

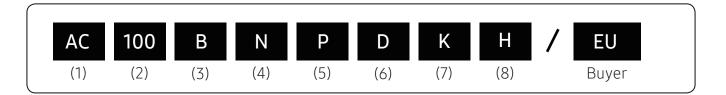
Model: AC***BNPDKH/EU (Indoor Unit)
AC***BXPD*H/EU (Outdoor Unit)

History

Version	Modification	Date	Remark
Ver.1.0	Release Single PAC TDB for Europe	22. 06 03	

Nomenclature

Model Name



(1) Classification

AC	CAC

(5) Product Notation

IAC

(2) Capacity

v 1/10 k/M (3 digits)
x 1/10 kW (3 digits)

(6) Fearure

D	Doluvo
U	Deluxe

(3) Version

(7) Rating Voltage

В	1Ф, 220V, 60Hz	
Н	3Ф, 380V, 60Hz	
K	1Ф, 220~240V, 50/60Hz	
N	3Φ 380~415V 50/60Hz	

(4) Product Type

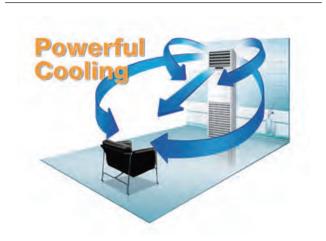
N	Indoor Unit
Χ	Outdoor Unit

(8) Mode

С	Cooling Only
Н	Heat Pump

Features & Benefits

Long Distance Air Flow



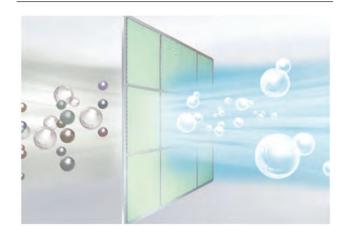
As a result of the horizontal and vertical flaps that move independently of one another, a greater diversity of airflow is available depending upon your needs: direct air flow in one direction, long-range cooling, broad left-right airflow, and three-dimensional cooling.

Easy Control thanks to Touch Display Panel



You need not find Remote controller anymore. It lets you control the temperature and air flow more easily.

Full HD Filter (MAX60%)



The full high density filter collects up to 60% of dust.

Auto shutter



The auto shutter opens and closes smoothly, revealing the flaps of the air conditioner only when it is turned on. The auto shutter protects the air conditioner from unwanted dust particles, making an unattractive air conditioner cover unnecessary.

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1. Line up

Indoor unit

Model Type	10.0kW	14.0kW
Indoor		

Outdoor Unit

Model Type	10.0kW	14.0kW
1Phase		-
3Phase	-	LARLING CO.

2. Specification

PAC

		IndoorUnit			AC100BNPDKH/EU	AC140BNPDKH/EU	
	Model Name	OutdoorUnit			AC100BXPDKH/EU	AC140BXPDNH/EU	
	Mode	outdoor ornic		-	Heat Pump	Heat Pump	
	1 locc		Cooling	kW	2.60/10.00/12.30	4.50/13.40/16.70	
			(Min/Std/Max)	Btu/h	8,900/34,100/42,000	15,300/45,700/57,000	
	Performance	Capacity	Heating	kW	2.80/11.20/14.00	3.90/15.50/20.00	
			(Min/Std/Max)	Btu/h	9,500/38,200/47,800	13,300/52,800/68,200	
			Cooling				
		PowerInput	(Min/Std/Max)	kW	0.62/3.50/5.40	0.93/4.32/6.00	
			Heating (Min/Std/Max)	kW	0.54/3.39/4.50	0.70/4.50/6.60	
	Power	Current Input	Cooling (Min/Std/Max)	A	3.2/15.3/23.2	1.8/6.8/9.6	
			Heating (Min/Std/Max)	А	2.9/15.0/20.5	1.4/7.0/10.7	
		Current	MCA	Α	26.0	16.1	
		Current	MFA	Α	30.0	16.1	
		EER	Cooling	W/W	2.86	3.10	
System		COP	Heating	W/W	3.30	3.44	
	Efficiency		SEER	-	A++(6.1)	5.8	
		EnergyGrade	SCOP	-	A+(4.2)	4.0	
			5001	Туре	Flare connection	Flare connection	
		Liquid Pipe		Φ, mm (inch)	9.52(3/8)	9.52(3/8)	
				Туре	Flare connection	Flare connection	
		Gas Pipe		Φ, mm			
	Piping	ous i ipe		(inch)	15.88(5/8)	15.88(5/8)	
	Connections	Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	
			Standard	m	5	5	
		Piping	Max.	m	50	75	
		length	Elevation	m	30	30	
		(ODU-IDU)	Chargeless	m	30	30	
	VA Continue		Min.	mm²	0.75	0.75	
	Wiring connections	Communication	mmunication Remark		F1,F2	F1,F2	
	Connections			-	· · · · · · · · · · · · · · · · · · ·	·	
	Refrigerant	Туре		-	R410A	R410A	
		Factory Charging		kg	3.0	3.5	
	Power Supply			Ø, #, V, Hz	1,2,220-240,50/60	1,2,220-240,50/60	
		Туре	I	-	PFE	PFE	
	Heat	Material	Fin	-	AL	AL	
	Exchanger		Tube	-	AL	AL	
		Fin Treatment		-	Hybrid Coating	Hybrid Coating	
		Туре		-	Sirocco Fan	Sirocco Fan	
		Quantity		EA	1	1	
	Fan	. ,	11040	CMM	29.0/25.0/23.0	35.0/30.0/27.0	
		Air Flow Rate	H/M/L	CFM	1,024 / 883 / 812	1,236 / 1,059 / 953	
		External		mmAq	-	-	
Indoor		Static Pressure	Min/Std/Max	Pa	-	-	
Unit		Type		-	BLDC	BLDC	
	Fan Motor	Output		Wxn	96 x 1	154 x 1	
	Drain	Drain Pipe		Φ, mm	VP18	VP18	
	Dialii	Sound Pressure					
	Sound	Level	H/M/L/(Silent)	dB(A)	47 / 44 / 41	51 / 48 / 45	
	Sourid	Sound Power Leve	l	dB(A)	60	65	
		Net Weight		kg	43.0	44.5	
	External	Shipping Weight		kg	50.0	50.5	
	Dimension	Net Dimensions (V	(VAHAD)		610 x 1,850x400	610x1,850x400	
	Dillicipion			mm		705x1,963x493	
	Casin	Shipping Dimensio	JIIS (WXHXD)	mm	·		
	Casing	Material		-	ABS	ABS	
		Infraredremotecont	Ol	-			
	ControlSystem	Wiredremotecontro		_			

2. Specification

PAC

	Model Name	IndoorUnit			AC100BNPDKH/EU	AC140BNPDKH/EU
	Model Name	Outdoor Unit			AC100BXPDKH/EU	AC140BXPDNH/EU
	Power Supply			Ø, #, V, Hz	1,2,220-240,50/60	3,4,380-415,50/60
		Туре		-	F&T	F&T
	Heat	Material	Fin	-	AL	AL
	Exchanger	I*lateriat	Tube	-	Cu	Cu
		Fin Treatment		-	Green Hydrophile	Green Hydrophile
		Model Name			UG8T300FUBJU	UG5TK1450FJX
		Туре		-	Twin BLDC Rotary	Twin BLDC Rotary
	Compressor	Output		kW	2.82	4.19
		Oil	Туре	-	POE	PVE
		Initial charge		СС	1,200	1,700
		Type		-	Propellar	Propellar
Outdoor	Fan	Discharge directi	on	-	Front	Front
Unit		Quantity		EA	1	2
Onic		Air Flow Rate		CMM	72	110
		All Flow Rate		CFM	2,543	3,885
	Fan Motor	Type		-	BLDC	BLDC
	Tanimotor	Output		Wxn	125 x 1	125 x 2
		Sound Pressure	Cooling	dB(A)	53	53
	Sound	Level	Heating	dB(A)	55	54
		Sound Power Lev	el	dB(A)	70	72
		Net Weight		kg	72.5	86.5
	External	Shipping Weight		kg	77.5	95.5
	Dimension	Net Dimensions (WxHxD)	mm	940x998x330	940x1,210x330
		Shipping Dimensi	ons (WxHxD)	mm	995x1,096x426	995x1,388x426
	Casing	Material	Body	-	Steel plate	Steel plate
	Operating	Cooling		°C	-15~50	-15~50
	Temp. Range	Heating		℃	-20~24	-20~24

- Specification may be subject to change without prior notice.
 - 1) Performances are based on the following test conditions.
 - Cooling: Indoor temperature 27°CDB, 19°CWB, Outdoor temperature 35°CDB, 24°CWB
 - Heating: Indoor temperature 20°CDB, 15°CWB, Outdoor temperature 7°CDB, 6°CWB
 - Equivalent refrigerant pipe length 5m, Level differences 0m
 - 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.

