

Model: ACXXMNMSEH/EU(Indoor Unit), ACXXMXASEH/EU(Outdoor Unit)

History

Version	Modification	Date	Remark
Ver.1.0	Release Single TDB for Europe	17.01.03	
Ver.1.1	Modify the SCOP data from 3.85 W/W to 3.8 W/W	17.08.04	

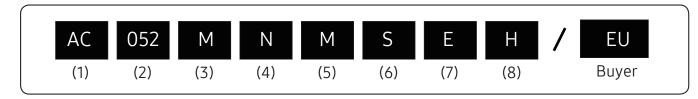
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1. Nomenclature

Indoor Unit

Model Name



(1) Classification

AC

(2) Capacity	
	X 1/10 kW (3 digits)

CAC

(5) Product Notation

1	1 Way Cassette
N	4 Way Cassette (600x600)
4	4 Way Cassette, 360 Cassette
L	LSP Duct
М	MSP Duct
С	Ceiling
J	Console
Α	A3050 (Wall Mounted)

(3) Version

Н	2014
J	2015
K	2016
М	2017

(6) Feature

F	Flagship
S	Standard
D	Deluxe
P	Premium

(4) Product Type

N	Indoor Unit
Χ	Outdoor Unit

(7) Rating Voltage

Е	1Ф, 220~240V, 50Hz

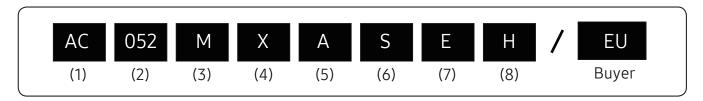
(8) Mode

Н	Heat Pump

1. Nomenclature

Outdoor Unit

Model Name



(1) Classification

AC	CAC

(5) Product Notation

Α	Inv+Side+General Temp
, ,	iiiv side delielat lellip

(2) Capacity

X 1/10 kW (3 digits)	

(6) F	eatu	re
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F	Flagship
S	Standard
D	Deluxe
P	Premium

(3) Version

Н	2014
J	2015
K	2016
М	2017

(7) Rating Voltage

E	1Ф, 220~240V, 50Hz	

(4) Product Type

N	Indoor Unit
Χ	Outdoor Unit

(8) Mode

Н	Heat Pump

2. Line-up

Indoor Units

Model	Capacity (kW)								
	5.2	7.1	10.0	12.0					
MSP Duct									

Outdoor Units

Time	Capacity (kW)								
Type	5.2	7.1	10.0	12.0					
1Phase	SAMSUNG	CAMIUNG SAMIUNG							

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3. Specification

	Madal Nama	Indoor Unit			AC052MNMSEH/EU	AC071MNMSEH/EU	AC100MNMSEH/EU	AC120MNMSEH/EU
	Model Name	Outdoor Unit			AC052MXASEH/EU	AC071MXASEH/EU	AC100MXASEH/EU	AC120MXASEH/EU
	Mode			-	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP
	Dorformanco		Cooling	kW	0.95 / 5.00 / 6.00	1.75 / 6.80 / 8.00	2.00 / 9.50 / 12.00	2.90 / 12.00 / 14.00
			(Min/Std/Max)	Btu/h	3,230 / 17,000 /	5,950 / 23,000 /	6,800 / 32,000 /	9,860 / 40,000 /
	Performance	Capacity		LAAZ	20,400	27,200	40,800	47,600
			Heating	kW	0.66 / 5.50 / 6.60	1.20 / 7.50 / 9.00	2.00 / 10.80 / 12.00	2.75 / 13.00 / 17.00
			(Min/Std/Max)	Btu/h	2,244 / 18,700 / 22,400	4,080 / 25,500 / 30,600	6,800 / 36,700 / 40,800	9,350 / 44,000 / 57,800
		Power Input	Cooling (Min/Std/Max)	kW	0.28 / 1.86 / 2.62	0.34 / 2.30 / 2.65	0.54 / 3.30 / 4.95	0.72 / 4.40 / 5.55
			Heating (Min/Std/Max)	kW	0.21 / 1.64 / 2.65	0.28 / 2.35 / 3.85	0.41 / 3.20 / 4.80	0.60 / 3.75 / 5.95
	Power	Current Input	Cooling (Min/Std/Max) Heating (Min/Std/Max)	A A	1.6 / 8.5 / 11.6 1.4 / 7.6 / 11.0	2.0 / 10.5 / 11.7 1.8 / 10.4 / 17.0	3.2 / 14.7 / 21.8 2.4 / 14.2 / 21.0	4.0 / 19.5 / 24.5 3.2 / 16.6 / 27.0
			MCA MCA	A	16.5	23.5	25.5	27.5
		Current	MFA	A	18.2	25	28	30
		EER	Cooling	W/W	2.69	2.96	2.97	2.73
		COP	Heating	W/W	3.35	3.19	3.38	3.47
	Efficiency	SEER (Cooling Energ		W/W	5.50	5.50	5.50	5.10
		SCOP (Heating Ener	gy Grade)	W/W	3.8	3.8	3.8	3.8
		Pdesignh		kW	2.2	3.5	5.0	7.4
System				Туре	Flare connection	Flare connection	Flare connection	Flare connection
Jysteili		Liquid Pipe		Φ, mm	6.35	6.35	9.52	9.52
				Φ, inch	1/4	1/4	3/8	3/8
		Cas Dina		Туре Ф. mm	Flare connection 12.7	Flare connection 15.88	Flare connection 15.88	Flare connection 15.88
	Piping	Gas Pipe		Φ, mm Φ, inch	1/2	5/8	5/8	5/8
	Connections			Ψ, ΠΙΟΠ	Both liquid and gas		Both liquid and gas	Both liquid and gas
	Connections	Heat Insulation		-	pipes	pipes	pipes	pipes
			Standard	m	5	5	5	5
		Piping length	Max.	m	30	50	50	50
		(ODU-IDU)	Elevation	m	20	30	30	30
			Chargeless	m	5	5	30	30
		Power Source Wire		mm ²	-	-	-	-
	Wiring connections	Communication wire	9	mm ²	Min. 0.75	Min. 0.75	Min. 0.75	Min. 0.75
		Remark		-	F1, F2	F1, F2	F1, F2	F1, F2
		Power supply intake		-	Both indoor and outdoor unit	Both indoor and outdoor unit	Both indoor and outdoor unit	Both indoor and outdoor unit
		Туре		-	R410A	R410A	R410A	R410A
	Refrigerant			kg	1.2	1.5	2.5	3.0
	, and the second	Factory Charging		tCO₂e	2.5	3.13	5.22	6.3
	Power Supply			Ø, #, V, Hz	1, 2, 220-240, 50	1, 2, 220-240, 50	1, 2, 220-240, 50	1, 2, 220-240, 50
	Heat	Туре		-	Fin & Tube	Fin & Tube	Fin & Tube	Fin & Tube
	Exchanger	Material	Fin	-	Al	Al	Al	Al
			Tube	-	Cu	Cu	Cu	Cu
		Type		- E ^	Sirocco Fan	Sirocco Fan	Sirocco Fan	Sirocco Fan 2
		Quantity		EA CMM	2 15 / 14.2 / 13.5	2 18 / 15.8 / 13.5	29 / 24.5 / 20	34 / 29 / 24.5
	Fan	Air Flow Rate	High/Mid/Low	l/s	250 / 237 / 225	300 / 263 / 225	483.33 / 408.33 /	566.67 / 483.33 /
		External Static		mmAq	3/3/15	3/3/15	333.33 4/4/15	408.33 5.2/5.2/15
		Pressure	Min/Std/Max	Pa	29.4/29.4/147.1	29.4/29.4/147.1	39.2/39.2/147.1	51.0/29/147.1
	Fan Motor	Output		Wxn	150 x 1	150 x 1	150 x 1	200 x 1
Indoor	Drain	Drain Pipe		Φ, mm	VP-25(OD32, ID25)	VP-25(OD32, ID25)	VP-25(OD32, ID25)	VP-25(OD32, ID25)
Unit		Sound Pressure Level	High/Mid/Low/(Silent)	dB(A)	31/28/25	33/30/27	35/32/29	37/34/31
	Sound	Sound Power Level		dB(A)	55	57	62	64
		Net Weight		kg kg	30.0	30.0	33.0	47.8
	External		Shipping Weight		34.5	34.5	37.2	54.5
	Dimension	Net Dimensions (Wx		mm	1150 x 260 x 480	1150 x 260 x 480	1150 x 320 x 480	1200 x 360 x 650
	Casing	Shipping Dimension	S (WXHXD)	mm -	1419 x 340 x 594	1419 x 340 x 594	1419 x 400 x 594	1456 x 440 x 778
	Casing Control System	Material Infrared remote con	trol	-	EGI Steel Plate MR-EH00	EGI Steel Plate MR-EH00	EGI Steel Plate MR-EH00	EGI Steel Plate MR-EH00
	Control System				MWR-WE10N	MWR-WE10N	MWR-WE10N	MWR-WE10N
						1 *******************************		
	Control System	Wired remote contro	ol	-	MWR-WE11N	MWR-WE11N	MWR-WE11N	MWR-WE11N
	Control System Drain Pump	Wired remote control Drain Pump Max. lifting Height /		- mm / Liter/h	MWR-WE11N - -	MWR-WE11N - -	MWR-WE11N -	MWR-WE11N -

3. Specification

	Model Name	Indoor Unit			AC052MNMSEH/EU	AC071MNMSEH/EU	AC100MNMSEH/EU	AC120MNMSEH/EU
	модет маше	Outdoor Unit			AC052MXASEH/EU	AC071MXASEH/EU	AC100MXASEH/EU	AC120MXASEH/EU
			External Model	-	-	-	-	-
		Dunin Dunin	Internal Model	-	MDP-M075SGU1D	MDP-M075SGU1D	MDP-M075SGU1D	MDP-M075SGU2D
Indoor Unit	Additional Accessories	Drain Pump	Max. lifting Height / Displacement	mm / Liter/h	750/24	750/24	750/24	750/24
Offic	Accessories	Air Filter		-	Removable / Washable	Removable / Washable	Removable / Washable	Removable / Washable
		Virus Doctor		-	-	-	-	-
	Power Supply			Ø, #, V, Hz	1, 2, 220-240, 50	1, 2, 220-240, 50	1, 2, 220-240, 50	1, 2, 220-240, 50
	Туре			-	Fin & Tube	FMC	Fin & Tube	Fin & Tube
	Heat	Material	Fin	-	Al	Al	Al	Al
	Exchanger		Tube	-	Cu	Al	Cu	Cu
		Fin Treatment		-	Anti-Corrosion	Hybrid Coating	Anti-Corrosion	Anti-Corrosion
	Compressor	Model Name			UG9TK3150FE4	UG4T200FUAE4	UG8T300LNBJU	UG5TK1450FJXSG
		Output		kW	1.423	1.788	2.818	4.189
		Oil	Туре	-	POE	POE	PVE	PVE
			Initial charge	CC	500	650	1200	1700
		Туре		-	Propeller	Propeller	Propeller	Propeller
	Fan	Discharge direction		-	Front	Front	Front	Front
		Quantity		EA	1	1	1	1
Outdoor		Air Flow Rate		CMM	31	51	58	78
Unit		All I tow Rate		l/s	516.67	850	966.67	1,300
	Fan Motor	Туре		-	BLDC Motor	BLDC Motor	BLDC Motor	BLDC Motor
	raii Motoi	Output	Output		39 x 1	95 x 1 95 x 1		125 x 1
		Sound Pressure	Cooling	dB(A)	48	49	52	54
	Sound	Level	Heating	dB(A)	48	51	54	56
		Sound Power Level		dB(A)	64	65	69	70
		Net Weight		kg	37.5	53.0	69.2	77.0
	External	Shipping Weight		kg	40.5	57.2	74.0	82.0
	Dimension	Net Dimensions (Wx	HxD)	mm	790 x 548 x 285	880 x 798 x 310	880 x 967 x 320	940 x 998 x 330
		Shipping Dimension		mm	926 x 640 x 384	1023 x 911 x 413	1047 x 1045 x 415	995 x 1096 x 426
	Casing	Material	Body	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate
	Operating	Cooling	•	°C	-15 ~ 50	-15 ~ 50	-15 ~ 50	-15 ~ 50
	Temp. Range	Heating		°€	-20 ~ 24	-20 ~ 24	-20 ~ 24	-20 ~ 24



- Specification may be subject to change without prior notice. Specification comply with EN14511.
 - 1) Capacities are based on (Equivalent refrigerant piping 5m, Level differences 0m);
 - Cooling: Indoor temperature 27°C DB, 19°C WB / Outdoor temperature 35°C DB, 24°C WB
 - Heating: Indoor temperature 20°C DB, 15°C WB / Outdoor temperature 7°C DB, 6°C WB
 - 2) Sound power level is an absolute value that a sound source generates.
 - Sound power level is based on cooling operation.
 - Sound pressure level is a relative value, depending on the distance and acoustic environment.
 - Sound values are obtained in an anechoic room.
 - Sound values of multi combination are theoretical values based on sound results of individual installed units.
 - 3) These products contain R410A(GWP=2,088) which is fluorinated greenhouse gas.
- In case you want to know more information regarding capacity and correction, please refer to capacity table TDB on pvi.samsung.com site.

4. Summary Table

Indoor Units

Performance Characteristics

	Net	Capacity				۸:سال	Sound Pressure Level	Cound Downey and
Model Code	Weight (kg)		Cooling (kW)	Heating (kW)	Fan Speed	Airflow (CMM)	(dBA)	Sound Power Level (dBA)
		Max.	6.0	6.6	High	15.0	31	55
AC052MNMSEH	30.0	Std.	5.0	5.5	Mid.	14.2	28	-
		Min.	0.95	0.66	Low	13.5	25	-
	30.0	Max.	8.0	9.0	High	18.0	33	57
AC071MNMSEH		Std.	6.8	7.5	Mid.	15.8	30	-
		Min.	1.75	1.2	Low	13.5	27	-
		Max.	12.0	12.0	High	29.0	35	62
AC100MNMSEH	33.0	Std.	9.5	10.8	Mid.	24.5	32	-
		Min.	2.0	2.0	Low	20.0	29	-
		Max.	14.0	17.0	High	34.0	37	64
AC120MNMSEH	47.8	Std.	12.0	13.0	Mid.	29.0	34	-
		Min.	2.9	2.75	Low	24.5	31	-



• Sound data is based on cooling operation.

Electric Characteristics

Мо	Outdoor Unit				Input Currer	Power Supply					
la de calla M	0 1 1 11 11	Rated	Voltag	e range		Outdo	or Unit	Indoor Unit	Total	MCA(A)	MFA(A)
Indoor Unit	Outdoor Unit	Hz	Volts	Min.	Max.	Cooling	Heating				
AC052MNMSEH	AC052MXASEH	50	220 to 240	198	264	13	13	3.5	16.5	16.5	18.2
AC071MNMSEH	AC071MXASEH	50	220 to 240	198	264	20	20	3.5	23.5	23.5	25
AC100MNMSEH	AC100MXASEH	50	220 to 240	198	264	22	22	3.5	25.5	25.5	28
AC120MNMSEH	AC120MXASEH	50	220 to 240	198	264	24	24	3.5	27.5	27.5	30



MCA: Minimum circuit amperesMFA: Maximum fuse amperes

• Select wire size based on the value of MCA

4. Summary Table

Outdoor Units

Performance Characteristics

Capacity	Madal Cada	Net Size	Net Weight	Airflow	Sound Press	ure Level(dBA)	Sound Power Level
kW	Model Code	(WxHxD, mm)	(kg)	(CMM)	Cooling	Heating	(dBA)
5.2	AC052MXASEH	790 x 548 x 285	37.5	31	48	48	64
7.1	AC071MXASEH	880 x 798 x 310	53.0	51	49	51	65
10	AC100MXASEH	880 x 967 x 320	69.2	58	52	54	69
12	AC120MXASEH	940 x 998 x 330	77.0	78	54	56	70



• Sound power level is based on cooling operation.

5. Capacity Table

(1) AC052MNMSEH/EU+AC052MXASEH/EU

Cooling

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

Outdoor									Indoo	r Temp	erature	(°C, DB	/WB)								
Outdoor Temperature		20 / 14			22/16			25 / 18			27 / 19			28/20			30 / 22			32 / 24	
(°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	4.9	3.9	1.33	5.1	4.0	1.36	5.3	4.1	1.39	5.5	4.2	1.41	5.6	4.2	1.43	5.9	4.2	1.44	6.2	4.1	1.47
21	4.6	3.7	1.40	4.9	3.8	1.43	5.1	3.9	1.46	5.3	4.0	1.49	5.4	4.0	1.50	5.6	4.0	1.52	5.9	3.9	1.55
35	4.4	3.5	1.75	4.7	3.6	1.79	4.9	3.7	1.82	5.0	3.9	1.86	5.1	3.8	1.88	5.4	3.8	1.90	5.6	3.7	1.94
46	3.8	3.4	1.58	4.0	3.5	1.61	4.1	3.6	1.64	4.3	3.7	1.67	4.3	3.6	1.69	4.6	3.6	1.71	4.8	3.5	1.74
50	2.9	2.7	1.40	3.0	2.8	1.43	3.2	2.8	1.46	3.3	2.9	1.49	3.3	2.9	1.50	3.5	2.9	1.52	3.7	2.8	1.55



• Capacities are based on following conditions; Refrigerant pipe length: 5m / Level difference: 0m.

