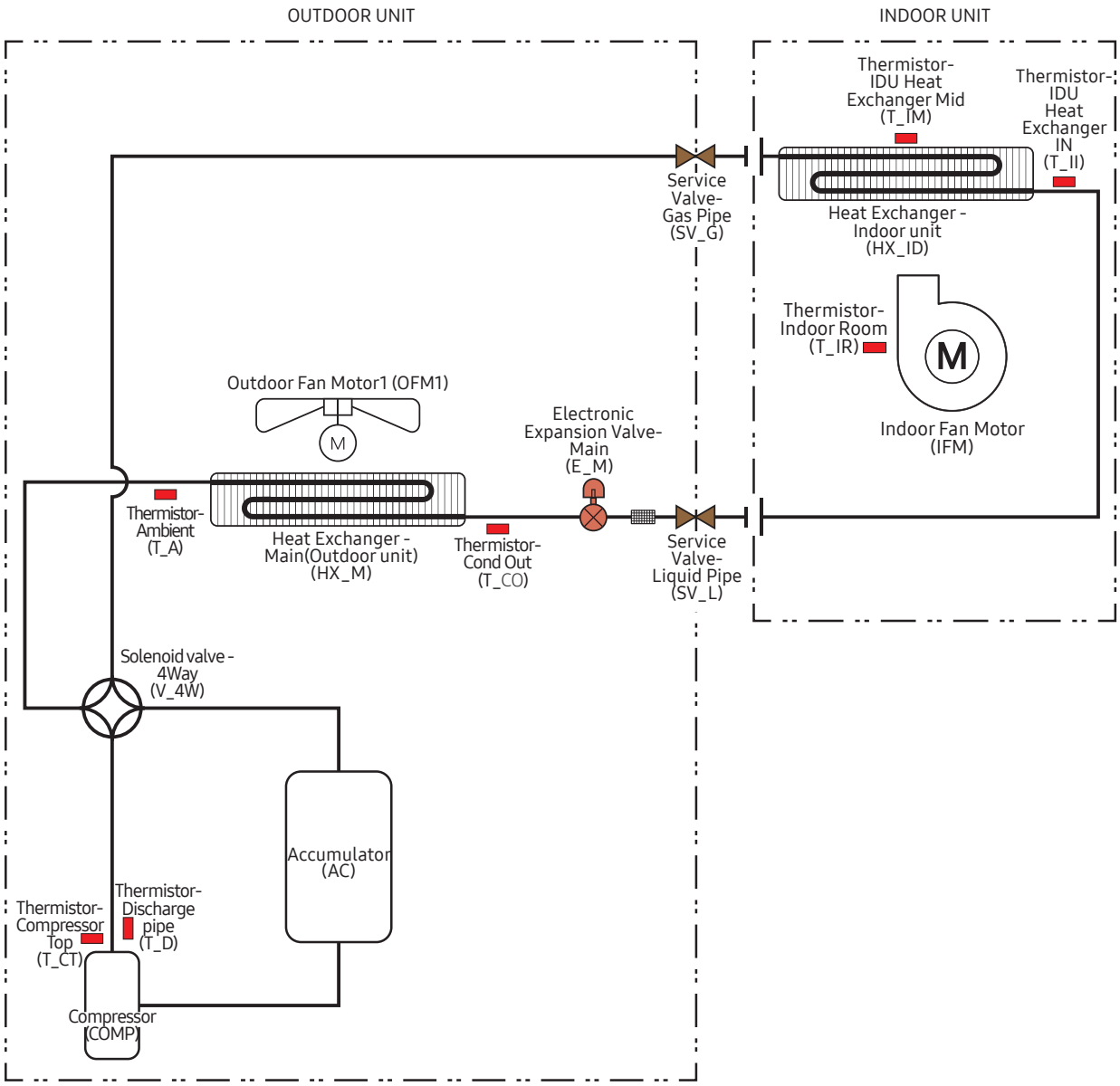
CNH18LDB(AC018BNLDCH/AA)+CXH18ADB(AC018BXADCH/AA)
CNH18HDB(AC018BNHDCH/AA)+CXH18ADB(AC018BXADCH/AA)



8. Piping Diagram

Outdoor Units

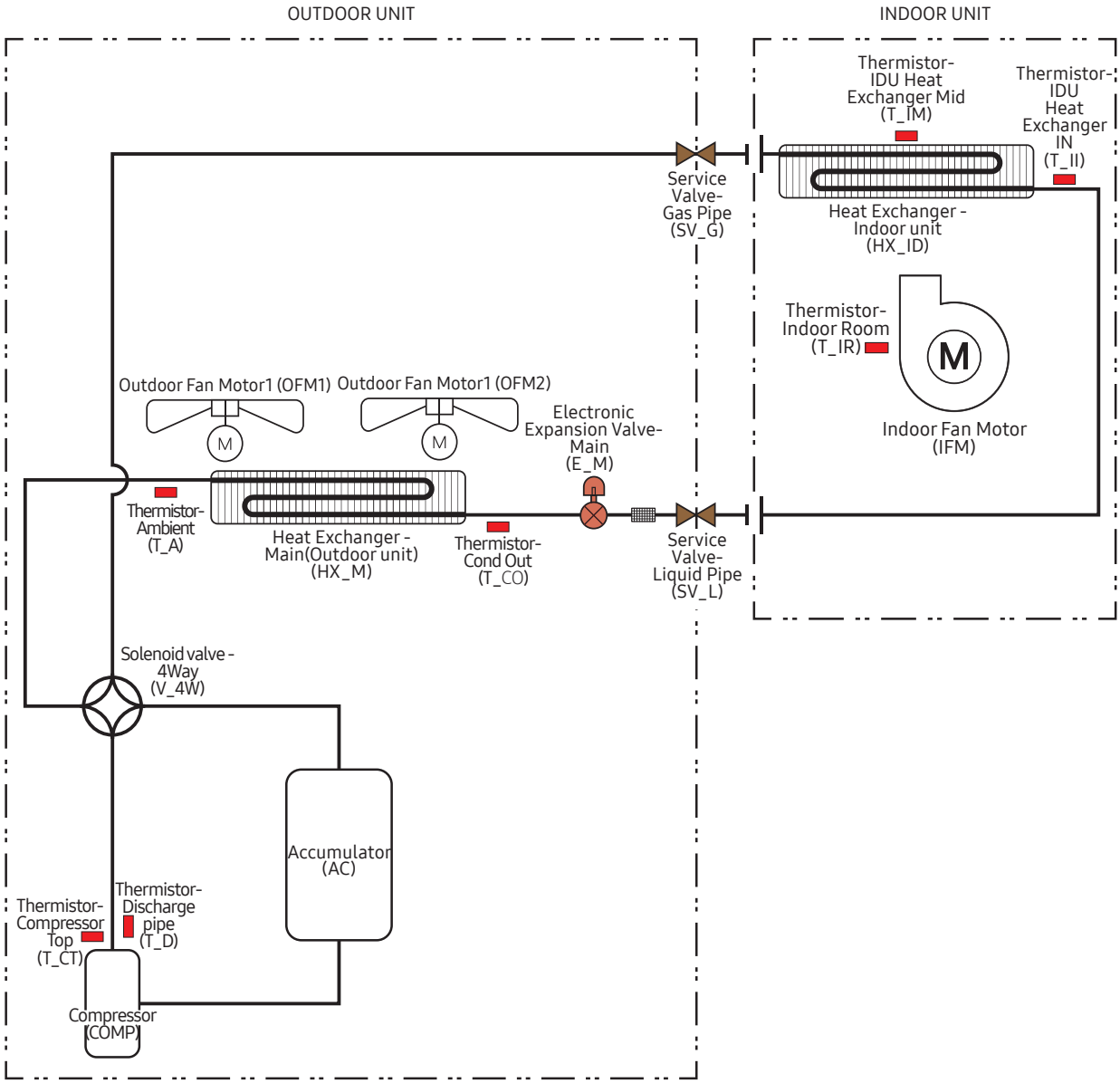
CNH24HDB(AC024BNHDCH/AA)+CXH24ADB(AC024BXADCH/AA)
CNH30HDB(AC030BNHDCH/AA)+CXH30ADB(AC030BXADCH/AA)



