

SAMSUNG

SINGLE Technical Data Book

**SINGLE RAC for America
(Low Ambient, R410A,
Cooling Only System)**



Model : CNH***DM (AC***MN*DCH/AA)
CXC**SCM (AC***MXSCCC/AA)

History

Version	Modification	Date	Remark
Ver.1.0	Release Single RAC TDB for America (Low Ambient, R410A, CO)	17. 05. 05	
Ver.1.1	Revised the 36kBtu/h Dimension Errors (P8, P19)	18. 01. 09	
Ver.1.2	Updated the model code including US code	20. 09. 04	

Nomenclature

US Code

Model Name

C	N	H	18	4	D	N
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) Classification

C	CAC
----------	-----

(2) Product Type

N	Indoor Unit
X	Outdoor Unit

(3) Mode

H	Heat Pump
C	Cooling Only

(4) Capacity

X1,000 Btu/h (2 digits)

(5-1) Product Notation (Indoor Unit)

1	1 Way Cassette
N	4 Way Cassette (600x600) Wind-Free 4 Way Cassette (600x600)
4	4 Way Cassette, 360 Cassette Wind-Free 4 Way Cassette
L	LSP Duct
M	MSP Duct
C	Ceiling
J	Console
A	A3050 (Wall Mounted)

(5-2) Product Notation (Outdoor Unit)

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

(6) Feature

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

(7) Version

J	2015
K	2016
M	2017
N	2018

Nomenclature

Indoor Unit

Model Name

AC

030

M

N

T

D

C

H

/

AA

(1)

(2)

(3)

(4)

(5)

(6)

(7)

(8)

Buyer

(1) Classification

AC	CAC
----	-----

(2) Capacity

kBtu/h (3digits)

(3) Version

H	2014
J	2015
K	2016
M	2017

(4) Product Type

N	Indoor Unit
X	Outdoor Unit

(5) Product Notation

1	1 Way Cassette
N	4 Way Cassette (600x600)
4	4 Way Cassette, 360 Cassette
L	LSP Duct
M	MSP Duct
C	Ceiling
J	Console
A	A3050 (Wall Mounted)
T	RAC

(6) Feature

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

(7) Rating Voltage

C	1Ø, 208~230V, 60Hz
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(8) Mode

H	Heat Pump
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Nomenclature

Outdoor Unit

Model Name

AC	030	M	X	S	C	C	C	/	AA
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

(1) Classification

AC	CAC
----	-----

(2) Capacity

kBtu/h (3digits)

(3) Version

H	2014
J	2015
K	2016
M	2017

(4) Product Type

N	Indoor Unit
X	Outdoor Unit

(5) Product Notation

A	Inv+Side+General Temp
S	Inv+Side+Low Temp.

(6) Feature

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

(7) Rating Voltage

C	1Ø, 208~230V, 60Hz
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(8) Mode

C	Cooling Only
H	Heat Pump

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1. Line-up

1-1. Indoor Units

Model	Capacity (kBtu/h)			
	18	24	30	36
RAC				

1-2. Outdoor units

Model	Capacity (kBtu/h)			
	18	24	30	36
1Φ				

2. Specification

Model Name				Indoor Unit		AC018MNADCH/AA		AC024MNADCH/AA		AC030MNTDCH/AA		AC036MNTDCH/AA			
				Outdoor Unit		AC018MXSCCC/AA		AC024MXSCCC/AA		AC030MXSCCC/AA		AC036MXSCCC/AA			
US Code				Indoor Unit		CNH18ADM		CNH24ADM		CNH30TDM		CNH36TDM			
				Outdoor Unit		CXC18SCM		CXC24SCM		CXC30SCM		CXC36SCM			
System	Mode					-	Cooling Only		Cooling Only		Cooling Only		Cooling Only		
	Performance		Capacity (Min/Std/Max)		Cooling	kW	1.17/5.28/5.86		2.05/7.03/7.91		2.64/8.79/10.84		2.93/10.55/11.14		
						Btu/h	4,000/18,000/20,000		7,000/24,000/27,000		9,000/30,000/37,000		10,000/36,000/38,000		
						USRT	0.33/1.34/1.49		0.58/1.79/2.25		0.75/2.50/3.08		0.83/3.00/3.16		
			Heating		kW	-		-		-		-			
					Btu/h	-		-		-		-			
					US RT	-		-		-		-			
	Power		Power Input (Min/Std/Max)		Cooling	kW	0.23/1.99/2.42		0.32/2.27/3.5		0.55/2.94/4.8		0.6/4.44/4.8		
					Heating		-		-		-		-		
			Current Input (Min/Std/Max)		Cooling	A	1.5/8.5/10.5		1.8/10.0/15.0		2.7/13.1/21.0		3.0/19.5/21.0		
					Heating		-		-		-		-		
			Current		MCA	A	13		16		24		24		
					MOP		15		20		30		30		
	Energy Efficiency		EER		Cooling (US)	(Btu/h)/W	9.05		10.57		10.20		8.11		
					Cooling		-		-		-		-		
			COP		Heating	W/W	-		-		-		-		
					SEER		18.8		18.3		19.7		18		
			HSPF		-		-		-		-		-		
					Pdesignh		kW		-		-		-		-
	Piping Connections		Liquid Pipe			Type	Flare connection		Flare connection		Flare connection		Flare connection		
						Φ, mm (inch)	6.35 (1/4")		6.35 (1/4")		9.52 (3/8")		9.52 (3/8")		
			Gas Pipe			Type	Flare connection		Flare connection		Flare connection		Flare connection		
						Φ, mm (inch)	12.70 (1/2")		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		Both liquid and gas pipes		
			Piping length (ODU-IDU)		Standard	m (ft)	7.5 (24.6)		7.5 (24.6)		7.5 (24.6)		7.5 (24.6)		
					Max.	m (ft)	30 (98.4)		50 (164.0)		50 (164.0)		50 (164.0)		
					Elevation	m (ft)	20 (65.6)		30 (98.4)		30 (98.4)		30 (98.4)		
	Chargeless	m (ft)			7.5 (24.6)		7.5 (24.6)		7.5 (24.6)		7.5 (24.6)				
	Wiring Connections		Communication		Min.	mm²	0.75		0.75		0.75		0.75		
					Remark	-	F1, F2		F1, F2		F1, F2		F1, F2		
	Refrigerant		Type			-	R410A		R410A		R410A		R410A		
			Control Method			-	EEV		EEV		EEV		EEV		
			Factory Charging			kg	1.30		2.00		2.40		2.40		
						lbs	2.87		4.41		5.29		5.29		
	Indoor Unit	Power Supply					Φ, #, V, Hz	1,2,208-230,60		1,2,208-230,60		1,2,208-230,60		1,2,208-230,60	
		Heat Exchanger		Type		-	Fin & Tube		Fin & Tube		Fin & Tube		Fin & Tube		
Material				Fin	Al		Al		Al		Al				
				Tube	Cu		Cu		Cu		Cu				
Fin Treatment				-	Silica		Silica		Silica		Silica				
Fan		Type			-	Crossflow Fan		Crossflow Fan		Crossflow Fan		Crossflow Fan			
		Quantity			EA	1		1		1		1			
		Air Flow Rate		H/M/L	CMM	11.5/9.5/7.5		15.6/13.5/11.6		22.0/20.5/19.0		23.5/21.3/19.8			
					CFM	406/336/265		551/477/410		777/724/671		830/752/699			
Fan Motor		Type			-	BLDC Motor		BLDC Motor		BLDC Motor		BLDC Motor			
		Output			W x n	27 x 1		27 x 1		58 x 1		58 x 1			
		Drain			Drain Pipe			Φ, mm		ID 18 HOSE		ID 18 HOSE			
Sound		Sound Pressure	High/Mid/Low/(Silent)		dB(A)	42/37/32/29		43/39/35/32		49/47/45/37		51/48/46/38			
		Sound Power	Cooling Std High		dB(A)	-		-		-		-			
External Dimension		Net Weight			kg (lbs)	10.8 (23.81)		14.6 (32.19)		18.4 (40.57)		18.4 (40.57)			
		Shipping Weight			kg (lbs)	12.4 (27.34)		16.8 (37.04)		21.8 (48.06)		21.8 (48.06)			
		Net Dimensions (WxHxD)			mm	896 x 261 x 261		1065 x 301 X 294		1280 x 345 x 253		1280 x 345 x 253			
					inch	35.3 x 10.3 x 10.3		41.9 x 11.9 x 11.6		50.4 x 13.6 x 10.0		50.4 x 13.6 x 10.0			
		Shipping Dimensions (WxHxD)			mm	956 x 317 x 335		1123 x 354 x 384		1352 x 326 x 420		1352 x 326 x 420			
					inch	37.6 x 12.5 x 13.2		44.2 x 13.9 x 15.1		53.2 x 12.8 x 16.5		53.2 x 12.8 x 16.5			
Casing		Material			-	HIPS		HIPS		HIPS		HIPS			
Control System		Infrared remote control			-	MR-EH00		MR-EH00		MR-EH00		MR-EH00			
		Wired remote control			-	MWR-WE10N MWR-WE11N		MWR-WE10N MWR-WE11N		MWR-WE10N MWR-WE11N		MWR-WE10N MWR-WE11N			
Additional Accessories		Drain pump		External Model	-	-		-		-		-			
				Internal Model	-	-		-		-		-			
				Max. Lifting Height / Displacement	mm/liter/h	-		-		-		-			
		Air Filter		-			-	-		-		-		-	

2. Specification

Model Name			Indoor Unit		AC018MNADCH/AA	AC024MNADCH/AA	AC030MNTDCH/AA	AC036MNTDCH/AA	
			Outdoor Unit		AC018MXSCCC/AA	AC024MXSCCC/AA	AC030MXSCCC/AA	AC036MXSCCC/AA	
US Code			Indoor Unit		CNH18ADM	CNH24ADM	CNH30TDM	CNH36TDM	
			Outdoor Unit		CXC18SCM	CXC24SCM	CXC30SCM	CXC36SCM	
Outdoor Unit	Power Supply				Φ, #, V, Hz	1,2,208-230,60	1,2,208-230,60	1,2,208-230,60	1,2,208-230,60
	Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube	Fin & Tube	
		Material	Fin	-	Al	Al	Al	Al	
			Tube	-	Cu	Cu	Cu	Cu	
		Fin Treatment		-	Anti-Corrosion	Anti-Corrosion	Anti-Corrosion	Anti-Corrosion	
	Compressor	Model Name		-	Twin BLDC	Twin BLDC	Twin BLDC	Twin BLDC	
		Type		-	UG9TK3150FE4	UG4T200FUA4	UG8T300FUBJU	UG8T300FUBJU	
		Output		kW	1.42	1.79	2.82	2.82	
		Oil	Type	-	POE	POE	PVE	PVE	
			Initial Charge	cc	500	650	1200	1200	
	Fan	Type		-	Propeller	Propeller	Propeller	Propeller	
		Discharge direction		-	Front	Front	Front	Front	
		Quantity		EA	1	1	1	1	
		Air Flow Rate	CMM	40	51	78	78		
			CFM	1,412	1,801	2,754	2,754		
			l/s	667	850	1,300	1,300		
	Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor	BLDC Motor	
		Output		W x n	125 x 1	125 x 1	125 x 1	125 x 1	
	Sound	Sound Pressure	Cooling	dB(A)	48	50	52	54	
		Sound Power		dB(A)	-	-	-	-	
	External Dimension	Net Weight		kg (lbs)	42.8 (94.36)	52.0 (114.64)	72.4 (159.61)	72.4 (159.61)	
		Shipping Weight		kg (lbs)	45.8 (100.97)	55.3 (121.92)	76.4 (168.43)	76.4 (168.43)	
		Net Dimensions (WxHxD)		mm	880 x 638 x 310	880 x 798 x 310	940 x 998 x 330	940 x 998 x 330	
				inch	34.6 x 25.1 x 12.2	34.6 x 31.4 x 12.2	37.0 x 39.3 x 13.0	37.0 x 39.3 x 13.0	
		Shipping Dimensions (WxHxD)		mm	1023 x 730 x 413	1023 x 911 x 413	995 x 1096 x 426	995 x 1096 x 426	
				inch	40.3 x 28.7 x 16.3	40.3 x 35.9 x 16.3	39.2 x 43.1 x 16.8	39.2 x 43.1 x 16.8	
	Casing	Material	Body	-	EGL Steel Plate	EGL Steel Plate	EGL Steel Plate	EGL Steel Plate	
	Operating Temp. Range	Cooling	Standard Range	°C (°F)	-5(23)~46(115)	-5(23)~46(115)	-5(23)~46(115)	-5(23)~46(115)	
			Range with wind baffle	°C (°F)	-40(-40)~46(115)	-40(-40)~46(115)	-40(-40)~46(115)	-40(-40)~46(115)	

NOTE

- Specification may be subject to change without prior notice.
- Capacities are based on (Equivalent refrigerant piping 7.5m(24.6ft), Level differences 0m(0ft))
 - 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
 - Select wire size based on the value of MCA
 - 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
 - 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
 - These products contain R410A which is fluorinated greenhouse gas.
 - For more information about Control Systems, please refer to 14. Accessory section.

3. Summary Table

Performance characteristics

Indoor Unit

Model Code	Net Weight (lbs)	Capacity			Fan Speed	Airflow (CFM)	Sound Pressure Level (dBA)
			Cooling (Btu/h)	Heating (Btu/h)			
CNH18ADM (AC018MNADCH/AA)	23.81	Max.	20,000	-	High	406	42
		Std.	18,000	-	Mid.	336	37
		Min.	4,000	-	Low	265	32
CNH24ADM (AC024MNADCH/AA)	32.19	Max.	27,000	-	High	551	43
		Std.	24,000	-	Mid.	477	39
		Min.	7,000	-	Low	410	35
CNH30TDM (AC030MNTDCH/AA)	40.57	Max.	37,000	-	High	777	49
		Std.	30,000	-	Mid.	724	47
		Min.	9,000	-	Low	671	45
CNH36TDM (AC036MNTDCH/AA)	40.57	Max.	38,000	-	High	830	51
		Std.	36,000	-	Mid.	752	48
		Min.	10,000	-	Low	699	46

Outdoor Unit

Capacity (kBtu/h)	Model Code	Net Size (WxHxD, inch)	Net Weight (lbs)	Airflow (CFM)	Sound Pressure Level (dBA)	
					Cooling	Heating
18	CXC18SCM (AC018MXSCCC/AA)	34.6 x 25.1 x 12.2	94.36	1,412	48	-
24	CXC24SCM (AC024MXSCCC/AA)	34.6 x 31.4 x 12.2	114.64	1,801	50	-
30	CXC30SCM (AC030MXSCCC/AA)	37.0 x 39.3 x 13.0	159.61	2,754	52	-
36	CXC36SCM (AC036MXSCCC/AA)	37.0 x 39.3 x 13.0	159.61	2,754	54	-

NOTE

- Sound data is based on cooling operation.

