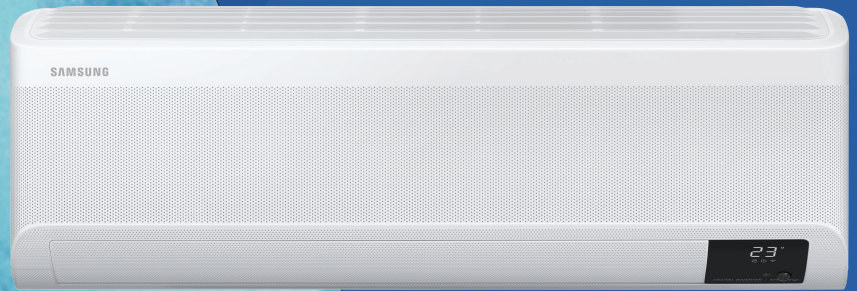


**SAMSUNG**

# VRF Technical Data Book

Wall-Mounted Wind-Free™ for North America  
(R410A, 60Hz, HP)

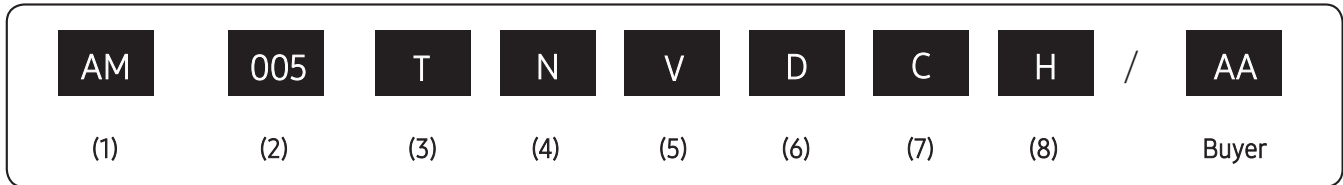


Model : AM\*\*\*TNVDCH/AA

# Nomenclature

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## Model Name



### (1) Classification

AM	DVM
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### (5) Product Notation

A	EEV NOT INCLUDED
V	EEV INCLUDED

### (2) Capacity

X kBtulh (3 digits)
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### (6) Feature

D	DELUXE
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### (3) Version

T	2020
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### (7) Rating Voltage

C	1Ø, 208~230V, 60Hz
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### (4) Product Type

N	Indoor Unit
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### (8) Mode

H	Heat Pump (R410A)
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# 1. Specification

Wind-Free™

Model Name			AM005TNVDCH/AA	AM007TNVDCH/AA	AM009TNVDCH/AA	
Power Supply			Φ, #, V, Hz	1, 2, 208~230V, 60Hz	1, 2, 208~230V, 60Hz	1, 2, 208~230V, 60Hz
Mode			-	HP/HR	HP/HR	HP/HR
Performance	Capacity	Cooling	kW	1.5	2.2	2.8
			Btu/h	5000	7500	9500
	Heating	kW	1.7	2.5	3.2	
		Btu/h	5800	8500	10500	
Power	Power Input	Cooling	W	20.0	24.0	30.0
				Heating	20.0	24.0
	Current Input	Cooling	A	0.13	0.16	0.20
				Heating	0.13	0.16
	Current	MCA	A	0.16	0.20	0.25
		MOP	A	15	15	15
Heat exchanger	Type		-	F&T	F&T	F&T
	Material	Fin	-	Al	Al	Al
		Tube	-	Cu	Cu	Cu
	Fin Treatment		-	Green Hydrophile	Green Hydrophile	Green Hydrophile
Fan	Type		-	Crossflow Fan	Crossflow Fan	Crossflow Fan
	Quantity		ea	1	1	1
	Air Flow Rate	High/Mid/Low	CMM	4.9/4.5/4.1	5.7/5.0/4.5	8.5/7.7/6.9
			CFM	173.0/158.9/144.8	201.3/176.6/158.9	300.2/271.9/243.7
		l/s	81.7/75.0/68.3	95.0/83.3/75.0	141.7/128.3/115.0	
Fan Motor	Type		-	BLDC	BLDC	BLDC
	Output x n		W	27 x 1	27 x 1	27 x 1
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)	12.7 (1/2)	12.7 (1/2)	12.7 (1/2)
Drain Pipe		Φ,mm	16.3, 550	16.3, 550	16.3, 550	
Wiring connections	Communication	Minimum	mm <sup>2</sup>	0.75	0.75	0.75
		Remark	-	F1, F2	F1, F2	F1, F2
Refrigerant	Type		-	R410A	R410A	R410A
	Electronic Expansion Valve		-	EEV INCLUDED	EEV INCLUDED	EEV INCLUDED
Sound	Sound Pressure	High/Mid/Low/Windfree	dB(A)	31/30/27/26	34/32/30/27	34/33/32/26
	Sound Power	Cooling		50	51	52
Dimensions	Net Weight		kg (lbs)	9.0(19.8)	9.0(19.8)	9.5(20.9)
	Shipping Weight		kg (lbs)	10.5(23.1)	10.5(23.1)	11.0(24.3)
	Net Dimensions (W×H×D)		mm	820 x 299 x 215	820 x 299 x 215	820 x 299 x 215
			inch	32.3 x 11.8 x 8.5	32.3 x 11.8 x 8.5	32.3 x 11.8 x 8.5
	Shipping Dimensions (W×H×D)		mm	880 x 290 x 375	880 x 290 x 375	880 x 290 x 375
			inch	34.6 x 11.4 x 14.8	34.6 x 11.4 x 14.8	34.6 x 11.4 x 14.8
Additional Accessories			-	-	-	-
	Drain pump	Max. lifting Height / Displacement	mm / Liter/h	-	-	-
		EASY FILTER PLUS		-	○	○