3. Summary Table

Performance characteristics

	Net		Capacity		F	۸: سال میں	CI D	Carral Dance
Model Code	Weight (kg)		Cooling (kW)	Heating (kW)	Fan Speed	Airflow (CMM)	Sound Pressure Level(dBA)	Sound Power Level(dBA)
		Max.	12.30	14.00	High	29.0	47	60
AC100BNPDKH/EU	43.0	Std.	10.00	11.20	Mid	25.0	44	-
		Min.	2.60	2.80	Low	23.0	41	-
		Max.	16.70	20.00	High	35.0	51	65
AC140BNPDKH/EU	44.5	Std.	13.40	15.50	Mid	30.0	48	-
		Min.	4.50	3.90	Low	27.0	45	-

Electrical Characteristics

Mode	l Code		Outdoor	Unit		Inpi	ut Curren	t(Amper	es)	Power Supply		
Indoor Unit	Outdoor Unit	Rated	Voltag	je ran	ge	Outdoo	or Unit	Indoor	Total	MCA (A)	MFA (A)	
illuoor offic	Outdoor offic	Hz	Volts	Min.	Max.	Cooling	Heating	Unit	TOLAL	MCA (A)	MIFA (A)	
AC100BNPDKH/EU	AC100BXPDKH/EU	50/60	220 - 240	198	264	24.0	24.0	2.0	26.0	26.0	30.0	
AC140BNPDKH/EU	AC140BXPDNH/EU	50/60	380 - 415	342	418	14.1	14.1	2.0	16.1	16.1	16.1	



MCA: Minimum circuit amperesMFA: Maximum fuse amperes

• Select wire size based on the value of MCA

4. Capacity Table

AC100BNPDKH/EU + AC100BXPDKH/EU

Cooling

 ${\sf TC:TotalCapacity,SHC:SensibleHeatCapacity,PI:PowerInput}$

	IndoorTemperature(°C, DB / WB)																				
Outdoor		20 / 14	Į.		22 / 16		25 / 18			27 / 19		28/20)	30/22			32 / 24			
Temp. (°C, DB)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
(C, DB)	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-15	9.73	7.76	2.55	10.24	8.00	2.60	10.67	8.25	2.66	11.00	8.50	2.71	11.22	8.42	2.74	11.78	8.33	2.76	12.37	8.16	2.82
7	9.46	7.59	2.69	9.96	7.83	2.75	10.37	8.07	2.81	10.69	8.32	2.86	10.91	8.23	2.89	11.45	8.15	2.92	12.03	7.99	2.98
21	9.29	7.48	2.79	9.78	7.72	2.84	10.19	7.95	2.90	10.50	8.20	2.96	10.71	8.12	2.99	11.25	8.04	3.02	11.81	7.88	3.08
35	8.85	7.12	3.29	9.31	7.34	3.36	9.70	7.57	3.43	10.00	7.80	3.50	10.20	7.72	3.54	10.71	7.64	3.57	11.25	7.49	3.64
46	7.52	6.48	3.46	7.92	6.68	3.53	8.25	6.89	3.61	8.50	7.10	3.68	8.67	7.03	3.72	9.10	6.96	3.75	9.56	6.82	3.83
50	6.63	6.11	3.58	6.98	6.30	3.65	7.28	6.50	3.72	7.50	6.70	3.80	7.65	6.63	3.84	8.03	6.57	3.88	8.43	6.44	3.95

Heating

	IndoorTemperature(°C, DB / WB)											
Outdoor Temp.	16		18		20		21		22		24	
(°C,	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
DB)	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-20	8.57	4.51	8.48	4.46	8.40	4.42	8.32	4.38	8.23	4.33	8.15	4.29
-15	9.79	4.86	9.70	4.81	9.60	4.76	9.50	4.71	9.41	4.67	9.31	4.62
-5	11.22	4.85	11.11	4.80	11.00	4.75	10.89	4.70	10.78	4.66	10.67	4.61
0	11.63	4.15	11.51	4.11	11.40	4.07	11.29	4.03	11.17	3.99	11.06	3.95
7	11.43	3.46	11.31	3.42	11.20	3.39	11.09	3.36	10.98	3.32	10.87	3.29
24	13.87	3.43	13.74	3.39	13.60	3.36	13.46	3.33	13.33	3.29	13.20	3.26



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

4. Capacity Table

AC140BNPDKH/EU + AC140BXPDNH/EU

Cooling

 ${\sf TC:TotalCapacity,SHC:SensibleHeatCapacity,PI:PowerInput}$

		IndoorTemperature(°C, DB/ WB)																			
Outdoor	20 / 14		22 / 16		25 / 18			27 / 19	1	28/20)	30/22			32 / 24					
Temp. (°C, DB)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
(C, DD)	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-15	13.09	9.95	3.09	13.78	10.26	3.15	14.36	10.57	3.21	14.80	10.90	3.28	15.10	10.79	3.31	15.85	10.68	3.35	16.64	10.47	3.41
7	12.71	9.67	3.19	13.38	9.97	3.26	13.94	10.28	3.32	14.37	10.59	3.39	14.66	10.49	3.42	15.39	10.38	3.46	16.16	10.18	3.53
21	12.47	9.49	3.26	13.13	9.79	3.32	13.68	10.09	3.39	14.10	10.40	3.46	14.38	10.30	3.49	15.10	10.19	3.53	15.86	9.99	3.60
35	11.85	9.04	4.07	12.48	9.31	4.15	13.00	9.60	4.23	13.40	9.90	4.32	13.67	9.80	4.36	14.35	9.70	4.41	15.07	9.51	4.49
46	9.73	8.31	4.60	10.24	8.56	4.70	10.67	8.83	4.79	11.00	9.10	4.89	11.22	9.01	4.94	11.78	8.92	4.99	12.37	8.74	5.09
50	8.58	7.67	3.72	9.03	7.90	3.80	9.41	8.15	3.88	9.70	8.40	3.96	9.89	8.32	4.00	10.39	8.23	4.04	10.91	8.07	4.12

Heating

	IndoorTemperature(°C, DB / WB)											
Outdoor Temp.	16		18		2	0	21		22		24	
(°C,	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
DB)	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-20	9.59	5.30	9.49	5.25	9.40	5.20	9.31	5.15	9.21	5.10	9.12	5.05
-15	13.77	6.89	13.64	6.82	13.50	6.75	13.37	6.68	13.23	6.62	13.10	6.55
-5	15.51	6.43	15.35	6.36	15.20	6.30	15.05	6.24	14.90	6.17	14.75	6.11
0	16.12	5.51	15.96	5.45	15.80	5.40	15.64	5.35	15.49	5.29	15.33	5.24
7	15.81	4.59	15.66	4.55	15.50	4.50	15.35	4.46	15.19	4.41	15.04	4.37
24	20.50	5.15	20.30	5.10	20.10	5.05	19.90	5.00	19.70	4.95	19.50	4.90

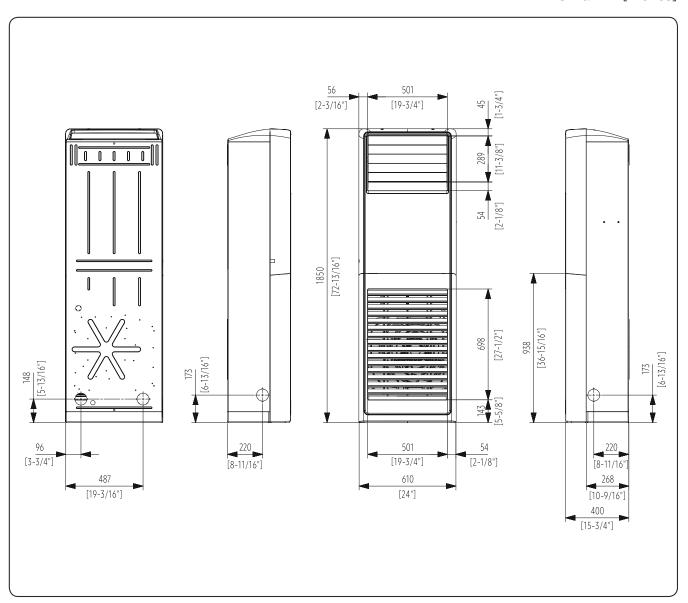


• The performance table shows the average value of each conditions.