3. Summary Table

Electrical Characteristics

Model Code		Outdoor Unit				Input Current(Amperes)					Power Supply	
Indoor Unit	Outdoor Unit	Rated	Voltage range			RLA(A)	Outdoor Unit		Indoor Unit	Total	MCA (A)	MOP (A)
		Hz	Volts	Min.	Max.		Fan1(A)	Fan2(A)				
CNH18ADM (AC018MNADCH/AA)	CXC18SCM (AC018MXSCCC/AA)	60	208 to 230	187	253	9	0.9	-	0.7	13	13	15
CNH24ADM (AC024MNADCH/AA)	CXC24SCM (AC024MXSCCC/AA)	60	208 to 230	187	253	10.5	0.9	-	0.7	16	16	20
CNH30TDM (AC030MNTDCH/AA)	CXC30SCM (AC030MXSCCC/AA)	60	208 to 230	187	253	16.5	1.51	-	0.9	24	24	30
CNH36TDM (AC036MNTDCH/AA)	CXC36SCM (AC036MXSCCC/AA)	60	208 to 230	187	253	16.5	1.51	-	0.9	24	24	30

NOTE

- RLA : Rated Load Ampere
- MCA : Minimum Circuit Ampere
- MOP : Maximum Overcurrent Protective Device (A)
- Select wire size based on the value of MCA

4. Capacity Table

Cooling

(1) CNH18ADM (AC018MNADCH/AA) + CXC18SCM (AC018MXSCCC/AA)

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

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB / WB)																				
	68 / 57			72 / 61			77 / 64			80 / 67			82 / 70			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
-40	16.0	11.6	1.36	16.9	11.9	1.39	17.6	12.3	1.42	18.1	12.7	1.45	18.5	12.6	1.46	19.4	12.4	1.48	20.4	12.2	1.51
-4	16.8	11.9	1.40	17.7	12.2	1.43	18.4	12.6	1.46	19.0	13.0	1.49	19.4	12.9	1.50	20.3	12.7	1.52	21.4	12.5	1.55
70	18.0	12.9	1.42	18.9	13.3	1.45	19.7	13.7	1.48	20.3	14.1	1.51	20.7	14.0	1.53	21.7	13.8	1.54	22.8	13.5	1.57
95	15.9	11.4	1.87	16.8	11.8	1.91	17.5	12.1	1.95	18.0	12.5	1.99	18.4	12.4	2.01	19.3	12.3	2.03	20.2	12.0	2.07
115	15.1	11.2	2.72	15.9	11.6	2.78	16.6	11.9	2.83	17.1	12.3	2.89	17.4	12.2	2.92	18.3	12.1	2.95	19.2	11.8	3.01

(2) CNH24ADM (AC024MNADCH/AA) + CXC24SCM (AC024MXSCCC/AA)

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

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB / WB)																				
	68 / 57			72 / 61			77 / 64			80 / 67			82 / 70			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
-40	21.4	15.4	1.42	22.5	15.9	1.45	23.5	16.4	1.48	24.2	16.9	1.51	24.7	16.7	1.53	25.9	16.6	1.54	27.2	16.2	1.57
-4	23.1	15.8	1.47	24.3	16.3	1.50	25.3	16.8	1.53	26.1	17.3	1.56	26.6	17.1	1.58	28.0	17.0	1.59	29.4	16.6	1.62
70	23.3	15.9	1.55	24.5	16.4	1.58	25.5	16.9	1.62	26.3	17.4	1.65	26.8	17.2	1.67	28.2	17.1	1.68	29.6	16.7	1.72
95	21.2	15.2	2.14	22.3	15.6	2.18	23.3	16.1	2.22	24.0	16.6	2.27	24.5	16.4	2.29	25.7	16.3	2.32	27.0	15.9	2.36
115	19.5	14.0	2.76	20.5	14.4	2.81	21.3	14.8	2.87	22.0	15.3	2.93	22.4	15.1	2.96	23.6	15.0	2.99	24.7	14.7	3.05

(3) CNH30TDM (AC030MNTDCH/AA) + CXC30SCM (AC030MXSCCC/AA)

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

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB / WB)																				
	68 / 57			72 / 61			77 / 64			80 / 67			82 / 70			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
-40	27.6	19.8	3.28	29.1	20.4	3.34	30.3	21.0	3.41	31.2	21.7	3.48	31.8	21.4	3.51	33.4	21.2	3.55	35.1	20.8	3.62
-4	29.6	21.5	3.25	31.2	22.2	3.31	32.5	22.9	3.38	33.5	23.6	3.45	34.2	23.4	3.48	35.9	23.1	3.52	37.7	22.7	3.59
70	33.3	23.0	2.96	35.0	23.7	3.03	36.5	24.4	3.09	37.6	25.2	3.15	38.4	24.9	3.18	40.3	24.7	3.21	42.3	24.2	3.28
95	26.5	19.7	2.77	27.9	20.3	2.82	29.1	21.0	2.88	30.0	21.6	2.94	30.6	21.4	2.97	32.1	21.2	3.00	33.7	20.7	3.06
115	24.4	18.0	3.41	25.7	18.5	3.48	26.8	19.1	3.55	27.6	19.7	3.62	28.2	19.5	3.66	29.6	19.3	3.69	31.0	18.9	3.77

(4) CNH36TDM (AC036MNTDCH/AA) + CXC36SCM (AC036MXSCCC/AA)

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

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB / WB)																				
	68 / 57			72 / 61			77 / 64			80 / 67			82 / 70			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
-40	28.8	20.8	3.41	30.3	21.5	3.48	31.5	22.1	3.55	32.5	22.8	3.62	33.2	22.6	3.66	34.8	22.3	3.69	36.5	21.9	3.77
-4	31.7	23.5	3.38	33.3	24.2	3.45	34.7	24.9	3.52	35.8	25.7	3.59	36.5	25.4	3.63	38.3	25.2	3.66	40.3	24.7	3.74
70	35.1	24.1	3.12	37.0	24.8	3.18	38.5	25.6	3.24	39.7	26.4	3.31	40.5	26.1	3.34	42.5	25.9	3.38	44.6	25.4	3.44
95	31.8	22.5	4.18	33.5	23.2	4.26	34.9	24.0	4.35	36.0	24.7	4.44	36.7	24.5	4.48	38.6	24.2	4.53	40.5	23.7	4.62
115	25.6	18.9	3.50	26.9	19.5	3.57	28.0	20.1	3.65	28.9	20.7	3.72	29.5	20.5	3.76	31.0	20.3	3.79	32.5	19.9	3.87

NOTE

- Capacities are based on following conditions; Refrigerant pipe length : 7.5m (24.6ft) / Level difference : 0m (0ft).

5. Capacity Correction

Cooling

(1) CNH18ADM (AC018MNADCH/AA) + CXC18SCM (AC018MXSCCC/AA)



		Pipe Length (ft)					
		16.4	32.8	49.2	65.6	82	98.4
Level Difference (ft)	65.6	-	-	-	0.97	0.96	0.95
	49.2	-	-	0.98	0.97	0.96	0.95
	32.8	-	0.99	0.98	0.97	0.96	0.95
	16.4	1.00	0.99	0.98	0.97	0.96	0.95
	0	1.00	0.99	0.98	0.97	0.96	0.95
	-16.4	1.00	0.99	0.98	0.97	0.96	0.94
	-32.8	-	0.98	0.97	0.96	0.95	0.93
	-49.2	-	-	0.97	0.96	0.95	0.92
	-65.6	-	-	-	0.96	0.94	0.91

(2) CNH24ADM (AC024MNADCH/AA) + CXC24SCM (AC024MXSCCC/AA)

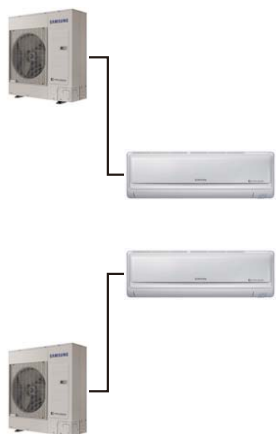


		Pipe Length (ft)									
		16.4	32.8	49.2	65.6	82.0	98.4	114.8	131.2	147.6	164.0
Level Difference (ft)	98.4	-	-	-	-	-	0.97	0.97	0.96	0.96	0.95
	82	-	-	-	-	0.98	0.97	0.97	0.96	0.96	0.95
	65.6	-	-	-	0.98	0.98	0.97	0.97	0.96	0.96	0.95
	49.2	-	-	0.99	0.98	0.98	0.97	0.97	0.96	0.96	0.95
	32.8	-	0.99	0.99	0.98	0.98	0.97	0.97	0.96	0.96	0.95
	16.4	1.00	0.99	0.99	0.98	0.98	0.97	0.97	0.96	0.96	0.95
	0	1.00	0.99	0.99	0.98	0.98	0.97	0.97	0.96	0.96	0.95
	-16.4	1.00	0.99	0.99	0.98	0.98	0.97	0.96	0.96	0.95	0.93
	-32.8	-	0.99	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.92
	-49.2	-	-	0.99	0.98	0.97	0.96	0.96	0.94	0.93	0.90
	-65.6	-	-	-	0.98	0.97	0.96	0.95	0.94	0.92	0.88
	-82	-	-	-	-	0.97	0.96	0.95	0.93	0.91	0.87
	-98.4	-	-	-	-	-	0.96	0.94	0.93	0.90	0.85

5. Capacity Correction

Cooling

(3) CNH30TDM (AC030MNTDCH/AA) + CXC30SCM (AC030MXSCCC/AA),
CNH36TDM (AC036MNTDCH/AA) + CXC36SCM (AC036MXSCCC/AA)



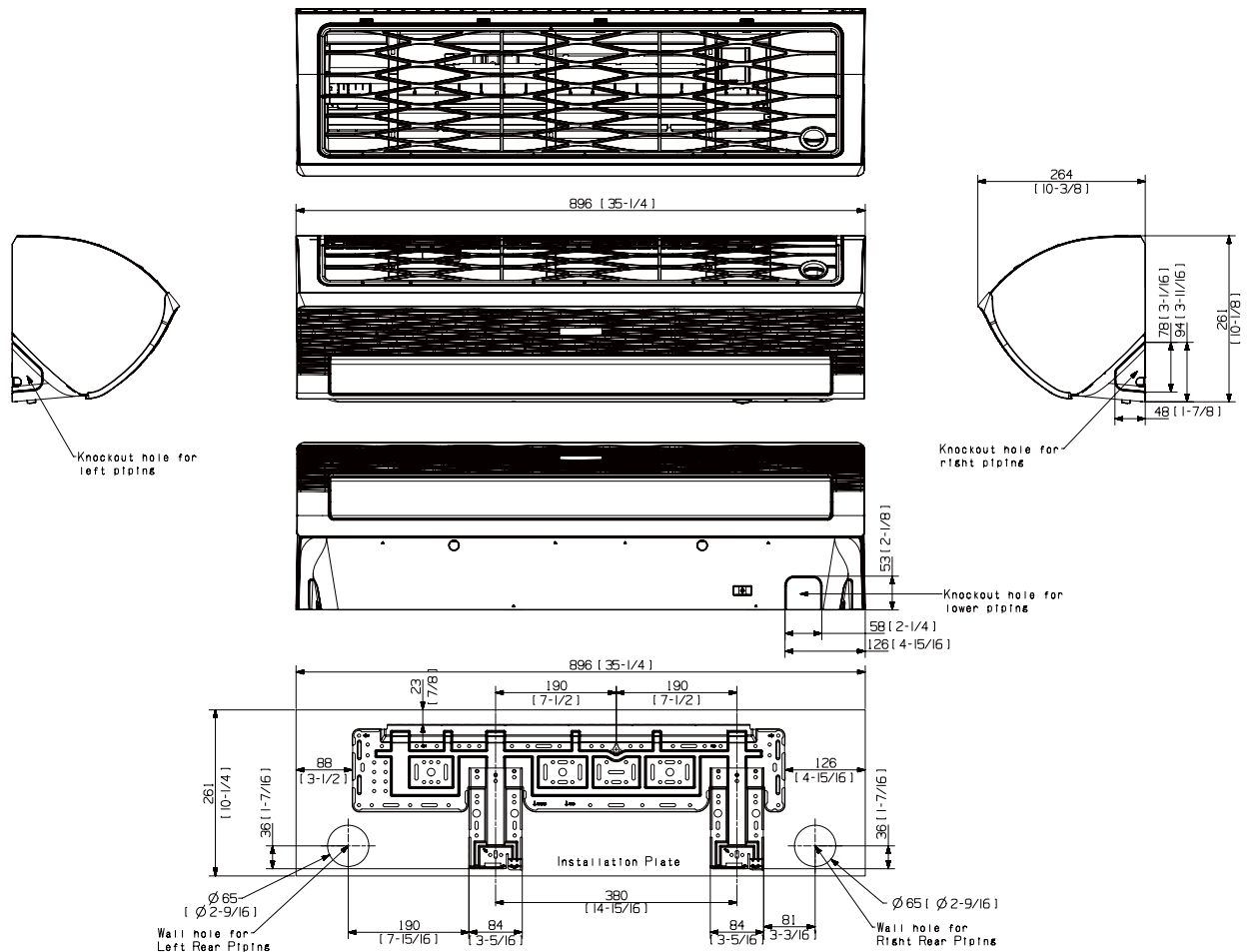
		Pipe Length (ft)									
		16.4	32.8	49.2	65.6	82.0	98.4	114.8	131.2	147.6	164.0
Level Difference (ft)	98.4	-	-	-	-	-	0.97	0.97	0.96	0.96	0.90
	82	-	-	-	-	0.98	0.97	0.97	0.96	0.96	0.90
	65.6	-	-	-	0.98	0.98	0.97	0.97	0.96	0.96	0.90
	49.2	-	-	0.99	0.98	0.98	0.97	0.97	0.96	0.96	0.90
	32.8	-	0.99	0.99	0.98	0.98	0.97	0.97	0.96	0.96	0.90
	16.4	1.00	0.99	0.99	0.98	0.98	0.97	0.97	0.96	0.96	0.90
	0	1.00	0.99	0.99	0.98	0.98	0.97	0.97	0.96	0.96	0.90
	-16.4	1.00	0.99	0.99	0.98	0.98	0.97	0.96	0.95	0.94	0.88
	-32.8	-	0.99	0.99	0.98	0.97	0.96	0.96	0.94	0.92	0.87
	-49.2	-	-	0.98	0.98	0.97	0.96	0.95	0.93	0.90	0.85
	-65.6	-	-	-	0.98	0.97	0.96	0.94	0.92	0.89	0.83
	-82	-	-	-	-	0.96	0.95	0.94	0.91	0.87	0.82
	-98.4	-	-	-	-	-	0.95	0.93	0.90	0.85	0.80

6. Dimensional Drawing

Indoor Unit

CNH18ADM (AC018MNADCH/AA)

Unit: mm (inch)