## NOTE

- Mode : HP(Heat Pump), HR(Heat Recovery)
- Nominal Cooling : Indoor temperature 26.7°CDB / 19.4°CWB(80°F DB/67°F WB), Outdoor temperature 35°CDB / 23.9°CWB(95°F DB/75°F WB), Refrigerant pipe length 7.5m(25ft), Level difference 0m(0ft).
- Nominal Heating : Indoor temperature 21.1°CDB / 15.6°CWB(70°F DB/60°F WB), Outdoor temperature 8.3°CDB / 6.1°CWB(47°F DB/43°F WB), Refrigerant pipe length 7.5m(25ft), Level difference 0m(0ft).
- Sound level was acquired in an anechoic room. Thus actual noise level may be different depending on the installation conditions.
- These products contain R410A which is fluorinated greenhouse gas.
- Specifications may be subject to change without prior notice.
- Select wire size based on the value of MCA
- The Wind-Free™ unit delivers an air current that is under 0.15 m/s while in Wind-Free™ mode. Air velocity that is below 0.15 m/s is considered "still air" as defined by ASHRAE 55-2013 (American Society of Heating, Refrigerating, and Air-Conditioning Engineers).

## 2. Summary Table

Wind-Free™

### Performance Characteristics

Model Code	Net Weight (lbs)	Fan Speed	Nominal Capacity			Airflow (CFM)	Sound Pressure	Sound Power
			Cooling	Sensible	Heating			
AM005TNVDCH/AA	19.8	High	5,000	3,400	5,800	173.0	31	50
		Mid	4,600	3,100	5,600	158.9	30	-
		Low	4,300	2,900	5,300	144.8	27	-
AM007TNVDCH/AA	19.8	High	7,500	5,000	8,500	201.3	34	51
		Mid	6,700	4,500	8,000	176.6	32	-
		Low	6,100	4,100	7,600	158.9	30	-
AM009TNVDCH/AA	20.9	High	9,500	6,400	10,500	300.2	34	52
		Mid	8,700	5,900	10,000	271.9	33	-
		Low	7,900	5,300	9,500	243.7	32	-
AM012TNVDCH/AA	20.9	High	12,000	8,000	13,500	363.8	40	56
		Mid	10,800	7,200	12,700	321.4	36	-
		Low	9,900	6,600	12,100	293.1	34	-
AM015TNVDCH/AA	26.5	High	15,000	10,100	17,000	441.5	37	55
		Mid	13,900	9,400	16,200	402.6	34	-
		Low	12,900	8,700	15,600	370.8	33	-
AM018TNVDCH/AA	26.5	High	18,000	12,100	20,000	554.5	40	58
		Mid	16,100	10,800	18,800	487.4	37	-
		Low	14,200	9,500	17,500	423.8	34	-
AM024TNVDCH/AA	26.5	High	23,200	15,700	23,800	593.3	43	62
		Mid	21,000	14,200	22,500	529.7	40	-
		Low	18,700	12,700	21,100	466.2	37	-
AM028TNVDCH/AA	28.7	High	28,000	18,800	29,000	618.0	46	64
		Mid	25,300	17,000	27,400	550.9	45	-
		Low	22,700	15,200	25,800	487.4	43	-

