SAMSUNG

RAC Technical Data Book

2021 AR9500T for Europe (INV, R32, 50Hz, HP)

Model : AR**AXKAAWKNEU (Indoor Unit)
AR**AXKAAWKXEU (Outdoor Unit)

History

Version	Modification	Date	Remark
Ver.1.0	Released 2021 AR9500T RAC TDB for Europe (AR9500)	21.03.10	
Ver.1.1	Updated the Additional Accessories information in Spec page	22.04.21	

Nomenclature

Model Name

AR	09	A	X	K	A	A	WK	N	EU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	Buyer

(1) Classification

AR	RAC

(2) Capacity

x1000 Btu/h

(3) Year

A	2021

(4) Product Type

X	INVERTER HP R32

(5) Characteristics

K	PM1.0 Filter + PM1.0 Sensor +Wi-Fi

(6) Design Segment

A	Wind-Free GEO
C	Wind-Free AIRISE
Y	GEO
Z	AIRISE

(7) Version

A-Z (1 digit)

(8) Color

WK	DA White

(9) Set

N	Indoor Unit
X	Outdoor Unit
/	Set

Line-up

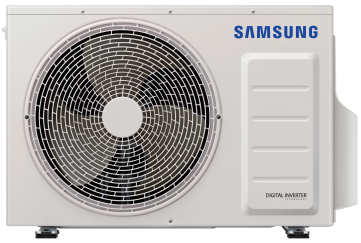
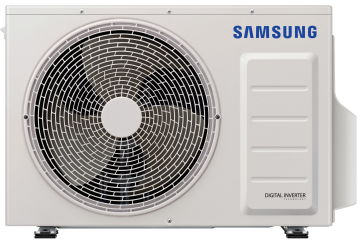
Indoor Unit

Model Type	Design	Image	
AR9500	Wind-Free GEO PM1.0		

Model Type	Design	Capacity (kW)	
		2.5	3.5
AR9500	Wind-Free GEO	●	●

Line-up

Outdoor Unit

Model Type	Design	Capacity (kW)	
		2.5	3.5
AR9500	Wind-Free GEO		

Contents

1. Specification

AR9500

Model Name		Indoor Unit			AR09AXKAAWKNEU	AR12AXKAAWKNEU
		Outdoor Unit			AR09AXKAAWKXEU	AR12AXKAAWKXEU
System	Mode			-	HEAT PUMP	HEAT PUMP
	Performance	Capacity (Min/Std/Max)	Cooling	kW	0.9 / 2.5 / 3.4	0.9 / 3.5 / 4.4
				Btu/h	3,071 / 8,530 / 11,601	3,071 / 11,942 / 15,013
			Heating	kW	0.7 / 3.2 / 6.5	0.8 / 4.0 / 6.8
				Btu/h	2,388 / 10,919 / 22,179	2,388 / 13,649 / 23,203
	Power	Power Input (Min/Std/Max)	Cooling	kW	0.18 / 0.56 / 0.93	0.18 / 0.92 / 1.45
			Heating	kW	0.15 / 0.81 / 2.16	0.15 / 1.09 / 2.28
		Current Input (Min/Std/Max)	Cooling	A	1.2 / 2.9 / 4.5	1.2 / 4.4 / 6.4
			Heating	A	1.0 / 3.9 / 9.5	1.0 / 5.1 / 10.0
	Efficiency	EER	Cooling	-	4.46	3.8
		COP	Heating	-	3.95	3.71
		SEER (Cooling Energy Grade)		-	7.90 (A++)	7.20 (A++)
		SCOP (Heating Energy Grade)		-	5.20 (A+++)	5.20 (A+++)
		Pdesignh		kW	2.4	2.4
	Piping Connections	Liquid Pipe		Type	Flare connection	Flare connection
				Φ, ㎜ (inch)	6.35 (1/4)	6.35 (1/4)
		Gas Pipe		Type	Flare connection	Flare connection
				Φ, ㎜ (inch)	9.52 (3/8)	9.52 (3/8)
		Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes
		Installation Limitation	Max. Length (Outdoor to indoor)	m	15	15
			Max. Height (Between ID/OD)	m	8	8
	Wiring connections	Power Source Wire		㎟	1.5	1.5
		Communication	Min.	㎟	0.75	0.75
			Remark	-	F1, F2	F1, F2
	Refrigerant	Type		-	R32	R32
		Factory Charging		kg	0.965	0.965
				tCO_2e	0.65	0.65
Indoor Unit	Power Supply			Ø, #, V, Hz	1,2,220-240,50	1,2,220-240,50
	Heat Exchanger	Type		-	F&T	F&T
		Material	Fin	-	Al	Al
			Tube	-	Cu	Cu
		Fin Treatment		-	Green Hydrophile	Green Hydrophile
	Fan	Type		-	Cross Flow	Cross Flow
		Quantity		EA	1	1
		Air Flow Rate	Cooling (T/H/M/L)	m^3/min	10.3 / 9.5 / 8.5 / 7.0	10.8 / 10.0 / 8.5 / 7.0
				l/s	172 / 159 / 142 / 117	180 / 167 / 142 / 117
			Heating (T/H/M/L)	m^3/min	11.1 / 10.2 / 9.1 / 8.0	11.1 / 10.2 / 9.1 / 8.0
				l/s	185 / 170 / 152 / 134	185 / 170 / 152 / 134
	Fan Motor	Type		-	BLDC	BLDC
		Output		W x n	27 x 1	27 x 1
	Drain	Drain Pipe		Φ, ㎜	Φ16.3, 550mm	Φ16.3, 550mm
	Sound	Sound Pressure Level	H / Silent	dB(A)	38 / 19	40 / 19
		Sound Power Level		dB(A)	56	58
	External Dimension	Net Weight		kg	10.3	10.3
		Shipping Weight		kg	12.4	12.4
		Net Dimensions (WxHxD)		㎜	820 x 345 x 215	820 x 345 x 215
		Shipping Dimensions (WxHxD)		㎜	880 x 290 x 410	880 x 290 x 410
	Casing	Material		-	HIPS	HIPS
	Control System	Infrared remote control		-	Included	Included
		Wired remote control		-	MWR-WE13N MWR-WG00JN MWR-WG00KN MWR-SH11N	MWR-WE13N MWR-WG00JN MWR-WG00KN MWR-SH11N
	Drain Pump	Drain Pump		-	-	-
		Max.lifting Height/Displacement		㎜ / Liter/h	-	-

1. Specification

AR9500

Model Name		Indoor Unit			AR09AXKAAWKNEU	AR12AXKAAWKNEU
		Outdoor Unit			AR09AXKAAWKXEU	AR12AXKAAWKXEU
Indoor Unit	Additional Accessories	Drain Pump	External Model	-	-	-
			Internal Model	-	-	-
			Max. lifting Height / Displacement	㎜ / Liter/h	-	-
		Easy Filter Plus		-	Removable / Washable	Removable / Washable
		Tri-Care Filter		-	○	○
		Motion Detect Sensor		-	-	-
		Wi-Fi		-	○	○
Outdoor Unit	Power Supply			Ø, #, V, Hz	1, 2, 220-240, 50	1, 2, 220-240, 50
	Heat Exchanger	Type		-	F&T	F&T
		Material	Fin	-	Al	Al
			Tube	-	Cu	Cu
		Fin Treatment		-	Anti-Corrosion	Anti-Corrosion
	Compressor	Model Name			KTN130D42UFR	KTN130D42UFR
		Type		-	BLDC ROTARY	BLDC ROTARY
		Output		kW	4.09	4.09
		Oil	Type	-	POE	POE
			Initial charge	cc	350	350
	Fan	Type		-	Propeller	Propeller
		Discharge direction		-	Front	Front
		Quantity		EA	1	1
		Air Flow Rate		m^3/min	45	45
				l/s	750	750
	Fan Motor	Type		-	BLDC	BLDC
		Output		W x n	40 x 1	40 x 1
	Sound	Sound Pressure Le	Cooling	dB(A)	45	46
		Sound Power Level		dB(A)	59	62
	External Dimension	Net Weight		kg	32.7	32.7
		Shipping Weight		kg	35.0	35.0
		Net Dimensions (WxHxD)		㎜	790 x 548 x 285	790 x 548 x 285
		Shipping Dimensions (WxHxD)		㎜	913 x 622 x 371	913 x 622 x 371
	Casing	Material	Body	-	EGI Steel Plate / PP	EGI Steel Plate / PP
	Operating Temp. Range	Cooling		℃	-10 ~ 46	-10 ~ 46
		Heating		℃	-15 ~ 24	-15 ~ 24

NOTE

- Specifications may be subject to change without prior notice.

1) Nominal cooling capacities are based on;
   Indoor temperature: 27℃ DB, 19℃ WB
   Outdoor temperature: 35℃ DB, 24℃ WB, Equivalent refrigerant piping: 5m, Level differences: 0 m
2) Nominal heating capacities are based on;
   Indoor temperature: 20℃ DB, 15℃ WB
   Outdoor temperature: 7℃ DB, 6℃ WB, Equivalent refrigerant piping: 5m, Level differences: 0 m
3) Sound pressure was acquired in an anechoic room. Thus actual noise level may be different depending on the installation conditions.
4) These products contain R32 which is fluorinated greenhouse gas.

2 Capacity Table

AR9500

AR09AXKAAWKNEU+AR09AXKAAWKXEU

Cooling

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

Outdoor Temp. (°C, DB)	Indoor Temperature (°C, DB / WB)																				
	20 / 14			22 / 16			25 / 18			27 / 19			28 / 20			30 / 22			32 / 24		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-10	2.80	2.33	0.76	2.91	2.41	0.79	3.13	2.55	0.83	3.31	2.65	0.84	3.42	2.71	0.84	3.65	2.81	0.85	3.91	2.92	0.85
0	2.88	2.41	0.66	3.01	2.50	0.69	3.26	2.65	0.72	3.46	2.77	0.73	3.57	2.82	0.73	3.82	2.94	0.74	4.10	3.05	0.74
10	3.06	2.55	0.61	3.19	2.65	0.64	3.45	2.81	0.67	3.66	2.93	0.68	3.78	2.99	0.68	4.04	3.11	0.68	4.33	3.23	0.68
20	3.20	2.67	0.63	3.34	2.77	0.66	3.61	2.93	0.70	3.82	3.05	0.71	3.94	3.11	0.71	4.20	3.24	0.71	4.49	3.35	0.71
25	3.23	2.69	0.67	3.37	2.79	0.70	3.63	2.95	0.74	3.84	3.07	0.75	3.96	3.13	0.75	4.22	3.25	0.75	4.51	3.37	0.75
32	3.19	2.65	0.76	3.32	2.75	0.80	3.57	2.91	0.83	3.78	3.02	0.85	3.90	3.08	0.85	4.15	3.20	0.85	4.44	3.31	0.85
35	3.13	2.61	0.81	3.26	2.70	0.85	3.51	2.85	0.89	2.50	2.00	0.56	3.82	3.02	0.91	4.07	3.14	0.91	4.36	3.25	0.91
40	2.97	2.47	0.92	3.09	2.56	0.96	3.33	2.71	1.00	3.52	2.82	1.02	3.63	2.88	1.02	3.88	2.99	1.03	4.15	3.10	1.03
43	2.84	2.36	0.99	2.95	2.44	1.04	3.18	2.59	1.08	3.37	2.70	1.10	3.47	2.75	1.11	3.71	2.86	1.11	3.98	2.97	1.11
46	2.66	2.22	1.08	2.77	2.30	1.13	2.99	2.44	1.17	3.17	2.54	1.19	3.27	2.59	1.20	3.50	2.70	1.21	3.77	2.80	1.21

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temp. (°C, DB)	Indoor Temperature (°C, DB)											
	16		18		20		21		22		24	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-15	3.65	1.88	3.64	1.90	3.63	1.92	3.62	1.93	3.60	1.94	3.53	1.97
-10	4.06	1.93	4.11	1.96	4.11	2.00	4.10	2.02	4.06	2.04	3.92	2.07
-5	4.20	1.77	4.30	1.82	4.33	1.88	4.30	1.90	4.25	1.92	4.05	1.96
0	4.17	1.49	4.33	1.56	4.37	1.63	4.34	1.65	4.27	1.68	4.01	1.71
2	4.13	1.37	4.31	1.44	4.36	1.51	4.32	1.54	4.25	1.56	3.97	1.60
5	4.06	1.18	4.28	1.26	4.34	1.34	4.30	1.36	4.22	1.39	3.90	1.42
7	4.02	1.06	4.26	1.15	3.20	0.81	4.29	1.25	4.20	1.28	3.86	1.31
10	3.98	0.91	4.25	1.01	4.33	1.08	4.29	1.11	4.20	1.13	3.82	1.16
15	4.01	0.77	4.35	0.88	4.45	0.95	4.41	0.98	4.30	1.00	3.87	1.02
20	4.27	0.85	4.67	0.95	4.80	1.03	4.76	1.05	4.63	1.07	4.15	1.07
24	4.70	1.11	5.15	1.22	5.30	1.29	5.26	1.31	5.13	1.32	4.61	1.31

NOTE

- The performance table shows the average value of each conditions.

