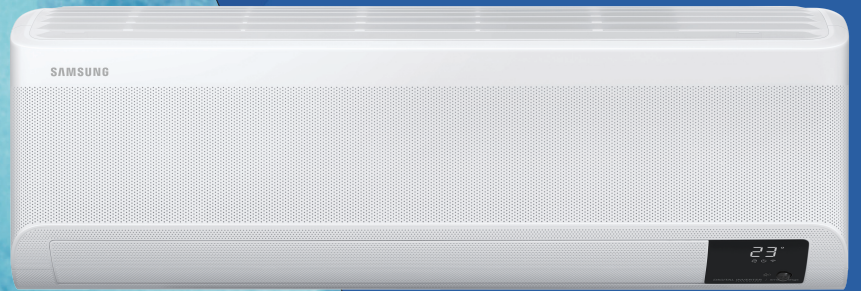


**SAMSUNG**

# VRF Technical Data Book

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

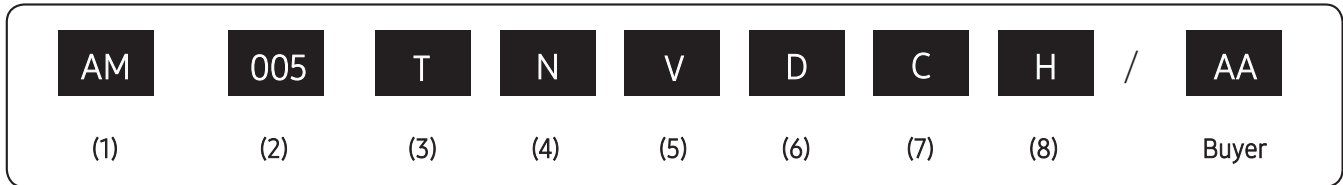


Model : AM\*\*\*TNVDCH/AA

# Nomenclature

---

## Model Name



### (1) Classification

AM	DVM
----	-----

### (5) Product Notation

A	EEV NOT INCLUDED
V	EEV INCLUDED

### (2) Capacity

X kBtulh (3 digits)
---------------------

### (6) Feature

D	DELUXE
---	--------

### (3) Version

T	2020
---	------

### (7) Rating Voltage

C	1Ø, 208~230V, 60Hz
---	--------------------

### (4) Product Type

N	Indoor Unit
---	-------------

### (8) Mode

H	Heat Pump (R410A)
---	-------------------

---

# 1. Specification

Wind-Free™

Model Name				AM012TNVDCH/AA	AM015TNVDCH/AA	AM018TNVDCH/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	3.6	4.5	5.6	
			Btu/h	12000	15000	18000	
	Heating	kW	4.0	5.0	6.3		
		Btu/h	13500	17000	20000		
Power	Power Input	Cooling	W	37.0	40.0	52.0	
		Heating		37.0	40.0	52.0	
	Current Input	Cooling	A	0.25	0.27	0.35	
		Heating		0.25	0.27	0.35	
	Current	MCA	A	0.31	0.34	0.44	
		MOP		15	15	15	
Heat exchanger	Type			-	F&T	F&T	
	Material	Fin			-	Al	Al
		Tube			-	Cu	Cu
	Fin Treatment			-	Green Hydrophile	Green Hydrophile	
Fan	Type			-	Crossflow Fan	Crossflow Fan	
	Quantity			ea	1	1	
	Air Flow Rate	High/Mid/Low	CMM	10.3/9.1/8.3	12.5/11.4/10.5	15.7/13.8/12.0	
			CFM	363.8/321.4/293.1	441.5/402.6/370.8	554.5/487.4/423.8	
		l/s	171.7/151.7/138.3	208.3/190.0/175.0	261.7/230.0/200.0		
Fan Motor	Type			-	BLDC	BLDC	
	Output x n			W	27 x 1	27 x 1	
Piping Connections	Liquid Pipe			Type	Flare connection	Flare connection	
				Φ, mm (inch)	6.35 (1/4)	6.35 (1/4)	
	Gas Pipe			Type	Flare connection	Flare connection	
				Φ, mm (inch)	12.7 (1/2)	12.7 (1/2)	
Drain Pipe			Φ,mm	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	
	Electronic Expansion Valve			-	EEV INCLUDED	EEV INCLUDED	
Sound	Sound Pressure	High/Mid/Low/Windfree	dB(A)	40/36/34/26	37/34/33/29	40/37/34/29	
	Sound Power	Cooling		56	55	58	
Dimensions	Net Weight		kg (lbs)	9.5(20.9)	12.0(26.5)	12.0(26.5)	
	Shipping Weight		kg (lbs)	11.0(24.3)	14.0(30.9)	14.0(30.9)	
	Net Dimensions (W×H×D)			mm	820 x 299 x 215	1,055 x 299 x 215	
				inch	32.3 x 11.8 x 8.5	41.5 x 11.8 x 8.5	
	Shipping Dimensions (W×H×D)			mm	880 x 290 x 375	1,115 x 290 x 375	
				inch	34.6 x 11.4 x 14.8	43.9 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