8. Piping Diagram

Outdoor Units

CNH36HDB(AC036BNHDCH/AA)+CXH36ADB(AC036BXADCH/AA)
CNH42HDB(AC042BNHDCH/AA)+CXH42ADB(AC042BXADCH/AA)
CNH48HDB(AC048BNHDCH/AA)+CXH48ADB(AC048BXADCH/AA)

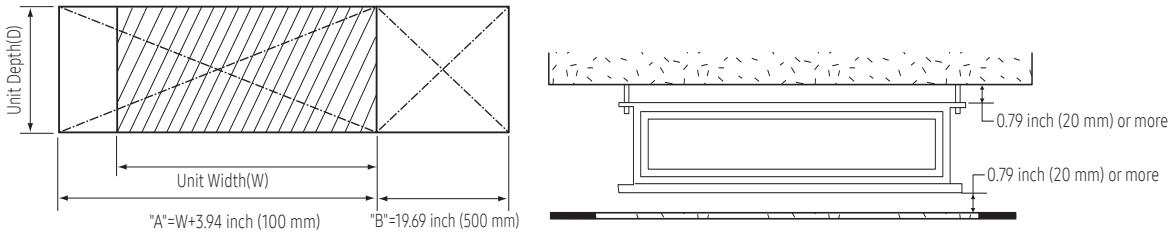


Installation

Duct

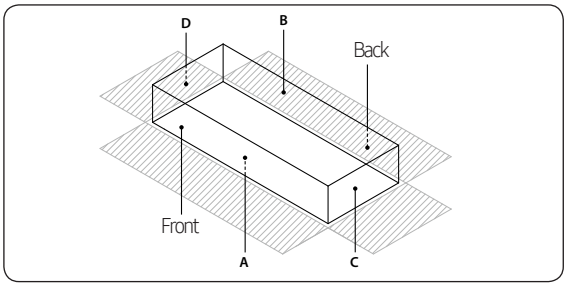
Spacing requirements

Space requirements for installation & service.
Construction Standard for Inspection opening
An inspection opening is required for service and unit replacement.
1) If the ceiling is a grid type, an inspection opening is not required.
2) If the ceiling is plaster board, an inspection opening is required. The size of the opening will vary based on the height inside the ceiling.
a. Height is more than 1.64ft (0.5m): Only "B" [Inspection for PBA] is applied.
b. Height is less than 1.64ft (0.5m): Both "A"&"B" are applied.
c. "A"&"B" are inspection opening .



- You must have 0.79 inch (20 mm) or more space between the ceiling and the bottom of indoor unit to prevent transmission of noise and vibration from the unit into the space.
- It is possible to install the unit at an height of between 7.2~8.2 ft (2.2~2.5m)from the ground,if the unit has a duct with a well defined length [11.81inch (300 mm) or more], to avoid fan motor blower contact.
- If you install the cassette or duct type indoor unit on the ceiling with humidity over 80%, you must apply extra 0.39 inch (10mm) of polyethylene foam or other insulation with similar material on the body of the indoor unit.

Optional: Insulating the body of the indoor unit



Thickness: more than 0.39 inch(10mm) Unit: inch(mm)

Indoor Unit	AC009BNLDCH AC012BNLDCH	AC018BNLDCH
	35.43X17.32X7.83 (900X440X199)	43.31X17.32X7.83 (1100X440X199)
A	35.43X7.83 (900X199)	43.31X7.83 (1100X199)
B	35.43X7.83 (900X199)	43.31X7.83 (1100X199)
C	17.32X7.83 (440X199)	17.32X7.83 (440X199)
D	17.32X7.83 (440X199)	17.32X7.83 (440X199)
Front/ Back	Insulate the front and back side in proper size at the same time when insulating the suction duct and discharge duct.	

Unit: inch(mm)

Indoor Unit	AC009BNHDCH AC012BNHDCH	AC018BNHDCH AC024BNHDCH AC030BNHDCH	AC036BNHDCH AC042BNHDCH AC048BNHDCH
	33.46X27.56X9.84 (850X700X250)	47.24X27.56X9.84 (1200X700X250)	51.18X27.56X11.81 (1300X700X300)
A	33.46X27.56 (850X700)	47.24X27.5 (1200X700)	51.18X27.56 (1300X700)
B	33.46X27.56 (850X700)	47.24X27.5 (1200X700)	51.18X27.56 (1300X700)
C	27.56X9.84 (700X250)	27.56X9.84 (700X250)	27.56X11.81 (700X300)
D	27.56X9.84 (700X250)	27.56X9.84 (700X250)	27.56X11.81 (700X300)
Front/ Back	Insulate the front and back side in proper size at the same time when insulating the suction duct and discharge duct.		

NOTE

- Insulate the end of the pipe and some curved area by using separate insulator.
- Insulate the discharge and suction part at the same time when you insulate connection duct.

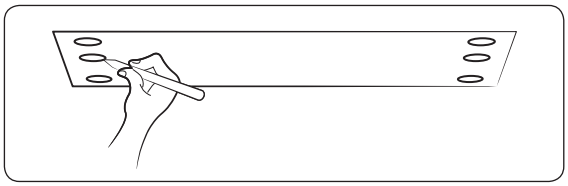
Installation

Duct

Installing the indoor unit

When deciding on the location of the air conditioner with the owner, the following restrictions must be taken into account

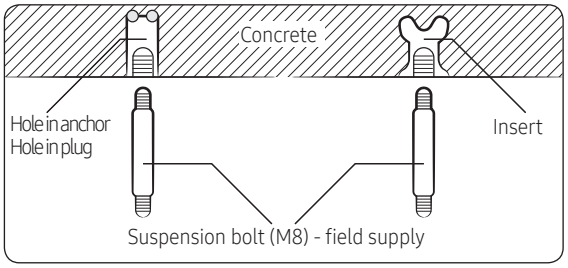
1 Place the pattern sheet on the ceiling at the spot where you want to install the indoor unit.



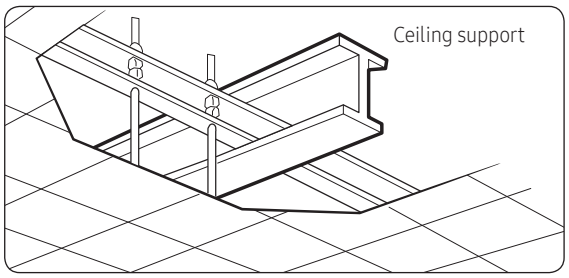
NOTE

- 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 maintain the correct dimensions between the markings.