2 Capacity Table

AR9500

AR12AXKAAWKNEU+AR12AXKAAWKXEU

Cooling

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

Outdoor Temp. (°C, DB)	Indoor Temperature (°C, DB / WB)																				
	20 / 14			22 / 16			25 / 18			27 / 19			28 / 20			30 / 22			32 / 24		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-10	3.09	2.57	0.87	3.22	2.62	0.91	3.45	2.78	0.94	3.64	2.91	0.96	3.74	2.98	0.96	3.98	3.10	0.97	4.27	3.19	0.97
0	2.98	2.49	0.71	3.13	2.56	0.75	3.39	2.73	0.79	3.59	2.88	0.80	3.71	2.95	0.80	3.97	3.08	0.81	4.28	3.18	0.81
10	3.21	2.69	0.73	3.37	2.76	0.77	3.65	2.94	0.81	3.87	3.09	0.82	3.99	3.17	0.82	4.27	3.31	0.83	4.59	3.42	0.82
20	3.54	2.95	0.87	3.70	3.02	0.91	3.99	3.21	0.95	4.21	3.37	0.97	4.34	3.44	0.97	4.62	3.58	0.98	4.95	3.70	0.97
25	3.66	3.04	0.97	3.82	3.12	1.01	4.11	3.31	1.06	4.33	3.46	1.08	4.46	3.54	1.08	4.74	3.68	1.08	5.07	3.79	1.08
32	3.70	3.08	1.12	3.87	3.15	1.17	4.15	3.34	1.22	4.37	3.49	1.24	4.49	3.56	1.25	4.77	3.71	1.26	5.10	3.82	1.25
35	3.66	3.04	1.19	3.82	3.11	1.24	4.10	3.30	1.30	3.50	2.80	0.92	4.44	3.52	1.33	4.72	3.66	1.33	5.04	3.77	1.33
40	3.48	2.89	1.30	3.63	2.96	1.36	3.90	3.14	1.42	4.11	3.29	1.44	4.23	3.36	1.45	4.51	3.50	1.46	4.83	3.61	1.46
43	3.30	2.74	1.37	3.44	2.81	1.43	3.70	2.99	1.49	3.91	3.13	1.51	4.03	3.21	1.52	4.30	3.34	1.53	4.62	3.44	1.53
46	3.05	2.54	1.42	3.19	2.61	1.49	3.44	2.78	1.55	3.64	2.92	1.58	3.76	2.99	1.59	4.03	3.13	1.60	4.34	3.23	1.60

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temp. (°C, DB)	Indoor Temperature (°C, DB)											
	16		18		20		21		22		24	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-15	4.15	2.20	4.15	2.21	4.14	2.24	4.12	2.25	4.10	2.27	4.01	2.30
-10	4.64	2.32	4.70	2.36	4.70	2.41	4.68	2.44	4.63	2.46	4.48	2.50
-5	4.84	2.21	4.95	2.28	4.97	2.35	4.94	2.38	4.88	2.41	4.66	2.46
0	4.83	1.96	5.00	2.05	5.04	2.13	5.00	2.17	4.93	2.20	4.65	2.25
2	4.79	1.84	4.99	1.93	5.03	2.02	4.99	2.06	4.91	2.09	4.61	2.14
5	4.71	1.64	4.95	1.75	5.00	1.84	4.96	1.87	4.87	1.91	4.53	1.95
7	4.65	1.51	4.91	1.62	4.00	1.08	4.93	1.75	4.84	1.78	4.48	1.82
10	4.57	1.33	4.87	1.44	4.95	1.53	4.90	1.57	4.80	1.60	4.40	1.63
15	4.50	1.10	4.86	1.21	4.96	1.30	4.92	1.34	4.80	1.36	4.35	1.38
20	4.58	1.03	5.01	1.14	5.14	1.23	5.09	1.25	4.96	1.27	4.46	1.27
24	4.83	1.14	5.31	1.25	5.47	1.32	5.42	1.35	5.28	1.36	4.73	1.34

NOTE

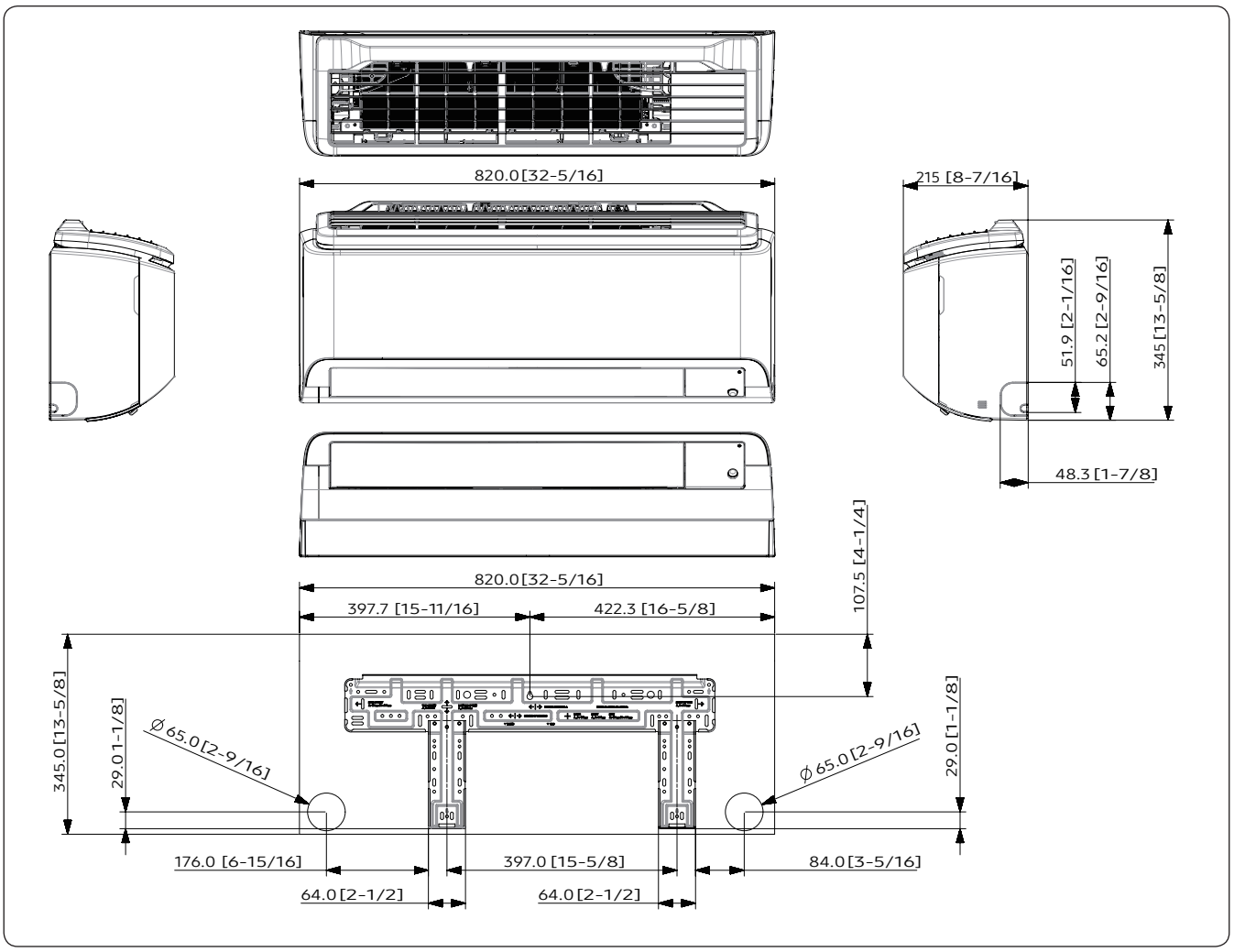
- The performance table shows the average value of each conditions.

3. Dimensional Drawing

Indoor units

AR9500 : AR09AXKAAWKNEU, AR12AXKAAWKNEU

Unit: mm (inches)

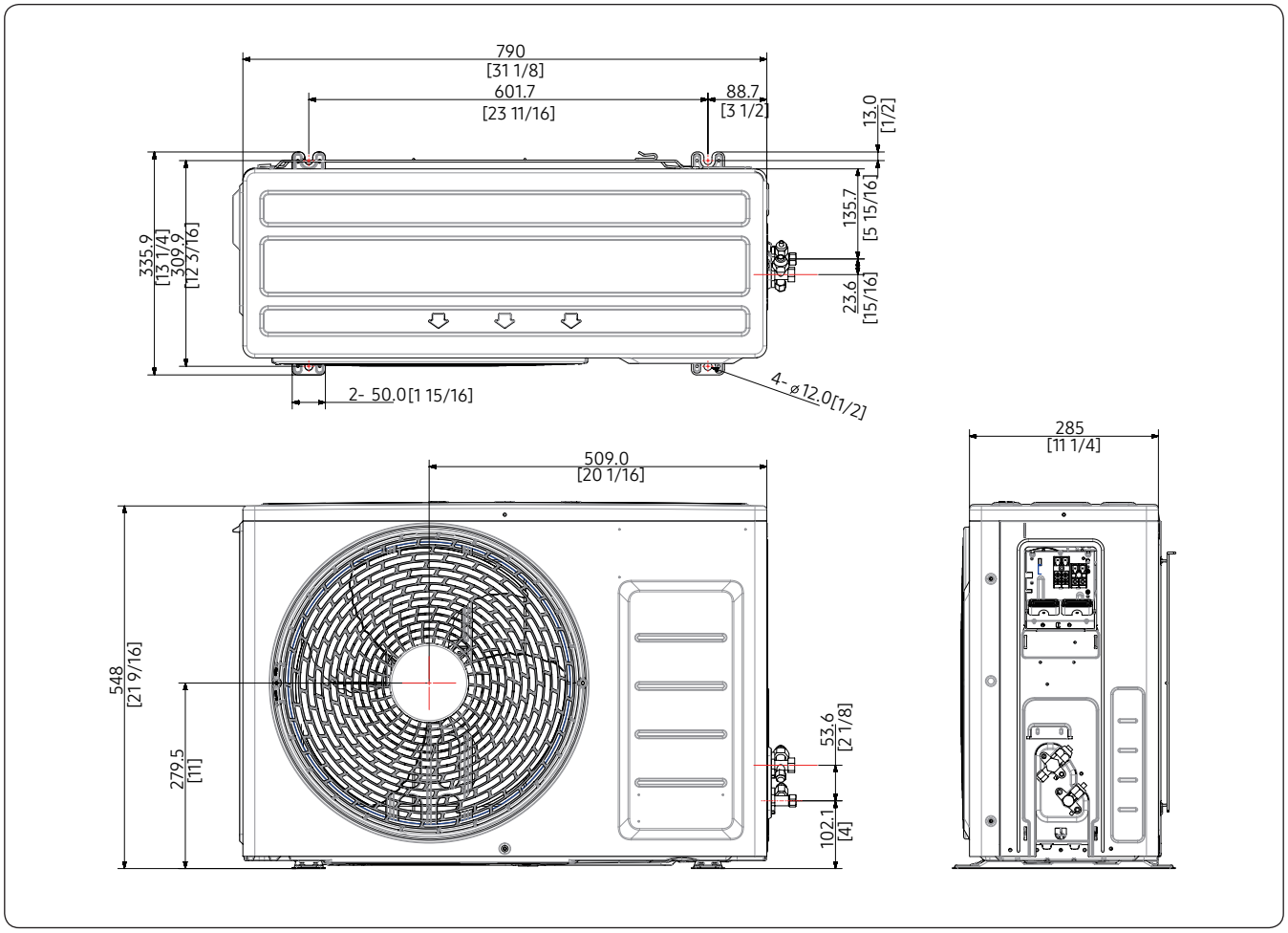


3. Dimensional Drawing

Outdoor units

AR9500 : AR09AXKAAWKXEU, AR12AXKAAWKXEU

Unit: mm (inches)