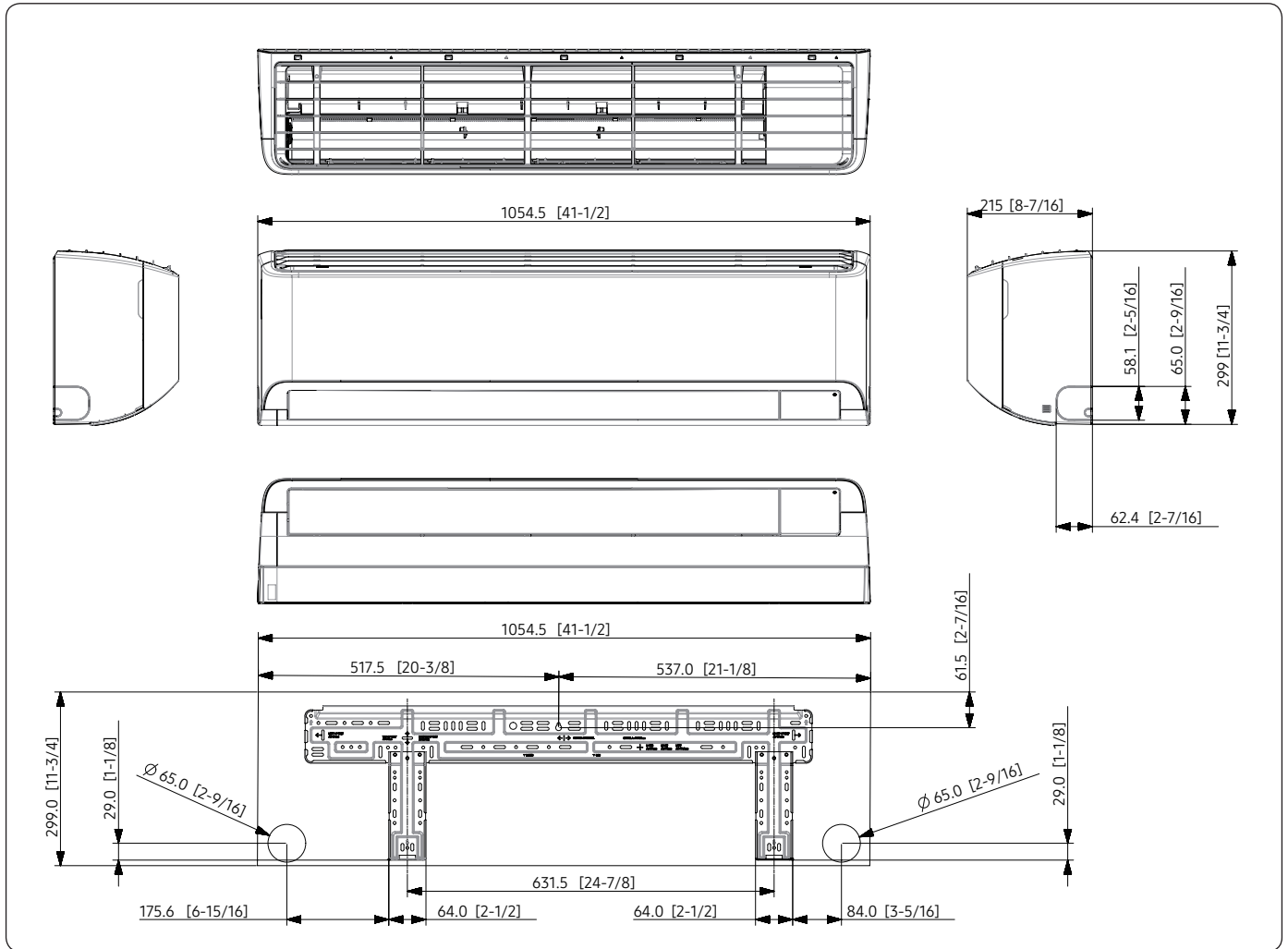
- MCA : Minimum circuit amperes
- MOP : Maximum overcurrent protective
- Select wire size based on the value of MCA