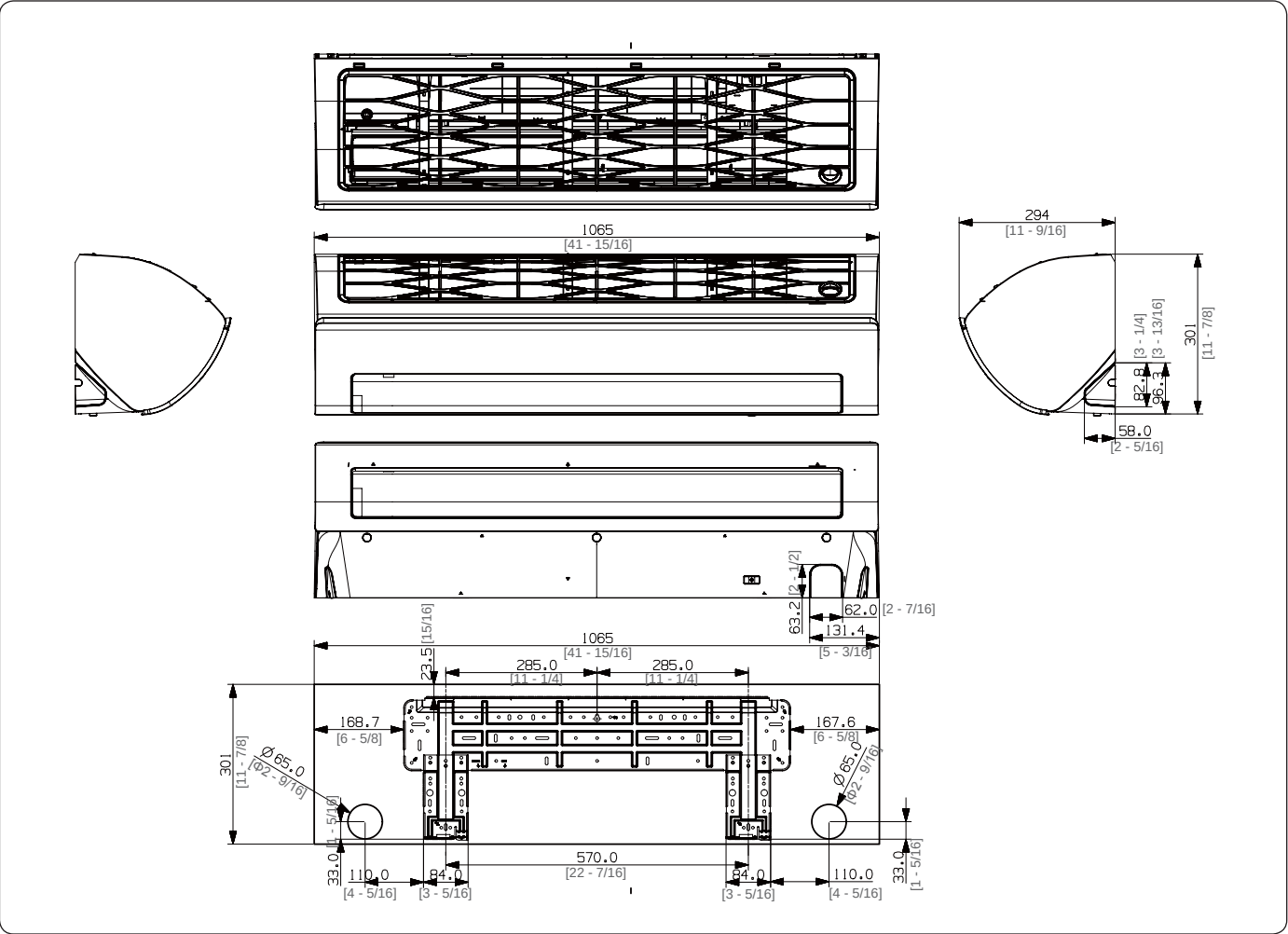
No.	Name	Description
1	Liquid pipe connection	6.35 (1/4")
2	Gas pipe connection	12.7 (1/2")
3	Drain pipe connection	ID 18 HOSE
4	Power supply & Communication wiring conduit	-

6. Dimensional Drawing

Indoor Unit

CNH24ADM (AC024MNADCH/AA)

Unit: mm (inch)



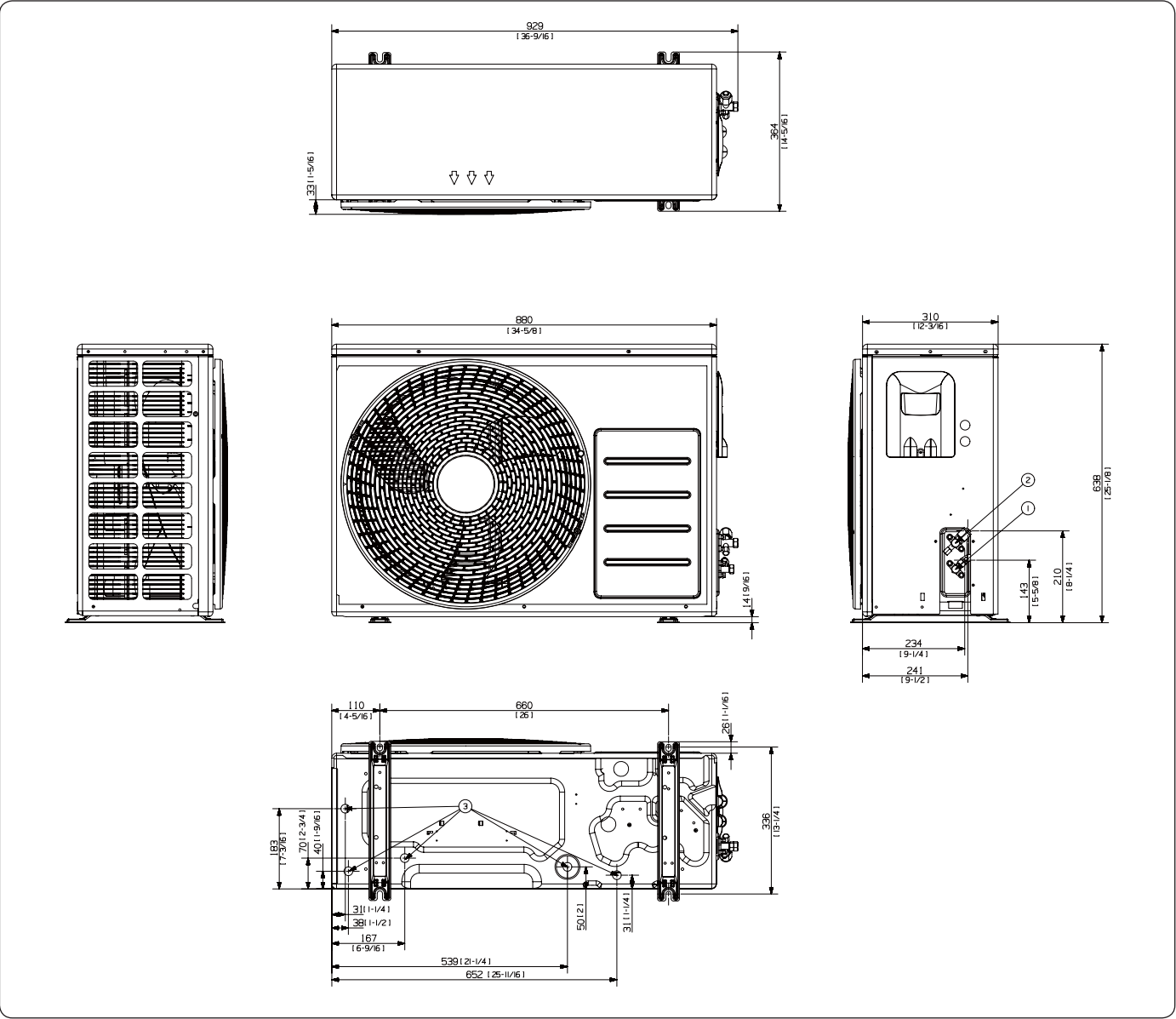
No.	Name	Description
1	Liquid pipe connection	6.35 (1/4")
2	Gas pipe connection	15.88 (5/8")
3	Drain pipe connection	ID 18 HOSE
4	Power supply & Communication wiring conduit	-

6. Dimensional Drawing

Outdoor unit

CXC18SCM (AC018MXSCC/AA)

Unit: mm (inch)



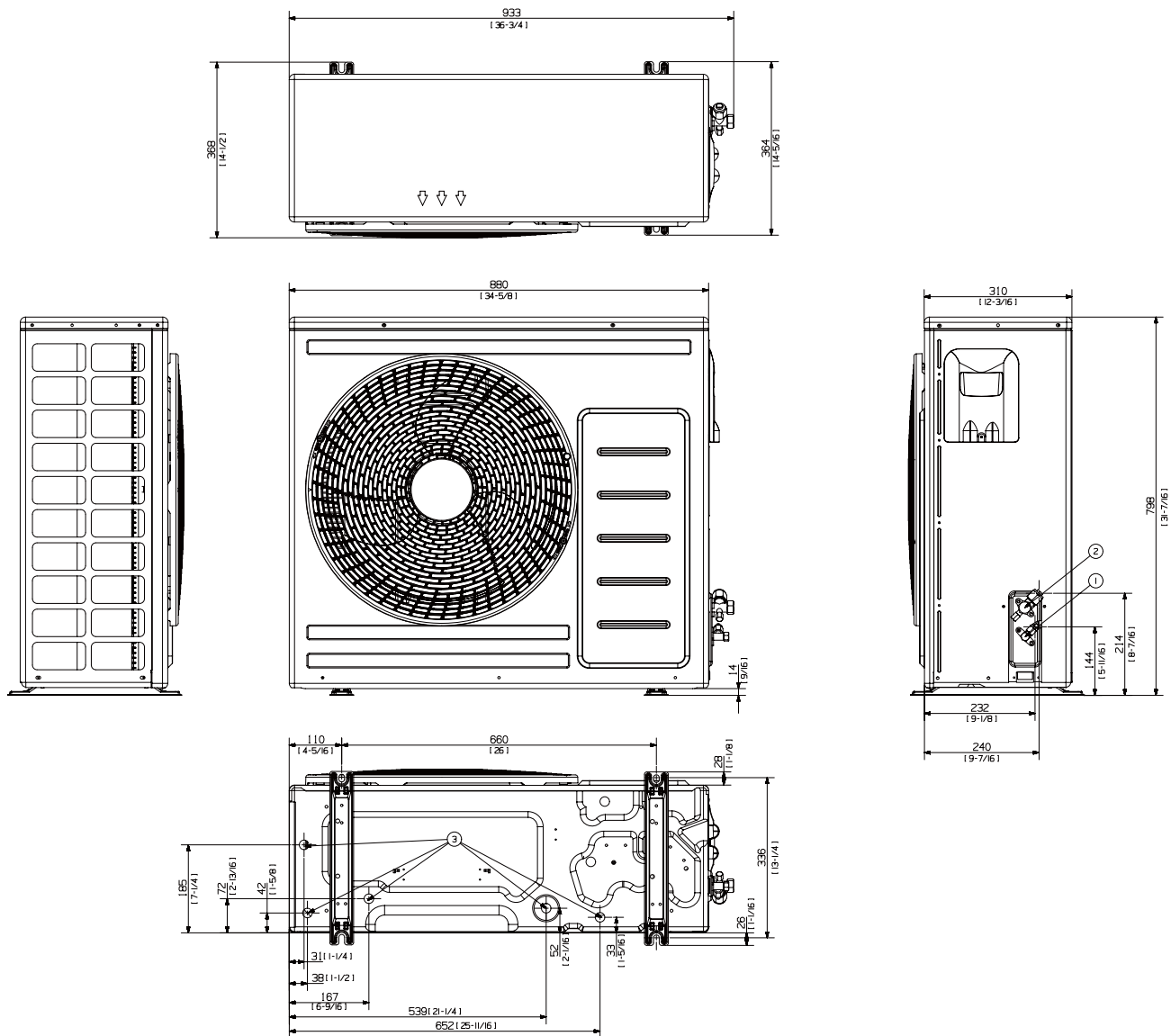
No.	Name	Description
1	Refrigerant liquid pipe	Φ 6.35(1/4)
2	Refrigerant gas pipe	Φ 12.7(1/2)
3	Drain Hole	-

6. Dimensional Drawing

Outdoor unit

CXC24SCM (AC024MXSCC/AA)

Unit: mm (inch)



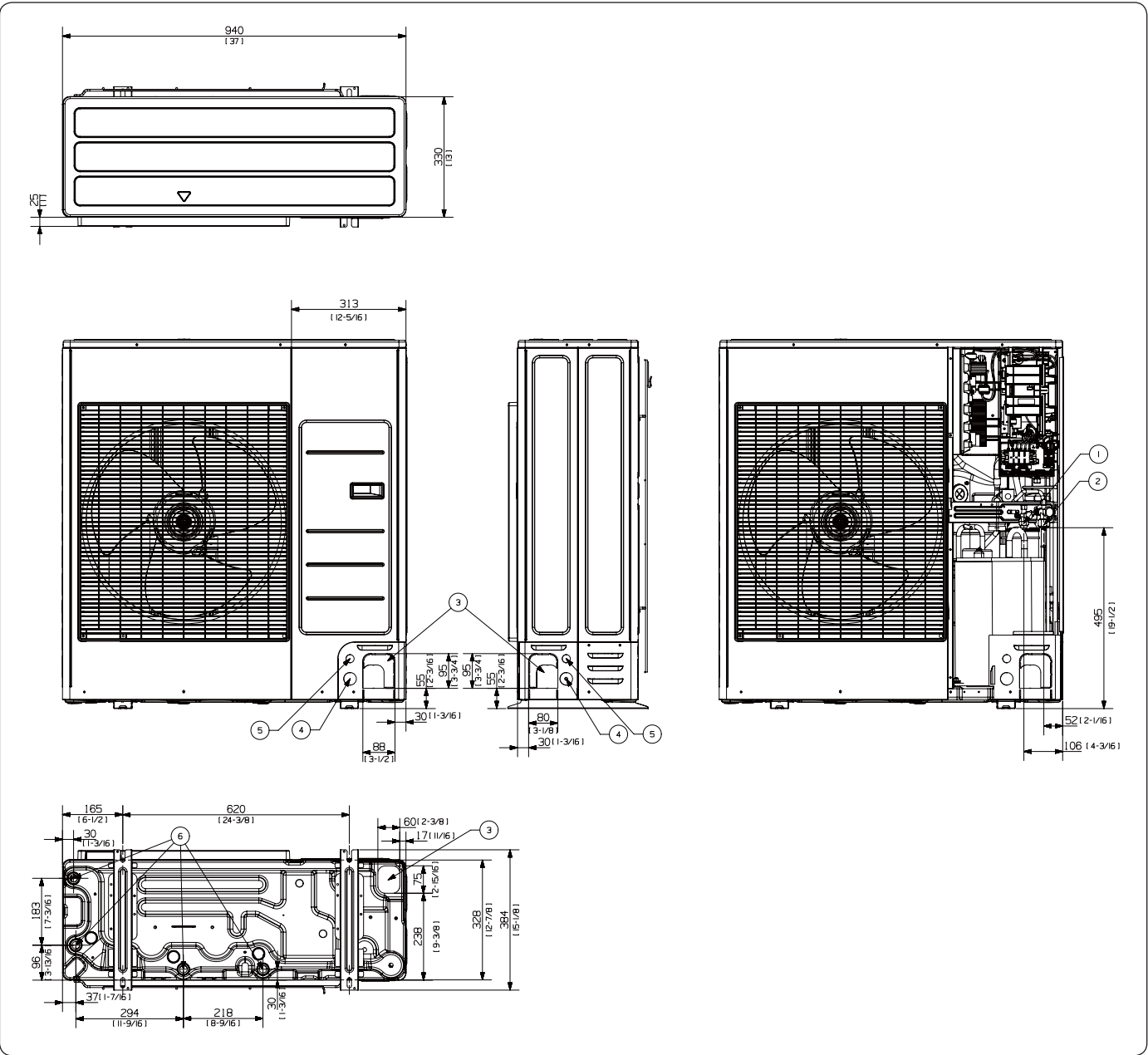
No.	Name	Description
1	Refrigerant liquid pipe	Φ 6.35(1/4)
2	Refrigerant gas pipe	Φ 15.88(5/8)
3	Drain Hole	-

6. Dimensional Drawing

Outdoor unit

CXC30SCM (AC030MXSCC/AA), CXC36SCM (AC036MXSCC/AA)

Unit: mm (inch)

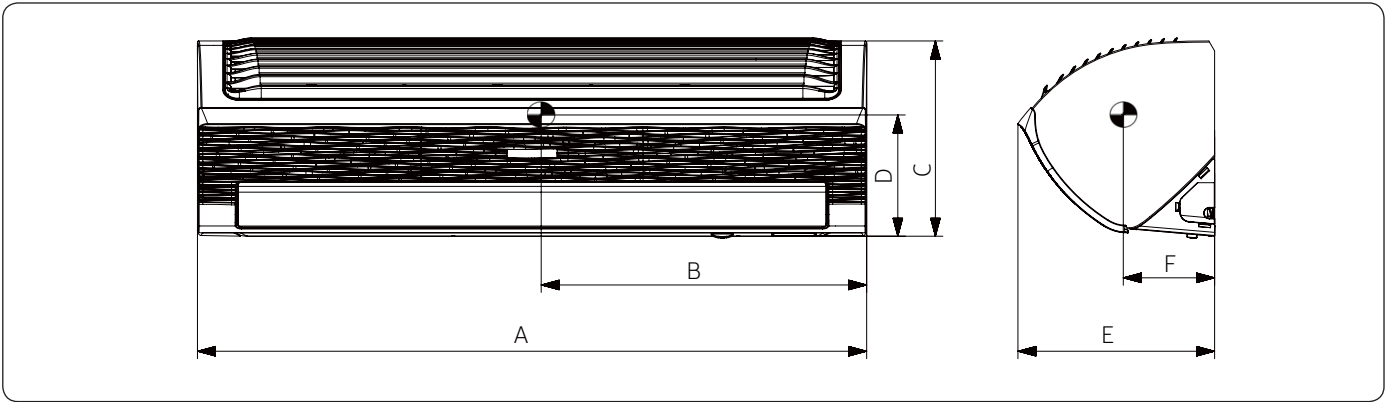


No.	Name	Description
1	Refrigerant gas pipe	Φ15.88(5/8)
2	Refrigerant liquid pipe	Φ9.52(3/8)
3	Drain Hole	Connect with the provided drain plug
4	Communication wiring conduit	Front / Side / Rear, Φ22 [7/8]