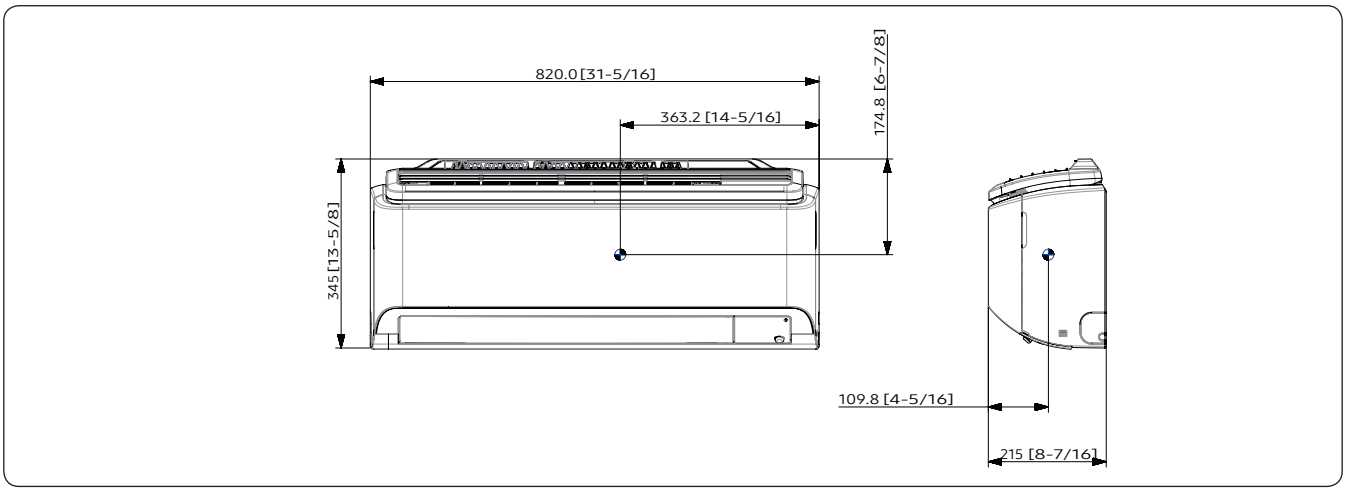


4. Center of Gravity

Indoor units

AR9500 : AR09AXKAAWKNEU, AR12AXKAAWKNEU

Unit: mm (inches)

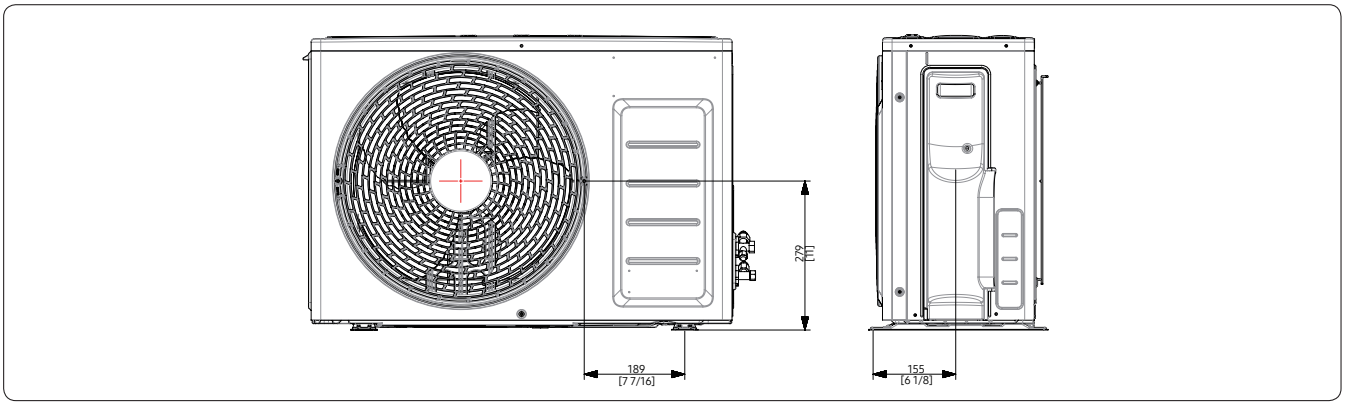


4. Center of Gravity

Outdoor units

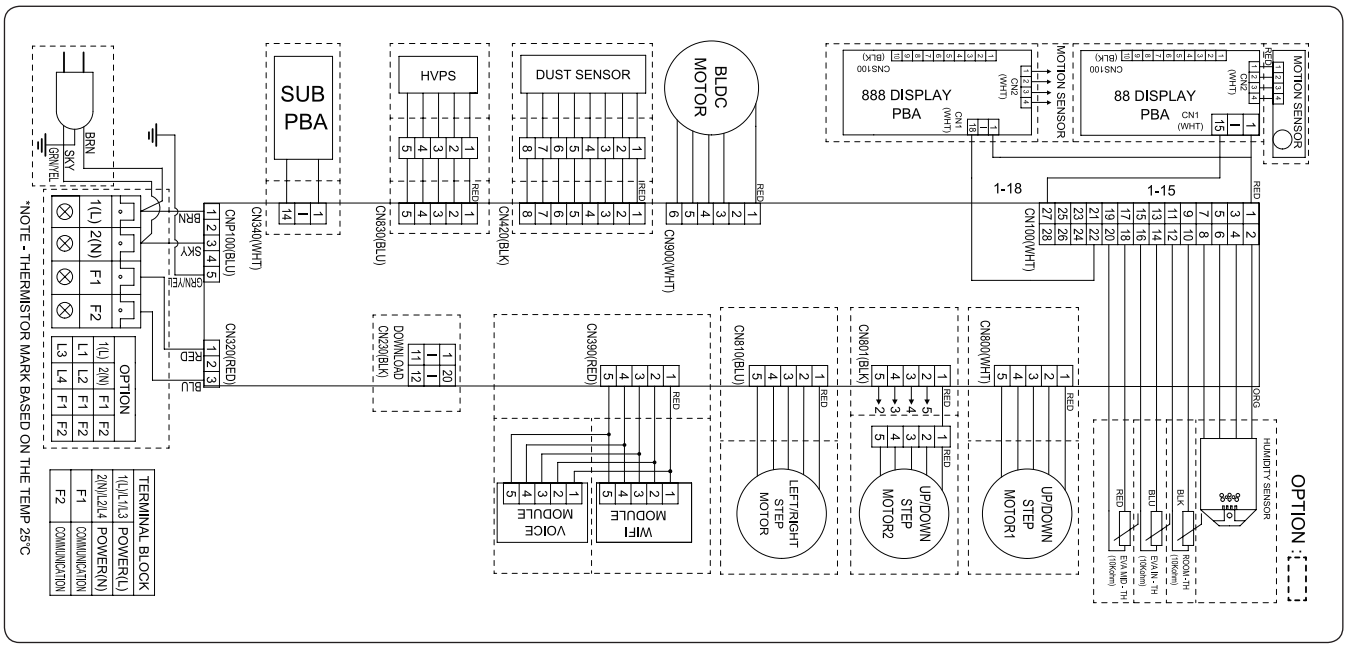
AR9500 : AR09AXKAAWKXEU, AR12AXKAAWKXEU

Unit: mm (inches)



5. Electrical Wiring Diagram

Indoor units



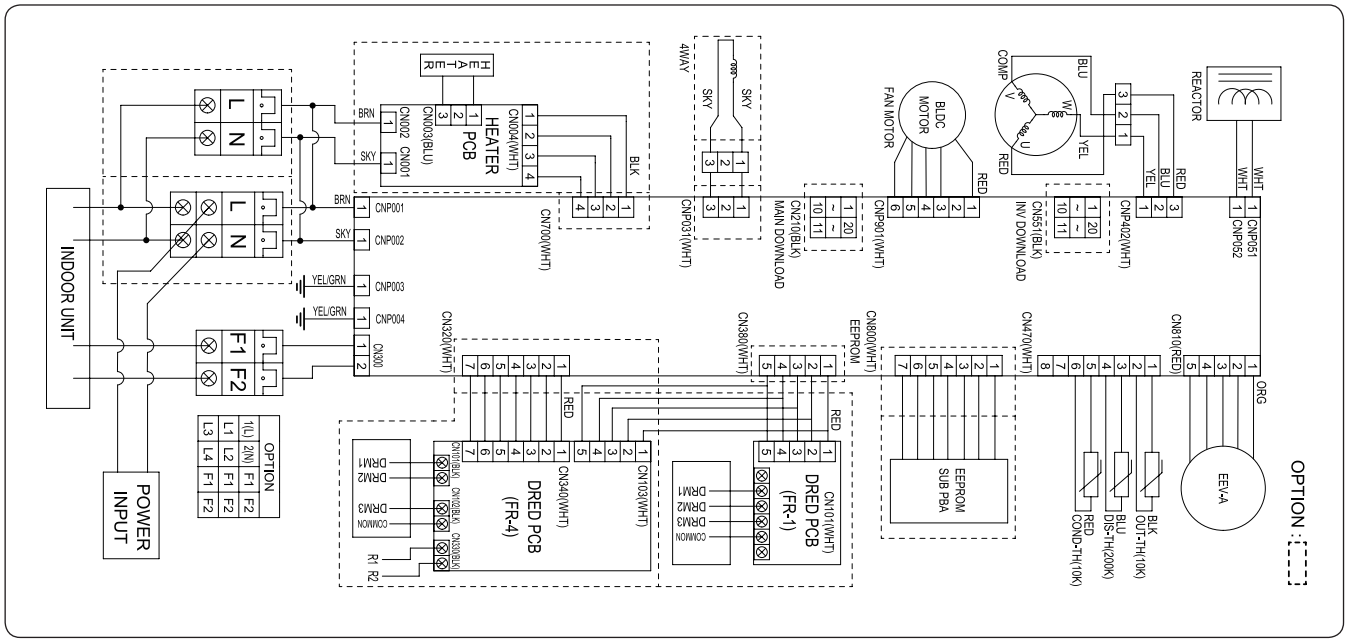
MOTION SENSOR	SENSOR(MOTION)	DISPLAY	Printed circuit board(DISPLAY BOARD)	DUST SNESOR	SENSOR(DUST)
ROOM TH	Thermistor(Room Temp._10Kohm)	BLDC	Motor(BLDC FAN MOTOR)	HVPS	LOAD(HVPS MODULE)
EVA MID - TH	Thermistor(EVA MID Temp._10Kohm)	UP/DOWN STEP MOTOR1	Motor(STEP MOTOR)	WIFI MODULE	LOAD(WIFI MODULE)
EVA IN -TH	Thermistor(EVA IN Temp._10Kohm)	UP/DOWN STEP MOTOR2	Motor(STEP MOTOR)	SUB PBA	Printed circuit board(SUB BOARD)
HUMIDITY SENSOR	SENSOR(HUMIDITY)	LEFT/RIGHT STEP MOTOR	SENSOR(HUMIDITY)		

