SAMSUNG

SINGLE Technical Data Book

SINGLE RAC for America (R410A, HP)

Model : AC✳✳✳MN✳DCH/AA (Indoor Unit)
AC✳✳✳✳XADCH/AA (Outdoor Unit)

History

Version	Modification	Date	Remark
Ver.1.0	Release Single RAC TDB for America	17. 03. 30	

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

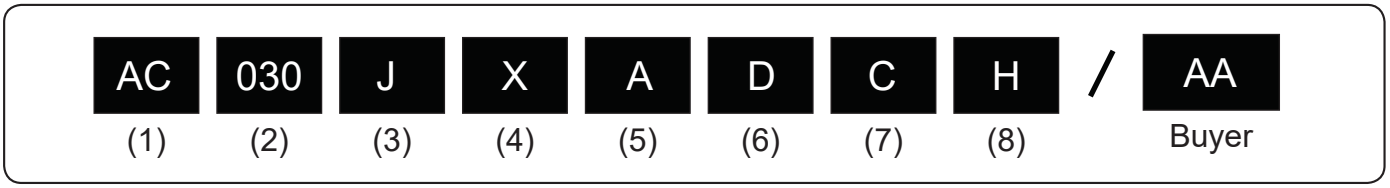
(8) Mode

H	Heat Pump

Nomenclature

Outdoor Unit

Model Name



(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

(8) Mode

H	Heat Pump

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1-1. Indoor Units

Model	Capacity (kBtu/h)				
	12	18	24	30	36
RAC					

1-2. Outdoor units

Model	Capacity (kBtu/h)				
	12	18	24	30	36
1Φ					

2. Specification

Model Name		Indoor Unit				AC012MNADCH/AA	AC018MNADCH/AA	AC024MNADCH/AA
		Outdoor Unit				AC012KXADCH/AA	AC018JXADCH/AA	AC024JXADCH/AA
System	Mode				-	HEAT PUMP	HEAT PUMP	HEAT PUMP
	Performance	Capacity (Min/Std/Max)	Cooling		kW	1.00/3.52/4.25	1.17/5.28/5.86	2.05/7.03/7.91
					Btu/h	3,400/12,000/14,500	4,000/18,000/20,000	7,000/24,000/27,000
					US RT	0.28/1.0/1.2	0.33/1.5/1.66	0.58/2.0/2.25
			Heating		kW	0.88/4.10/4.75	1.11/5.86/7.33	1.52/7.91/9.09
					Btu/h	3,000/14,000/16,200	3,800/20,000/25,000	5,200/27,000/31,000
					US RT	0.25/1.16/1.35	0.31/1.66/2.08	0.43/2.25/2.58
	Power	Power Input (Min/Std/Max)	Cooling		kW	0.24/1.22/1.46	0.32/2.16/2.20	0.45/2.35/2.40
			Heating			0.21/1.68/2.30	0.26/1.96/2.70	0.38/2.56/3.50
		Current Input (Min/Std/Max)	Cooling		A	1.6/5.7/6.6	2.0/9.4/9.5	2.5/10.4/10.5
			Heating			1.3/7.4/10.0	1.7/8.5/12.0	2.5/11.4/14.5
		Current	MCA		A	10.7	10	12.5
			MFA			15	15	20
	Energy Efficiency	EER	Cooling (US)		(Btu/h)/W	9.84	8.33	10.21
			Cooling		-	-	-	-
		COP	Heating		W/W	2.44	2.98	3.08
		SEER			-	18.0	18.8	18.3
		HSPF			-	9.5	10.0	10.8
		Pdesignh			kW	N/A	N/A	N/A
	Piping Connections	Liquid Pipe			Type	Flare connection	Flare connection	Flare connection
					Φ, mm (inch)	6.35 (1/4")	6.35 (1/4")	6.35 (1/4")
		Gas Pipe			Type	Flare connection	Flare connection	Flare connection
					Φ, mm (inch)	9.52 (3/8")	12.70 (1/2")	15.88 (5/8")
		Heat Insulation			-	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)
			Max.		m (ft)	20 (65.6)	30 (98.4)	50 (164.0)
			Elevation		m (ft)	15 (49.2)	20 (65.6)	30 (98.4)
			Chargeless		m (ft)	7.5 (24.6)	7.5 (24.6)	7.5 (24.6)
	Wiring Connections	Communication	Min.		mm²	0.75	0.75	0.75
			Remark		-	F1, F2	F1, F2	F1, F2
		Power supply			-	Outdoor unit powers indoor unit	Outdoor unit powers indoor unit	Outdoor unit powers indoor unit
	Refrigerant	Type			-	R410A	R410A	R410A
		Control Method			-	EEV	EEV	EEV
		Factory Charging			kg	1.05	1.30	2.10
					lbs	2.31	2.87	4.63
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			-	Silica	Silica	Silica
	Fan	Type			-	Crossflow Fan	Crossflow Fan	Crossflow Fan
		Quantity			EA	1	1	1
		Air Flow Rate		H/M/L	CMM	8.5/7.0/5.5	11.5/9.5/7.5	15.6/13.5/11.6
					CFM	300/247/194	406/336/265	551/477/410
					l/s	142/117/92	192/158/125	260/225/193

2. Specification

Model Name		Indoor Unit			AC012MNADCH/AA	AC018MNADCH/AA	AC024MNADCH/AA
		Outdoor Unit			AC012KXADCH/AA	AC018JXADCH/AA	AC024JXADCH/AA
Indoor Unit	Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor
		Output		W x n	27 x 1	27 x 1	27 x 1
	Drain	Drain Pipe		Φ,mm	ID 18 HOSE	ID 18 HOSE	ID 18 HOSE
	Sound	Sound Pressure	High/Mid/Low/ (Silent)	dB(A)	38/32/26/23	42/37/32/29	43/39/35/32
		Sound Power	Cooling Std High	dB(A)	59	60	61
	External Dimension	Net Weight		kg (lbs)	7.6 (16.76)	10.8 (23.81)	14.6 (32.19)
		Shipping Weight		kg (lbs)	9 (19.84)	12.4 (27.34)	16.8 (37.04)
		Net Dimensions (WxHxD)		mm	750 x 246 x 249	896 x 261 x 261	1065 x 294 x 301
				inch	29.5 x 9.7 x 9.8	35.3 x 10.3 x 10.3	41.9 x 11.6 x 11.9
		Shipping Dimensions (WxHxD)		mm	800 x 298 x 302	956 x 317 x 335	1123 x 354 x 384
				inch	31.5 x 11.7 x 11.9	37.6 x 12.5 x 13.2	44.2 x 13.9 x 15.1
	Casing	Material		-	HIPS	HIPS	HIPS
	Control System	Infrared remote control		-	MR-EH00U	MR-EH00U	MR-EH00U
		Wired remote control		-	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		-	-	-	-
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	FMC	FMC
		Material	Fin	-	Al	Al	Al
			Tube	-	Cu	Al	Al
		Fin Treatment		-	Anti-Corrosion	Anti-Corrosion	Anti-Corrosion
	Compressor	Model Name		-	UG9T115FUAEQ	UG4T150LNBEQ	UG4T200LNFE4
		Type		-	Twin BLDC	Twin BLDC	Twin BLDC
		Output		kW	1.05	1.42	1.85
		Oil	Type	-	POE	POE	POE
			Initial Charge	cc	380	500	700
	Fan	Type		-	Propeller	Propeller	Propeller
		Discharge direction		-	Front	Front	Front
		Quantity		EA	1	1	1
		Air Flow Rate		CMM	36.0	43.9	62.0
				CFM	1,270	1,550	2,190
				l/s	600.0	731.5	1,033.5
	Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor
		Output		W x n	68 x 1	68 x 1	125 x 1

1. Line-up

Model Name		Indoor Unit			AC012MNADCH/AA	AC018MNADCH/AA	AC024MNADCH/AA
		Outdoor Unit			AC012KXADCH/AA	AC018JXADCH/AA	AC024JXADCH/AA
Outdoor Unit	Sound	Sound Pressure	Cooling / Heating	dB(A)	48/48	48/48	50/50
		Sound Power		dB(A)	61	62	65
	External Dimension	Net Weight		kg (lbs)	36.2 (79.81)	45.0 (99.21)	64.5 (142.20)
		Shipping Weight		kg (lbs)	38.8 (85.54)	48.0 (105.82)	69.5 (153.22)
		Net Dimensions (WxHxD)		mm	790 x 548 x 285	880 x 638 x 310	940 x 998 x 330
				inch	31.1 x 21.6 x 11.2	34.6 x 25.1 x 12.2	37.0 x 39.3 x 13.0
		Shipping Dimensions (WxHxD)		mm	926 x 640 x 384	1023 x 730 x 413	995 x 1096 x 426
				inch	36.5 x 25.2 x 15.1	40.3 x 28.7 x 16.3	39.2 x 43.1 x 16.8
	Casing	Material	Body	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate
	Operating Temp. Range	Cooling		°C (°F)	-18~46 (0~115)	-18~46 (0~115)	-18~46 (0~115)
		Heating		°C (°F)	-20~24 (-4.0~75.2)	-20~24 (-4.0~75.2)	-20~24 (-4.0~75.2)

NOTE

- Specification may be subject to change without prior notice.

1) 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
   - 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
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.
6) For more information about Control Systems, please refer to 14. Accessory section.

1. Line-up

Model Name		Indoor Unit				AC030MNTDCH/AA	AC036MNTDCH/AA
		Outdoor Unit				AC030JXADCH/AA	AC036JXADCH/AA
System	Mode				-	HEAT PUMP	HEAT PUMP
	Performance	Capacity (Min/Std/Max)	Cooling		kW	2.73/8.79/10.26	4.10/10.55/11.43
					Btu/h	9,300/30,000/35,000	14,000/36,000/39,000
					US RT	0.77/2.5/2.91	1.16/3.0/3.25
			Heating		kW	2.64/9.38/11.14	3.37/11.72/14.07
					Btu/h	9,000/32,000/38,000	11,500/40,000/48,000
					US RT	0.75/2.66/3.16	0.95/3.33/4.0
	Power	Power Input (Min/Std/Max)	Cooling		kW	0.70/3.15/3.40	0.93/3.87/4.20
			Heating			0.65/3.36/5.50	0.72/4.12/5.00
		Current Input (Min/Std/Max)	Cooling		A	4.0/13.7/15.0	4.8/16.5/18.5
			Heating			3.4/14.7/21.8	3.7/17.8/23.0
		Current	MCA		A	20.3	23.2
			MFA			30	35
	Energy Efficiency	EER	Cooling (US)		(Btu/h)/W	9.52	9.3
			Cooling		-	-	-
		COP	Heating		W/W	2.78	2.84
		SEER			-	19.5	18.3
		HSPF			-	9.2	9.5
		Pdesignh			kW	N/A	N/A
	Piping Connections	Liquid Pipe			Type	Flare connection	Flare connection
					Φ, mm (inch)	9.52 (3/8")	9.52 (3/8")
		Gas Pipe			Type	Flare connection	Flare connection
					Φ, mm (inch)	15.88 (5/8")	15.88 (5/8")
		Heat Insulation			-	Both liquid and gas pipes	Both liquid and gas pipes
		Piping length (ODU-IDU)	Standard		m (ft)	7.5 (24.6)	7.5 (24.6)
			Max.		m (ft)	50 (164.0)	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.		mm²	0.75	0.75
			Remark		-	F1, F2	F1, F2
		Power supply			-	Outdoor unit powers indoor unit	Outdoor unit powers indoor unit
	Refrigerant	Type			-	R410A	R410A
		Control Method			-	EEV	EEV
		Factory Charging			kg	2.60	2.80
					lbs	5.73	6.17
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			-	Silica	Silica
	Fan	Type			-	Crossflow Fan	Crossflow Fan
		Quantity			EA	1	1
		Air Flow Rate		H/M/L	CMM	22.0/20.5/19.0	23.5/21.3/19.8
					CFM	777/724/671	830/752/699
					l/s	367/342/317	392/355/330

1. Line-up

Model Name		Indoor Unit			AC030MNTDCH/AA	AC036MNTDCH/AA
		Outdoor Unit			AC030JXADCH/AA	AC036JXADCH/AA
Indoor Unit	Fan Motor	Type		-	BLDC Motor	BLDC Motor
		Output		W x n	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)	49/47/45/37	51/48/46/38
		Sound Power	Cooling Std High	dB(A)	64	65
	External Dimension	Net Weight		kg (lbs)	18.4 (40.57)	18.4 (40.57)
		Shipping Weight		kg (lbs)	21.8 (48.06)	21.8 (48.06)
		Net Dimensions (WxHxD)		mm	1280 x 253 x 345	1280 x 253 x 345
				inch	50.4 x 10.0 x 13.6	50.4 x 10.0 x 13.6
		Shipping Dimensions (WxHxD)		mm	1352 x 326 x 420	1352 x 326 x 420
				inch	53.2 x 12.8 x 16.5	53.2 x 12.8 x 16.5
	Casing	Material		-	HIPS	HIPS
	Control System	Infrared remote control		-	MR-EH00U	MR-EH00U
		Wired remote control		-	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		-	-	-
Outdoor Unit	Power Supply			Φ, #, V, Hz	1,2,208-230,60	1,2,208-230,60
	Heat Exchanger	Type		-	FMC	FMC
		Material	Fin	-	Al	Al
			Tube	-	Al	Al
		Fin Treatment		-	Anti-Corrosion	Anti-Corrosion
	Compressor	Model Name		-	UG8T300LNBJU	UG5T450FUEJX
		Type		-	Twin BLDC	Twin BLDC
		Output		kW	2.82	4.12
		Oil	Type	-	PVE	PVE
			Initial Charge	cc	1,200	1,700
	Fan	Type		-	Propeller	Propeller
		Discharge direction		-	Front	Front
		Quantity		EA	1	2
		Air Flow Rate		CMM	62.9	86.1
				CFM	2,220	3,040
				l/s	1,047.7	1,434.7
	Fan Motor	Type		-	BLDC Motor	BLDC Motor
		Output		W x n	125 x 1	125 x 2

1. Line-up

Model Name		Indoor Unit			AC030MNTDCH/AA	AC036MNTDCH/AA
		Outdoor Unit			AC030JXADCH/AA	AC036JXADCH/AA
Outdoor Unit	Sound	Sound Pressure	Cooling / Heating	dB(A)	50/52	49/51
		Sound Power		dB(A)	65	65
	External Dimension	Net Weight		kg (lbs)	70.0 (154.32)	88.0 (194.01)
		Shipping Weight		kg (lbs)	74.0 (163.14)	98 (216.05)
		Net Dimensions (WxHxD)		mm	940 x 998 x 330	940 x 1210 x 330
				inch	37.0 x 39.3 x 13.0	37.0 x 47.6 x 13.0
		Shipping Dimensions (WxHxD)		mm	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
	Casing	Material	Body	-	EGI Steel Plate	EGI Steel Plate
	Operating Temp. Range	Cooling		℃ (℉)	-18~46 (0~115)	-18~46 (0~115)
		Heating		℃ (℉)	-20~24 (-4.0~75.2)	-20~24 (-4.0~75.2)

NOTE

- Specification may be subject to change without prior notice.

1) 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
   - 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
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.
6) 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)	Sound Power Level (dBA)
			Cooling (Btu/h)	Heating (Btu/h)				
AC012MNADCH/AA	16.76	Max.	14,500	16,200	High	300	38	59
		Std.	12,000	14,000	Mid.	247	32	-
		Min.	3,400	3,000	Low	194	26	-
AC018MNADCH/AA	23.81	Max.	20,000	25,000	High	406	42	60
		Std.	18,000	20,000	Mid.	336	37	-
		Min.	4,000	3,800	Low	265	32	-
AC024MNADCH/AA	32.19	Max.	27,000	31,000	High	551	43	61
		Std.	24,000	27,000	Mid.	477	39	-
		Min.	7,000	5,200	Low	410	35	-
AC030MNTDCH/AA	40.57	Max.	35,000	38,000	High	777	49	64
		Std.	30,000	32,000	Mid.	724	47	-
		Min.	9,300	9,000	Low	671	45	-
AC036MNTDCH/AA	40.57	Max.	39,000	48,000	High	830	51	65
		Std.	36,000	40,000	Mid.	752	48	-
		Min.	14,000	11,500	Low	699	46	-

Outdoor Unit

Capacity (kBtu/h)	Model Code	Net Size (WxHxD, inch)	Net Weight (lbs)	Airflow (CFM)	Sound Pressure Level(dBA)		Sound Power Level (dBA)
					Cooling	Heating	
12	AC012KXADCH/AA	31.1 x 21.6 x 11.2	79.81	1,270	48	48	61
18	AC018JXADCH/AA	34.6 x 25.1 x 12.2	99.21	1,550	48	48	62
24	AC024JXADCH/AA	37.0 x 39.3 x 13.0	142.2	2,190	50	50	65
30	AC030JXADCH/AA	37.0 x 39.3 x 13.0	154.32	2,220	50	52	65
36	AC036JXADCH/AA	37.0 x 47.6 x 13.0	194.01	3,040	49	51	65

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	Total	MCA (A)	MOP (A)
		Hz	Volts	Min.	Max.		Fan1(A)	Fan2(A)	Unit			
AC012MNADCH/AA	AC012KXADCH/AA	60	208 to 230	187	253	8.1	0.17	-	0.4	10.7	10.7	15
AC018MNADCH/AA	AC018JXADCH/AA	60	208 to 230	187	253	6.1	0.13	-	0.7	10	10	15
AC024MNADCH/AA	AC024JXADCH/AA	60	208 to 230	187	253	9.0	0.48	-	0.7	12.5	12.5	20
AC030MNTDCH/AA	AC030JXADCH/AA	60	208 to 230	187	253	15.1	0.48	-	0.9	20.3	20.3	30
AC036MNTDCH/AA	AC036JXADCH/AA	60	208 to 230	187	253	17.0	0.48	0.48	0.9	23.2	23.2	35

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

AC012MNADCH/AA + AC012KXADCH/AA

Cooling

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
0	10.1	7.2	0.78	10.6	7.4	0.80	11.1	7.7	0.82	11.4	7.9	0.83	11.6	7.8	0.84	12.2	7.8	0.85	12.8	7.6	0.87
70	10.8	7.6	0.68	11.4	7.8	0.69	11.8	8.0	0.71	12.2	8.3	0.72	12.4	8.2	0.73	13.1	8.1	0.74	13.7	8.0	0.75
95	10.6	7.3	1.15	11.2	7.5	1.17	11.6	7.7	1.20	12.0	8.0	1.22	12.2	7.9	1.23	12.9	7.8	1.24	13.5	7.7	1.27
115	8.9	6.6	1.25	9.4	6.8	1.27	9.8	7.0	1.30	10.1	7.2	1.32	10.3	7.2	1.34	10.8	7.1	1.35	11.4	6.9	1.38

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°F, DB)"	Indoor Temperature (°F, DB)											
	61		64		68		70		72		75	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-4	9.4	1.57	9.3	1.55	9.2	1.53	9.1	1.52	9.0	1.50	8.9	1.49
14	14.1	2.29	13.9	2.27	13.8	2.25	13.6	2.22	13.5	2.20	13.4	2.18
32	14.2	2.01	14.1	1.99	14.0	1.97	13.8	1.95	13.7	1.93	13.5	1.91
47	14.4	1.73	14.3	1.71	14.1	1.70	14.0	1.68	13.9	1.66	13.7	1.65
75.2	14.9	1.33	14.8	1.31	14.6	1.30	14.5	1.29	14.4	1.28	14.2	1.26

NOTE

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

4. Capacity Table

AC018MNADCH/AA + AC018JXADCH/AA

Cooling

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
0	16.2	11.0	0.97	17.0	11.4	0.99	17.7	11.7	1.01	18.3	12.1	1.04	18.6	12.0	1.05	19.6	11.8	1.06	20.5	11.6	1.08
70	15.8	11.0	1.16	16.6	11.4	1.18	17.3	11.7	1.21	17.9	12.1	1.23	18.2	12.0	1.24	19.1	11.9	1.25	20.1	11.6	1.28
95	15.9	11.2	2.03	16.8	11.6	2.07	17.5	11.9	2.12	18.0	12.3	2.16	18.4	12.2	2.18	19.3	12.1	2.20	20.2	11.8	2.25
115	12.6	9.5	1.92	13.3	9.8	1.96	13.9	10.1	2.00	14.3	10.4	2.04	14.6	10.3	2.06	15.3	10.2	2.08	16.1	10.0	2.12

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB)											
	61		64		68		70		72		75	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-4	12.7	1.68	12.6	1.66	12.4	1.65	12.3	1.63	12.2	1.61	12.1	1.60
14	18.0	2.28	17.8	2.26	17.7	2.24	17.5	2.21	17.3	2.19	17.1	2.17
32	18.9	2.15	18.7	2.13	18.5	2.11	18.3	2.09	18.1	2.07	17.9	2.05
47	20.6	2.02	20.4	2.00	20.2	1.98	20.0	1.96	19.8	1.94	19.6	1.92
75.2	19.6	1.60	19.4	1.59	19.2	1.57	19.0	1.56	18.8	1.54	18.7	1.52

NOTE

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

4. Capacity Table

AC024MNADCH/AA + AC024JXADCH/AA

Cooling

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
0	19.1	14.2	1.72	20.1	14.6	1.76	20.9	15.1	1.79	21.6	15.5	1.83	22.0	15.4	1.85	23.1	15.2	1.86	24.3	14.9	1.90
70	22.4	15.8	1.43	23.5	16.3	1.46	24.5	16.8	1.49	25.3	17.3	1.52	25.8	17.1	1.54	27.1	17.0	1.55	28.4	16.6	1.58
95	21.2	14.9	2.21	22.3	15.4	2.26	23.3	15.9	2.30	24.0	16.4	2.35	24.5	16.2	2.37	25.7	16.0	2.40	27.0	15.7	2.44
115	17.3	13.4	2.23	18.3	13.8	2.28	19.0	14.2	2.32	19.6	14.7	2.37	20.0	14.5	2.39	21.0	14.4	2.42	22.1	14.1	2.47

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB)											
	61		64		68		70		72		75	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-4	15.1	2.02	15.0	2.00	14.8	1.98	14.7	1.96	14.5	1.94	14.4	1.92
14	23.2	2.85	23.0	2.82	22.8	2.79	22.5	2.77	22.3	2.74	22.1	2.71
32	25.6	2.74	25.3	2.72	25.1	2.69	24.8	2.66	24.6	2.64	24.3	2.61
47	27.8	2.64	27.5	2.61	27.3	2.59	27.0	2.56	26.7	2.53	26.5	2.51
75.2	27.0	1.82	26.7	1.80	26.4	1.78	26.2	1.76	25.9	1.75	25.7	1.73

NOTE

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

4. Capacity Table

AC030MNTDCH/AA + AC030JXADCH/AA

Cooling

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
0	28.1	20.7	1.97	29.6	21.4	2.01	30.8	22.0	2.06	31.8	22.7	2.10	32.4	22.5	2.12	34.1	22.3	2.14	35.8	21.8	2.18
70	30.0	21.5	2.22	31.6	22.2	2.27	32.9	22.8	2.32	33.9	23.6	2.36	34.6	23.3	2.39	36.3	23.1	2.41	38.2	22.6	2.46
95	26.5	20.6	2.96	27.9	21.3	3.03	29.1	21.9	3.09	30.0	22.6	3.15	30.6	22.4	3.18	32.1	22.2	3.21	33.7	21.7	3.28
115	19.6	17.0	2.86	20.6	17.5	2.92	21.5	18.1	2.98	22.2	18.6	3.04	22.6	18.4	3.07	23.7	18.2	3.10	24.9	17.9	3.16

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB)											
	61		64		68		70		72		75	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-4	19.9	3.04	19.7	3.01	19.5	2.98	19.3	2.95	19.1	2.92	18.9	2.89
14	30.4	4.17	30.1	4.13	29.8	4.09	29.5	4.05	29.2	4.01	28.9	3.97
32	31.3	3.63	31.0	3.59	30.7	3.55	30.4	3.52	30.1	3.48	29.8	3.45
47	33.0	3.46	32.6	3.43	32.3	3.39	32.0	3.36	31.7	3.33	31.4	3.29
75.2	40.3	3.32	39.9	3.29	39.5	3.26	39.1	3.22	38.7	3.19	38.3	3.16