### Electrical Characteristics

Model Code	Power Supply (Ø, #, V, Hz)	Power Input (W) (C / H)	Current Input (A) (C / H)	MCA (A)	MOP (A)	FLA (A)
AM005TNVDCH/AA	1, 2, 208~230, 60	20 / 20	0.13 / 0.13	0.16	15	0.13
AM007TNVDCH/AA	1, 2, 208~230, 60	24 / 24	0.16 / 0.16	0.20	15	0.16
AM009TNVDCH/AA	1, 2, 208~230, 60	30 / 30	0.20 / 0.20	0.25	15	0.20
AM012TNVDCH/AA	1, 2, 208~230, 60	37 / 37	0.25 / 0.25	0.31	15	0.25
AM015TNVDCH/AA	1, 2, 208~230, 60	40 / 40	0.27 / 0.27	0.34	15	0.27
AM018TNVDCH/AA	1, 2, 208~230, 60	52 / 52	0.35 / 0.35	0.44	15	0.35
AM024TNVDCH/AA	1, 2, 208~230, 60	60 / 60	0.40 / 0.40	0.50	15	0.40
AM028TNVDCH/AA	1, 2, 208~230, 60	65 / 65	0.43 / 0.43	0.54	15	0.43

#### NOTE

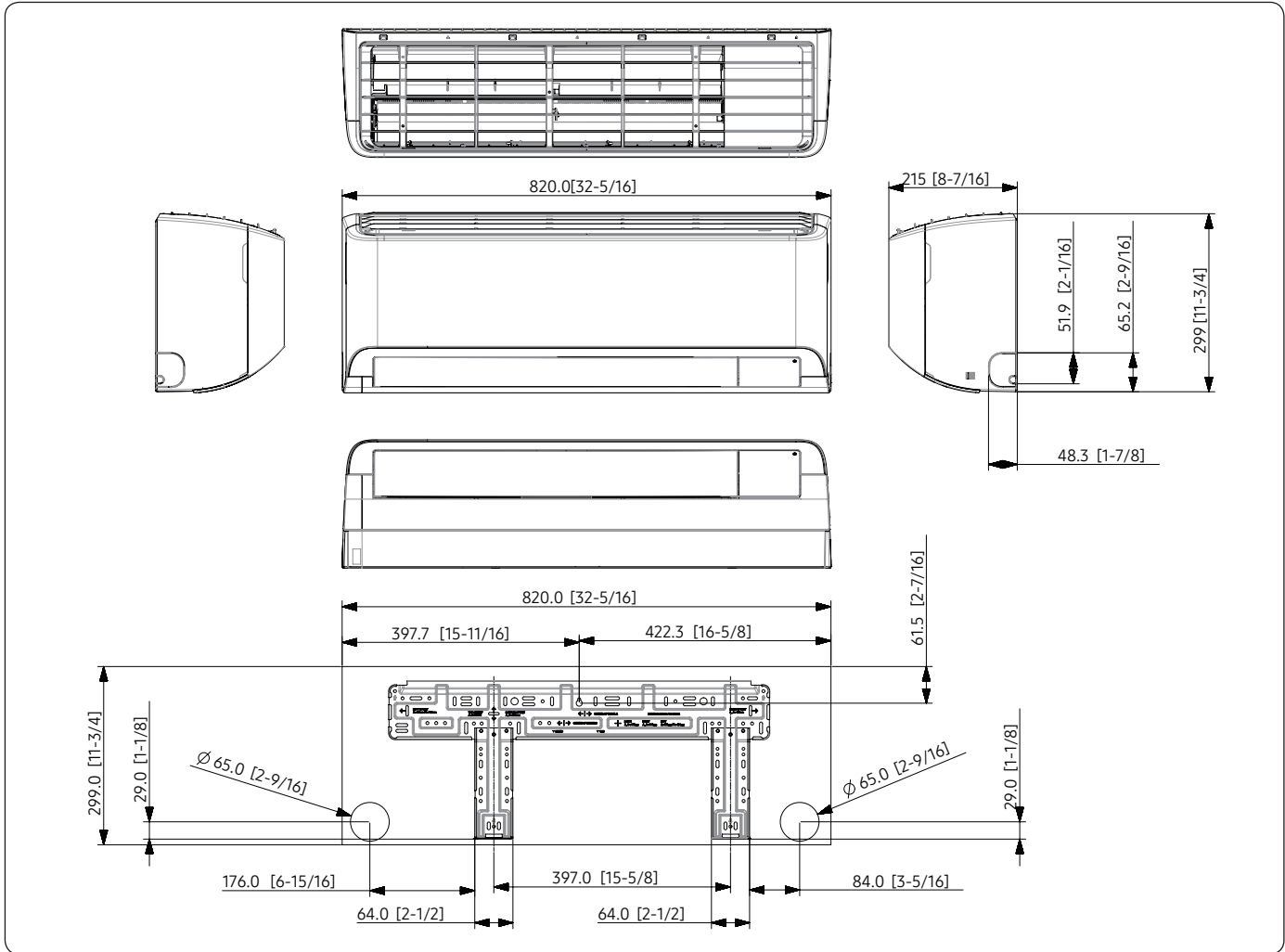
- MCA : Minimum circuit amperes
- MOP : Maximum overcurrent protective
- Select wire size based on the value of MCA