NOTE

- This wiring diagram applies only to the indoor unit.
- Colors BLK : black, BRN : brown, SKY-BLU : sky-blue, GRN/YEL : green/yellow, RED : red, YEL : yellow, ORG : orange, BLU : blue, WHT:white
- ⏚ : Protective earth(screw)

5. Electrical Wiring Diagram

Outdoor units



DRED	Printed circuit board(DRED PCB)	DIS-TH	Thermistor(Discharge Temp._200Kohm)
REACTOR	REACTOR	OUT-TH	Thermistor(AmbientTemp._10Kohm)
EEPROM	Printed circuit board(EEPROM PCB)	COND-TH	Thermistor(Cond Out Temp._10Kohm)
COMP	COMPRESSOR	BLDC	Motor(BLDC FAN Motor)
HEATER	Printed circuit board(HEATER PCB)	EEV-A	Electronic expansion valve A
4-WAY VALVE	4-WAY VALVE		

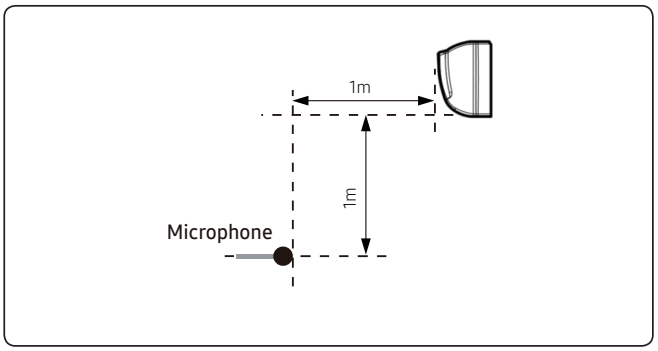
NOTE

- This wiring diagram applies only to the outdoor unit.
- Colors BLK : black, BRN : brown, SKY-BLU : sky-blue, GRN/YEL : green/yellow, RED : red, YEL : yellow, ORG : orange, BLU : blue, WHT:white
- ⏚ Protective earth(screw)

6. Sound Data

Indoor units

Sound Pressure level

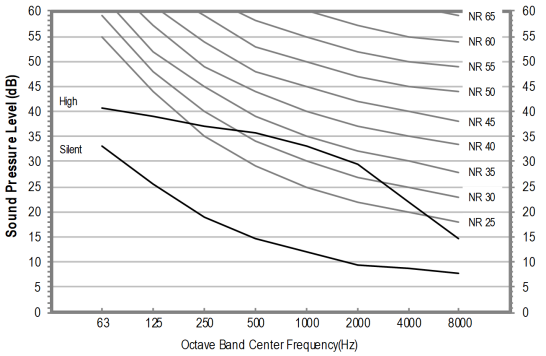


Unit: dB(A)

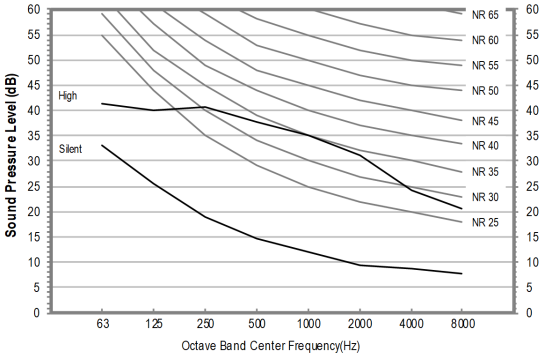
Model	Cooling	
	High	Silent
AR09AXKAAWKNEU	38	19
AR12AXKAAWKNEU	40	19

- NR Curve

1) AR09AXKAAWKNEU



2) AR12AXKAAWKNEU



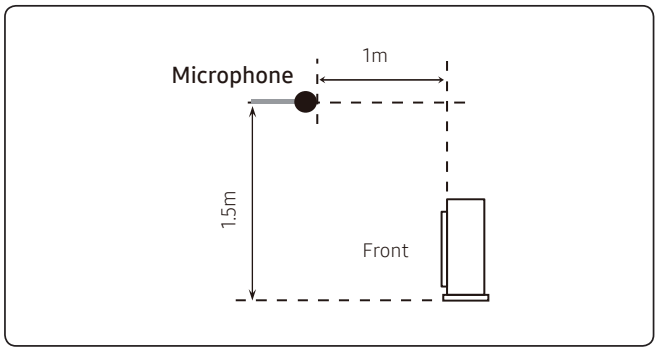
NOTE

- 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

6. Sound Data

Outdoor units

Sound Pressure level

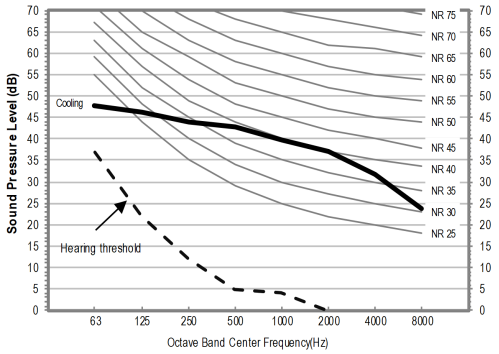


Unit: dB(A)

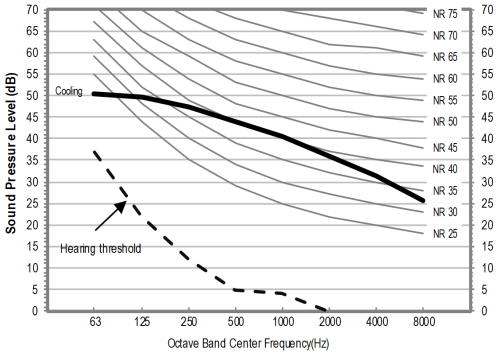
Model	Cooling
AR09AXKAAWKXEU	45
AR12AXKAAWKXEU	46

- NR Curve

1) AR09AXKAAWKXEU



2) AR12AXKAAWKXEU



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

6. Sound Data

Indoor units

Sound Power level

Unit: dB(A)

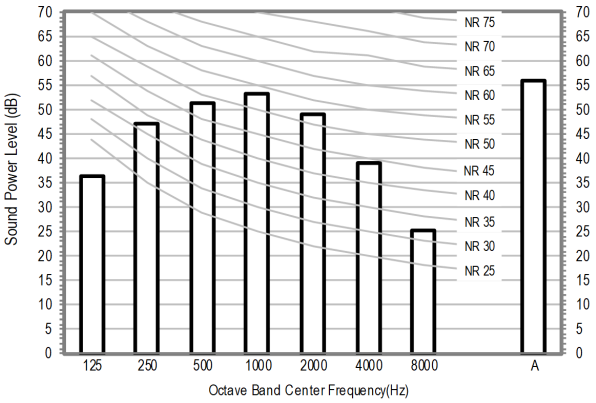
Model	Cooling
AR09AXKAAWKNEU	56
AR12AXKAAWKNEU	58

NOTE

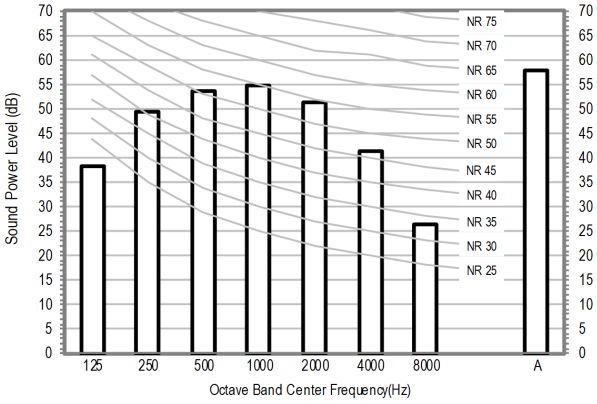
- Specifications may be subject to change without prior notice.
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

- NR Curve

1) AR09AXKAAWKNEU



2) AR12AXKAAWKNEU



6. Sound Data

Outdoor units

Sound Power level

Unit: dB(A)

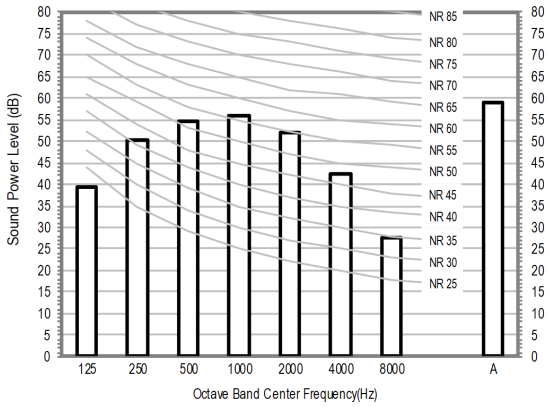
Model	Cooling
AR09AXKAAWKXEU	59
AR12AXKAAWKXEU	62

NOTE

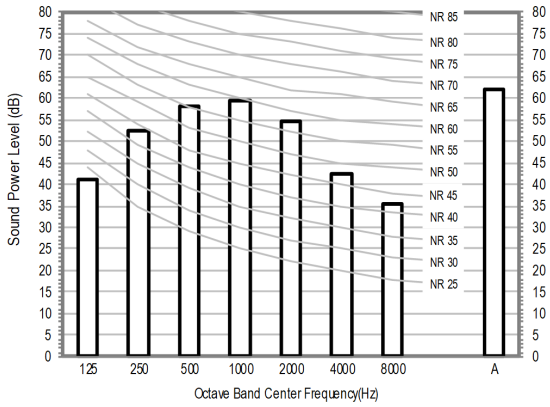
- Specifications may be subject to change without prior notice.
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

- NR Curve

1) AR09AXKAAWKXEU



2) AR12AXKAAWKXEU



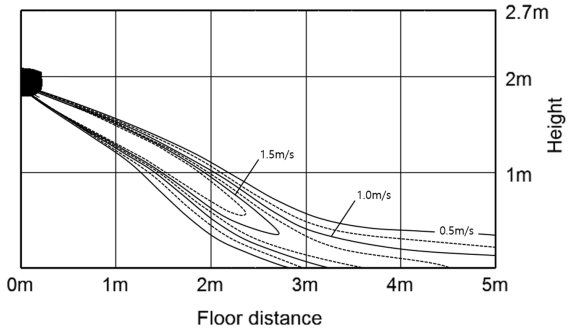
7. Temperature and air flow distribution

AR9500

AR09AXKAAWKNEU

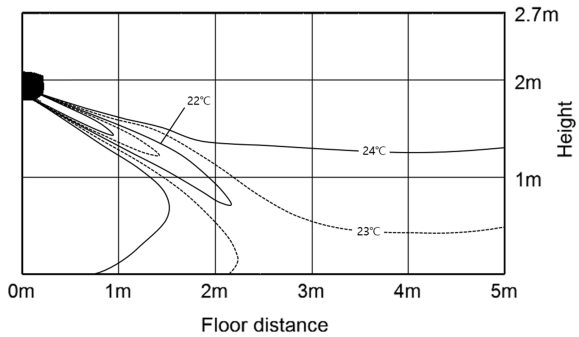
- Cooling air velocity distribution

(Discharge angle : 20 degree)