7. Center of Gravity

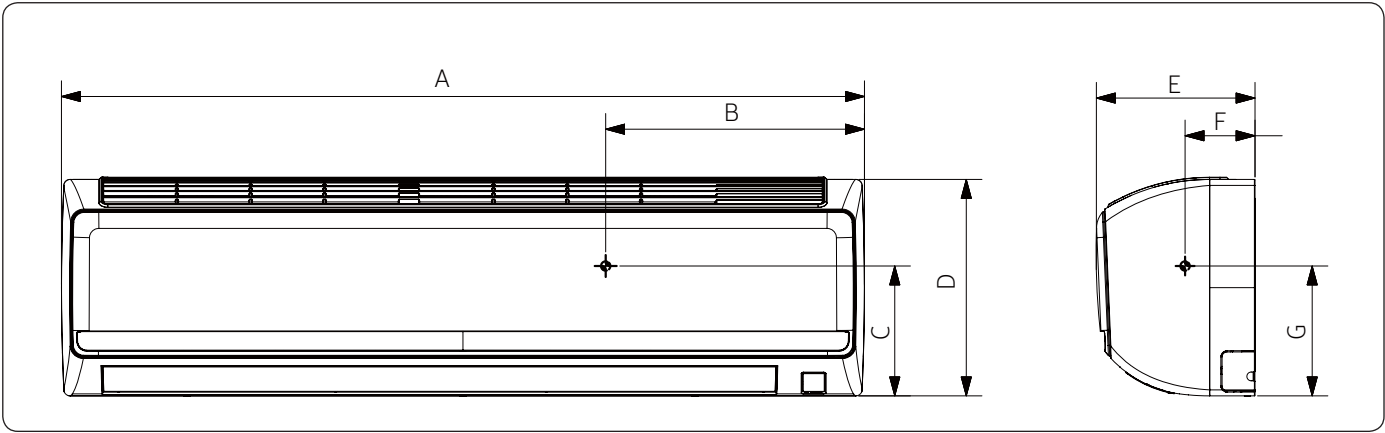
Indoor Unit

Unit: mm (inch)



	A	B	C	D	E	F
CNH18ADM (AC018MNADCH/AA)	896 [35-1/4]	400 [15-3/4]	261 [10-1/4]	130 [5-1/8]	264 [10-3/8]	105 [4-1/8]
CNH24ADM (AC024MNADCH/AA)	1065 [41-15/16]	470 [18-1/2]	307 [12-1/16]	130 [5-1/8]	297 [11-11/16]	105 [4-1/8]

Unit: mm (inch)

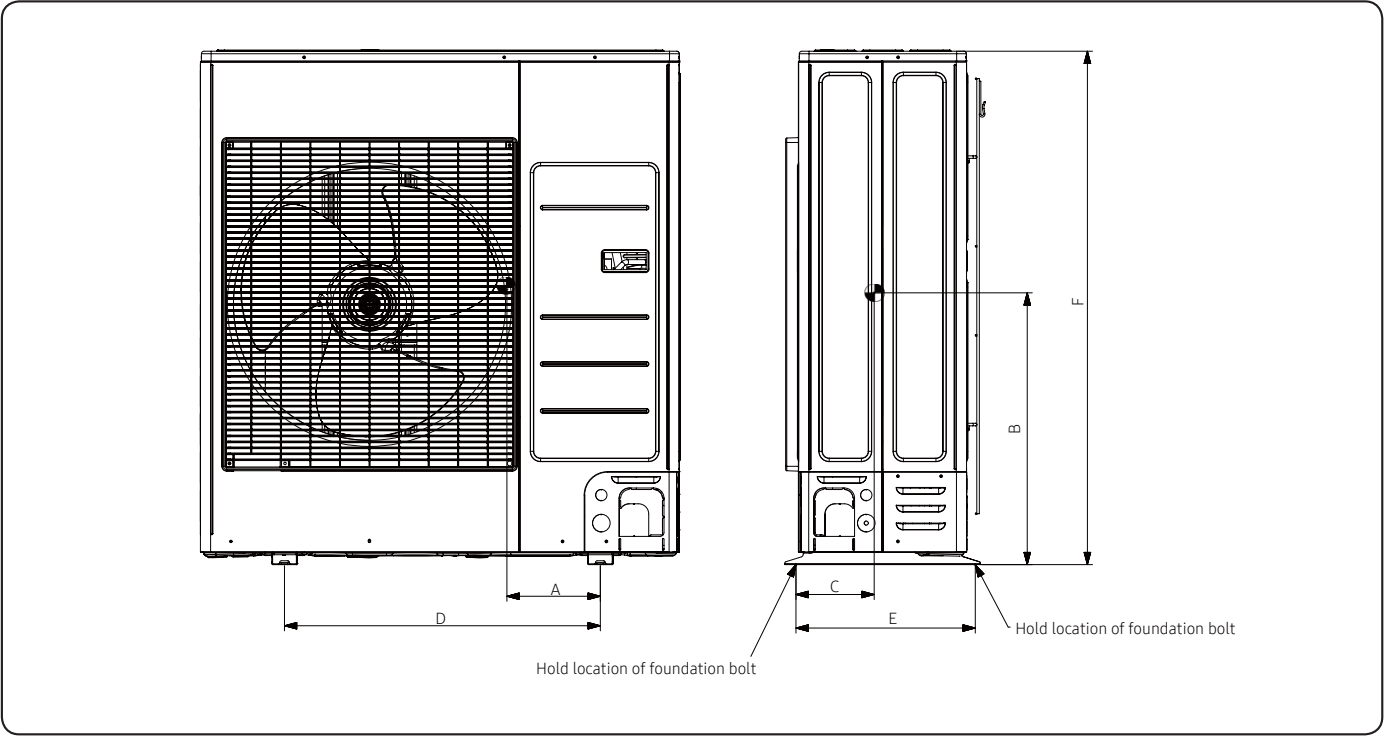


	A	B	C	D	E	F	F
CNH30TDM (AC030MNTDCH/AA) CNH36TDM (AC036MNTDCH/AA)	1280 (50-3/8)	412 (16-1/4)	207 (8-1/8)	345 (13-9/16)	253 (9-15/16)	111 (4-3/8)	207 (8-1/8)

7. Center of Gravity

Outdoor Unit

Unit: mm (inch)

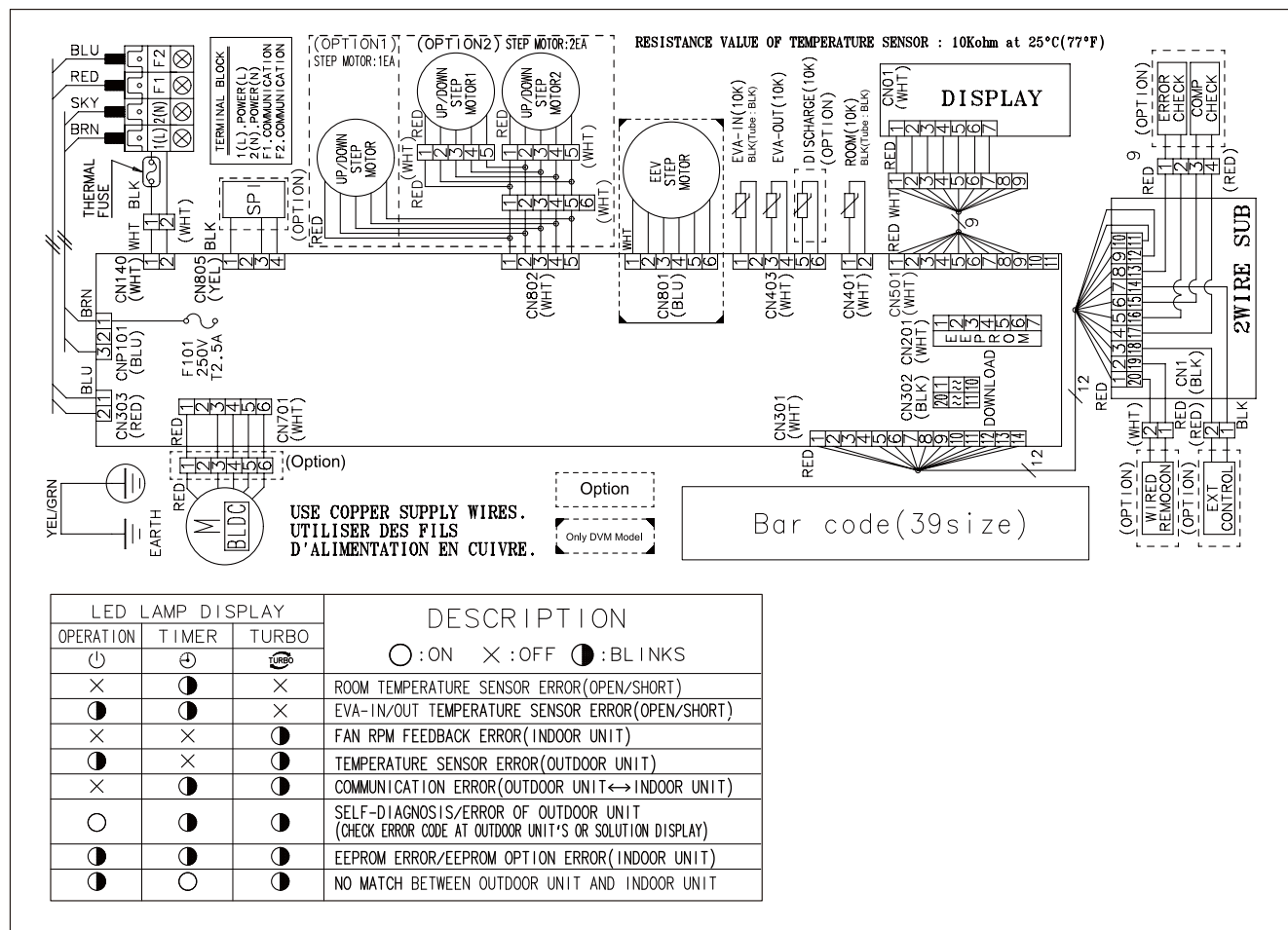


	A	B	C	D	E	F
CXC18SCM (AC018MXSCCC/AA)	220 [8-5/8]	290 [11-7/16]	150 [5-15/16]	660 [26]	336 [13-1/4]	638 [25-1/8]
CXC24SCM (AC024MXSCCC/AA)	250 [9-7/8]	350 [13-3/4]	150 [5-15/16]	660 [26]	336 [13-1/4]	798 [31-7/16]
CXC30SCM (AC030MXSCCC/AA) CXC36SCM (AC036MXSCCC/AA)	205 [8-1/4]	230 [20-7/8]	160 [6-6/15]	620 [24-3/8]	328 [12-7/8]	1210 [47-5/8]

8. Electrical Wiring Diagram

Indoor Unit

Unit: mm (inch)



MAIN PCB	Print circuit board(MAIN)	EEV	Electronics expansion valve	EVA-IN TEMP	Thermistor EVAPORATE
DISPLAY	Print circuit board(DISPLAY)	M-BLDC	BLDC Motor	EVA-OUT TEMP	Thermistor EVAPORATE
2WIRE SUB	Print circuit board(SUB COMM)	ROOM-TEMP	Thermistor AMBIENT		

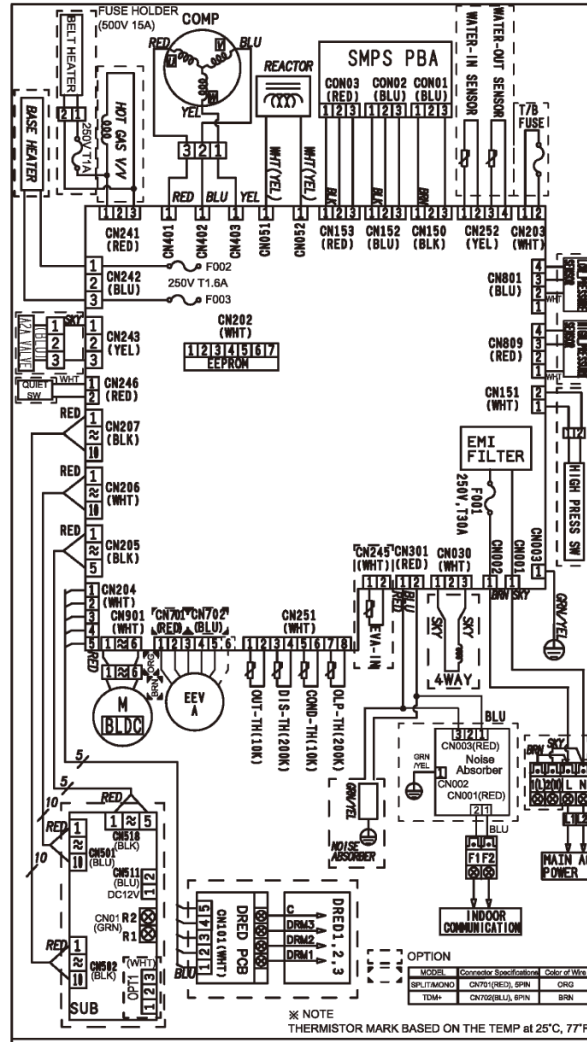
NOTE

- This wiring diagram applies only to the indoor 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, 1/2 : The wire quantity

8. Electrical Wiring Diagram

Outdoor Unit

CXC18SCM (AC018MXSCCC/AA), CXC24SCM (AC024MXSCCC/AA)



MAIN PCB	Printed circuit board(MAIN)	EEV	Electronics Expansion Valve	DIS-TH(200K)	Thermistor DISCHARGE
DRED PCB	Printed circuit board(DRED)	M-BLDC	BLDC Motor	OUT-TH(10K)	Thermistor AMBIENT
SMPS	Printed circuit board(SMPS)	OLT-TH(200K)	Thermistor OLP	COND-TH(10K)	Thermistor CONDENSOR
SUB	Printed circuit board(SUB)	BELT HEATER	Comp Belt Heater		

NOTE

- This wiring diagram applies only to the outdoor 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
-  : Protective earth(SCREW)

Outdoor Unit

Wiring diagram for the EHS Model unit, showing connections between the EMI PBA, INVERTER PBA, MAIN PBA, and BASE HEATER PBA.

EMI PBA: Includes terminals for power (F101 250V / T40A), fans (FAN1, FAN2), and communication lines (BLK, SKY, BRN, YEL, GRN). It also shows a QR code and a model number DB68-05586A-03.

INVERTER PBA: Includes terminals for fans (FAN1, FAN2), communication lines (BLK, SKY, BRN, YEL, GRN), and a high pressure switch.

MAIN PBA: Includes terminals for fans (FAN1, FAN2), communication lines (BLK, SKY, BRN, YEL, GRN), and a high pressure switch.

BASE HEATER PBA: Includes terminals for fans (FAN1, FAN2), communication lines (BLK, SKY, BRN, YEL, GRN), and a high pressure switch.