2 Insert bolt anchors. Use existing ceiling supports or construct a suitable support as shown in figure.



3 Install the suspension bolts depending on the ceiling type.



⚠ CAUTION

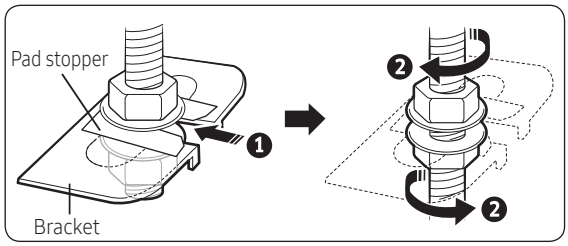
- Ensure that the ceiling is strong enough to support the weight of the indoor unit. Before hanging the unit, test the strength of each attached suspension bolt.
- If the length of suspension bolt is more than 4.92 ft (1.5m), it is required to prevent vibration.
- If this is not possible, create an opening 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 to the suspension bolts making space for hanging the indoor unit.

NOTE

- You must install all the suspension rods.

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



⚠ CAUTION

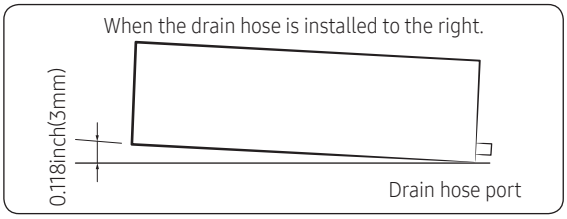
- Piping must be laid and connected inside the ceiling when suspending the unit. If the ceiling is already constructed, lay the piping into position for connection to the unit before placing the unit inside the ceiling.

6 Screw the nuts to suspend the unit.

7 Adjust level of the unit by using measurement plate for all 4 sides.

⚠ CAUTION

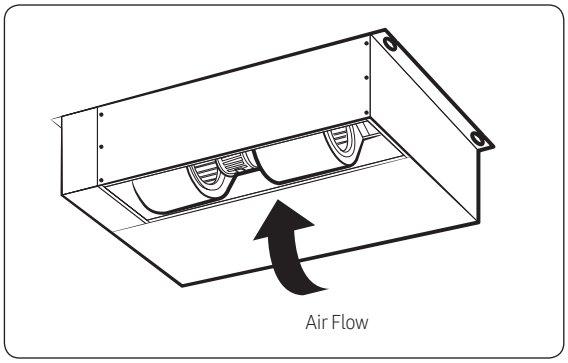
- For proper drainage of condensate, give a 0.118 inch (3mm) slant to the left or right side of the unit which will be connected with the drain hose, as shown in the figure. Make a tilt when you wish to install the drain pump, too.



- When installing the indoor unit, make sure it is not tilted toward front or back side.

⚠ CAUTION

- Noise will increase 3~6 dB(A) when the air flow enters from the bottom side (Only for AC***BNLDCH indoor unit product).



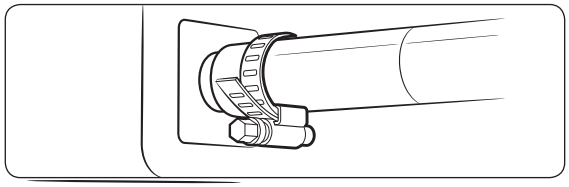
Installation

Duct

Installing the drain hose and drain pipe

1 Push the supplied drain hose as far as possible over the drain socket.

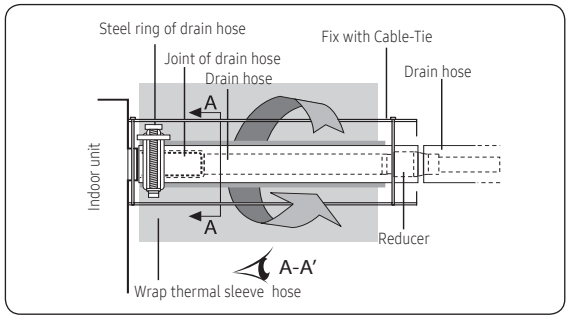
2 Tighten the metal clamp as shown in the picture.



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.

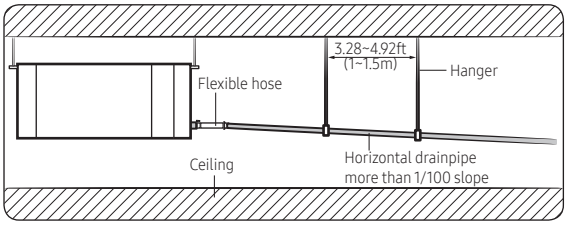


Without the drain pump

1 Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 3.28~4.92ft(1~1.5m).

2 Install U-trap at the end of the drainpipe to prevent a nasty smell to reach the indoor unit.

3 Do not install the drainpipe to upward position. It may cause water flow back to the unit.



With the drain pump

1 The drain pipe should be installed within 11.81inch(300mm) to 21.65inch(550mm) from the flexible hose and then lift down 0.79inch(20mm) or more.

2 Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 3.28~4.92ft(1~1.5m).

3 Install the air vent in the horizontal drainpipe to prevent water flow back to the indoor unit.

NOTE

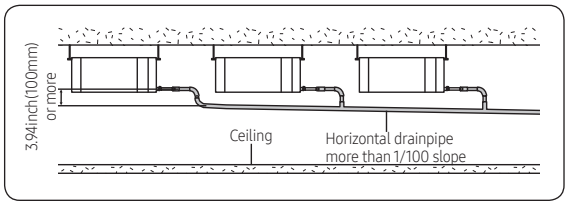
- You may not need to install it if there were proper slope in the horizontal drainpipe.

4 The flexible hose should not be installed upward position, it may cause water flow back to the indoor unit.

Centralized drainage without the drain pump

1 Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 3.28~4.92ft(1~1.5m).

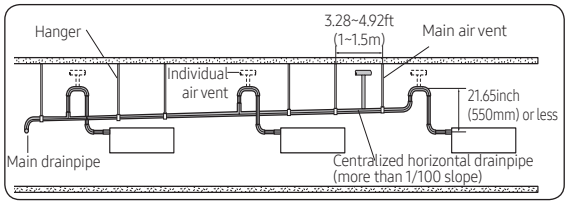
2 Install U-trap at the end of the drainpipe to prevent a nasty smell to reach the indoor unit.



Centralized drainage with the drain pump

1 Install main air vent at the front of the farthest indoor unit from the main drain when installed indoor units are more than 3.

2 You may need to install individual air vent to prevent water flow back at the top of each indoor unit drainpipe.



Installation

Duct

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 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.

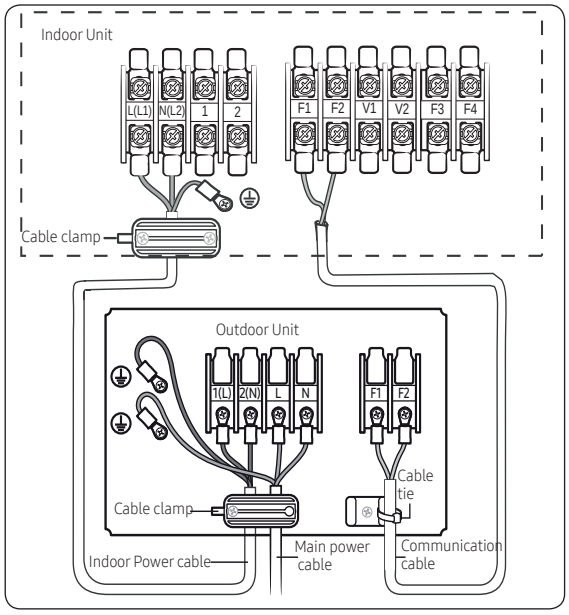
1 Remove the screw on the electrical component box and remove the cover plate.