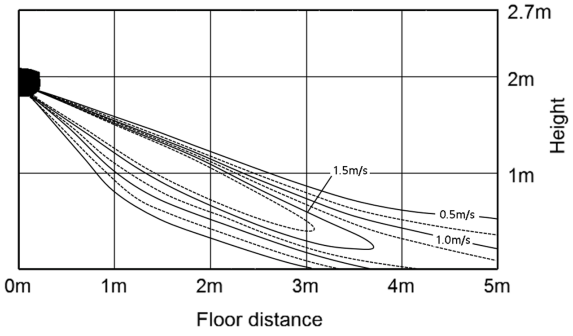
- Cooling Temperature distribution

(Discharge angle : 20 degree)



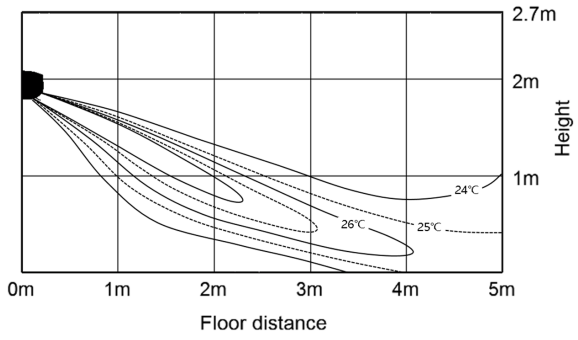
- Heating air velocity distribution

(Discharge angle : 30 degree)



- Heating Temperature distribution

(Discharge angle : 30 degree)



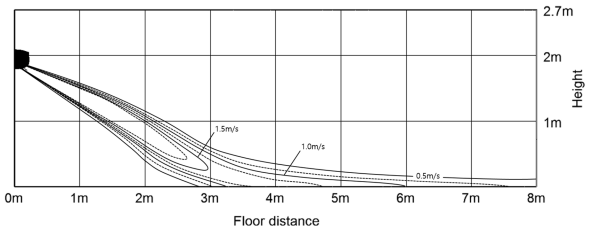
7. Temperature and air flow distribution

AR9500

AR12AXKAAWKNEU

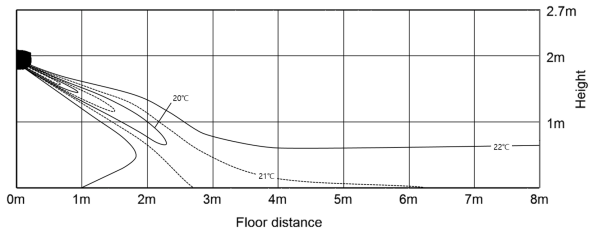
- Cooling air velocity distribution

(Discharge angle : 20 degree)



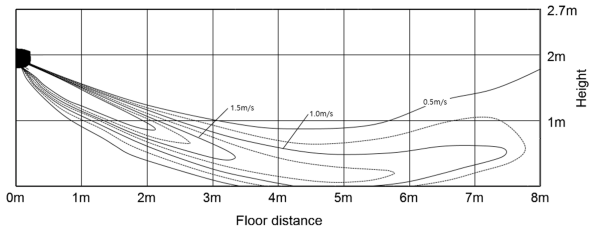
- Cooling Temperature distribution

(Discharge angle : 20 degree)



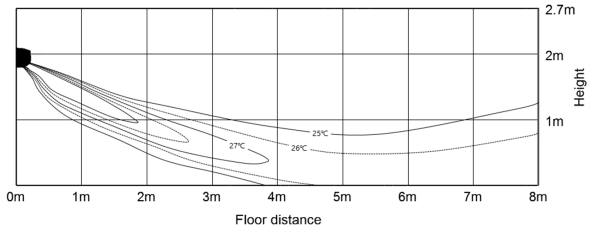
- Heating air velocity distribution

(Discharge angle : 30 degree)

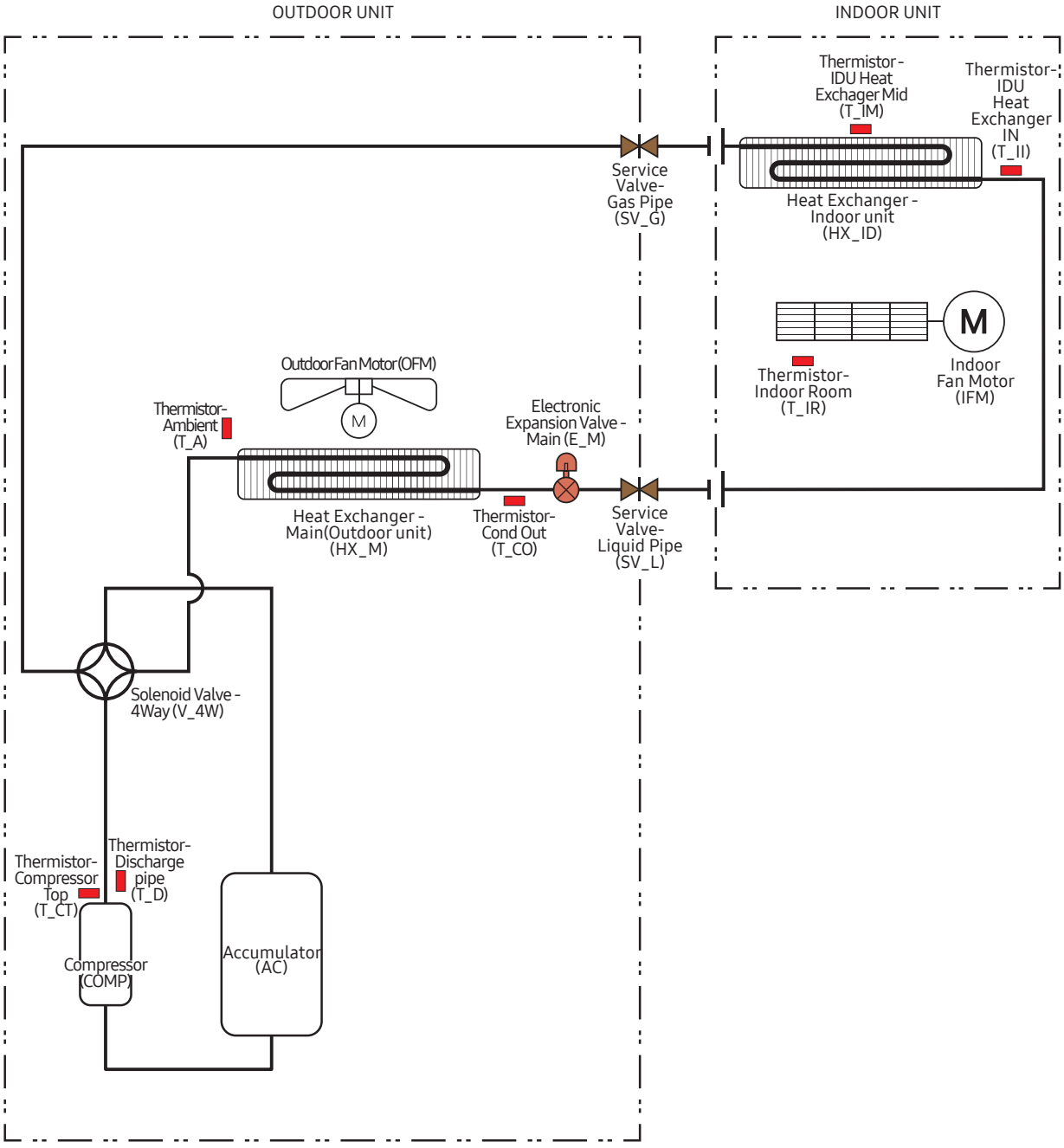


- Heating Temperature distribution

(Discharge angle : 30 degree)

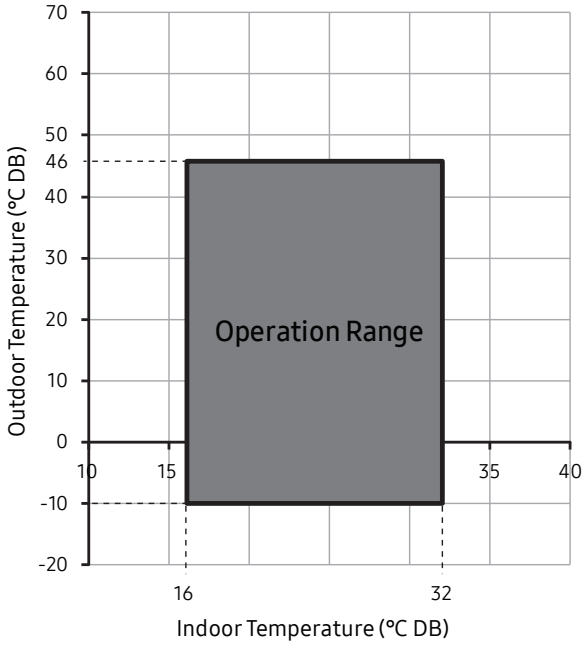


8. Piping Diagram

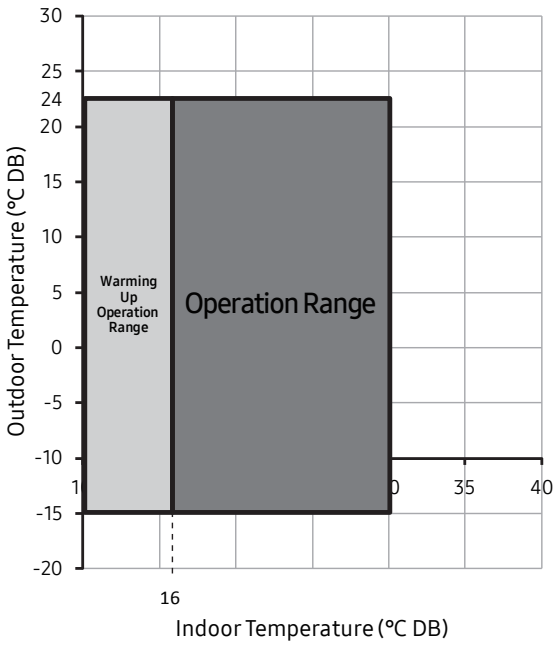


9. Operation Limit

Cooling



Heating



10. Capacity Correction

Outdoor units

Cooling

		Pipe Length (m)			
		5	10	12.5	15
Level Difference (m)	8	-	0.96	0.94	0.91
	5	0.99	0.97	0.95	0.92
	0	1	0.98	0.96	0.93
	-5	0.99	0.97	0.95	0.92
	-8	-	0.96	0.94	0.91

Heating

		Pipe Length (m)			
		5	10	12.5	15
Level Difference (m)	8	-	0.96	0.94	0.91
	5	0.99	0.97	0.95	0.92
	0	1	0.98	0.96	0.93
	-5	0.99	0.97	0.95	0.92
	-8	-	0.96	0.94	0.91

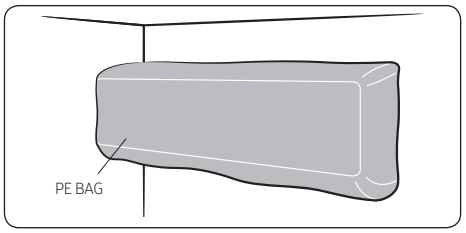
11. Installation

Installation of the product

- Our units must be installed in compliance with the spaces indicated in the installation manual to ensure either accessibility from both sides or ability to perform routine maintenance and repairs. The units' components must be accessible and that can be disassembled in conditions of complete safety either for people or things. For this reason, where it is not observed as indicated into the Installation Manual, the cost necessary to reach and repair the unit (in safety, as required by current regulations in force) with slings, trucks, scaffolding or any other means of elevation won't be considered in-warranty and will be charged to end user.
- The outdoor unit shall be installed in an open space that is always ventilated.
- The local gas regulations shall be observed.
- To handle, purge, and dispose the refrigerant, or break into the refrigerant circuit, the worker should have a certificate from an industry-accredited authority.
- Do not install the indoor unit in the following areas:
  - Area filled with minerals, splashed oil, or steam. It will deteriorate plastic parts, causing failure or leakage.
  - Area that is close to heat sources.
  - Area that produces substances such as sulfuric gas, chlorine gas, acid, and alkali. It may cause corrosion of the pipings and brazed joints.
  - Area that can cause leakage of combustible gas and suspension of carbon fibers, flammable dust, or volatile flammables.
  - Area where refrigerant leaks and settles.
  - Area where animals may urinate on the product. Ammonia may be generated.
- Do not use the indoor unit for preservation of food items, plants, equipment, and art works. This may cause deterioration of their quality.
- Do not install the indoor unit if it has any drainage problem.
- Because your air conditioner contains R-32 refrigerant, make sure that it is installed, operated, and stored it in a room whose floor area is larger than the minimum required floor area specified in the following table:

Wall-mounted type	
m (kg)	A (m^2)
≤1.842	No requirement
1.843	4.45
1.9	4.58
2.0	4.83
2.2	5.31
2.4	5.79
2.6	6.39
2.8	7.41
3.0	8.51

  - m : Total refrigerant charge in the system
  - A : Minimum required floor area
- IMPORTANT: it's mandatory to consider either the table above or taking into consideration the local law regarding the minimum living space of the premises.
- Minimum installation height of indoor unit is 0.6 m for floor mounted, 1.8 m for wall, 2.2 m for ceiling.
- Please cover the air conditioner with PE BAG after installation, and remove it when you start to run air conditioner.