5. Dimensional Drawing

Indoor unit

AC100BNPDKH/EU, AC140BNPDKH/EU

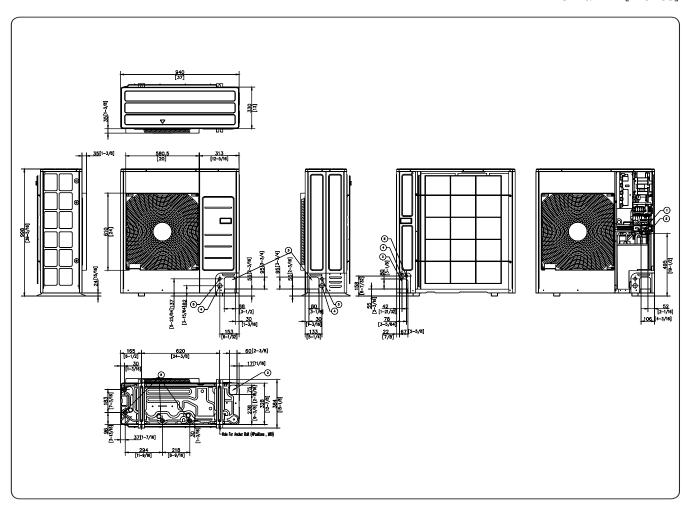


No	Nama	Description					
No.	Name	AC100BNPDKH/EU	AC140BNPDKH/EU				
1	Liquid pipe connection	9.52 (3/8")	9.52 (3/8")				
2	Gas pipe connection	15.88 (5/8")	15.88 (5/8")				
3	Drain pipe connection	-	-				
4	Power supply & Communication wiring conduit	-	-				

5. Dimensional Drawing

Outdoor unit

AC100BXPDKH/EU

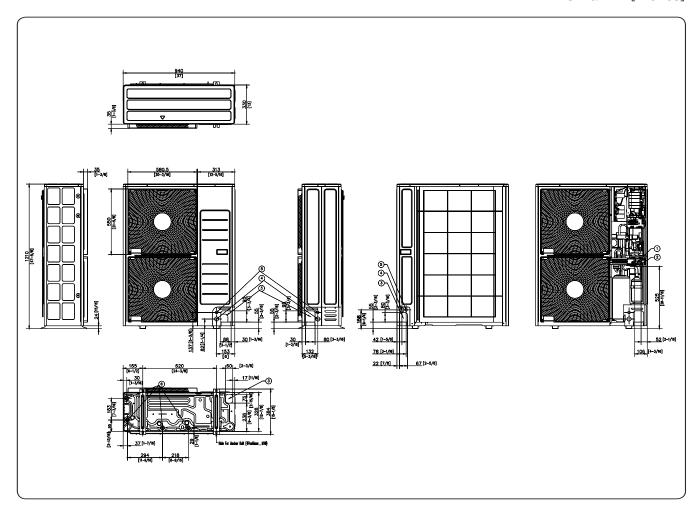


No.	Name	Description
1	Liquid pipe connection	Ø9.52 (3/8)
2	Gas pipe connection	Ø15.88 (5/8)
3	Piping intake knockout hole	Front / Side / Rear / Bottom
4	Power wiring conduit	Front / Side / Rear / Ø34 (1-3/8)
5	Communication wiring conduit	Front / Side / Rear / Ø22 (7/8)
6	Drain hole	Connect with the provided drain plug.

5. Dimensional Drawing

Outdoor unit

AC140BXPDNH/EU

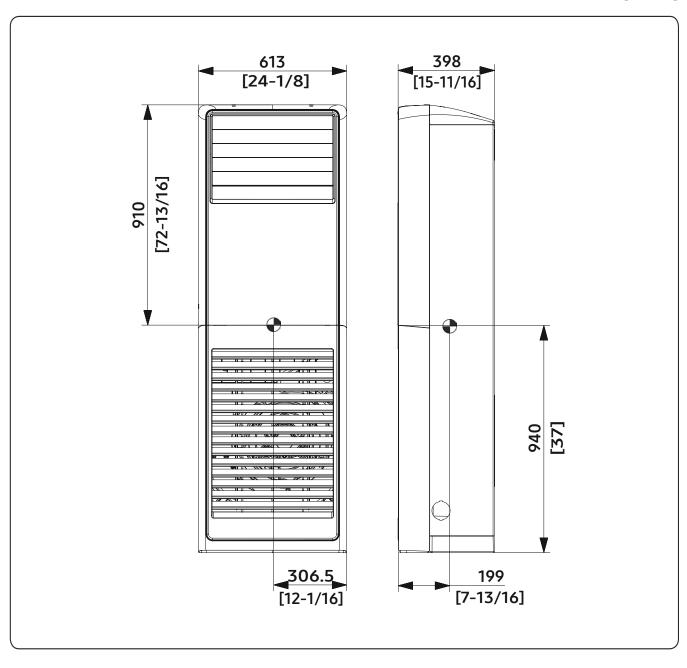


No.	Name	Description
1	Liquid pipe connection	Ø9.52 (3/8)
2	Gas pipe connection	Ø15.88 (5/8)
3	Piping intake knockout hole	Front / Side / Rear / Bottom
4	Power wiring conduit	Front / Side / Rear / Ø34 (1-3/8)
5	Communication wiring conduit	Front / Side / Rear / Ø22 (7/8)
6	Drain hole	Connect with the provided drain plug.

6. Center of Gravity

Indoor unit

AC100BNPDKH/EU, AC140BNPDKH/EU

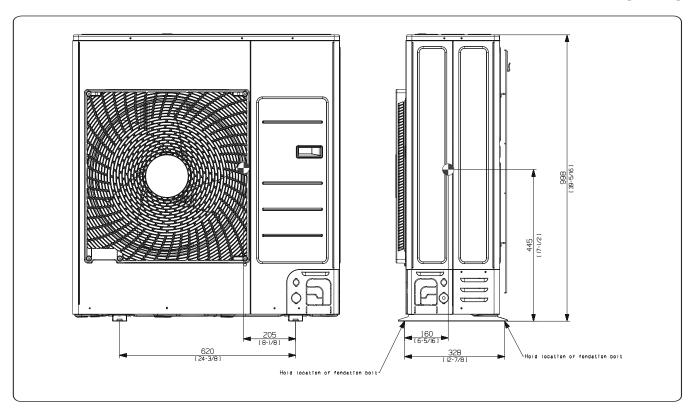


6. Center of Gravity

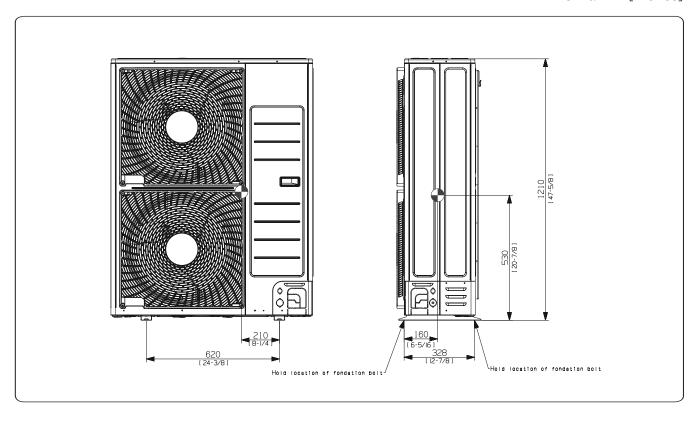
Outdoor unit

AC100BXPDKH/EU

Unit: mm[inches]