# 4. Dimensional Drawing

Wind-Free™

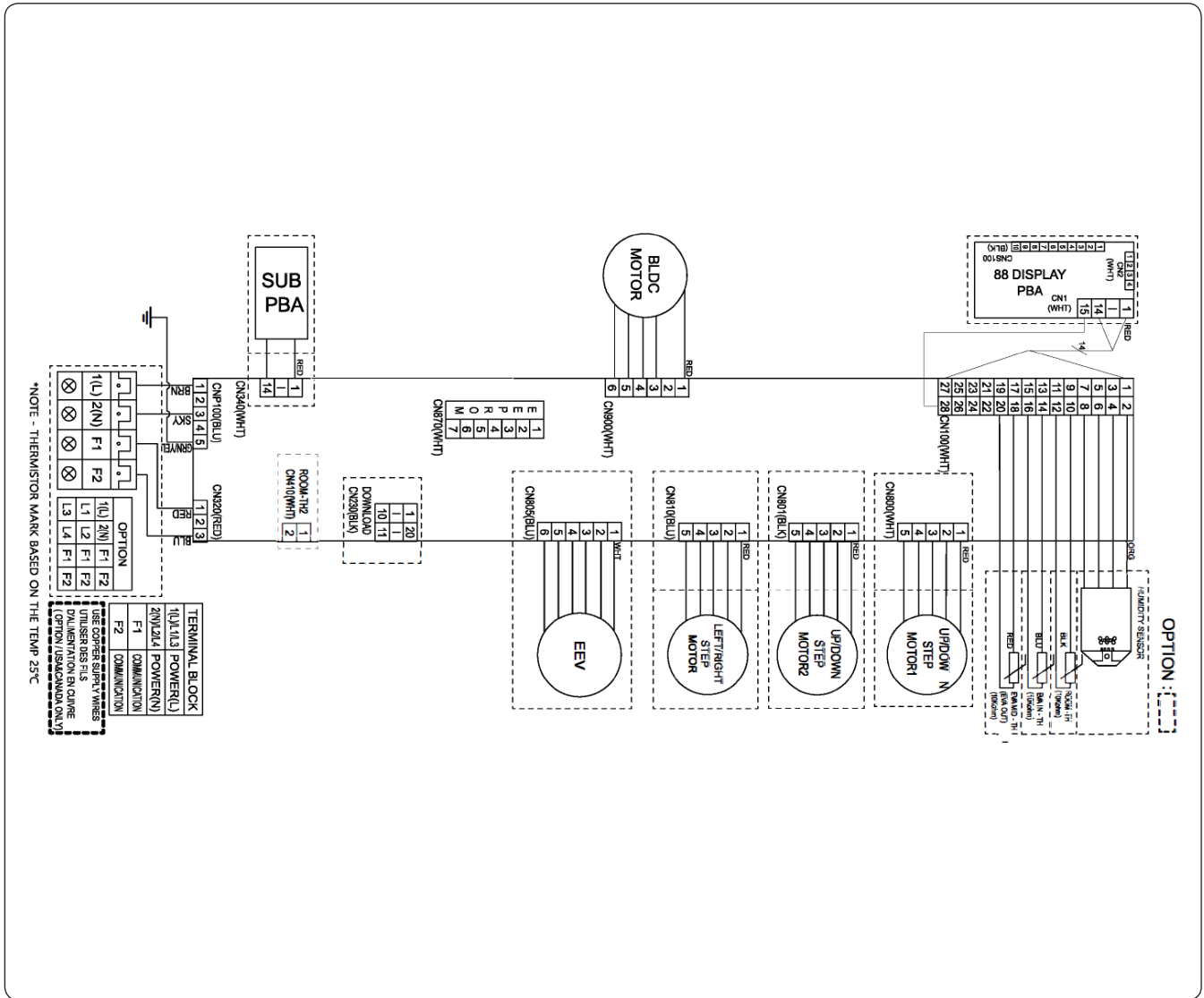
AM005TNVDCH/AA, AM007TNVDCH/AA, AM009TNVDCH/AA, AM012TNVDCH/AA