NOTE

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

4. Capacity Table

AC036MNTDCH/AA + AC036JXADCH/AA

Cooling

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
0	26.6	21.6	1.93	28.0	22.2	1.97	29.1	22.9	2.01	30.0	23.6	2.05	30.6	23.4	2.07	32.2	23.2	2.09	33.8	22.7	2.14
70	32.1	22.6	1.90	33.8	23.3	1.94	35.2	24.0	1.98	36.3	24.7	2.02	37.0	24.5	2.04	38.9	24.2	2.06	40.8	23.7	2.10
95	31.8	23.1	3.64	33.5	23.8	3.72	34.9	24.5	3.79	36.0	25.3	3.87	36.7	25.1	3.91	38.6	24.8	3.95	40.5	24.3	4.03
115	23.7	18.9	3.37	25.0	19.5	3.44	26.0	20.1	3.51	26.8	20.7	3.58	27.3	20.5	3.62	28.7	20.3	3.65	30.1	19.9	3.73

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB)											
	61		64		68		70		72		75	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-4	30.8	4.85	30.5	4.80	30.2	4.76	29.9	4.71	29.6	4.66	29.3	4.62
14	38.1	5.69	37.7	5.64	37.4	5.58	37.0	5.53	36.6	5.47	36.3	5.42
32	39.2	4.97	38.8	4.92	38.4	4.87	38.0	4.82	37.6	4.77	37.2	4.73
47	41.2	4.24	40.8	4.20	40.4	4.16	40.0	4.12	39.6	4.08	39.2	4.04
75.2	43.9	3.66	43.5	3.63	43.0	3.59	42.6	3.55	42.2	3.52	41.8	3.48

NOTE

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

5. Capacity Correction

AC012MNADCH/AA + AC012KXADCH/AA

Cooling

		Pipe Length (ft)				
		16.4	32.8	49.2	65.6	82.0
Level Difference (ft)	49.2	-	-	0.97	0.95	0.93
	32.8	-	0.98	0.97	0.95	0.93
	16.4	1	0.98	0.97	0.95	0.93
	0	1	0.98	0.97	0.95	0.93
	-16.4	1	0.97	0.96	0.94	0.93
	-32.8	-	0.97	0.95	0.94	0.92
	-49.2	-	-	0.95	0.93	0.91

Heating

		Pipe Length (ft)				
		16.4	32.8	49.2	65.6	82.0
Level Difference (ft)	49.2	-	-	0.96	0.93	0.91
	32.8	-	0.98	0.96	0.93	0.91
	16.4	1	0.98	0.96	0.93	0.91
	0	1	0.98	0.96	0.93	0.91
	-16.4	1	0.98	0.96	0.93	0.91
	-32.8	-	0.98	0.96	0.93	0.91
	-49.2	-	-	0.96	0.93	0.91

5. Capacity Correction

AC018MNADCH/AA + AC018JXADCH/AA

Cooling

		Pipe Length (ft)					
		16.4	32.8	49.2	65.6	82.0	98.4
Level Difference (ft)	65.6	-	-	-	0.96	0.94	0.93
	49.2	-	-	0.97	0.96	0.94	0.93
	32.8	-	0.99	0.97	0.96	0.94	0.93
	16.4	1	0.99	0.97	0.96	0.94	0.93
	0.0	1	0.99	0.97	0.96	0.94	0.93
	-16.4	1	0.98	0.97	0.95	0.94	0.93
	-32.8	-	0.97	0.96	0.95	0.93	0.92
	-49.2	-	-	0.96	0.94	0.93	0.92
	-65.6	-	-	-	0.94	0.93	0.91

Heating

		Pipe Length (ft)					
		16.4	32.8	49.2	65.6	82.0	98.4
Level Difference (ft)	65.6	-	-	-	0.94	0.92	0.90
	49.2	-	-	0.96	0.94	0.92	0.90
	32.8	-	0.98	0.96	0.94	0.92	0.90
	16.4	1	0.98	0.96	0.94	0.92	0.90
	0.0	1	0.98	0.96	0.94	0.92	0.90
	-16.4	1	0.98	0.96	0.94	0.92	0.90
	-32.8	-	0.98	0.96	0.94	0.92	0.90
	-49.2	-	-	0.96	0.94	0.92	0.90
	-65.6	-	-	-	0.94	0.92	0.90

5. Capacity Correction

AC024MNADCH/AA + AC024JXADCH/AA, AC030MNTDCH/AA + AC030JXADCH/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
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	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	0.0	1	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-16.4	1	0.98	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88
	-32.8	-	0.98	0.97	0.96	0.95	0.94	0.92	0.90	0.89	0.86
	-49.2	-	-	0.97	0.96	0.94	0.93	0.91	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	0.90	0.88	0.86	0.81
	-98.4	-	-	-	-	-	0.92	0.90	0.88	0.85	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
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	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	0.0	1	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-16.4	1	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

5. Capacity Correction

AC036MNTDCH/AA + AC036JXADCH/AA

Cooling

Level Difference (m)	Pipe Length (ft)														
	16.4	32.8	49.2	65.6	82	98.4	114.8	131.2	147.6	164	180.4	196.9	213.3	229.7	246.1
98.4	-	-	-	-	-	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
82	-	-	-	-	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	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	1	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	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	-	-	-	-	0.95	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

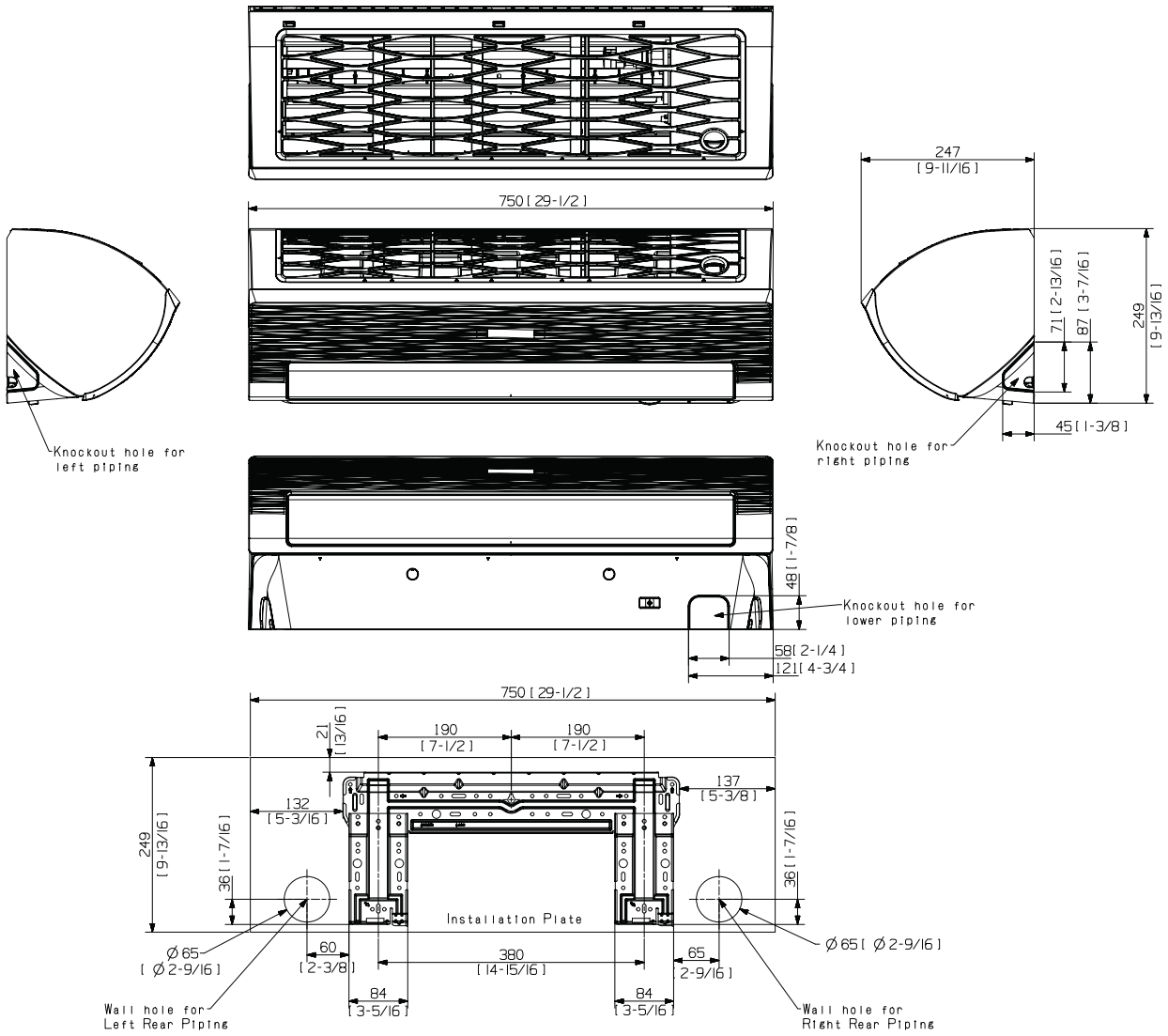
Level Difference (m)	Pipe Length (ft)														
	16.4	32.8	49.2	65.6	82	98.4	114.8	131.2	147.6	164	180.4	196.9	213.3	229.7	246.1
98.4	-	-	-	-	-	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
82	-	-	-	-	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
65.6	-	-	-	0.97	0.97	0.96	0.95	0.94	0.93	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	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	1	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	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	-	-	-	-	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
-98.4	-	-	-	-	-	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88

6. Dimensional Drawing

Indoor Unit

AC012MNADCH/AA

Unit: mm (inch)



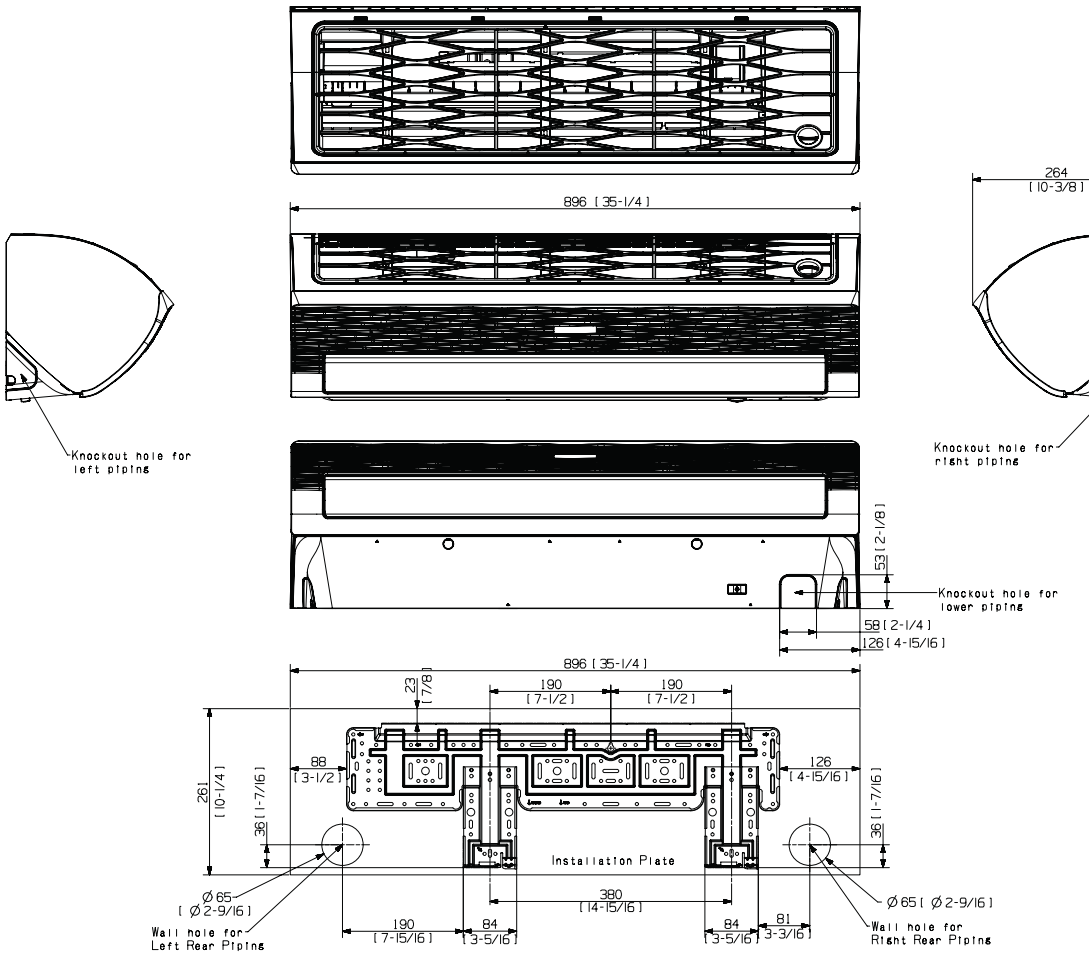
No.	Name	Description
1	Liquid pipe connection	6.35 (1/4")
2	Gas pipe connection	9.52 (3/8")
3	Drain pipe connection	ID 18 HOSE
4	Power supply & Communication wiring conduit	-

6. Dimensional Drawing

Indoor Unit

AC018MNADCH/AA

Unit: mm (inch)



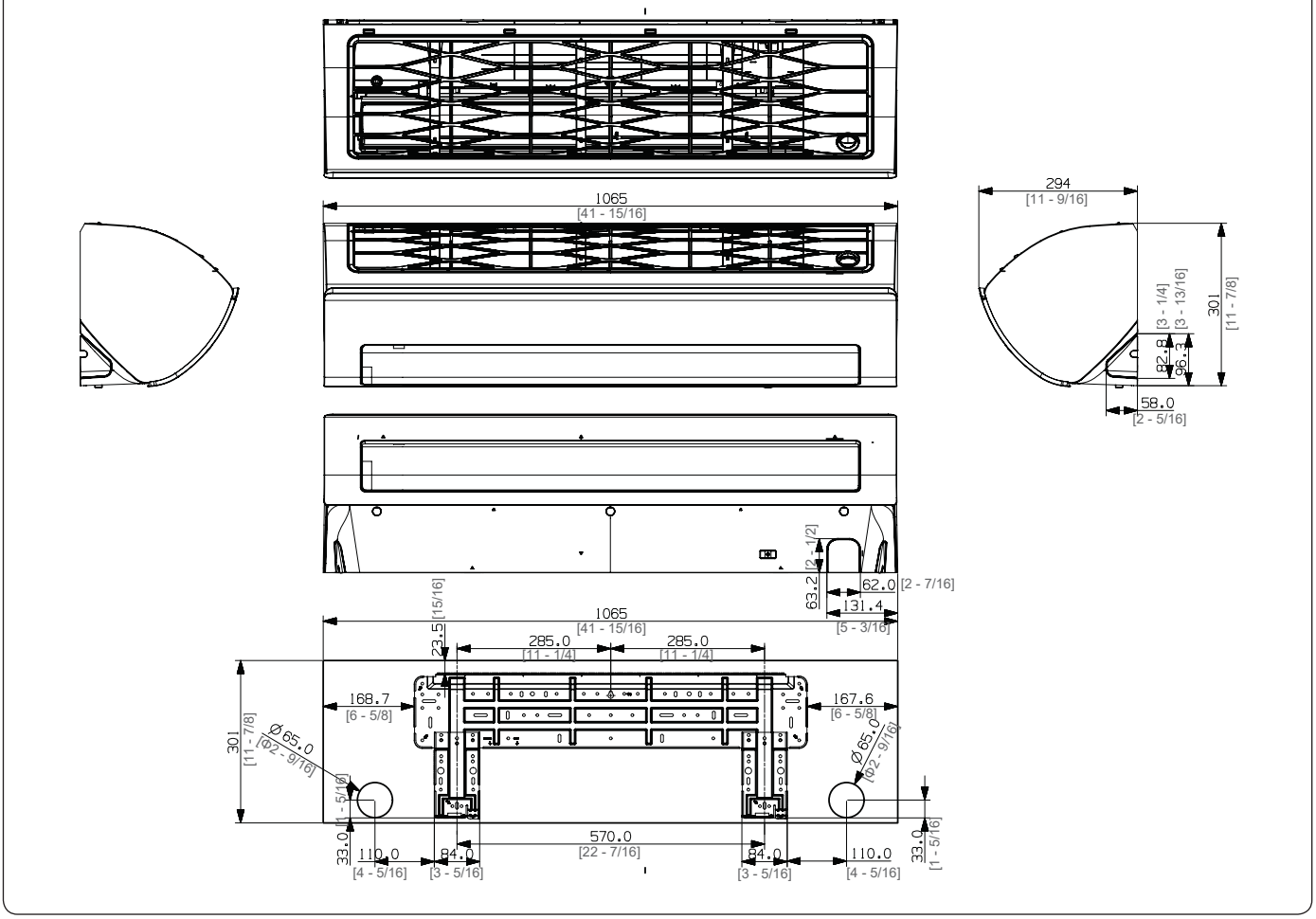
No.	Name	Description
1	Liquid pipe connection	6.35 (1/4")
2	Gas pipe connection	12.7 (1/2")
3	Drain pipe connection	ID 18 HOSE
4	Power supply & Communication wiring conduit	-

6. Dimensional Drawing

Indoor Unit

AC024MNADCH/AA

Unit: mm (inch)



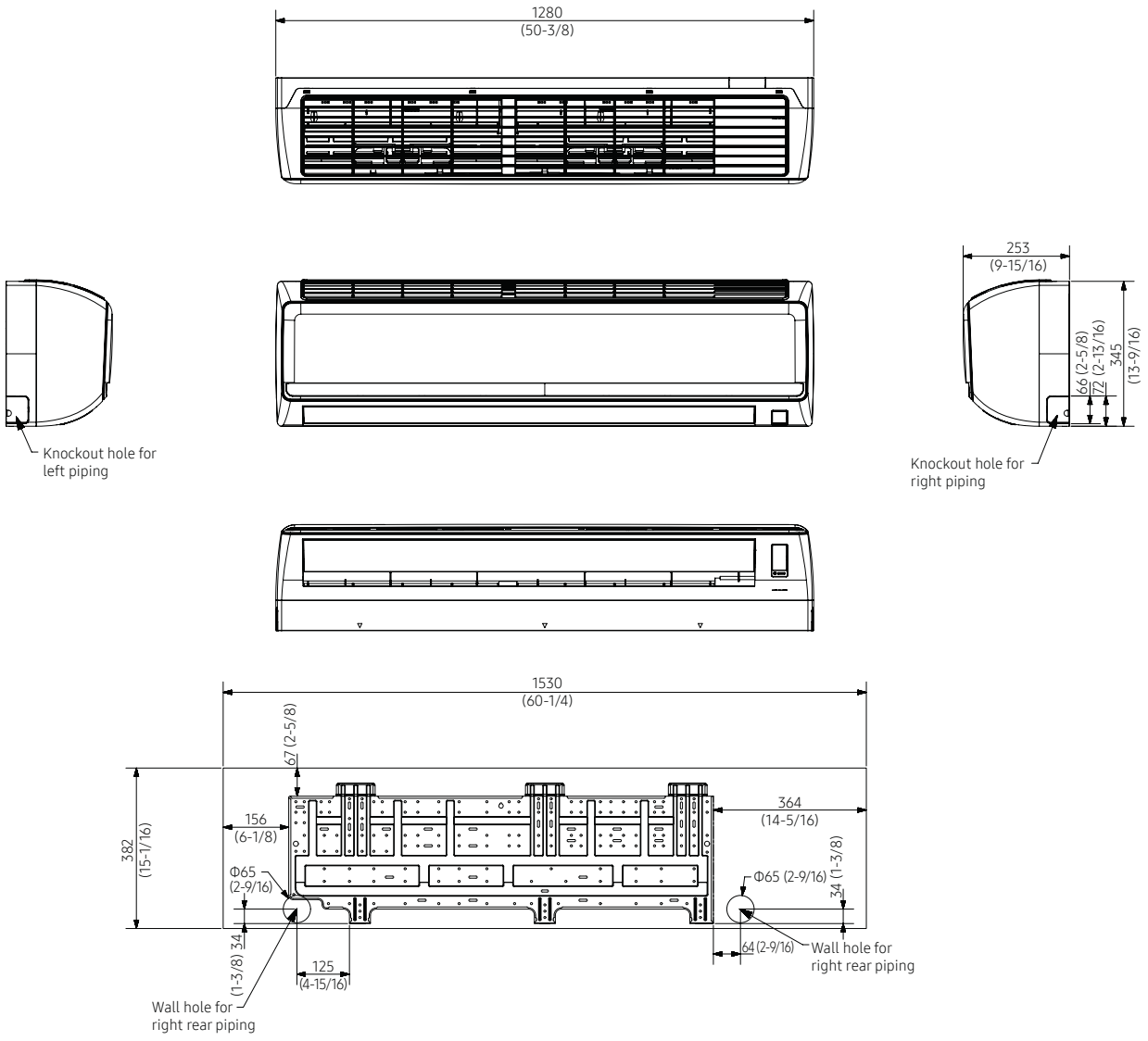
No.	Name	Description
1	Liquid pipe connection	6.35 (1/4")
2	Gas pipe connection	15.88 (5/8")
3	Drain pipe connection	ID 18 HOSE
4	Power supply & Communication wiring conduit	-

6. Dimensional Drawing

Indoor unit

AC030MNTDCH/AA, AC036MNTDCH/AA

Unit: mm (inch)



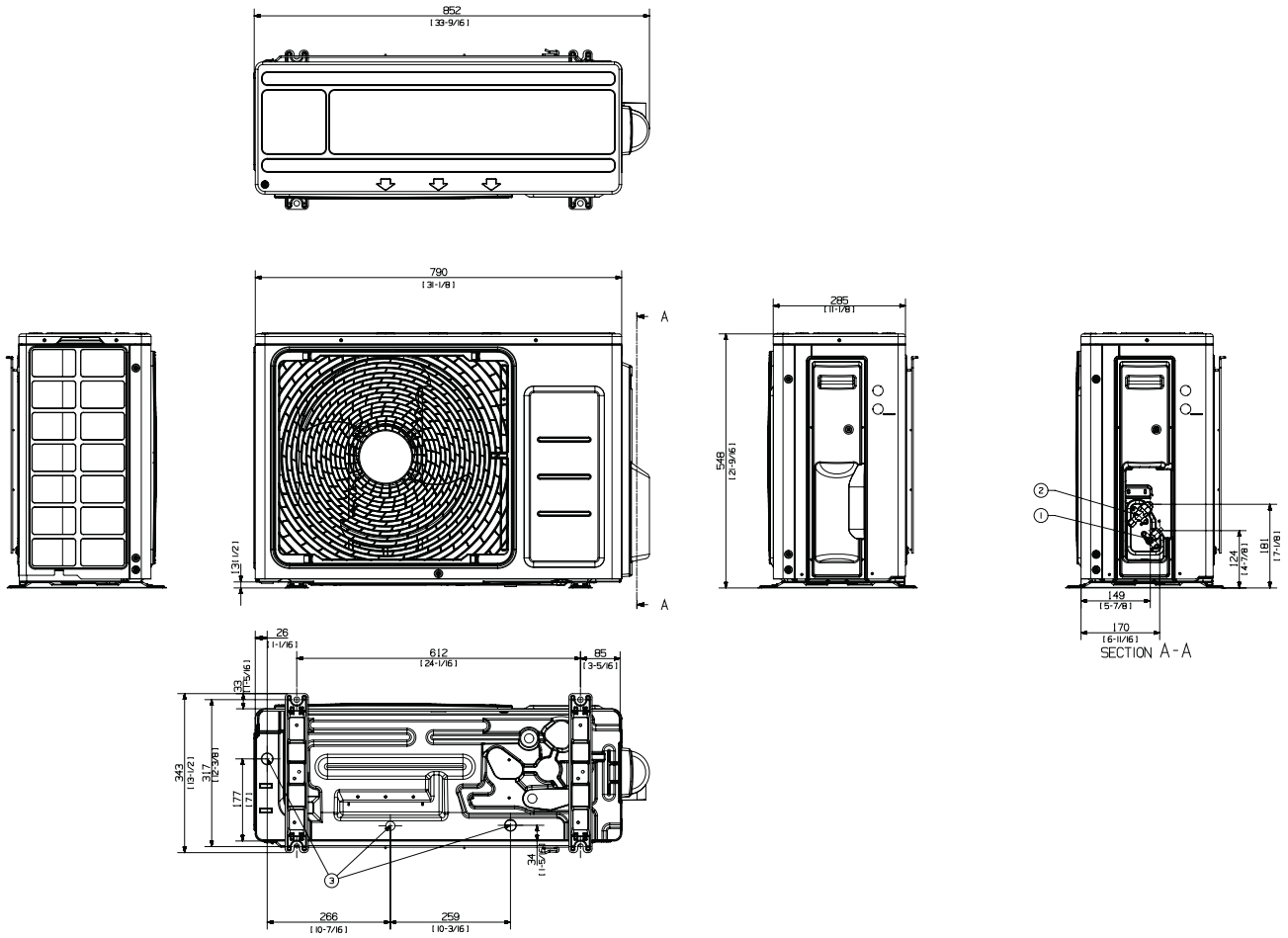
No.	Name	Description
1	Liquid pipe connection	9.52 (3/8")
2	Gas pipe connection	15.88 (5/8")
3	Drain pipe connection	ID 18 HOSE
4	Power supply & Communication wiring conduit	-

