

# LG AIRCONDITIONER ENGINEERING PRODUCT DATA BOOK

Inverter Single  
Wall Mounted  
(60Hz/R410A)

6RM10-02A



**LG**

Life's Good

# Inverter Single-60Hz (R410A)

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## Publication history

Pib.No	Outdoor Units	Notes	Publication in
6RMI0-01A	All models	Added N.A models	Apr.2010
6RMI0-01B	All models	Change operation range Delete word "Libero"	Nov.2010
6RMI0-02A	LAN090HSV / LAN120HSV LAN180HSV / LAN240HSV LS307HV	Add '11 New models	Mar. 2011
	All models	Change unit & Etc.	

## Test condition of international standard

CLASSIFICATION			KSC 9306	ISO 5151	ARI 210/240	AHAM	AS 1861.1	SSA 385
Cooling Capacity	Indoor	DB°C(°F)	27.0	27.0	26.7(80)	26.7(80)	27.0	29.0
		WB°C(°F)	19.5	19.0	19.4(67)	19.4(67)	19.0	19.0
	Outdoor	DB°C(°F)	35.0	35.0	35.0(95)	35.0(95)	35.0	46.0
		WB°C(°F)	24.0	24.0	23.9(75)	23.9(75)	24.0	24.0
Heating Capacity	Indoor	DB°C(°F)	20.0	20.0	21.1(70)	21.1(70)	21.0	21.0
		WB°C(°F)	15.0	15.0	15.6(60)	15.6(60)	15.0	15.5
	Outdoor	DB°C(°F)	7.0	7.0	8.3(47)	8.3(47)	7.0	7.0
		WB°C(°F)	6.0	6.0	6.1(43)	6.1(43)	6.0	6.0
Maximum Cooling Operating	Indoor	DB°C(°F)	32.0	32.0	26.7(80)	32.2(90)	32.0	29.0
		WB°C(°F)	23.0	23.0	19.4(67)	22.8(73)	23.0	19.0
	Outdoor	DB°C(°F)	43.0	43.0	46.1(115)	43.3(110)	43.0	54.0
		WB°C(°F)	26.0	26.0	23.9(75)	25.6(78)	26.0	24.0
Maximum Heating Operating	Indoor	DB°C(°F)	27.0	27.0	26.7(80)	26.7(80)	-	-
		WB°C(°F)	19.0	19.0	19.4(67)	22.8(73)	-	-
	Outdoor	DB°C(°F)	21.0	24.0	23.9(75)	23.9(75)	-	-
		WB°C(°F)	15.0	18.0	18.3(65)	18.3(65)	-	-
Enclosure Sweat / Condensate Disposal	Indoor	DB°C(°F)	27.0	27.0	26.7(80)	26.7(80)	27.0	27.0
		WB°C(°F)	24.0	24.0	23.9(75)	23.9(75)	24.0	24.0
	Outdoor	DB°C(°F)	27.0	27.0	26.7(80)	26.7(80)	27.0	27.0
		WB°C(°F)	24.0	24.0	23.9(75)	23.9(75)	24.0	24.0
Freeze-up/ Low Temperature	Indoor	DB°C(°F)	21.0	21.0	19.4(67)	21.1(70)	21.0	21.0
		WB°C(°F)	15.0	15.0	13.9(57)	15.6(60)	16.0	16.0
	Outdoor	DB°C(°F)	21.0	21.0	19.4(67)	21.1(70)	21.0	21.0
		WB°C(°F)	15.0	15.0	13.9(57)	15.6(60)	16.0	16.0

KS : Korea Standard  
 ISO : International Standard Organization  
 ARI : Airconditioning and Refrigeration Institute  
 AHAM : Association of Home Appliance Manufacturers

AS : Australia Standard  
 SSA : Saudi Arabian Standard

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## General Description

Split type of Air conditioners are known by the category name of Wall Mounted Type of units. These units can be easily installed in a small space and have exceptional Cooling capacity. Designed for Low-noise operation, it ensures a pleasant air conditioned environment.

LG Offers various types of units to its customers to suit for the best application and requirement. The following are the important categories offered by LG :

- 1) General Wall Mounted Type Units : Units with Simplicity in design.
- 2) Art Cool Units : A new concept of cooling introduced by LG in the field of Air Conditioning.
- 3) Inverter Units : These units are capable of minimising the Power consumption with the unique inverter technology.

Some of the Important Features of these units are listed below :

- 1) Long Term Money Saving : By providing the Features such as Gold Fin, Auto Clean etc. to maintain the same performance for years.
- 2) Best Comfort : With Features such as Sleep Mode, Timer, Auto Restart etc.

The Units are available with many standard and optional features which give our Customers the choice to select the unit of their own desire. For details refer to the detailed specification followed after this description.

**LG Electronics Inc.**  
**Air Conditioning Company**


# 1. Models Line up


## 1.1 Indoor Unit




Indoor Type \ kW (kBtu/h)	2.63(9)	3.51(12)	4.68(16)	5.27(18)	7.03(24)	8.79(30)	10.55(36)
	ASNW093BRU1 (LAN090HSV)	ASNW123BRU1 (LAN120HSV)		ASNW183CRU1 (LAN180HSV)	ASNW243CRU1 (LAN240HSV)		
	ASNW093B1U1 (LSN091HSV)	ASNW123B1U1 (LSN121HSV)	ASNW163C2U1 (LSN161HSV)	ASNW183C2U2 (LSN181HSV)			
	ASNW093ERH1 (LAN096HV)	ASNW123ERH1 (LAN126HV)		ASNW1838RH1 (LAN186HV)	ASNW2438RH1 (LAN246HV)		
					ASNW2435SZ1 (LSN246HV)		
					ASNW243DGU1 (LSN240HSV)	ASNW303DGH1 (LSN306HV) ASNW303DGU1 (LSN307HV)	ASNW363DGU1 (LSN360HV)

## 1.2 Outdoor Unit

Heat pump		ASUW093B1U1(LSU091HSV) ASUW093BRU1 (LAU090HSV)	ASUW123B1U1(LSU121HSV) ASUW123BRU1 (LAU120HSV)
Total capacity index of connectable indoor units	kW	2.63	3.51
	kBtu/h	9	12
Power supply		1Φ / 208~230V / 60Hz	
Chassis		<p style="text-align: center;">UL2</p> 	