Wiring Details:

- Power:** F101 250V / T40A, CN1 (WHT), FUSE HOLDER(500V / 15A).
- Fans:** FAN1, FAN2, BLDC, M, BLDC, M.
- Sensors:** High Pressure Switch, Mid Pressure Sensor, Low Pressure Sensor.
- Communication:** BLK, SKY, BRN, YEL, GRN.
- Other:** REACTOR, REACTOR-A1, REACTOR-A2, REACTOR-B2, INVERTER DOWNLND, FAN2 OPTION, FANZ OPTION, FANZ1, FANZ2, FANZ3, FANZ4, FANZ5, FANZ6, FANZ7, FANZ8, FANZ9, FANZ10, FANZ11, FANZ12, FANZ13, FANZ14, FANZ15, FANZ16, FANZ17, FANZ18, FANZ19, FANZ20.

Legend:

- EMI PBA
- INVERTER PBA
- MAIN PBA
- BASE HEATER PBA

Notes:

- USE COPPER SUPPLY WIRES. UTILISER DES FILS D'ALIMENTATION EN CUIVRE.
- * EHS MODEL : NO USE
- × FAN2 OPTION
- If the unit is using one fan, don't connect fan motor on CN911 in the inverter PBA.

QR Code: DB68-05586A-03

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

 NOTE

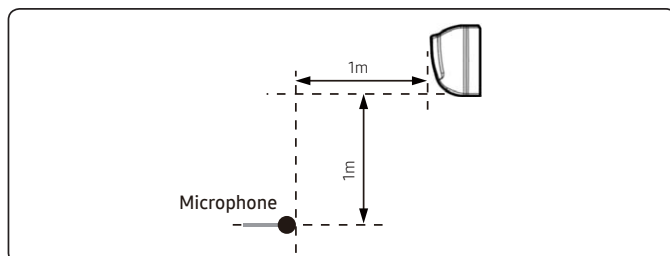
- This wiring diagram applies only to the outdoor unit.
- Symbols show as follow: blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue, grn: green
- For connection wiring indoor-outdoor transmission F1-F2
-  : Protective earth(SCREW)

9. Sound Data

Indoor Unit

Sound Pressure Level

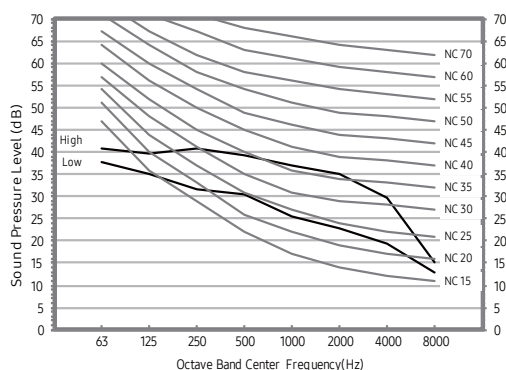
Unit: dB(A)



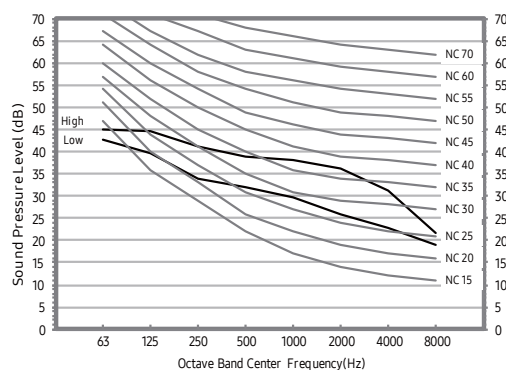
Model	High	Mid	Low
CNH18ADM (AC018MNADCH/AA)	42	37	32
CNH24ADM (AC024MNADCH/AA)	43	39	35
CNH30TDM (AC030MNTDCH/AA)	49	47	45
CNH36TDM (AC036MNTDCH/AA)	51	48	46

• NC Curve

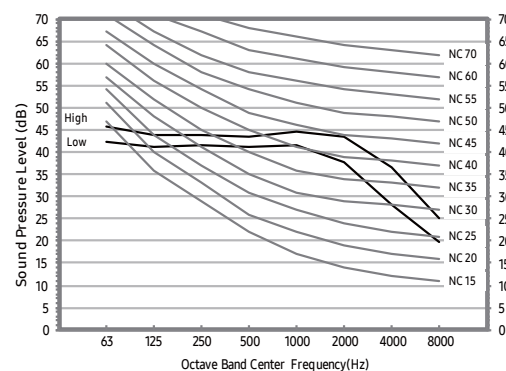
1) CNH18ADM (AC018MNADCH/AA)



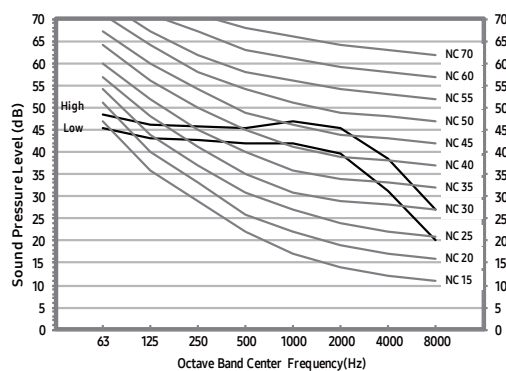
2) CNH24ADM (AC024MNADCH/AA)



3) CNH30TDM (AC030MNTDCH/AA)



4) CNH36TDM (AC036MNTDCH/AA)



NOTE

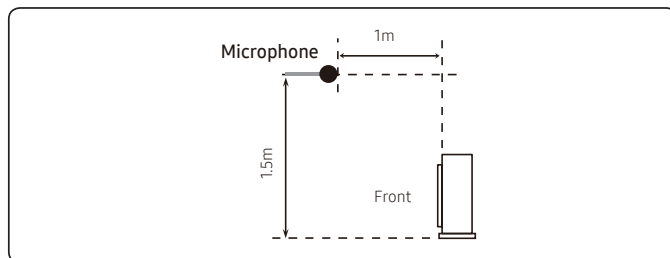
- Specifications may be subject to change without prior notice.
- Sound pressure Level
 - Sound pressure level is obtained in an anechoic room.
 - Sound pressure level is a relative value, depending on the distance and acoustic environment.
 - Sound pressure level may differ depending on operation condition.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

9. Sound Data

Outdoor Unit

Sound Pressure Level

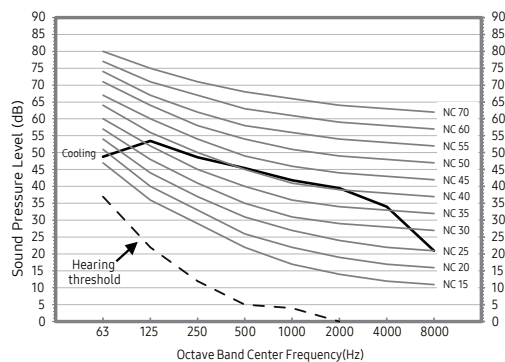
Unit: dB(A)



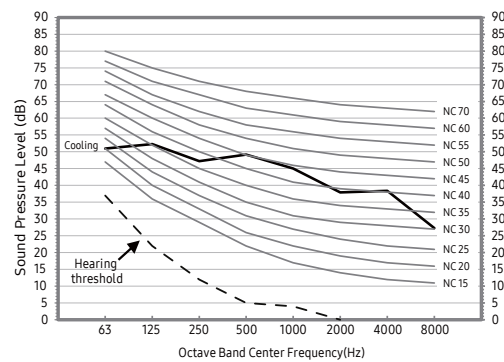
Model	Cooling
CXC18SCM (AC018MXSCCC/AA)	48
CXC24SCM (AC024MXSCCC/AA)	50
CXC30SCM (AC030MXSCCC/AA)	52
CXC36SCM (AC036MXSCCC/AA)	54

• NC Curve

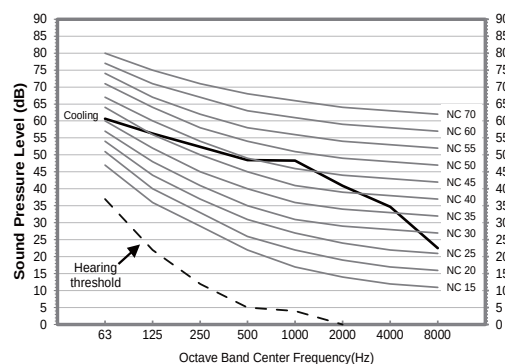
1) CXC18SCM (AC018MXSCCC/AA)



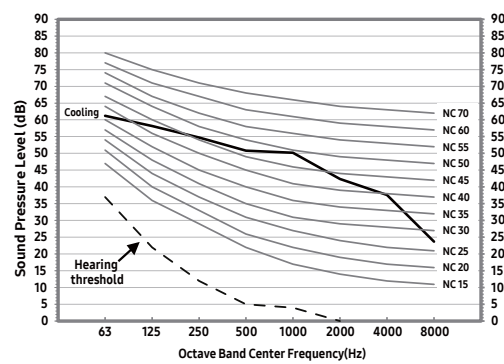
2) CXC24SCM (AC024MXSCCC/AA)



3) CXC30SCM (AC030MXSCCC/AA)



4) CXC36SCM (AC036MXSCCC/AA)



NOTE

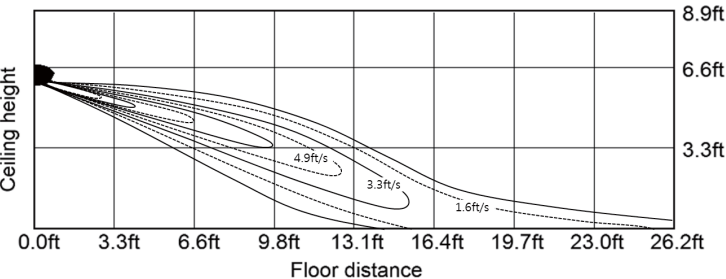
- Specifications may be subject to change without prior notice.
- Sound pressure Level
 - Sound pressure level is obtained in an anechoic room.
 - Sound pressure level is a relative value, depending on the distance and acoustic environment.
 - Sound pressure level may differ depending on operation condition.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

10. Temperature and air flow distribution

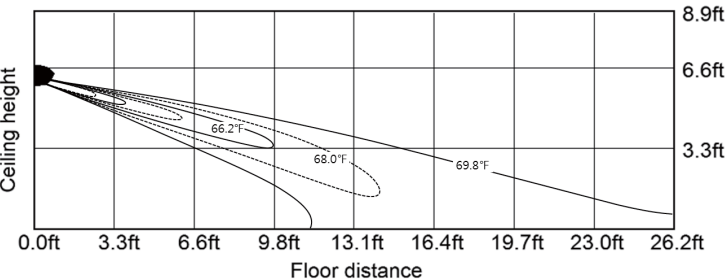
CNH18ADM (AC018MNADCH/AA)

1) Cooling air velocity distribution

Cooling Discharge angle : 16°

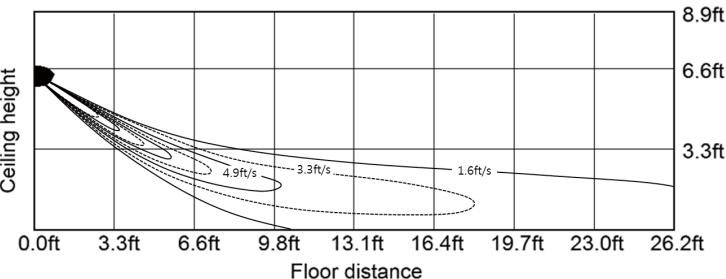


2) Cooling Temperature distribution

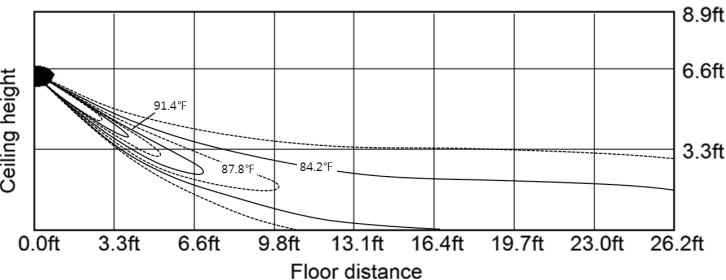


3) Heating air velocity distribution

Heating Discharge angle : 46°



4) Heating Temperature distribution

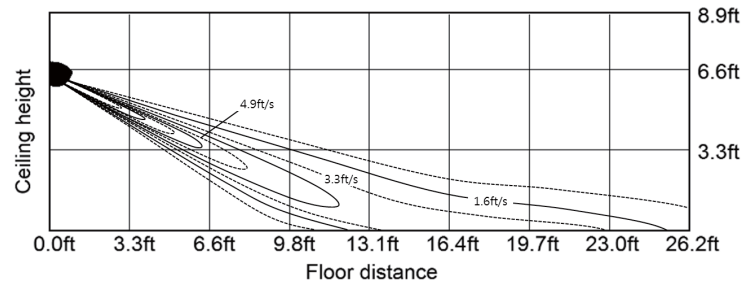


10. Temperature and air flow distribution

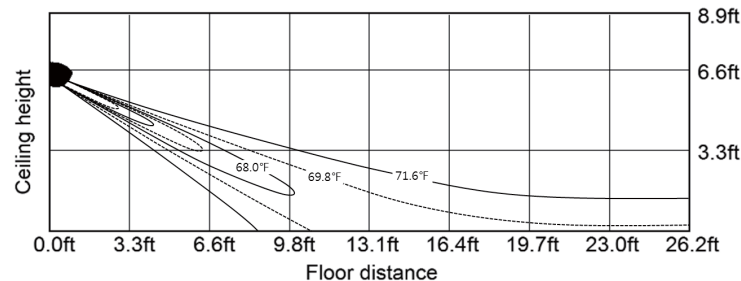
CNH24ADM (AC024MNADCH/AA)

1) Cooling air velocity distribution

Cooling Discharge angle : 28°

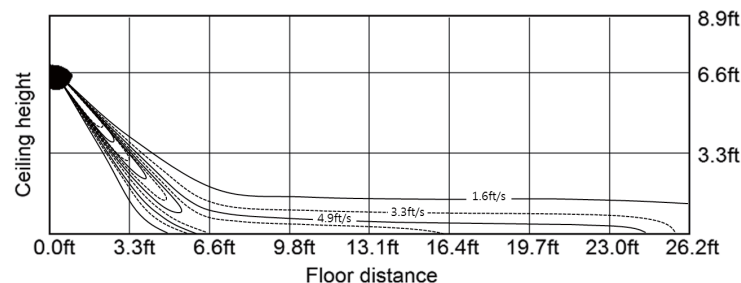


2) Cooling Temperature distribution

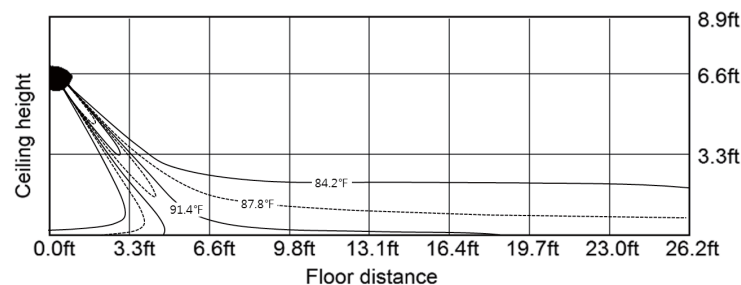


3) Heating air velocity distribution

Heating Discharge angle : 58°



4) Heating Temperature distribution

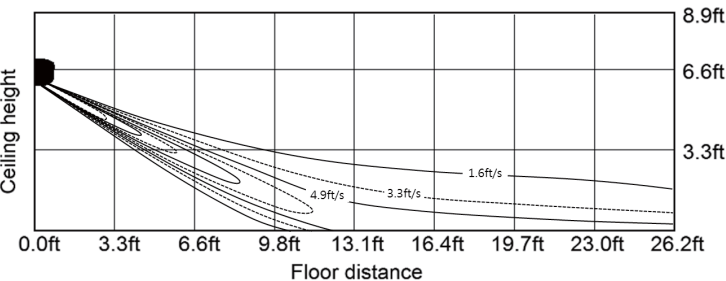


10. Temperature and air flow distribution

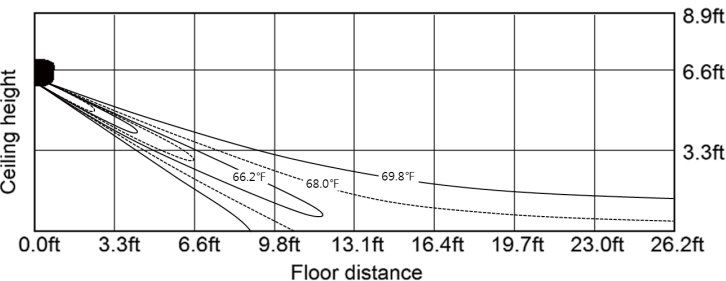
CNH30TDM (AC030MNTDCH/AA)