6. Dimensional Drawing

Outdoor unit

AC012KXADCH/AA

Unit: mm (inch)



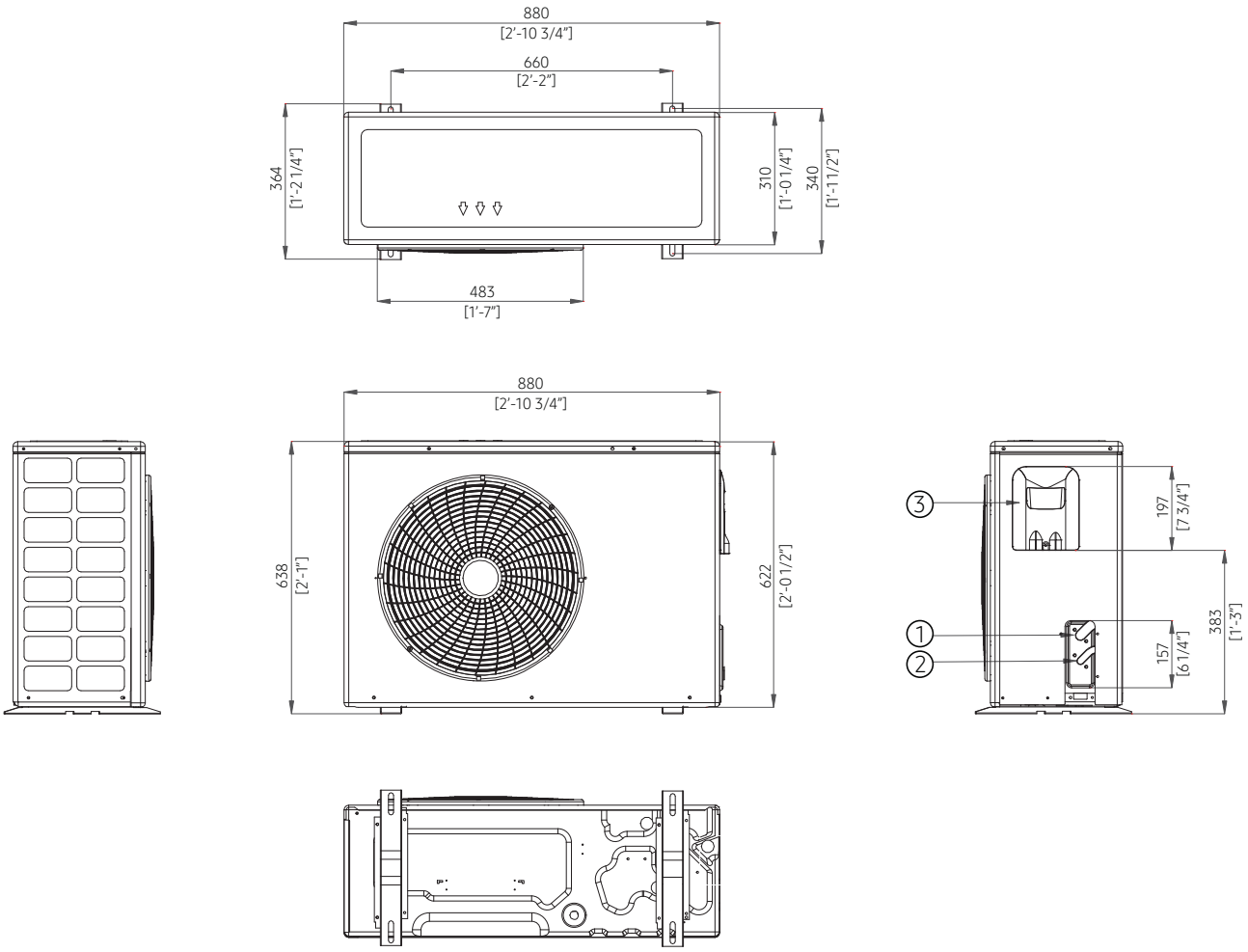
No.	Name	Description
1	Refrigerant liquid pipe	Φ6.35(1/4)
2	Refrigerant gas pipe	Φ9.52(3/8)
3	Drain Hole	-

6. Dimensional Drawing

Outdoor unit

AC018JXADCH/AA

Unit: mm (inch)



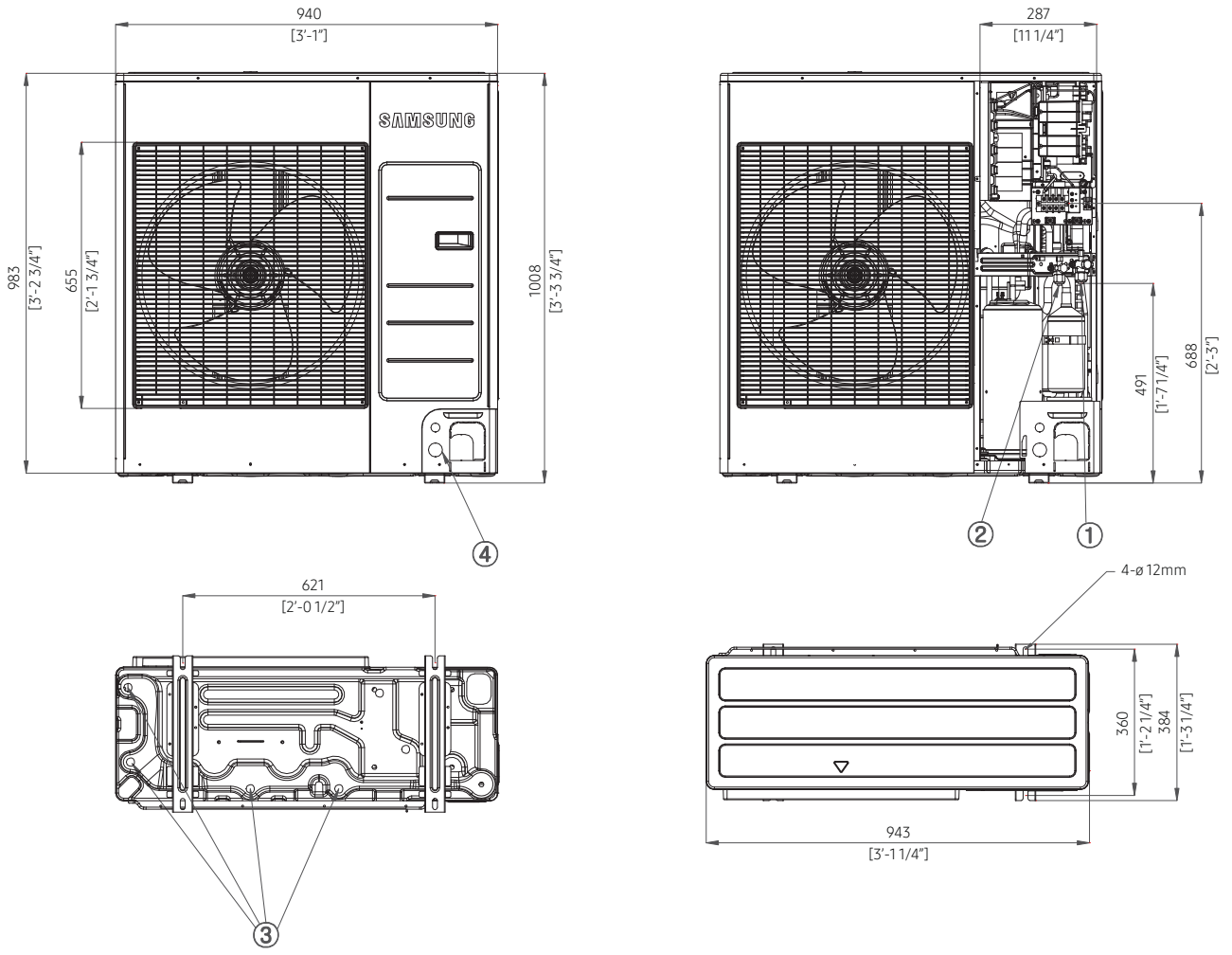
No.	Name	Description
1	Refrigerant gas pipe	Φ12.7(1/2)
2	Refrigerant liquid pipe	Φ6.35(1/4)
3	Drain Hole	-

6. Dimensional Drawing

Outdoor unit

AC024JXADCH/AA, AC030JXADCH/AA

Unit: mm (inch)



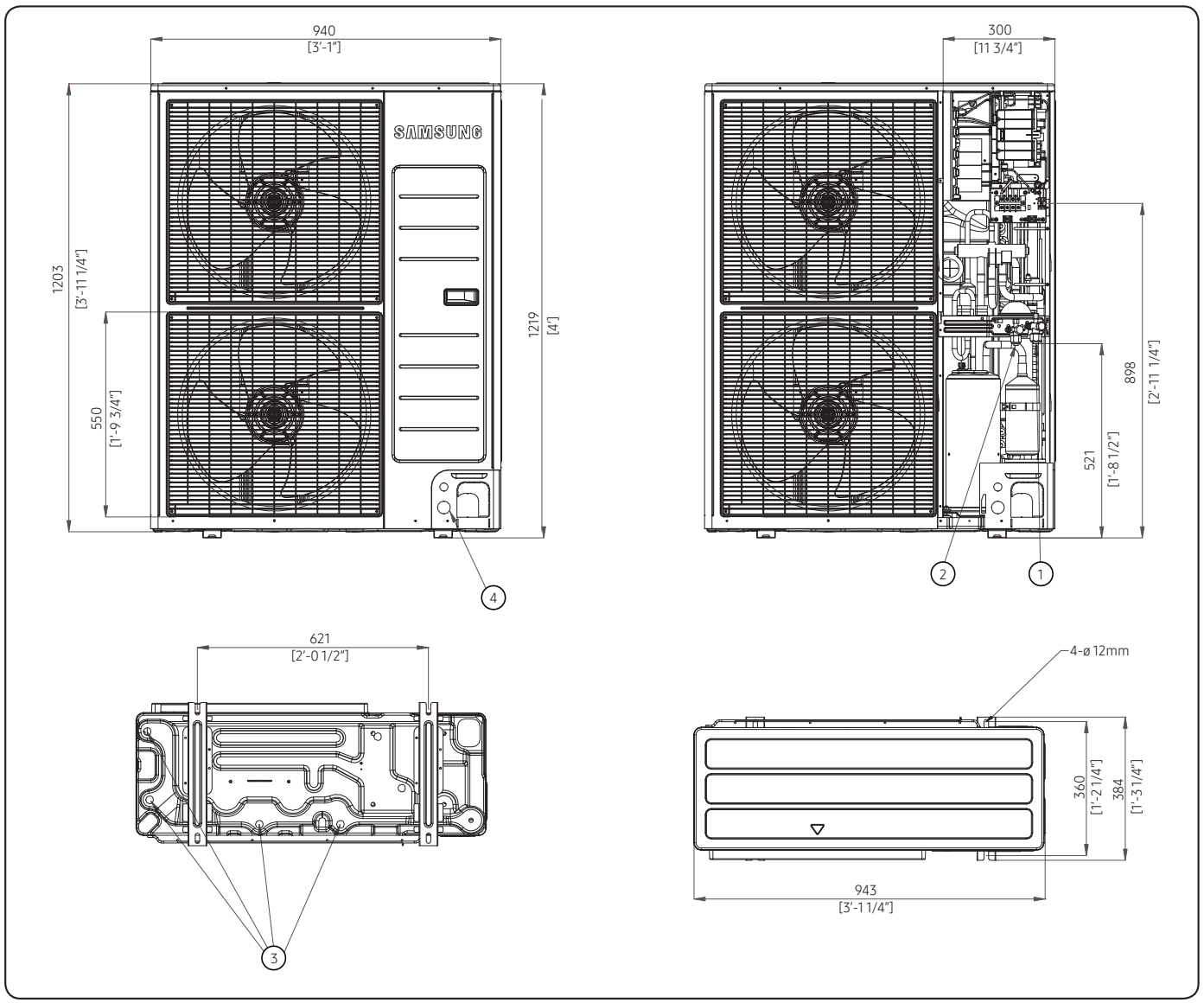
No.	Name	Description
1	Refrigerant gas pipe	Φ15.88(5/8)
2	Refrigerant liquid pipe	Φ9.52(3/8)
3	Drain Hole	Connect with the provided drain plug
4	Communication wiring conduit	Front / Side / Rear, Φ22 [7/8]

6. Dimensional Drawing

Outdoor unit

AC036JXADCH/AA

Unit: mm (inch)

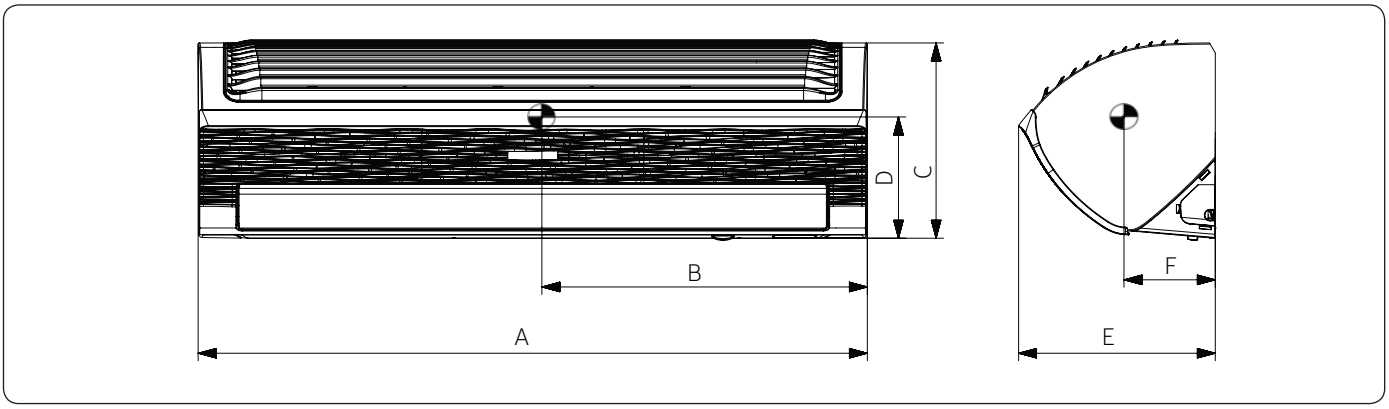


No.	Name	Description
1	Refrigerant gas pipe	Φ15.88(5/8)
2	Refrigerant liquid pipe	Φ9.52(3/8)
3	Drain Hole	Connect with the provided drain plug
4	Communication wiring conduit	Front / Side / Rear, Φ22 [7/8]

7. Center of Gravity

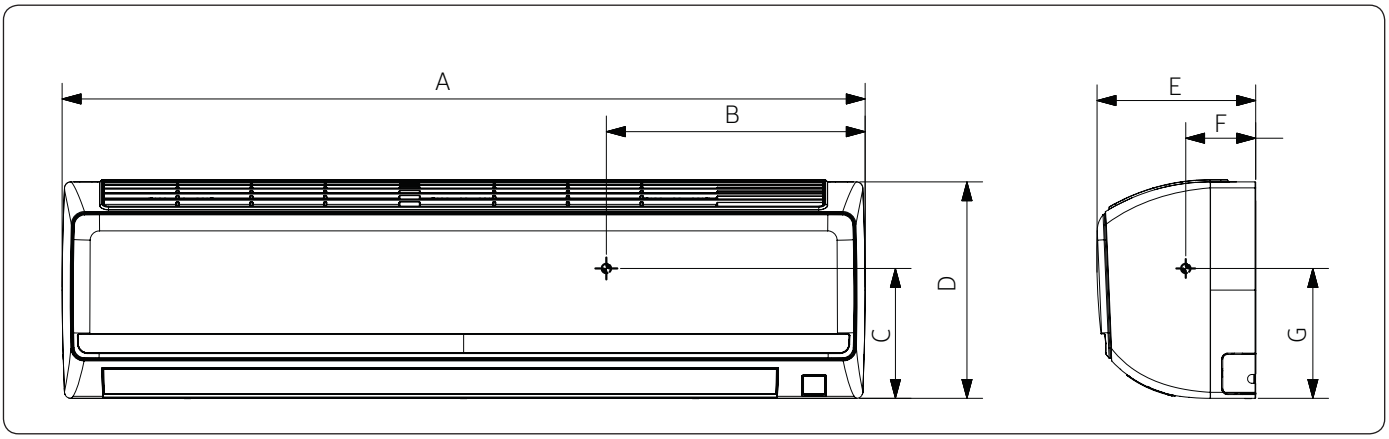
Indoor Unit

Unit: mm (inch)



	A	B	C	D	E	F
AC012MNADCH/AA	750 [29-1/2]	335 [13-3/16]	249 [9-13/16]	130 [5-1/8]	247 [9-11/16]	105 [4-1/8]
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]
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)

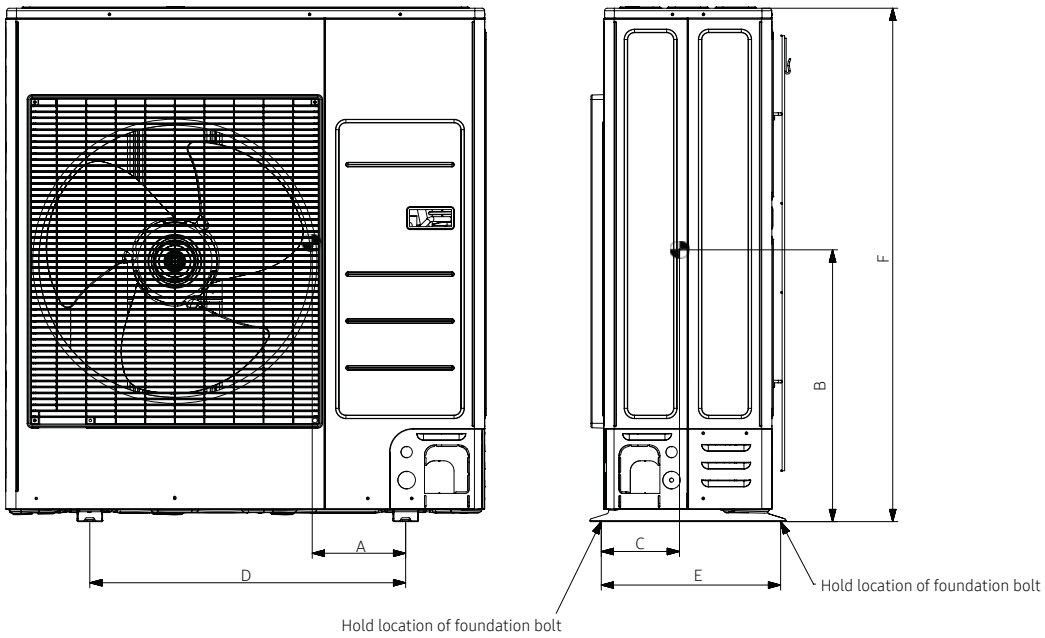


	A	B	C	D	E	F	F
AC030MNTDCH/AA AC036MNTDCH/AA	1280 [50-3/8]	412 [16-1/4]	207 [8-1/8]	345 [13-9/16]	253 [9-15/16]	111 [4-3/8]	207 [8-1/8]

7. Center of Gravity

Outdoor Unit

Unit: mm (inch)

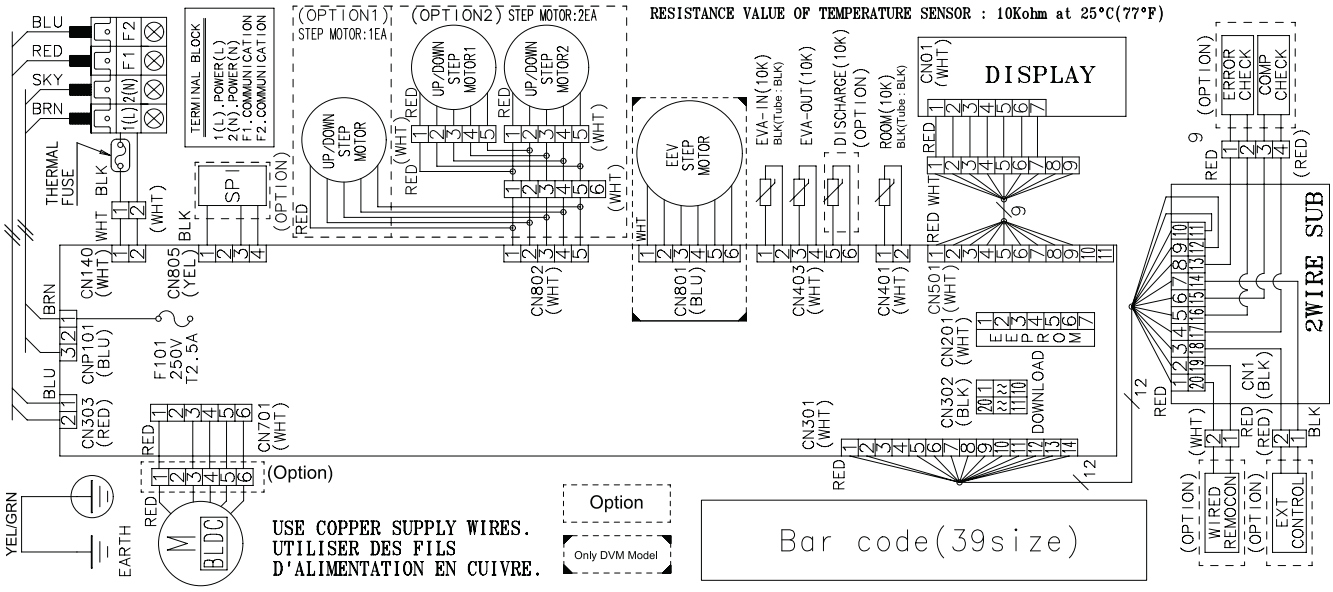


Model	A	B	C	D	E	F
AC018JXADCH	220 [8-5/8]	290 [11-7/16]	150 [5-7/8]	660 [26]	336 [13-1/4]	638 [25-1/8]
AC024JXADCH AC030JXADCH	205 [8-1/8]	445 [17-1/2]	160 [6-5/16]	620 [24-3/8]	328 [12-7/8]	998 [39-5/16]
AC036JXADCH	210 [8-1/4]	530 [20-7/8]	160 [6-5/16]	620 [24-3/8]	328 [12-7/8]	1210 [47-5/8]
AC012KXADCH/AA	230 [9-1/16]	230 [9-1/16]	160 [6-5/16]	612 [24-1/16]	317 [12-3/8]	548 [21-9/16]

8. Electrical Wiring Diagram

Indoor Unit

Unit: mm (inch)



LED LAMP DISPLAY			DESCRIPTION
OPERATION	TIMER	TURBO	○ : ON ✕ : OFF ◑ : BLINKS
✕	◑	✕	ROOM TEMPERATURE SENSOR ERROR(OPEN/SHORT)
◑	◑	✕	EVA-IN/OUT TEMPERATURE SENSOR ERROR(OPEN/SHORT)
✕	✕	◑	FAN RPM FEEDBACK ERROR(INDOOR UNIT)
◑	✕	◑	TEMPERATURE SENSOR ERROR(OUTDOOR UNIT)
✕	◑	◑	COMMUNICATION ERROR(OUTDOOR UNIT↔INDOOR UNIT)
○	◑	◑	SELF-DIAGNOSIS/ERROR OF OUTDOOR UNIT (CHECK ERROR CODE AT OUTDOOR UNIT'S OR SOLUTION DISPLAY)
◑	◑	◑	EEPROM ERROR/EEPROM OPTION ERROR(INDOOR UNIT)
◑	○	◑	NO MATCH BETWEEN OUTDOOR UNIT AND INDOOR UNIT