Heat pump		ASUW163C2U1(LSU161HSV)	ASUW1838UH1(LAU186HV)
Total capacity index of connectable indoor units	kW	4.68	5.27
	kBtu/h	16	18
Power supply		1Φ / 208~230V / 60Hz	
Chassis		<p style="text-align: center;">UE</p> 	

Heat pump		ASUW093EUH1(LAU096HV)	ASUW123EUH1(LAU126HV)
Total capacity index of connectable indoor units	kW	2.63	3.51
	kBtu/h	9	12
Power supply		1Φ / 208~230V / 60Hz	
Chassis		<p style="text-align: center;">UL</p> 	

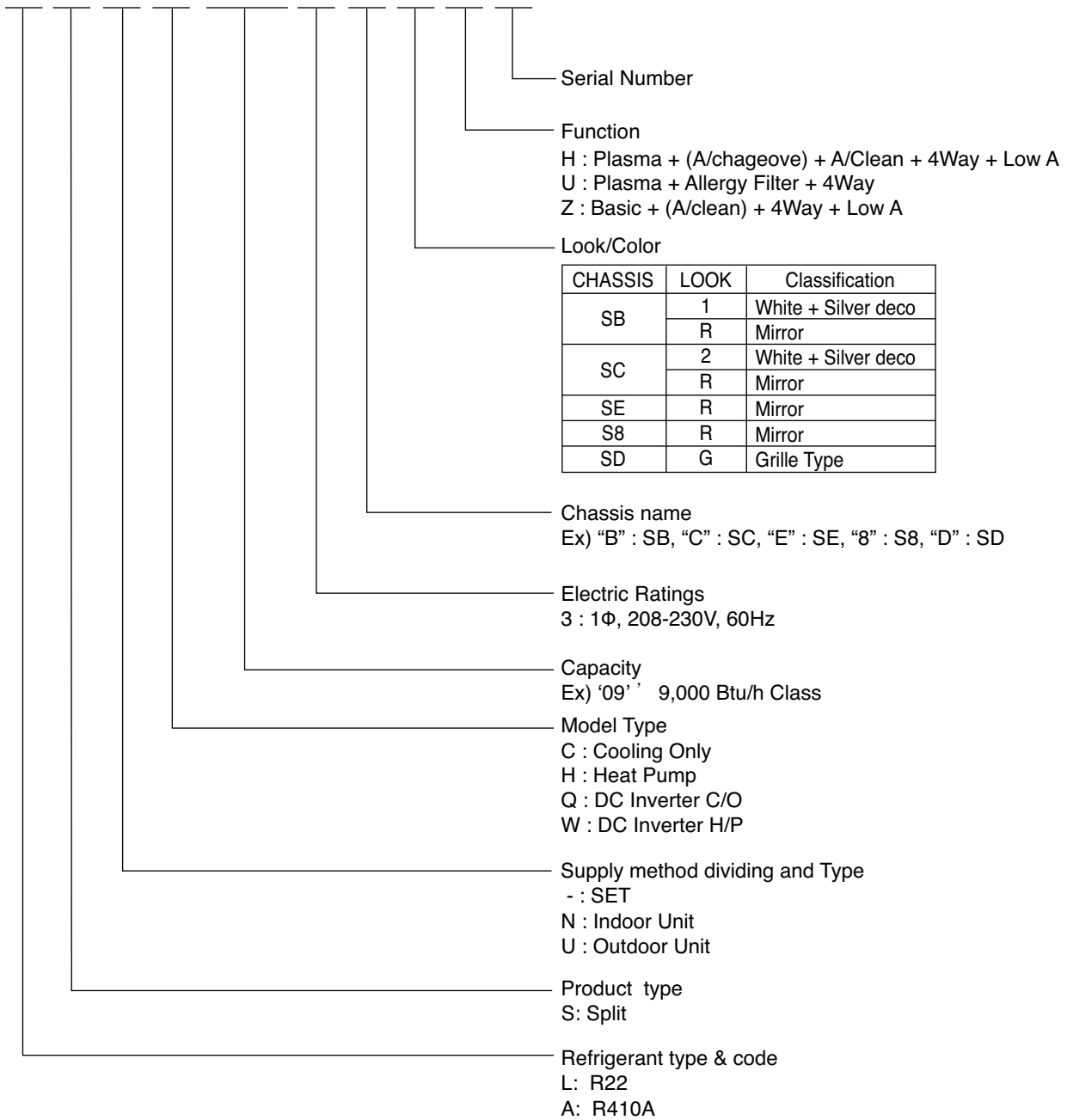
Heat pump		ASUW183C2U2(LSU181HSV) ASUW183CRU1 (LAU180HSV)	ASUW243DGU1 (LSU240HSV) ASUW243CRU1 (LAU240HSV)
Total capacity index of connectable indoor units	kW	5.27	7.03
	kBtu/h	18	24
Power supply		1Φ / 208~230V / 60Hz	
Chassis		UE1+	
Heat pump		ASUW2435SZ1(LSU246HV), ASUW2438UH1(LAU246HV)	ASUW303DGH1(LSU306HV)
Total capacity index of connectable indoor units	kW	7.03	8.79
	kBtu/h	24	30
Power supply		1Φ / 208~230V / 60Hz	
Chassis		UE1	
Heat pump		ASUW303DGU1 (LSU307HV)	ASUW363DGU1(LSU360HV)
Total capacity index of connectable indoor units	kW	8.79	10.55
	kBtu/h	30	36
Power supply		1Φ / 208~230V / 60Hz	
Chassis		UE1+	



