

**SAMSUNG**

# VRF Technical Data Book

Wind-Free 1Way Cassette for Latin America  
(R410A, 60Hz)

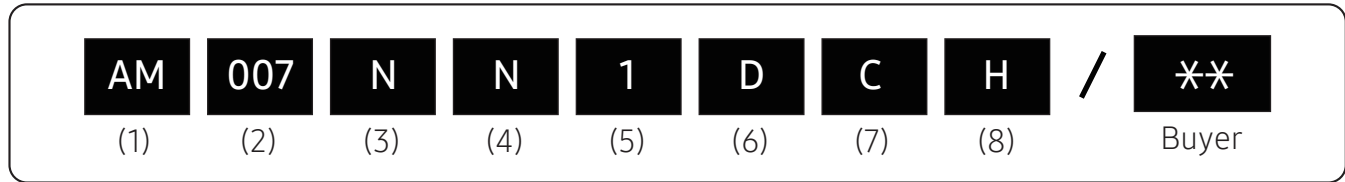


Model : AM\*\*\*NN1DCH/AZ

# Nomenclature

## Indoor Units

### Model Names



#### (1) Classification

<b>AM</b>	DVM
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#### (2) Capacity

X kBtu/h (3 digits)
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#### (3) Version

<b>K</b>	2016
<b>M</b>	2017
<b>N</b>	2018

#### (4) Product Type

<b>N</b>	Indoor Unit
<b>X</b>	Outdoor Unit

#### (5) Product Notation

<b>1</b>	1Way Cassette
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#### (6) Feature

<b>D</b>	Deluxe
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#### (7) Rating Voltage

<b>C</b>	1Ø, 208~230V, 60Hz
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#### (8) Mode

<b>H</b>	Heat Pump (R410A)
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## 2. Specification

### Wind-Free 1 Way Cassette

Type			1Way CASSETTE	1Way CASSETTE	1Way CASSETTE	
Model Name			AM012NN1DCH/AZ	AM018NN1DCH/AZ	AM024NN1DCH/AZ	
Power Supply		Φ, #, V, Hz	1,208-230,60	1,208-230,60	1,208-230,60	
Mode		-	HP/HR	HP/HR	HP/HR	
Performance	Capacity	Cooling	Btu/h	12,000	18,000	24,000
			US RT	1.00	1.50	2.00
		Heating	Btu/h	13,500	20,000	27,000
			US RT	1.12	1.67	2.25
Power	Power Input	Cooling	W	50.0	55.00	80.00
		Heating		50.0	55.00	80.00
	Current Input	Cooling	A	0.28	0.28	0.40
		Heating		0.28	0.28	0.40
	Current	MCA	A	0.35	0.35	0.50
		MFA		15	15	15
Heat exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube
	Material	Fin	-	Al	Al	Al
		Tube	-	Cu	Cu	Cu
	Fin Treatment		-	Green Hydrophile	Green Hydrophile	Green Hydrophile
Fan	Type		-	Crossflow Fan	Crossflow Fan	Crossflow Fan
	Quantity		ea	1	1	1
	Air Flow Rate	H/M/L	CMM	8.0 / 7.0 / 6.0	16.0 / 14.0 / 12.5	17.0 / 15.5 / 14.0
			CFM	282.53/247.21/211.90	529.74/459.11/388.48	582.71/512.08/423.79
Fan Motor	Model		-	AC Motor	BLDC Motor	BLDC Motor
	Output x n		W	17 x 1	54 x 1	54 x 1
Piping Connections	Liquid Pipe	Type	-	Flare Connection	Flare Connection	Flare Connection
		Φ, mm	6.35	6.35	9.52	
		Φ, inch	1/4"	1/4"	3/8"	
	Gas Pipe	Type	-	Flare Connection	Flare Connection	Flare Connection
		Φ, mm	12.70	12.70	15.88	
		Φ, inch	1/2"	1/2"	5/8"	
Drain Pipe		Φ, mm	VP20 (OD 25,ID 20)	VP20 (OD 25,ID 20)	VP20 (OD 25,ID 20)	
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	dB(A)	37 / 33 / 30	41 / 38 / 35	42 / 39 / 36
	Sound Power	Cooling		55	59	60
Dimension	Net Weight		kg	10.00	13.5	13.5
			lbs	22.05	29.76	29.76
	Shipping Weight		kg	12.80	17.3	17.3
			lbs	28.22	38.14	38.14
	Net Dimensions (WxHxD)		mm	970 x 135 x 410	1200 x 138 x 450	1200 x 138 x 450
			inch	38.19 x 5.31 x 16.14	47.24 x 5.43 x 17.72	47.24 x 5.43 x 17.72
Shipping Dimensions (WxHxD)		mm	1,173 x 231 x 478	1435 x 224 x 525	1435 x 224 x 525	
		inch	46.18 x 9.09 x 18.82	56.50 x 8.82 x 20.67	56.50 x 8.82 x 20.67	
Casing	Material		-	ABS	ABS	ABS