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		

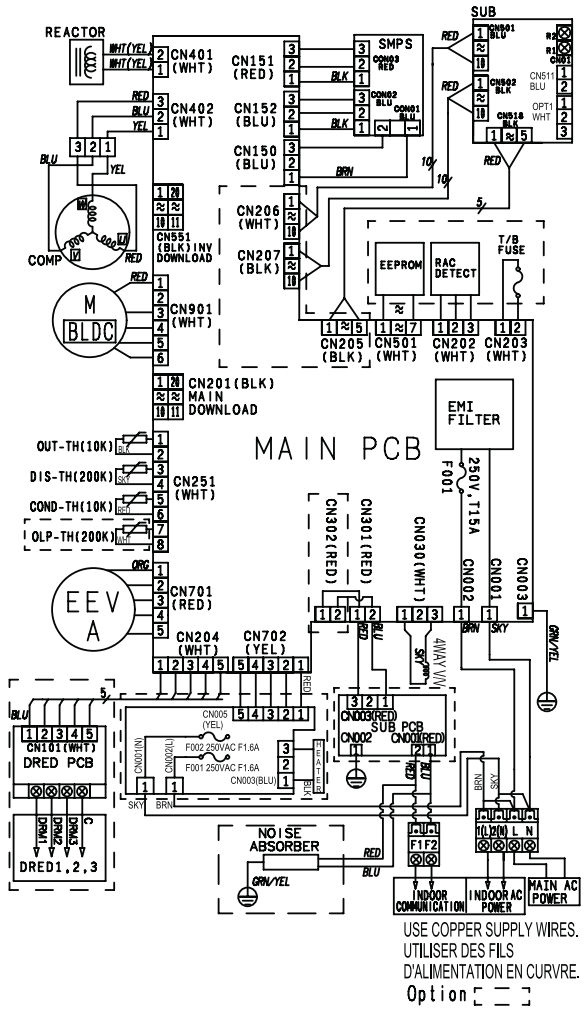
NOTE

- 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 shortciruit 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

8. Electrical Wiring Diagram

Outdoor Unit

AC012KXADCH/AA



DB68-04512A ※NOTE - 25°C (77°F) at 10Kohm / 200Kohm

MAIN PCB	Printed circuit board(MAIN)	EEV	Electronic 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)	OLP-TEMP	Thermistor OLP	COND-TH(10K)	Thermistor CONDENSOR
SUB	Printed circuit board(SUB)				

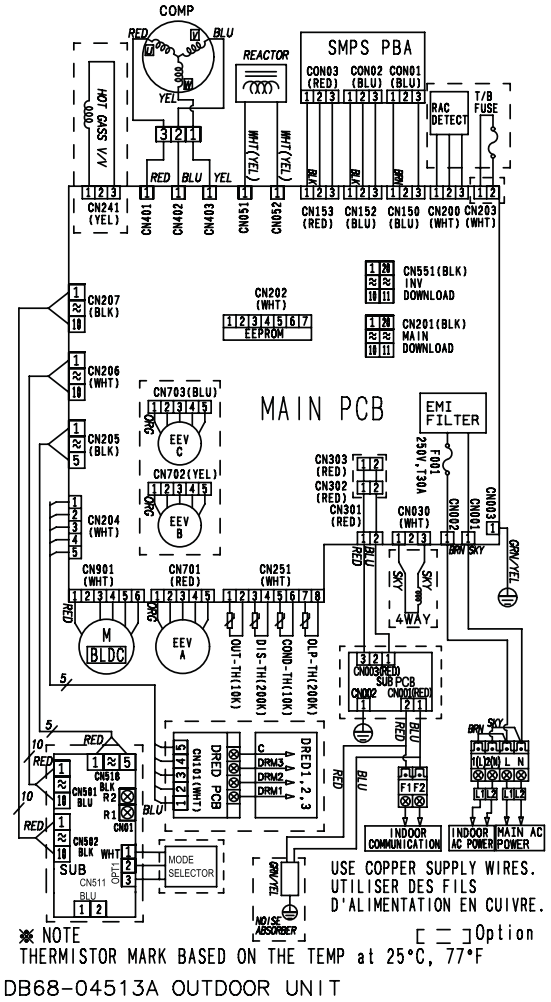
NOTE

- 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)

8. Electrical Wiring Diagram

Outdoor Unit

AC018JXADCH/AA



MAIN PCB	Printed circuit board(MAIN)	EEV	Electronic 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)	HOT GASS V/V	HOT GASS Valve	COND-TH(10K)	Thermistor CONDENSOR
SUB	Printed circuit board(SUB)	OLP-TEMP	Thermistor OLP		

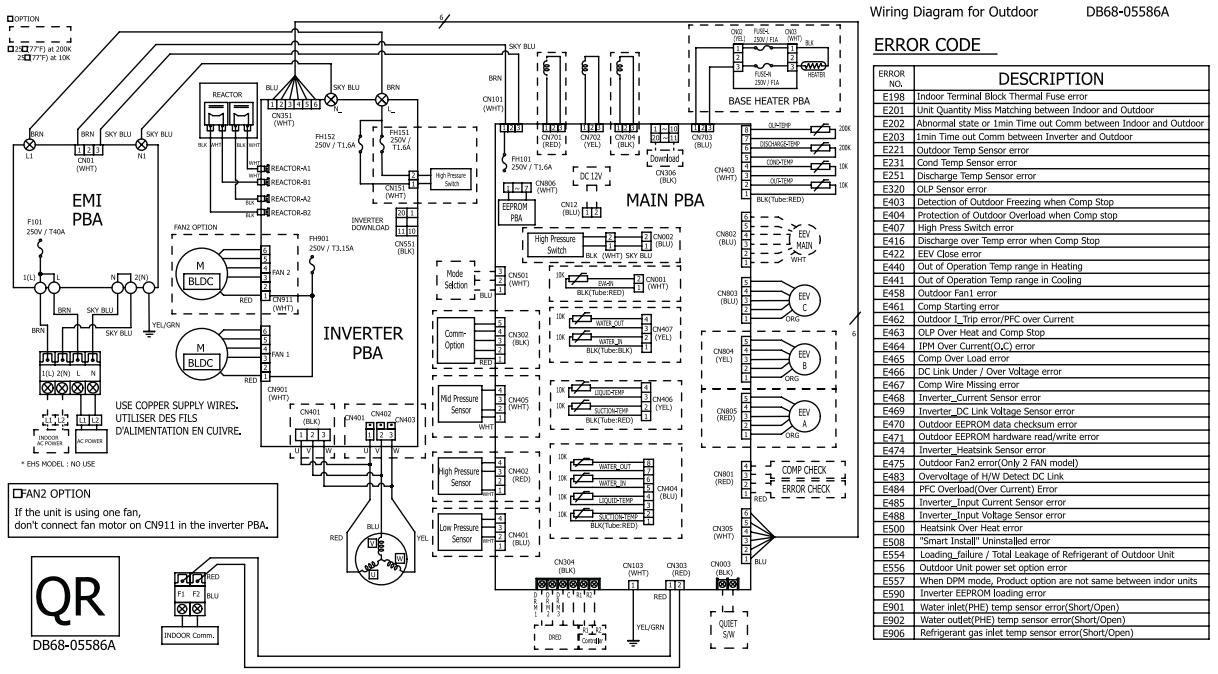
NOTE

- 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)

8. Electrical Wiring Diagram

Outdoor Unit

AC024JXADCH/AA, AC030JXADCH/AA, AC036JXADCH/AA



ERROR NO.	DESCRIPTION
E198	Indoor Terminal Block Thermal Fuse error
E201	Unit Quantity Miss Matching between Indoor and Outdoor
E202	Abnormal state or 1min Time out Comm between Indoor and Outdoor
E203	1min Time out Comm between Inverter and Outdoor
E221	Outdoor Temp Sensor error
E231	Cond Temp Sensor error
E251	Discharge Temp Sensor error
E320	OLP Sensor error
E403	Detection of Outdoor Freezing when Comp Stop
E404	Protection of Outdoor Overload when Comp stop
E407	High Press Switch error
E416	Discharge over Temp error when Comp Stop
E422	EEV Close error
E440	Out of Operation Temp range in Heating
E441	Out of Operation Temp range in Cooling
E458	Outdoor Fan1 error
E461	Comp Starting error
E462	Outdoor I_Trip error/PFC over Current
E463	OLP Over Heat and Comp Stop
E464	IPM Over Current(O,C) error
E465	Comp Over Load error
E466	DC Link Under / Over Voltage error
E467	Comp Wire Missing error
E468	Inverter_Current Sensor error
E469	Inverter_DC Link Voltage Sensor error
E470	Outdoor EEPROM data checksum error
E471	Outdoor EEPROM hardware read/write error
E474	Inverter_Heatsink Sensor error
E475	Outdoor Fan2 error(Only 2 FAN model)
E483	Overvoltage of H/W Detect DC Link
E484	PFC Overload(Over Current) Error
E485	Inverter_Input Current Sensor error
E488	Inverter_Input Voltage Sensor error
E500	Heatsink Over Heat error
E508	"Smart Install" Uninstalled error
E554	Loading_failure / Total Leakage of Refrigerant of Outdoor Unit
E556	Outdoor Unit power set option error
E557	When DPM mode, Product option are not same between indor units
E590	Inverter EEPROM loading error
E901	Water inlet(PHE) temp sensor error(Short/Open)
E902	Water outlet(PHE) temp sensor error(Short/Open)
E906	Refrigerant gas inlet temp sensor error(Short/Open)

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

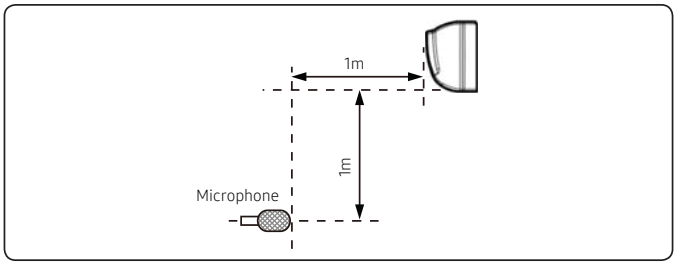
NOTE

- 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

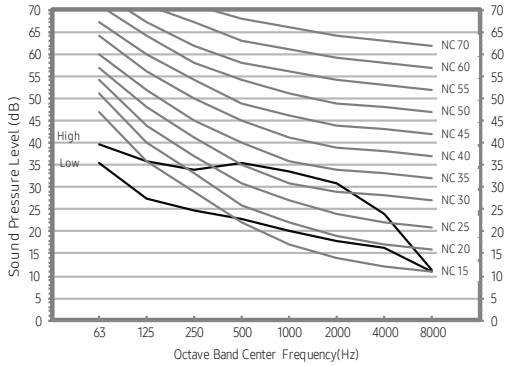


Unit: dB(A)

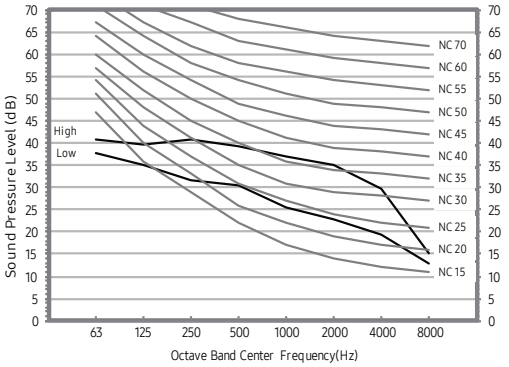
Model	High	Mid	Low
AC012MNADCH/AA	38	32	26
AC018MNADCH/AA	42	37	32
AC024MNADCH/AA	43	39	35

- NC Curve

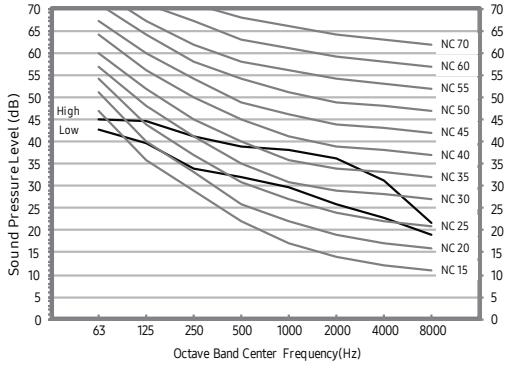
1) AC012MNADCH/AA



2) AC018MNADCH/AA



3) AC024MNADCH/AA



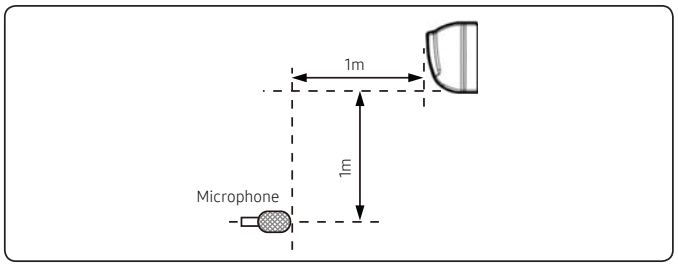
NOTE

- 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

Indoor Unit

Sound Pressure level

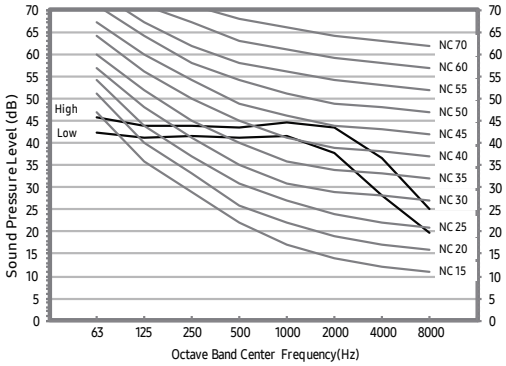


Unit: dB(A)

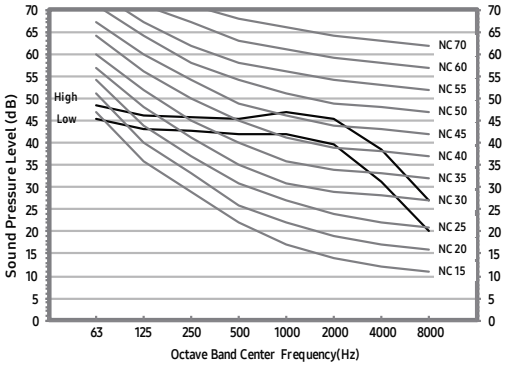
Model	High	Mid	Low
AC030MNTDCH/AA	49	47	45
AC036MNTDCH/AA	51	48	46

- NC Curve

1) AC030MNTDCH/AA



2) AC036MNTDCH/AA



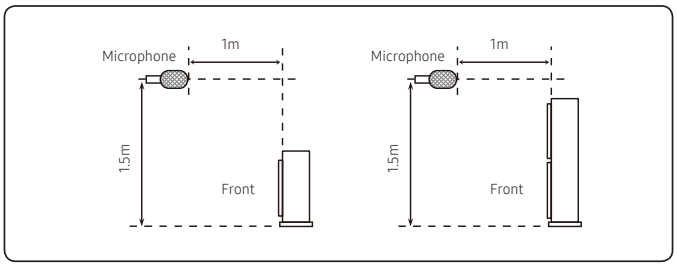
NOTE

- 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

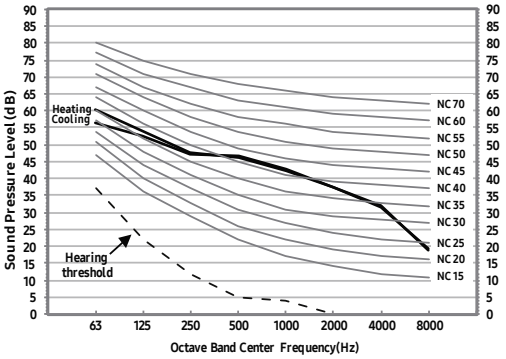


Unit: dB(A)

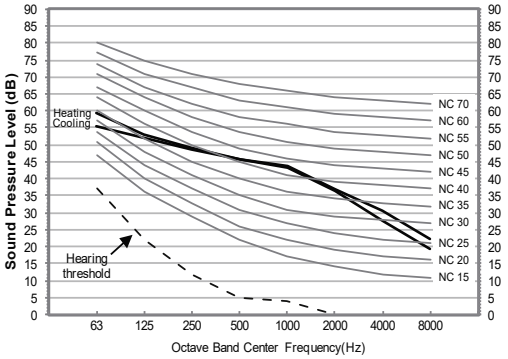
Model	Cooling	Heating
AC012KXADCH/AA	48	48
AC018JXADCH/AA	48	48
AC024JXADCH/AA	50	50

- NC Curve

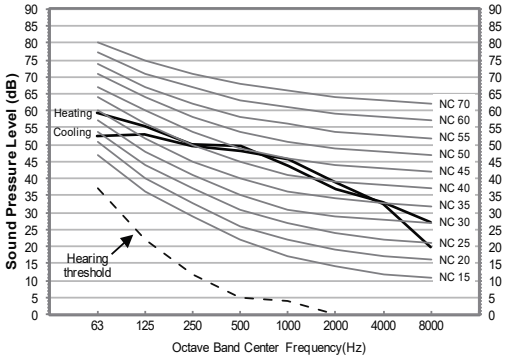
1) AC012KXADCH/AA



2) AC018JXADCH/AA



3) AC024JXADCH/AA



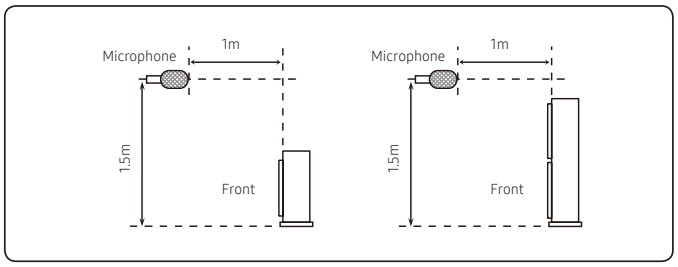
NOTE

- 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

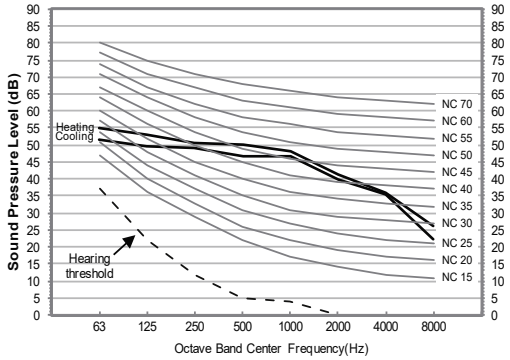


Unit: dB(A)

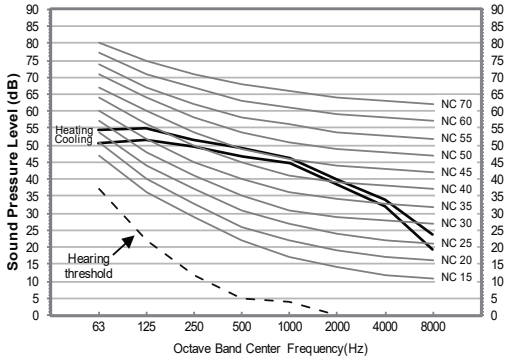
Model	Cooling	Heating
AC030JXADCH/AA	50	52
AC036JXADCH/AA	49	51

- NC Curve

1) AC030JXADCH/AA



2) AC036JXADCH/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

Indoor Unit

Sound Power level

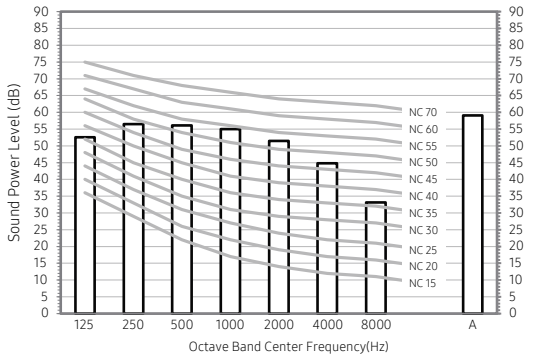
Unit: dB(A)

Model	Power
AC012MNADCH/AA	59
AC018MNADCH/AA	60
AC024MNADCH/AA	61

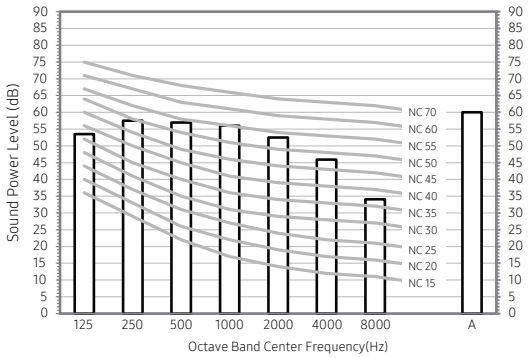
NOTE

- Specifications may be subject to change without prior notice.
- Sound Power Level
  - 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.

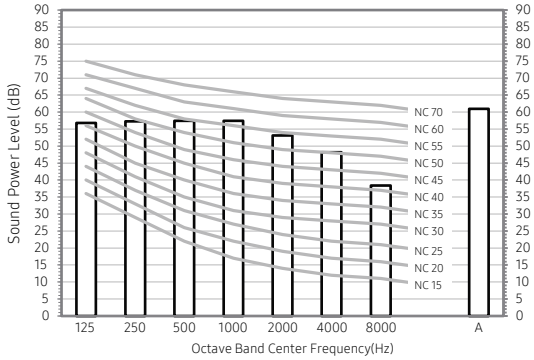
1) AC012MNADCH/AA



2) AC018MNADCH/AA



3) AC024MNADCH/AA



9. Sound Data

Indoor Unit

Sound Power level

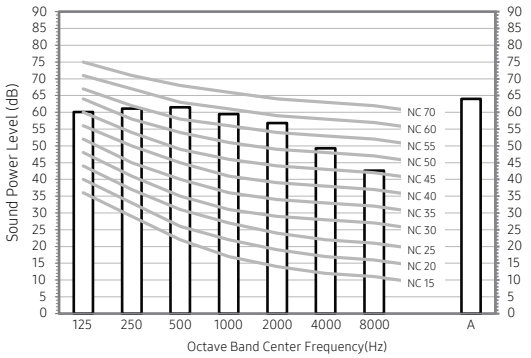
Unit: dB(A)

Model	Power
AC030MNTDCH/AA	64
AC036MNTDCH/AA	65

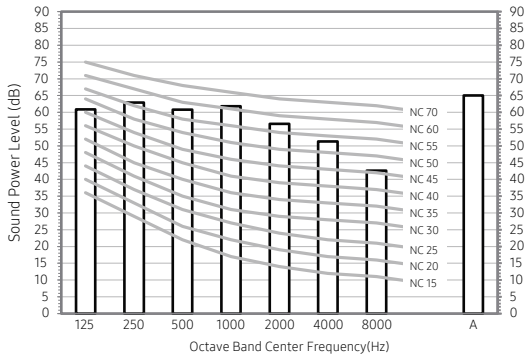
NOTE

- Specifications may be subject to change without prior notice.
- Sound Power Level
  - 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.

1) AC030MNTDCH/AA



2) AC036MNTDCH/AA



9. Sound Data

Outdoor Unit

Sound Power level

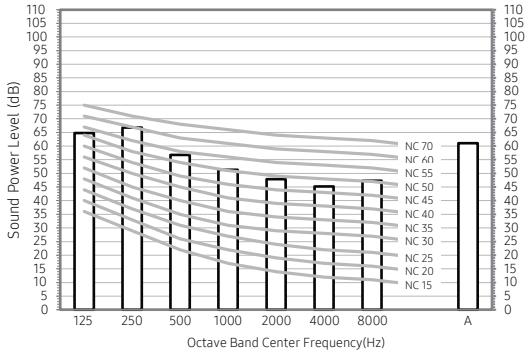
Unit: dB(A)

Model	Power
AC012KXADCH/AA	61
AC018JXADCH/AA	62
AC024JXADCH/AA	65

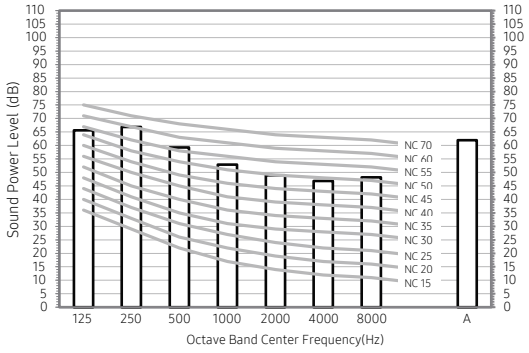
NOTE

- Specifications may be subject to change without prior notice.
- Sound Power Level
  - 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.