2 Route the connection cord through the side of the indoor unit and connect the cable to the terminals refer to the figure below.

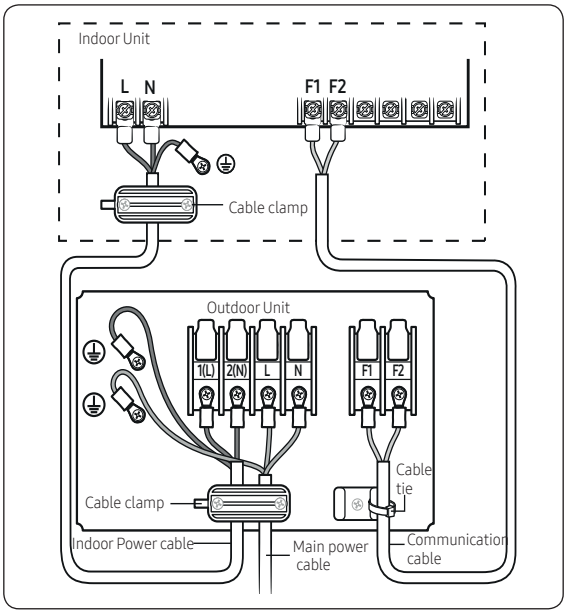
3 Route the other end of the cable to the outdoor unit through the ceiling & the hole on the wall.

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

AC*BNLDCH



AC*BNHDCH

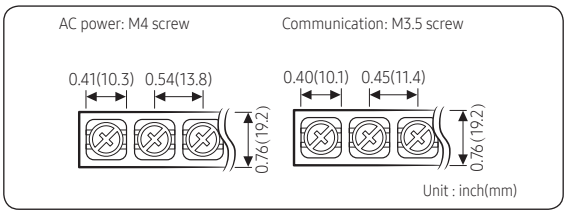


NOTE

- Terminal Block of the outdoor unit may be different from the diagram depending on the model. Refer to the manual of the outdoor unit for the configuration of the terminal block of the outdoor unit.

Indoor power supply		
Power supply	**Max/Min(V)**	**Indoor power cable**
208 to 230V, 60 Hz	±10%	0.0023 inch^2 ↑ (1.5mm^2 ↑), 3 wires
Communication cable		
0.0012 inch^2↑ (0.75mm^2 ↑), 2 wires		

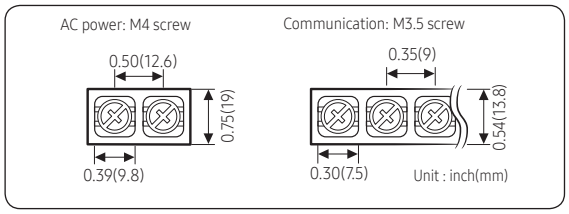
AC*BNLDCH



Installation

Duct

AC***BNHDCH



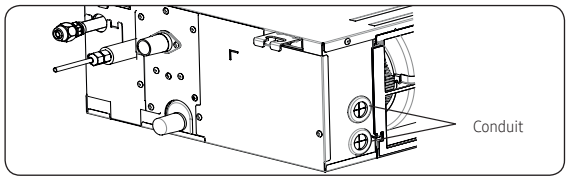
Tightening torque lbf·ft (kgf • cm)	
M3.5	0.58 to 0.87 (8.0 to 12.0)
M4	0.87 to 1.30 (12.0 to 18.0)

- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord.

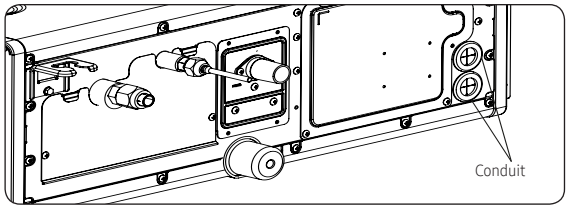
  –Code designation

  [1-phase] IEC: 60245 IEC 57 / CENELEC: H05RN-F grade or more
- Be sure to run the power supply cable and the communication cable through electrical conduit as seen in the picture.

AC***BNLDCH

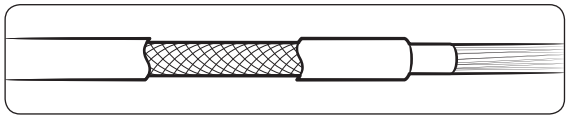


AC***BNHDCH



⚠ CAUTION

- Be sure not to put your finger into the conduit.
- 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 a server room, use the double shielded communication cable (tape aluminum / polyester braid + copper) of FROHH2R type.

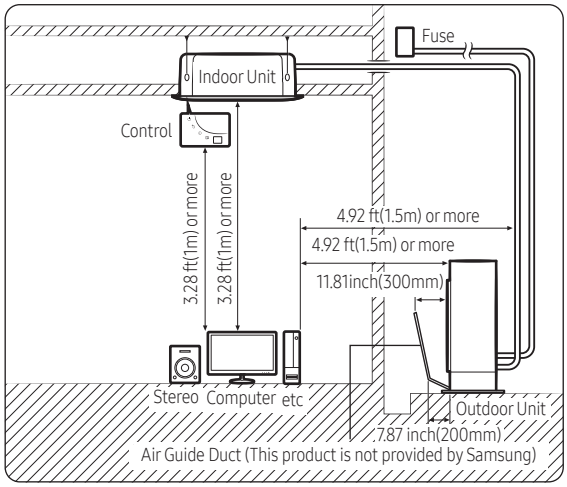
Installation

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.

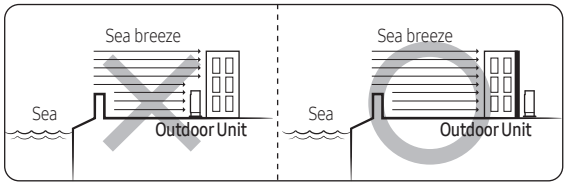


⚠ CAUTION

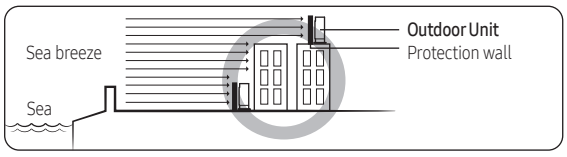
- You have just purchased a system air conditioner and it has been installed by your installation specialist.
- This device must be installed according to the national electrical rules.
- If your outdoor unit exceeds a net weight of 132.2 lb(60 kg), do not install it on a suspended wall, but stand it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

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

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



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



⚠ CAUTION

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

Installation

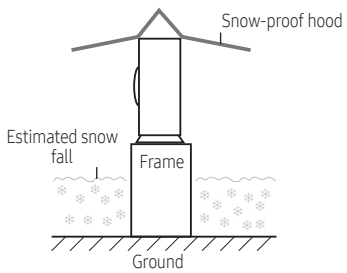
Outdoor Units

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

  ※ Please contact your local SAMSUNG representative for further details.