Unit: mm (inches)



# 6. Electrical Wiring Diagram


Wind-Free™



SUB PBA	Printed Circuit Board(SUB)	EEV	Electronic expansion valve	EVA-OUT(10K)	Thermistor EVA OUT(10K)
MOTOR	BLDC	ROOM(10K)	Thermistor ROOM In(10K)	EVA-IN(10K)	Thermistor EVA IN(10K)

## NOTE

- This wiring diagram applies only to the Indoor unit.
- Symbols show as follow :  
BLK: black, RED: red, BLU: blue, WHT: white, YEL: yellow, BRN: brown, sky: sky blue, GRN: green
- For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.

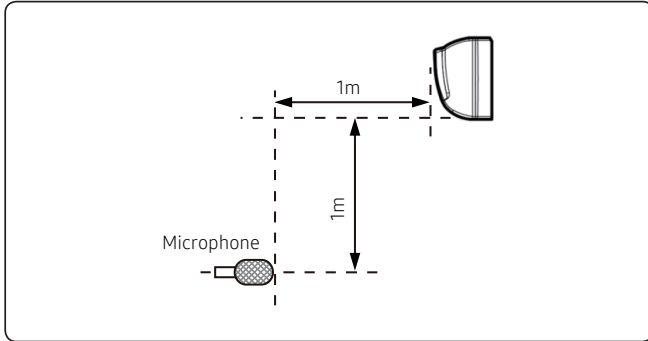
•  Protective earth(SCREW)  
EARTH EARTH

# 7. Sound Data

Wind-Free™

## Sound Pressure level

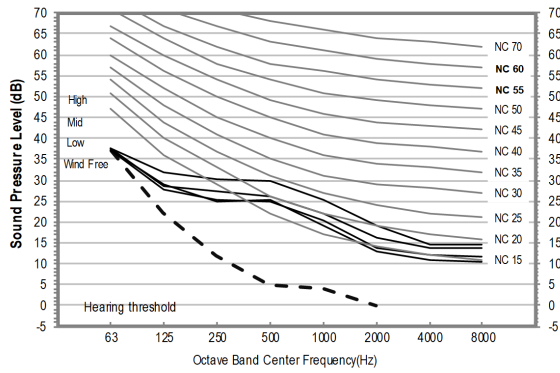
Unit: dB(A)



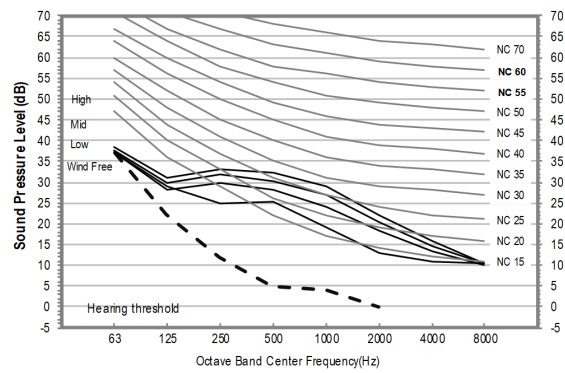
Model	High	Mid	Low	Wind-Free
AM005TNVDCH/AA	31	30	27	26
AM007TNVDCH/AA	34	32	30	27
AM009TNVDCH/AA	34	33	32	26
AM012TNVDCH/AA	40	36	34	26