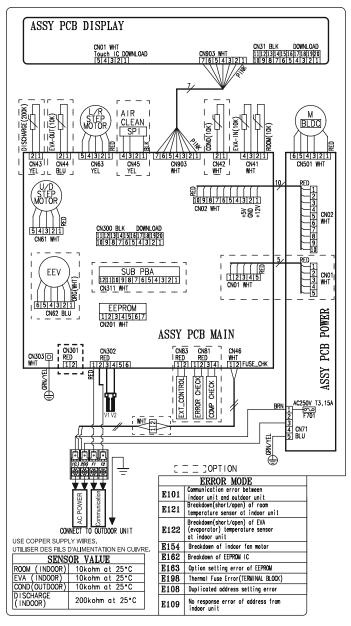
AC140BXPDNH/EU



7. Electrical Wiring Diagram

Indoor unit

AC100BNPDKH/EU, AC140BNPDKH/EU



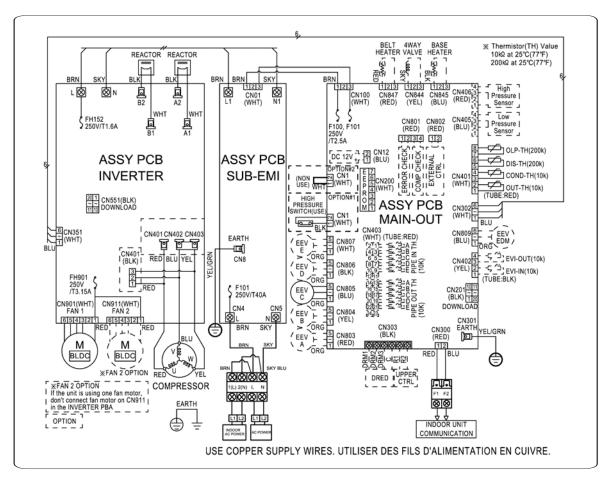
ASSY PCB MAIN	Print circuit board(MAIN)	U/D STEP MOTOR	Up/Down Louver stepping motor
ASSY PCB POWER	Print circuit board(POWER)	L/R SETP MOTOR	Left/Rigth Louver stepping motor
ASSY PCB DISPLAY	Print circuit board(DISPLAY)	M-BLDC	BLDC Motor
ROOM(10K)	Thermistor ROOM	EVA-IN	Thermistor EVA-IN

- 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 shortcircuit 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, → : The wire quantity

7. Electrical Wiring Diagram

Outdoor unit

AC100BXPDKH/EU



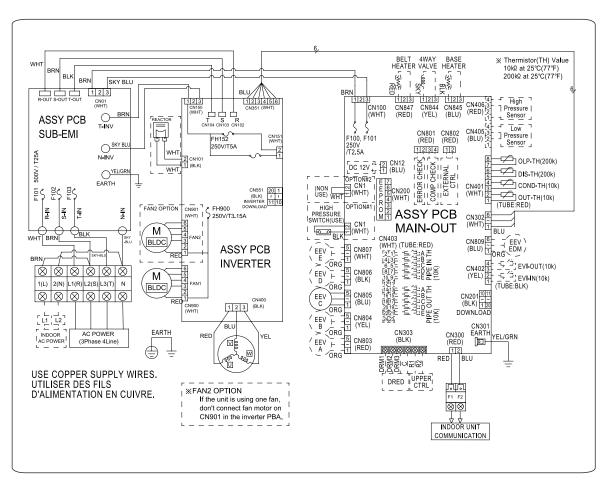
MAIN PCB	Printed circuit board(MAIN)	EEV	Electronics Expansion Valve	DIS-TH(200K)	Thermistor DISCHARGE
INVERTER PCB	Printed circuit board(INVERTER)	M-BLDC	BLDC Motor	OUT-TH(10K)	Thermistor AMBIENT
EMI	Printed circuit board(EMI)	OLT-TH(200K)	Thermistor OLP	COND-TH(10K)	Thermistor CONDENSOR

- This wiring diagram applies only to the outdoor Unit.
- Colors BLK: black, RED: red, BLU: blue, WHT: white, YEL: yellow, BRN: brown, SKY: skyblue
- When operating, don't shortcircuit 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, ┡ : The wire quantity

7. Electrical Wiring Diagram

Outdoor unit

AC140BXPDNH/EU



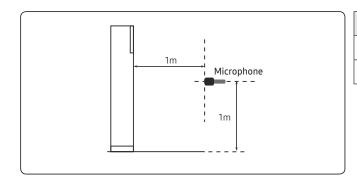
MAIN PCB	Printed circuit board(MAIN)	EEV	Electronics Expansion Valve	DIS-TH(200K)	Thermistor DISCHARGE
INVERTER PCB	Printed circuit board(INVERTER)	M-BLDC	BLDC Motor	OUT-TH(10K)	Thermistor AMBIENT
EMI	Printed circuit board(EMI)	OLT-TH(200K)	Thermistor OLP	COND-TH(10K)	Thermistor CONDENSOR

- This wiring diagram applies only to the outdoor Unit.
- Colors BLK: black, RED: red, BLU: blue, WHT: white, YEL: yellow, BRN: brown, SKY: skyblue
- When operating, don't shortcircuit 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, ┡ : The wire quantity

Indoor unit

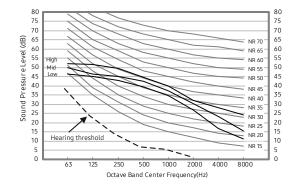
Sound Pressure level

Unit: dB(A)

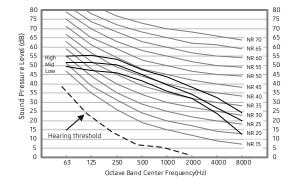


Model	High	Mid	Low
AC100BNPDKH/EU	47	44	41
AC140BNPDKH/TK	51	48	45

- NR Curve
 - 1) AC100BNPDKH/EU



2) AC140BNPDKH/EU



- 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

Outdoor unit

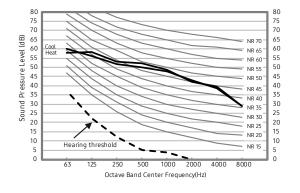
Sound Pressure level

Unit: dB(A)

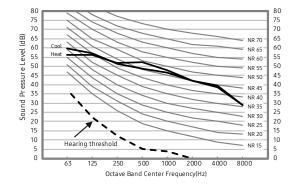
Microphone	1m	Microphone	1m
			 -
			\Box
1.5m	!	1.5m	
	i i		Front
	Front		
_*		_+	

Model	Cooling	Heatng
AC100BXPDKH/EU	53	55
AC140BXPDNH/EU	53	54

- NR Curve
 - 1) AC100BXPDKH/EU



2) AC140BXPDNH/EU



- 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

Indoor unit

Sound Power level

NOTE

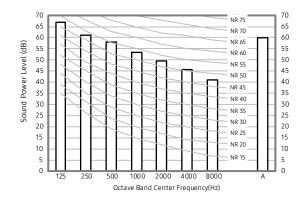
Unit: dB(A)

- 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.

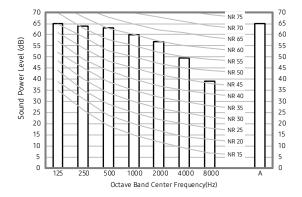
Model	Power
AC100BNPDKH/EU	60
AC140BNPDKH/EU	65

NR Curve

1) AC100BNPDKH/EU



2) AC140BNPDKH/EU



Outdoor unit

Sound Power level

NOTE

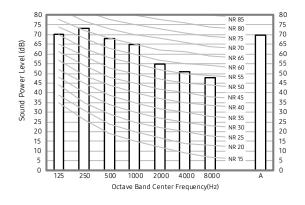
Unit: dB(A)

- 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.