## 2. Nomenclature

### • Model Number

**A S - W 0 9 3 B 1 U 1**



## 3. Specifications

### High Efficiency Inverter(#1)

Sales Model			LS091HSV	LS121HSV	
Models		Unit	AS-W093B1U1	AS-W123B1U1	
Cooling Capacity		kW	0.89~2.64~3.70	0.89~3.28~4.30	
		Btu/h.	3,070~9,000~12,620	3,070~11,200~14,660	
Heating Capacity		kW	0.89~3.17~5.00	0.89~3.90~6.00	
		Btu/h.	3,070~10,800~17,060	3,070~13,300~20,470	
Power Input	Cooling	W	677	896	
Running Current	Cooling/Heating	A	3.0 / 3.7	4.2 / 4.9	
Starting Current	Cooling/Heating	A	3.0 / 3.7	4.2 / 4.9	
EER		W/W	3.90	3.66	
		Btu/h.W	13.3	12.5	
SEER			20	20	
HSPF			11	11.3	
Power Supply		Ø / V / Hz	1/208-230/60	1/208-230/60	
Power Factor		%	93	97.1	
Air Flow Rate	Indoor,Max	m <sup>3</sup> /min(CFM)	11.0(388)	12.0(423)	
	Outdoor,Max	m <sup>3</sup> /min(CFM)	33(1,165)	33(1,165)	
Dehumidification		pts/h	2.6	3.0	
Sound Level	Indoor,H/M/L	dB(A)±3	38 / 33 / 24 / 19	39 / 33 / 24 / 19	
	Outdoor,Max	dB(A)±3	45	45	
Refrigerant & Charge (at 7.5 m)		g(oz)	R410A, 1,000(35.3)	R410A, 1,000(35.3)	
Additional Refrigerant charge		g(m/oz/ft)	20(0.22)	20(0.22)	
Compressor	Type		Rotary	Rotary	
	Model		5RS102XAA21	5RS102XAA21	
	Motor Type		Brushless DC Motor	Brushless DC Motor	
	Oil Type		PVE(FV50S)	PVE(FV50S)	
	Oil Charge	cc	320	320	
	O.L.P. name		-	-	
Fan(Indoor)	Type		Cross Flow Fan	Cross Flow Fan	
	Motor Output	W	20	20	
Fan(Outdoor)	Type		Propeller	Propeller	
	Motor Type		BLDC	BLDC	
	Motor Output	W	43	43	
Circuit Breaker*		A	15	15	
Minimum Circuit Ampacity		A	8.2	8.2	
Power Supply Cable		No.*mm <sup>2</sup>	3*1.0	3*1.0	
Power and Transmission Cable No.*mm <sup>2</sup>			4*1.0 (Including Earth)	4*1.0 (Including Earth)	
Piping Connections	Liquid Side	mm(in)	6.35(1/4)	6.35(1/4)	
	Gas Side	mm(in)	9.52(3/8)	9.52(3/8)	
Drain Hose(O.D / I.D.)		mm(in)	21.5 / 16.0(0.85 / 0.63)	21.5 / 16.0(0.85 / 0.63)	
Dimensions	Indoor (W*H*D)	mm	885*285*210	885*285*210	
		inch	34-13/16*11-1/4*8-1/4	34-13/16*11-1/4*8-1/4	
	Outdoor (W*H*D)	mm	770*545*288	770*545*288	
		inch	30-5/16*21-7/16*11-5/16	30-5/16*21-7/16*11-5/16	
Net Weight	Indoor	kg(lbs)	11(24.5)	11(24.3)	
	Outdoor	kg(lbs)	35(77.2)	35(77.2)	
Gross Weight	Indoor	kg(lbs)	13.5(29.7)	13.5(29.7)	
	Outdoor	kg(lbs)	37(81.6)	37(81.6)	
Operation Range	Cooling(Outdoor)	°C(°F)	-10~48(14~118.4)	-10~48(14~118.4)	
	Heating(Outdoor)	°C(°F)	-10(-15)~24(14.0~75.2)	-10(-15)~24(14.0~75.2)	
Piping Length	Min	m(ft)	2(6.6)	2(6.6)	
	Max	m(ft)	20(65.6)	20(65.6)	
Chargeless		m(ft)	12.5(41.0)	12.5(41.0)	
Max. Elevation Difference		m(ft)	10(32.8)	10(32.8)	
Tool Code(Chassis)			SB + UL2	SB + UL2	
Functions	Indoor + Outdoor				
	Temperature Control		Thermistor	Thermistor	
	Allergy free filter		O	O	
	Plasma Filter		O	O	
	Prefilter(washable/anti-fungus)		O	O	
	Auto Clean		O	O	
	CHAOS Wind(Auto Wind)		O	O	
	Steps, Fan/Cool/Heat		5/6/5	5/6/5	
	Airflow Direction Control(up& Down)		Auto	Auto	
	Airflow Direction Control(left & right)		Auto	Auto	
	Remote Controller Type		Wireless LCD(EZ-Remocon)	Wireless LCD(EZ-Remocon)	
	Setting Temperature Range	Cooling	°C(°F)	18 ~ 30 (64.4 ~ 86)	18 ~ 30 (64.4 ~ 86)
		Heating	°C(°F)	16 ~ 30 (60.8 ~ 86)	16 ~ 30 (60.8 ~ 86)
	Auto Operation (Micom Control)			-	-
	Auto Changeover (Micom Control)			O	O
	Self Diagnosis			O	O
	Timer			24h, On/Off	24h, On/Off
	Sleep Operation			O	O
	Soft Dry Operation			O	O
	Restart Delay(minute)			3	3
	Deice Control(Defrost)			O	O
	Hot Start			O	O
	Jet Cool			O	O
	Low Ambient Operation			O	O
	Special Function			-	-

Note : O : Applie, X : Not applied, - : No relation

• Filters are optional in some specific areas.

• For Circuit Breaker Rating, please conform to local standards whenever necessary.