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### Wind-Free 1 Way Cassette

Type			1Way CASSETTE	1Way CASSETTE	1Way CASSETTE	
Model Name			AM012NN1DCH/AZ	AM018NN1DCH/AZ	AM024NN1DCH/AZ	
Panel	Model Name	-	PC1NWFMAN	PC1BWFMAN	PC1BWFMAN	
	Type	-	Wind Free	Wind Free	Wind Free	
	Material	-	HIPS	HIPS	HIPS	
	Color	-	White	White	White	
	Net Weight	kg		4.30	5.0	5.0
		lbs		9.48	11.02	11.02
	Shipping Weight	kg		6.30	7.0	7.0
		lbs		13.89	15.43	15.43
	Net Dimensions (W×H×D)	mm		1198 x 35 x 500	1410 x 35 x 500	1410 x 35 x 500
		inch		47.17 x 1.38 x 19.69	55.51 x 1.38 x 19.69	55.51 x 1.38 x 19.69
Shipping Dimensions (W×H×D)	mm		1262 x 122 x 566	1474 x 122 x 566	1474 x 122 x 566	
	inch		49.69 x 4.80 x 22.28	58.03 x 4.80 x 22.28	58.03 x 4.80 x 22.28	
		-	INCLUDED	INCLUDED	INCLUDED	
Drain pump	Max. lifting Height / Displacement	mm / Liter/h	750 / 24	750 / 24	750 / 24	

#### NOTE

- Mode : HP(Heat Pump), HR(Heat Recovery)
- Cooling : Indoor temperature 27°C DB / 19°C WB, Outdoor temperature 35°C DB/24°C WB, Refrigerant pipe length 7.5m, Level difference 0m.
- Heating : Indoor temperature 20°C DB / 15°C WB, Outdoor temperature 7°C DB / 6°C WB, Refrigerant pipe length 7.5m, Level difference 0m.
- 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
- Drain pump included (check valve included)

# 3. Summary Table

## Wind-Free 1 Way Cassette

### Performance Characteristics

Model Code	Net Weight (kg)	Fan Speed	Nominal Capacity(Btu/h)			Airflow (CMM)	Sound Pressure (dBA)	Sound Power (dBA)
			Cooling	Sensible	Heating			
AM007NN1DCH/AZ	10.0	High	7,500	5,100	8,500	6.00	29.0	47
		Mid	6,850	4,660	7,760	5.00	26.0	-
		Low	6,120	4,160	6,940	4.00	24.0	-
AM009NN1DCH/AZ	10.0	High	9,500	6,400	10,500	7.00	32.0	50
		Mid	8,800	5,930	9,720	6.00	28.0	-
		Low	8,030	5,410	8,870	5.00	24.0	-
AM012NN1DCH/AZ	10.0	High	12,000	8,700	13,500	8.00	37.0	55
		Mid	11,200	8,140	12,600	7.00	33.0	-
		Low	10,400	7,530	11,700	6.00	30.0	-
AM018NN1DCH/AZ	13.5	High	18,000	13,500	20,000	16.00	41.0	59
		Mid	16,850	12,640	19,270	14.00	38.0	-
		Low	14,890	11,160	17,780	12.50	35.0	-
AM024NN1DCH/AZ	13.5	High	24,000	16,920	27,000	17.00	42.0	60
		Mid	22,940	16,150	25,990	15.50	39.0	-
		Low	20,610	14,650	24,070	14.00	36.0	-

#### NOTE

- Sound data is based on cooling operation.