Heating

TC: Total Capacity, PI: Power Input

Outdoor												
nperature	1	6	1	8	2	0	2	:1	2	2	2	4
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
С, ББ)	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-20	3.9	2.17	3.8	2.15	3.8	2.13	3.8	2.11	3.7	2.09	3.7	2.07
-15	4.9	2.51	4.8	2.48	4.8	2.46	4.7	2.44	4.7	2.41	4.6	2.39
-5	5.5	2.34	5.4	2.32	5.4	2.30	5.3	2.27	5.3	2.25	5.2	2.23
0	5.7	2.01	5.7	1.99	5.6	1.97	5.6	1.95	5.5	1.93	5.4	1.91
7	5.6	1.67	5.6	1.66	5.5	1.64	5.4	1.62	5.4	1.61	5.3	1.59
24	7.3	1.92	7.2	1.90	7.2	1.89	7.1	1.87	7.0	1.85	6.9	1.83
	-20 -15 -5 0	-20 3.9 -15 4.9 -5 5.5 0 5.7 7 5.6	-20 3.9 2.17 -15 4.9 2.51 -5 5.5 2.34 0 5.7 2.01 7 5.6 1.67	bc, DB) TC PI TC kW kW kW kW -20 3.9 2.17 3.8 -15 4.9 2.51 4.8 -5 5.5 2.34 5.4 0 5.7 2.01 5.7 7 5.6 1.67 5.6	Poc, DB) TC PI TC PI kW kW kW kW kW -20 3.9 2.17 3.8 2.15 -15 4.9 2.51 4.8 2.48 -5 5.5 2.34 5.4 2.32 0 5.7 2.01 5.7 1.99 7 5.6 1.67 5.6 1.66	Pic, DB) TC PI TC PI TC kW kW kW kW kW kW -20 3.9 2.17 3.8 2.15 3.8 -15 4.9 2.51 4.8 2.48 4.8 -5 5.5 2.34 5.4 2.32 5.4 0 5.7 2.01 5.7 1.99 5.6 7 5.6 1.67 5.6 1.66 5.5	PC, DB) TC PI TC PI TC PI kW kW <th< td=""><td>Pic, DB) TC PI TC TC TC TC <</td><td>NC, DB) TC PI AS 2.11</td><td>No. DB TC PI TC PI</td><td>Pic, DB) TC PI <</td><td>Pic, DB) TC PI <</td></th<>	Pic, DB) TC PI TC TC TC TC <	NC, DB) TC PI AS 2.11	No. DB TC PI TC PI	Pic, DB) TC PI <	Pic, DB) TC PI <

(2) AC071MNMSEH/EU+AC071MXASEH/EU

Cooling

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

Outdoor									Indoo	r Tempe	erature	(°C, DB	/WB)								
Temperature		20 / 14			22 / 16			25 / 18			27 / 19			28 / 20			30 / 22			32 / 24	
(°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	6.6	5.3	1.65	7.0	5.4	1.68	7.3	5.6	1.71	7.5	5.8	1.75	7.6	5.7	1.77	8.0	5.7	1.78	8.4	5.5	1.82
21	6.3	5.0	1.73	6.6	5.2	1.77	6.9	5.3	1.80	7.1	5.5	1.84	7.3	5.4	1.86	7.6	5.4	1.88	8.0	5.3	1.91
35	6.0	4.7	2.16	6.3	4.8	2.21	6.6	4.9	2.25	6.8	5.1	2.30	6.9	5.0	2.32	7.3	5.0	2.35	7.6	4.9	2.39
46	5.1	4.6	1.95	5.4	4.7	1.99	5.6	4.9	2.03	5.8	5.0	2.07	5.9	5.0	2.09	6.2	4.9	2.11	6.5	4.8	2.15
50	3.9	3.4	1.73	4.1	3.5	1.77	4.3	3.6	1.80	4.4	3.7	1.84	4.5	3.7	1.86	4.7	3.6	1.88	5.0	3.6	1.91



• Capacities are based on following conditions; Refrigerant pipe length: 5m / Level difference: 0m.

Heating

Indoor Temperature (°C, DB)

TC: Total Capacity, PI: Power Input

Temperature	1	6	1	8	2	0	2	<u>.</u> 1	2	2	2	24
(°C, DB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
(C, DB)	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-20	5.3	3.12	5.2	3.09	5.2	3.06	5.1	3.02	5.1	2.99	5.0	2.96
-15	6.7	3.60	6.6	3.56	6.5	3.53	6.5	3.49	6.4	3.45	6.3	3.42
-5	7.5	3.36	7.4	3.32	7.4	3.29	7.3	3.26	7.2	3.22	7.1	3.19
0	7.8	2.88	7.7	2.85	7.7	2.82	7.6	2.79	7.5	2.76	7.4	2.74
7	7.7	2.40	7.6	2.37	7.5	2.35	7.4	2.33	7.4	2.30	7.3	2.28
24	9.9	2.76	9.8	2.73	9.8	2.70	9.7	2.68	9.6	2.65	9.5	2.62

5. Capacity Table

(3) AC100MNMSEH/EU+AC100MXASEH/EU

Cooling

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

Outdoor									Indoo	r Tempe	erature	(°C, DB	/WB)								
Outdoor Temperature		20 / 14			22 / 16			25 / 18			27 / 19			28 / 20			30 / 22			32 / 24	
(°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	9.3	7.4	2.36	9.8	7.6	2.41	10.2	7.8	2.46	10.5	8.1	2.51	10.7	8.0	2.53	11.2	7.9	2.56	11.8	7.7	2.61
21	8.8	7.0	2.48	9.3	7.2	2.54	9.7	7.5	2.59	10.0	7.7	2.64	10.2	7.6	2.67	10.7	7.5	2.69	11.2	7.4	2.75
35	8.4	7.0	3.11	8.8	7.2	3.17	9.2	7.5	3.23	9.5	7.7	3.30	9.7	7.6	3.33	10.2	7.5	3.37	10.7	7.4	3.43
46	7.1	6.4	2.80	7.5	6.6	2.85	7.8	6.8	2.91	8.1	7.0	2.97	8.2	6.9	3.00	8.6	6.8	3.03	9.1	6.7	3.09
50	5.5	5.1	2.48	5.8	5.2	2.54	6.0	5.4	2.59	6.2	5.6	2.64	6.3	5.5	2.67	6.6	5.4	2.69	6.9	5.3	2.75



• Capacities are based on following conditions; Refrigerant pipe length: 5m / Level difference: 0m.

Heating

TC: Total Capacity, PI: Power Input

Outdoor					l	naoor rempe	rature (°C, DB	5)				
Temperature	1	6	1	8	2	0	2	21	2	.2	2	<u>!</u> 4
(°C, DB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
(C, DB)	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-20	7.6	4.24	7.5	4.20	7.5	4.16	7.4	4.12	7.3	4.08	7.2	4.04
-15	9.6	4.90	9.5	4.85	9.4	4.80	9.3	4.75	9.2	4.70	9.1	4.66
-5	10.8	4.57	10.7	4.52	10.6	4.48	10.5	4.44	10.4	4.39	10.3	4.35
0	11.2	3.92	11.1	3.88	11.0	3.84	10.9	3.80	10.8	3.76	10.7	3.73
7	11.0	3.26	10.9	3.23	10.8	3.20	10.7	3.17	10.6	3.14	10.5	3.10
24	14.3	3.75	14.2	3.72	14.0	3.68	13.9	3.64	13.8	3.61	13.6	3.57

(4) AC120MNMSEH/EU+AC120MXASEH/EU

Cooling

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

Outdoor									Indoo	r Tempe	erature	(℃, DB	/WB)								
Temperature		20 / 14			22/16			25 / 18			27 / 19			28/20			30 / 22			32 / 24	
(°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	11.7	9.3	3.15	12.3	9.6	3.21	12.8	9.9	3.28	13.2	10.2	3.34	13.5	10.1	3.38	14.2	10.0	3.41	14.9	9.8	3.48
21	11.1	8.9	3.31	11.7	9.1	3.38	12.2	9.4	3.45	12.6	9.7	3.52	12.9	9.6	3.56	13.5	9.5	3.59	14.2	9.3	3.66
35	10.6	8.8	4.14	11.2	9.0	4.23	11.6	9.3	4.31	12.0	9.6	4.40	12.2	9.5	4.44	12.9	9.4	4.49	13.5	9.2	4.58
46	9.0	8.1	3.73	9.5	8.3	3.80	9.9	8.6	3.88	10.2	8.8	3.96	10.4	8.7	4.00	10.9	8.7	4.04	11.5	8.5	4.12
50	6.9	6.4	3.31	7.3	6.6	3.38	7.6	6.8	3.45	7.8	7.0	3.52	8.0	6.9	3.56	8.4	6.9	3.59	8.8	6.7	3.66



• Capacities are based on following conditions; Refrigerant pipe length: 5m / Level difference: 0m.

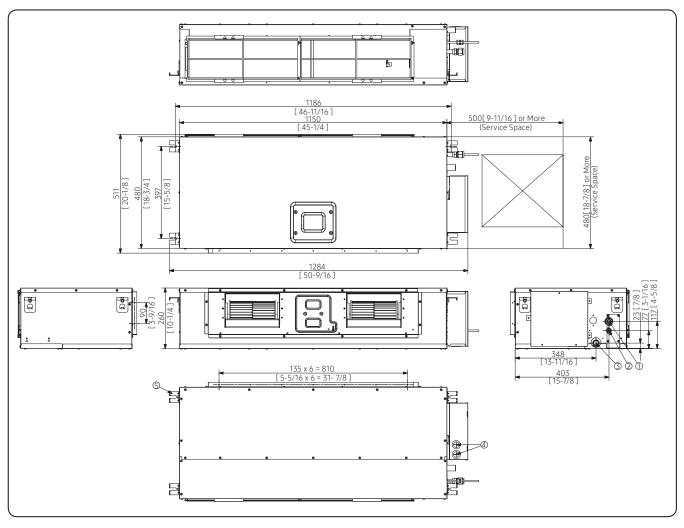
Heating

TC: Total Capacity, PI: Power Input

Outdoor					ı	ndoor Tempe	rature (°C, DB	3)				
Temperature	1	6	1	8	2	0	2	21	2	2	2	4
(°C, DB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
(C, DB)	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-20	8.0	4.82	7.9	4.77	7.8	4.73	7.7	4.68	7.6	4.63	7.6	4.58
-15	10.5	5.51	10.4	5.45	10.3	5.40	10.2	5.35	10.1	5.29	10.0	5.24
-5	11.7	5.66	11.6	5.61	11.4	5.55	11.3	5.49	11.2	5.44	11.1	5.39
0	13.7	4.40	13.5	4.36	13.4	4.31	13.3	4.27	13.1	4.23	13.0	4.18
7	13.3	3.83	13.1	3.79	13.0	3.75	12.9	3.71	12.7	3.68	12.6	3.64
24	14.9	4.36	14.7	4.32	14.6	4.28	14.4	4.23	14.3	4.19	14.1	4.15

Indoor Units

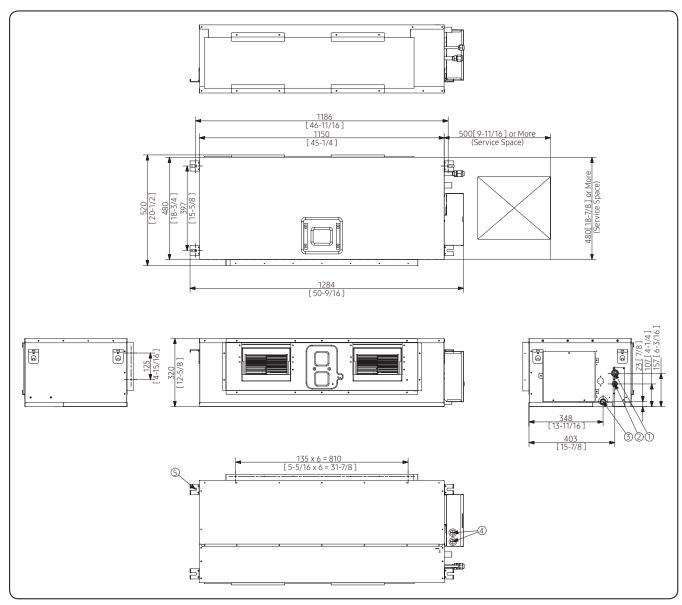
AC052/071MNMSEH



No	Nama	Descri	iption
No.	Name	AC052MNMSEH	AC071MNMSEH
1	Liquid pipe connection	Ф6.35	5(1/4)
2	Gas pipe connection	Φ12.7(1/2)	Ф15.88(5/8)
3	Drain pipe connection	VP-25(OD	32, ID25)
4	Power supply & Communication wiring conduit		
5	Hook	Use M8~M1	0 bolt(4ea)

Indoor Units

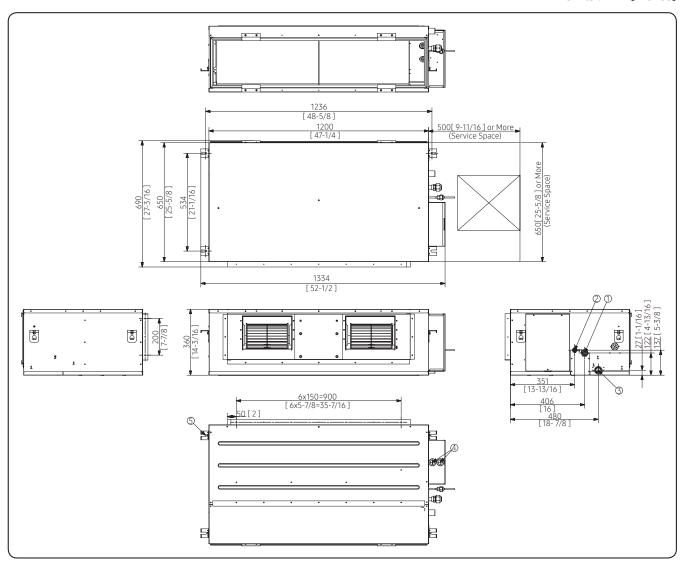
AC100MNMSEH



No.	Name	Description
1	Liquid pipe connection	Ф9.52(3/8)
2	Gas pipe connection	Ф15.88(5/8)
3	Drain pipe connection	VP-25(OD32, ID25)
4	Power supply & Communication wiring conduit	
5	Hook	Use M8~M10 bolt(4ea)

Indoor Units

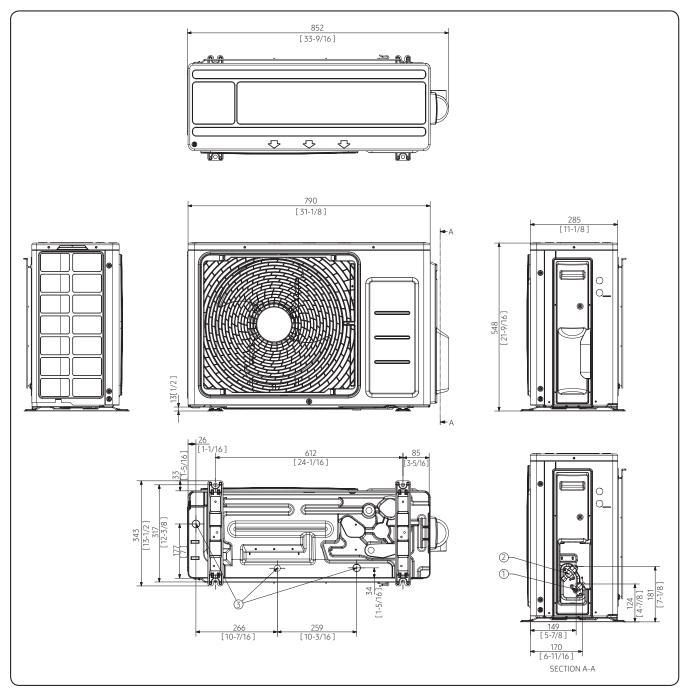
AC120MNMSEH



No.	Name	Description
1	Liquid pipe connection	Ф9.52(3/8)
2	Gas pipe connection	Ф15.88(5/8)
3	Drain pipe connection	VP-25(OD32, ID25)
4	Power supply & Communication wiring conduit	
5	Hook	Use M8~M10 bolt(4ea)

Outdoor Units

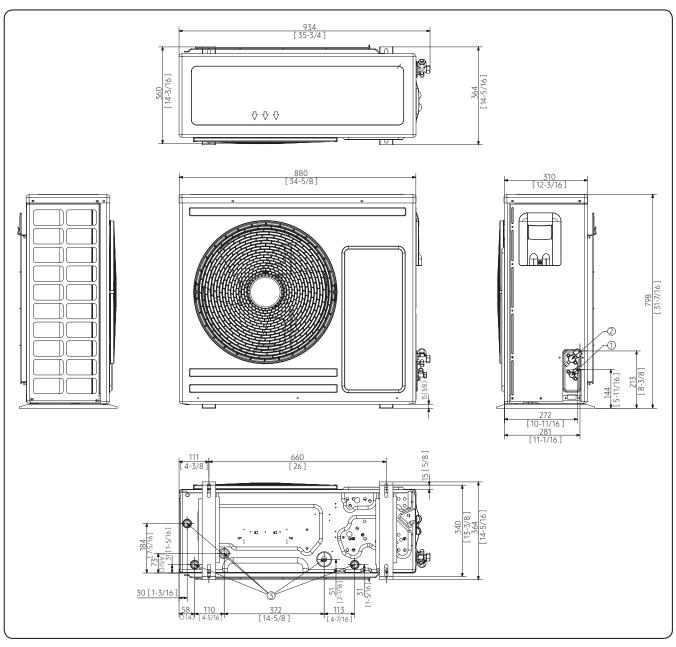
AC052MXASEH



No.	Name	Description
1	Refrigerant liquid pipe	Ф6.35(1/4)
2	Refrigerant gas pipe	Ф12.7(1/2)
3	Drain Hole	

Outdoor Units

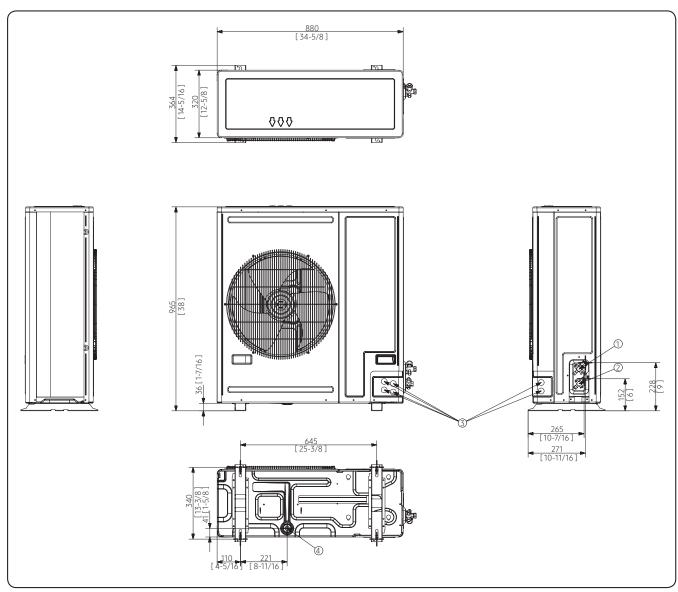
AC071MXASEH



No.	Name	Description
1	Refrigerant liquid pipe	Ф6.35(1/4)
2	Refrigerant gas pipe	Ф15.88(5/8)
3	Drain Hole	

Outdoor Units

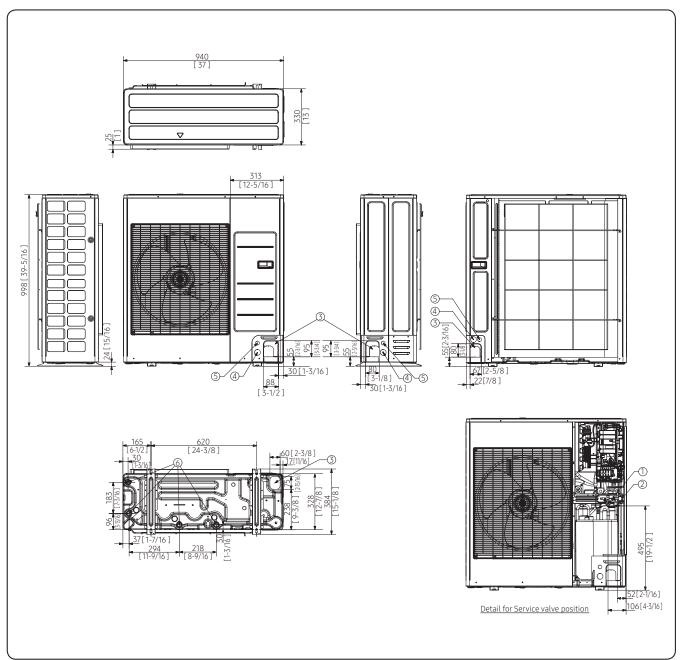
AC100MXASEH



No.	Name	Description	
1	Refrigerant liquid pipe	Ф9.52(3/8)	
2	Refrigerant gas pipe	Ф15.88(5/8)	
3	Power & Communication wiring Conduits	Ф22 х беа	
4	Drain Hole	Connect with the provided drain plug	