1) Cooling air velocity distribution

Cooling Discharge angle : 26°

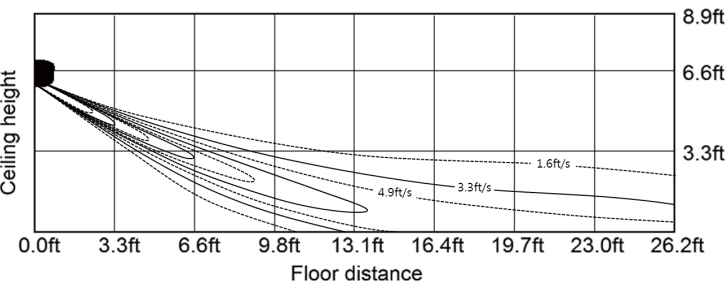


2) Cooling Temperature distribution

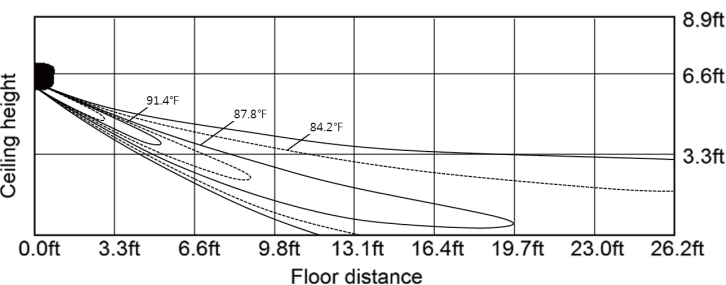


3) Heating air velocity distribution

Heating Discharge angle : 26°



4) Heating Temperature distribution

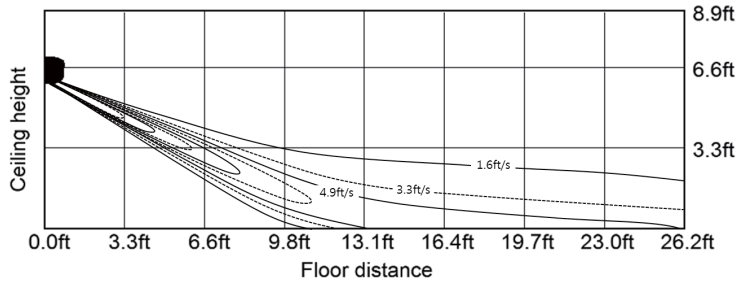


10. Temperature and air flow distribution

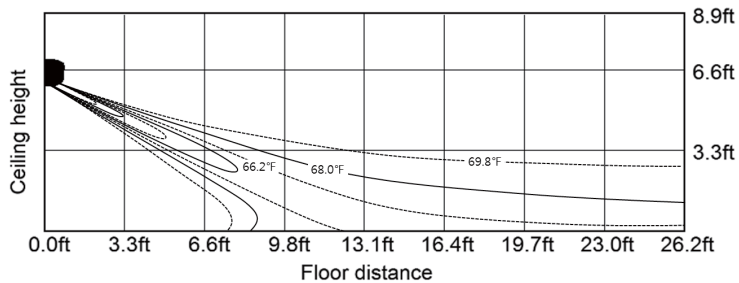
CNH36TDM (AC036MNTDCH/AA)

1) Cooling air velocity distribution

Cooling Discharge angle : 26°

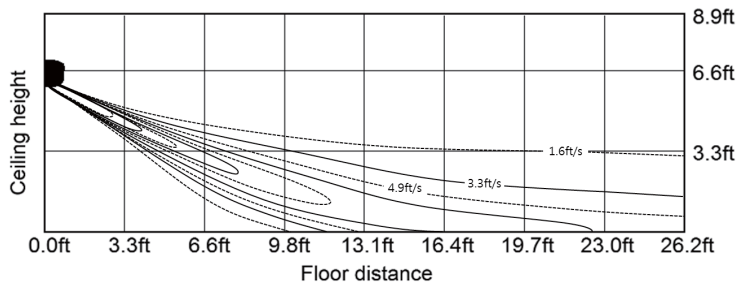


2) Cooling Temperature distribution

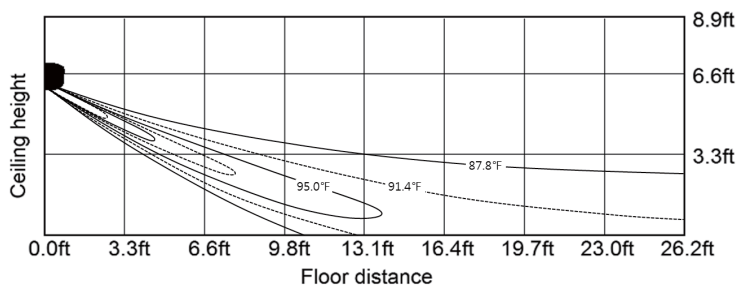


3) Heating air velocity distribution

Heating Discharge angle : 26°



4) Heating Temperature distribution



11. Operation Range

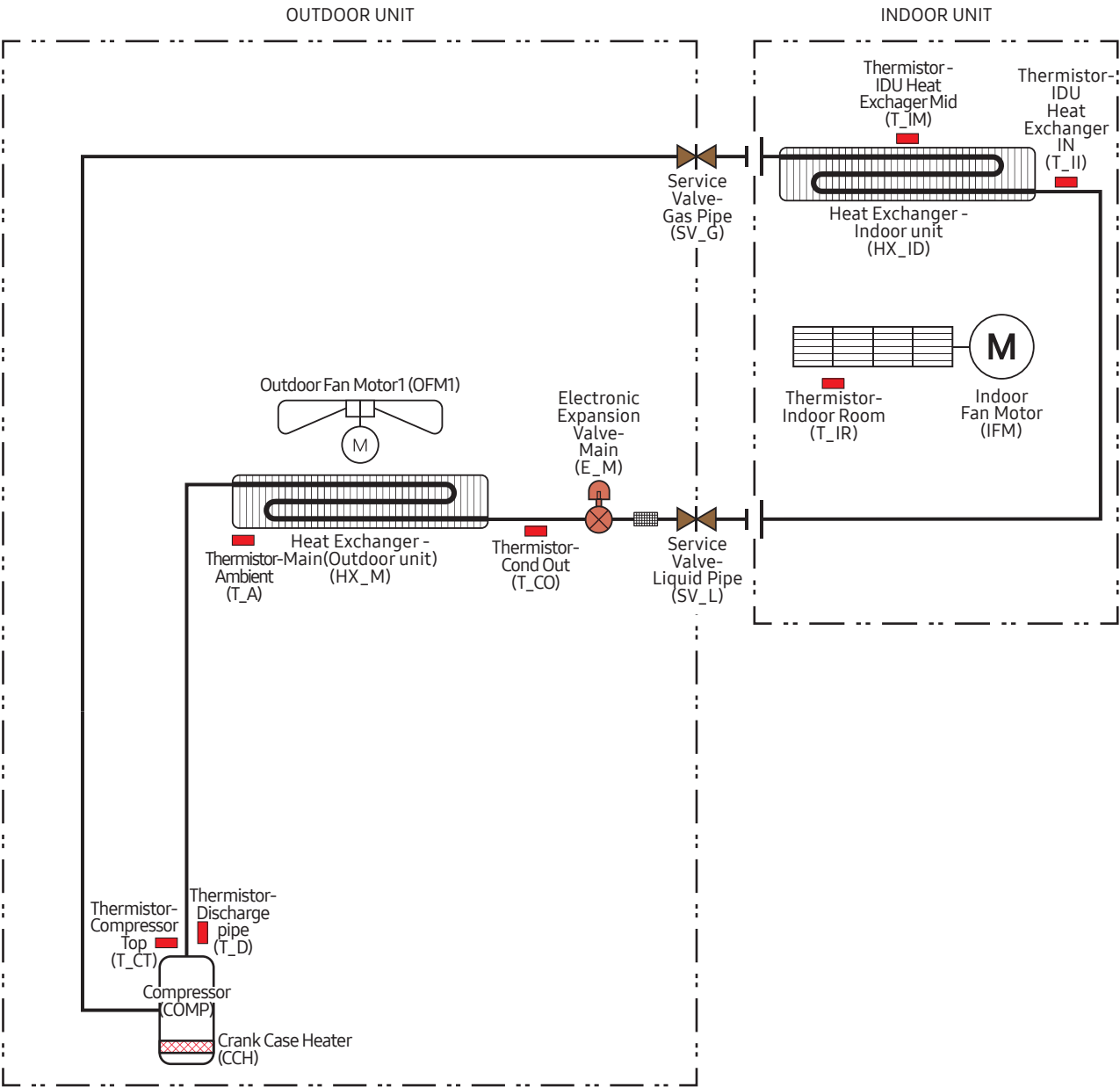
Mode	OUTDOOR TEMPERATURE	INDOOR TEMPERATURE	INDOOR HUMIDITY
COOLING	-40°F to 115°F (-40°C to 46°C)	64°F to 90°F (18°C to 32°C)	80% or less
DRYING	-40°F to 115°F (-40°C to 46°C)	64°F to 90°F (18°C to 32°C)	80% or less

NOTE

- The assumed installation conditions are follows:
 - The pipe length(including elbow) is 24.6 ft.
 - The level difference is 0 ft.
- If you have further inquiry about beyond our operating range (up to -40F), please contact to our professional engineer. Because our product designs to turn off under -40°F in order to protect our system in extremely abnormal condition.

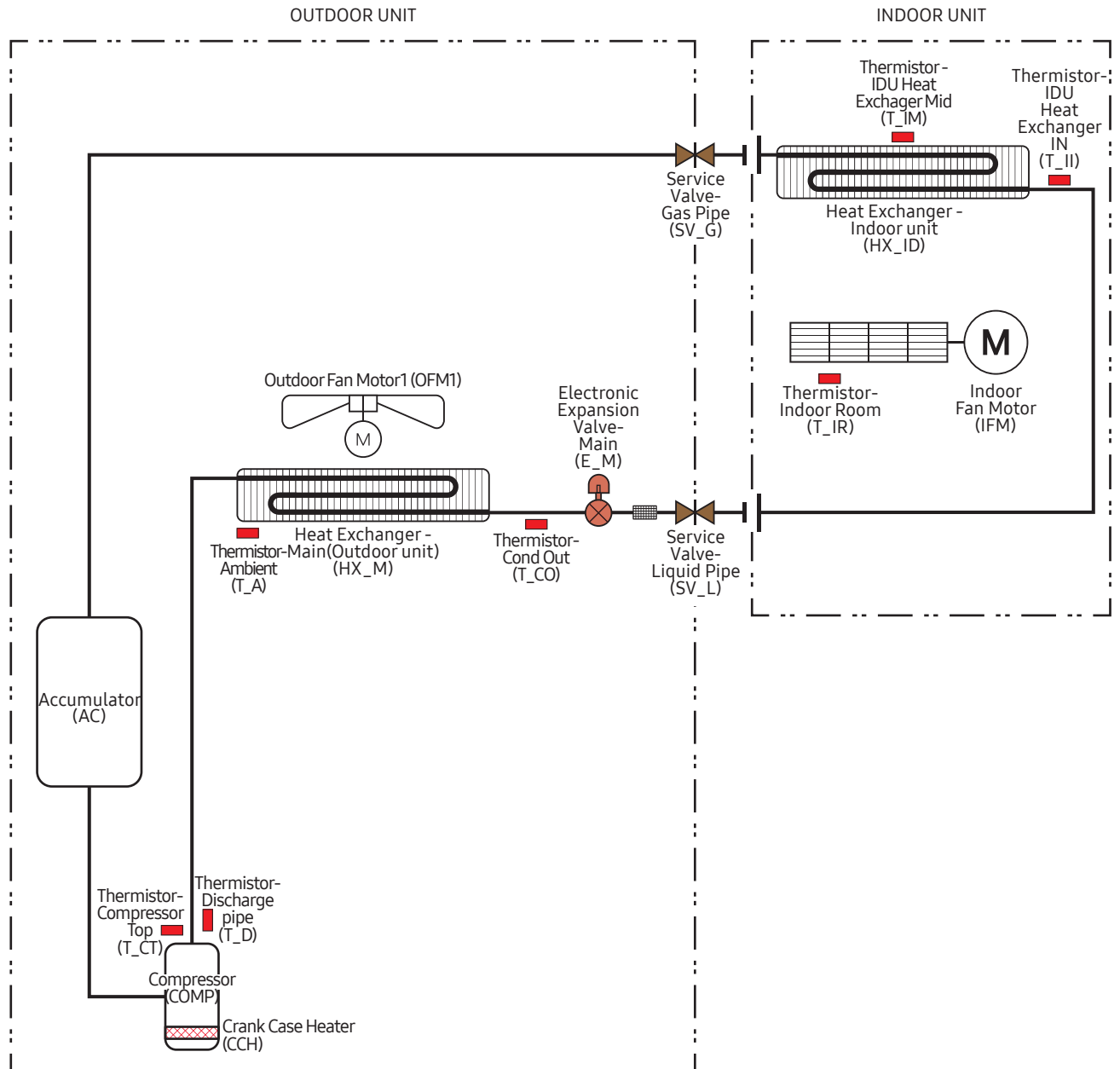
12. Piping Diagram

CNH18ADM (AC018MNADCH/AA) + CXC18SCM (AC018MXSCCC/AA)



12. Piping Diagram

CNH24ADM (AC024MNADCH/AA) + CXC24SCM (AC024MXSCCC/AA),
 CNH30TDM (AC030MNTDCH/AA) + CXC30SCM (AC030MXSCCC/AA) ,
 CNH36TDM (AC036MNTDCH/AA) + CXC36SCM (AC036MXSCCC/AA)



13. Installation

13-1. Indoor unit

Choosing the installation location

Overview of installation location requirements

4.92 inch (125 mm) or more (recommended)

3.94 inch (100 mm) or more (recommended)

4.92 inch (125 mm) or more (recommended)

Drain hose hole

You can select the direction of draining (left or right).

Maximum pipe height: 26.25 ft (8 m)

Maximum pipe length: 49.21 ft (15 m)

Make at least one round to reduce noise and vibration.

The actual units may look different from the images depicted here.

Unit : ft (m)

Model	Pipe length		Pipe height
	Minimum	Maximum	Maximum
CNH18ADM (AC018MNADCH/AA)	9.84 (3)	98.43 (30)	65.62 (20)
CNH24ADM (AC024MNADCH/AA)			
CNH30TDM (AC030MNTDCH/AA)	9.84 (3)	164.04 (50)	98.43 (30)
CNH36TDM (AC036MNTDCH/AA)			

Outdoor Unit

Outer wall

Indoor Unit

Cut insulation to have rainwater drained

CAUTION Make a U-trap (A) on the pipe (which is connected to the indoor unit) at outer wall and cut the bottom part of the insulation [about 0.39 inch (10 mm)] to prevent rainwater from getting inside through the insulation.