### Electrical Characteristics

Model Code	Power Supply (Φ, #, V, Hz)	Power Input (W)	Current Input (A)	MCA (A)	MFA (A)	FLA (A)
AM007NN1DCH/AZ	1,2,208-230,60	40.00	0.23	0.29	15.0	0.23
AM009NN1DCH/AZ	1,2,208-230,60	45.00	0.25	0.31	15.0	0.25
AM012NN1DCH/AZ	1,2,208-230,60	50.00	0.28	0.35	15.0	0.28
AM018NN1DCH/AZ	1,2,208-230,60	55.00	0.28	0.35	15.0	0.28
AM024NN1DCH/AZ	1,2,208-230,60	80.00	0.40	0.5	15.0	0.40

#### NOTE

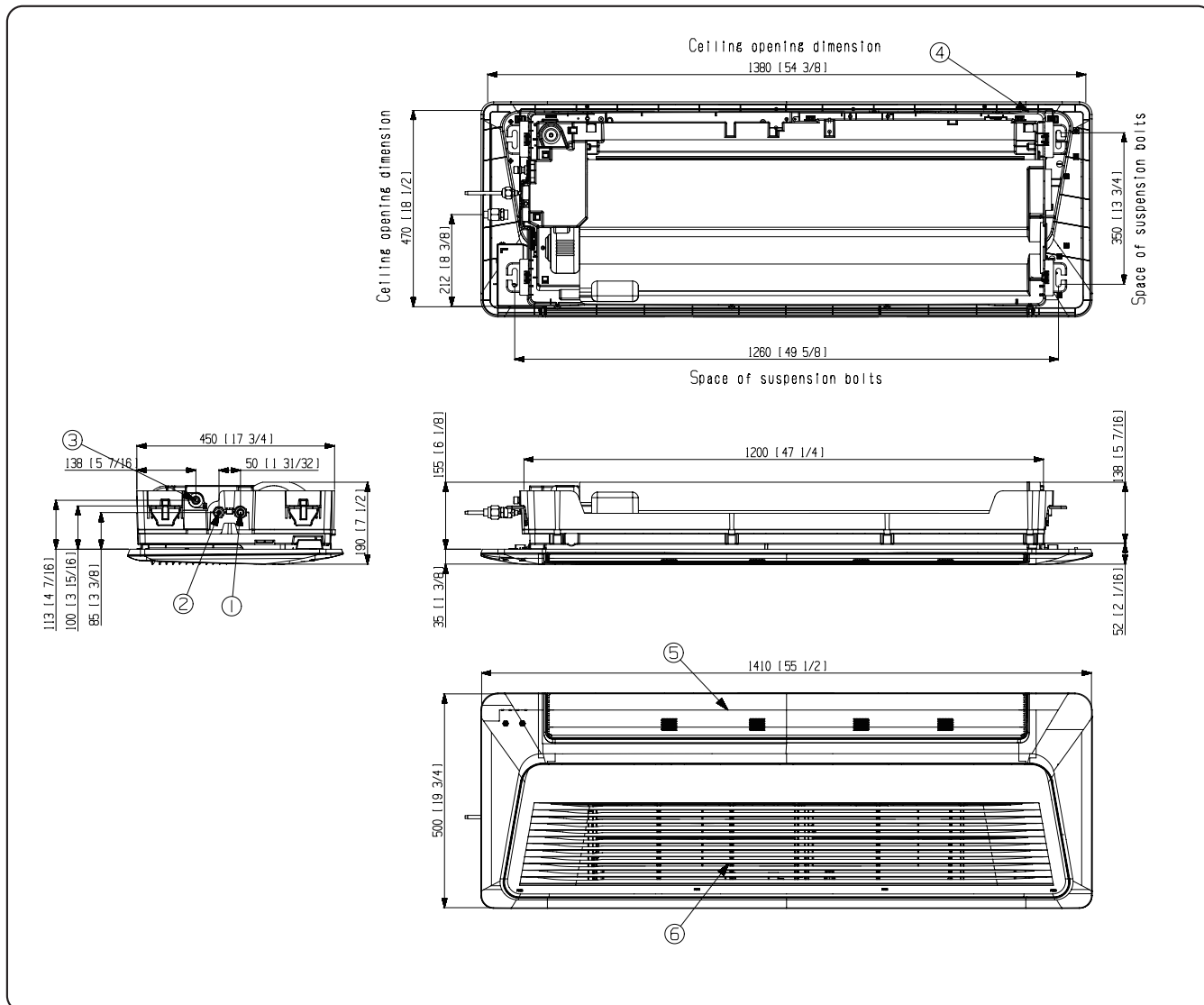
- MCA: Minimum circuit amperes
- MFA: Maximum fuse amperes
- FLA: Full load amperes
- Select wire size based on the value of MCA