Sales Model			LS161HSV	LS181HSV	LS240HSV	
Models		Unit	AS-W163C2U1	AS-W183C2U2	AS-W243DGU1	
Cooling Capacity		kW	0.90~4.78~6.00	0.90 ~ 5.33 ~ 8.65	0.90 ~ 6.45 ~ 8.80	
		Btu/h.	3,070~16,300~20,472	3,070~18,200~29,515	3,070~22,000~30,030	
Heating Capacity		kW	0.90~5.92~9.00	0.90 ~ 6.45 ~ 11.40	0.90 ~ 8.09 ~ 11.40	
		Btu/h.	3,070~20,200~30,709	3,070~22,000~38,898	3,070~27,600~38,898	
Power Input	Cooling	W	1304	1447	1760	
Running Current	Cooling/Heating	A	6.3 / 7.5	6.3 / 8.2	7.9 / 10.7	
Starting Current	Cooling/Heating	A	6.3 / 7.5	6.3 / 8.2	7.9 / 10.7	
EER		W/W	3.66	3.69	3.66	
		Btu/h.W	12.5	12.6	12.5	
SEER			19	18.2	18.9	
HSPF			9.7	9.7	10.2	
Power Supply		Ø / V / Hz	1/208-230/60	1/208-230/60	1/208-230/60	
Power Factor		%	98.8	98.2	96.9	
Air Flow Rate	Indoor,Max	m³/min(CFM)	19.5(689)	22(777)	25(883)	
	Outdoor,Max	m³/min(CFM)	60(2,119)	60(2,119)	60(2,119)	
Dehumidification		pts/h	4.0	5.5	6.0	
Sound Level	Indoor,H/M/L	dB(A)±3	42 / 38 / 34	45 / 40 / 35	46 / 43 / 39	
	Outdoor,Max	dB(A)±3	51	53	54	
Refrigerant & Charge (at 7.5 m)		g(oz)	R410A, 1,350(47.62)	R410A, 1,800(63.5)	R410A, 2,000(70.5)	
Additional Refrigerant charge		g/m(oz/ft)	20(0.21)	35(0.38)	35(0.38)	
Compressor	Type		Twin Rotary	Twin Rotary	Twin Rotary	
	Model		GKT141DAA	GJT240DAA	GJT240DAA	
	Motor Type		Brushless DC Motor	Brushless DC Motor	Brushless DC Motor	
	Oil Type		FVC68D	PVE(FVD68C)	PVE(FVD68C)	
	Oil Charge	cc	570	900	900	
	O.L.P. name		-	-	-	
Fan(Indoor)	Type		Cross Flow Fan	Cross Flow Fan	Cross Flow Fan	
	Motor Output	W	30	76.1	76.1	
Fan(Outdoor)	Type		Propeller	Propeller	Propeller	
	Motor Type		BLDC	BLDC	BLDC	
	Motor Output	W	84	124	124	
Circuit Breaker*		A	20	25	25	
Minimum Circuit Ampacity		A	12.4	16.4	16.7	
Power Supply Cable		No.*mm²	3*1.5	3*2.5	3*2.5	
Power and Transmission Cable No.*mm²		No.*mm²	4*1.0 (Including Earth)	4*1.0 (Including Earth)	4*1.0 (Including Earth)	
Piping Connections	Liquid Side	mm(in)	6.35(1/4)	9.52(3/8)	9.52(3/8)	
	Gas Side	mm(in)	12.70(1/2)	15.88(5/8)	15.88(5/8)	
Drain Hose(O.D / I.D.)		mm(in)	21.5 / 16.0(0.85 / 0.63)	21.5 / 16.0(0.85 / 0.63)	21.5 / 16.0(0.85 / 0.63)	
Dimensions	Indoor (W*H*D)	mm	1,030*325*250	1,030*325*250	1209*346*205	
		inch	40-1/2*12-3/4*9-7/8	40-9/16*12-13/16*9-7/8	47-5/8*13-5/8*8-1/16	
	Outdoor (W*H*D)	mm	870*655*320	870*800*320	870*800*320	
		inch	34-5/16*25-13/16*12-5/8	34-5/16*31-1/2*12-5/8	34-5/16*31-1/2*12-5/8	
Net Weight	Indoor	kg(lbs)	17(37.5)	17(37.5)	18(39.7)	
	Outdoor	kg(lbs)	46(101.4)	60(132.3)	60(132.3)	
Gross Weight	Indoor	kg(lbs)	19(41.9)	19(41.9)	20(44.1)	
	Outdoor	kg(lbs)	53(116.8)	64(141.1)	64(141.1)	
Operation Range	Cooling(Outdoor)	°C(°F)	-10~48(14~118.4)	-10~48(14~118.4)	-10~48(14~118.4)	
	Heating(Outdoor)	°C(°F)	-10(-15)~24(14.0~75.2)	-10(-15)~24(14.0~75.2)	-10(-15)~24(14.0~75.2)	
Piping Length	Min	m(ft)	-	-	-	
	Max	m(ft)	20(65.6)	30(98.4)	30(98.4)	
Chargeless		m(ft)	-	-	-	
Max. Elevation Difference		m(ft)	15(49.2)	15(49.2)	15(49.2)	
Tool Code(Chassis)	Indoor + Outdoor		SC + UE	SC + UE1+	SD + UE1+	
Functions	Temperature Control		Thermistor	Thermistor	Thermistor	
	Allergy free filter		O	O	O	
	Plasma Filter		O	O	O	
	Prefilter(washable/anti-fungus)		O	O	O	
	Auto Clean		O	O	O	
	CHAOS Wind(Auto Wind)		O	O	O	
	Steps, Fan/Cool/Heat		5/6/5	5/6/5	3/4/3	
	Airflow Direction Control(up& Down)		Auto	Auto	Auto	
	Airflow Direction Control(left & right)		Auto	Auto	Auto	
	Remote Controller Type		Wireless LCD(EZ-Remocon)	Wireless LCD(EZ-Remocon)	Wireless LCD(EZ-Remocon)	
	Setting Temperature	Cooling	°C(°F)	18 ~ 30 (64.4 ~ 86)	18 ~ 30 (64.4 ~ 86)	18 ~ 30 (64.4 ~ 86)
		Heating	°C(°F)	16 ~ 30 (60.8 ~ 86)	16 ~ 30 (60.8 ~ 86)	16 ~ 30 (60.8 ~ 86)
	Auto Operation (Micom Control)		O	O	O	
	Auto Changeover (Micom Control)		O	O	O	
	Self Diagnosis		O	O	O	
	Timer		24h, On/Off	24h, On/Off	24h, On/Off	
	Sleep Operation		O	O	O	
	Soft Dry Operation		O	O	O	
	Restart Delay(minute)		3	3	3	
	Deice Control(Defrost)		O	O	O	
	Hot Start		O	O	O	
	Jet Cool		O	O	O	
	Low Ambient Operation		O	O	O	
Special Function		-	-	-		

Note : O : Applie, X : Not applied, - : No relation

• Filters are optional in some specific areas.