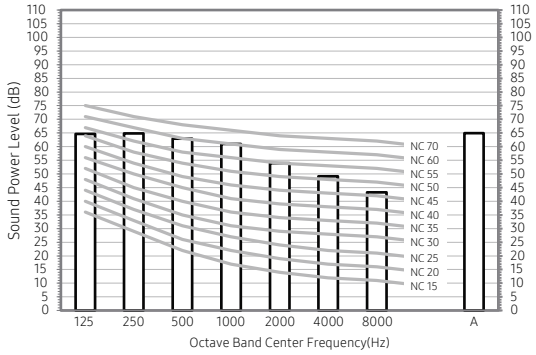
1) AC012KXADCH/AA



2) AC018JXADCH/AA



3) AC024JXADCH/AA



9. Sound Data

Outdoor Unit

Sound Power level

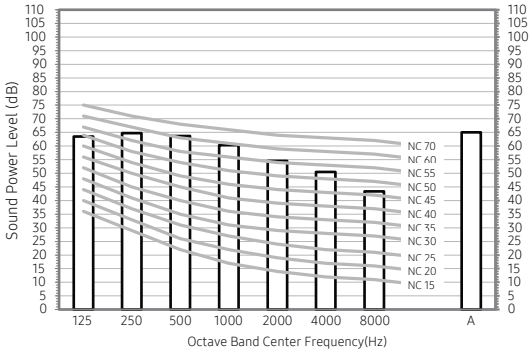
Unit: dB(A)

Model	Power
AC030JXADCH/AA	65
AC036JXADCH/AA	65

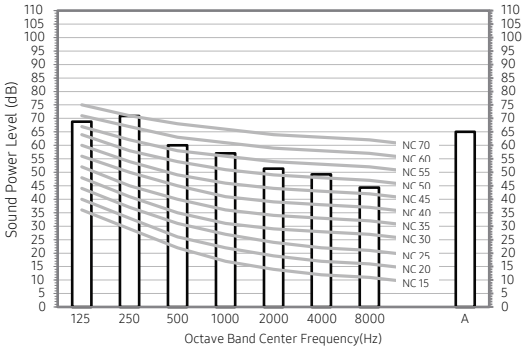
NOTE

- Specifications may be subject to change without prior notice.
- Sound Power Level
  - 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.

1) AC030JXADCH/AA



2) AC036JXADCH/AA

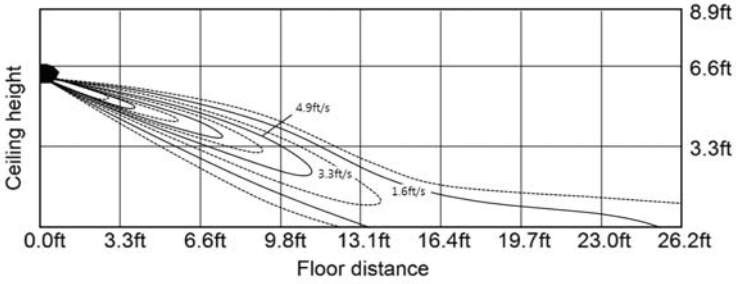


10. Temperature and air flow distribution

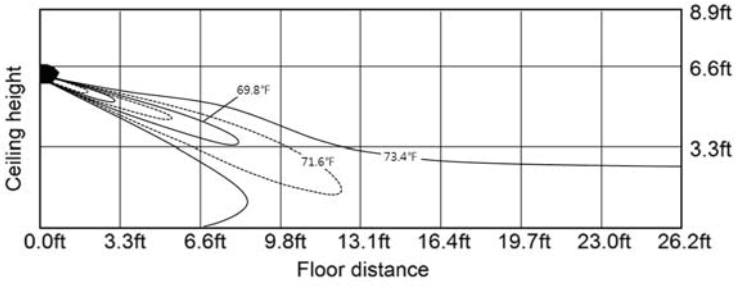
AC012MNADCHAA

1) Cooling air velocity distribution

Cooling Discharge angle : 23˚

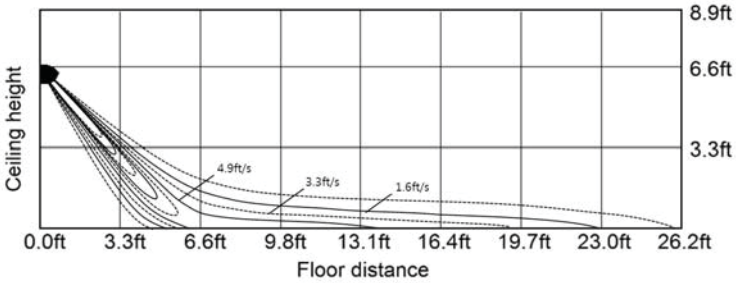


2) Cooling Temperature distribution

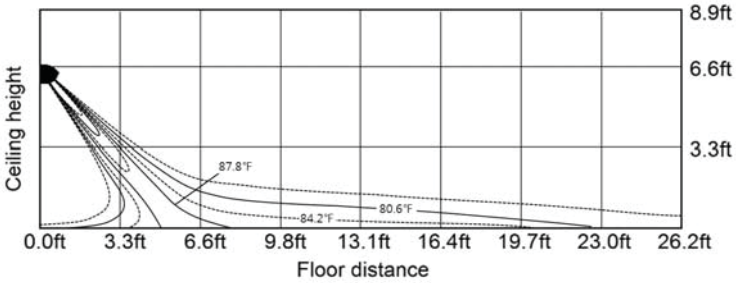


3) Heating air velocity distribution

Heating Discharge angle : 53˚



4) Heating Temperature distribution

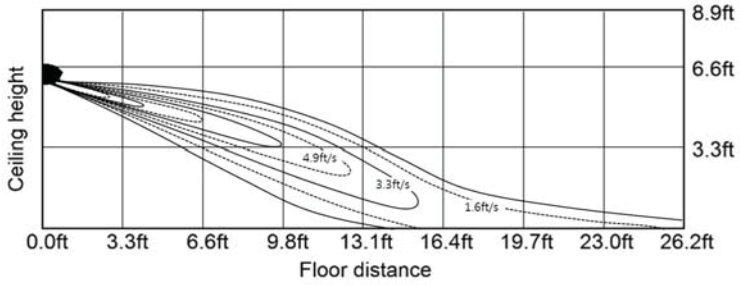


10. Temperature and air flow distribution

AC018MNADCHAA

1) Cooling air velocity distribution

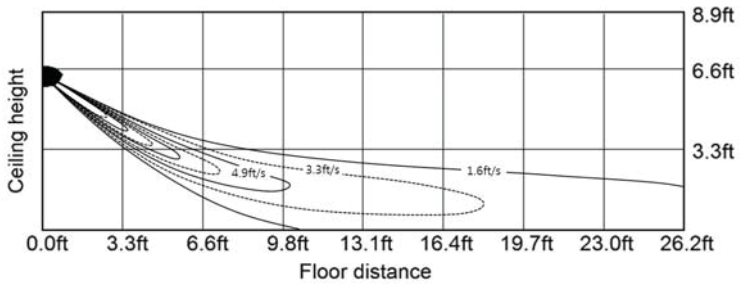
Cooling Discharge angle : 16˚



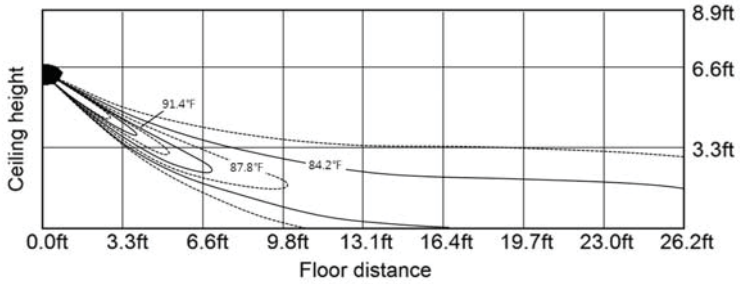
2) Cooling Temperature distribution

3) Heating air velocity distribution

Heating Discharge angle : 46˚



4) Heating Temperature distribution

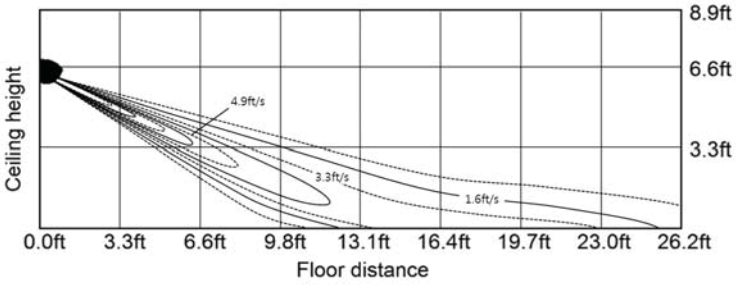


10. Temperature and air flow distribution

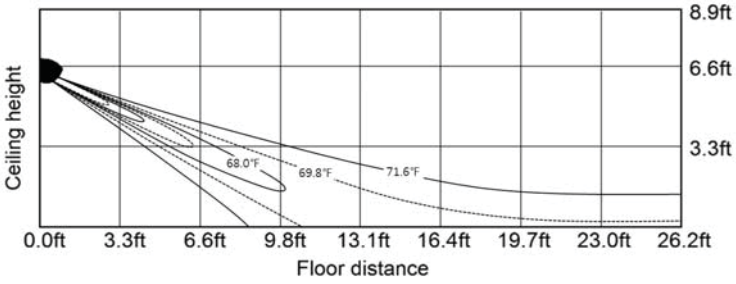
AC024MNADCHAA

1) Cooling air velocity distribution

Cooling Discharge angle : 28˚

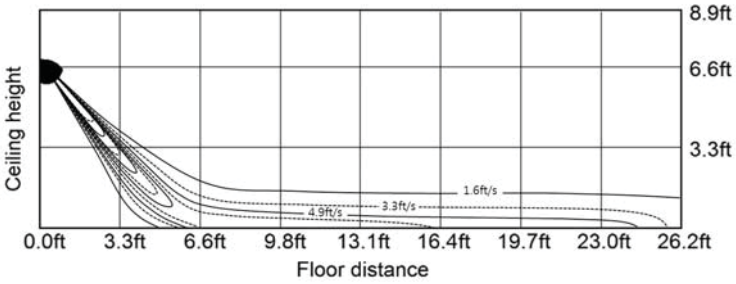


2) Cooling Temperature distribution

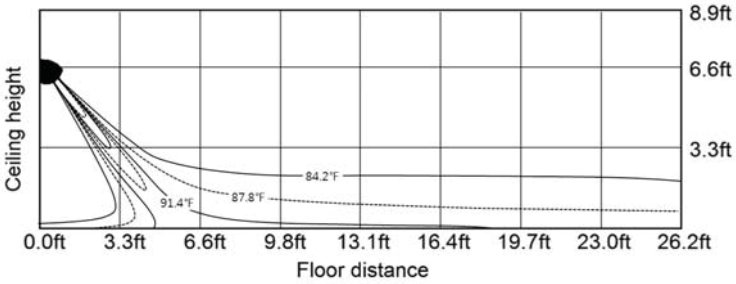


3) Heating air velocity distribution

Heating Discharge angle : 58˚



4) Heating Temperature distribution

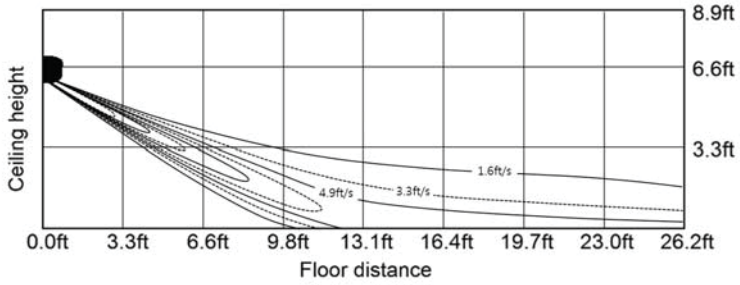


10. Temperature and air flow distribution

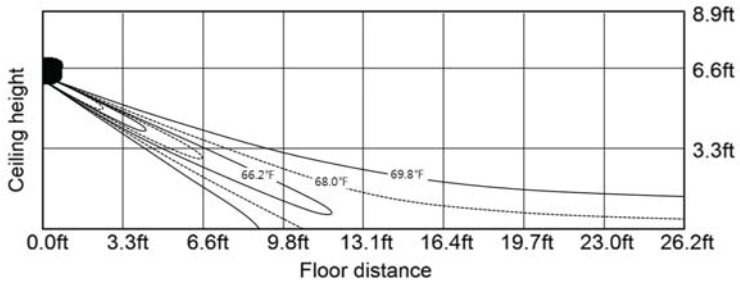
AC030MNTDCHAA

1) Cooling air velocity distribution

Cooling Discharge angle : 26˚

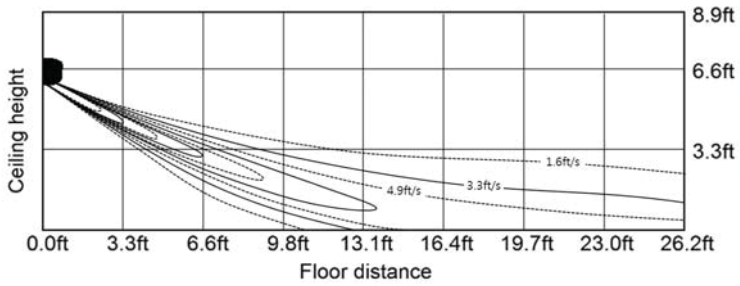


2) Cooling Temperature distribution

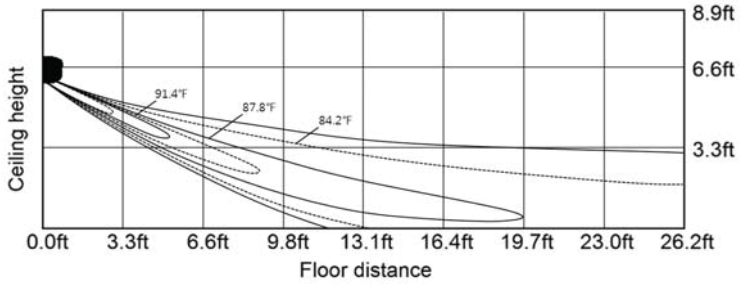


3) Heating air velocity distribution

Heating Discharge angle : 26˚



4) Heating Temperature distribution

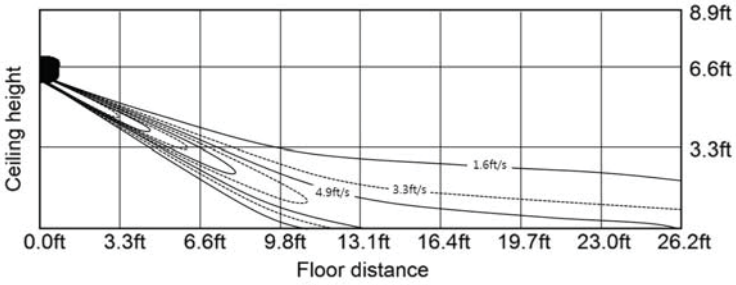


10. Temperature and air flow distribution

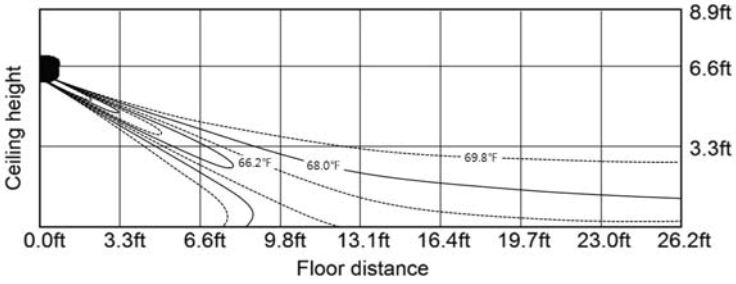
AC036MNTDCHAA

1) Cooling air velocity distribution

Cooling Discharge angle : 26˚

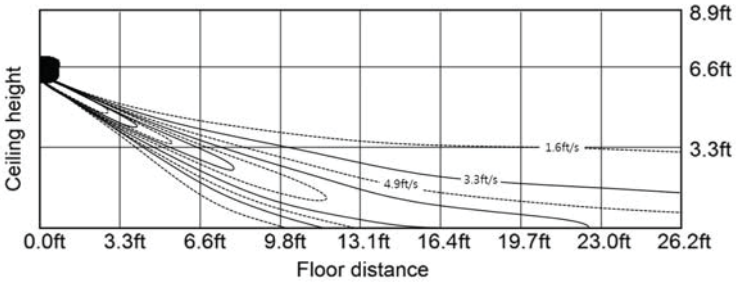


2) Cooling Temperature distribution

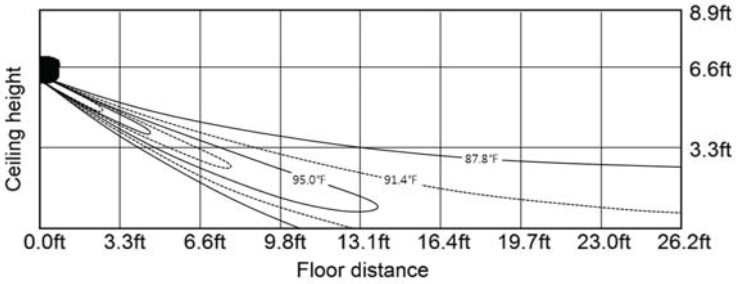


3) Heating air velocity distribution

Heating Discharge angle : 26˚



4) Heating Temperature distribution



11. Operation Range

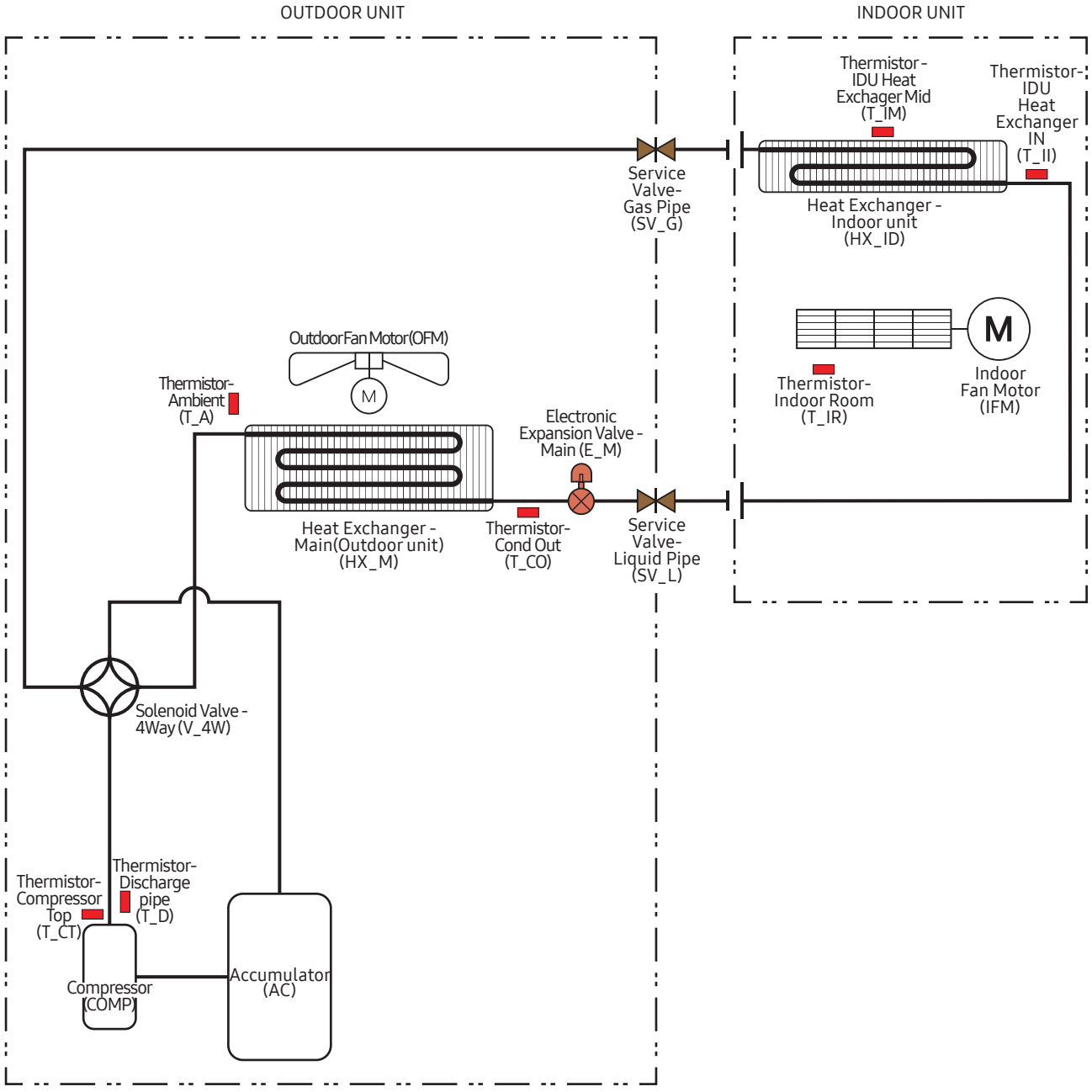
Mode	Outdoor Unit	Indoor Unit	Indoor Unit
	Temperature(DB)	Temperature(DB)	Humidity(RH)
COOL	0°F ~ 115°F	64.4°F ~ 89.6°F	80% or less
HEAT	-4°F ~ 75.2°F	86°F or less	-
DRY	0°F ~ 115°F	64.4°F ~ 89.6°F	80% or less

NOTE

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

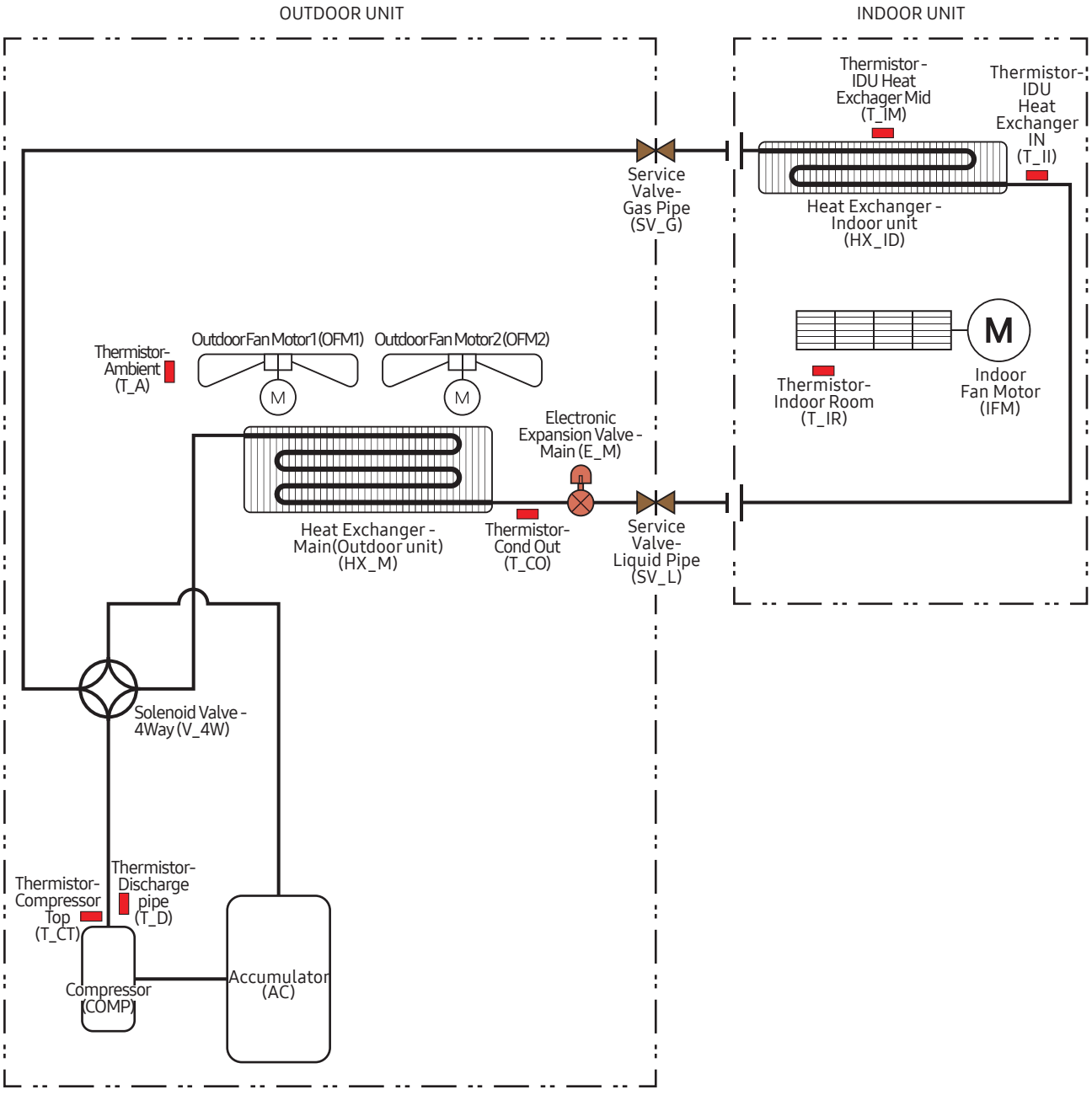
12. Piping Diagram

AC012MNADCH/AA+AC012KXADCH/AA, AC018MNADCH/AA+AC018JXADCH/AA, AC024MNADCH/AA+AC024JXADCH/AA, AC030MNTDCH/AA+AC030JXADCH/AA



12. Piping Diagram

AC036MNTDCH/AA+AC036JXADCH/AA

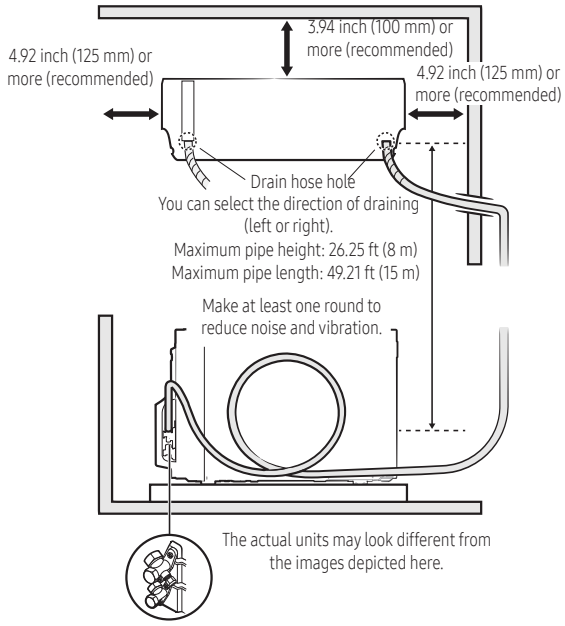


13. Installation

13-1. Indoor unit

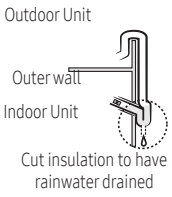
Step 1.1 Choosing the installation location

Overview of installation location requirements



Unit : ft (m)

Model	Pipe length		Pipe height
	Minimum	Maximum	Maximum
AC012MNADCH	9.84 (3)	65.62 (20)	49.21 (15)
AC018MNADCH	9.84 (3)	98.43 (30)	65.62 (20)
AC024MNADCH AC030/036MNTDCH	9.84 (3)	164.04 (50)	98.43 (30)



CAUTION

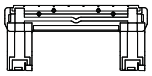
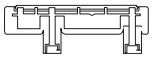
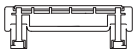
Make a U-trap (A) on the pipe (which is connected to the indoor unit) at outer wall and cut the bottom part of the insulation [about 0.39 inch (10 mm)] to prevent rainwater from getting inside through the insulation.