# 5. Dimensional Drawing

## Wind-Free 1Way Cassette

• AM018/024NN1DCH/AZ

Unit: mm(inch)

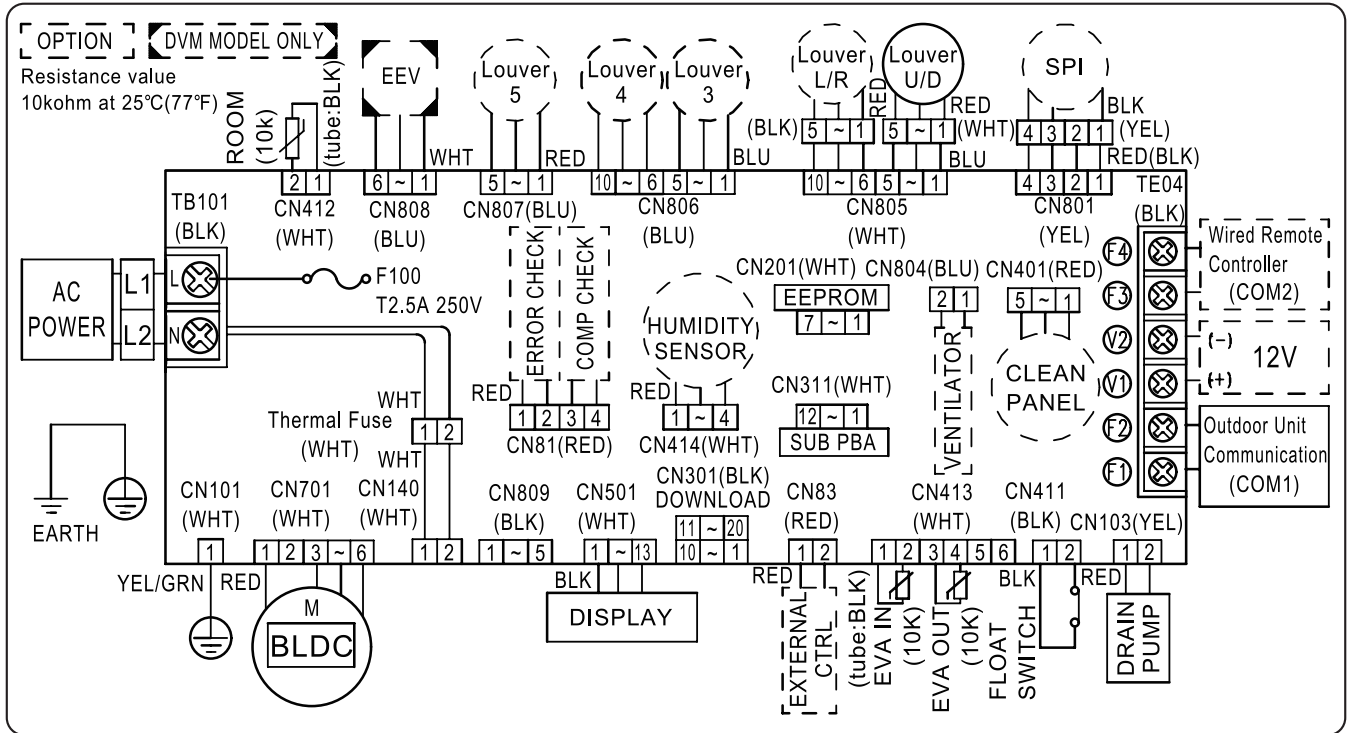


NO	Name	Description	NO	Name	Description
01	Gas pipe connection	5.2 kW	03	Drain hose connection	VP20 (OD26, ID20)
		7.1 kW	04	Power supply/Communication wiring conduit	-
02	Liquid pipe connection	5.2 kW	05	Air outlet louver	-
		7.1 kW	06	Air inlet grille	-

# 7. Electrical Wiring Diagram

## Wind-Free 1Way Cassette

- AM018/024NN1DCH/AZ



F100	FUSE	EEV	Electronic expansion valve	EVA-IN(10K)	Thermistor EVA IN(10K)
M[HALL IC]	Motor (IDU fan)	SPI	S-Plasma ion	EVA-OUT(10K)	Thermistor EVA OUT(10K)