Outdoor Units

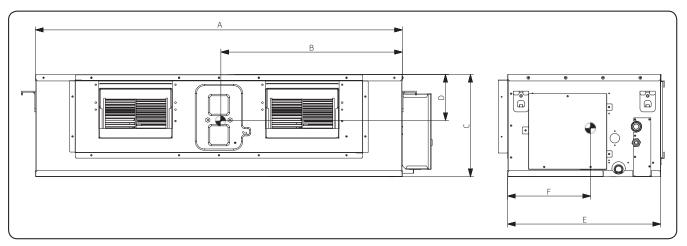
AC120MXASEH



No.	Name	Description		
1	Refrigerant liquid pipe	Φ9.52(3/8)		
2	Refrigerant gas pipe	Ф15.88(5/8)		
3	Piping intake knockout hole	Front / Side / Rear / Bottom		
4	Power wiring conduit	Front / Side / Rear , Φ34 [1-3/8]		
5	Communication wiring conduit	Front / Side / Rear , Φ22 [7/8]		
6	Drain Hole	Connect with the provided drain plug		

7. Center of Gravity

Indoor Units



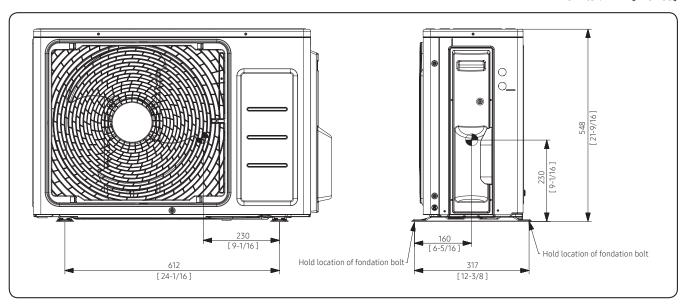
Model	А	В	С	D	E	F
AC052MNMSEH AC071MNMSEH	1150	570	260	135	480	255
AC100MNMSEH	1150	570	320	165	480	255
AC120MNMSEH	1200	590	360	190	650	345

7. Center of Gravity

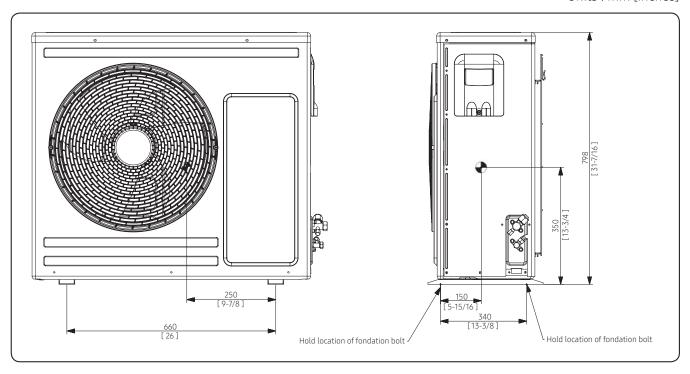
Outdoor Units

AC052MXASEH

Units: mm [inches]



AC071MXASEH

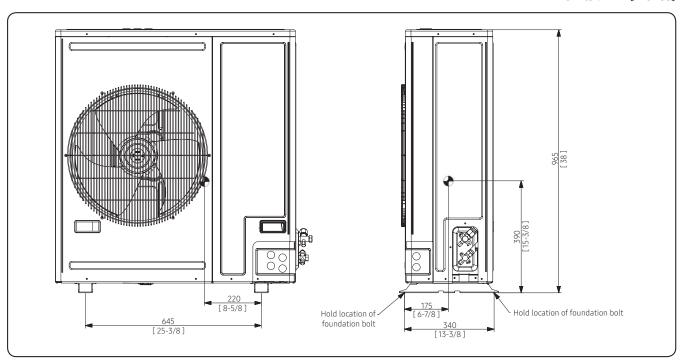


7. Center of Gravity

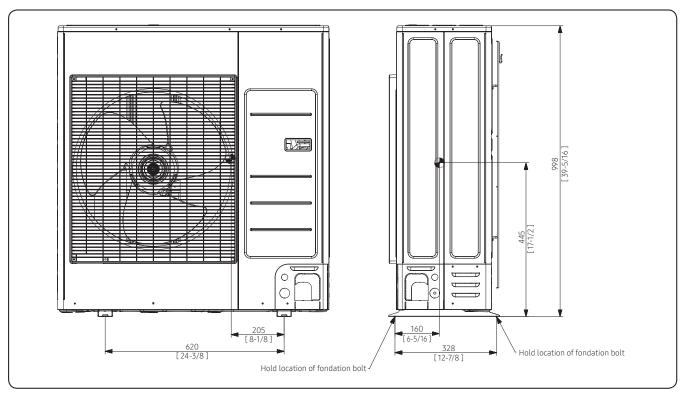
Outdoor Units

AC100MXASEH

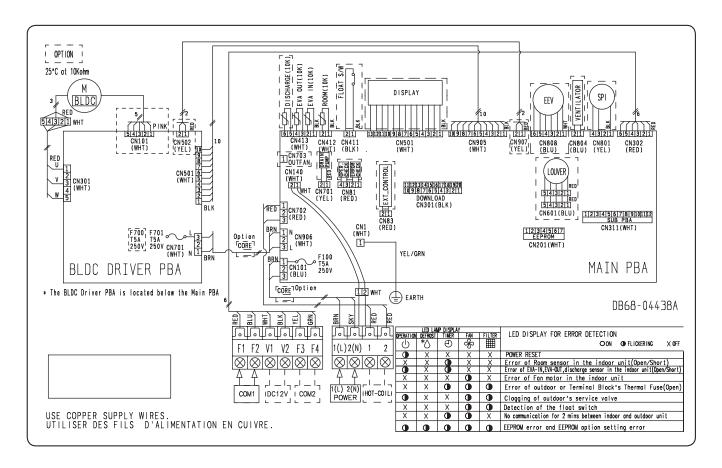
Units: mm [inches]



AC120MXASEH



Indoor Units

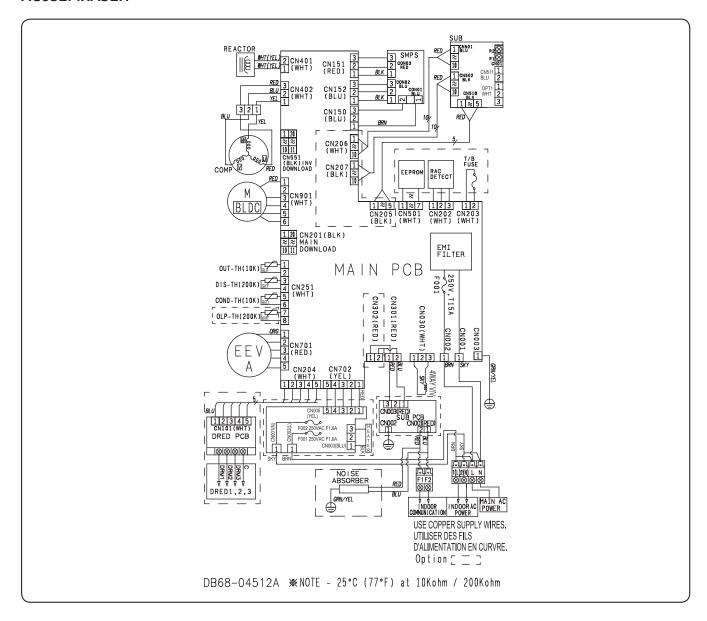


MAIN PBA	Printed Circuit Board(MAIN)	SPI	S-Plasma ion	ROOM(10K)	Thermistor ROOM OUT(10K)
BLDC DRIVER PBA	Printed Circuit Board(BLDC DRIVER)	EEV	Electronic Expansion Valve	EVA-IN(10K)	Thermistor EVA IN(10K)
SUB PBA	Printed Circuit Board(SUB)	EXT_CONTROL	EXTERNAL_CONTROL	EVA-OUT(10K)	Thermistor EVA OUT(10K)
M-BLDC	BLDC Motor			DISCHARGE(10K)	Thermistor DISCHARGE(10K)

- This wiring diagram applies only to the Indoor unit.
- Symbols show as follow: blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue: grn: green
- For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.
- Protective earth(screw), : connector, \(\frac{1}{2} \): The wire quantity

Outdoor Units

AC052MXASEH

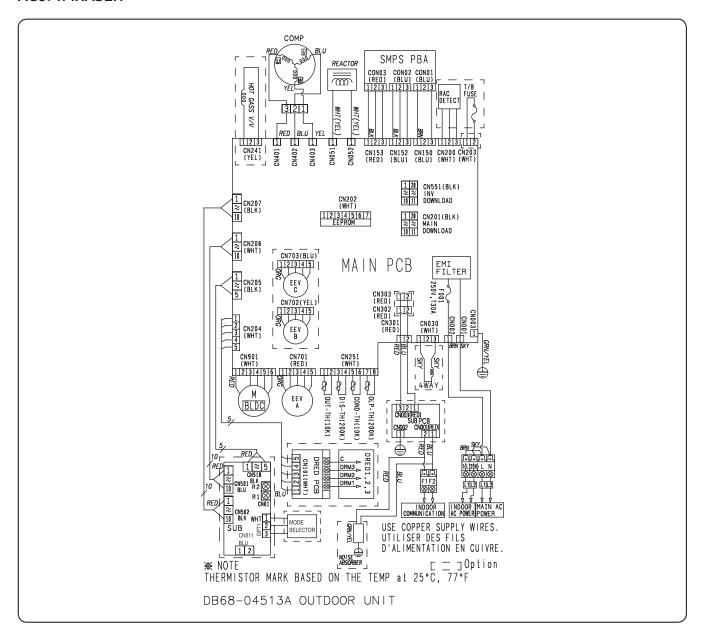


MAIN PCB	Printed circuit board(MAIN)	EEV	Electronic Expansion Valve	DIS-TH(200K)	Thermistor DISCHARGE
DRED PCB	Printed circuit board(DRED)	M-BLDC	BLDC Motor	OUT-TH(10K)	Thermistor AMBIENT
SMPS	Printed circuit board(SMPS)	OLP-TEMP	Thermistor OLP	COND-TH(10K)	Thermistor CONDENSOR
SUB	Printed circuit board(SUB)				

- This wiring diagram applies only to the Indoor unit.
- Symbols show as follow: blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue: grn: green
- For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.
- ♣ Protective earth(screw), ☐☐: connector, ┡ : The wire quantity

Outdoor Units

AC071MXASEH

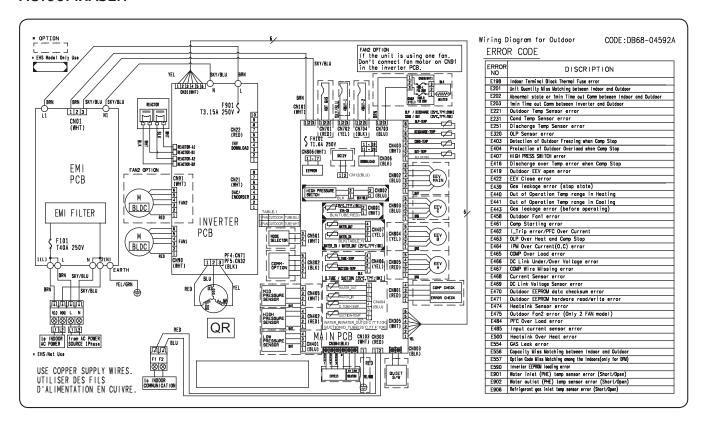


MAIN PCB	Printed circuit board(MAIN)	EEV	Electronic Expansion Valve	DIS-TH(200K)	Thermistor DISCHARGE
DRED PCB	Printed circuit board(DRED)	M-BLDC	BLDC Motor	OUT-TH(10K)	Thermistor AMBIENT
SMPS	Printed circuit board(SMPS)	HOT GASS V/V	HOT GASS Valve	COND-TH(10K)	Thermistor CONDENSOR
SUB	Printed circuit board(SUB)	OLP-TEMP	Thermistor OLP		

- This wiring diagram applies only to the Indoor unit.
- Symbols show as follow: blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue: grn: green
- For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.
- ♣ Protective earth(screw), Ⅲ : connector, ♣ : The wire quantity

Outdoor Units

AC100MXASEH

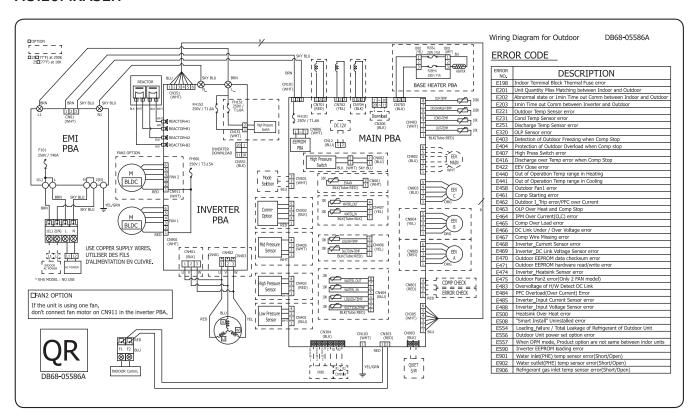


MAIN PCB	Printed circuit board(MAIN)	EEV	Electronic Expansion Valve	DIS-TEMP	Thermistor DISCHARGE
INVERTER PCB	Printed circuit board(INVERTER)	M-BLDC	BLDC Motor	OUT-TEMP	Thermistor AMBIENT
EMI PCB	Printed circuit board(EMI)	OLP-TEMP	Thermistor OLP	COND-TEMP	Thermistor CONDENSOR

- This wiring diagram applies only to the Indoor unit.
- Symbols show as follow: blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue: grn: green
- For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.

Outdoor Units

AC120MXASEH



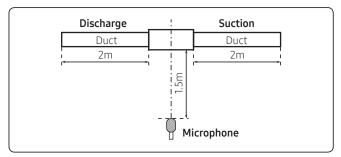
MAIN PCB	Printed circuit board(MAIN)	EEV	Electronic Expansion Valve	DIS-TEMP	Thermistor DISCHARGE
INVERTER PCB	Printed circuit board(INVERTER)	M-BLDC	BLDC Motor	OUT-TEMP	Thermistor AMBIENT
EMI PCB	Printed circuit board(EMI)	OLP-TEMP	Thermistor OLP	COND-TEMP	Thermistor CONDENSOR

- This wiring diagram applies only to the Indoor unit.
- Symbols show as follow: blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue: grn: green
- For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.
- ☐ Protective earth(screw), ☐ : connector, У : The wire quantity

Indoor units

Sound Pressure level

Unit: dB(A)



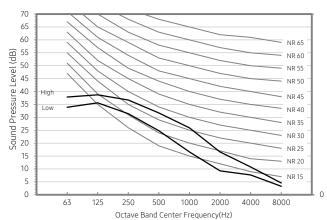
MODEL	Hi	MID	LOW
AC052MNMSEH	31	28	25
AC071MNMSEH	33	30	27
AC100MNMSEH	35	32	29
AC120MNMSEH	37	34	31

NR Curve

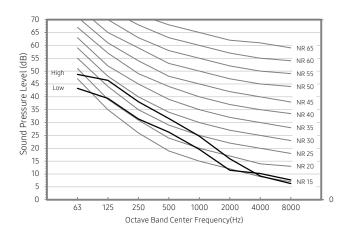
1) AC052MNMSEH

65 60 NR 65 Sound Pressure Level (dB) 45 20 30 20 50 20 NR 55 High NR 40 NR 30 15 NR 20 10 NR 15 5 500 1000 2000 4000 8000 125 250 Octave Band Center Frequency(Hz)

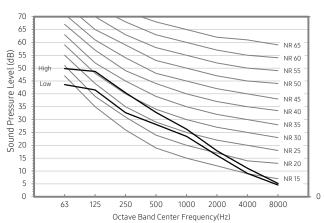
2) AC071MNMSEH



3) AC100MNMSEH



4) AC120MNMSEH



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

Indoor units

Sound Power level



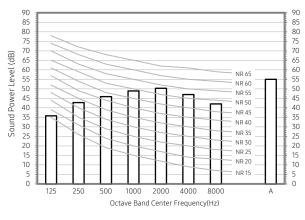
Unit: dB(A)

- 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.

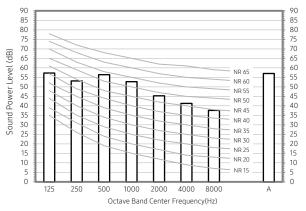
MODEL	Power
AC052MNMSEH	55
AC071MNMSEH	57
AC100MNMSEH	62
AC120MNMSEH	64

NR Curve

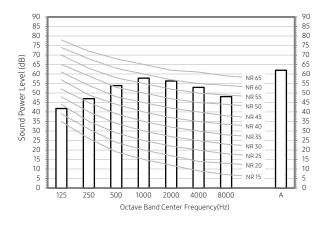
1) AC052MNMSEH



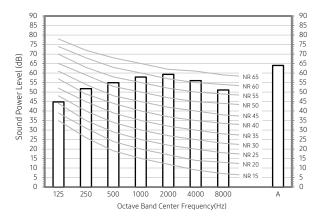
2) AC071MNMSEH



3) AC100MNMSEH



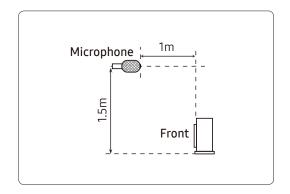
4) AC120MNMSEH



Outdoor Units

Sound Pressure level

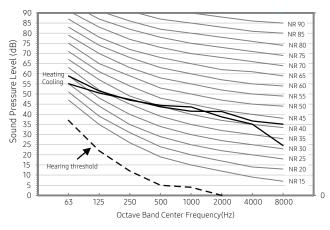
Unit: dB(A)



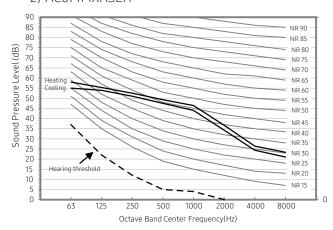
MODEL	Cooling	Heating
AC052MXASEH	48	48
AC071MXASEH	49	51
AC100MXASEH	52	54
AC120MXASEH	54	56

NR Curve

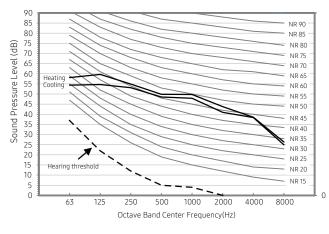
1) AC052MXASEH



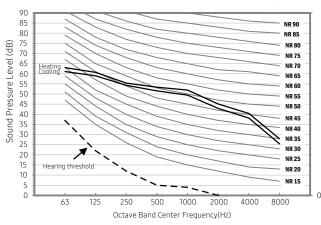
2) AC071MXASEH



3) AC100MXASEH



4) AC120MXASEH



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

Outdoor Units

Sound Power level



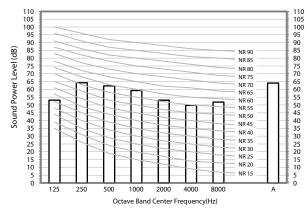
- Specifications may be subject to change without prior notice.
 - Sound power level is an absolute value that a sound source generates.
 - dBA = A-weighted sound power level.
 - Reference power: 1pW.
 - Measured according to ISO 3741.