Step 1.2 Checking and preparing accessories and tools

Accessories

Accessories in the indoor unit package

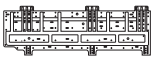
AC✻✻✻MNADCH

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 x 16 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 x 16 Tapped Screws (2)	
	

Tools

General tools

- Vacuum pump (Backward flowing prevention)
- Manifold gauge
- Stud finder
- Torque wrench
- Pipe cutter
- Reamer
- Pipe bender
- Spirit level
- Screwdriver
- Spanner
- Drill
- L-wrench
- Measuring tape

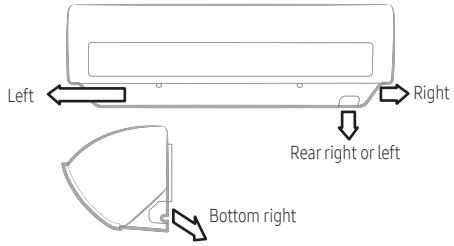
Tools for test operation

- Thermometer
- Resistance meter
- Electroscope

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.

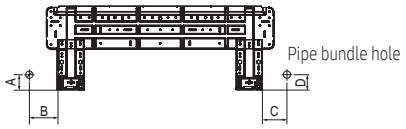
1 Determine the position of a 2.56 inch (65 mm) hole in consideration of the possible directions of the pipe bundle and the minimum distances between the hole and the installation plate.



‹Possible directions of the pipe bundle›

⚠ 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.

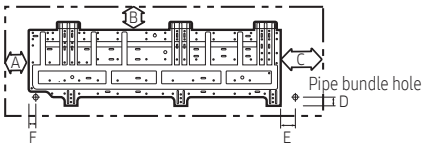


‹Minimum distances between the hole and the installation plate›

Unit : inch (mm)

Model	A	B	C	D
AC012MNADCH	1.42 (36)	2.36 (60)	2.56 (65)	1.42 (36)
AC018MNADCH	1.42 (36)	7.48 (190)	3.19 (81)	1.42 (36)
AC024MNADCH	1.30 (33)	4.33 (110)	4.33 (110)	1.30 (33)

Pipe bundle hole: Ø 2.56 inch (65 mm)



‹Minimum distances between the hole and the installation plate›

Unit : inch (mm)

Model	A	B	C	D	E	F
AC030/036MNTDCH	6.14 (156)	2.64 (67)	14.33 (364)	1.36 (34.5)	2.54 (64.5)	0.77 (19.5)

Pipe bundle hole: Ø 2.56 inch (65 mm)

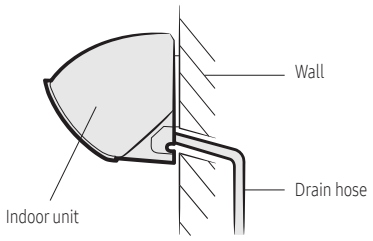
2 Drill the hole.

13. Installation

13-1. Indoor unit

⚠ 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.



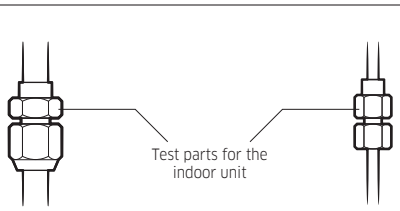
<The hole slants downwards>

Step 1.4 Performing leak test

Leak test

LEAK TEST WITH NITROGEN (before opening valves)
In order to detect basic refrigerant leaks, before recreating the vacuum and recirculating the R410A, it's responsible of installer to pressurize the whole system with nitrogen (using a pressure regulator) at a pressure above 4.1MPa (gauge).

LEAK TEST WITH R410A (after opening valves)
Before opening valves, discharge all the nitrogen into the system and create vacuum. After opening valves check leaks using a leak detector for refrigerant R410A.



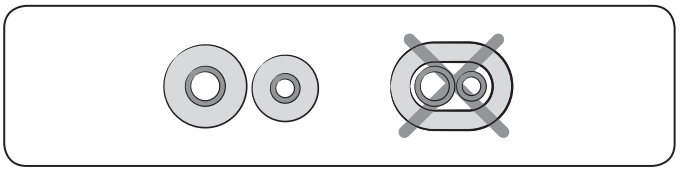
⚠ CAUTION

- Discharge all the nitrogen to create a vacuum and charge the system.

Step 1.5 Wrapping the pipes with the insulation

After checking for gas leaks in the system, insulate the pipe, hose and cables. Then place the indoor unit on the installation plate.

1 To avoid condensation problems, place heat-resistant poly-ethylene foam separately around each refrigerant pipe in the lower part of the indoor unit.



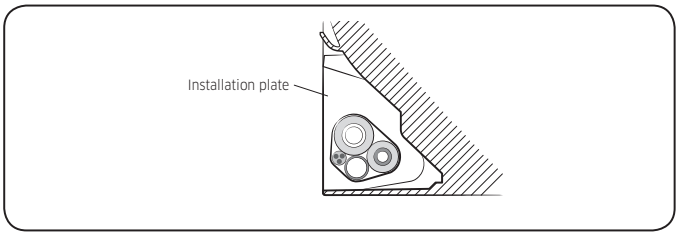
2 Wrap the refrigerant pipe and the drain hose in the rear of the indoor unit with the absorbent pad.

NOTE

- Wind the pipe and hose three times to the end of the indoor unit with the absorbent pad. [0.79 inch (20mm) interval]

3 Wind the pipe, assembly cable and drain hose with insulation tape.

4 Place the bundle (the pipe, assembly cable and drain hose) in the lower part of the indoor unit carefully so it doesn't project from the rear of the indoor unit.



5 Hook the indoor unit to the installation plate and move the unit to the right and left until it is securely in place.

6 Wrap the rest of the pipe with vinyl tape.

7 Attach the pipe to the wall using clamps (optional).

13. Installation

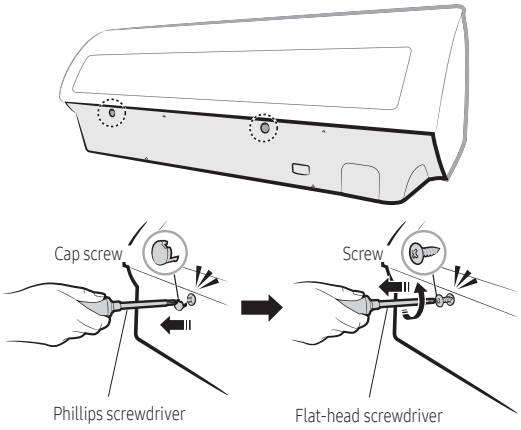
13-1. Indoor unit

Please scan this QR code for detail video of indoor unit installation.

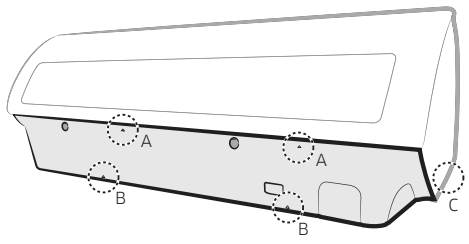
(This QR code only for AC✳✳✳MNADCH)

Step 2.1 Disassembling the cover panel (Only for AC✳✳✳MNADCH)

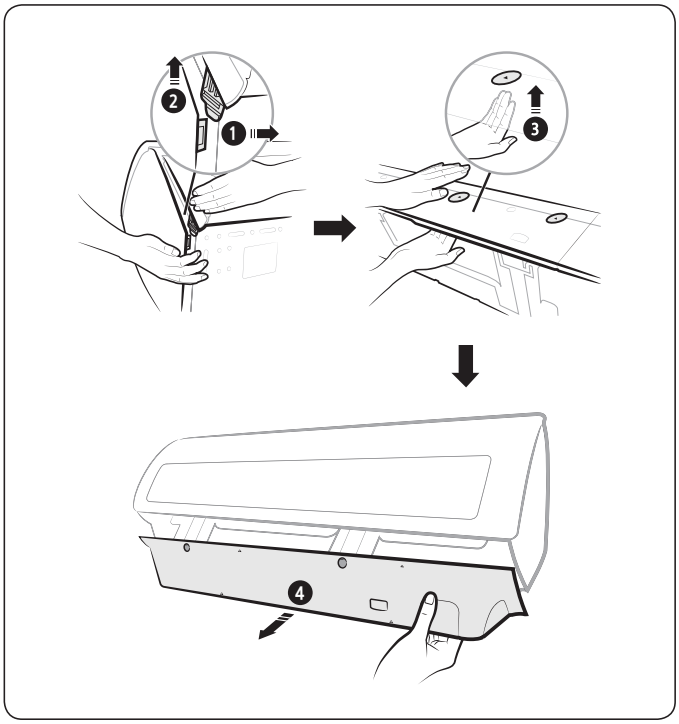
1 Remove the cap screws, then the screws.



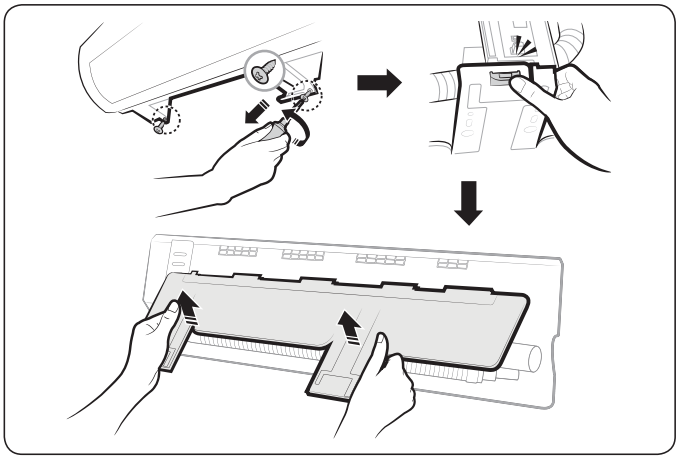
2 Unlock the side hooks (❶, ❷), then centre hooks (❸).
Then unlock the bottom hooks (❹) to pull out the cover panel.



Centre hook (A)	Bottom/Side hook (B/C)
	



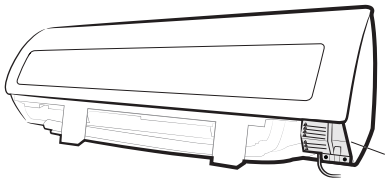
Step 2.2 Disassembling the installation plate



13. Installation

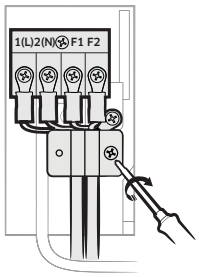
13-1. Indoor unit

Step 2.3 Connecting the power and communication cables (assembly cable)



Before connecting				
	Correct	Upside down	Damaged	Non-circular
After connecting				
	Correct (Front view)	Correct (Side view)	Upside down	Non-fitted

<Circular terminal>



Fasten the screws for the wire holders.

Model	AC012MNADCH AC018MNADCH AC024MNADCH AC030MNTDCH AC036MNTDCH
Power cable (Outdoor unit)	3G X 0.0023 inch² (1.5 mm²), H07RN-F
Outdoor-to-indoor power cable	3G X 0.0016 inch² (1.0 mm²), H07RN-F
Communication cable	2 X 0.0012 inch² (0.75 mm²), H05RN-F
Type GL	16A

- 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 metres).
- 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

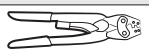
- Connect the wires firmly so that wires cannot be pulled out easily. (If they are loose, it could cause burn-out of the wires.)

13. Installation

13-1. Indoor unit

Step 2.4 Optional: Extending the power cable

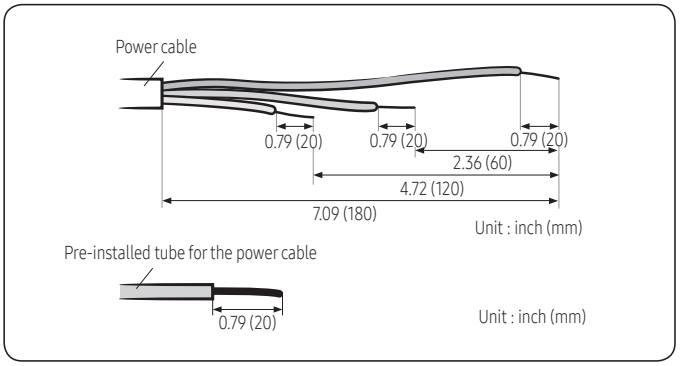
1 Prepare the following tools.

Tools	Spec	Shape
Crimping pliers	MH-14	
Connection sleeve [inch (mm)]	20xØ0.26 (6.5) (HxOD)	
Insulation tape	Width 0.75 inch (19 mm)	
Contraction tube [inch (mm)]	70xØ0.31 (8.0) (LxOD)	

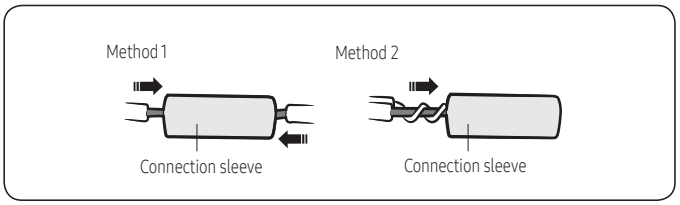
2 As shown in the figure, peel off the shields from the rubber and wire of the power cable.
- Peel off 0.79 inch (20 mm) of cable shields from the pre-installed tube.

⚠ CAUTION

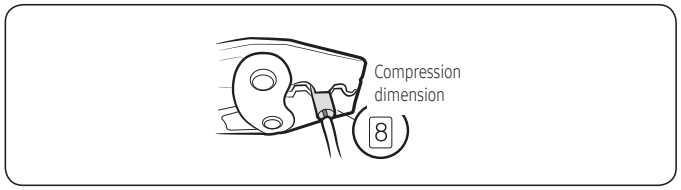
- For information about the power cable specifications for indoor and outdoor units, refer to the installation manual.
- After peeling off cable wires from the pre-installed tube, insert a contraction tube.



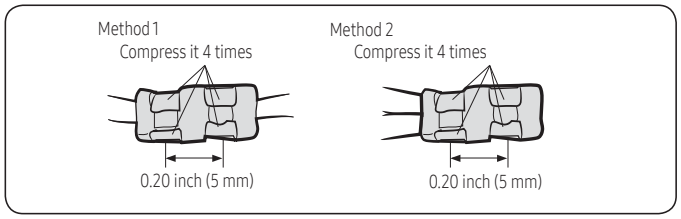
3 Insert both sides of core wire of the power cable into the connection sleeve.
- **Method 1**: Push the core wire into the sleeve from both sides.
- **Method 2**: Twist the wire cores together and push it into the sleeve.



4 Using a crimping tool, compress the two points and flip it over and compress another two points in the same location.
- The compression dimension should be 0.31 inch (8.0 mm).

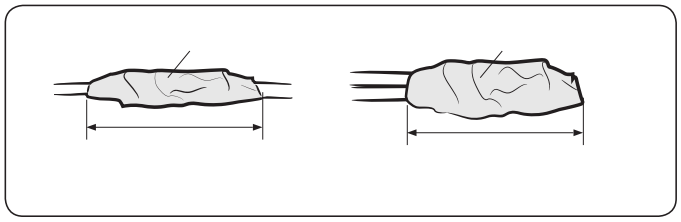


- After compressing it, pull both sides of the wire to make sure it is firmly pressed.

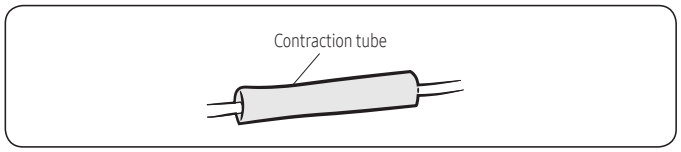


5 Wrap it with the insulation tape twice or more and position your contraction tube in the middle of the insulation tape.

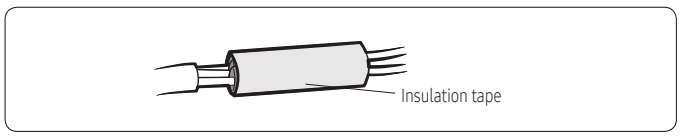
6 Three or more layers of insulation are required.



7 Apply heat to the contraction tube to contract it.



8 After tube contraction work is completed, wrap it with the insulation tape to finish.



13. Installation

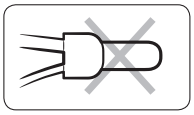
13-1. Indoor unit

⚠ CAUTION

- Make sure that the connection parts are not exposed to outside.
- Be sure to use insulation tape and a contraction tube made of approved reinforced insulating materials that have the same level of withstand voltage with the power cable. (Comply with the local regulations on extensions.)

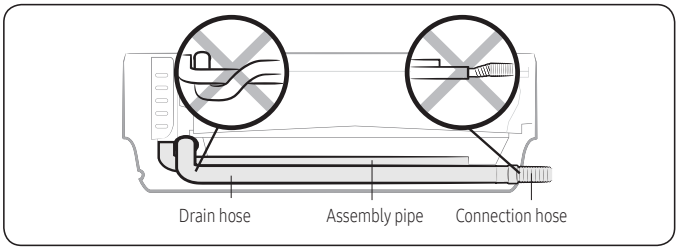
⚠ WARNING

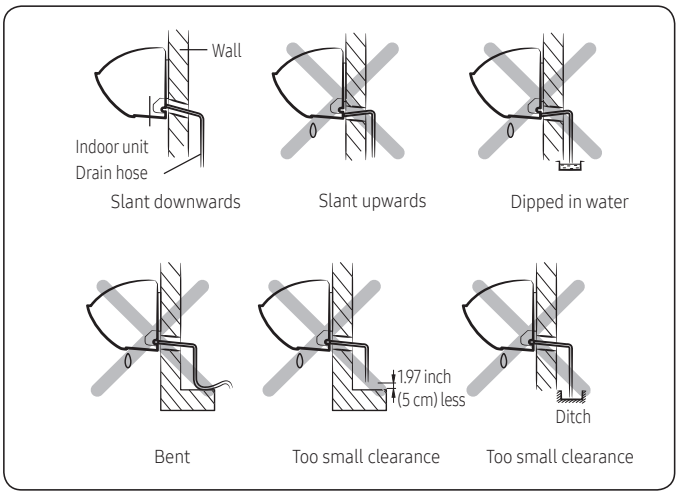
- In case of extending the electric wire, please DO NOT use a round-shaped pressing socket.
  - Incomplete wire connections can cause electric shock or a fire.



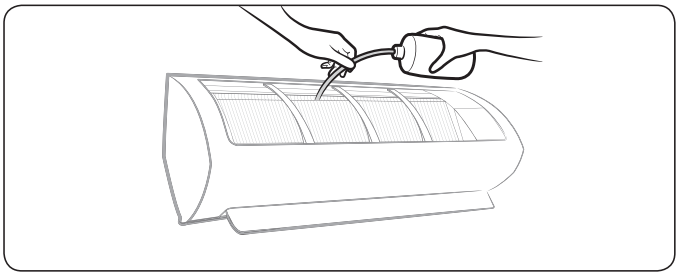
Step 2.5 Installing and connecting the drain hose

1 Install the drain hose.





2 Pour water into the drain pan. Check whether the hose is well drained.



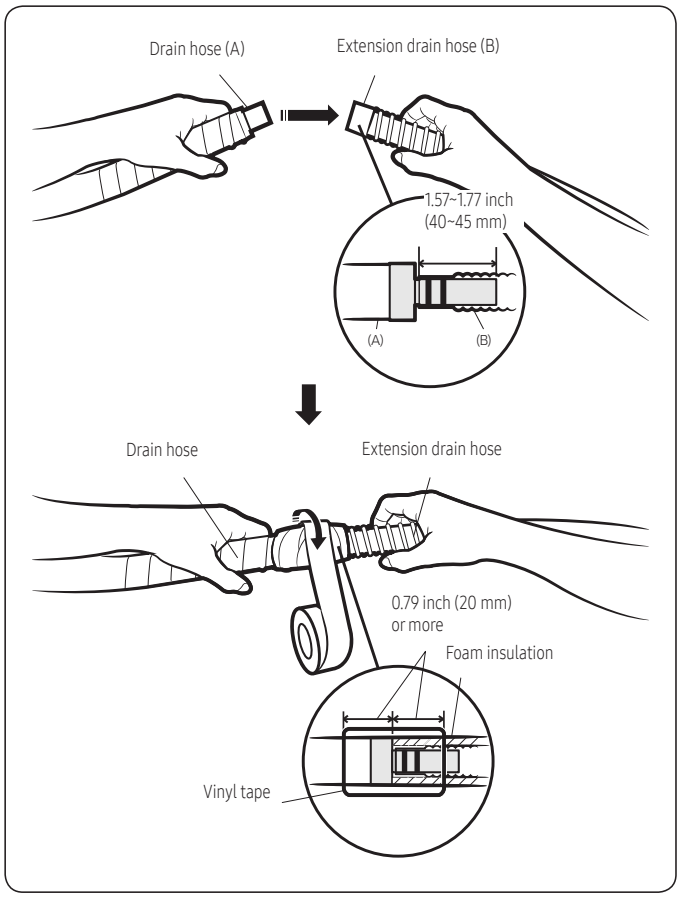
⚠ CAUTION

- 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.