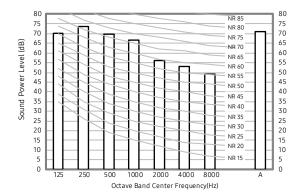
Model	Power
AC100BXPDKH/EU	70
AC140BXPDNH/EU	72

NR Curve

1) AC100BXPDKH/EU



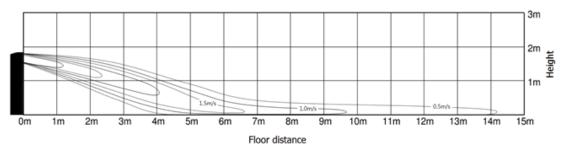
2) AC140BXPDNH/EU



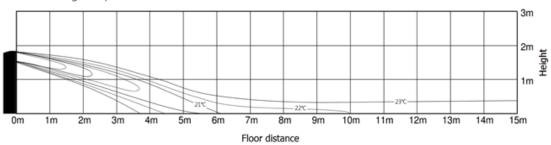
9. Temperature and airflow distribution

AC100BNPDKH/EU

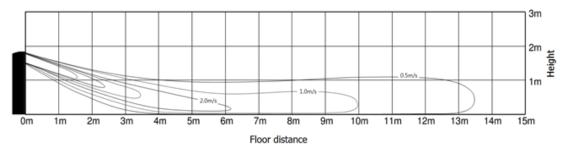
(1) Cooling air velocity distribution



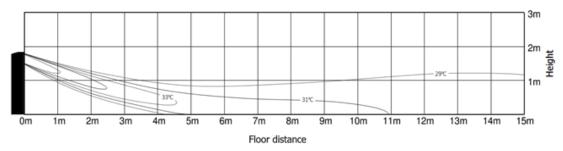
(2) Cooling temperature distribution



(3) Heating air velocity distribution



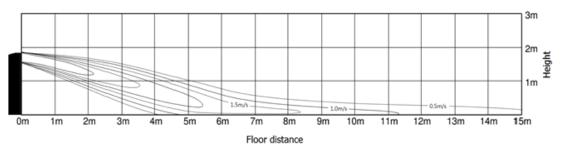
(4) Heating temperature distribution



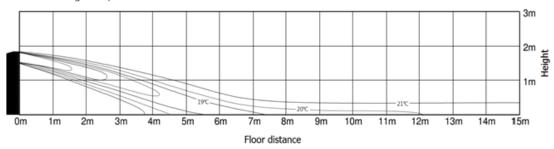
9. Temperature and airflow distribution

AC140BNPDKH/EU

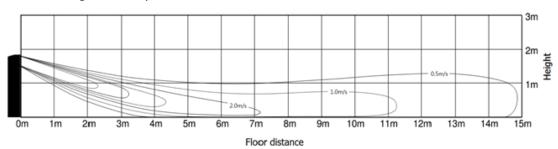
(1) Cooling air velocity distribution



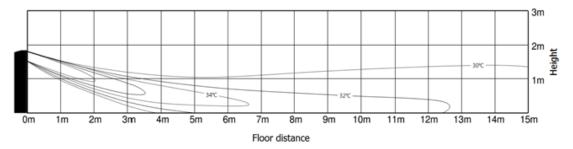
(2) Cooling temperature distribution



(3) Heating air velocity distribution



(4) Heating temperature distribution



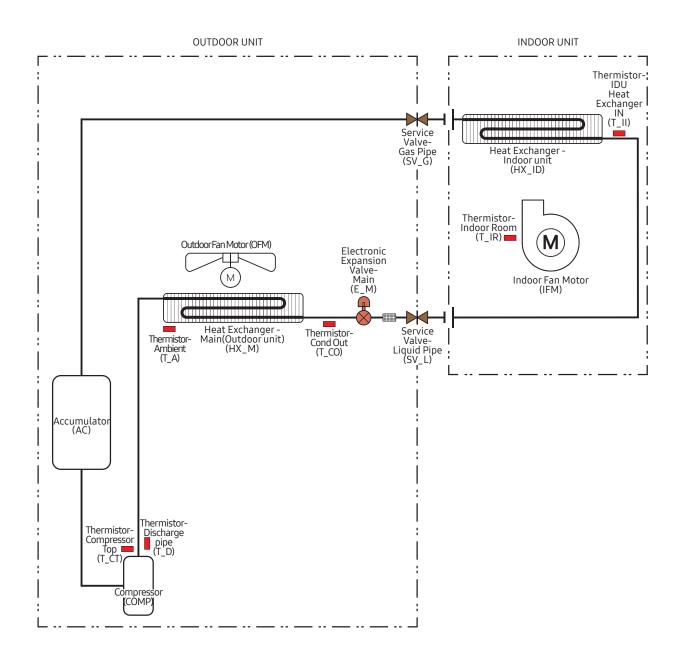
10. Operation Range

AC***BNPDKH/EU + AC***BXPD*H/EU

Mode	Indoor Temperature	Outdoor Temperature	Indoor humidity
Cooling	18°C to 32°C	-15°C to 50°C	80% or less
Drying	18°C to 32°C	-15°C to 50°C	80% or less
Heating	30°C or less	-20°C to 24°C	-

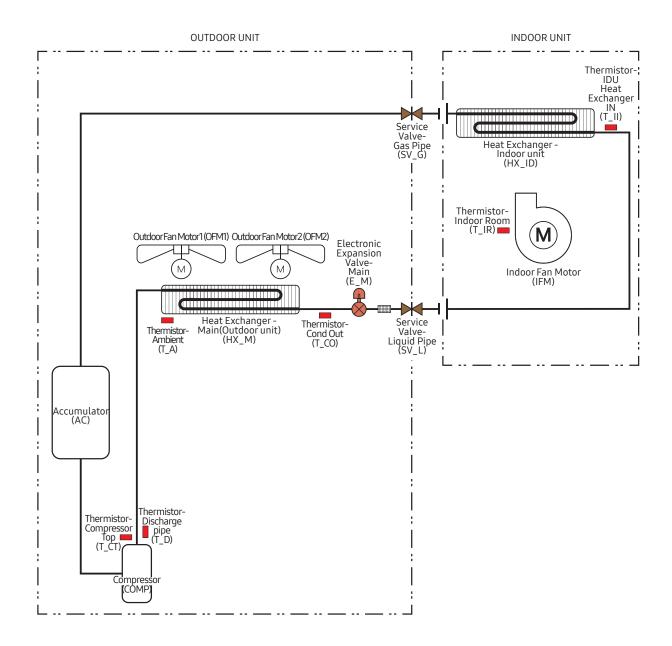
11. Piping Diagram

AC100BNPDKH/EU



11. Piping Diagram

AC140BNPDNH/EU



12. Capacity Correction

AC100BNPDKH/EU + AC100BXPDKH/EU

Cooling

							Pipe Ler	ngth (m)				
(A)			5	10	15	20	25	30	35	40	45	50
		30	-	-	-	-	-	0.92	0.90	0.88	0.87	0.85
	25	-	-	-	-	0.93	0.92	0.90	0.88	0.87	0.85	
		20	-	-	-	0.95	0.93	0.92	0.90	0.88	0.87	0.85
	<u> </u>	15	-	-	0.97	0.95	0.93	0.92	0.90	0.88	0.87	0.85
	L) e:	10	-	0.98	0.97	0.95	0.93	0.92	0.90	0.88	0.87	0.85
	Level Difference (m)	5	1.00	0.98	0.97	0.95	0.93	0.92	0.90	0.88	0.87	0.85
	iffe	0	1.00	0.98	0.97	0.95	0.93	0.92	0.90	0.88	0.87	0.85
	el D	-5	1.00	0.98	0.96	0.94	0.93	0.91	0.89	0.88	0.86	0.84
	Lev	-10	-	0.97	0.96	0.94	0.92	0.90	0.89	0.87	0.85	0.82
		-15	-	-	0.95	0.93	0.92	0.90	0.88	0.86	0.84	0.81
6		-20	-	-	-	0.93	0.91	0.89	0.87	0.85	0.83	0.80
		-25	-	-	-	-	0.90	0.89	0.87	0.85	0.82	0.78
		-30	-	-	-	-	-	0.88	0.86	0.84	0.81	0.77