Unit: dB(A)

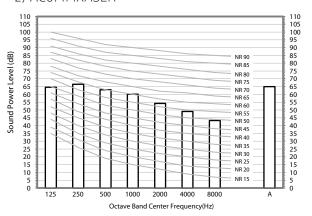
MODEL	Power
AC052MXASEH	64
AC071MXASEH	65
AC100MXASEH	69
AC120MXASEH	70

NR Curve

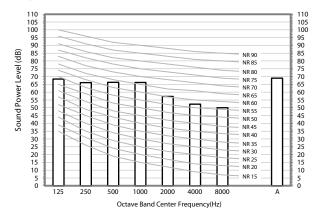
1) AC052MXASEH



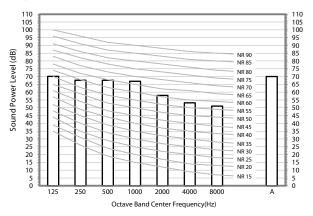
2) AC071MXASEH



3) AC100MXASEH

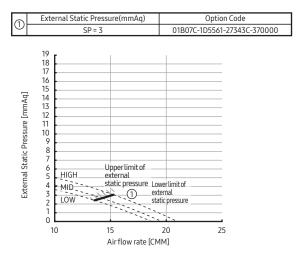


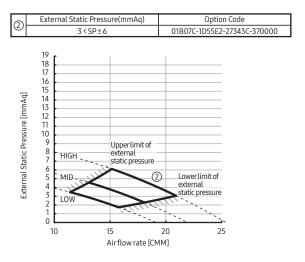
4) AC120MXASEH



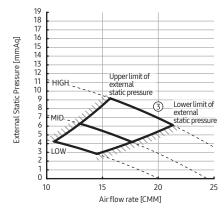
Indoor Units

1) AC052MNMSEH

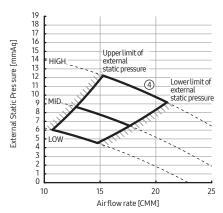




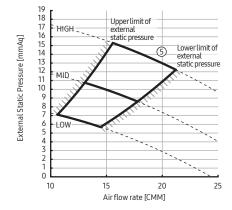
	(Z)	External Static Pressure(mmAq)	Option Code
L	9	6 <sp≤9< td=""><td>01B07C-1D5963-27343C-370000</td></sp≤9<>	01B07C-1D5963-27343C-370000



	External Static Pressure(mmAq)	Option Code
4	9 < SP ≤ 12	01B07C-1D59D9-27343C-370000

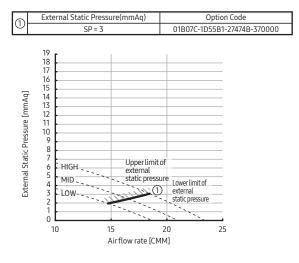


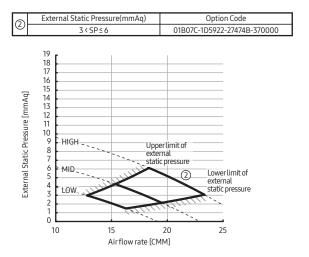
(5)	External Static Pressure(mmAq)	Option Code
	12 < SP ≤15	01B07C-1D5D3C-27343C-370000



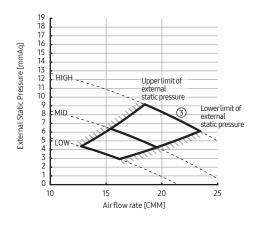
Indoor Units

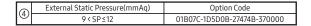
2) AC071MNMSEH

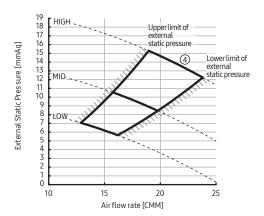


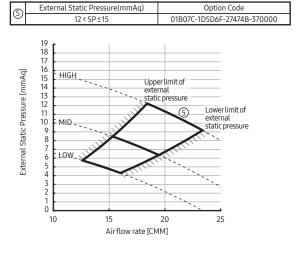


External Static Pressure(mmAq)	Option Code
6 < SP ≤ 9	01B07C-1D5997-27474B-370000



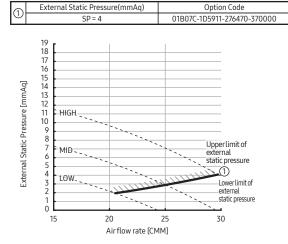


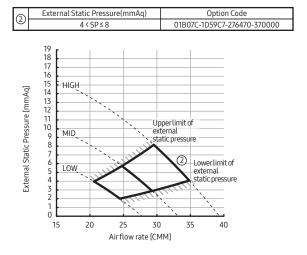


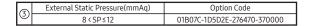


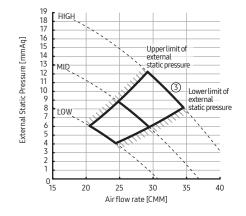
Indoor Units

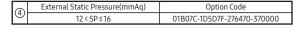
3) AC100MNMSEH

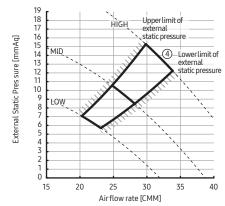






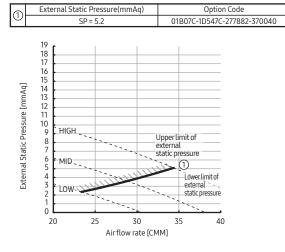


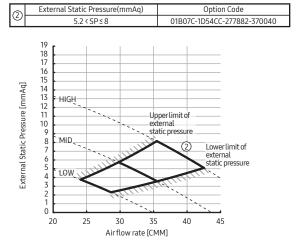


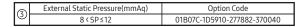


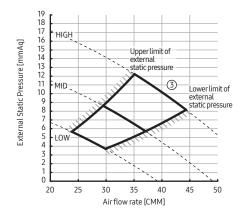
Indoor Units

4) AC120MNMSEH

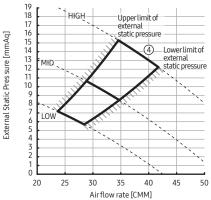










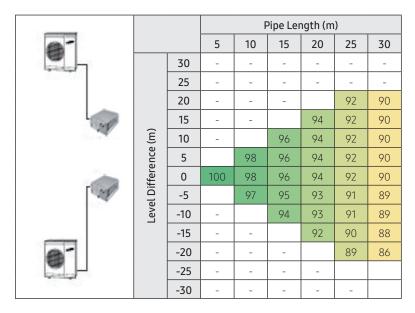


- Adjust option code according to the actual installation condition (external static pressure).
- The graphs display the available external static pressure range of installed indoor units. Therefore, they do not reflect the actual change of external static pressure and airflow rate according to adjusted airflow (High-Mid-Low) of installed indoor units.

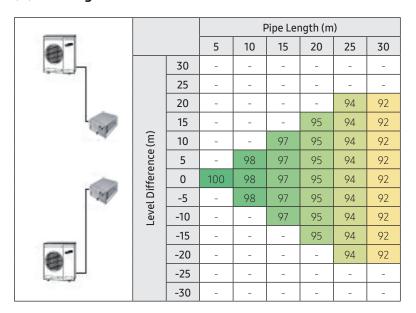
11. Capacity Correction

AC052MNMSEH + AC052MXASEH

(1) Cooling



(2) Heating



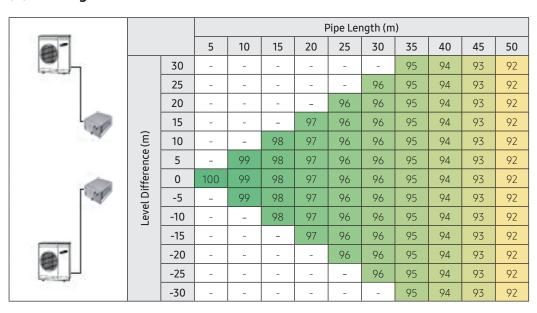
11. Capacity Correction

AC 071/100/120 MNMSEH + AC071/100/120MXASEH

(1) Cooling

						F	Pipe Ler	ngth (m)			
A -			5	10	15	20	25	30	35	40	45	50
		30	-	-	-	-	-	-	93	92	91	90
		25	-	-	-	-	-	94	93	92	91	90
		20	1	-	-	-	96	94	93	92	91	90
00		15	1	-	-	97	96	94	93	92	91	90
	Level Difference (m)	10	1	ı	98	97	96	94	93	92	91	90
	ance	5	ı	99	98	97	96	94	93	92	91	90
	ffere	0	100	99	98	97	96	94	93	92	91	90
1	i Oi	-5	-	98	97	96	95	94	93	92	91	89
	Leve	-10	1	ı	97	96	95	94	92	91	90	88
		-15	1	-1	-	95	95	93	92	91	89	88
a -		-20	- 1	-1	-	-	94	93	92	90	89	87
		-25	- 1	-1	-	-	-	92	91	90	88	86
200 - 1540 r		-30	-	-	-	-	-	-	91	89	88	85

(2) Heating



12. Operation Range

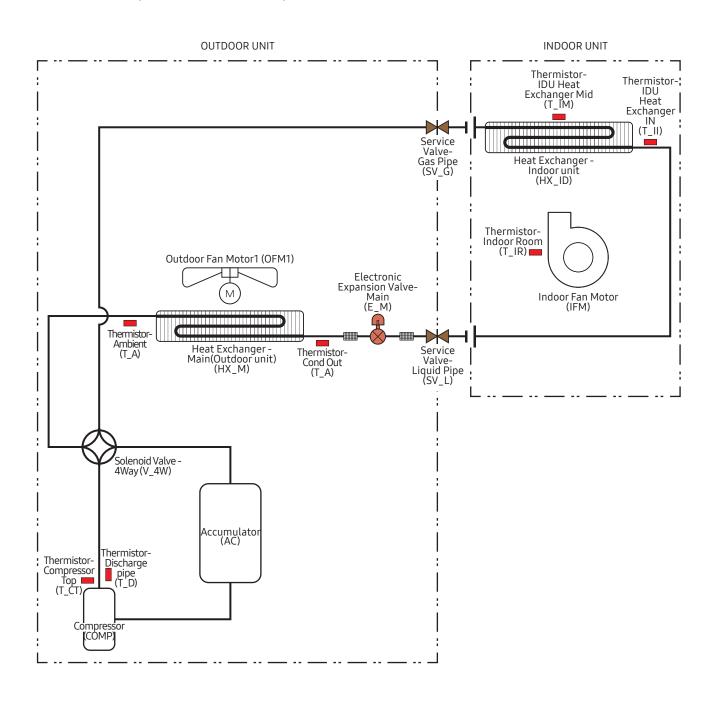
Outdoor Unit Mode		Indoor Unit	Indoor Unit	
Mode	Temperature(DB)	Temperature(DB)	Humidity(RH)	
Cooling	-15°C ~ 50°C	18°C ~ 32°C	80% or less	
Heating	-20°C ~ 24°C	30°C or less	-	
Drying	-15°C ~ 50°C	18°C ~ 32°C	80% or less	

■ NOTE

- The assumed installation conditions are follows
 - The pipe length(including elbow) is 5 m.The level difference is 0 m.

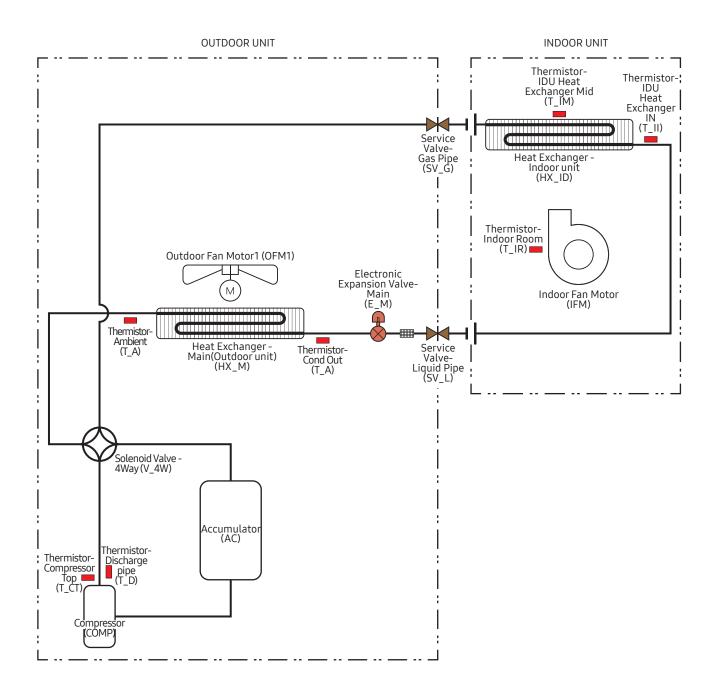
13. Piping Diagram

AC052MNMSEH/EU+AC052MXASEH/EU, AC071MNMSEH/EU+AC071MXASEH/EU AC100MNMSEH/EU+AC100MXASEH/EU



13. Piping Diagram

AC120MNMSEH/EU+AC120MXASEH/EU



40 _____

Indoor Unit

Step 1 Checking and preparing accessories

The following accessories are supplied with the indoor unit. The type and quantity may differ, depending on the specifications.

User manual (1)	Installation manual (1)
Clamp hose (1)	Flexible hose (1)

Step 2 Choosing the installation location

General requirements for installation location

Do not install the air conditioner in a location where it will come into contact with the following elements:

- Combustible gases
- Saline air
- Machine oil
- Sulphide gas
- Special environmental conditions

Avoid installing the air conditioner in a location with the following conditions:

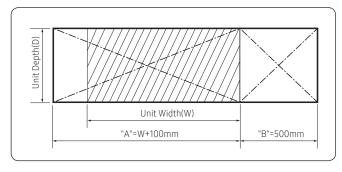
- In areas where it is exposed to direct sunlight. Close to heat sources.
- In damp areas or locations where it could come into contact with water. (for example rooms used for laundry)
- In areas where curtains and furniture could affect the supply and discharge of air.
- Without leaving the required minimum space around the unit. (as shown in the drawing)
- In scarcely ventilated areas.
- On surfaces that are unable to support the weight of the unit without deforming, breaking or causing vibrations during the use of the air conditioner.
- In a position that does not enable the condensate drainage pipe to be correctly installed. (at the end of the installation. It is always essential to check the efficiency of the drainage system)

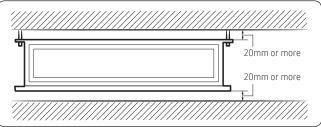
Insulation drain (1)	Thermal insulation sponge A (1)
Cable-tie (8)	Thermal insulation sponge B (1)
<u> </u>	
Rubber (8)	Thermal insulation sponge C (1)

Space requirements for installation

Construction Standard for Inspection Hole

- 1 In case, the ceiling is tex tile, Inspection hole dose not need
- 2 In case, the ceiling is plaster board, Inspection hole depends on Inside height of the ceiling.
 - **a** Height is more than 0.5m : Only "B" [Inspection for PBA] is applied.
 - **b** Height is less than 0.5m: Both "A"&"B" are applied.
 - **c** "A"&"B" are inspection holes.

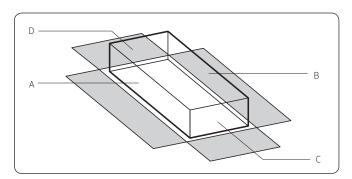




Indoor Unit

- You must have 20 mm or more space between the ceiling and the bottom of indoor unit. Otherwise, the noise from the vibration of indoor unit may bother the user. When the ceiling is under construction, the hole for check-up must be made to take service, clean and repair the unit.
- It is possible to install the unit at an height of between 2.2~2.5 m from the ground, if the unit has a duct with a well defined lenght (300 mm or more), to avoid fan motor blower contact.
- If you install the cassette or duct type indoor unit on the ceiling with humidity over 80%, you must apply extra 10 mm of polyethylene foam or other insulation with similar material on the body of the indoor unit.

Step 3 Optional: Insulating the body of the indoor unit



Thickness: more than 10mm

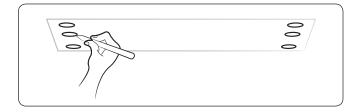
Indoor Unit	AC052MNMSEH AC071MNMSEH	AC100MNMSEH	AC120MNMSEH
Offic	1150 X 480 X 260	1150 X 480 X 320	1200 X 650 X 360
Α	1150 X 260	1150 X 320	1200 X 360
В	1150 X 260	1150 X 320	1200 X 360
С	480 X 260	480 X 320	650 X 360
D	480 X 260	480 X 320	650 X 360
Front/ Back	Insulate the front and back side in proper size at the same time when insulating the suction duct and discharge duct.		

(Unit: mm)

Step 4 Installing the indoor unit

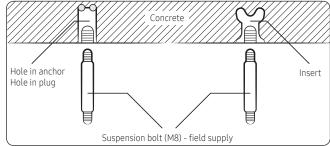
When deciding on the location of the air conditioner with the owner, the following restrictions must be taken into account

1 Place the pattern sheet on the ceiling at the spot where you want to install the indoor unit.

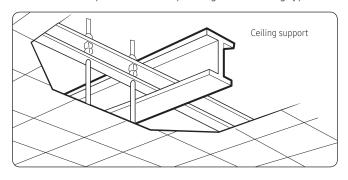


■ NOTE

- Since the diagram is made of paper, it may shrink or stretch slightly due to temperature or humidity. For this reason, before drilling the holes maintain the correct dimensions between the markings.
- 2 Insert bolt anchors. Use existing ceiling supports or construct a suitable support as shown in figure.



3 Install the suspension bolts depending on the ceiling type.



🖹 NОТЕ

- Insulate the end of the pipe and some curved area by using separate insulator.
- Insulate the discharge and suction part at the same time when you insulate connection duct.

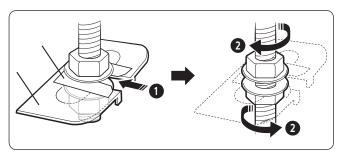
Indoor Unit

! CAUTION

- Ensure that the ceiling is strong enough to support the weight of the indoor unit. Before hanging the unit, test the strength of each attached suspension bolt.
- If the length of suspension bolt is more than 1.5m, it is required to prevent vibration.
- If this is not possible, create an opening on the false ceiling in order to be able to use it to perform the required operations on the indoor unit.
- 4 Screw eight nuts to the suspension bolts making space for hanging the indoor unit.