# 4. Dimensional Drawing

Wind-Free™

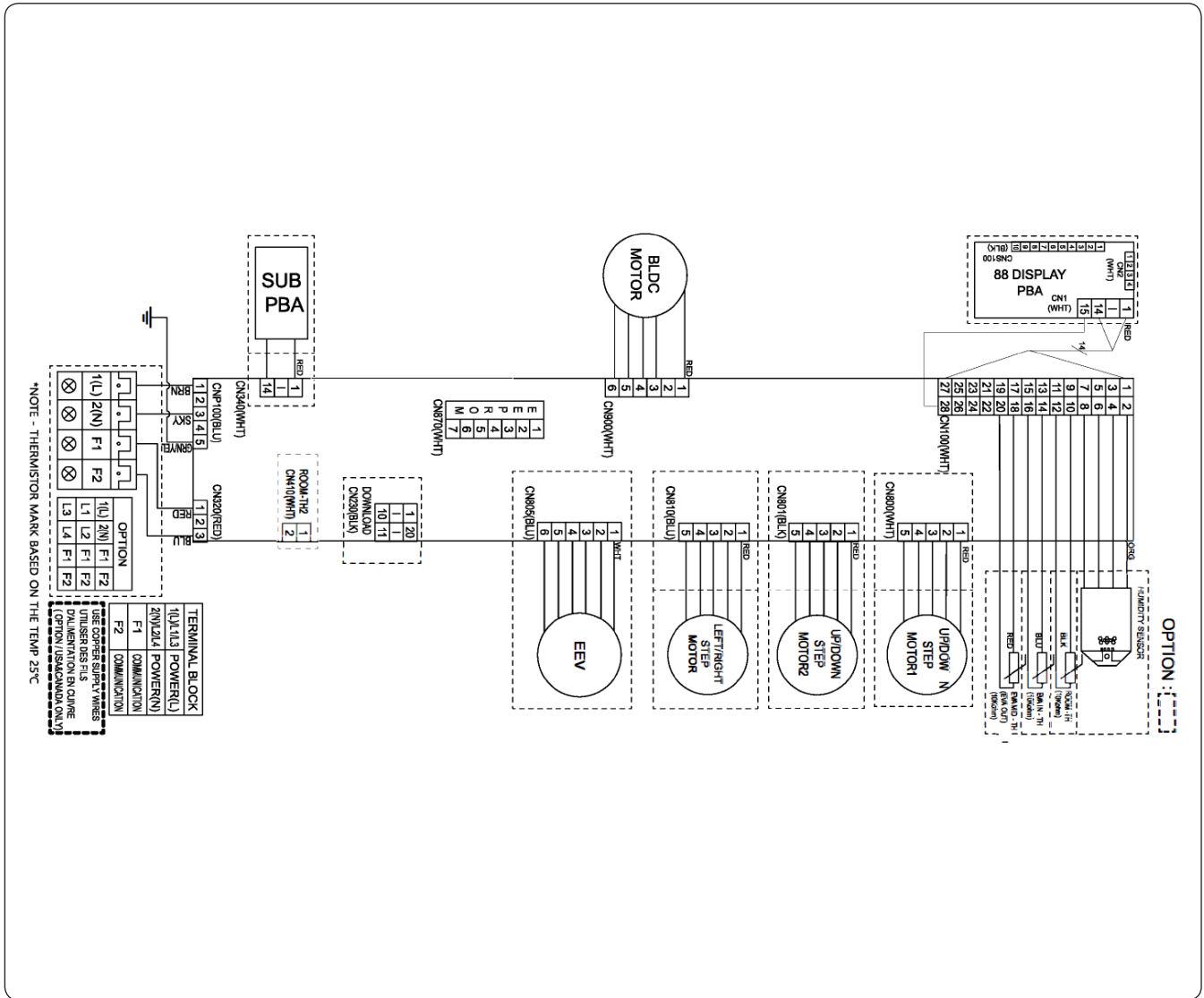
AM015TNVDCH/AA, AM018TNVDCH/AA, AM024TNVDCH/AA, AM028TNVDCH/AA

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.