### • NC Curve

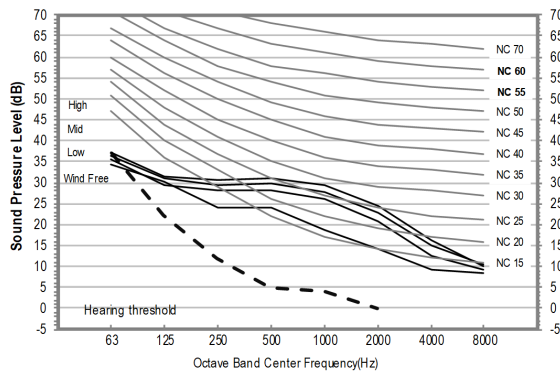
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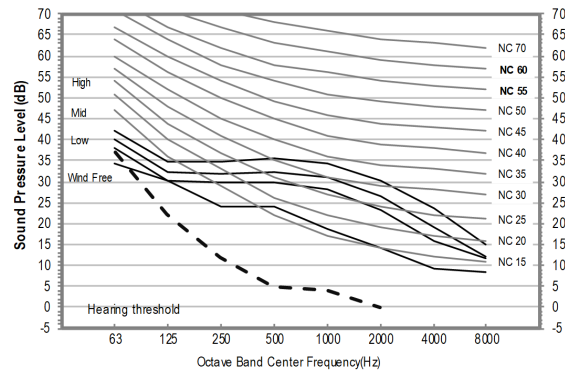
2) AM007TNVDCH/AA



3) AM009TNVDCH/AA



4) AM012TNVDCH/AA

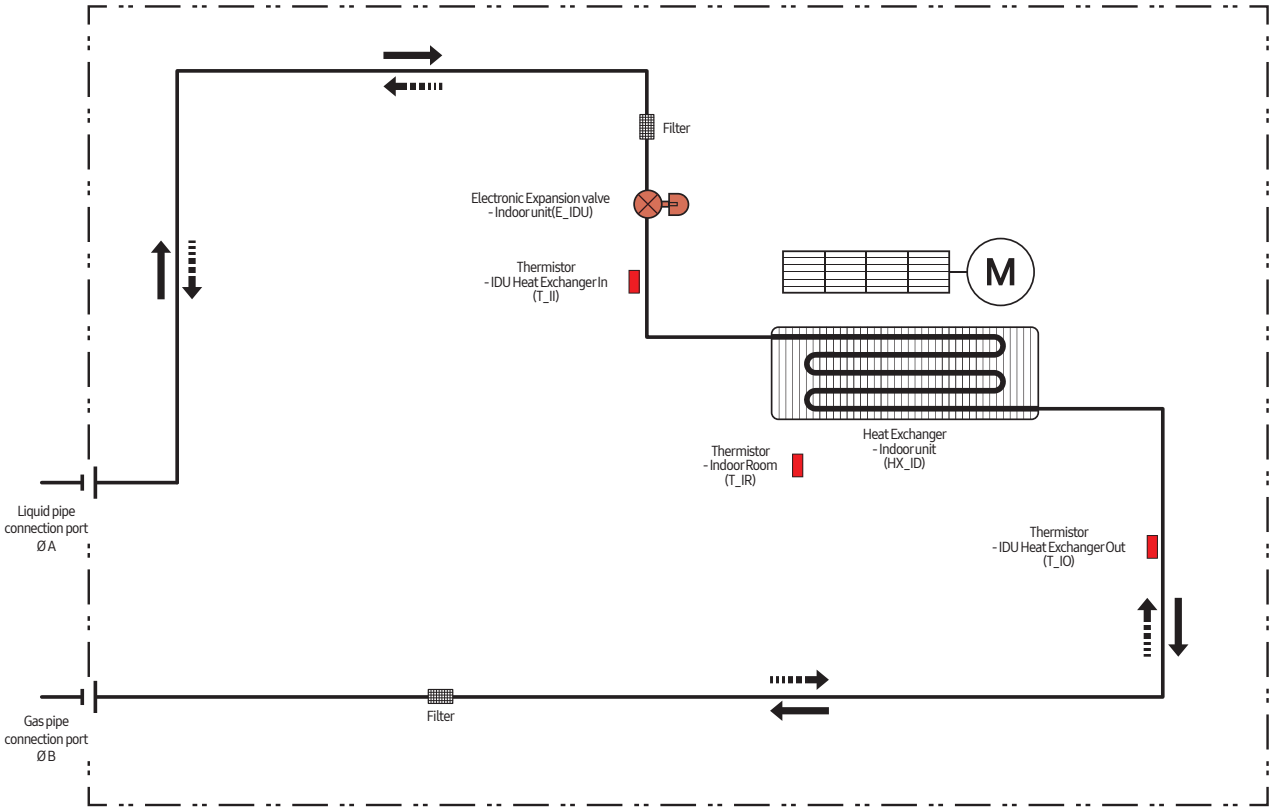


### NOTE

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

# 9. Piping Diagram

## EEV included Model



Refrigerant flow	
Cooling	Heating
→	⋯→





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Ver.1.1

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