NOTE

- You must install all the suspension rods.
- 5 Hang the indoor unit to the suspension bolts between two nuts.

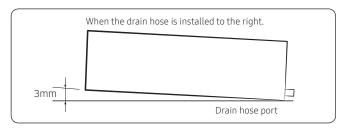


! CAUTION

- Piping must be laid and connected inside the ceiling when suspending the unit. If the ceiling is already constructed, lay the piping into position for connection to the unit before placing the unit inside the ceiling.
- 6 Screw the nuts to suspend the unit.
- 7 Adjust level of the unit by using measurement plate for all 4 sides.

CAUTION

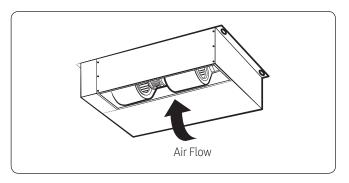
 For proper drainage of condensate, give a 3mm slant to the left or right side of the unit which will be connected with the drain hose, as shown in the figure. Make a tilt when you wish to install the drain pump, too.



 When installing the indoor unit, make sure it is not tilted toward front or back side.

CAUTION

 Noise will increase 3~6 dB(A) when the air flow enters from the bottom side (Only for Slim Duct Type product).



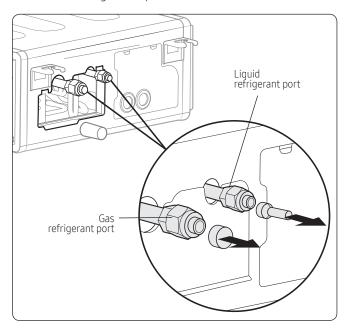
Indoor Unit

Step 5 Purging inert gas from the indoor unit

From factory the unit is supplied and set with a pre-charge of nitrogen gas. (inert gas) Therefore, all inert gas must be purged before connecting the assembly piping.

Unscrew the pinch pipe at the end of each refrigerant pipe.

Result: All inert gas escapes from the indoor unit.



NOTE

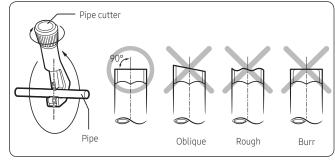
- The designs and shape are subject to change according to the model.
- To prevent dirt or foreign objects from getting into the pipes during installation, do NOT remove the pinch pipe completely until you are ready to connect the piping.

! CAUTION

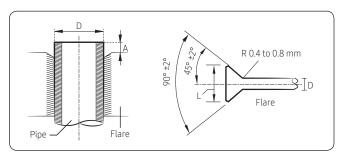
- Connect the indoor and outdoor units using pipes with flared connections(not supplied). For the lines, use insulated, unwelded, degreased and deoxidized copper pipe (Cu DHP type to ISO 1337 or UNI EN 12735-1), suitable for operating pressures of at least 4200kPa and for a burst pressure of at least 20700kPa. Copper pipe for hydro-sanitary applications is completely unsuitable.
- For sizing and limits (height difference, line length, max. bends, refrigerant charge, etc.) see the outdoor unit installation manual.
- All refrigerant connection must be accessible, in order to permit either unit maintenance or removing it completely.

Step 6 Cutting and flaring the pipes

- 1 Make sure that you have the required tools available. (pipe cutter, reamer, flaring tool and pipe holder)
- 2 If you wish to shorten the pipes, cut it with a pipe cutter, taking care to ensure that the cut edge remains at a 90° angle with the side of the pipe. Refer to the illustrations below for examples of edges cut correctly and incorrectly.



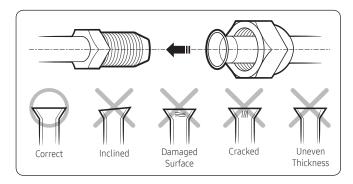
- **3** To prevent any gas from leaking out, remove all burrs at the cut edge of the pipe, using a reamer.
- 4 Slide a flare nut on to the pipe and modify the flare.



Outer Diameter (D)	Depth (A)	Flare dimension (L)
Ø6.35 mm	1.3 mm	8.7~9.1 mm
Ø9.52 mm	1.8 mm	12.8~13.2 mm
Ø12.70 mm	2.0 mm	16.2~16.6 mm
Ø15.88 mm	2.2 mm	19.3~19.7 mm
Ø19.05 mm	2.2 mm	23.6~24.0 mm

Indoor Unit

5 Check that the flaring is correct, referring to the illustrations below for examples of incorrect flaring.



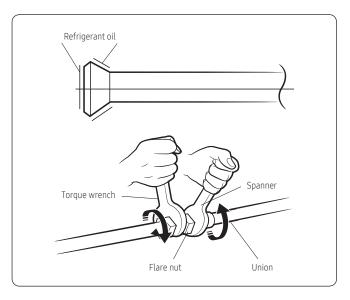
! CAUTION

- If the pipes require brazing ensure that OFN (Oxygen Free Nitrogen) is flowing through the system.
- Nitrogen blowing pressure range is 0.02 ~ 0.05MPa.

Step 7 Connecting the assembly pipes to the refrigerant pipes

There are two refrigerant pipes of different diameters :

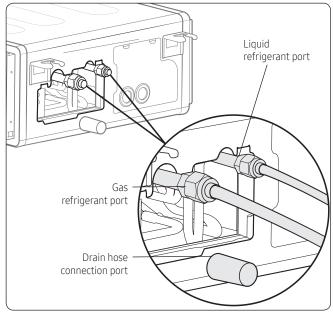
- A smaller one for the liquid refrigerant
- A larger one for the gas refrigerant
- The inside of copper pipe must be clean & has no dust
- 1 Remove the pinch pipe on the pipes and connect the assembly pipes to each pipe, tightening the nuts, first manually and then with a torque wrench, a spanner applying the following torque.



Outer diameter (D)	Torque (N•m)
Ø6.35 mm	14 ~ 18
Ø9.52 mm	34 ~ 42
Ø12.70 mm	49 ~ 61
Ø15.88 mm	68 ~ 82
Ø19.05 mm	100 ~ 120

NOTE

- If the pipes must be shortened refer to page 44,
 Step 6 Cutting and flaring the pipes
- 2 Be sure to use insulator which is thick enough to cover the refrigerant tube to protect the condensate water on the outside of pipe falling onto the floor and the efficiency of the unit will be better.
- **3** Cut off any excess foam insulation.
- 4 Be sure that there must be no crack or wave on the bended area.
- 5 It would be necessary to double the insulation thickness(10mm or more) to prevent condensation even on the insulator when if the installed area is warm and humid.
- **6** Do not use joints or extensions for the pipes that connect the indoor and outdoor unit. The only permitted connections are those for which the units are designed.



NOTE

• The designs and shape are subject to change according to the model.

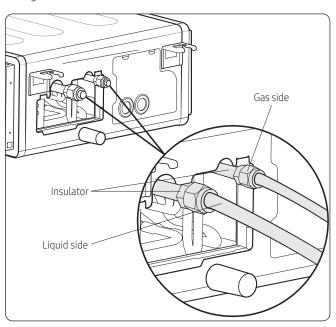
Indoor Unit

Step 8 Performing the gas leak test

To identify potential gas leaks on the indoor unit, inspect the connection area of each refrigerant pipe using a leak detector for R-410A.

Before recreating the vacuum and recirculating the refrigerant gas, pressurize the whole system with nitrogen (using a cylinder with a pressure reducer) at a pressure above 4 MPa in order to immediately detect leaks on the refrigerant fittings.

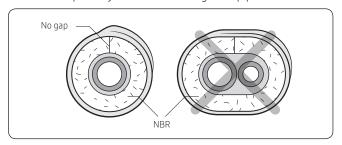
Made vacuum for 15 minutes and pressurizing system with nitrogen.



Step 9 Insulating the refrigerant pipes

Once you have checked that there are no leaks in the system, you can insulate the piping and hose.

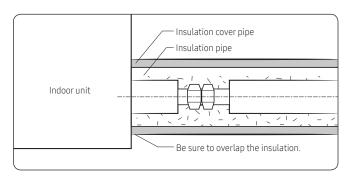
1 To avoid condensation problems, place Acrylonitrile Butadien Rubber separately around each refrigerant pipe.



NOTE

• Always make the seam of pipes face upwards.

2 Wind insulating tape around the pipes and drain hose avoiding compressing the insulation too much.

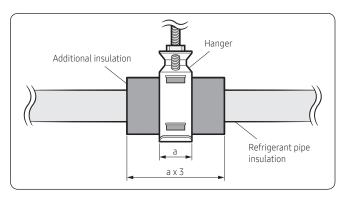


∴ CAUTION

- Be sure to wrap insulation tightly without any gaps.
- **3** Finish wrapping insulating tape around the rest of the pipes leading to the outdoor unit.
- **4** The pipes and electrical cables connecting the indoor unit with the outdoor unit must be fixed to the wall with suitable ducts.

! CAUTION

- Make sure that all refrigerant connection must be accessible for easy maintenance and detachment.
- Install the insulation not to get wider and use the adhesives on the connection part of it to prevent moisture from entering.
- Wind the refrigerant pipe with insulation tape if it is exposed to outside sunlight.
- Install the refrigerant pipe respecting that the insulation does not get thinner on the bent part or hanger of pipe.
- Add the additional insulation if the insulation plate gets thinner.



Indoor Unit

- **5** Select the insulation of the refrigerant pipe.
 - Insulate the gas side and liquid side pipe, noting the insulation thickness that must differ according to the pipe size.
 - Standard: Less than an indoor temperature of 30°C, with humidity at 85%. If installing in a high humidity environment, use one grade thicker insulator by referring to the table below. If installing in an unfavourable environment, use thicker one.
 - The heat-resistance temperature of the insulator must be more than 120°C.

		Insulati (heating		
Pipe	Pipe size	Standard (Less than 30°C, 85%)	High humidity (Over 30°C, 85%)	Remarks
		EPDM	I, NBR	
Liquid	Ø6.35 to Ø9.52	9t	9t	
pipe	Ø12.7 to Ø19.05	13t	13t	
	Ø6.35	13t	19t	The internal temperature
	Ø9.52			is higher than 120°C.
Gas pipe	Ø12.70	40.	25+	
	Ø15.88	19t	25t	
	Ø19.05			

 When installing insulation in the places and conditions below, use the same insulation that is used for high humidity conditions.

<Geological condition>

High humidity locations such as shorelines, hot springs, lake or riversides, and ridges (when part of the building is covered by earth and sand)

Operation purpose condition>

Restaurant ceiling, sauna, swimming pool etc.

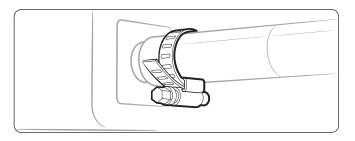
<Building construction condition>

Ceilings frequently exposed to moisture and cooling are not covered. For example, pipes installed at a corridor of a dormitory and studio or near an exit that opens and closes frequently.

Places (where the pipes are installed) that are highly humid due to a lack of ventilation.

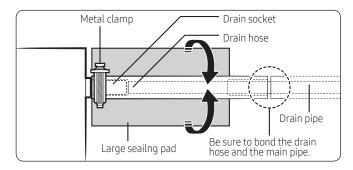
Step 10 Installing the drain hose and drain pipe

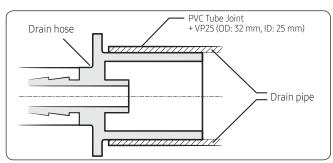
- 1 Push the supplied drain hose as far as possible over the drain socket.
- 2 Tighten the metal clamp as shown in the picture.



- 3 Wrap the supplied large sealing pad over the metal clamp and drain hose to insulate and fix it with clamps.
- 4 Insulate the complete drain piping inside the building (field supply).

 If the drain hose cannot be sufficiently set on a slope, fit the hose with drain raising piping (field supply).
- 5 Push the drain hose up to insulation when connecting the drain hose to drain socket.

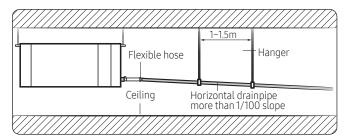




Indoor Unit

Without the drain pump

- 1 Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 1.0~1.5m.
- 2 Install U-trap at the end of the drainpipe to prevent a nasty smell to reach the indoor unit.
- 3 Do not install the drainpipe to upward position. It may cause water flow back to the unit.

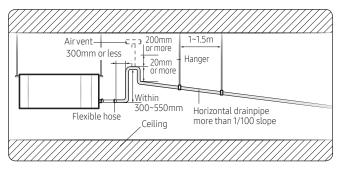


With the drain pump

- 1 The drain pipe should be installed within 300mm to 550mm from the flexible hose and then lift down 20mm or more.
- 2 Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 1.0~1.5m.
- 3 Install the air vent in the horizontal drainpipe to prevent water flow back to the indoor unit.

NOTE

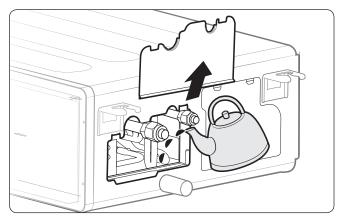
- You may not need to install it if there were proper slope in the horizontal drainpipe.
- **4** The flexible hose should not be installed upward position, it may cause water flow back to the indoor unit.



Step 11 Performing the drainage test

Prepare a little water about 2 liter.

- 1 Pour water into the base pan in the indoor unit as shown in figure.
- 2 Confirm that the water flows out through the drain hose.



Step 12 Optional: Installing DPM

- When installing DPM, you should set "DPM setting" to the outdoor unit.
- If DPM model is not set, communication error may occur.
- While the outdoor unit is tracking the indoor unit for one minute after the power supply is turned on. The operation may stop if the remote control reception signal of the installed indoor unit is different.
- When DPM is installed, Automatic Air-Volume function cannot be performed simultaneously for all indoor units. Automatic Air-Volume function must be performed for each indoor unit with the wired remote control attached.
- To enable Level contol with the centralized controller, refer to page 55

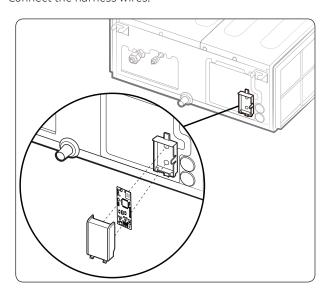
Indoor Unit

Step 13 Optional: Installing external controller

Accessories (External controller: MIM-B14)

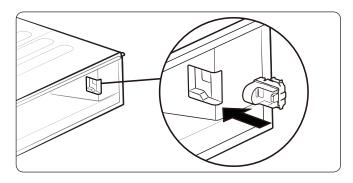
External Controller	PCB Case
Haness Wire	Haness Wire
-	1)—————————————————————————————————————
Screw	

- 1 Fix the case at with bolts on the side of the control box in the indoor unit.(See the picture).
- 2 Attach the external controller PCB to the case in the control box of the indoor unit.
- **3** Connect the harness wires.



Accessories (SPI module: MSD-EAN1)

Refer to the SPI module(MSD-EAN1) installation manual for the more information.



Step 14 Connecting the power and communication cables

! 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.

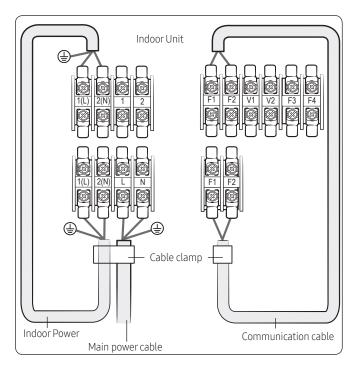
! CAUTION

 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.

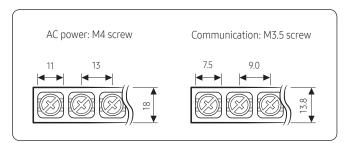
The indoor unit is powered through the outdoor unit by means of a H07 RN-F connection cable (or a more power model), with insulation in synthetic rubber and a jacket in polychloroprene (neoprene), in accordance with the requirements specified in the standard EN 60335-2-40.

- 1 Remove the screw on the electrical component box and remove the cover plate.
- 2 Route the connection cord through the side of the indoor unit and connect the cable to the terminals refer to 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.

Indoor Unit



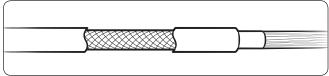
Indoor power supply			
Power supply	Max/Min(V)	Indoor power cable	
220 to 240V, 50 Hz	±10%	1.5 mm²↑, 3wires	
Communication cable			
0.75 to 1.5 mm², 2 wires			



Tightening torque (kgf • cm)		
M3.5		8.0 to 12.0
M4		12.0 to 18.0

- 1 N·m = 10 kgf·cm
- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord. (Code designation IEC:60245 IEC 57 / CENELEC: H05RN-F or IEC:60245 IEC 66 / CENELEC: H07RN-F)

• Since it has the external power supply, refer to the outdoor unit installation manual for MAIN POWER.



! CAUTION

 When installing the indoor unit in a computer room or a server room, use the double shielded communication cable (tape aluminum / polyester braid + copper) of FROHH2R type.

Step 15 Setting additional functions of wired remote control

External Static Pressure (ESP) setting for phase control motor

With its phase control motor, you can adjust the indoor unit fan speed depending on the installation condition. If the external static pressure is high so that the duct becomes longer or if the external static pressure is low so that the duct becomes shorter, adjust the fan speed by referring the following table.

Model	AC052MNMSEH/EU	AC071MNMSEH/EU	
Static Pressure	Option Code for Indoor Unit		
SP=3	01B07C-1D5561- 27343C-370000	01B07C-1D55B1- 27474B-370000	
3< SP ≤6	01B07C-1D55E2- 27343C-370000	01B07C-1D5922- 27474B-370000	
6< SP ≤9	01B07C-1D5963- 27343C-370000	01B07C-1D5997- 27474B-370000	
9< SP ≤12	01B07C-1D59D9- 27343C-370000	01B07C-1D5D0B- 27474B-370000	
12< SP ≤15	01B07C-1D5D3C- 27343C-370000	01B07C-1D5D6F- 27474B-370000	

Model	AC100MNMSEH/EU
Static Pressure	Option Code for Indoor Unit
SP=4	01B07C-1D5911-276470-370000
4< SP ≤8	01B07C-1D59C7-276470-370000
8< SP ≤12	01B07C-1D5D2E-276470-370000
12< SP ≤15	01B07C-1D5D7F-276470-370000

Indoor Unit

Model	AC120MNMSEH/EU
Static Pressure	Option Code for Indoor Unit
SP=5.2	01B07C-1D547C-277882-370040
5.2< SP≤8	01B07C-1D54CC-277882-370040
8< SP ≤12	01B07C-1D5910-277882-370040
12< SP ≤15	01B07C-1D5974-277882-370040

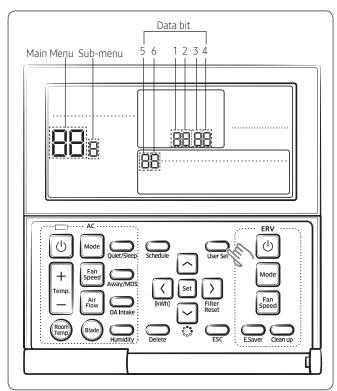
NOTE

- represents E. S. P(External Static Pressure) range of factory setting.
 You don't have to adjust the fan speed separately if the external static pressure of the installation place is in
 - external static pressure of the installation place is in
 When it is out of ______, input the appropriate option code.
- If you input the inappropriate option code, error may occur or the air conditioner is out of order. The option code must be inputted correctly by the installation specialist or service agent.