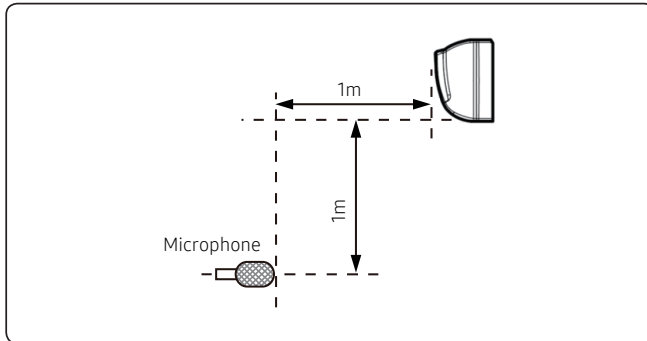
-  Protective earth(SCREW)

# 7. Sound Data

Wind-Free™

## Sound Pressure level

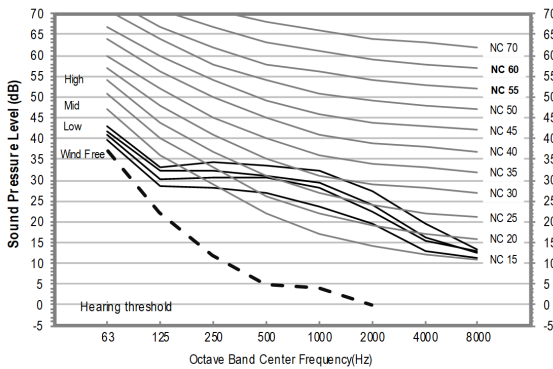
Unit: dB(A)



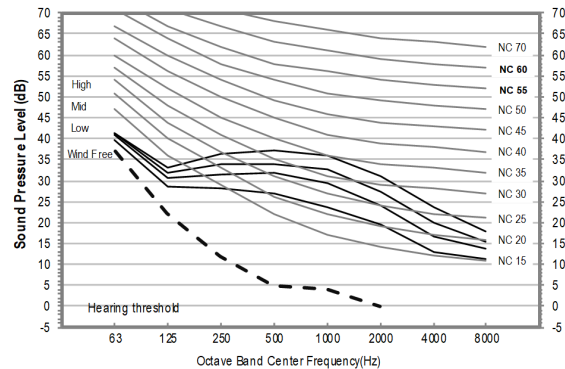
Model	High	Mid	Low	Wind-Free
AM015TNVDCH/AA	37	34	33	29
AM018TNVDCH/AA	40	37	34	29
AM024TNVDCH/AA	43	40	37	29
AM028TNVDCH/AA	46	45	43	30