⚠ CAUTION

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

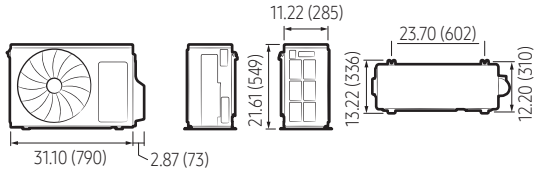


Outdoor unit dimensions

Unit : inch (mm)

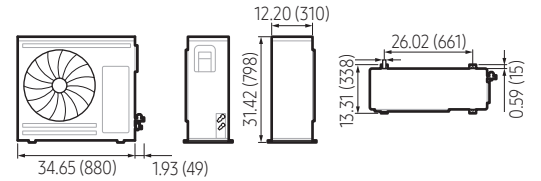
A Type

AC009BXADCH, AC012BXADCH



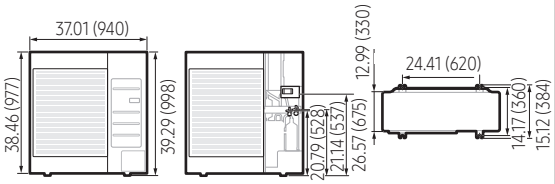
B Type

AC018BXADCH



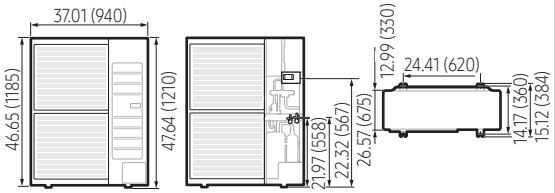
C Type

AC024BXADCH, AC030BXADCH



D Type

AC036BXADCH, AC042BXADCH, AC048BXADCH



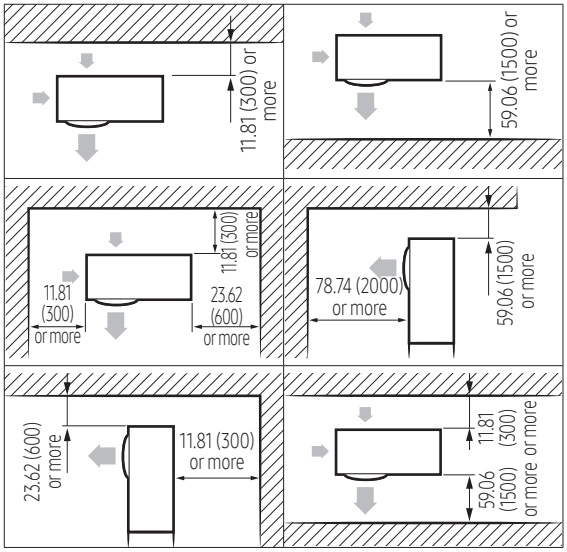
Installation

Outdoor Units

Minimum clearances for the outdoor unit

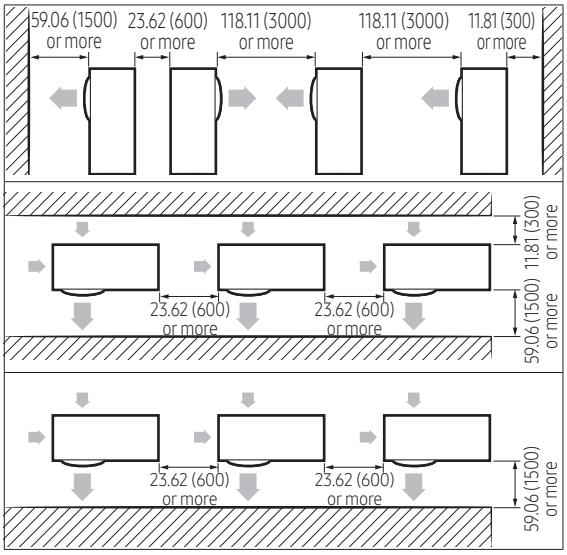
When installing 1 outdoor unit

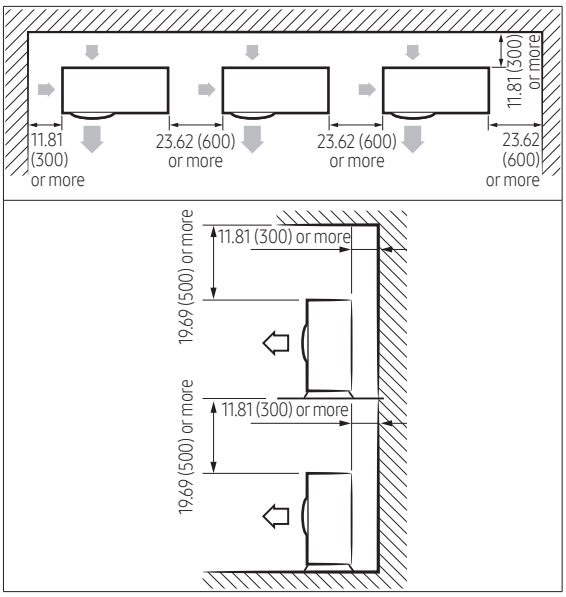
Unit : inch (mm)



When installing more than 1 outdoor unit

Unit : inch (mm)



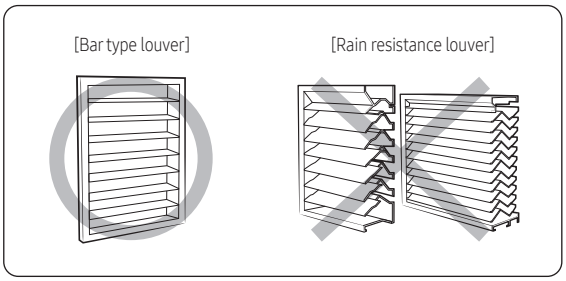


⚠ CAUTION

- 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

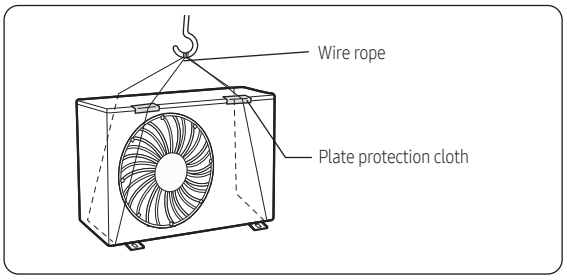
Outdoor Units

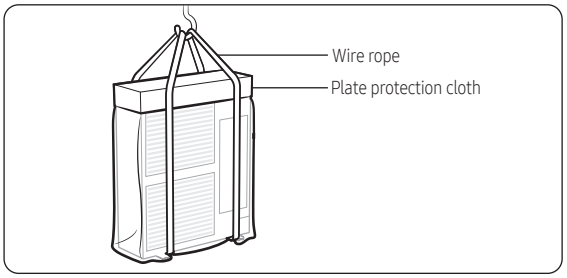
Moving the outdoor unit with wire rope

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.

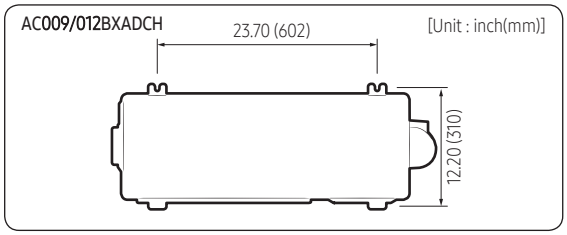
2 Attach the outdoor unit to the appropriate support using anchor bolts.