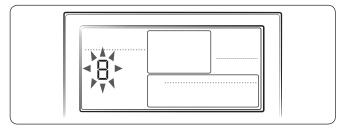
EASY Tuning

If the more cooling and heating airflow rate which set up when installing is wanted, or if the more Silent operation which sets up when installing is wanted, air conditioner is tuned for comfort.

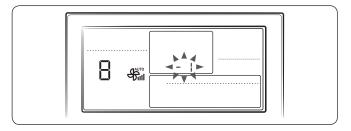
Indoor unit airflow rate for high, mid, low mode increases or decreases for $+2 \sim -2$ Steps with wired remotecontrol.



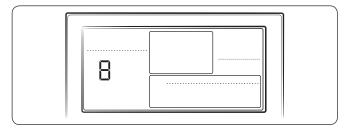
Press the User Set button.
 (Main Menu) will be displayed, and you can press the [△]/[✓] buttons to select No. 8, which will set the Easy Tuning.



2 Press the [▶] button to select airflow step.
Press the [▶]/[▶] buttons to select airflow step(-2,-1,0,1,2)
tuning (During the Easy Tuning setting, AC Fan Speed icon
will be displayed)



3 Press the 🖭 button to complete the Easy Tuning. (When the Easy Tuning setting complete, AC Fan Speed icon will be off)



4 Press the button to to exit to normal mode.

Main menu	Sub menu	Functions	SEG used	Default	Range
8	-	Easy Tuning	1,2	0	-2:-2 Step -1:-1 Step 0: No Use 1:+1 Step 2:+2 Step

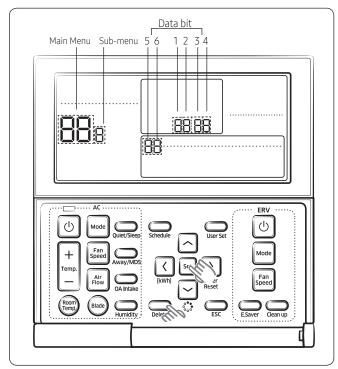
NOTE

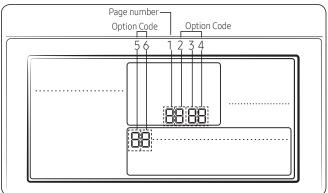
- Press the button anytime during setup to exit without setting.
- According to airflow changed from the Easy Tuning, Air conditioning performance reducing is possible.

Indoor Unit

Step 16 Setting the indoor unit option code

In order to set the indoor unit option code use the wired remote controller and follow the directions below.





SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	X	×	×	×	X

Page number

SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	*	*	*	*	*

Page number

SEG13	SEG14	SEG15	SEG16	SEG17	SEG18
2	*	*	*	*	*

Page number

SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
3	*	*	*	*	*

Page number

- 1 Press the set and buttons at the same time for more than 3 seconds and then a Main menu will be displayed.
- 2 Press the \(\triangle \) button to select \(\frac{1}{4} \) and then press \(\triangle \) button to enter a Sub-menu setting screen.
- 3 Press the \(\triangle / \) button to select \(\frac{2}{2} \) and then press \(\triangle \) button to enter a Indoor unit option code setting screen.

NOTE

- The first digit represents the page number and the remaining five digits are option codes.
- The option code which is currently setting will flicker.
- 4 Press the / button to set the option code in order. Press button to go to the next page.
- 5 Press the set button to save and complete the option setting.
- 6 Press the button to exit to normal mode.

NOTE

Press the button anytime during setup to exit without setting.

! CAUTION

- Option code will not be applied if you don't press the set
- Setting indoor unit option code is only possible in Master wired remote controller. You can only check the indoor unit option code in Slave wired remote controller.
- Setting indoor unit option code is possible when one indoor unit is connected. If more than 2 indoor units are connected, you can only check the Master indoor unit option code.

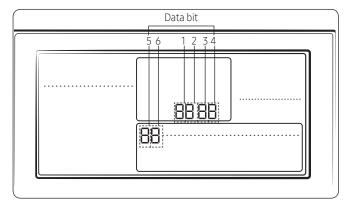
Indoor Unit

Step 17 Setting indoor unit addresses and installation options

Set the indoor unit address and installation option with remote controller option. Set the each option separately since you cannot set the ADDRESS setting and indoor unit installation setting option at the same time. You need to set twice when setting indoor unit address and installation option.

Setting an indoor unit address

- 1 Press the set and better buttons at the same time for more than 3 seconds and then a Main menu will be displayed.
- 2 Press the \(\triangle / \) button to select \(\frac{1}{4} \) and then press \(\triangle \) button to enter a Sub-menu setting screen.
- 3 Press the \(\scale / \subseteq \text{button to select } \) and then press \(\scale \) button to enter a Indoor Address setting screen.



NOTE

- The Main/RMC Address which is currently setting will flicker.
- Data bit 1 and 2 present Indoor unit main address checking
- Data bit 3 and 4 present Indoor unit main address setting(outdoor unit reset is needed to set).
- Data bit 5 and 6 present Indoor unit RMC address setting/ checking.
- 4 Press the / button to set the Indoor unit Main/RMC Address.
- 5 Press the set button to save and complete the option setting.
- 6 Press the button to exit to normal mode.

NOTE

- Press the button anytime during setup to exit without setting.
- Address will not be applied if you don't press set button.
- Setting Main/RMC Address of an Indoor unit is available only with a master wired remote controller.

Setting an indoor unit installation option

In order to check and set the indoor unit installation option code use the wired remote controller and follow the directions below

- 1 Press the set and buttons at the same time for more than 3 seconds and then a Main menu will be displayed.
- 2 Press the \(\setminus \) button to select \(\frac{1}{4} \) and then press \(\setminus \) button to enter a Sub-menu setting screen.
- 3 Press the △/ ✓ button to select ∃ and then press → button to enter a Indoor unit installation option code setting screen.

NOTE

- The first digit represents the page number and the remaining five digits are installation option.
- The total option codes are 24 digits. You can set six digits at a time and it is distinguished by page number (0, 1, 2, 3).
- 4 Press the / button to set the installation option code in order. Press) button to go to the next page.

SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	2	RESERVED	Exterior temperature sensor	Central control	RESERVED
SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	Drain pump	Use of Hot Coil	Use of Heater	Controller variables for auxiliary heater	RESERVED
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18
2	External control	External control output	S-Plasma ion	Buzzer	Number of hours using filter
SEG19	SEG20	SEG21	SEG22	SEG23	-
3	Individual control of a remote controller	Heating setting compensation	RESERVED	Away Set OFF Timer	-

Indoor Unit

Option No.: 02XXXX-1XXXXX-2XXXXX-3XXXXX

Option	SI	EG1		SEG2			SEG3		SEG4													
Explanation	P/	AGE		MODE						of external												
	Indication	Details	Indication	Detai	ilc	,	RESERVED		Indication	rature sensor Details												
Indication			marcation	,	11.5	,	KLJLKVLD		0 Disuse													
and Details		0		2					1 Use													
Option		EG5		SEG6			SEG7			SEG8												
Explanation		tral control					PAGE			drain pump												
	Indication	Details				Indication	Deta	ails	Indication	Details												
Indication	0	Disuse		RESERVED					1	Disuse Use												
and Details	1	Use				1				Use + 3minute												
									2	delay												
Option	SE	<u> </u>		SEG10			SEG11			SEG12												
Explanation	Use of	Hot Coil		Use of heater		Controller	variables for heater	auxiliary														
	Indication	Details	Indication	Detai	ils		Deta	ails														
					-		Set	Time delay														
						Indication	temperature for auxiliary	for auxiliary	,													
	0							heat on	heat on `													
		0 Disuse						. No														
			0	Disus	se.	0	temperature offset	No delay														
	O	Disase		Jisase I			No															
						1	temperature offset	10 minutes														
							No															
						2	temperature	20 minutes	D.E.	SERVED												
Indication						3	offset 1.5°C	No delay	I KE	SERVED												
and Details						4	1.5°C	10 minutes	_													
		-1			5	1.5°C	20 minutes	1														
	1	Use	1	Use	2	6	3°C	No delay														
						7	3°C	10 minutes														
						8	3°C	20 minutes														
																		9	4.5°C	No delay	-	
						А	4.5°C	10 minutes	1													
	_	_	2	Use		В	4.5°C	20 minutes	-													
				(Heater tim	e delay)	С	6°C	No delay														
						D	6°C	10 minutes	1													
Ontion	CF	G13		SEG14		Е	6°C SEG15	20 minutes		SEG16												
Option						Setting th	e output of e	external														
Explanation		AGE		of external co			control			lasma ion												
	Indication	Details	Indication		ils	Indication	Deta	ails	Indication	Details												
			0	Disuse																		
			1	On/Off control	Slave (disable																	
			2	Off control	Level	0	Therm	o on	0	Disuse												
Indication				Window on/	control*)																	
and Details		2	3	off control																		
			4	Disuse	Master																	
			5	On/Off control	(enable	1	Operati	on on	1	Use												
			6	Off control Window on/	Level control*)	'	Operati	OII OII		USE												
			7	off control	CONTROL")																	

Indoor Unit

Option	SE	G17		SEG18		SEG19	SEG20	
Explanation	Buzzei	rcontrol	Numbe	er of hours using filter	PAGE		control of a remote controller	
	Indication	Details	Indication	Details	Indication	Details	Indication	Details
Indication	0	Use of buzzer	2	1000 Hour			0 or1	Indoor1
and Details						3	2	Indoor 2
	1	Non use of buzzer	6 2000 Hour			3	Indoor 3	
							4	Indoor 4
Option	SE	G21		SEG22	SEG23			-
Explanation		g setting ensation				Away Set OFF Timer		-
	Indication	Details			Indication	Details		-
	0	Disuse		RESERVED	0 or1	Auto Set OFF 30	Min.	
Indication and Details	1	2°C			2	Auto Set OFF 60	Min.	_
and Details	2	2 5°C				Auto Set OFF 120Min.		-
	∠ 5'	J (4	Auto Set OFF 180	OMin.	

- 5 Press the [set] button to save and complete the option setting.
- **6** Press the putton to exit to normal mode.
- Level control: The centralized controller can limit the functions and inputs of connected products with this function enabled. [Example: Operation mode limit (Cooling only/Heating only/No limitation), Heating temperature upper limit, Cooling temperature lower limit] To enable 'Level control' when applying the DPM with the centralized controller, appoint the master (Set 'Use of external control [SEG14] option to 4 or higher).
- Example: When installing DPM (1 Outdoor unit with 4 indoor units)

Cond	lition		SEG 14					
External control	Level control	Indoor1	Indoor 2	Indoor3	Indoor 4	Result		
Default			Not s	Slave (All)				
Disuse	Use	4 Not set (0) Not set (0) Not set (0)		Not set (0)	Master (Indoor1), Slave (Indoor 2,3,4)			
Use (Indoor 3)	Disuse	Not set (0)	Not set (0)	1~3	Not set (0)	Slave (All)		
Use (Indoor 4)	Use	Not set (0)	ot set (0) Not set (0) Not set (0) 5~7		5~7	Master (Indoor 4), Slave (Indoor 1,2,3)		

■ NOTE

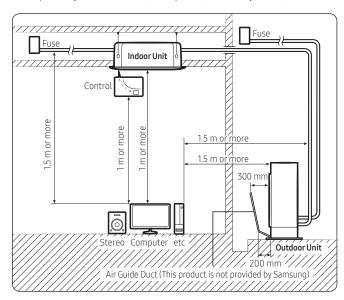
- Press button anytime during setup to exit without setting.
- Option code will not be applied if you don't press [set] button.
- Setting Installation option code is available only with a master wired remote controller.
- Setting Installation option code is available when there is one on one connection between a wired remote controller and an indoor unit.

Outdoor Unit

Step 1 Choosing the installation location

Installation location requirements

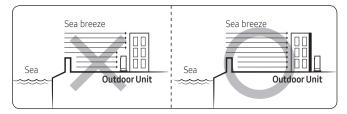
- Do not place the outdoor unit on its side or upside down.
 Failing to do so may cause the compressor lubrication oil to run into the cooling circuit and lead to a serious damage to the unit.
- Install the unit in a well-ventilated location away from direct sunlight or strong winds.
- Install the unit in a location that would not obstruct any passageways or thoroughfares.
- Install the unit in a location that would not inconvenience or disturb your neighbors, as they could be affected by the noise or the airflow coming from the unit.
- Install the unit in a location where the pipes and the cables can be easily connected to the indoor unit.
- Install the unit on a flat, stable surface that can withstand the weight of the unit. Otherwise, the unit can generate noise and vibration during operation.
- Install the unit so that the air flow is directed towards the open area.
- Maintain sufficient clearance around the outdoor unit, especially from a radio, computer, stereo system, etc.



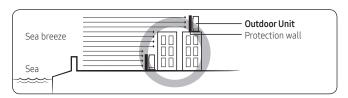
- Install the unit at a height where its base can be firmly fixed in place.
- Make sure that the water dripping from the drain hose runs away correctly and safely.

A CAUTION

- You have just purchased a system air conditioner and it has been installed by your installation specialist.
- This device must be installed according to the national electrical rules.
- If your outdoor unit exceeds a net weight of 60 kg, do not install it on a suspended wall, but stand it on a floor.
- When installing the outdoor unit at the seaside, make sure that it is not directly exposed to sea breeze. If you cannot find an adequate place free from direct sea breeze, construct a protection wall or a protective fence.
 - Install the outdoor unit in a place (such as near buildings etc.) where it can be prevented from sea breeze. Failure to do so may cause a damage to the outdoor unit.



- If you cannot avoid installing the outdoor unit at the seaside, construct a protection wall around to block the sea breeze
- Construct a protection wall with a solid material such as concrete to block the sea breeze. Make sure that the height and the width of the wall are 1.5 times larger than the size of the outdoor unit. Also, secure a space larger than 700 mm between the protection wall and the outdoor unit for exhausted air to ventilate.

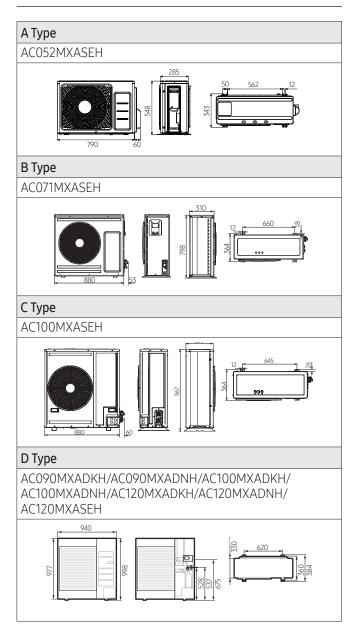


! CAUTION

- Depending on the condition of power supply, unstable power or voltage may cause malfunction of the parts or control system. (At the ship or places using power supply from electric generator...etc)
- Install the unit in a place where water can drain smoothly.
- If you have any difficulty finding installation location as prescribed above, contact your manufacturer for details.
- Be sure to clean the sea water and the dust on the heat exchanger of the outdoor unit and apply a corrosion inhibitor on it. (At least once in a year.)

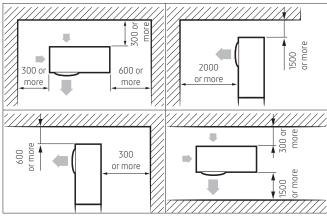
Outdoor Unit

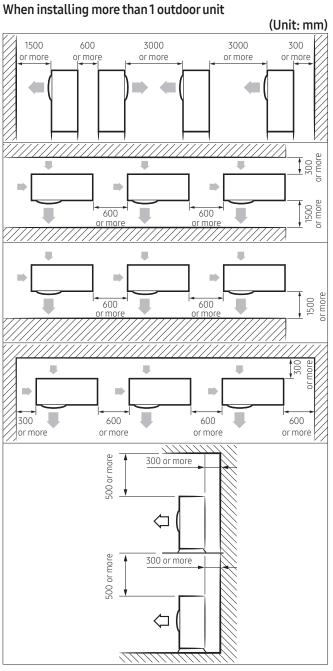
Outdoor unit dimensions



Minimum clearances for the outdoor unit

When installing 1 outdoor unit (Unit: mm)





Outdoor Unit

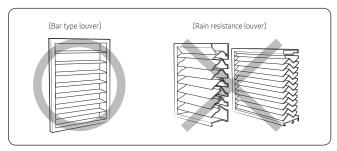
CAUTION

The outdoor unit must be installed according to the specified distances in order to permit accessibility from each side, to guarantee correct operation, maintenance, and repair of the unit.

The components of the outdoor unit must be reachable and removable under safe conditions for people and the

♠ WARNING

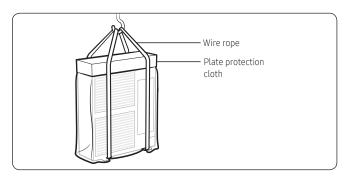
• Should adopt bar type louver. Don't use a type of rain resistance louver.



- Louver specifications.
 - Angle criteria: less than 20°
 - Opening ratio criteria: greater than 80%

Moving the outdoor unit with wire rope

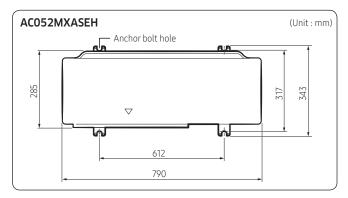
- 1 Before carrying the outdoor unit, fasten two wire ropes of 8 m or longer, as shown in the figure.
- 2 To prevent damages or scratches effectively, insert a piece of cloth between the outdoor unit and the ropes.
- 3 Move the outdoor unit.

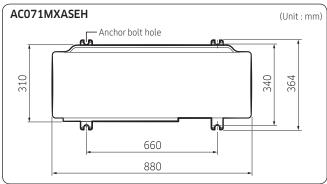


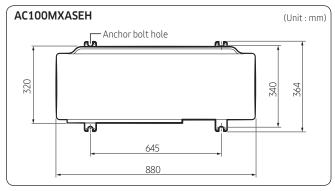
Step 2 Fixing the outdoor unit in place

Install the outdoor unit on a rigid and stable base to prevent disturbance from any noise caused by vibration. When installing the unit at a height or in a location exposed to strong winds, fix the unit securely to a support (i.e., a wall or a ground).

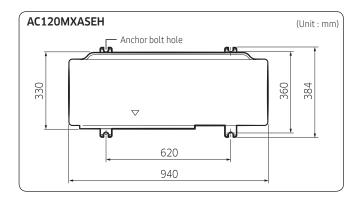
Fix the outdoor unit with anchor bolts. Make sure that the anchor bolts are 20 mm or higher from the base surface.