13. Installation

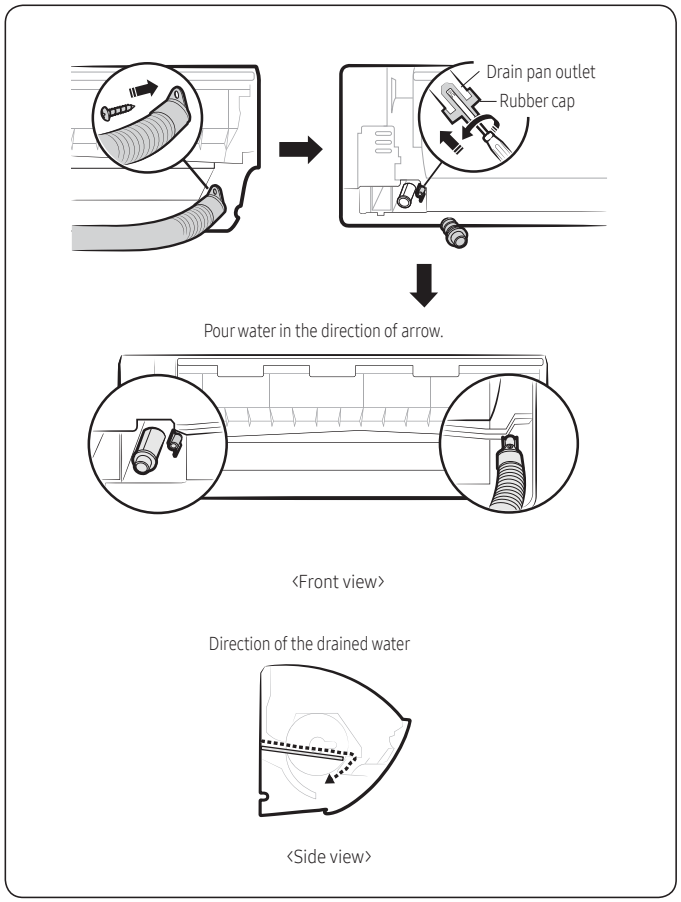
13-1. Indoor unit

Step 2.6 Optional: Extending the drain hose



Step 2.7 Optional: Changing the direction of the drain hose

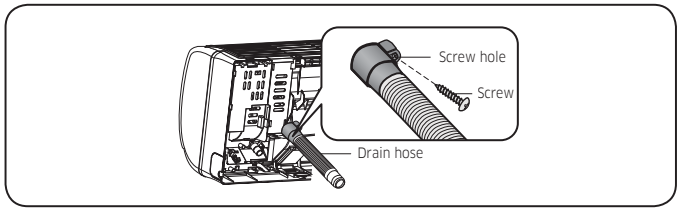
AC□□□MNADCH



AC✻✻✻MNTDCH

Change the direction only when it is necessary.

1 Detach the rubber cap with the flyer.

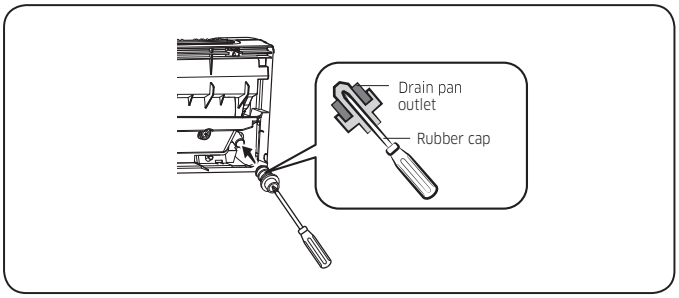


2 Detach the drain hose by pulling it and turning to the left.

3 Insert the drain hose by fixing it into the groove of the drain hose and the outlet of the drain pan.

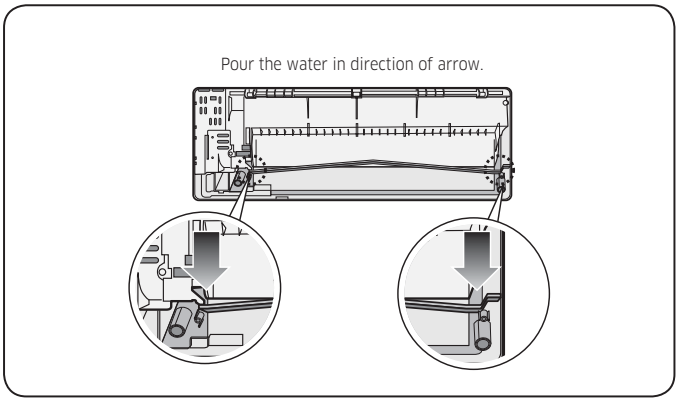
13. Installation

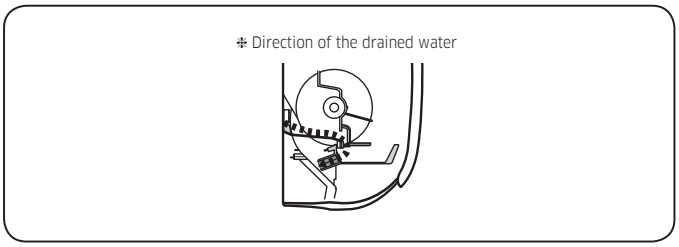
13-1. Indoor unit



4 Attach the rubber cap with a screwdriver by turning it to the right until it fixes to the end of the groove.

5 Check for leakage on both side of the drain outlet.





⚠ 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.

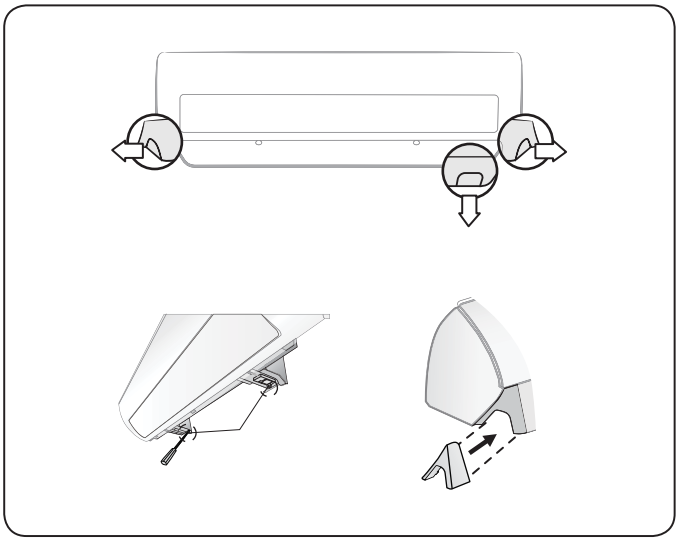
Step 2.8 Installing and connecting the assembly pipes to the refrigerant pipes (assembly pipe)

Connect indoor and outdoor units with field-supplied copper pipes by means of flare connections. Use insulated seamless refrigeration grade pipe only, (Cu DHP type according to ISO1337), degreased and deoxidized, suitable for operating pressures of at least 4200 kPa and for burst pressure of at least 20700 kPa. Under no circumstances must sanitary type copper pipe be used.

There are 2 refrigerant pipes of different diameters:

- The smaller one is for the liquid refrigerant
- The larger one is for the gas refrigerant

A short liquid refrigerant pipe and a short gas refrigerant pipe are already fitted to the air conditioner. The connection procedure for the refrigerant pipes varies according to the exit position of each pipe when facing the wall:



1 Cut out the appropriate knock-out piece (A, B, C) on the rear of the indoor unit unless you connect the pipe directly from the rear.

2 Smooth the cut edges.

3 Remove the protection caps of the pipes and connect the assembly pipe to each pipe. Tighten the nuts first with your hands, and then with a torque wrench, applying the following torque:

Outer diameter [inch (mm)]	Torque [lbf•ft (N•m)]	Torque (kgf•cm)
ø 1/4" (6.35)	10.3 to 13.3 (14 to 18)	140 to 180
ø 3/8" (9.52)	25.1 to 31.0 (34 to 42)	350 to 430
ø 1/2" (12.70)	36.1 to 45.0 (49 to 61)	500 to 620
ø 5/8" (15.88)	50.2 to 60.5 (68 to 82)	690 to 830

NOTE

- If you want to shorten or extend the pipes, see **Step 2.9 Shortening or extending the refrigerant pipes (assembly pipe)** on page **49**.

13. Installation

13-1. Indoor unit

4 Cut off the remaining foam insulation.

5 If necessary, bend the pipe to fit along the bottom of the indoor unit. Then pull it out through the appropriate hole.
- The pipe should not project from the rear of the indoor unit.
- The bending radius should be 3.94 inch (100 mm) or more.

6 Pass the pipe through the hole in the wall.

7 Fix the indoor unit on the wall.Pass the cables, pipes and hose through the knock-out hole which would be connected to the outdoor unit .

8 Use 2 screws to fix the indoor unit as shown in the picture 2.

9 Assemble the Guide into the position of A or B as shown in the picture 3.

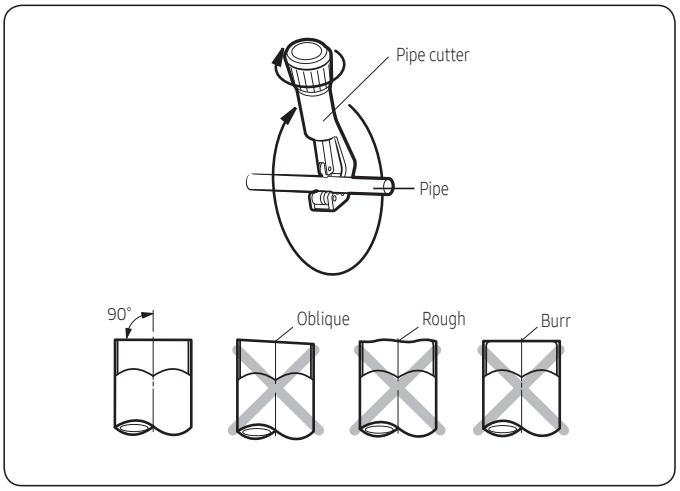
NOTE

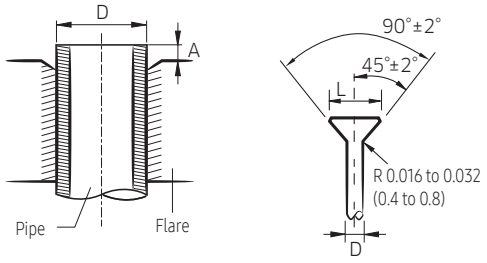
- The pipe will be insulated and fixed permanently into position after finishing the installation and the gas leak test.

⚠ CAUTION

- Tighten the flare nut with a torque wrench according to specified method. If the flare nut is over-tightened, the flare may break and cause refrigerant gas leakage.
- Do not box in or cover the pipe connection. All refrigerant pipe connection must be easily accessible and serviceable.

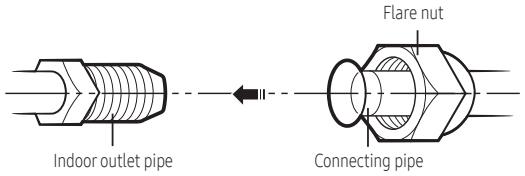
Step 2.9 Shortening or extending the refrigerant pipes (assembly pipe)





Unit: inch (mm)

Outer diameter (D)	Depth (A)	Flare dimension (L)
ø 1/4" (6.35)	0.051 (1.3)	0.34 to 0.36 (8.7 to 9.1)
ø 3/8" (9.52)	0.071 (1.8)	0.50 to 0.52 (12.8 to 13.2)
ø 1/2" (12.70)	0.079 (2.0)	0.64 to 0.65 (16.2 to 16.6)
ø 5/8" (15.88)	0.087 (2.2)	0.76 to 0.78 (19.3 to 19.7)

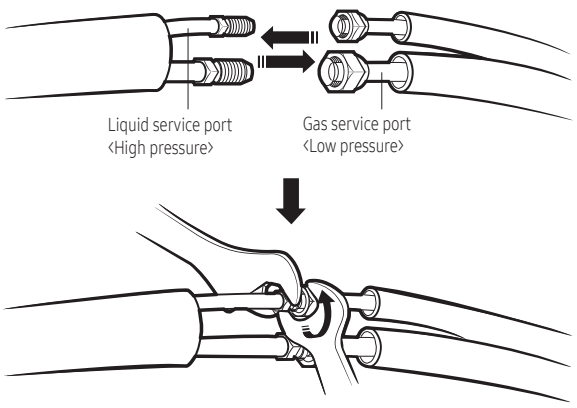


Outer diameter [inch (mm)]	Torque [lbf•ft (N•m)]	Torque (kgf•cm)
ø 1/4" (6.35)	10.3 to 13.3 (14 to 18)	140 to 180
ø 3/8" (9.52)	25.1 to 31.0 (34 to 42)	350 to 430
ø 1/2" (12.70)	36.1 to 45.0 (49 to 61)	500 to 620
ø 5/8" (15.88)	50.2 to 60.5 (68 to 82)	690 to 830

⚠ CAUTION

- If you need a pipe longer than specified in piping codes and standards, you must add refrigerant to the pipe. Otherwise, the indoor unit may freeze.
- While removing burrs, put the pipe face down to make sure that the burrs do not get in to the pipe.

13. Installation



‹Flare nut›

NOTE

- Excessive torque may cause gas leakage. When extending the pipe with welding or brazing, ensure that nitrogen is used during the welding or brazing process. The joint must be accessible and serviceable.

⚠ CAUTION

- Tighten the flare nut at the specified torque. If the flare nut is over-tightened, it may break to cause leakage of refrigerant gas.

Step 2.10 Fixing the installation plate

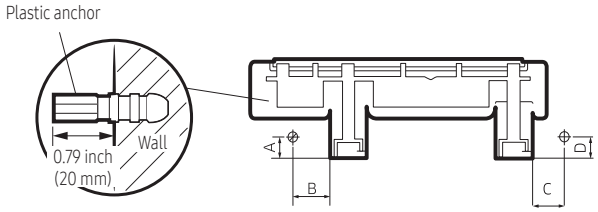
You can install the indoor unit on a wall, window frame, or gypsum board.

⚠ 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

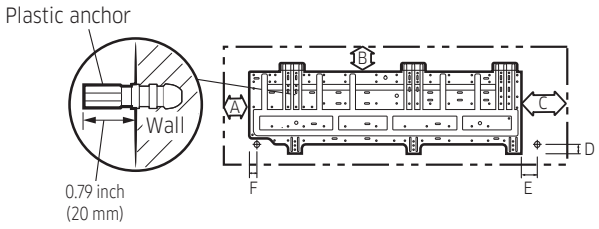
Fix the installation plate to the wall giving attention to the weight of the indoor unit.



Unit : inch (mm)

Model	A	B	C	D
AC012MNADCH	1.42 (36)	2.36 (60)	2.56 (65)	1.42 (36)
AC018MNADCH	1.42 (36)	7.48 (190)	3.19 (81)	1.42 (36)
AC024MNADCH	1.30 (33)	4.33 (110)	4.33 (110)	1.30 (33)

Pipe bundle hole: Ø 2.56 inch (65 mm)



Unit : inch (mm)

Model	A	B	C	D	E	F
AC030/036MNTDCH	6.14 (156)	2.64 (67)	14.33 (364)	1.36 (34.5)	2.54 (64.5)	0.77 (19.5)

Pipe bundle hole: Ø 2.56 inch (65 mm)

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

13-1. Indoor unit

When fixing the indoor unit on a window frame

1 Determine the positions of the wooden uprights to be attached to the window frame.

2 Attach the wooden uprights to the window frame giving attention to the weight of the indoor unit.

3 Attach the installation plate to the wooden upright using tapping screws.

When fixing the indoor unit on a gypsum board

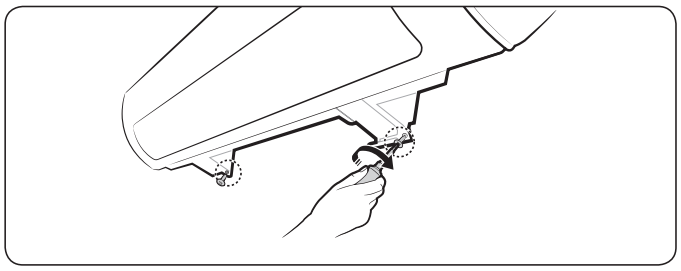
1 Use stud finder to find out locations of the studs.

2 Fix the plate hanger on two studs.

⚠ CAUTION

- If you fix the indoor unit on a gypsum board, use only specified anchor bolts on reference positions. Otherwise, the gypsum surrounding the joints may crumble over time and cause the screws to be loosened and stripped. This may lmead to physical injury or equipment damage.
- Search for other spots if there are less than two studs, or the distance between the studs are different from the plate hanger.
- Fix the installation plate without inclining to one side.

Step 2.11 Fixing the indoor unit to the installation plate



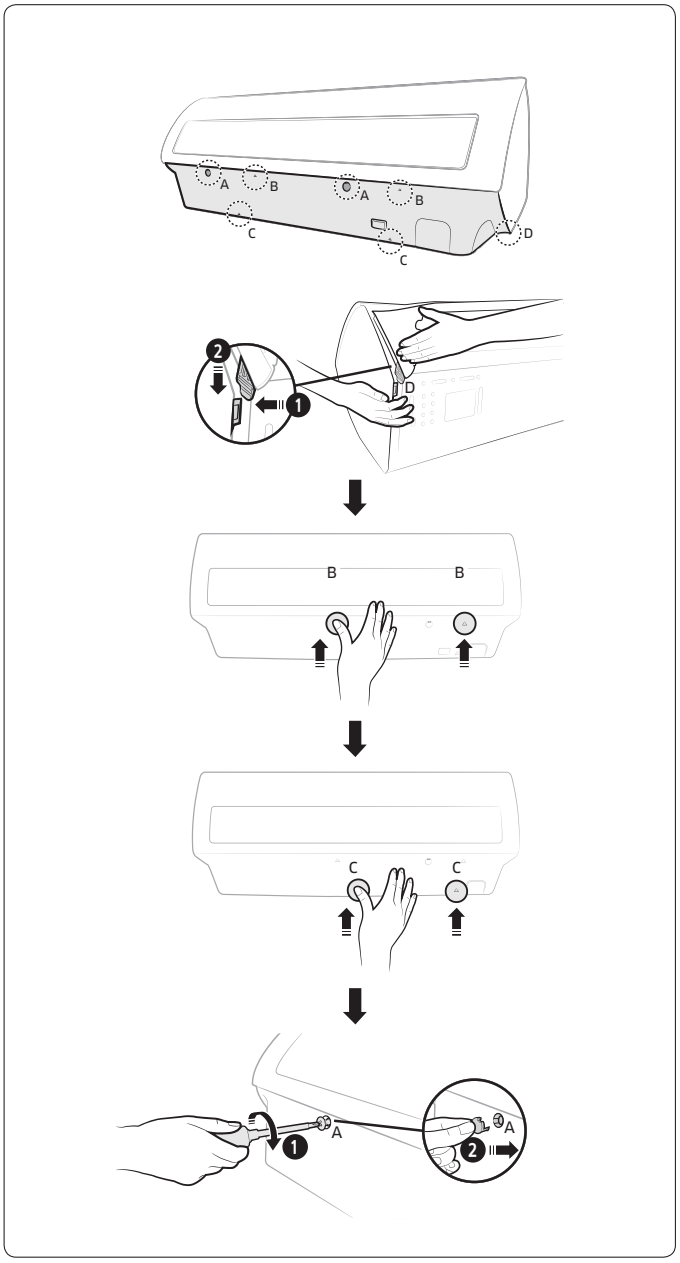
⚠ CAUTION

- Make sure that the pipe bundle does not move when you install the indoor unit onto the installation plate.

Step 2.12 Assembling the cover panel (Only for AC✻✻✻MNADCH)

1 Lock the side hooks (D), then centre hooks (B). Then lock the bottom hooks (C) to engage the cover panel in place.

2 Fasten the screw (A- ❶), then assemble the cap screws (A- ❷).



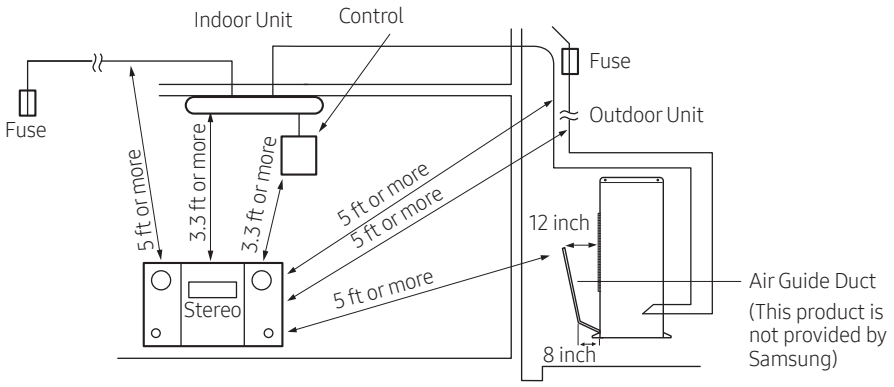
13. Installation

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 neighbours.
- Choose a position that enables the pipes and cables to be easily connected to the indoor unit.
- Install the outdoor unit on a flat, stable surface that can support its weight and does not generate any unnecessary noise and vibration.
- Position the outdoor unit so that the air flow is directed towards the open area.
- Maintain sufficient clearance around the outdoor unit, especially from a radio, computer, stereo system, etc.



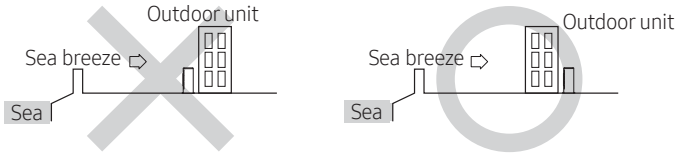
- If the outdoor unit is installed at a height, ensure that its base is firmly fixed in position.
- Make sure that the water dripping from the drain hose runs away correctly and safely.
- When you install the outdoor unit at wayside, you should install it above 6.6 ft height or make sure that the heat 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

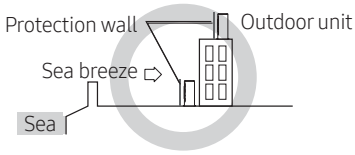
- When installing the outdoor unit near seashore, make sure it is not directly exposed to sea breeze. If you can not find a adequate place without direct see breeze, protection wall should be constructed.

- Install the outdoor unit in a place (such as near buildings etc.) where it can be prevented from sea breeze which can damage the outdoor unit.



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

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

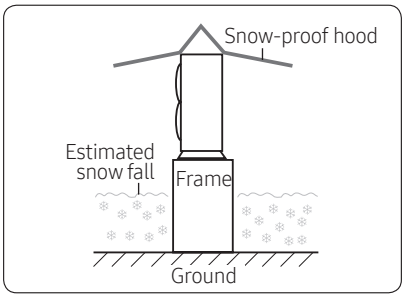


- Install the outdoor unit in a place where water can drain smoothly.

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

⚠ 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.
- With an outdoor unit having net weight upper than 132.2 lb, we suggest do not install it suspended on wall, but considering floor standing one.
- When the outdoor unit is installed near seashore or in a place where sulfuric acid gas may leak, corrosion may occur in outdoor unit and cause product malfunction.
- 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.