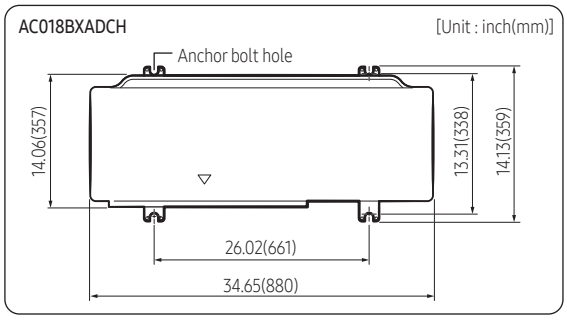
- The ground wire for the telephone line cannot be used to ground the air conditioner.

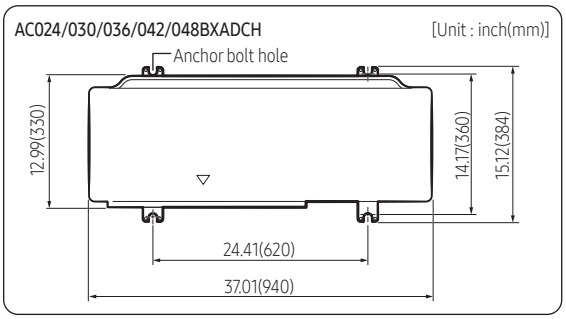
3 DIf the outdoor unit is exposed to strong winds, install shield plates around the outdoor unit, so that the fan can operate correctly.

NOTE

- Install provided rubber legs to prevent vibration and noise.

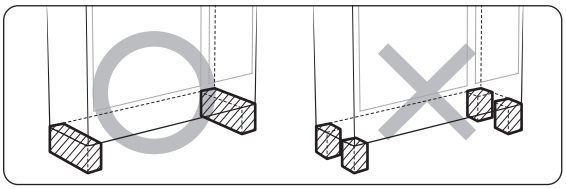




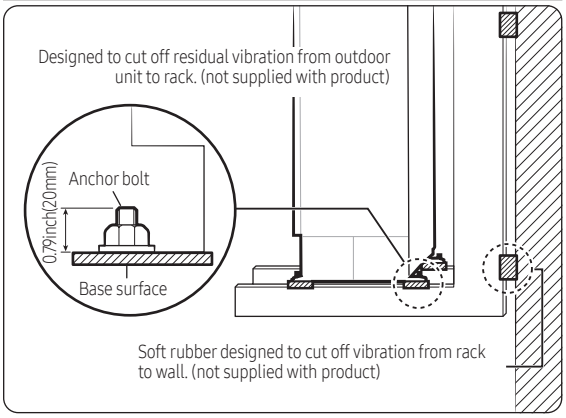


⚠ CAUTION

- 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.

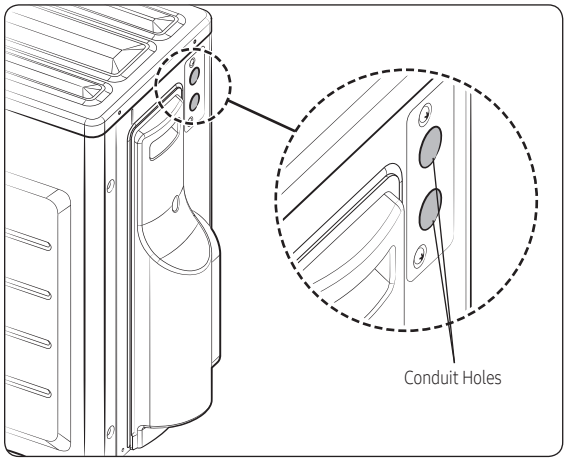
⚠ CAUTION

- 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.

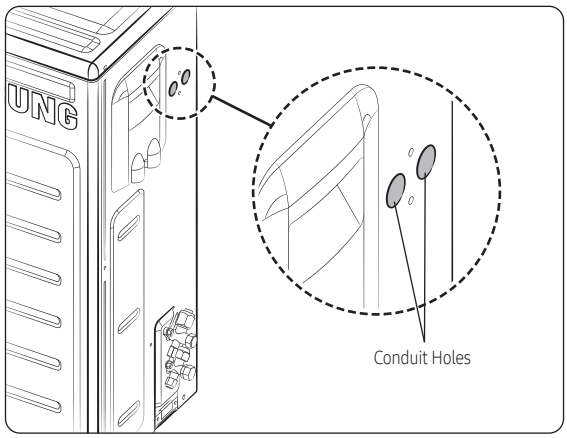
Connecting wire conduits

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

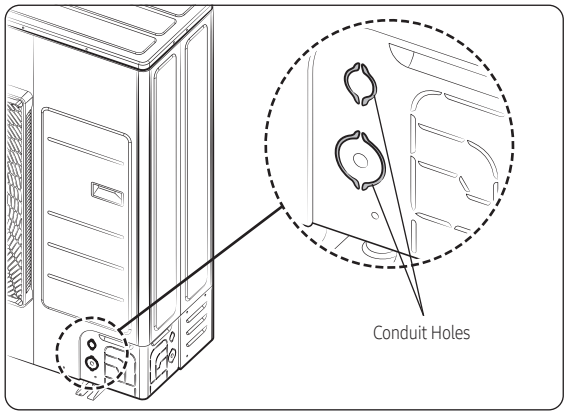
1 Drill holes on the conduit plate in accordance with their use and quantity.
   - AC009/012BXADCH
     – Drill conduit holes on the side cabinet. (knock out holes)



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



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

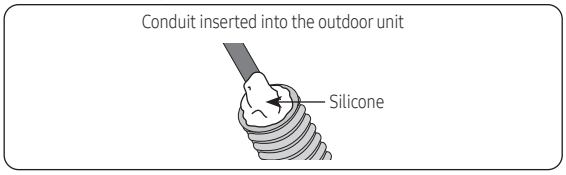


Installation

Outdoor Units

2 Insert the cables through the conduits, and then fix the conduits to the conduit plate with the lock nuts.

3 Apply silicone to the end of the hose to prevent rain from entering the hose.

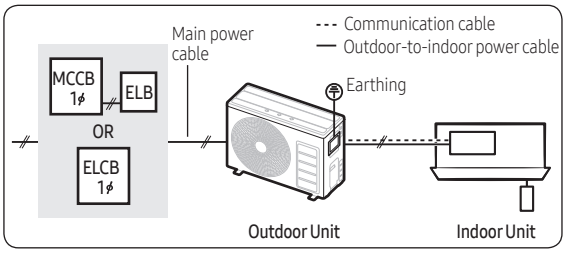


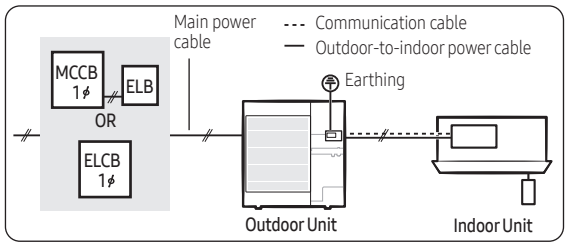
4 Connect the cables to the outdoor units.
For how to connect the cables, refer to the next page.