### • NC Curve

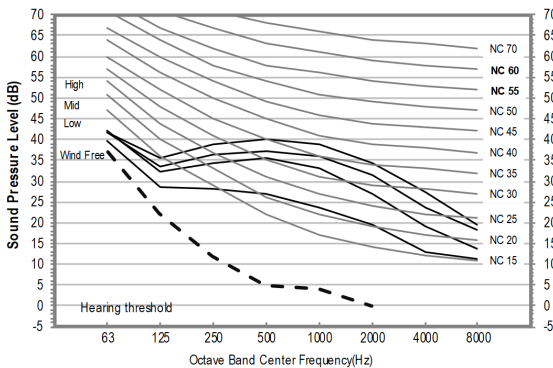
1) AM015TNVDCH/AA



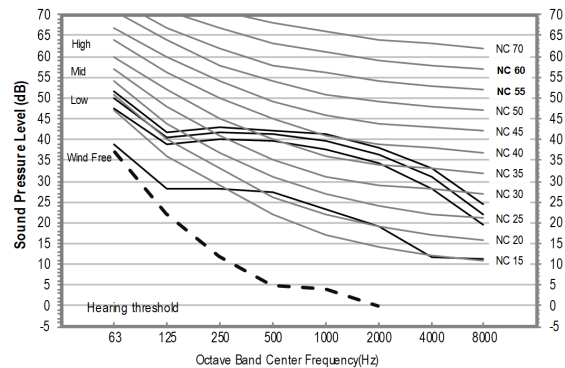
2) AM018TNVDCH/AA



3) AM024TNVDCH/AA



4) AM028TNVDCH/AA

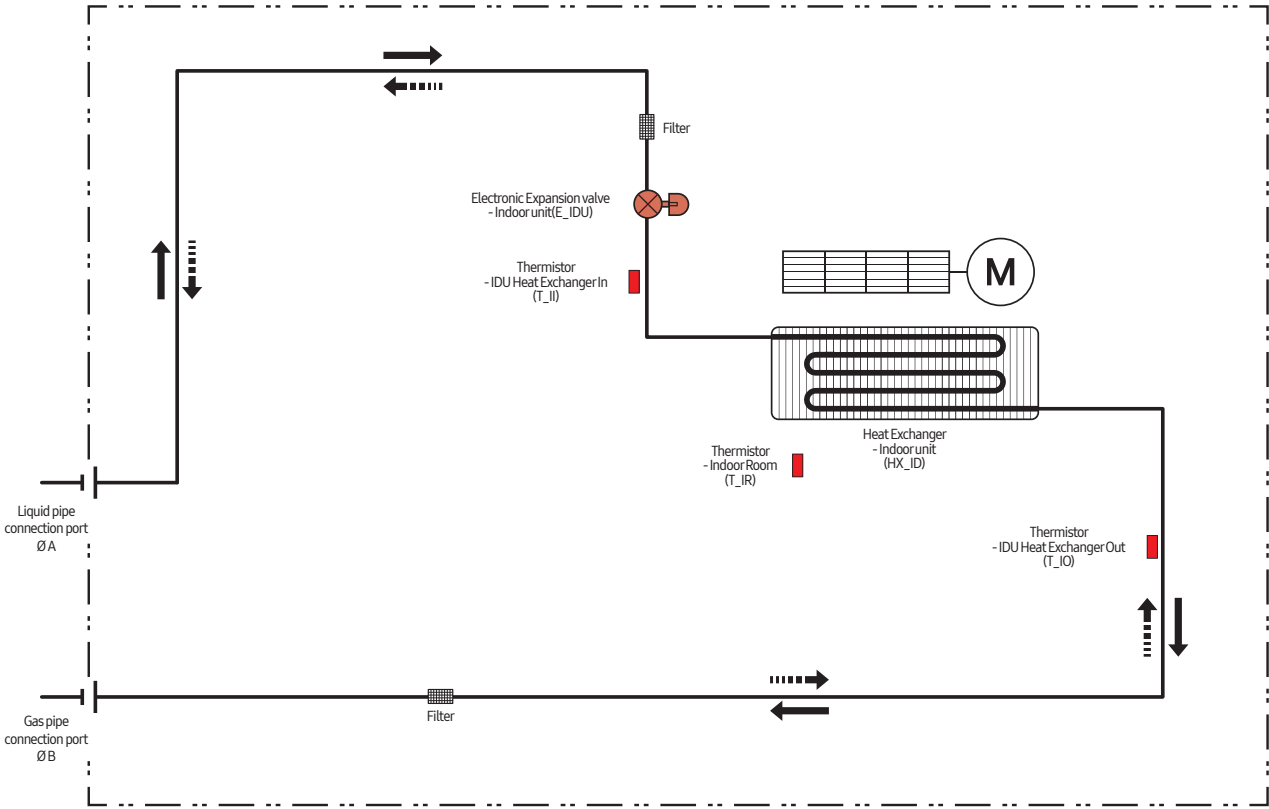


### NOTE

- 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
→	- - - - - →





2020.08  
Ver.1.1

**Samsung Electronics Co., LTD.**

Head Office (Suwon Korea) 129, Samsung-Ro, Yeongtong-Gu, Suwon City, Gyeonggi-Do, Korea 16677  
Website : [www.samsung.com](http://www.samsung.com), <https://partnerhub.samsung.com> Email : [airconditioner@samsung.com](mailto:airconditioner@samsung.com)  
Images and data in this book may subject to change without prior notice.