• For Circuit Breaker Rating, please conform to local standards whenever necessary.

## Artcool Inverter(#1)

Sales Model			LA096HV	LA126HV	LA186HV	LA246HV	
Models		Unit	AS-W093ERH1	AS-W123ERH1	AS-W1838RH1	AS-W2438RH1	
Cooling Capacity		kW	0.89~2.64~3.70	0.89~3.46~4.04	1.76~5.16~5.80	3.87~7.09~7.74	
		Btu/h.	3,070~9,000~12,620	3,070~11,800~13,800	6,000~17,600~19,800	13,200~24,200~25,500	
Heating Capacity		kW	0.89~3.43~5.00	0.89~4.43~5.49	1.40~5.98~6.65	3.37~7.91~8.88	
		Btu/h.	3,070~11,700~17,060	3,070~15,100~18,720	4,800~20,400~22,700	12,300~27,000~29,700	
Power Input	Cooling	W	714	1157	1814	2802	
Running Current	Cooling/Heating	A	3.2 / 4.2	5.0 / 5.9	7.3 / 7.3	11.0 / 13.0	
Starting Current	Cooling/Heating	A	3.2 / 4.2	5.0 / 5.9	7.3 / 7.3	11.0 / 13.0	
EER		W/W	3.69	2.99	2.84	2.87	
		Btu/h.W	12.6	10.2	9.7	9.3	
SEER			19.0	18.0	15.0	15.6	
HSPF			9.2	8.9	7.7	8.0	
Power Supply		Ø - V - Hz	1-208/230-60	1-208/230-60	1-208/230-60	1-208/230-60	
Air Flow Rate	Indoor,Max	m <sup>3</sup> /min(CFM)	10.5(371)	10.5(371)	16(565)	20.3(717)	
	Outdoor,Max	m <sup>3</sup> /min(CFM)	27(954)	27(954)	42(1483)	58(2048)	
Dehumidification		pts/h	2.5	3.2	4.4	5.7	
Sound Level	Indoor,H/M/L	dB(A)±3	36 / 33 / 30	39 / 37 / 30	40 / 37 / 34	45 / 40 / 37	
	Outdoor,Max	dB(A)±3	45	45	53	54	
Refrigerant & Charge (at 7.5 m)		g(oz)	R410A, 1,000(35.3)	R410A, 1,000(35.3)	R410A, 1,200(42.3)	R410A, 1,800(63.0)	
Additional Refrigerant charge		g/m(oz/ft)	20(0.22)	20(0.22)	20(0.21)	30(0.32)	
Compressor	Type		Rotary	Rotary	E-Scroll	Rotary	
	Model		5RS102XAA21	5RS102XAA21	5CS130XCC03	5KD240XCA21	
	Motor Type		Brushless DC Motor	Brushless DC Motor	Brushless DC Motor	Brushless DC Motor	
	Oil Type		PVE(FV50S)	PVE(FV50S)	RB68A	PVE(FV50S)	
	Oil Charge	cc	320	320	480	900	
	O.L.P. name		-	-	-	-	
Fan(Indoor)	Type		Cross Flow Fan	Cross Flow Fan	Cross Flow Fan	Cross Flow Fan	
	Motor Output	W	20	20	30	30	
Fan(Outdoor)	Type		Propeller	Propeller	Propeller	Propeller	
	Motor Type		BLDC	BLDC	AC Induction	AC Induction	
	Motor Output	W	43	43	65	76.5	
Circuit Breaker*		A	15	15	20	25	
Minimum Circuit Ampacity		A	8.2	9.9	12.4	16.7	
Power Supply Cable		No.*mm <sup>2</sup>	3*1.0	3*1.0	3*1.5	3*2.5	
Power and Transmission Cable No.*mm <sup>2</sup>		No.*mm <sup>2</sup>	4*1.0 (Including Earth)	4*1.0 (Including Earth)	4*1.5 (Including Earth)	4*2.5 (Including Earth)	
Piping Connections	Liquid Side	mm(in)	6.35(1/4)	6.35(1/4)	6.35(1/4)	9.52(3/8)	
	Gas Side	mm(in)	9.52(3/8)	9.52(3/8)	12.70(1/2)	15.88(5/8)	
Drain Hose(O.D / I.D.)		mm(in)	21.5 / 16.0(0.85 / 0.63)	21.5 / 16.0(0.85 / 0.63)	21.5 / 16.0(0.85 / 0.63)	21.5 / 16.0(0.85 / 0.63)	
Dimensions	Indoor (W*H*D)	mm	912*282*165	912*282*165	1,107*299*200	1,107*299*200	
		inch	35-7/8*11-1/8*6-1/2	35-7/8*11-1/8*6-1/2	43-11/16*11-3/4*7-7/8	43-11/16*11-3/4*7-7/8	
	Outdoor (W*H*D)	mm	770*545*245	770*545*245	870*655*320	870*800*320	
		inch	30-5/16*21-1/2*9-5/8	30-3*21-5*9.6	34-5/16*25-13/16*12-5/8	34-5/16*31-1/2*12-5/8	
Net Weight	Indoor	kg(lbs)	10(22)	10(22)	15(33.1)	15(33.1)	
	Outdoor	kg(lbs)	32(71)	32(71)	46(101)	60(132)	
Gross Weight	Indoor	kg(lbs)	12.0(26.5)	12.0(26.5)	17(37.5)	17(37.5)	
	Outdoor	kg(lbs)	37(81.6)	37(81.6)	50(110.2)	64(141.1)	
Operation Range	Cooling(Outdoor)	°C(°F)	-5~43(23~109.4)	-5~43(23~109.4)	-5~43(23~109.4)	-5~43(23~109.4)	
	Heating(Outdoor)	°C(°F)	-10(-15)~24(14.0~75.2)	-10(-15)~24(14.0~75.2)	-10(-15)~24(14.0~75.2)	-10(-15)~24(14.0~75.2)	
Piping Length	Min	m(ft)	-	-	-	--	
	Max	m(ft)	15(49.2)	15(49.2)	15(49.2)	30(98.4)	
Max. Elevation Difference		m(ft)	7.5(24.6)	7.5(24.6)	7.5(24.6)	15(49.2)	
Tool Code(Chassis)	Indoor + Outdoor		SE MIRROR + UL	SE MIRROR + UL	S8 + UE	S8 + UE1	
Functions	Temperature Control		Thermistor	Thermistor	Thermistor	Thermistor	
	Allergy free filter		-	-	-	-	
	Plasma Filter		0	0	0	0	
	Prefilter(washable/anti-fungus)		0	0	0	0	
	Auto Clean		0	0	0	0	
	CHAOS Wind(Auto Wind)		0	0	0	0	
	Steps, Fan/Cool/Heat		3/4/3	3/4/3	3/4/3	3/4/3	
	Airflow Direction Control(up& Down)		Auto	Auto	Auto	Auto	
	Airflow Direction Control(left & right)		Auto	Auto	Auto	Auto	
	Remote Controller Type		Wireless LCD(EZ-Remocon)	Wireless LCD(EZ-Remocon)	Wireless LCD(EZ-Remocon)	Wireless LCD(EZ-Remocon)	
	Setting Temperature Range	Cooling	°C(°F)	18 ~ 30 (64.4 ~ 86)	18 ~ 30 (64.4 ~ 86)	18 ~ 30 (64.4 ~ 86)	18 ~ 30 (64.4 ~ 86)
		Heating	°C(°F)	16 ~ 30 (60.8 ~ 86)	16 ~ 30 (60.8 ~ 86)	16 ~ 30 (60.8 ~ 86)	16 ~ 30 (60.8 ~ 86)
	Auto Operation (Micom Control)		0	0	0	0	
	Auto Changeover (Micom Control)		0	0	0	0	
	Self Diagnosis		0	0	0	0	
	Timer		24h, On/Off	24h, On/Off	24h, On/Off	24h, On/Off	
	Sleep Operation		0	0	0	0	
	Soft Dry Operation		0	0	0	0	
	Restart Delay(minute)		2	2	3	3	
	Deice Control(Defrost)		0	0	0	0	
	Hot Start		0	0	0	0	
	Jet Cool		0	0	0	0	
	Low Ambient Operation		0	0	0	0	
	Special Function		-	-	-	-	