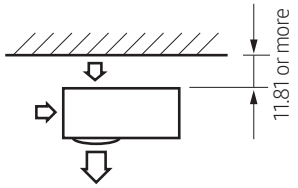
13. Installation

13-2. Outdoor unit

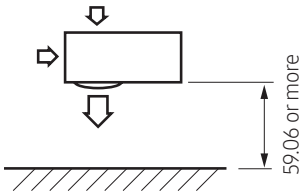
Space Requirements for Outdoor Unit

When installing 1 outdoor unit

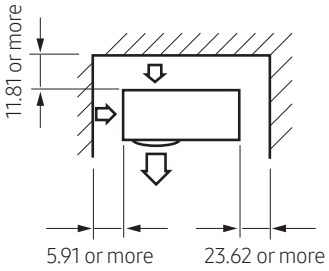
(Unit : inch)



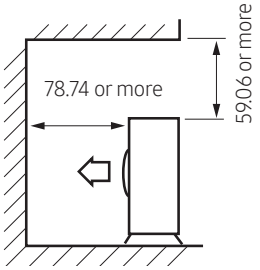
✳ When the air outlet is opposite the wall



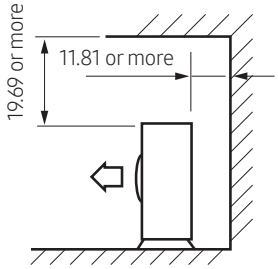
✳ When the air outlet is towards the wall



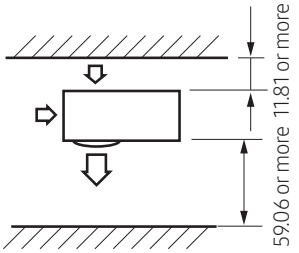
✳ When 3 sides of the outdoor unit are blocked by the wall



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



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



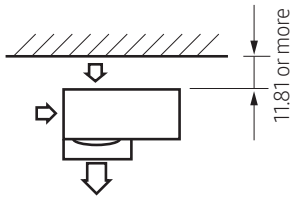
✳ When front and rear side of the outdoor unit is towards the wall

13. Installation

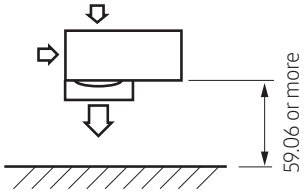
13-2. Outdoor unit

When installing 1 outdoor unit (with wind baffle)

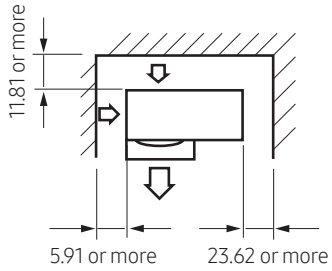
(Unit : inch)



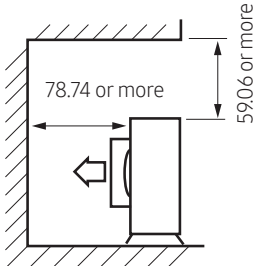
✳ When the air outlet is opposite the wall



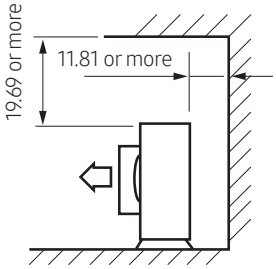
✳ When the air outlet is towards the wall



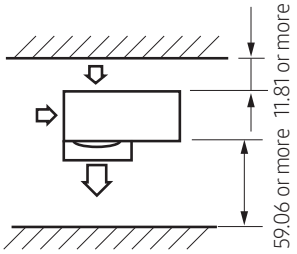
✳ When 3 sides of the outdoor unit are blocked by the wall



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



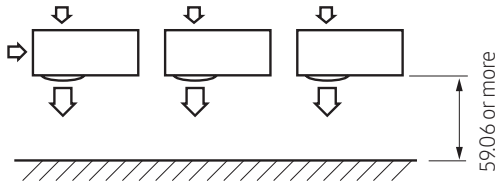
✳ The upper part of the outdoor unit and the air outlet is opposite the wall



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

When installing more than 1 outdoor unit

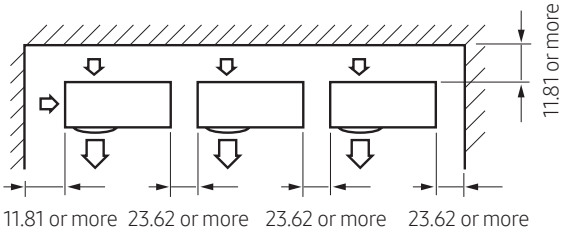
(Unit : inch)



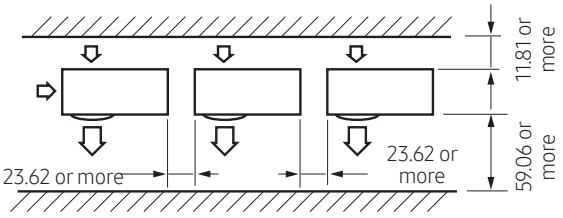
✳ When the air outlet is towards the wall

13. Installation

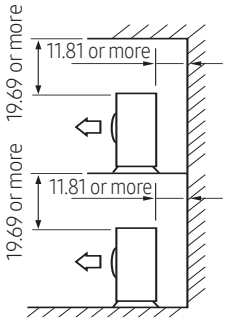
13-2. Outdoor unit



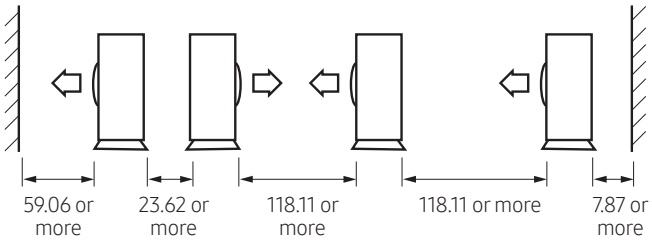
✳ When 3 sides of the outdoor unit are blocked by the wall



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



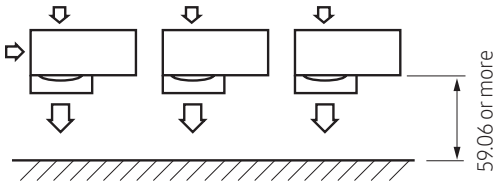
✳ The upper part of the outdoor unit and the air outlet is towards the wall



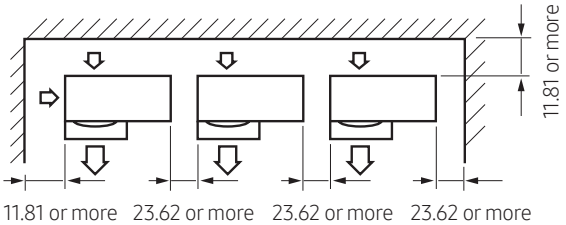
✳ When front and rear side of the outdoor unit is towards the wall.

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

(Unit : inch)



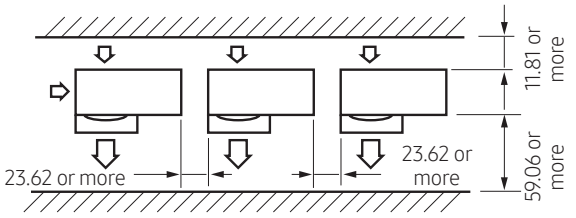
✳ When the air outlet is towards the wall



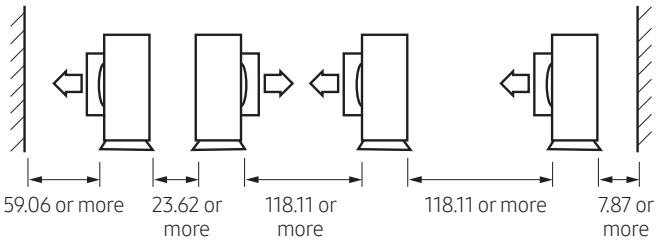
✳ When 3 sides of the outdoor unit are blocked by the wall

13. Installation

13-2. Outdoor unit



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



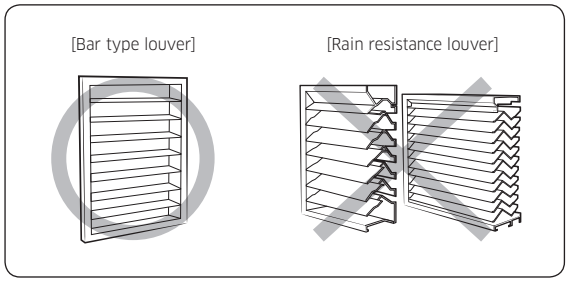
✳ When 3 sides of the outdoor unit are blocked by the wall

⚠ **CAUTION**

- The units must be installed according to distances declared, in order to permit accessibility from each side, either to guarantee correct operation of maintenance or repairing products.
  The unit's parts must be reachable and removable completely under safety condition (for people or things).

⚠ 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%

13. Installation

13-2. Outdoor unit

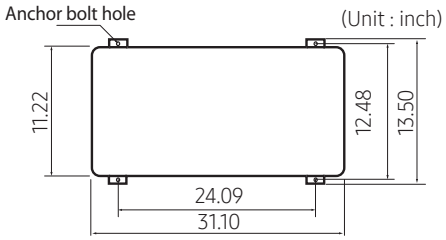
Outdoor unit installation

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).

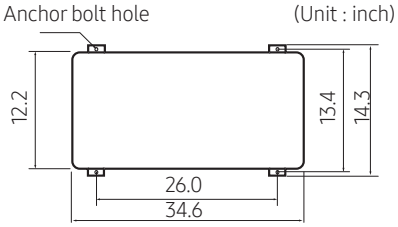
Fix the outdoor unit with anchor bolts.

NOTE

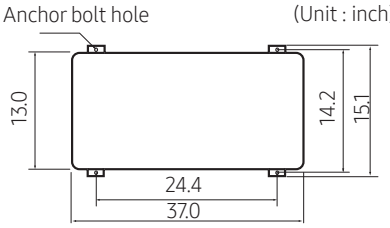
- The anchor bolt must be 0.79 inch or higher from the base surface.



A Type : AC009KXADCH



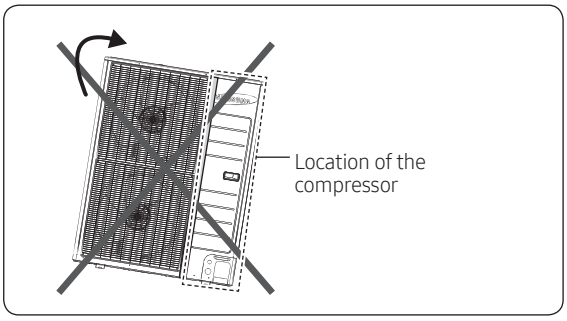
B Type : AC018JXADCH



C Type : AC024JXADCH/ AC030JXADCH/ AC036JXADCH

CAUTION

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



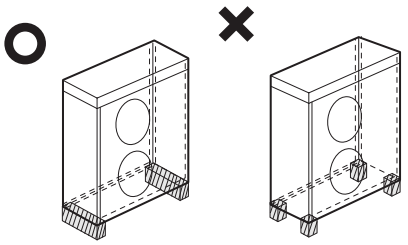
CAUTION

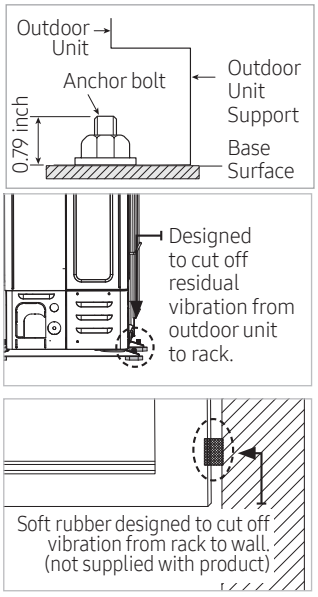
- Make sure that product is level during installation. Especially, product shouldn't be tilted towards the compressor.

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.

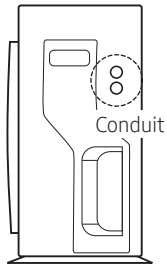
Connecting the cable

Two electronic cables must be connected to the outdoor unit.

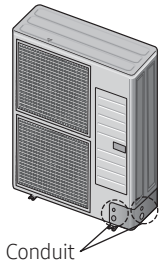
- The connection cord between indoor unit and outdoor unit.
- The power cable between outdoor unit and auxiliary circuit breaker.
- Be sure to run the power supply cable and the communication cable through electrical conduit as seen in the picture.
- Protect the power and communication cable using the 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.



AC012KXADCH, AC018JXADCH



AC024JXADCH, AC030JXADCH, AC036JXADCH

13. Installation

13-2. Outdoor unit

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.

Model		Power Source	RLA (A)	FLA (A)			MCA	MOP
Outdoor	Indoor			Outdoor		Indoor		
				FAN1	FAN2			
AC012KXADCH/AA	AC012MNADCH/AA	208~230V/60Hz	8.1	0.17	-	0.4	10.7	15
AC018JXADCH/AA	AC018MNADCH/AA		6.1	0.13	-	0.7	10	15
AC024JXADCH/AA	AC024MNADCH/AA		9	0.48	-	0.7	12.5	20
AC030JXADCH/AA	AC030MNTDCH/AA		15.1	0.48	-	0.9	20.3	30
AC036JXADCH/AA	AC036MNTDCH/AA		17	0.48	0.48	0.9	23.2	35

NOTE

- RLA is based on AHRI 210/240 colling standard condition [Indoor temp. : 26.7 °C / 80 °F(DB) / 19.46 °C / 67 °F(WB), Outdoor temp. : 35 °C / 95 °F(DB)]
- Voltage tolerance is ± 10 %.
- Maxium allowable voltage between phases is 2 %.

Symbols

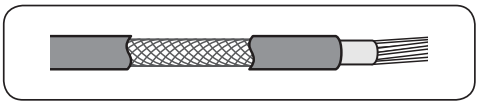
- RLA : Rated Load Ampere
- FLA : Full Load Ampere
- MCA : Minumum Circuit Ampere (A)
- MOP : Maximum Overcurrent Protective Device (A)

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

Power supply			Communation Cable
Power supply	Max/Min(V)	Indoor Power Cable	
1Φ, 208~230V, 60Hz	±10%	0.0039 in² ↑, 3wires	0.0011~0.0023 in², 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.

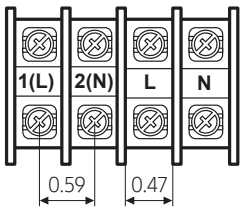


13. Installation

13-2. Outdoor unit

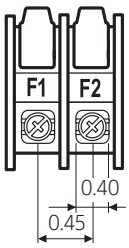
1-phase terminal block spec

AC power : M5 screw



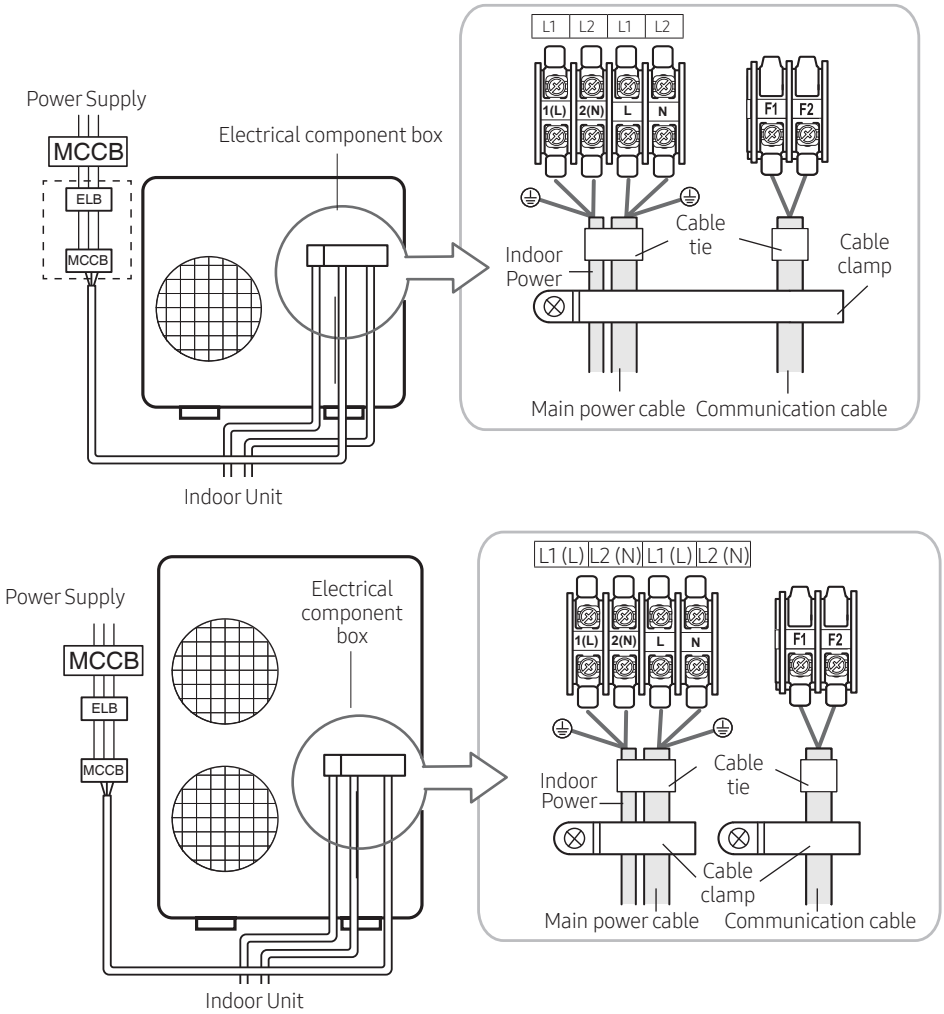
L1 (L)	L2 (N)	L1 (L)	L2 (N)
INDOOR POWER		OUTDOOR POWER	

Communication : M4 screw



Wiring Diagram of Power Cable

When using ELB for1 phase



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

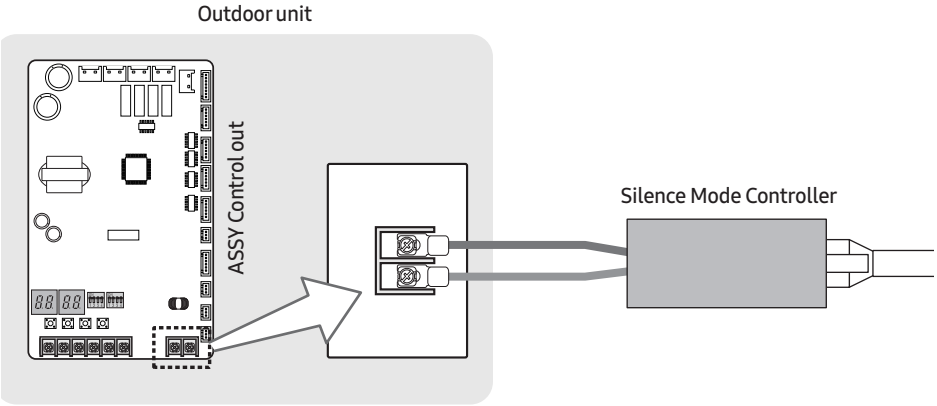
13. Installation

13-2. Outdoor unit

⚠ CAUTION

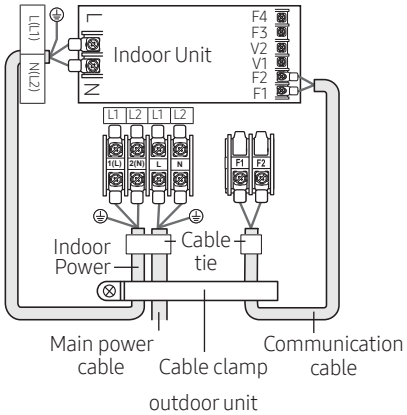
- You should connect the power cable into the power cable terminal and fasten it with a clamp.
- The unbalanced power must be maintained within 2% of supply rating.
  - If the power is unbalanced greatly, it may shorten the life of the condenser. If the unbalanced power is exceeded over 4% of supply 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 (AC024JXADCH, AC030JXADCH, AC036JXADCH)



Wiring Diagram of Connection Cord

1 phase



NOTE

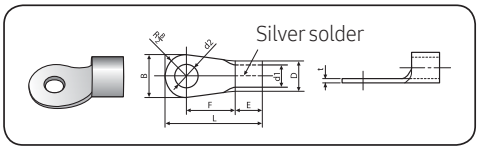
- Lay the electrical wiring so that the front cover does not rise up when doing wiring work and attach the front cover securely.
- Ground wire for the indoor unit and outdoor unit connection cable must be clamped to a soft copper tin-plated eyelet terminal with M4 screw hole (NOT SUPPLIED WITH UNIT ACCESSORIES).

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)		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			
M4	12.0~18.0 (kgf·cm)	0.86~1.30 (lbf·ft)	AC power : L1, L2 / Communication : F1, F2

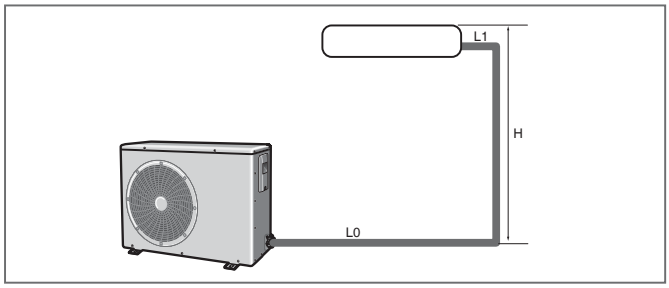
⚠ CAUTION

- 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 refirgerant 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

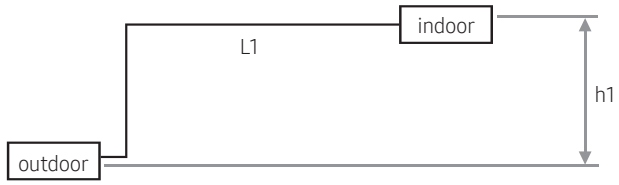
13-2. Outdoor unit

Refrigerant piping system



Refrigerant piping system table			Pipe length or height	
			AC012KXADCH	AC018JXADCH
Max. allowable length	Actual pipe length	L0 + H + L1	65.6 ft (20 m) or less	98.4 ft (30 m) or less
Allowable height length	Actual pipe length	H	49.2 ft (15 m) or less	65.6 ft (20 m) or less

Items	Maximum allowable length		
	Single installation		
Type	A	B	C
Applicable outdoor unit models	AC024/030JXADCH	AC036/042/048JXADCH	AC030/036JXSCCH / AC054KXADCH
Main pipe (L1)	164.0 ft (50 m)	246.0 ft (75 m)	
Max. height difference between outdoor and indoor units (h1)	98.4 ft (30 m)	98.4 ft (30 m)	



- Temper grade and minimum thickness of the refrigerant pipe

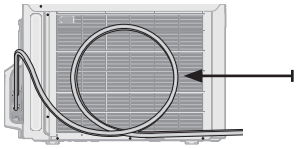
Outer diameter [inch]	Minimum thickness [inch]	Temper grade
1/4	0.0276	C1220T-O
3/8	0.0276	
1/2	0.0315	
5/8	0.0394	
5/8	0.0315	C1220T-1/2H OR C1220T-H
3/4	0.0354	
7/8	0.0354	

⚠ **CAUTION**

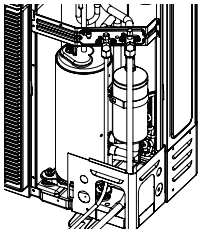
- Make sure to use C1220T-1/2H (Semi-hard) pipe for more than 3/4 in. In case of using C1220T-O (Soft) pipe for 3/4 in., pipe may be broken, which can result in an injury.

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.

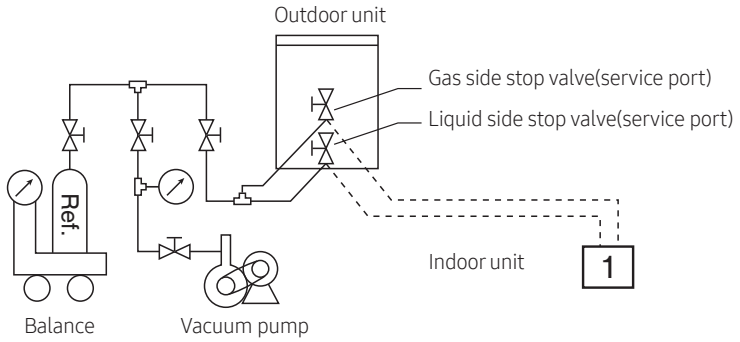
NOTE

- 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
AC012KXADCH	24.6 ~ 65.6 (7.5 ~ 20)	+0.108 oz/ft over 24.6 ft (+10 g/m over 7.5 m)
AC018JXADCH	24.6 ~ 98.4 (7.5 ~ 30)	+0.108 oz/ft over 24.6 ft (+10 g/m over 7.5 m)
AC024JXADCH	24.6 ~ 164 (7.5 ~ 50)	+0.108 oz/ft over 24.6 ft (+10 g/m over 7.5 m)
AC030JXADCH	24.6 ~ 164 (7.5 ~ 50)	+0.237 oz/ft over 24.6 ft (+22 g/m over 7.5 m)
AC036JXADCH	24.6 ~ 246 (7.5 ~ 75)	+0.355 oz/ft over 24.6 ft (+33 g/m over 7.5 m)

14. Accessory

Controller

Classification	Product	Image	Model	Remark
Intergrated Management System	DMS 2.0		MIM-D00AN	
	DMS 2.5		MIM-D01AUN	
	S-NET 3		MST-P3P	
Buiding Management System	BACnet G/W		MIM-B17N	
			MIM-B17BN, MIM-B17BUN	
	LONWORKS G/W		MIM-B18N	
			MIM-B18BN, MIM-B17BUN	
Centralized Control System	Touch Controller		MCM-A300N	
	Wi-Fi Kit		MIM-H03UN	
Individual Control System	Wireless remote Controller		MR-EH00U	Except for 360 Cassette
	Wired remote Controller		MWR-WE10N	
			MWR-WE11N	Include 360 Cassette Airflow Control function
			MWR-SH00N	Simple Type
			MWR-SH10N	Touch Simple Type

14. Accessory

Controller

Classification	Product	Image	Model	Remark
Others	External room sensor		MRW-TA	
	Compatible interface module		MIM-N01	
	External contact interface module		MIM-B14	
	S-Converter		MIM-C02N	

- In case you want more information about the accessories, please refer to the control and accessories TDB on pvi.samsung.com site.

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