Heating

							Pipe Ler	ngth (m)				
A	A		5	10	15	20	25	30	35	40	45	50
		30	-	-	-	-	-	0.93	0.91	0.90	0.88	0.87
	25	-	-	-	-	0.94	0.93	0.91	0.90	0.88	0.87	
		20	-	-	-	0.96	0.94	0.93	0.91	0.90	0.88	0.87
	<u> </u>	15	-	-	0.97	0.96	0.94	0.93	0.91	0.90	0.88	0.87
	Level Difference (m)	10	-	0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.88	0.87
	renc	5	1.00	0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.88	0.87
	iffe	0	1.00	0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.88	0.87
	el D	-5	1.00	0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.88	0.87
	Lev	-10	-	0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.88	0.87
		-15	-	-	0.97	0.96	0.94	0.93	0.91	0.90	0.88	0.87
6		-20	-	-	-	0.96	0.94	0.93	0.91	0.90	0.88	0.87
O		-25	-	-	-	-	0.94	0.93	0.91	0.90	0.88	0.87
		-30	-	-	-	-	-	0.93	0.91	0.90	0.88	0.87

12. Capacity Correction

AC140BNPDKH/EU + AC140BXPDNH/EU

Cooling

									Pipe	Lengtl	n (m)						
6			5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
		30	-	-	-	-	-	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72
		25	-	-	-	-	0.92	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72
		20	-	-	-	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72
		15	-	-	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72
Level Difference (m)	10	-	0.98	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72	
	enci	5	1	0.98	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72
-	ffer	0	1	0.98	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72
-	il Di	-5	1	0.98	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72
	Leve	-10	-	0.97	0.95	0.93	0.91	0.89	0.87	0.85	0.83	0.81	0.79	0.77	0.75	0.73	0.71
		-15	-	-	0.95	0.93	0.91	0.89	0.87	0.85	0.83	0.81	0.79	0.77	0.75	0.73	0.71
6	6	-20	-	-	-	0.92	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72	0.70
		-25	-	-	-	-	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72	0.70
		-30	-	-	-	-	-	0.87	0.85	0.83	0.81	0.79	0.77	0.75	0.73	0.71	0.69

Heating

									Pipe	Lengtl	n (m)						
6			5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
		30	-	-	-	-	-	0.95	0.94	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
		25	-	-	-	-	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
		20	-	-	-	0.97	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
	_	15	-	-	0.98	0.97	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
(E)	10	-	0.99	0.98	0.97	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	
	ence	5	1.00	0.99	0.98	0.97	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
1	ffer	0	1.00	0.99	0.98	0.97	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
	Level Difference	-5	1.00	0.99	0.98	0.97	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
	Leve	-10	-	0.99	0.98	0.97	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
		-15	-	-	0.98	0.97	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
6		-20	-	-	-	0.97	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
0		-25	-	-	-	-	0.96	0.95	0.94	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
		-30	-	-	-	-	-	0.95	0.94	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87

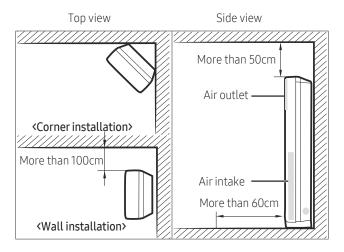
AC***BNPDKH/EU + AC***BXPD*H/EU

Choosing the installation location

Determine the installation location considering the following conditions and obtain the user approval.

Indoor unit

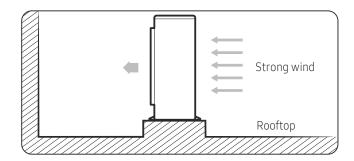
- Install the unit where the pipes and cables can be easily connected to the outdoor unit.
- Install the unit where there are no obstacles against the wind around the air intake and air outlet.
- Install the unit on a flat and stable surface that can hold the unit's weight. Otherwise, the unit may generate noise and vibrations.
- Do not install the unit near highly frequented doors and passages.
- Do not install the unit in a location exposed to direct sunlight.



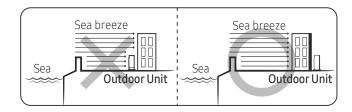
Outdoor unit

- Install the unit where it will not experience oil leakages, salt collection, gas exposure, or sulfide gas risk, and keep it and safe from other dangers.
- Install the unit where does not disturb your neighbors as they may be affected by the noise or airflow coming from the unit.
- Install the unit where no rainwater can collect on or near it.
- Install the unit in a well-ventilated location away from direct sunlight or strong winds.
- Install the unit where the pipes and cables can be easily connected to the indoor unit.
- Maintain sufficient space for repairs and service.
- Make sure that condensed water dripping from the drain hose is directed away safely.
- If there is any unavoidable reason to install the unit at such a place, take the following measures:
 - When installing the unit at a roadside concentrated with buildings, install it parallel to the road.
 - Install the unit so that the air outlet faces the wall such as rooftop that may be subjected to strong wind.

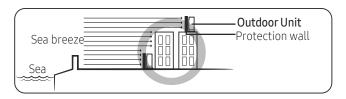
AC***BNPDKH/EU + AC***BXPD*H/EU



- When installing the outdoor unit near the seashore, make sure that it is not directly exposed to sea breeze. If you cannot find an adequate place, a protection wall should be constructed.
 - Install the outdoor unit at a place (such as near a building) where it can be protected from sea breeze. Failure to do so may cause damage to the outdoor unit.



• If you cannot avoid a place near the seashore, construct a protection wall around the outdoor unit.



- Construct a protection wall made of solid material such as concrete to block sea breeze. Make sure that its height and width are 1.5 times greater than the size of the outdoor unit. In addition, secure a space larger than 600 mm between the protection wall and the outdoor unit for exhausted air to ventilate.
- Install the unit at a place where water can drain smoothly.
- If you have any difficulty in finding an installation location, contact your manufacturer.
- Be sure to clean sea water and dust on the heat exchanger of the outdoor unit and apply a corrosion inhibitor on it (at least once in a year).

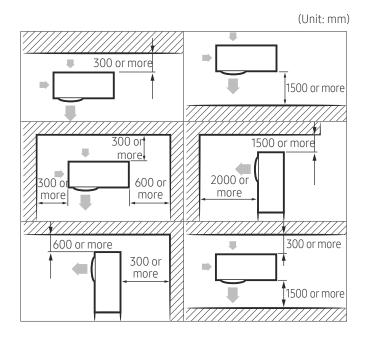
AC***BNPDKH/EU+ AC***BXPD*H/EU

Outdoor unit installation request

- The suggested space is based on the outdoor temperature of 35°C while in operation. If the outdoor temperature is higher than 35°C, secure more space.
- Be sure to secure sufficient clearance for a person and air flow passage.
- See the clearances and dimensions in Minimum clearances for the outdoor unit (page 33) when installing the outdoor unit
- If you install multiple outdoor units in the same place, be sure to secure enough space for ventilation and free airflow.
- If the space for ventilation is insufficient, the air conditioner may not perform well as designed.
- If you install multiple outdoor units in the same place, be sure to secure enough space for ventilation and free airflow.
- If the space for ventilation is insufficient, the air conditioner may not perform well as designed.
- 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.
- If the product installed within 500m of seashore, special anti-corrosion treatment is required.
 - * Please contact your local SAMSUNG representative for further details.