Checking and preparing accessories and tools

Accessories

Accessories in the indoor unit package

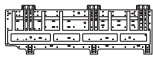
AC***MNADCH

Installation plate (1) **012** (01 frame)	Installation plate (1) **018** (04 frame)
Installation plate (1) **024** (05 frame)	Remote control (1)
Remote control battery (2)	User Manual (1)
Installation Manual (1)	Cap screw (3)
Remote Control Holder (1)	M4 x16 Tapped Screws (2)
Guide Left(1)	Guide Right(1)

13. Installation

13-1. Indoor unit

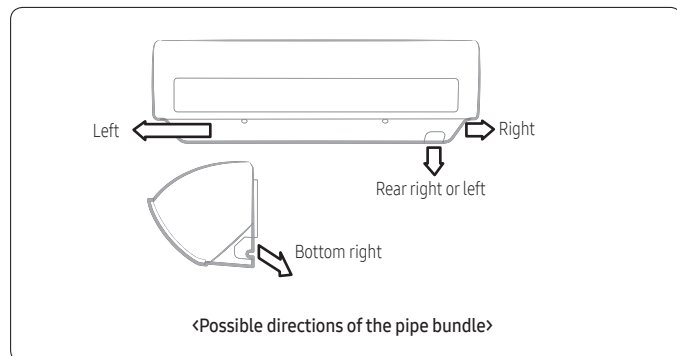
AC***MNTDCH

Installation plate (1) **030/036**	Remote control (1)
	
Remote control battery (2)	User Manual (1)
	
Installation Manual (1)	Remote Control Holder (1)
	
M4 x16 Tapped Screws (2)	
	

Step 1.3 Drilling a hole through the wall

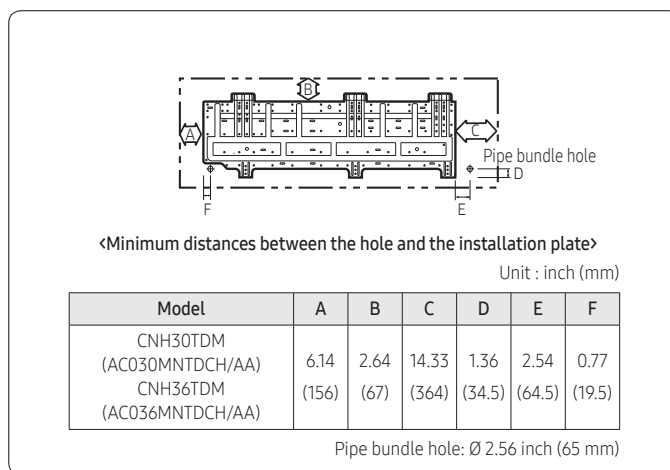
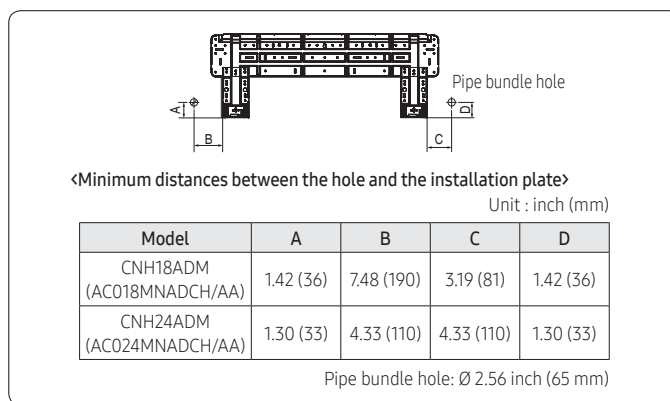
Before fixing the installation plate to a wall and then fixing the indoor unit to the installation plate, a window frame, or a gypsum board, you must determine the position of a hole [with 2.56 inch (65 mm) inner diameter] through which the pipe bundle (consisting of power and communication cables, refrigerant pipes, and drain hose) will pass and then drill that hole.

- 1 Determine the position of a 2.56 inch (65 mm) hole in consideration of the possible directions of the pipe bundle and the minimum distances between the hole and the installation plate.



CAUTION

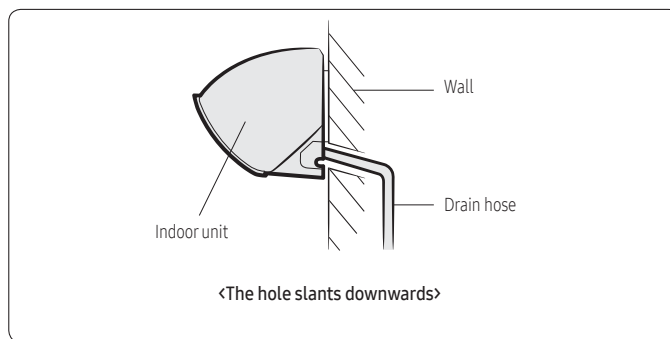
- If changing the pipe direction from left to right, do not drastically bent it but slowly turn it in the opposite direction as shown. Otherwise, the pipe may be damaged in the process.



- 2 Drill the hole.

CAUTION

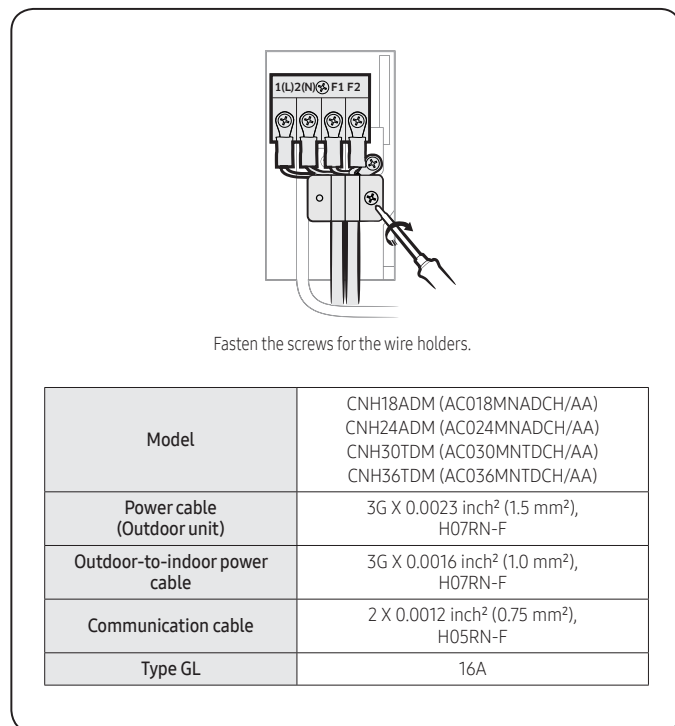
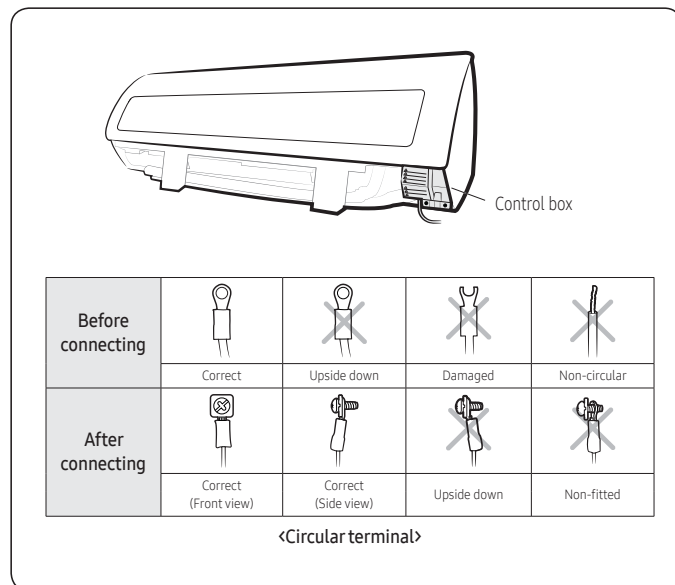
- Be sure to drill only one hole.
- Make sure that the hole slants downwards so that the drain hose slants downwards to drain water well.



13. Installation

13-1. Indoor unit

Connecting the power and communication cables (assembly cable)



- When performing electrical and earthing works, be sure to comply with the 'technical standards of electrical installations' and the 'wiring regulations' in the local regulations.
- Tighten the terminal block screw to 0.89-1.33 lbf•ft [1.2-1.8 N•m (12-18 kgf•cm)].

NOTE

- Each wire is labelled with the corresponding terminal number.
- Use shield cable (Category 5; less than 50pF/m) for noisy environmental site.
- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord. (Code designation IEC: 60245 IEC 66/CENELEC: H07RN-F, IEC: 60245 IEC 57/CENELEC: H05RN-F)
- Power & Communication cable shall not exceed 98.42 ft (30m).

CAUTION

- For the terminal block wiring, use a wire with a ring terminal socket only. Regular wires without a ring terminal socket may become a hazard due to overheating of the electrical contact during installation.
- If you need to extend the pipe, be sure to extend the cable too. The maximum length of each of the cable and pipe used should not exceed 49.21 ft 15 (meters).
- Do not connect two or more different cables to extend the length. This connection may cause fire.
- Each circular terminal must match the size of its corresponding screw in the terminal block.
- After connecting the cables, make sure that terminal numbers on the indoor and outdoor units match.
- Ensure that power and communication cables are separated, they must not be in the same cable.

WARNING

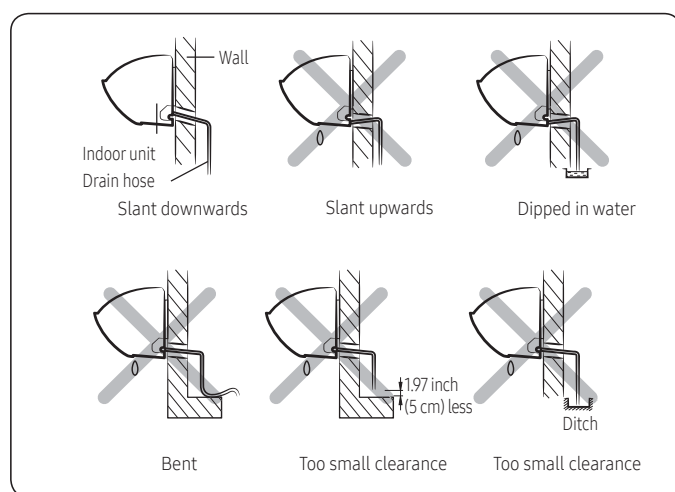
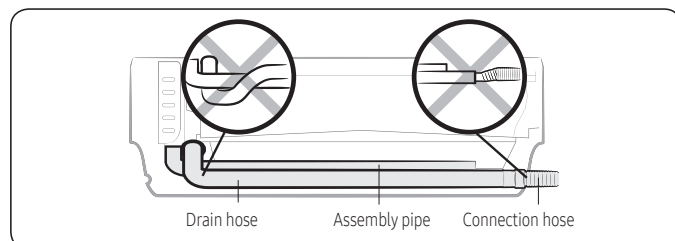
- Connect the wires firmly so that wires cannot be pulled out easily. (If they are loose, it could cause burn-out of the wires.)

13. Installation

13-1. Indoor unit

Installing and connecting the drain hose

- 1 Install the drain hose.



CAUTION

- Make sure that the indoor unit is in upright position when you pour water to check for leakage. Make sure that the water does not overflow onto the electrical part.
- If the diameter of the connection hose is smaller than the product's drain hose, water leakage may occur.
- Inadequate installation may cause water leakage.
- If the drain hose is routed inside the room, insulate the hose so that dripping condensation does not damage the furniture or floors.
- Do not box in or cover the drain hose connection. Drain hose connection must be easily accessible and serviceable.

Fixing the installation plate

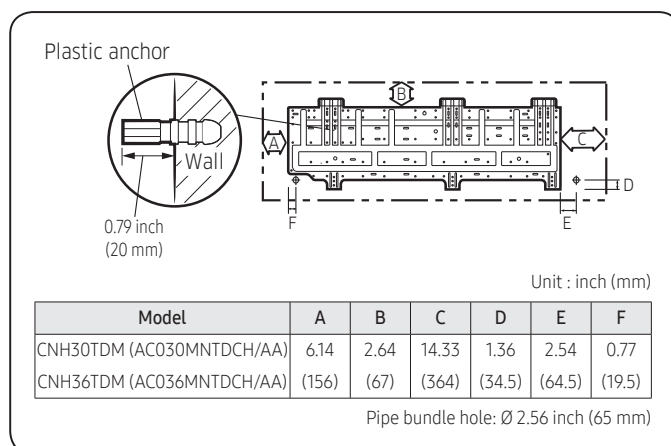
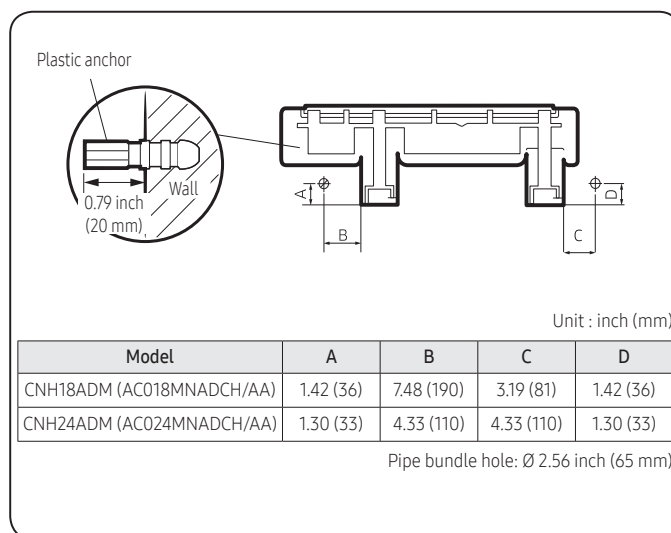
You can install the indoor unit on a wall, window frame, or gypsum board.

WARNING

- Make sure that the wall, window frame, or gypsum board can withstand the weight of the indoor unit. If you install the indoor unit in a place where it is not strong enough to withstand the unit's weight, the unit could fall and cause injury.

When fixing the indoor unit on a wall

Fix the installation plate to the wall giving attention to the weight of the indoor unit.



NOTE

- If you mount the plate to a concrete wall using plastic anchors, make sure that gaps between the wall and the plate, created by projected anchor, is less than 0.79 inch (20 mm).

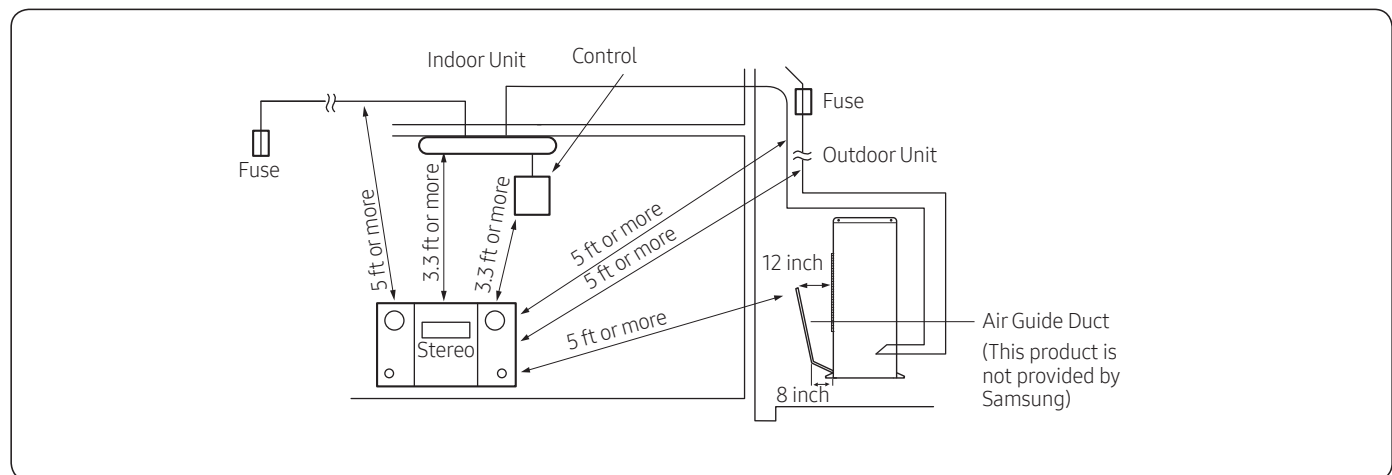
13. Installation

13-2. Outdoor unit

Deciding on where to install the outdoor unit

Outdoor Unit

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



- If the outdoor unit is installed at a height, ensure that its base is firmly fixed in position.
- Make sure that the water dripping from the drain hose runs away correctly and safely.
- When you install the outdoor unit at wayside, you should install it above 6.6 ft height or make sure that the heat from the outdoor unit shouldn't be in direct contact with passersby. (The ground for application :The revision of regulation for facility in building by the law of the Ministry of Construction and Transportation.