Note : O : Applie, X : Not applied, - : No relation

• Filters are optional in some specific areas.

• For Circuit Breaker Rating, please conform to local standards whenever necessary.

## Artcool Inverter(#2)

Sales Model			LA090HSV	LA120HSV	LA180HSV	LA240HSV	
Models		Unit	AS-W093BRU1	AS-W123BRU1	AS-W183CRU1	AS-W243CRU1	
Cooling Capacity		kW	0.89~2.64~3.70	0.89~3.28~4.30	0.90 ~ 5.33 ~ 8.65	0.90 ~ 6.45 ~ 8.80	
		Btu/h.	3,070~9,000~12,620	3,070~11,200~14,660	3,070~18,200~29,515	3,070~22,000~30,030	
Heating Capacity		kW	0.89~3.17~5.00	0.89~3.90~6.00	0.90 ~ 6.45 ~ 11.40	0.90 ~ 8.09 ~ 11.40	
		Btu/h.	3,070~10,800~17,060	3,070~13,300~20,470	3,070~22,000~38,898	3,070~27,600~38,898	
Power Input	Cooling	W	677	896	1447	2040	
Running Current	Cooling/Heating	A	3.0/3.7	4.2/4.9	6.3/8.2	7.9/10.7	
Starting Current	Cooling/Heating	A	3.0/3.7	4.2/4.9	6.3/8.2	7.9/10.7	
EER		W/W	3.90	3.66	3.69	3.16	
		Btu/h.W	13.3	12.5	12.6	10.8	
SEER			20	20	20.5	20.0	
HSPF			11	11	9.7	10.0	
Power Supply		Ø / V / Hz	1/208-230/60	1/208-230/60	1/208-230/60	1/208-230/60	
Power Factor		%	97.1	97.1	98.2	98.2	
Air Flow Rate	Indoor,Max	m <sup>3</sup> /min(CFM)	12 (423)	12 (423)	22 (777)	22 (777)	
	Outdoor,Max	m <sup>3</sup> /min(CFM)	33(1,165)	33(1,165)	60(2,119)	60(2,119)	
Dehumidification		pts/h	2.6	3.0	5.5	5.5	
Sound Level	Indoor,H/M/L	dB(A)±3	38 / 33 / 24 / 19	39 / 33 / 24 / 19	45 / 40 / 35	45 / 40 / 35	
	Outdoor,Max	dB(A)±3	45	45	53	53	
Refrigerant & Charge (at 7.5 m)		g(oz)	R410A, 1,000(35.3)	R410A, 1,000(35.3)	R410A, 1,800(63.5)	R410A, 1,800(63.5)	
Additional Refrigerant charge		g/m(oz/ft)	20(0.22)	20(0.22)	35(0.38)	35(0.38)	
Compressor	Type		Rotary	Rotary	Twin Rotary	Twin Rotary	
	Model		5RS102XAA21	5RS102XAA21	GJT240DAA	GJT240DAA	
	Motor Type		Brushless DC Motor	Brushless DC Motor	Brushless DC Motor	Brushless DC Motor	
	Oil Type		PVE(FV50S)	PVE(FV50S)	PVE(FVD68C)	PVE(FVD68C)	
	Oil Charge	cc	320	320	900	900	
	O.L.P. name		-	-	-	-	
Fan(Indoor)	Type		Cross Flow Fan	Cross Flow Fan	Cross Flow Fan	Cross Flow Fan	
	Motor Output	W	20	20	76.1	76.1	
Fan(Outdoor)	Type		Propeller	Propeller	Propeller	Propeller	
	Motor Type		BLDC	BLDC	BLDC	BLDC	
	Motor Output	W	43	43	124	124	
Circuit Breaker*		A	15	15	25	25	
Minimum Circuit Ampacity		A	8.2	8.2	16.4	16.4	
Power Supply Cable		No.*mm <sup>2</sup>	3*1.0	3*1.0	3*2.5	3*2.5	
Power and Transmission Cable No.*mm <sup>2</sup>		No.*mm <sup>2</sup>	4*1.0 (Including Earth)	4*1.0 (Including Earth)	4*1.0 (Including Earth)	4*1.0 (Including Earth)	
Piping Connections	Liquid Side	mm(in)	6.35(1/4)	6.35(1/4)	9.52(3/8)	9.52(3/8)	