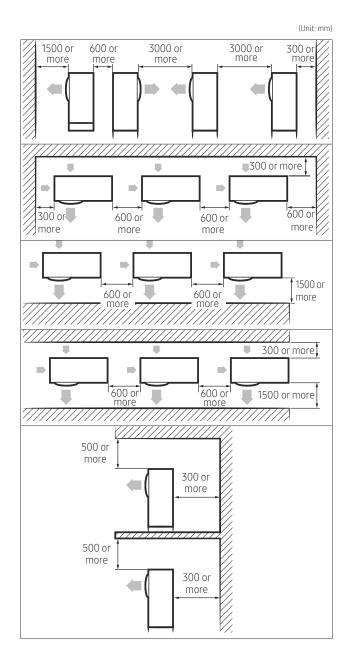
Minimum clearances for the outdoor unit

When installing 1 outdoor unit



AC***BNPDKH/EU + AC***BXPD*H/EU

When installing more than 1 outdoor unit



AC***BNPDKH/EU + AC***BXPD*H/EU

! CAUTION

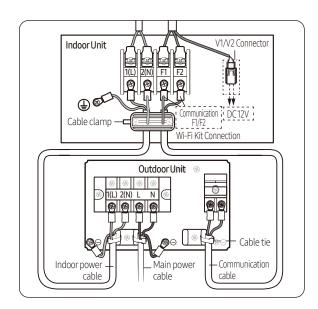
- Always remember to connect the refrigerant pipes before performing the electric connections.

 When disconnecting the system, always disconnect the electric cables before disconnecting the refrigerant pipes.
- Always remember to connect the air conditioner to the grounding system before performing the electric connections. Use a crimp ring terminal at the end of each wire.

Electrical work must be done by the certified personnel.

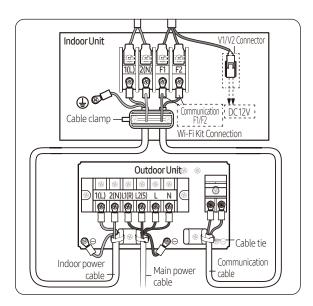
- Wiring work should be performed in compliance with related regulations following technical specifications and installation guide.
- Be sure to install an exclusive power supply. If you use a power strip for multiple electrical connections, there is a risk of electric shock or fire.
- Be sure to install a circuit breaker with a rated current sensitivity of over 30 mA.
- Fasten the screws on the terminal block to be within the rated range and so that they do not loosen.
- Be sure to connect the ground wire. Install the power wire and make sure it is shorter than 50 m. If the length of the power wire exceeds 50 m, the product may not work properly or the wire may be damaged.
- 1 Remove the screw on the electrical component box and remove the cover plate.
- 2 Route the cables through the sides or back of the indoor unit and then connect them to the terminals noting the figure below.
- **3** Route the other end of the cable to the outdoor unit through the ceiling & the hole on the wall.
- 4 Reassemble the electrical component box cover, carefully tightening the screw.

AC100BNPDKH (1-phase)



AC***BNPDKH/EU + AC***BXPD*H/EU

AC140BNPDKH (3-phase)



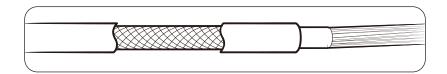


• DC12V Connection for Wi-Fi Kit: Cut the wires of the V1/V2 connector and then connect the wires to the Wi-Fi Kit.

Outdoor-to-indoor power and communication cables specifications

Indoor power supply					
Power supply Max/Min (V) Indoor power cable					
1Ф, 220-240V, 50/60 Hz	±10%	0.75 mm ² ↑, 3 wires			
Communication cable					
0.75 mm², 2 wires					

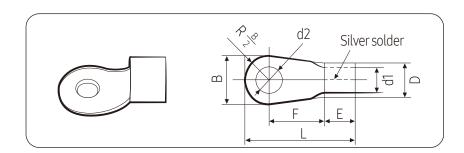
- For outdoor use, the power supply cords of the appliances must not be lighter than the polychloroprene sheathed flexible cord. (Code designation IEC: 60245 IEC 57 / CENELEC: H05RN-F or IEC: 60245 IEC66 / CENELEC H07RN-F)
- When installing the indoor unit in a computer room or net work room, use the double shielded (tape aluminium / polyester braid + copper) cable of FROHH2R type.



AC***BNPDKH/EU+ AC***BXPD*H/EU

! CAUTION

- Use rated cables or products only, with heat resistance over 105°C, as well as properly rated switches or fuses in the cabinet panel.
- Make sure that the cables connected do not produce sparks around the auxiliary power switch or that they are not installed in a place subject to high temperature. High ambient temperature decreases allowable current.
- Install the auxiliary power switch in a dry place, install the panel board or electrical component box, and then install the circuit breaker in the panel board.
- When connecting the main power cable, press the cable to the terminal for a secure connection.
- Select a ring terminal for use.



Thickness of the wire (mm²)	B (mm)	d2 (mm)	
2.5	Less than 9.5	More than 4.5	
4.5	Less than 9.5	More than 4.5	
6.0	Less than 9.5	More than 4.5	
10.0	Less than 15	More than 8.4	

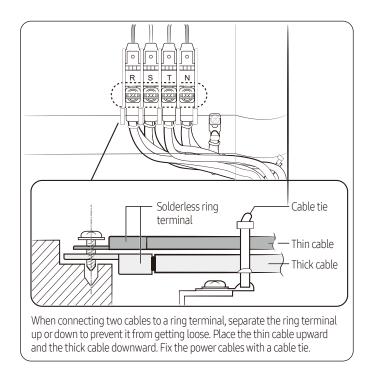
Connecting the cable to the power terminal

Connect the cables to the terminal board with the ring terminals.

- Be sure to use the certified and rated cables and firmly connect them without applying any external force to the ring terminal.
- Connect with a driver and wrench that can apply the rated torque to the screws.
- Connect the terminal screws in compliance with the rated tightening torques.
- If the terminal is loose, a fire may occur, caused by arcing electricity. If the terminal is connected too firmly, the terminal may be damaged.

Screw	Tightening torque for terminal (kgf·cm)		
M3	5 to 7.5		
M3.5	8 to 12		
M4	12 to 18		
M5	20 to 30		
M6	25 to 37.5		

AC***BNPDKH/EU + AC***BXPD*H/EU

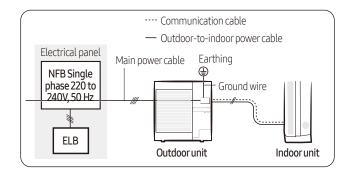


Connecting the cables

AC100BXPDKH

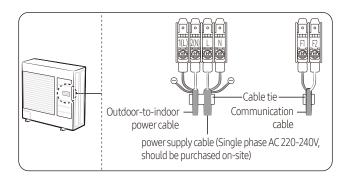
- This product uses a single phase power, with 220 to 240V supply.
- When connecting the outdoor-to-indoor power cables, be sure to match the numbers (or letters) between the outdoor and indoor units. Connect the communication cable to the connector included in the electrical component box for each unit. When the outdoorto-indoor power cables are connected incorrectly, a malfunction of the product may occur.
- When connecting the communication and outdoor-to-indoor power cables, make sure these cables do not touch the service valve on the refrigerant pipe on the gas side or the pipes without proper insulation. Fix the outdoor-to-indoor power cables to the insulated pipes.
- Be sure to comply with the wiring standards, as there may be a risk of fire.
- Make sure to install the circuit breaker firmly inside the electrical component box.

Entire system diagram

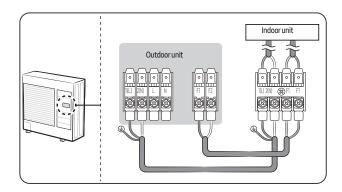


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Power wiring diagram



Indoor and outdoor unit connection diagram



AC140BXPDNH

- This product uses a 3-phase 4-wire electrical system, with 380 to 415V supply.
- When connecting the outdoor-to-indoor power cables, be sure to match the numbers (or letters) between the outdoor and indoor units. Connect the communication cable to the connector included in the electrical component box for each unit. When the outdoor
 - to-indoor power cables are connected incorrectly, a malfunction of $\,$ the product may occur.
- When connecting the communication and outdoor-to-indoor power cables, make sure these cables do not touch the service valve on the refrigerant pipe on the gas side or the pipes, without proper insulation. Fix the outdoor-to-indoor power cables to the insulated pipes.
- Make sure to comply with the wiring standards, as there may be a risk of fire.
- Make sure to install the circuit breaker firmly inside the electrical component box.
- Install a 3-phase 4-wire circuit breaker.
- When using the power (R, S, T, N) with the NFB (overcurrent breaker), be sure to connect the main power cable (R, S, T, N) to the R, S, T and N terminal on the outdoor unit

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Main 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.