Thermal Fuse	Terminal Block thermal fuse	ROOM(10K)	Thermistor ROOM(10K)		

### NOTE

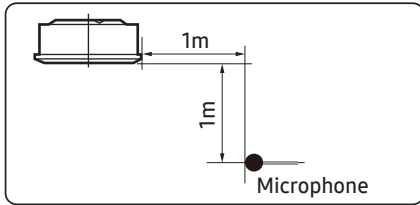
- This wiring diagram applies only to the indoor unit.
- Symbols show as follow :  
BLK: black, RED: red, BLU: blue, WHT: white, YEL: yellow, BRN: brown, SKY: sky blue, GRN: green
- For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.
- ⊕ Protective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

# 8. Sound data

## Wind-Free 1Way Cassette

### Sound Power level

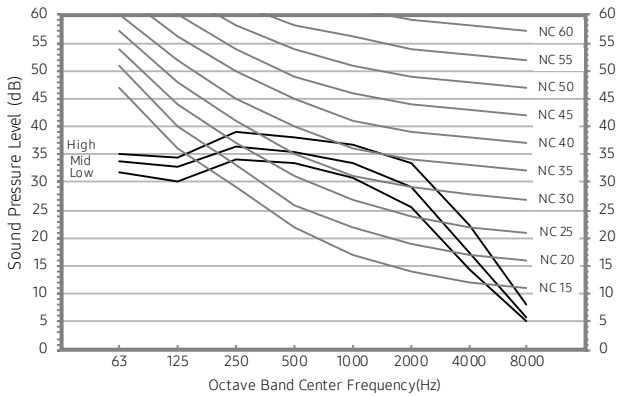
Unit: dB(A)



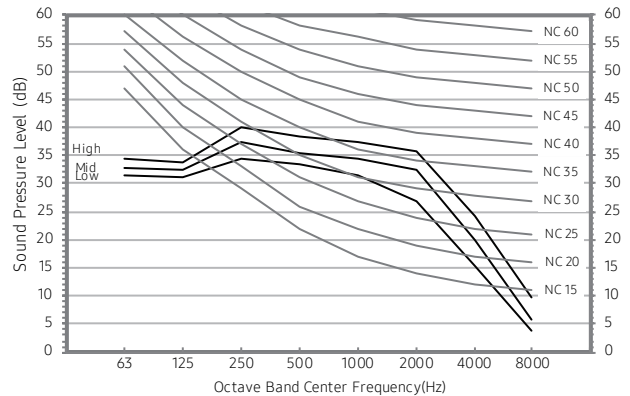
Model	High	Mid	Low
AM018NN1DCH/AZ	41	38	35
AM024NN1DCH/AZ	42	39	36