Installation of the outdoor unit

- While in installation or relocation of the product, do not mix the refrigerant with other gases including air or unspecified refrigerant. Failure to do so may cause pressure increase to result in rupture or injury.
- Do not cut or burn the refrigerant container or pipings.
- Use clean parts such as manifold gauge, vacuum pump, and charging hose for the refrigerant.
- Installation must be carried out by qualified personnel for handling the refrigerant. Additionally, reference the regulations and laws.
- Be careful not to let foreign substances (lubricating oil, refrigerant, water, etc.) enter the pipings. The application of oil or refrigerant deteriorates the pipings to result in drain leakage. For storage, securely seal their openings.
- When mechanical ventilation is required, ventilation openings shall be kept clear of obstruction.
- For disposal of the product, follow the local laws and regulations.
- Do not work in a confined place.
- The work area shall be blocked.
- The refrigerant pipings shall be installed in the position where there are no substances that may result in corrosion.
- The following checks shall be performed for installation:
  - The charging amount depends on the room size.
  - The ventilation devices and outlets are operating normally and are not obstructed.
  - Markings and signs on the equipment shall be visible and legible.
- Upon leakage of the refrigerant, ventilate the room. When the leaked refrigerant is exposed to flame, it may cause generation of toxic gases.
- Make sure that the work area is safe from flammable substances.
- To purge air in the refrigerant, be sure to use a vacuum pump.
- Note that the refrigerant has no odour.
- The units are not explosion proof so they must be installed with no risk of explosion.
- This product contains fluorinated gases that contribute to global greenhouse effect. Accordingly, do not vent gases into the atmosphere.
- The models that use the refrigerant R-32 have a different thread diameter for the charging port to prevent charging failure. Therefore, check its diameter (12.70 mm) in advance.

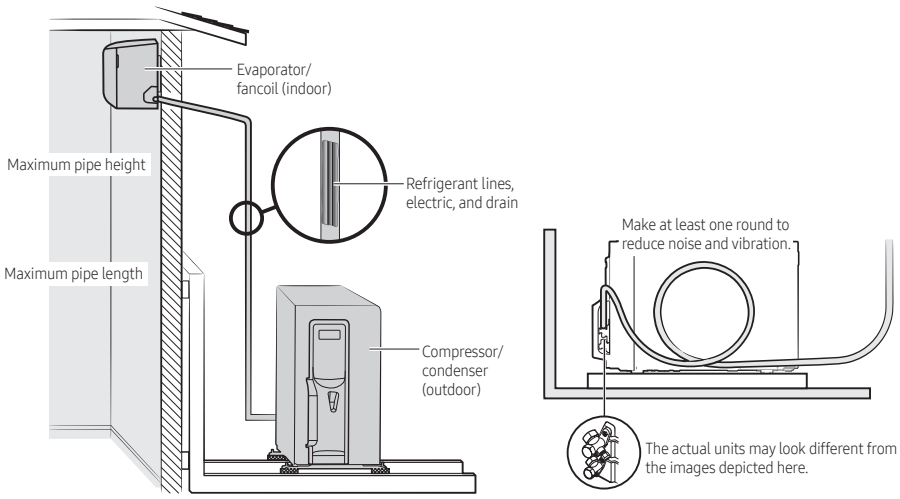
※ In case you want more information about the controllers and accessories, please refer to the Controller and Accessory TDB on pvi.Samsung.com site or Global Partner Portal site.

11. Installation

- Servicing shall be performed as recommended by the manufacturer. In case other skilled persons are joined for servicing, it shall be carried out under supervision of the person who is competent in handling flammable refrigerants.
- For servicing the units containing flammable refrigerants, safety checks are required to minimise the risk of ignition.
- Servicing shall be performed following the controlled procedure to minimize the risk of flammable refrigerant or gases.
- Do not install where there is a risk of combustible gas leakage.
- Do not place heat sources.
- Be cautious not to generate a spark as follows:
- - Do not remove the fuses with power on.
  - Do not disconnect the power plug from the wall outlet with power on.
  - It is recommended to locate the outlet in a high position. Place the cords so that they are not tangled.
- If the indoor unit is not R-32 compatible, an error signal appears and the unit will not operate.
- After installation, check for leakage. Toxic gas may be generated and if it comes into contact with an ignition source such as fan heater, stove, and cooker.cylinders, make sure that only the refrigerant recovery cylinders are used.

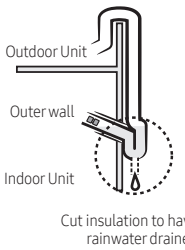
Viewing the typical installation

A typical installation will be similar to the one shown below.



(Unit : m)

Model	Pipe length			Pipe height
	Minimum	Maximum	Standard for factory charge	Maximum
09***** **12*******	3	15	5	8



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 10 mm) to prevent rainwater from getting inside through the insulation.

⚠ CAUTION

- For the product that uses the R-32 refrigerant, Install the indoor unit on the wall 1.8 m or higher from the floor.

※ In case you want more information about the controllers and accessories, please refer to the Controller and Accessory TDB on pvi.Samsung.com site or Global Partner Portal site.

11. Installation

Choosing the installation location

If using a multi system, install as described in the installation manual supplied with the outdoor unit.

⚠ WARNING

- Verify that a dedicated circuit breaker and a disconnect switch of the appropriate sizes for the air conditioner are preinstalled and available for use.
- Verify that the voltage and frequency of the power supply comply with the rated voltage as defined on the unit name plate.
- Verify that a suitable grounding connection is available.
- Do not install this appliance in an environment containing hazardous substances or close to equipment that releases open flames.
- Do not install this appliance near a heater or flammable material.

⚠ CAUTION

- The manufacturer shall not be responsible for damage occurring as a result of the wrong voltage being applied to this air conditioner.
- The indoor and outdoor units must be installed in compliance with minimum clearances to ensure that both units are accessible from both sides and can be maintained or repaired. Insufficient clearance may reduce product performance, generate excessive noise, and reduce the life of some unit components.

IMPORTANT

- Any changes or modifications to the installation described in this manual that are not expressly approved by the manufacturer could void the manufacturer's warranty.

To determine where to locate the indoor and outdoor units, you must survey the entire site and consider many variables. The goal is to select locations that comply with all safety precautions while also minimizing the total effort involved.

Indoor unit location requirements

⚠ WARNING

- Do not install the unit in a humid, oily, or dusty location or in a location exposed to direct sunlight, water, or rain.
- Make sure that the wall can support the unit weight.

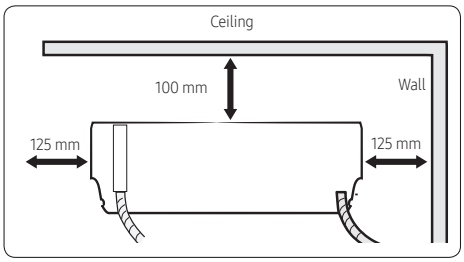
Examine the area that the customer wants to be air conditioned. Consider the following:

- What wall location will meet minimum clearances and provide optimal product performance?
- Will the wall provide adequate support for the unit weight (wall with stud construction or concrete)? If applicable, where are the studs?
- Where will you place the wall penetration for routing the piping bundle (consisting of power and communication cables, refrigerant pipes, and the drain hose) through the wall to the outdoor unit? Will the hole intersect any plumbing or wires in the wall?
- Is the location as close as possible to where the outdoor unit will be installed, to minimize the length of piping and cables?
- Will the condensate drain inside the room, through the wall penetration to the outdoor unit, or be connected to a condensate pump?

NOTE

- This manual covers a typical gravity-drain installation where the drain hose is routed to the outdoor unit through a hole in the wall.

Minimum clearances for the indoor unit



Outdoor unit location requirements

Examine the area where the outdoor unit could be located. Consider the following:

- What location will meet minimum clearances and provide optimal product performance?
- Is there an existing level and hard foundation, such as a concrete pad, that will support the unit weight and produce minimal vibration? Installation on uneven ground may result in abnormal vibrations, noise, or problems with the unit.
- Does the unit need to be mounted on the wall?
- Where are the dedicated circuit breaker and disconnect switch located? How will you connect them to the unit?
- How will you route the piping bundle from the indoor unit? Is the location as close as possible to where the indoor unit will be installed, to minimize the length of piping and cables?
- Will the unit be sheltered from the wind? In a high-wind area, you may need to build a protective fence around the unit.
- Where will the condensate drain?

⚠ WARNING

- The drain location must allow condensate to drain properly and prevent ice from forming on the unit in winter. If a block of ice falls from the unit, it may result in death, serious injury, or property damage. Improper or inadequate draining may result in water overflowing and property damage.

⚠ CAUTION

- Do not connect the drain hose to existing waste pipes as odors may arise.

Installation on an exterior wall

If the outdoor unit must be installed on an exterior wall, you will need an L-bracket to support the unit. This bracket is not included with the unit.

⚠ WARNING

- The wall must be capable of supporting the weight of both the L-bracket and the outdoor unit. If the unit falls, it may result in crushing, electric shock, fire, or explosion that could cause death, severe personal injury, or property damage.

※ In case you want more information about the controllers and accessories, please refer to the Controller and Accessory TDB on pvi.Samsung.com site or Global Partner Portal site.

11. Installation

Installation Guide at the seashore

Make sure to follow below guides when installing at the seashore.

1 Do not install the product in a place where it is directly exposed to sea water and sea breeze.
   - Make sure to install the product behind a structure (such as building) that can block see breeze.
   - Even when it is inevitable to install the product in seashore, make sure that product is not directly exposed to sea breeze by installing a protection wall.

2 Consider that the salinity particles clinging to the external panels should be sufficiently washed out.

3 Because the residual water at the bottom of the outdoor unit significantly promotes corrosion, make sure that the slope does not disturb drainage.
   - Keep the floor level so that rain does not accumulate.
   - Be careful not to block the drain hole due to foreign substance.