Mo	odel	Outdoor unit		Input Current (A)			Powersupply				
Outdoorunit	Indoorunit	Ra	ted	Voltag	e Range	Outdoor([Down_Amp)	Indoor	Total	MCA	MFA
Outdoor drift	indoor unit	Hz	Volts	Min.	Max.	Cooling	Heating	iiiuooi	iotat	MCA	MILY
AC100BXPDKH	AC100BNPDKH	50/60	220 ~ 240	198	264	24.0	24.0	2.0	26.0	26.0	30.0
AC140BXPDNH	AC140BNPDKH	50/60	380 ~ 415	342	456.5	14.1	14.1	2.0	16.1	16.1	16.1



- 1 Voltage range
- Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits
- 2 Maximum allowable voltage variation between phases is 2%.
- **3** Wire size & type must comply with the applicable local and national code.
 - Wire size: Based on the value of MCA.
 - Wire type: 60245 IEC57(IEC) or H05RN-F(CENELEC) grade or more.
- 4 MFA is used to select the circuit breaker and the ground fault circuit interrupter (earth leakage circuit breaker).
- **5** MCA represents maximum input current.
 - MFA represents capacity which may accept MCA
 - Abbreviations

MCA: Min. Circuit Amps. (A) MFA: Max. Fuse Amps. (A)

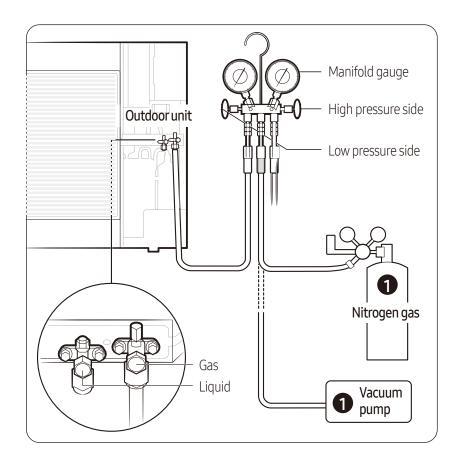
6 This equipment complies with IEC 61000-3-12 provided that the short-circuit power Ssc is greater than or equal to Ssc (*2) at the interface point between the user's supply and the public system. It is the responsibility of the installer or user of the equipment to ensure, by consultation with the distribution network operator if necessary, that the equipment is connected only to a supply with a short-circuit power Ssc greater than or equal to Ssc(*2).

MODEL	Ssc
AC100BXPDKH	0.42
AC140BXPDNH	3.20

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Performing gas leakage test

Use nitrogen gas at a pressure range between 0.2 and 4.1 MPa when testing the gas leakage. If you apply pressure at over 4.1 MPa, the refrigerant pipes may be damaged.



1 Connect the charging hose of low pressure side of manifold gauge to the packed valve having a service port as shown at the figure.



- The designs and shape are subject to change according to the model.
- **2** Open the valve of the low pressure side (A) of the manifold gauge anticlockwise.
- **3** Connect the manifold gauge to the nitrogen gas.
- 4 Apply nitrogen gas.
- **5** Check the change of pressure with a pressure regulator. **6** Check the gas leakage at the connection part or brazed part by using soap water.
- 7 Open the manifold gauge to discharge nitrogen.

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Evacuating the air

- 1 Connect the manifold gauge to a vacuum pump.
- 2 Purge the air from the system using the vacuum pump for about 30 minutes.
- Make sure that pressure gauge shows -0.1006 Mpa after about 30 minutes.
- Use a vacuum pump that is at least 140 l/min in capacity.
- Make sure that vacuuming timing is longer when the piping gets longer.
- Pressure will not drop even after 5 minutes of vacuuming when there is moisture within the pipe. In this case, apply nitrogen gas again, and then purge the air again.

Charging the refrigerant

Important information regulation regarding the refrigerant used

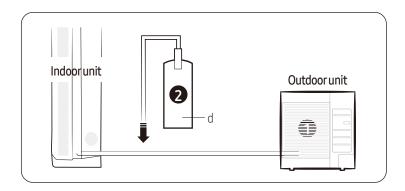
This product contains fluorinated greenhouse gases. Do not vent gases into the atmosphere.



Inform user if system contains 5 tCO₂e or more of fluorinated greenhouse gases. In this case, it has to be checked for leakage at least once every 12 months, according to regulation n° 517/2014. This activity has to be covered by qualified personnel only. In case situation above (5 tCO₂e or more of R-410A), installer (or recognised person which has responsability for final check) has to provide a maintenance book, with all the information recorded according to REGULATION (EU) N° 517/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 April 2014 on certain fluorinated greenhouse gases.

Please fill in the following with indelible ink on the refrigerant charge label supplied with the product and on this manual.

- 1: The factory refrigerant charge of the product.
- 2: The additional refrigerant amount charged in the field.
- 1 + 2: The total refrigerant charge.



Unit	kg	tCO₂e
1 , a		
2 , b		
1 + 2 , C		

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Refrigerant type	GWP value	
R-410A	2088	

- GWP= Global Warming Potential
- Calculating tCO₂e : kg x GWP / 1000

(Unit: g)

	a	b	С
AC100BXPDKH	3000	1000	4000
AC140BXPDNH	3500	2250	5750

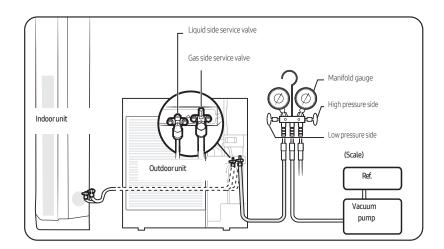
1 Measure the quantity of refrigerant depending on the length of the liquid side pipe.



NOTE

• When the pipe length exceeds the standard pipe length of 30 m, charge refrigerant according to the increased length. Do not charge refrigerant by assuming the quantity through the pressure gauge. When the pipe length is shorter than the standard, you do not need to charge refrigerant.

	Refrigerant amount		
Model name	Standard (less 30m)	Additional (over30m)	
AC100BXPDKH	3000	50	
AC140BXPDNH	3500	50	



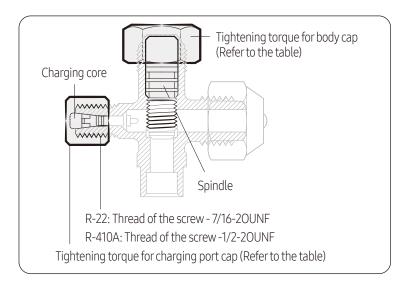
Open the manifold gauge valve connected to the liquid service valve and add refrigerant to reach the fixed quantity noting the scale.

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NOTE

- If you cannot add refrigerant when the operation of the outdoor unit is stopped, open the gas and liquid service valves and add remaining refrigerant by pressing the cooling trial operation button.
- After charging, completely open the spindles of the both the gas and liquid side service valves by rotating them anticlockwise. (Do not press them further if the spindle hits the stopper.)
- Fasten the caps of the service valves for the gas and liquid pipes including the cap nut of the charging port.
 - There may be slight refrigerant leakage when you open the spindle with a wrench. This is not a failure of the product.
 - Use a wrench that can apply the appropriate force.



Outer diameter (mm)	Tighte	ning torque		
Outer diameter (mm)	Body cap (N•m)	Charging port cap (N•m)		
ø 6.35	20 to 25			
ø 9.52	20 to 25			
ø 12.70	25 to 30	10 to 12		
ø 15.88	30 to 35			
Over ø 19.05	35 to 40			

(1 N•m = 10 kgf•cm)



• Be extra cautious for the gas leakage from the 3-way valve's stem nuts (gas side), and from the service port cap.