5 Attach the conduit plate to the product.

Air conditioning system examples

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





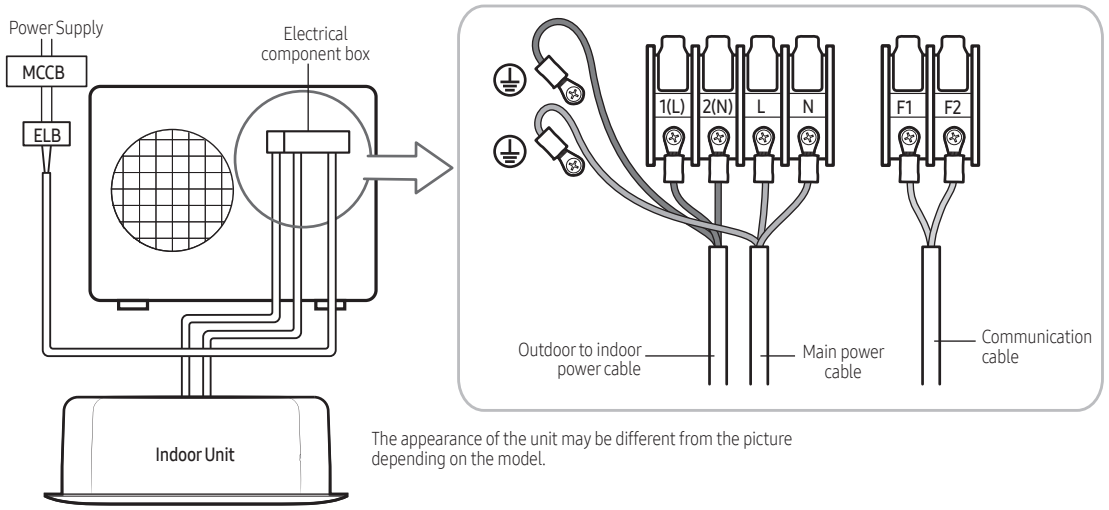
※ The appearance of the unit may be different from the picture depending on the model.

⚠ CAUTION

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

Connecting the main power cable

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



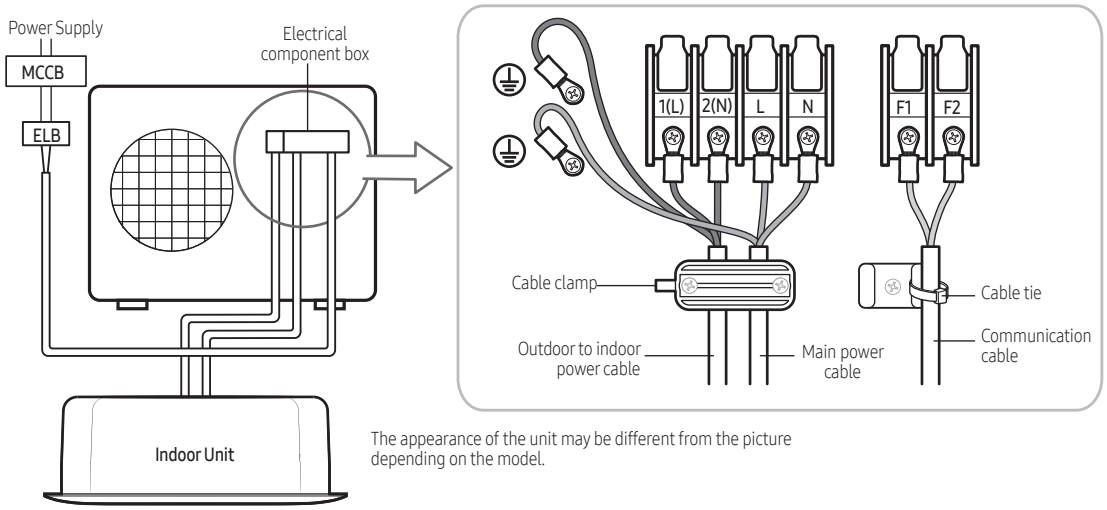
The appearance of the unit may be different from the picture depending on the model.

Installation

Outdoor Units

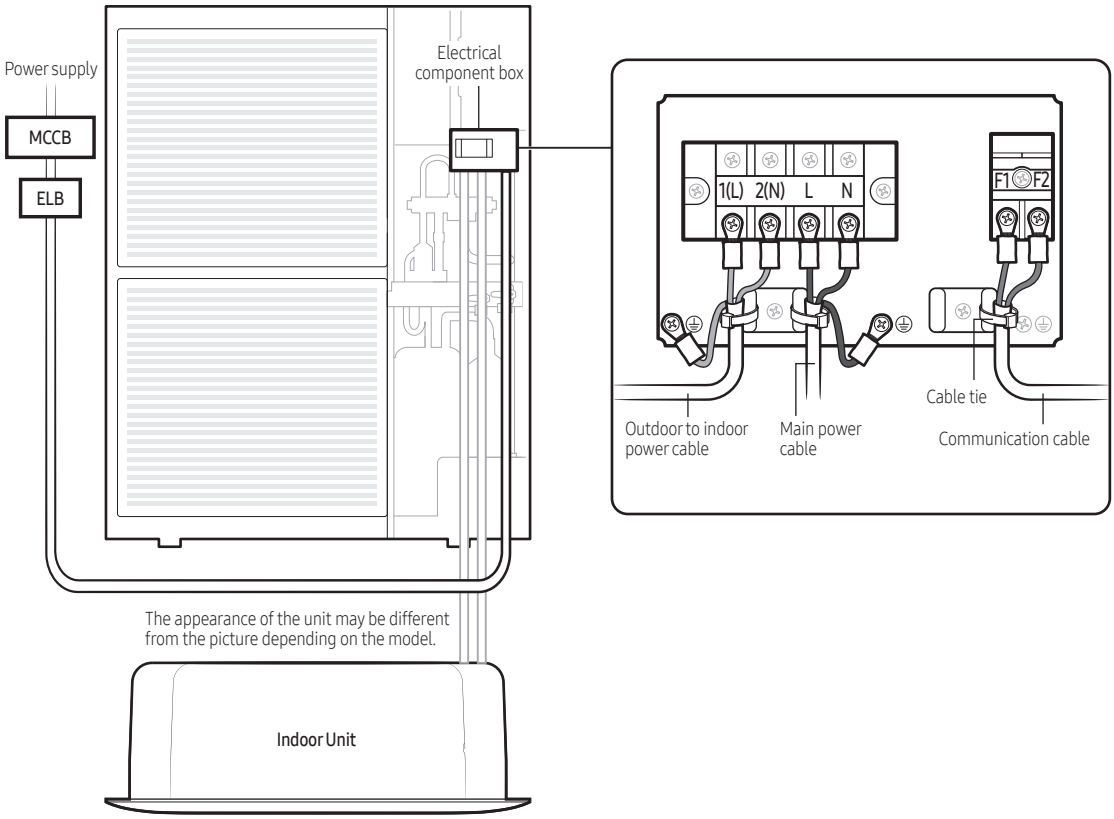
Connecting the main power cable

When using ELB for AC018BXADCH (1-phase)