- NC Curve

4) AM018NN1DCH/AZ



5) AM024NN1DCH/AZ



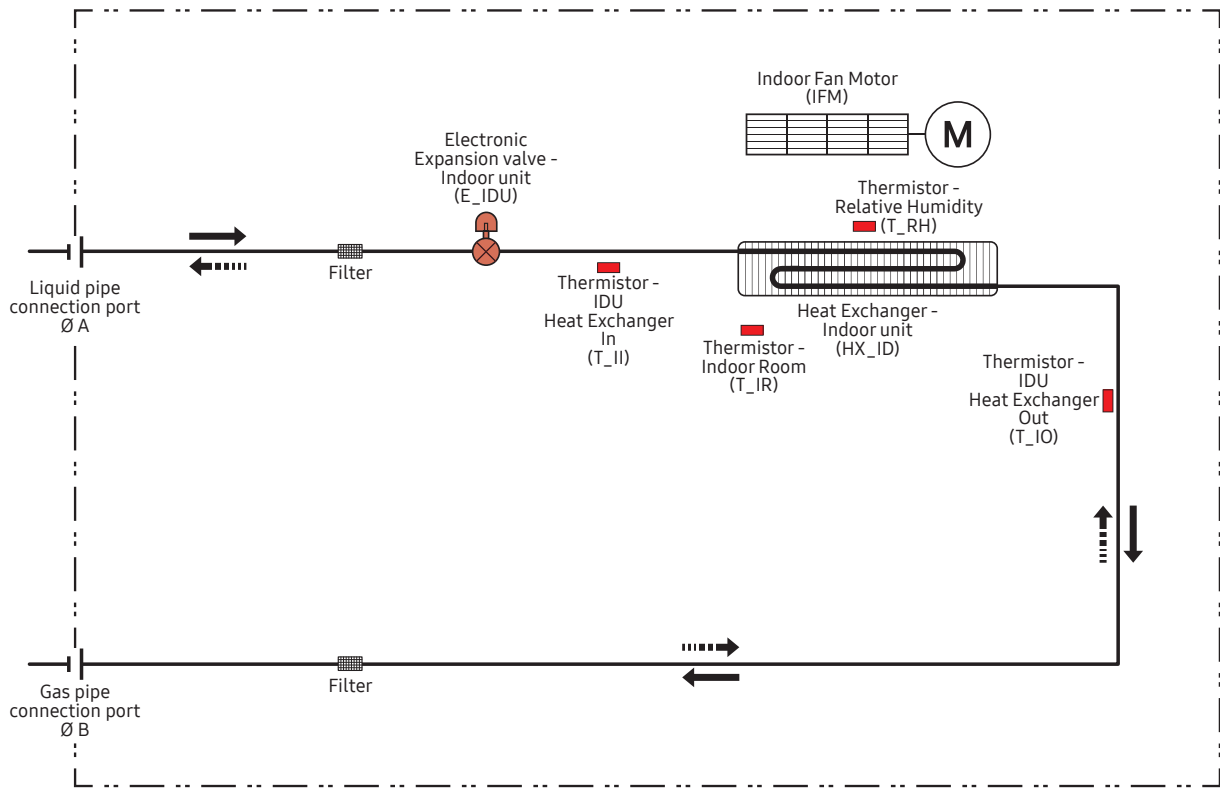
**NOTE**

- 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



# 10. Piping Diagram

## Wind-Free 1Way Cassette



Refrigerant flow	
Cooling	Heating
→	- - - - - →

Unit : mm [Inches]

Model	A	B
AM007NN1DCH/AZ	6.35(1/4)	12.70(1/2)
AM009NN1DCH/AZ	6.35(1/4)	12.70(1/2)
AM012NN1DCH/AZ	6.35(1/4)	12.70(1/2)
AM018NN1DCH/AZ	6.35(1/4)	12.70(1/2)
AM024NN1DCH/AZ	9.52(3/8)	15.88(5/8)

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