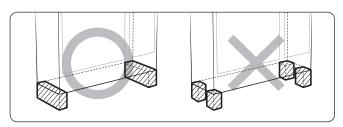


Outdoor Unit



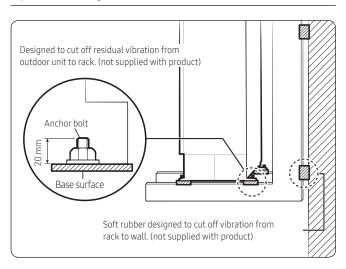
CAUTION

- Install a drain outlet at the lowest end around the base for outdoor unit drainage
- When installing the outdoor unit on the roof, waterproof the unit and check the ceiling strength.



- Make sure that the wall can support the weights of the rack and the outdoor unit.
- Install the rack close to the column as much as possible.

Optional: Fixing the outdoor unit to a wall with a rack



 Install a proper grommet in order to reduce noise and residual vibration transferred by the outdoor unit towards the wall.

CAUTION

- When installing an air guide duct, be sure to check the following:
 - The screws do not damage the copper pipe.
 - The air guide duct is fixed firmly on the guard fan.

Step 3 Connecting the power cables, communication cable, and controllers

You must connect the following three electrical cables to the outdoor unit:

- The main power cable between the auxiliary circuit breaker and the outdoor unit.
- The outdoor-to-indoor power cable between the outdoor unit and the indoor unit.
- The communication cable between the outdoor unit and the indoor unit.

A CAUTION

- During installation, make first the refrigerant connections and then the electrical connections. If the unit is uninstalled, first disconnect the electrical cables and then the refrigerant connections.
- Connect the air conditioner to the earthing system before making the electrical connections.

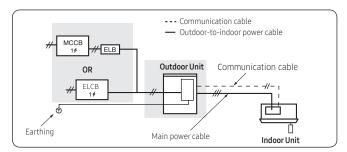


 Especially, if your outdoor unit is the one designed for Russian and European markets, consult the supply authority, if necessary, to estimate and reduce the supply system impedance before installation.

Outdoor Unit

Air conditioning system examples

When using earth leakage circuit breaker (ELCB) for a single phase

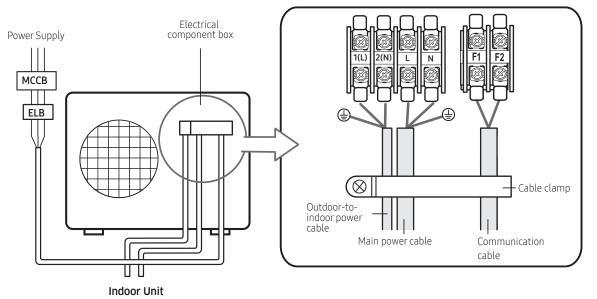


⚠ CAUTION

• If the outdoor unit is installed in a location vulnerable to an electric leak or submergence, make sure to install an ELCB.

Connecting the main power cable

When using ELB for 1 phase



The appearance of the unit may be different from the picture depending on the model.

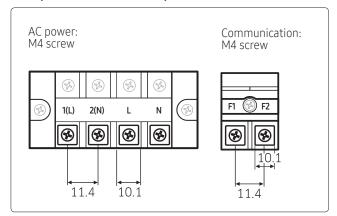
Outdoor Unit

! CAUTION

- You should connect the power cable into the power cable terminal and fasten it with a clamp.
- The unbalanced power must be maintained within 2% of supply rating.
 - If the power is unbalanced greatly, it may shorten the life of the condenser. If the unbalanced power is exceeded over 4% of supply rating, the indoor unit is protected, stopped and the error mode indicates.
- To protect the product from water and possible shock, you should keep the power cable and the connection cord of the indoor and outdoor units within ducts. (with appropriate IP rating and material selection for your application)
- Ensure that main supply connection is made through a switch that disconnects all poles, with contact gap of a least 3 mm.

- Devices disconnected from the power supply should be completely disconnected in the condition of overvoltage category.
- Keep distances of 50 mm or more between power cable and communication cable.

Main power terminal block specifications



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.

Мо	Model			Outdoor unit				Input current (Amperes)			
Indoorunit	0	Rated	Volt	age range	9	Outdo	or unit	Indoor	Total	MCA (A)	MFA
Indoor unit Out	Outdoor unit	Hz	Volts	Min.	Max.	Cooling	Heating	unit			(A)
AC052MNMSEH	AC052MXASEH	50	220 to 240	198	264	13	13	3.5	16.5	16.5	18.2
AC071MNMSEH	AC071MXASEH	50	220 to 240	198	264	20	20	3.5	23.5	23.5	25
AC100MNMSEH	AC100MXASEH	50	220 to 240	198	264	22	22	3.5	25.5	25.5	28
AC120MNMSEH	AC120MXASEH	50	220 to 240	198	264	24	24	3.5	27.5	27.5	30



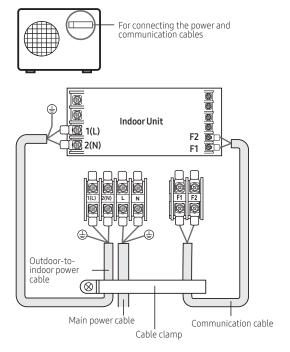
- 1 Voltage range
 - Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits
- 2 Maximum allowable voltage variation between phases is 2%
- 3 Wire size & type must comply with the applicable local and national code.
 - Wire size: 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)

Outdoor Unit

Connecting the outdoor-to-indoor power cable and the communication cable

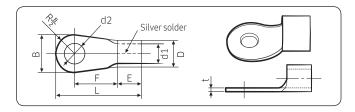


NOTE

- Lay the electrical wiring so that the front cover does not rise up when doing wiring work and attach the front cover securely.
- Ground wire for the indoor unit and outdoor unit connection cable must be clamped to a soft copper tinplated eyelet terminal with M4 screw hole(NOT SUPPLIED WITH UNIT ACCESSORIES).

Outdoor-to-indoor power terminal specifications

- Connect the cables to the terminal board using the compressed ring terminal.
- Cover a solderless ring terminal and a connector part of the power cable and then connect it.



Nominal	Nominal	E	3		D	C	11	Е	F	L	d	2	t	
dimensions for cable (mm²)	dimensions for screw (mm)	Standard dimension (mm)	Allowance (mm)	Standard dimension (mm)	Allowance (mm)	Standard dimension (mm)	Allowance (mm)	Min. (mm)	Min. (mm)	Max. (mm)	Standard dimension (mm)	Allowance (mm)	Min. (mm)	
1/4	4	9.5	+0.2	ΕZ	+0.3	7.4	+0.2		5	20	4.3	+0.2 0	0.9	
4/6	8	15	±0.2	5.6	-0.2	3.4	±0.2	6	9	28.5	8.4	+0.4 0	0.9	
10	8	15	±0.2	7.1	+0.3 -0.2	4.5	±0.2	7.9	9	30	8.4	+0.4	1.15	
16	8	16	±0.2	9	+0.3 -0.2	5.8	±0.2	9.5	13	33	8.4	+0.4	1.45	
25	8	12	±0.3	11.5	+0.5	7.7	±0.2	11	15	34	8.4	+0.4	1.7	
	8	16.5	-0.5	11.5	-0.2	7.7	-0.2	'''	13	J-1	8.4	0	1.7	
7.5	8	16	±0.3 13.3 +0.5 -0.2	17.7	+0.5	0.4	.0.2	10.5	13	38	8.4	+0.4	1.0	
35	8	22						9.4	±0.2	12.5	13	43	8.4	0
50	8	22	±0.3	13.5	+0.5 -0.2	11.4	±0.3	17.5	14	50	8.4	+ 0.4	1.8	
70	8	24	±0.4	17.5	+0.5 -0.4	13.3	±0.4	18.5	20	51	8.4	+ 0.4	2.0	

- Connect the rated cables only.
- Connect using a driver which is able to apply the rated torque to the screws.
- If the terminal is loose, fire may occur caused by arc. If the terminal is connected too firmly, the terminal may be damaged.

Outdoor Unit

Tightening torque (kgf • cm)				
M4 12.0 to 18.0				
M5	20.0 to 30.0			

• $1N \cdot m = 10 \text{ kgf} \cdot \text{cm}$

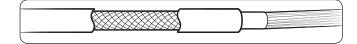
CAUTION

- When connecting cables, you can connect the cables to the electrical part or connect them through the holes below depending on the spot.
- Connect the communication cable between the indoor and outdoor units through a conduit to protect against external forces, and feed the conduit through the wall together with refrigerant piping.
- Remove all burrs at the edge of the knock-out hole and secure the cable to the outdoor knock-out using lining and bushing with an electrical insulation such as rubber and so on.
- Must keep the cable in a protection tube.
- Keep distances of 50mm or more between power cable and communication cable.
- When the cables are connected through the hole, remove the Plate bottom.

Outdoor-to-indoor power and communication cables specifications

Indoor power supply						
Power supply Max/Min (V) Indoor power cable						
1Φ, 220-240V, 50 Hz ±10% 1.5 mm ² ↑, 3wires						
Communication cable						
0.75 to 1.5 mm², 2 wires						

- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord. (Code designation IEC:60245 IEC 57 / CENELEC: H05RN-F or IEC:60245 IEC 66 / 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.



Step 4 Optional: Extending the power cable

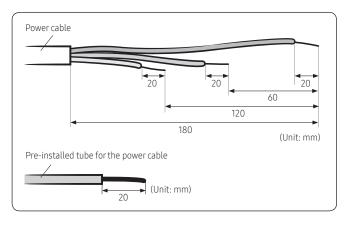
1 Prepare the following tools.

Tools	Spec	Shape
Crimping pliers	MH-14	
Connection sleeve (mm)	20xØ6.5 (HxOD)	
Insulation tape	Width 19 mm	
Contraction tube (mm)	70xØ8.0 (LxOD)	

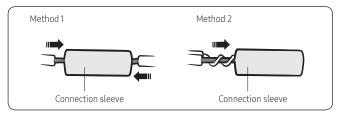
- 2 As shown in the figure, peel off the shields from the rubber and wire of the power cable.
 - Peel off 20 mm of the wire shields of the tube.

↑ CAUTION

- For information about the power cable specifications for indoor and outdoor units, refer to the installation manual
- After peeling off the tube wire, you must insert a contraction tube.

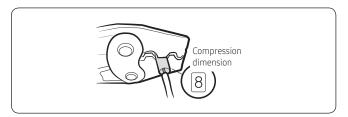


- 3 Insert both sides of core wire of the power cable into the connection sleeve
 - Method 1: Push the core wire into the sleeve from both sides.
 - Method 2: Twist the wire cores together and push it into the sleeve.

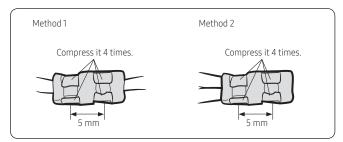


Outdoor Unit

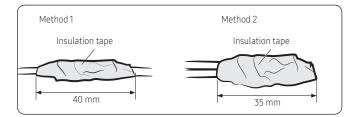
- 4 Using a crimping tool, compress the two points and flip it over and compress another two points in the same location.
 - The compression dimension should be 8.0.



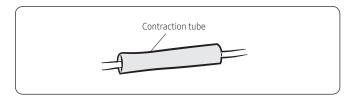
• After compressing it, pull both sides of the wire to make sure it is firmly pressed.



5 Wrap it with the insulation tape twice or more and position your contraction tube in the middle of the insulation tape.
A total of three or more layers of insulation is required.



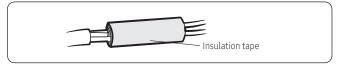
6 Apply heat to the contraction tube to contract it.



7 After tube contraction work is completed, wrap it with the insulation tape to finish.

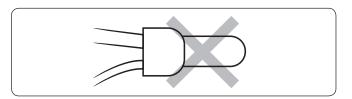
CAUTION

- Make sure that the connection parts are not exposed to outside.
- Be sure to use insulation tape and a contraction tube made of approved reinforced insulating materials that have the same level of withstand voltage with the power cable. (Comply with the local regulations on extensions.)



WARNING

- In case of extending the electric wire, please DO NOT use a round-shaped Pressing socket.
 - Incomplete wire connections can cause electric shock or a fire.

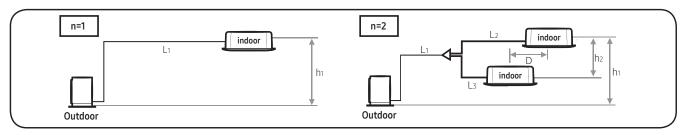


Outdoor Unit

Step 5 Connecting the refrigerant pipe

ltones	Maximum allowable length				
Items	Single installation				
Applicable outdoor unit models	AC052MXASEH	AC071MXASEH AC100MXASEH AC120MXASEH			
Total pipe length (L₁+L₂+L₃)	-	-			
Main pipe (L ₁)	30m	50m			
Max. distance among indoor units (D)	-	-			
Max. length after branch	-	-			
Max. height difference between outdoor and indoor units (h ₁)	20m	30m			
Max. height difference among indoor units(h ₂)	-	-			
Max Pipe length difference among indoor units after branch (L ₂ -L ₃)	-	-			

* "n" means the number of indoor unit connection of DPM.

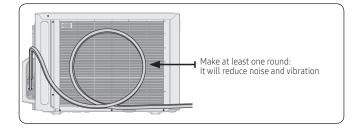


- * Use a joint kit that is only for DPM.
- Temper grade and minimum thickness of the refrigerant pipe

Outer diameter [mm]	Minimum thickness [mm]	Temper grade
ø6.35	0.7	
ø9.52	0.7	C1220T O
ø12.70	0.8	C1220T-O
ø15.88	1.0	
ø15.88	0.8	
ø19.05	0.9	C1220T-1/2H OR C1220T-H
ø22.23	0.9	21220111

A CAUTION

• Be sure to use C1220T-1/2H (Semi-hard) pipe for more than Ø19.05 mm. If you use C1220T-O (Soft) pipe for Ø19.05 mm, the pipe may be broken, which can result in an injury.



 The appearance of the unit may be different from the diagram depending on the model.

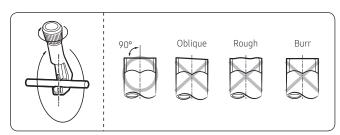
CAUTION

- After connecting the pipes with knock-out treatment, plug the space around the pipes.
- After connecting the pipes, proceed exactly as directed in the guide to prevent interference with the internal parts.

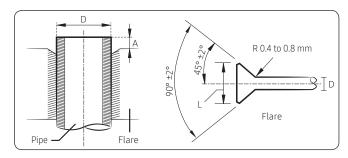
Outdoor Unit

Step 6 Optional: Cutting and flaring the pipes

- 1 Make sure that you have the required tools available. (pipe cutter, reamer, flaring tool, and pipe holder)
- 2 If you wish to shorten the pipes, cut it with a pipe cutter, taking care to ensure that the cut edge remains at a 90° angle with the side of the pipe. Refer to the illustrations below for examples of edges cut correctly and incorrectly.



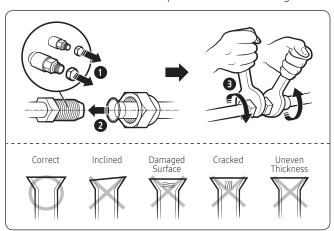
- **3** To prevent any gas from leaking out, remove all burrs at the cut edge of the pipe, using a reamer.
- 4 Slide a flare nut on to the pipe and modify the flare.



Outer diameter (D)	Depth (A)	Flare dimension (L)
ø6.35 mm	14 to 18	8.7 to 9.1 mm
ø9.52 mm	34 to 42	12.8 to 13.2 mm
ø12.70 mm	49 to 61	16.2 to 16.6 mm
ø15.88 mm	68 to 82	19.3 to 19.7 mm
ø19.05 mm	100 to 120	23.6 to 24.0 mm

• 1 N·m = 10 kgf·cm

5 Check that the flaring is correct, referring to the illustrations below for examples of incorrect flaring.



! CAUTION

- If the pipes require brazing ensure that OFN(Oxygen Free Nitrogen) is flowing through the system.
- Nitrogen blowing pressure range is 0.02 to 0.05 MPa.

Step 7 Connecting up and removing air in the circuit

^ CAUTION

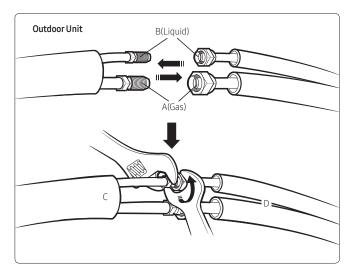
When installing, make sure there is no leakage. When
recovering the refrigerant, ground the compressor first
before removing the connection pipe. If the refrigerant
pipe is not properly connected and the compressor works
with the service valve open, the pipe inhales the air and
it makes the pressure inside of the refrigerant cycle
abnormally high. It may cause explosion and injury.

The air in the indoor unit and in the pipe must be evacuated. If air remains in the refrigerant pipes, it will affect the compressor either reduce cooling/heating capacity or lead to a malfunction. Refrigerant for air purging is not charged in the outdoor unit. Use Vacuum Pump as shown at the right figure.

1 Connect each assembly pipe to the appropriate valve on the outdoor unit and tighten the flare nut.

Outdoor Unit

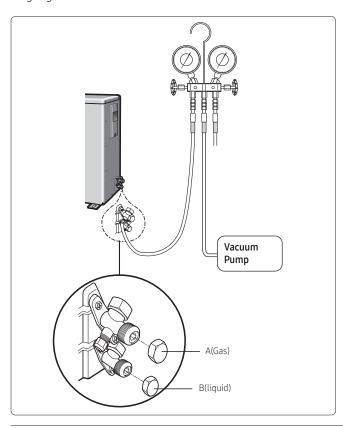
2 Referring to the illustration below, tighten the flare nut on section D first manually and then with a torque wrench, applying the following torque.



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

! CAUTION

- The designs and shape are subject to change according to the model.
- 4 Open the valve of the low pressure side(A) of manifold gauge anticlockwise.



- 5 Purge the air from the system using vacuum pump for about 10 minutes.
 - Close the valve of the low pressure side of manifold gauge clockwise.
 - Make sure that pressure gauge shows -0.1 MPa (-76 cmHg) after about 10 minutes. This procedure is very important to avoid a gas leak.
 - Turn off the vacuum pump.
 - Remove the hose of the low pressure side of manifold gauge.
- 6 Open the stop valve of both liquid and gas sides.
- 7 Mount the valve stem nuts and the service port cap to the valve, and tighten them at the torque of 183kgf•cm with a torque wrench.
- 8 Check for gas leakage.
 - At this time, especially check for gas leakage from the 3-way valve's stem nuts(A port), and from the service port cap.