	Gas Side	mm(in)	9.52(3/8)	9.52(3/8)	15.88(5/8)	15.88(5/8)	
Drain Hose(O.D / I.D.)		mm(in)	21.5 / 16.0(0.85 / 0.63)	21.5 / 16.0(0.85 / 0.63)	21.5 / 16.0(0.85 / 0.63)	21.5 / 16.0(0.85 / 0.63)	
Dimensions	Indoor (W*H*D)	mm	885*285*205	885*285*205	1,030*325*245	1,030*325*245	
		inch	34-13/16*11-1/4*8-1/16	34-13/16*11-1/4*8-1/16	40-9/16*12-13/16*9-5/8	40-9/16*12-13/16*9-5/8	
	Outdoor (W*H*D)	mm	770*545*288	770*545*288	870*800*320	870*800*320	
		inch	30-5/16*21-7/16*11-5/16	30-5/16*21-7/16*11-5/16	34-5/16*31-1/2*12-5/8	34-5/16*31-1/2*12-5/8	
Net Weight	Indoor	kg(lbs)	11(24.3)	11(24.3)	17(37.5)	17(37.5)	
	Outdoor	kg(lbs)	35(77.2)	35(77.2)	60(132.3)	60(132.3)	
Gross Weight	Indoor	kg(lbs)	13.5(29.7)	13.5(29.7)	19(41.9)	19(41.9)	
	Outdoor	kg(lbs)	37(81.6)	37(81.6)	64(141.1)	64(141.1)	
Operation Range	Cooling(Outdoor)	°C(°F)	-10~48(14~118.4)	-10~48(14~118.4)	-10~48(14~118.4)	-10~48(14~118.4)	
	Heating(Outdoor)	°C(°F)	-10~24(14~75.2)	-10~24(14~75.2)	-10~24(14~75.2)	-10~24(14~75.2)	
Piping Length	Min	m(ft)	2(6.6)	2(6.6)	-	-	
	Max	m(ft)	20(65.6)	20(65.6)	30(98.4)	30(98.4)	
Chargeless		m(ft)	12.5(41.0)	12.5(41.0)	-	-	
Max. Elevation Difference		m(ft)	10(32.8)	10(32.8)	15(49.2)	15(49.2)	
Tool Code(Chassis)	Indoor + Outdoor		SB + UL2	SB + UL2	SC + UE1+	SC + UE1+	
Functions	Temperature Control		Thermistor	Thermistor	Thermistor	Thermistor	
	Allergy free filter		O	O	O	O	
	Plasma Filter		O	O	O	O	
	Prefilter(washable/anti-fungus)		O	O	O	O	
	Auto Clean		O	O	O	O	
	CHAOS Wind(Auto Wind)		O	O	O	O	
	Steps, Fan/Cool/Heat		5/6/6	5/6/6	5/6/6	5/6/6	
	Airflow Direction Control(up& Down)		Auto	Auto	Auto	Auto	
	Airflow Direction Control(left & right)		Auto	Auto	Auto	Auto	
	Remote Controller Type		Wireless LCD	Wireless LCD	Wireless LCD	Wireless LCD	
	Setting Temperature Range	Cooling	°C(°F)	18 ~ 30 (64.4 ~ 86)	18 ~ 30 (64.4 ~ 86)	18 ~ 30 (64.4 ~ 86)	18 ~ 30 (64.4 ~ 86)
		Heating	°C(°F)	16 ~ 30 (60.8 ~ 86)	16 ~ 30 (60.8 ~ 86)	16 ~ 30 (60.8 ~ 86)	16 ~ 30 (60.8 ~ 86)
	Auto Operation (Micom Control)		-	-	-	-	
	Auto Changeover (Micom Control)		O	O	O	O	
	Self Diagnosis		O	O	O	O	
	Timer		24h, On/Off	24h, On/Off	24h, On/Off	24h, On/Off	
	Sleep Operation		O	O	O	O	
	Soft Dry Operation		O	O	O	O	
	Restart Delay(minute)		3	3	3	3	
	Deice Control(Defrost)		O	O	O	O	
	Hot Start		O	O	O	O	
	Jet Cool		O	O	O	O	
	Low Ambient Operation		O	O	O	O	
	Special Function		-	-	-	-	

Note : O : Applie, X : Not applied, - : No relation

• Filters are optional in some specific areas.

• For Circuit Breaker Rating, please conform to local standards whenever necessary.