4 When product is installed in seashore, periodically clean it with water to remove attached salinity.

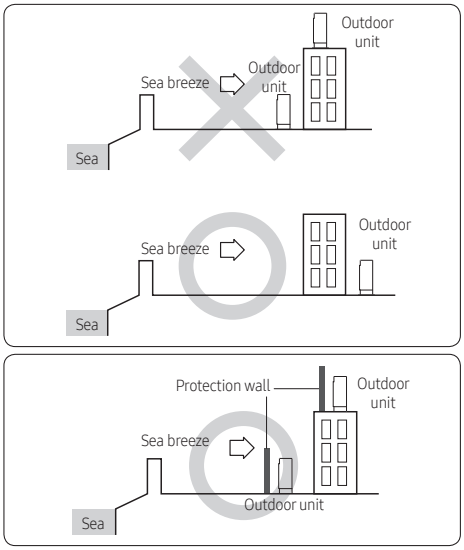
5 Make sure to install the product in a place that provides smooth water drainage. Especially, ensure that the base part has good drainage.

6 If the product is damaged during the installation or maintenance, make sure to repair it.

7 Check the condition of the product periodically.
   - Check the installation site every 3 months and perform anti-corrosion treatment such as R-Pro supplied by SAMSUNG (Code : MOK-220SA) or commercial water repellent grease and wax, etc., based on the product condition.
   - When the product is to be shut down for a long period of time, such as off-peak hours, take appropriate measures like covering the product.

8 If the product installed within 500m of seashore, special anti-corrosion treatment is required.

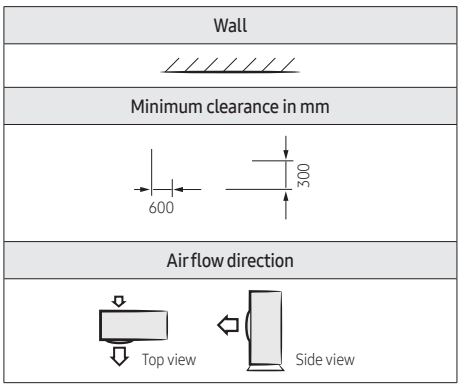
※ Please contact your local SAMSUNG representative for further details.



- Protection wall should be constructed with a solid material that can block the sea breeze and the height and width of the wall should be 1.5 times larger than the size of the outdoor unit. (You must secure more than 600 mm of space between the protection wall and the outdoor unit for air circulation.)

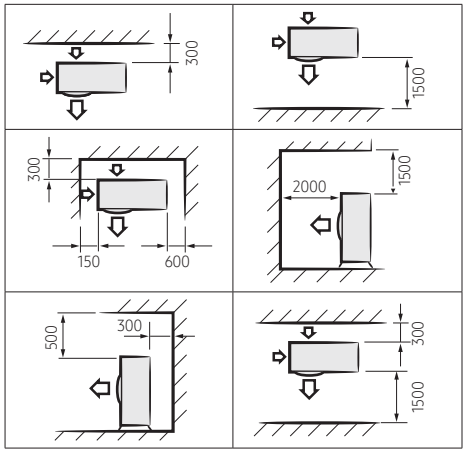
Minimum clearances for the outdoor unit

Legends:



Examples for installing one outdoor unit:

Unit: mm

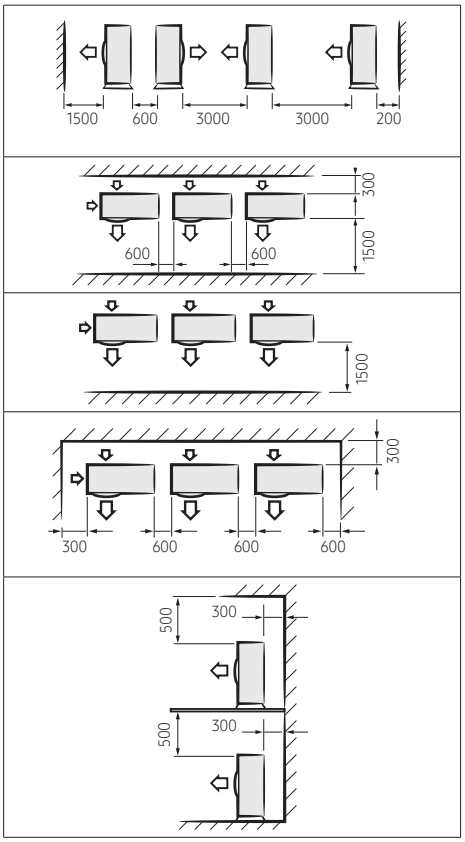


※ In case you want more information about the controllers and accessories, please refer to the Controller and Accessory TDB on pvi.Samsung.com site or Global Partner Portal site.

11. Installation

Examples for installing multiple outdoor units:

Unit: mm



Attaching the mounting bracket to the wall

1 Hold the mounting bracket against the wall at the selected installation position (Step 1-2 on page 8), making sure that the screw holes align with the center of the studs in the wall. If the screw locations do not align with the studs, use wall anchors.

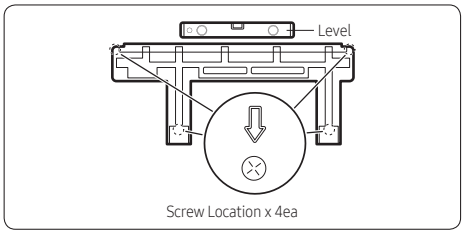
⚠ CAUTION

- The recommended best practice is to attach the mounting bracket directly to the studs in the wall. If you did not find a suitable location with studs (in Step 1-2 on page 8), or if the wall is concrete, you must use wall anchors of a suitable type and weight capacity, and install them according to the manufacturer's instructions. Failure to do so may cause the material surrounding the joints to crumble over time and the screws to be loosened and stripped. This may result in the unit falling from the wall, which could cause physical injury or equipment damage.

2 Using a level, make sure that the mounting bracket is level, then mark the location of the screw holes on the wall.

3 If using wall anchors, install them at the screw hole positions, following the manufacturer's instructions.

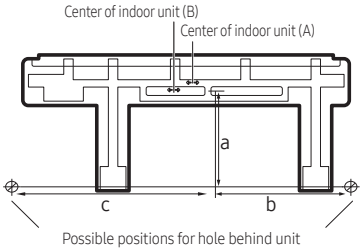
4 Using six field-supplied mounting screws and anchors (if applicable), attach the bracket to the wall.



Drilling the wall penetration

1 Determine the position of the hole through which the piping bundle (consisting of power and communication cables, refrigerant pipes, and the drain hose) will pass. Consider the following:

- The hole inner diameter must be 65 mm.
- The recommended hole location is behind the unit so that the hole and the piping bundle will not be visible in the room. The minimum distances between the hole and the mounting bracket are:

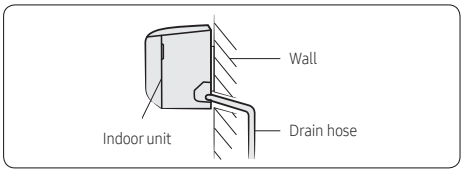


Possible positions for hole behind unit

Model		a	b	c
09***** **12*******	A	165	305	416

- If the hole cannot be positioned behind the unit, find a position as close to the unit as possible. The piping bundle that exits the unit and extends to the hole will need to be attached to the wall and will be visible inside the room.
- In relation to the bracket shown above, the unit is shipped with the drain hose connection on the right, the drain hose exits the unit on the left, and the refrigerant pipes are bent to exit on the left. Thus, positioning the hole to the left requires the least effort. If you position the hole to the right or below the unit, you will need to move the drain hose connection to the left and bend the pipes so that the hose and pipes exit to the right or bottom. See the figure in step 3 on page 15.

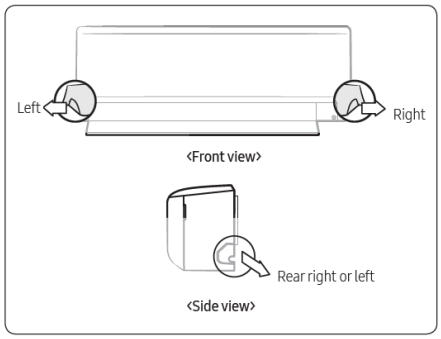
2 Use a standard 65 mm hole saw to drill one hole at the selected location, at a 15° downward angle so that the drain hose will drain properly.



※ In case you want more information about the controllers and accessories, please refer to the Controller and Accessory TDB on pvi.Samsung.com site or Global Partner Portal site.

11. Installation

3 Based on the hole location, determine where the piping bundle (drain hose, refrigerant pipes, and cables) will exit the unit.



NOTE

- The left or right exit will only be used if the hole is not positioned behind the unit.

Connecting the refrigerant pipes

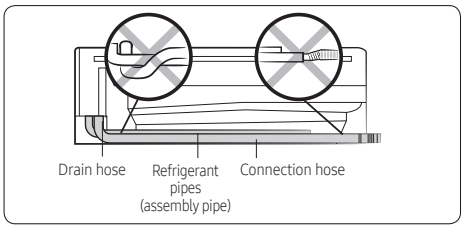
Connect indoor and outdoor units with field-supplied copper pipes by means of flare connections. Use insulated seamless refrigeration grade pipe only, (Cu DHP type according to ISO1337), degreased and deoxidized, suitable for operating pressures of at least 4200 kPa and for burst pressure of at least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

IMPORTANT

- When installing the unit, always connect the refrigerant pipes first, followed by the electrical cables. For disassembly, always disassemble the electric cables before the refrigerant pipes.

Two short refrigerant pipes are already attached to the air conditioner:

- The smaller-diameter pipe is for the high-pressure, two-phase refrigerant.
- The larger-diameter pipe is for the low-pressure refrigerant vapor.



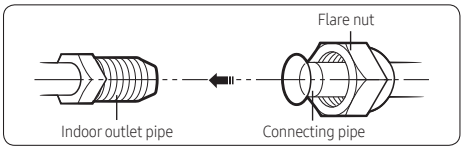
In Step 2-2, step 3 you determined the exit position for the piping bundle. The unit has three knockouts available for the left, right, and bottom exits. When the bundle exits directly from the rear, none of the knockouts are used.

1 If the pipes will exit directly from the rear, skip to step 3. Otherwise, cut out the appropriate knockout piece (left, right, or bottom).
2 Use a razor knife to clean the cut edges (flashing).
3 The left exit is the only position that does not require bending the pipes. For other positions, bend the pipes so that they will exit in the selected exit position.
   - The bending radius should be greater than 100 mm.
   - Bend the smaller pipe gradually to prevent kinking. The larger pipe has a preinstalled spring bender to prevent kinking.
   - Make sure that the pipes do not protrude from the back of the unit in a way that will make it difficult to attach the unit to the mounting bracket.
   - For right and bottom exits, pull the pipes out through the selected knockout opening. For left exits, the piping connections will be made in the service space behind the indoor unit (under the cover panel).

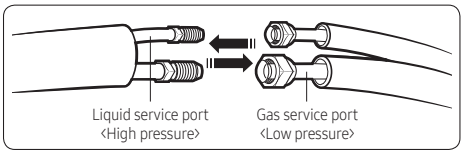
NOTE

- If you are using the right rear exit, the pipes should be long enough to extend through the wall without needing to connect the line set first. It may be easier to connect the line set outside of the building, after you have bundled the pipes and cables and passed the bundle through the wall. In this case, do not connect the line set now. Instead, complete Step 2-4 through Step 2-7, then go outside and connect the line set as described below.

4 Slowly remove the protective caps on the refrigerant pipe connections to relieve the nitrogen holding charge.
5 Connect the line set to each pipe.



6 Hand-tighten the flare nuts to make sure that they do not become stripped.



7 Torque the flare connections to the following values:

Outer diameter (mm)	Torque (N·m)
ø 6.35	14–18
ø 9.52	34–42
ø 12.70	49–61
ø 15.88	68–82

⚠ CAUTION

- Tighten the flare nuts only to the specified torque. If a flare nut is overtightened, the flare face may crack, causing refrigerant leakage.