13. Installation

13-2. Outdoor unit

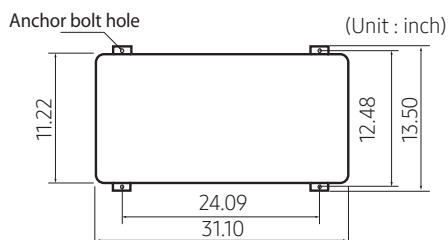
Outdoor unit installation

The outdoor unit must be installed on a rigid and stable base to avoid any increase in the noise level and vibration, particularly if the outdoor unit is to be installed in a location exposed to strong winds or at a height, the unit must be fixed to an appropriate support(wall or ground).

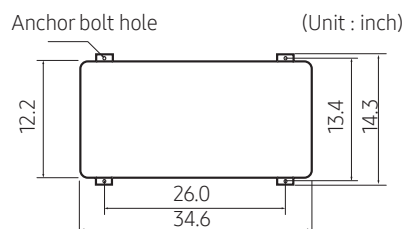
Fix the outdoor unit with anchor bolts.

NOTE

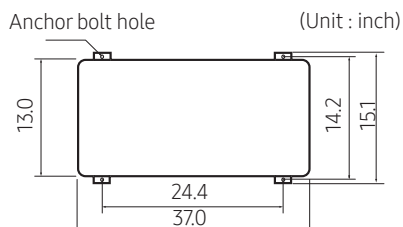
- The anchor bolt must be 0.79 inch or higher from the base surface.



A Type : AC009KXADCH



B Type : AC018JXADCH



C Type : AC030/36MXSCC

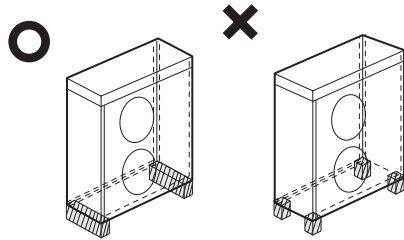
CAUTION

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

13. Installation

13-2. Outdoor unit

Outdoor Unit Support



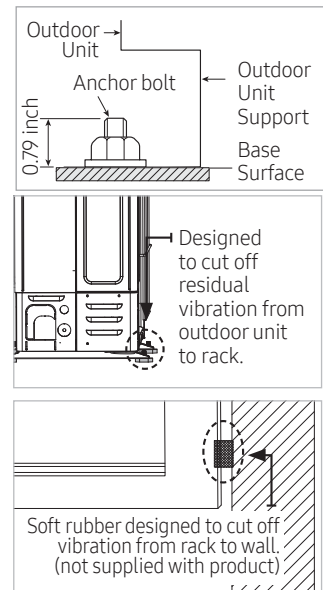
OUTDOOR UNIT INSTALLED ON RISERS/STAND OR WALL INSTALLATION

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

⚠ CAUTION

When installing air guide duct

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



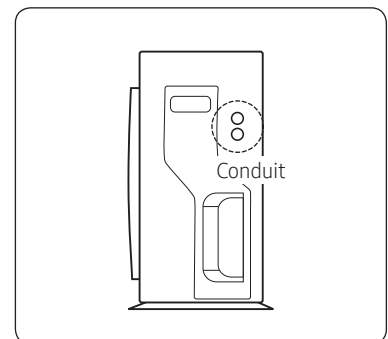
Connecting the cable

Two electronic cables must be connected to the outdoor unit.

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

⚠ CAUTION

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



13. Installation

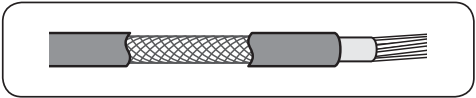
13-2. Outdoor unit

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

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

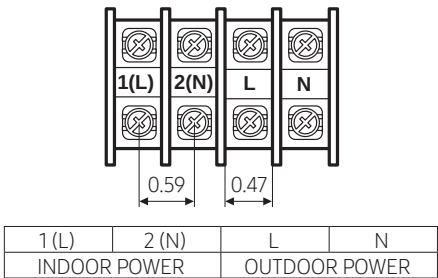
- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord.
(Code designation IEC:60245 IEC 57 / CENELEC: H05RN-F or IEC:60245 IEC 66 / CENELEC: H07RN-F)

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

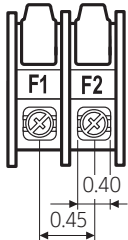


1-phase terminal block spec

AC power : M5 screw

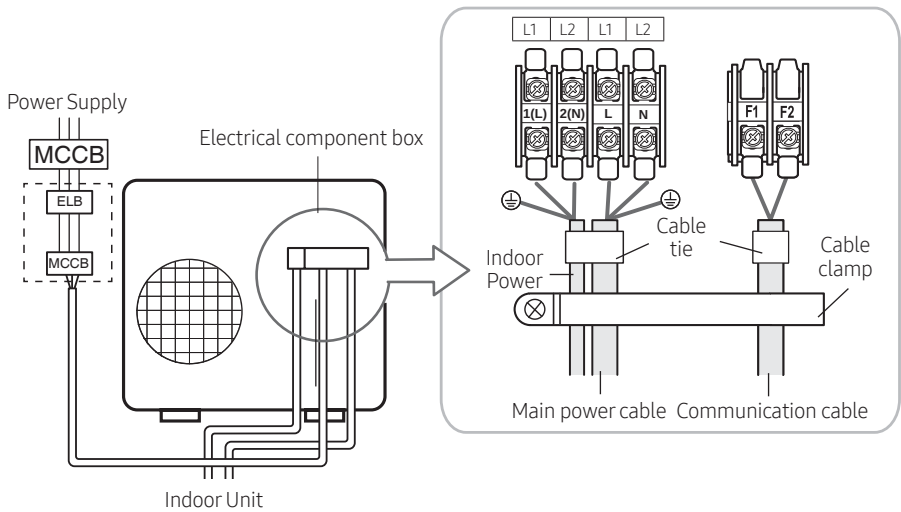


Communication : M4 screw



Wiring Diagram of Power Cable

When using ELB for 1 phase



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

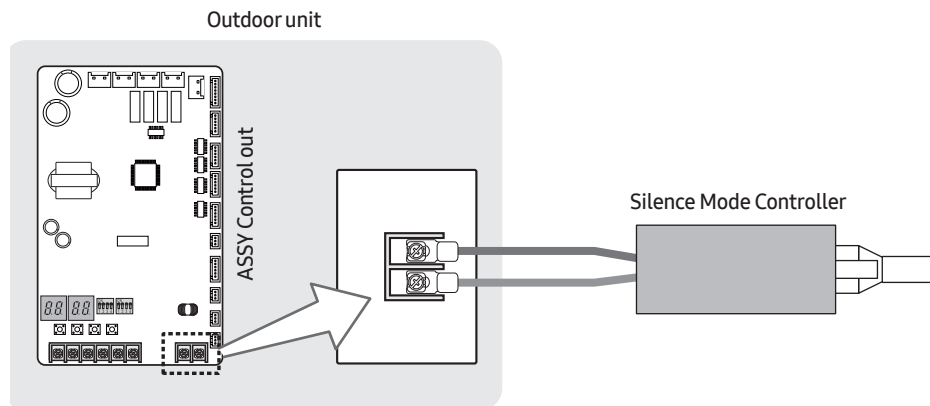
13. Installation

13-2. Outdoor unit

⚠ CAUTION

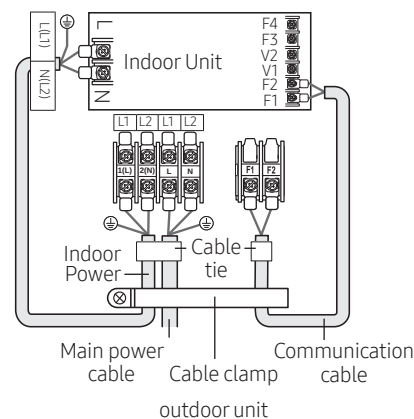
- You should connect the power cable into the power cable terminal and fasten it with a clamp.
- The unbalanced power must be maintained within 2% of supply rating.
 - If the power is unbalanced greatly, it may shorten the life of the condenser. If the unbalanced power is exceeded over 4% of supply rating, 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 in.
- Devices disconnected from the power supply should be completely disconnected in the condition of overvoltage category.
- Keep distances of 1.97 in. or more between power cable and communication cable.

Silence mode controller wiring diagram



Wiring Diagram of Connection Cord

1 phase



📄 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).

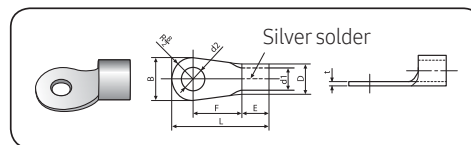


13. Installation

13-2. Outdoor unit

Connecting the Power Terminal

- 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.



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)	43 (1-11/16)	8.4 (1-3/16)	+0.4 (+0.015) 0(0)	
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)	+0.4 (+0.015) 0(0)	
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			
M4	12.0~18.0 (kgf·cm)	0.86~1.30 (lbf·ft)	AC power : 1(L), 2(N), L, N / Communication : F1, F2

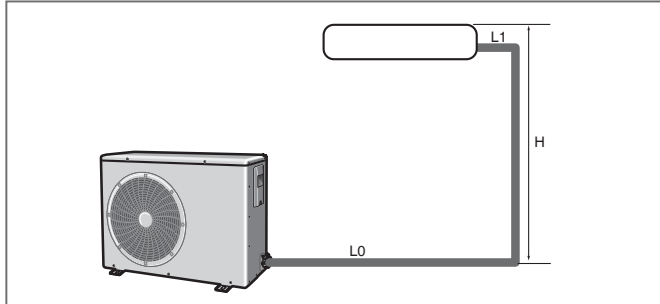
⚠ CAUTION

- When connecting cables, you can connect the cables to the electrical part or connect them through the holes below depending on the spot.
- Run transmission wiring 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 in. or more between power cable and communication cable.
- When the cables are connected through the hole, remove the Plate bottom.

13. Installation

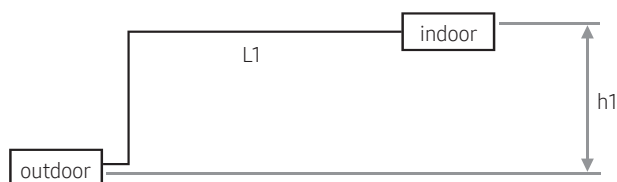
13-2. Outdoor unit

Refrigerant piping system



Refrigerant piping system table			Pipe length or height	
			CXC18SCM (AC018MXSCCC/AA)	CXC24SCM (AC024MXSCCC/AA)
Max. allowable length	Actual pipe length	$L0 + H + L1$	98.4 ft (30 m) or less	164.0 ft (50 m) or less
Allowable height length	Actual pipe length	H	65.6 ft (20 m) or less	98.4 ft (30 m) or less

Items	Maximum allowable length
	Single installation
Type	A
Applicable outdoor unit models	CXC30SCM (AC030MXSCCC/AA) CXC36SCM (AC036MXSCCC/AA)
Main pipe (L1)	164.0 ft (50 m)
Max. height difference between outdoor and indoor units (h1)	98.4 ft (30 m)



- Temper grade and minimum thickness of the refrigerant pipe

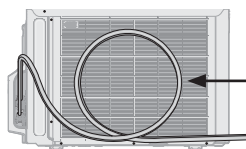
Outer diameter [inch]	Minimum thickness [inch]	Temper grade
1/4	0.0276	C1220T-O
3/8	0.0276	
1/2	0.0315	
5/8	0.0394	
5/8	0.0315	C1220T-1/2H OR C1220T-H
3/4	0.0354	
7/8	0.0354	

CAUTION

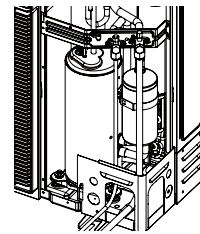
- Make sure to use C1220T-1/2H (Semi-hard) pipe for more than 3/4 in. In case of using C1220T-O (Soft) pipe for 3/4 in., pipe may be broken, which can result in an injury.

13. Installation

13-2. Outdoor unit



Make at least one round:
It will reduce noise and vibration



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

⚠ CAUTION

- After connecting pipes through the knock-out, cover the opening to prevent animals and debris from entering.

Adding refrigerant (R-410A)

The outdoor unit is loaded with sufficient refrigerant for standard piping. Thus, refrigerant must be added if the piping is lengthened. This operation can only be performed by a qualified refrigeration specialist. For volume of additional refrigerant, refer to "How to Calculate the Volume of Additional Refrigerant" section.

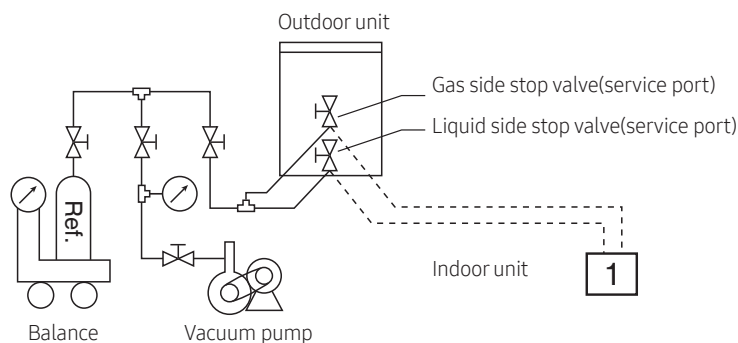
- 1) Check that the stop valve is closed entirely.
- 2) Charge the refrigerant through the service port of liquid stop valve.

📖 NOTE

- Do not charge the refrigerant through the gas side service port.
- 3) If you cannot charge the refrigerant according to the steps above, following these :
 - Open both liquid stop valve and gas stop valve.
 - Operate the air conditioner by pressing the K2 key on the outdoor unit PCB.
 - About 30 minutes later, charge the refrigerant through the service port of gas stop valve.

📖 NOTE

- If necessary, refer to the pressure table classified by outdoor temperature.



13. Installation

13-2. Outdoor unit

How to Calculate the Volume of Additional Refrigerant

The volume of additional refrigerant is variable according to the length of the liquid pipe. Determine the liquid pipe length before adding refrigerant. This operation can only be performed by a qualified refrigeration specialist.

Single installation outdoor unit

Model	Pipe length [ft(m)]	Interconnection pipe length
CXC18SCM (AC018MXSCCC/AA)	24.6 ~ 98.4 (7.5 ~ 30)	+0.108 oz/ft over 25.0 ft (+15 g/m over 7.5m)
CXC24SCM (AC024MXSCCC/AA)	24.6 ~ 164.0 (7.5 ~ 50)	+0.108 oz/ft over 25.0 ft (+10 g/m over 7.5m)
CXC30SCM (AC030MXSCCC/AA) CXC36SCM (AC036MXSCCC/AA)	24.6 ~ 164.0 (7.5 ~ 50)	+0.237 oz/ft over 25.0 ft (+30 g/m over 7.5 m)



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