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

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



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

Installation

Outdoor Units

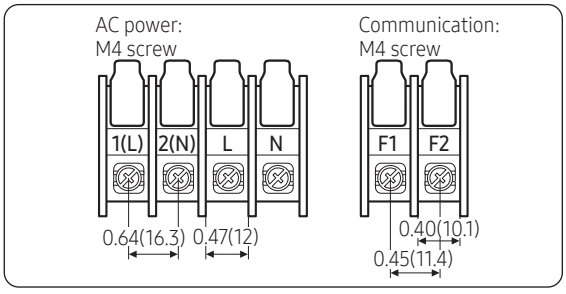
⚠ CAUTION

- 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

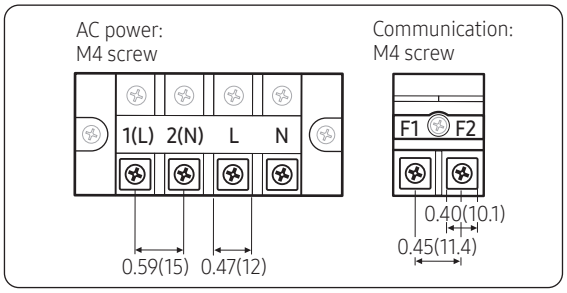
- AC009/012/018BXADCH (1-phase)

[Unit : inch(mm)]



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

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

Installation

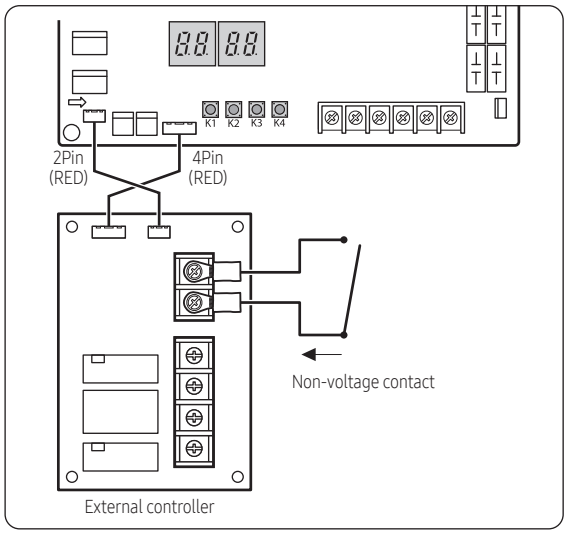
Outdoor Units

NOTE

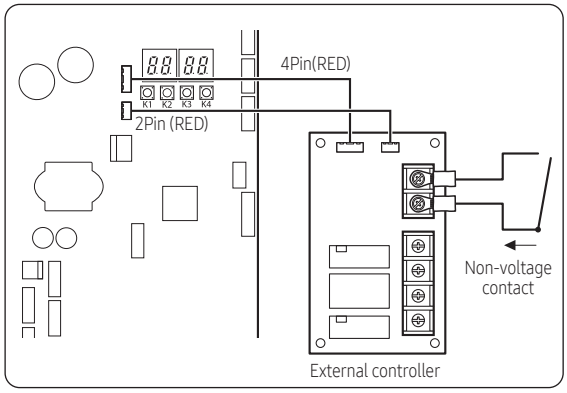
- RLA is based on AHRI 210/240 cooling standard condition [Indoor temp. : 26.7 °C / 80 °F(DB) / 19.46 °C / 67 °F(WB), Outdoor temp. : 35 °C / 95 °F(DB)]
- Voltage tolerance is ± 10 %.
- Maximum allowable voltage between phases is 2 %.
- Symbols
  - RLA: Rated Load Ampere (A)
  - MOC: Maximum Operating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

Silence mode controller wiring diagram with External controller

- AC009/012/018BXADCH



- AC024/030/036/042/048BXADCH

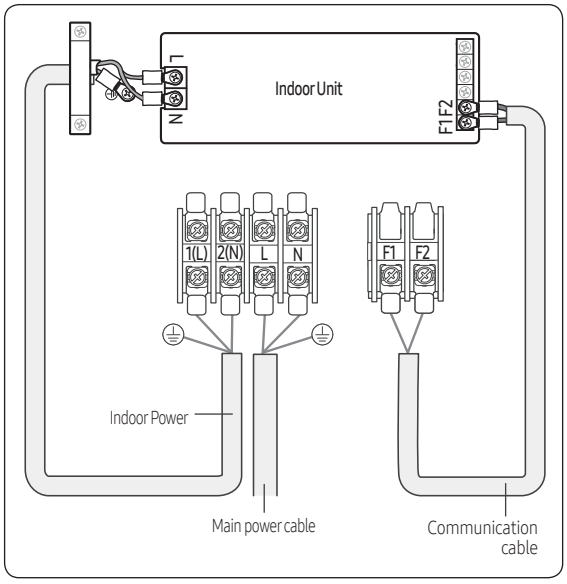


Installation

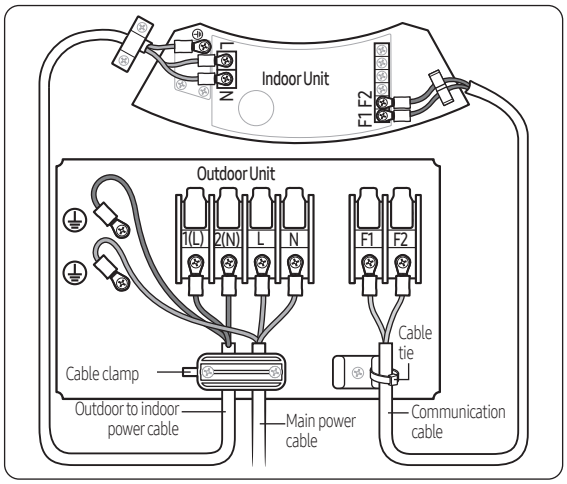
Outdoor Units

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

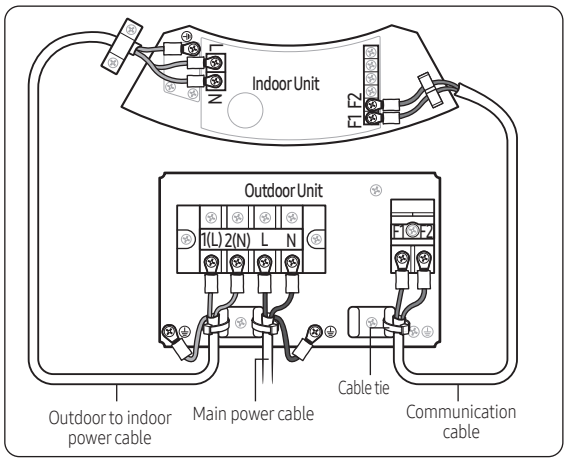
- AC009/012BXADCH



- AC018BXADCH



- AC024/030/036/042/048BXADCH

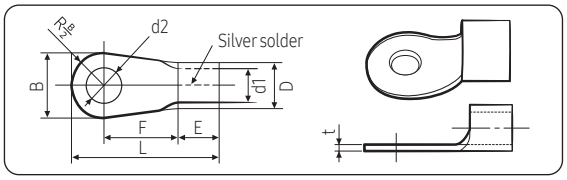


NOTE

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

Outdoor-to-indoor power terminal specifications

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



Installation

Outdoor Units

Nominal dimensions for cable [mm2(inch2)]	Nominal dimensions for screw [mm(inch)]	B		D		d1		E	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

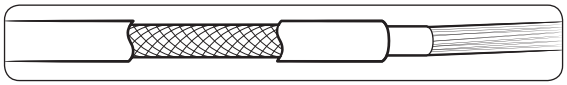
Outdoor Units

Outdoor-to-indoor power and communication cables specifications

- Indoor unit :
  Duct(AC***BNL***, AC***BNH***)

Indoor power supply		
Power supply	Max/Min (V)	Indoor power cable
1Φ, 208-230V~, 60Hz	±10%	0.0023 inch²↑ (1.5mm² ↑), 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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