8 Do not box in or cover the pipe connections. Make sure that the connections are accessible for testing later in the installation process and for future servicing.
9 Tape over the end of the pipes so that debris will not enter the piping when it is passed through the wall. The pipes will be insulated later in the installation process.

※ In case you want more information about the controllers and accessories, please refer to the Controller and Accessory TDB on pvi.Samsung.com site or Global Partner Portal site.

11. Installation

Connecting the power and communication cables

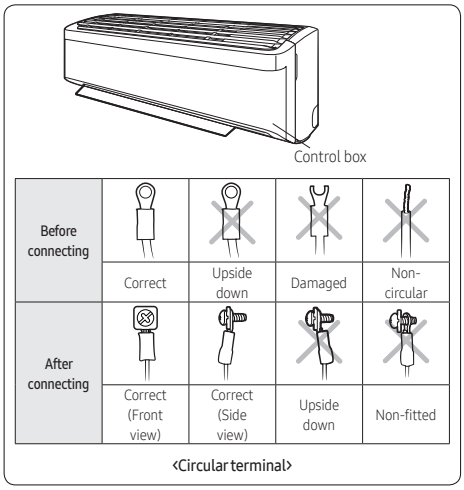
If using a multi system, install as described in the installation manual supplied with the outdoor unit.

⚠ WARNING

- Do not modify the power cable in any way. Doing so may cause electric shock or fire due to poor connection, poor insulation, or current limit override. Make sure to comply with the technical standards of electrical installations and the wiring regulations in the local area.
- This appliance must be properly grounded. Do not ground the appliance to a gas pipe, plastic water pipe, or telephone line. Failure to comply may result in electric shock, fire, and explosion.

1 Connect each wire to its corresponding terminal number.

Model	**09******* **12*******
Power cable (Outdoor unit)	3G X 2.5 mm², H07RN-F
Outdoor-to-indoor power cable	3G X 1.0 mm², H07RN-F
Communication cable	2 X 0.75 mm², H05RN-F
Type GL	16A



<Circular terminal>

⚠ CAUTION

- Connect the wires firmly so that wires cannot be pulled out. Loose wires can cause the connection to overheat.

  Each circular terminal must match the size of its corresponding screw in the terminal block.

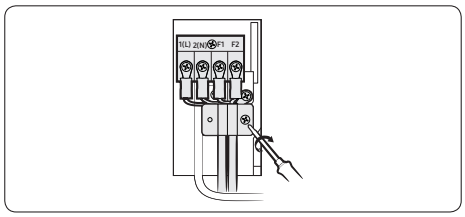
⚠ CAUTION

- 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 as the connections may loosen during operation.

For the product that uses the R-32 refrigerant, be cautious not to generate a spark by keeping the following requirements:

- Do not remove the fuses with power on.
- Do not disconnect the power plug from the wall outlet with power on.
- It is recommended to locate the outlet in a high position. Place the cords so that they are not tangled.

2 Tighten the terminal block screw.



3 In Step 2-2, step 3 you determined the exit position for the piping bundle. If using the left, right, or bottom exits, pass the cables through the selected knockout.

NOTE

- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord. (Code designation IEC: 60245 IEC66/ CENELEC: H07RN-F, IEC: 60245 IEC57 CENELEC: H05RN-F, IEC: 60227 IEC53: H05VV-F)
- Power & Communication cable shall not exceed 30 m.
- Keep distances of 50mm or more between main power cable and indoor cable assembly.

※ In case you want more information about the controllers and accessories, please refer to the Controller and Accessory TDB on pvi.Samsung.com site or Global Partner Portal site.

11. Installation

Outdoor Unit Installation

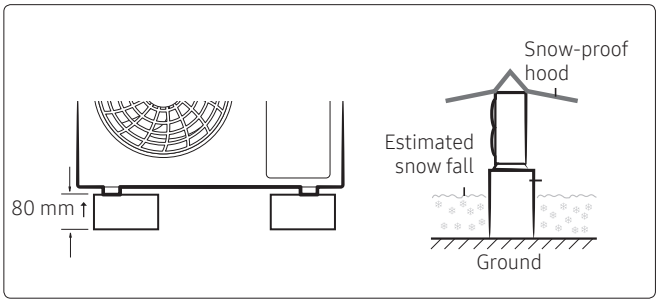
If using a multi system, install as described in the installation manual supplied with the outdoor unit.

Mounting the outdoor unit

To promote proper condensate draining, the recommended installation of the outdoor unit is elevated above the ground on a mounting bracket attached to a concrete pad.

In areas where snowfall occurs, the unit must be mounted above the snow line to allow for proper heating. Snow cannot be allowed to collect on top of the unit. For promoting natural drainage in a heavy snow fall area:

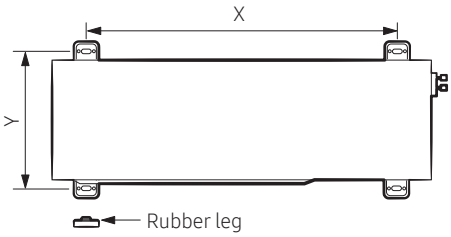
- Make space more 80 mm between the bottom of the outdoor unit and the ground for installation. (Ensure that the drained water runs off correctly and safely.)
- Allow enough separation distance between the product and the ground.



On the ground

1 Place the outdoor unit in the selected installation location (Step 1.1 on page 93), ensuring proper clearances and with the arrow on top of the unit pointing away from the wall.

2 Clip the rubber feet to the tabs to minimize sound and vibration to the structure.



(Unit: mm)

Model	X	Y
09***** **12*******	602	310

3 Level the unit, then use anchor bolts to secure it at the four mounting points.

4 For installations in locations that require seismic or hurricane tie downs, comply with local codes.

5 If the selected location is exposed to strong winds, install a protective fence around the unit so that the fan can operate correctly.

※ In case you want more information about the controllers and accessories, please refer to the Controller and Accessory TDB on pvi.Samsung.com site or Global Partner Portal site.

11. Installation

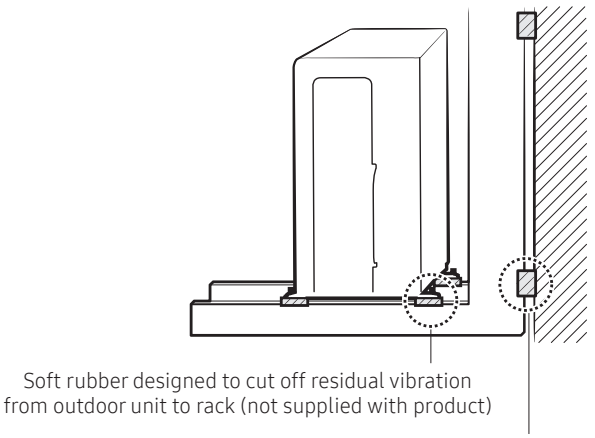
Outdoor Unit Installation

On a wall

⚠ WARNING

- The unit must be properly secured to the wall. If the unit falls, it may result in crushing, electric shock, fire, or explosion that could cause death, severe personal injury, or property damage.

1 At the selected installation location attach the L-bracket to the wall as follows:
   - Install the bracket as close to the wall as possible.
   - Insert rubber isolators between the bracket and the wall to minimize sound and vibration to the structure. Do not fully compress the isolators.



   - Make sure that the bracket is level.
   - Use suitable bolts/washers and lock washers.

2 Place the outdoor unit on the bracket, ensuring proper clearances and with the arrow on top of the unit pointing away from the wall.

3 Clip the rubber feet to the tabs to minimize sound and vibration to the structure.

4 Level the unit, then use anchor bolts to secure it at the four mounting points.

5 For installations in locations that require seismic or hurricane tie downs, comply with local codes.

Adding refrigerant (if needed)

The outdoor unit is charged with sufficient R-32 refrigerant to support up to a 5 m line set. For lengths greater than 5 m, you must add 15 g of refrigerant per meter of additional length, after the lines are evacuated.

1 Calculate the additional refrigerant required:
Additional grams of R-32 = (Total line set meter – 5) × 15

2 Connect the common hose of the manifold gauge set to the inverted R-32 refrigerant cylinder.

3 Place the refrigerant cylinder on a scale set to measure grams.

4 Open the valve on the tank.

5 At the manifold connection, bleed the refrigerant to remove any air that may be present in the common hose.

6 Open the gauge manifold and charge the system with the amount of refrigerant calculated in step 1.

7 Close the gauge manifold valve, close the valve on the refrigerant tank, and remove the common hose.

Precautions on adding the R-32 refrigerant

In addition to the conventional charging procedure, the following requirements shall be kept.

- Make sure that contamination by other refrigerants does not occur for charging.
- To minimize the amount of refrigerant, keep the hoses and lines as short as possible.
- The cylinders shall be kept upright.
- Make sure that the refrigeration system is earthed before charging.
- Label the system after charging, if necessary.
- Extreme care is required not to overcharge the system.
- Before recharging, the pressure shall be checked with nitrogen blowing.
- After charging, check for leakage before commissioning.
- Be sure to check for leakage before leaving the work area.

※ In case you want more information about the controllers and accessories, please refer to the Controller and Accessory TDB on pvi.Samsung.com site or Global Partner Portal site.

11. Installation

Outdoor Unit Installation

Important information: regulation regarding the refrigerant used

This product contains fluorinated greenhouse gases. Do not vent gases into the atmosphere.

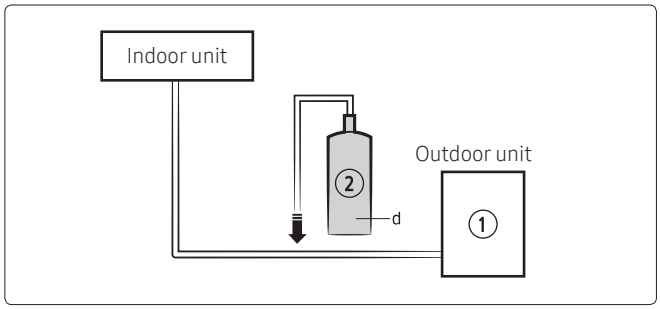
⚠ CAUTION

- Inform user if the system contains 5 tCO_2e or more of fluorinated greenhouse gases. In this case, it must be checked for leakage at least once every 12 months, according to regulation No. 517/2014. This activity must be covered by qualified personnel only. In the case of the situation above, the installer (or authorized person with responsibility for final check) must provide a maintenance book, with all the information recorded, according to REGULATION (EU) No. 517/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 April 2014 on fluorinated greenhouse gases.

1 Please fill in the following with indelible ink on the refrigerant charge label supplied with this product and on this manual.
   - ❶ the factory refrigerant charge of the product,
   - ❷ the additional refrigerant amount charged in the field and
   - ❶+❷ the total refrigerant charge. on the refrigerant charge label supplied with the product.

Refrigerant type	GWP value
R-32	675

- GWP: Global Warming Potential
- Calculating tCO_2e: kg x GWP/1000



Unit	Kg	tCO_2e
①, a		
②, b		
①+②, c		

NOTE

- Factory refrigerant charge of the product: see unit name plate
- Additional refrigerant amount charged in the field (Refer to the above information for the quantity of refrigerant replenishment.)
- Total refrigerant charge
- Refrigerant cylinder and manifold for charging

⚠ CAUTION

- The filled-out label must be adhered in the proximity of the product charging port (e.g. onto the inside of the stop valve cover).
- Make sure that the total refrigerant charge does not exceed (A), the maximum refrigerant charge, which is calculated in the following formula: Maximum refrigerant charge (A)= factory refrigerant charge (B) + maximum additional refrigerant charge due to piping extension (C)
- Here below, the summary table with refrigerant charge limits for each products.

(Unit:g)

Model	A	B	C
09***** **12*******	1115	965	150

※ In case you want more information about the controllers and accessories, please refer to the Controller and Accessory TDB on pvi.Samsung.com site or Global Partner Portal site.

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