CAUTION

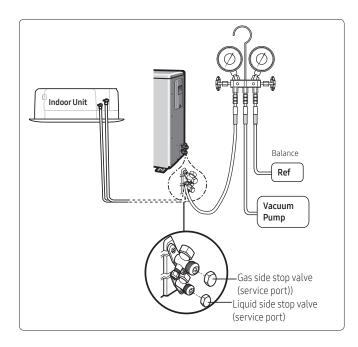
- Connect the indoor and outdoor units using pipes with flared connections (not supplied). For the lines, use insulated, unwelded, degreased and deoxidized copper pipe, (Cu DHP type to ISO 1337 or UNI EN 12735-1), suitable for operating pressures of at least 4200 kPa and for a burst pressure of at least 20700 kPa. Copper pipe for hydro-sanitary applications is completely unsuitable.
- For sizing and limits (height difference, line length, max. bends, refrigerant charge, etc.) see "Connecting refrigerant pipe section".

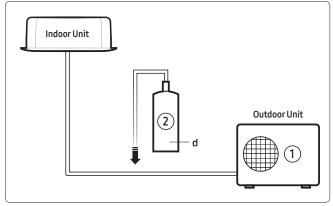
Step 8 Adding refrigerant (R-410A)

The outdoor unit is loaded with sufficient refrigerant for the standard piping. Thus, refrigerant must be added if the piping is lengthened. This operation can only be performed by a qualified refrigeration specialist. To determine the quantity of refrigerant charge, see Calculating the quantity of refrigerant to add on page 69.

- 1 Check if the stop valve is closed completely.
- 2 Charge the refrigerant through the service port of the liquid stop valve.
- 3 If you have any difficulty charging the refrigerant as described in the steps above, take the following steps:
 - a Open the liquid stop valve and gas stop valve.
 - **b** Operate the air conditioner by pressing the K2 key on the outdoor unit PCB.
 - **c** After about 30 minutes, charge the refrigerant through the service port of the gas stop valve.

Outdoor Unit





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

Refrigerant type GWP value R-410A 2088

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

Important information regulation regarding the refrigerant used

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



CAUTION

- 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 recognized person which has responsibility for final check) has to 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.

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



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

Outdoor Unit

Calculating the quantity of refrigerant to add

The quantity of additional refrigerant is variable according to the installation situation. Thus, make sure the outdoor unit situation before adding refrigerant. This operation can only be performed by a qualified refrigeration specialist.

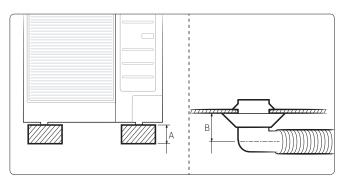
When installing the outdoor unit only

Madal	Interconnection pipe length (m)							
Model	0 to 5	5 to 10	10 to 20	20 to 30	30 to 40	40 to 50		
AC052MXASEH	0	+10 g/m over 5 m						
AC071MXASEH	U			+20 g/m over 5 m				
AC100MXASEH AC120MXASEH		0			+50 g/m	over 30 m		

Step 10 Connecting the drain hose to the outdoor unit

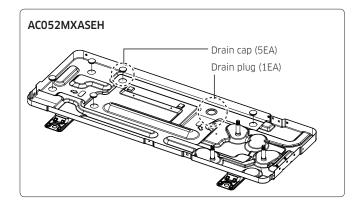
When using the air conditioner in the heating mode, ice may accumulate . During de-icing (defrost operation), the condensed water must be drained off safely. Consequently, you must install a drain hose on the outdoor unit, following the instructions below.

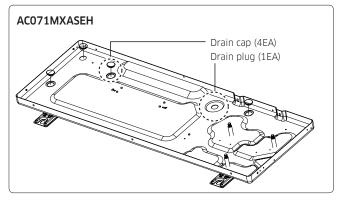
- 1 Make space more than "A" mm between the bottom of the outdoor unit and the ground for installation of the drain hose, as shown in figure.
- 2 Insert the drain plug into the hole on the underside of the outdoor unit.
- **3** Connect the drain hose to the drain plug.
- 4 Ensure that the drained water runs off correctly and safely.

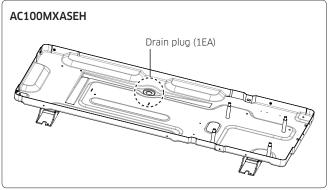


Model	А	В
AC052MXASEH	80mm	13mm
AC071MXASEH	80mm	30mm
AC100MXASEH	50mm	13mm
AC120MXASEH	80mm	13mm

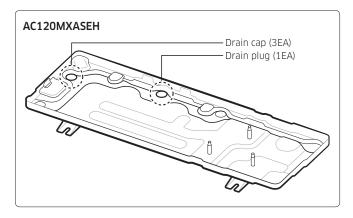
5 Be sure to plug the rest of drain holes not connected with drain plugs using drain caps.







Outdoor Unit

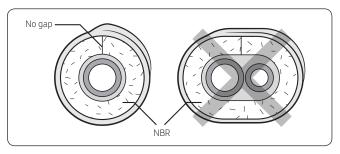


- When installing the product, make sure that the rack is not placed under the drain hole.
- If the product is installed in a region of heavy snow, allow enough separation distance between the product and the ground.

Step 11 Insulating the refrigerant pipes

Once you have checked that there are no leaks in the system, you can insulate the piping and hose.

1 To avoid condensation problems, place an insulator around each refrigerant pipe.



NOTE

- When insulate the pipe, be sure to overlap the insulation.
- The insulation has to be produced in full compliance of European regulation reg. EEC / EU 2037/ 2000 that requires the use of sheaths insulation form without using CFC and HCFC gases for health and the environment.

↑ CAUTION

• When insulating the pipe, use non-slit insulator.

- 2 Select the insulation of the refrigerant pipe.
 - Insulate the gas side and liquid side pipe referring to the thickness according to the pipe size.
 - Less than Indoor temperature of 30°C and humidity of 85% is the standard condition. If installing in a high humidity condition, use one grade thicker insulator by referring to the table below. If installing in an unfavourable conditions, use thicker one.
 - Insulator's heat-resistance temperature should be more than 120°C.

		Insulati (Heating,			
Pipe	Pipe size	Standard [Less than 30°C, 85%]	High humidity [over 30°C, 85%]	Remarks	
		EPDM			
Liquid nino	Ø6.35~Ø9.52	9 t	9 t	Internal	
Liquid pipe	Ø12.7~Ø19.05	13 t	13 t	temperature	
Caspina	Ø6.35	13 t	19 t	is higher than	
Gas pipe	Ø9.52~Ø19.05	19 t	25 t	120°C	

 When installing insulation in places and conditions below, use the same insulation that is used for high humidity conditions.

<Geological condition>

 High humidity places such as shoreline, hot spring, near lake or river, and ridge (when the part of the building is covered by earth and sand.)

Operation purpose condition>

- Restaurant ceiling, sauna, swimming pool etc.
- <Building construction condition>
- The ceiling frequently exposed to moisture and cooling is not covered.
- e.g. The pipe installed at a corridor of a dormitory and studio or near an exit that opens and closes frequently.
- The place where the pipe is installed is highly humid due to the lack of ventilation system.

Step 12 Checking the earthing

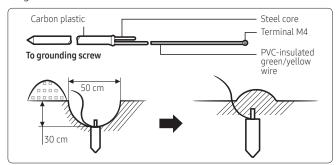
If the power distribution circuit does not have a earthing or the earthing does not comply with specifications, an earthing electrode must be installed. The corresponding accessories are not supplied with the air conditioner.

Outdoor Unit

- 1 Select an earthing electrode that complies with the specifications given in the illustration.
- 2 Connect the flexible hose to the flexible hose port.
 - In damp hard soil rather than loose sandy or gravel soil that has a higher earthing resistance.
 - Away from underground structures or facilities, such as gas pipes, water pipes, telephone lines and underground cables.
 - At least two metres away from a lightening conductor earthing electrode and its cable.

NOTE

 The earthing wire for the telephone line cannot be used to ground the air conditioner.



- **3** Finish wrapping insulating tape around the rest of the pipes leading to the outdoor unit.
- 4 Install a green/yellow coloured earthing wire:
 - If the earthing wire is too short, connect an extension lead in a mechanical way and wrap it with insulating tape (do not bury the connection).
 - Secure the earthing wire in position with staples.

NOTE

- If the earthing electrode is installed in an area with heavy traffic, its wire must be connected securely.
- 5 Carefully check the installation by measuring the earthing resistance with a earth resistance tester. If the resistance is above the required level, drive the electrode deeper into the ground or increase the number of earthing electrodes.
- 6 Connect the earthing wire to the electrical component box inside of the outdoor unit.

Step 13 Performing final check and trial operation

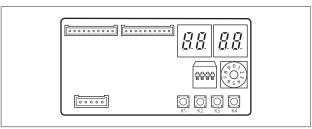
- 1 Check the power supply between the outdoor unit and the auxiliary circuit breaker.
 - 1 phase power supply: L, N
 - 3 phases power supply: R, S, T, N

- 2 Check the indoor unit.
 - a Check that you have connected the power and communication cables correctly. (If the power cable and communication cables one mixed up or connected incorrectly, the PCB will be damaged.)
 - **b** Check that the thermistor sensor, drain pump/hose, and display are connected correctly.
- **3** Press K1 or K2 on the outdoor unit PCB to run the test mode and stop.

	Key Push type				Display					
Key			ype Mode		SEG 2	SEG 3	SEG 4			
		1st	Heating test mode	E	8	8	8			
K1	Short	2nd	Defrost test mode*	В	3	8	8			
		3rd	Stop	8	8	8	8			
			Cooling test	Е	8	8	8			
1/2	Chart	2nd	Inverter check	В	8	8	8			
KZ	K2 Short	3rd	Pump down	Е	В	8	8			
		4th	Stop	8	8	8	8			
K3	Short	1st	Reset Release Eco mode*	8	8	8	8			

* Defrost test mode

Condition 1: The outdoor temperature is under 10°C Condition 2: All the temperature conditions should meet the defrost conditions



- **4** After 12 minutes of stationary condition check each indoor unit air treatment:
 - Cooling mode (indoor unit check) → Inlet air temp. -Outlet air temp.: From 10°C to 12°C
 - Heating mode (indoor unit check) → Outlet air temp. -Inlet air temp.: From 11°C to 14°C
 - In heating mode, the indoor fan motor can remain off to avoid cold air blown into air-conditioned space.
- 5 How to reset the power supply of the outdoor unit and deactivate the eco mode (standby mode):
 - Press K3 button over1 sec to reset the power supply of the outdoor unit and deactivate the eco mode (standby mode).
- * Eco mode: Standby for minimizing power onsumption

Outdoor Unit

6 View mode: When the K4 switch is pressed, you can see information about our system state as below.

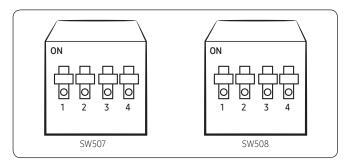
K4 short push	Display contents	SEG1	SEG2	SEG3	SEG4	Unit
1	Order frequency	1	Hundreds digit	Tens digit	Units digit	Hz
2	Current frequency	2	Hundreds digit	Tens digit	Units digit	Hz
3	The number of current indoor units	3	Hundreds digit	Tens digit	Units digit	EA
4	Ambient temperature sensor	4	+ / -	Tens digit	Units digit	°C
5	Compressor discharge sensor	5	Hundreds digit	Tens digit	Units digit	°C
6	Eva-Mid sensor	6	+ / -	Tens digit	Units digit	°C
7	Condensor sensor	7	+ / -	Tens digit	Units digit	°C
8	Current	8	Tens digit	Units digit	The first place of decimals	А
9	Fan RPM	9	Thousands digit	Hundreds digit	Tens digit	rpm
10	Target discharge temperature	А	Hundreds digit	Tens digit	Units digit	°C
11	EEV	В	Hundreds digit	Tens digit	Units digit	step
12	The capacity sum of indoor units	С	Tens digit	Unit digit	The first place of decimals	kW
13	Protective control	D	0: Cooling 1: Heating	Protective control 0: No Protective control 1: Freezing 2: Non-stop defrosting 3: Over-load 4: Discharge 5: Total electric current	Frequency status 0: Normal 1: Hold 2: Down 3: Up_limit 4: Down_limit	-
14	IPM temperature	Е	Hundreds digit	Tens digit	Units digit	-
15	The number of indoor units	F	-	-	-	-

		Display contents	SEG1	SEG2	SEG3	SEG4
K4 long push	-	Main micom version	Year (Hex)	Month (Hex)	Date (Tens digit)	Date (Units digit)
	After short push 1	Inverter micom version	Year (Hex)	Month (Hex)	Date (Tens digit)	Date (Units digit)
	After short push 1	E2P version	Year (Hex)	Month (Hex)	Date (Tens digit)	Date (Units digit)

• Long push K4 (Main micom ver.) → short push 1 more (Inv. micom ver.) → short push 1 more (E2P. ver.)

Outdoor Unit

7 DIP switch option



• SW507 option

	On (default)	Off
Switch 1	-	-
Switch 2	Disable snow prevention control	Enable snow prevention control
Switch 3	Cilanaa mada antian	
Switch 4 Silence mode op		oue option

Switch 3 Switch 4 On On		Operation	
		Disable Silence mode	
On Off		Silence mode step 1	
Off On		Silence mode step 2	
Off Off		Silence mode step 3	

- When snow prevention mode is in use, eco mode (standby mode) will not work.
- SW508 option

	On (default)	Off
Switch1	Auto Silence mode	Manual Silence mode
Switch 2	-	-
Switch 3	-	-
Switch 4	-	-

- 8 Setting the address manually(high level controller)
 - **a** Turn off the air conditioner, press and hold the K2 switch for a while to enter the Option mode. (Initial value: 00AU)
 - You cannot enter the Option mode when the air conditioner is running.

b Set the address in SEG3 and SEG4 by pressing the K2 switch shortly.

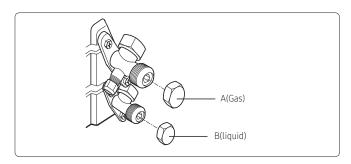
Option	SEG1	SEG2	SEG3	SEG4	Function
Channel address	0	0	А	U	The address is set automatically.
			00 t	:0 15	The address is set manually. You can set a value from 0 to 15.

- c Press and hold the K2 switch for a while to save the address and exit the Option mode. Each segment will flicker for 3 seconds in the current display state. Then if you need to change the address, reset the system, and then repeat all steps again. Press and hold the K1 switch to exit without save.
- * If you want to restore the setting to factory default, press and hold the K4 button while you are in the option setting mode.
 - If you press and hold the K4 button, setting will be restored to factory default but it doesn't mean that restored setting is saved.Press and hold the K2 button. When the segments shows that tracking mode is in progress, setting will be saved.

Pumping down refrigerant

Pump down will be carried out when an evaporator is replaced or when the unit is relocated in another area.

- 1 Remove the cap from the low pressure side.
- 2 Turn the low pressure side valve clockwise to close and connect a pressure gauge (low pressure side) to the service valve, and open the valve again.
- **3** Set the unit to the cooling Test mode by pushing K2 button. (Check if the compressor is operating.)
- 4 Turn the high pressure side valve clockwise to close.
- 5 When the pressure gauge indicates "0" turn the low pressure side valve clockwise to close.
- **6** Stop operation of the air conditioner by pushing K3 button.
- 7 Close the each cap of valve.



Outdoor Unit

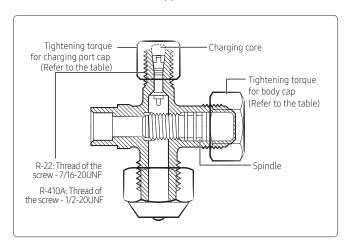
Relocating the indoor and outdoor units

- 1 Pump down refrigerant. See **Pumping down refrigerant** on page **73**.
- 2 Remove the power cord.
- 3 Disconnect the assembly cable from the indoor and outdoor units.
- 4 Remove the flare nuts connecting the indoor units and the pipes. At this time, cover the pipes of the indoor unit and the other pipes using a cap or vinyl plug to avoid foreign material entering.
- 5 Disconnect the pipes connected to the outdoor units. At this time, cover the valve of the outdoor units and the other pipes using a cap or vinyl plug to avoid foreign material entering.
 - Note: Make sure you do not bend the connection pipes in the middle and store together with the cables.
- **6** Move the indoor and outdoor units to a new location.
- 7 Remove the mounting plate for the indoor unit and move it to a new location.

Using the stop valve

Opening the stop valve

- 1 Open the cap and turn the stop valve anticlockwise by using a hexagonal wrench.
- 2 Turn it until the axis is stopped.



3 Tighten the cap securely.

	Tightening torque			
Outer Diameter (mm)	Body cap (N•m)	Charging port cap (N•m)		
Ø6.35	20 to 25			
Ø9.52	20 to 25			
Ø12.70	25 to 30	10 to 12		
Ø15.88	30 to 35			
Over Ø19.05	35 to 40			

(1 N•m=10 kgf•cm)



- Do not apply excessive force to the stop valve and always use special instruments. Otherwise, the stopping box can be damaged and the back sheet can leaks.
- If the watertight sheet leaks, turn the axis back by half, tighten the stopping box, then check the leakage again. If there is no leakage any more, tighten the axis entirely.

Closing the stop valve

- 1 Remove the cap.
- **2** Turn the stop valve clockwise by using a hexagonal wrench.
- **3** Tighten the axis until the valve reached the sealing point.
- 4 Tighten the cap securely.

A CAUTION

- When you use the service port, always use a charging hose, too.
- Check the leakage of refrigerant gas after tightening the cap.
- Must use a spanner and wrench when you open/tighten the stop valve.

15. Accessory

Controller

Classification	Product	Image	Model	Remark
	DMS 2.0		MIM-D00AN	
Intergrated Management System	DMS 2.5		MIM-D01AN	
	S-NET 3		MST-P3P	
			MIM-B17N	
	BACnet G/W	and the state of t	MIM-B17BN	
Buiding Management	LONWORKS G/W		MIM-B18N	
System	LUNWURKS G/W	Section 2	MIM-B18BN	
	SIM (Signal Interface Module)		MIM-B12N	
	On/Off Controller		MCM-A202DN	
Centralized Control System	Touch Controller	Section of the Control of the Contro	MCM-A300N	
	Wi-Fi Kit	100(100)	MIM-H03N	
	Wireless remote Controller		MR-EH00	Except for 360 Cassette
	Wired remote Controller	SAMEONG .	MWR-WE10N	
Individual			MWR-WE11N	Include 360 Cassette Airflow Control function
Control System			MWR-SH00N	Simple Type
		24" t		Touch Simple Type

15. Accessory

Controller

Classification	Product	lmage	Model	Remark
	Zone Controller (Master controller +Damper controller)		MWR-ZS00N	
Zone Control System	Zone Controller (Master controller)		MWR-ZS10N	
	External room sensor		MRW-TS	
	External room sensor	SAMSUNG	MRW-TA	
	Compatible interface module		MIM-N01	
Others	External contact interface module		MIM-B14	
	S-Converter		MIM-C02N	
	Wireless signal receiver	181010 €	MRK-A10N	Duct type only

• In case you want more information about the accessories, please refer to the control and accessories TDB on pvi.samsung.com site.