## Inverter(#1)

Sales Model			LS246HV	LS306HV	LS360HV	LS307HV	
Models		Unit	AS-W2435SZ1	AS-W303DGH1	AS-W363DGU1	AS-W303DGU1	
Cooling Capacity		kW	3.87~7.15~7.74	3.52~7.74~7.91	0.90~9.70~9.96	0.90 ~ 8.79 ~ 9.46	
		Btu/h.	13,200~24,400~26,400	12,000~26,400~27,000	3,070/33,100/34,000	3,070 ~ 30,000 ~ 32,300	
Heating Capacity		kW	3.37~7.62~8.88	3.52~8.91~9.09	0.90~10.31~11.40	0.90 ~ 9.38 ~ 10.81	
		Btu/h.	11,500~26,000~30,300	12,000~30,400~31,000	3,070/35,200/38,900	3,070 ~ 32,000 ~ 36,900	
Power Input	Cooling	W	2652	3181	4035	3,000/3,100	
Running Current	Cooling/Heating	A	11.0/13.0	13.6/14.0	17.0/16.2	13.4/13.9	
Starting Current	Cooling/Heating	A	11.0/13.0	13.6/14.0	17.0/16.2	13.4/13.9	
EER		W/W	2.70	2.43	2.40	2.93	
		Btu/h.W	9.2	8.3	8.2	10.0	
SEER			14.7	15.0	16.1	18.0	
HSPF			7.7	7.7	9.9	9.5	
Power Supply		Ø / V / Hz	1/208-230/60	1/208-230/60	1/208-230/60	1/208-230/60	
Power Factor		%	97	97	98.2	97.3	
Air Flow Rate	Indoor,Max	m³/min(CFM)	20.3(717)	21(742)	25(883)	25(883)	
	Outdoor,Max	m³/min(CFM)	58(2,048)	58(2,048)	60(2,119)	60(2,119)	
Dehumidification		pts/h	5.7	9.5	10.6	9.5	
Sound Level	Indoor,H/M/L	dB(A)±3	45/40/37	47/43/41	49/44/39	48/44/39	
	Outdoor,Max	dB(A)±3	54	58	55	55	
Refrigerant & Charge (at 7.5 m)		g(oz)	R410A, 1,800(63.5)	R410A, 1,830(64.6)	R410A, 2,000(70.5)	R410A, 2,000(70.5)	
Additional Refrigerant charge		g/m(oz/ft)	30(0.32)	20(0.22)	35(0.38)	35(0.38)	
Compressor	Type		Rotary	Scroll+Rotary	Twin Rotary	Twin Rotary	
	Model		5KD240XCA21	5CS130XC03+GK141KAC	GJT240DAA	GJT240DAA	
	Motor Type		BLDC	BLDC+AC	Brushless DC Motor	Brushless DC Motor	
	Oil Type		FV50S	POE	PVE(FVD68C)	PVE(FVD68C)	
	Oil Charge	cc	900	480+350	900	900	
	O.L.P. name		-	-	-	-	
Fan(Indoor)	Type		Cross Flow Fan	Cross Flow Fan	Cross Flow Fan	Cross Flow Fan	
	Motor Output	W	24	91	76.1	76.1	
Fan(Outdoor)	Type		Propeller	Propeller	Propeller	Propeller	
	Motor Type		AC Induction	AC Induction	BLDC	BLDC	
	Motor Output	W	76.5	140	124	124	
Circuit Breaker*		A	25	30	25	25	
Minimum Circuit Ampacity		A	16.7	17	16.8	16.8	
Power Supply Cable		No.*mm²	3*2.5	3*2.5	3*2.5	3*2.5	
Power and Transmission Cable No.*mm²		No.*mm²	4*1.0 (Including Earth)	4*1.0 (Including Earth)	4*1.0 (Including Earth)	4*1.0 (Including Earth)	
Piping Connections	Liquid Side	mm(in)	9.52(3/8)	6.35(1/4)	9.52(3/8)	9.52(3/8)	
	Gas Side	mm(in)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)	
Drain Hose(O.D / I.D.)		mm(in)	21.5 / 16.0(0.85 / 0.63)	21.5 / 16.0(0.85 / 0.63)	21.5 / 16.0(0.85 / 0.63)	21.5 / 16.0(0.85 / 0.63)	
Dimensions	Indoor (W*H*D)	mm	1,090*300*178	1209*346*205	1209*346*205	1209*346*205	
		inch	42-15/16*11-13/16*7	47-5/8*13-5/8*8-1/16	47-5/8*13-5/8*8-1/16	47-5/8*13-5/8*8-1/16	
	Outdoor (W*H*D)	mm	870*800*320	870*800*320	870*800*320	870*800*320	
		inch	34-5/16*31-1/2*12-5/8	34-5/16*31-1/2*12-5/8	34-5/16*31-1/2*12-5/8	34-5/16*31-1/2*12-5/8	
Net Weight	Indoor	kg(lbs)	13.0(28.7)	17.0(37.5)	18(39.7)	18(39.7)	
	Outdoor	kg(lbs)	60(132)	67(147.7)	60(132.3)	60(132.3)	
Gross Weight	Indoor	kg(lbs)	15(33.1)	20(44.1)	20(44.1)	20(44.1)	
	Outdoor	kg(lbs)	64(141.1)	72(158.7)	64(141.1)	64(141.1)	
Operation Range	Cooling(Outdoor)	°C(°F)	-10 ~ 43 (14.0~109.4)	-5 ~ 43 (23.0~109.4)	-10~43(14~109.4)	-10~48(14~118.4)	
	Heating(Outdoor)	°C(°F)	-10 ~ 24 (14.0 ~ 75.2)	-5 ~ 24 (23.0 ~ 75.2)	-10(-15)~24(14.0~75.2)	-10~24(14.0~75.2)	
Piping Length	Min	m(ft)	-	-	-	-	
	Max	m(ft)	30(98.4)	30(98.4)	30(98.4)	30(98.4)	
Chargeless		m(ft)	-	-	-	-	
Max. Elevation Difference		m(ft)	15(49.2)	15(49.2)	15(49.2)	15(49.2)	
Tool Code(Chassis)	Indoor + Outdoor		S5 + UE1	SD + UE1	SD + UE1+	SD + UE1+	
Functions	Temperature Control		Thermistor	Thermistor	Thermistor	Thermistor	
	Allergy free filter		-	-	O	O	
	Plasma Filter		-	O	O	O	
	Prefilter(washable/anti-fungus)		O	O	O	O	
	Auto Clean		O	O	O	O	
	CHAOS Wind(Auto Wind)		O	O	O	O	
	Steps, Fan/Cool/Heat		3/4/3	3/4/3	3/4/3	3/4/3	
	Airflow Direction Control(up& Down)		Auto	Auto	Auto	Auto	
	Airflow Direction Control(left & right)		Auto	Auto	Auto	Auto	
	Remote Controller Type		Wireless LCD	Wireless LCD	Wireless LCD(EZ-Remocon)	Wireless LCD(EZ-Remocon)	
	Setting Temperature Range	Cooling	°C(°F)	18 ~ 30 (64.4 ~ 86)	18 ~ 30 (64.4 ~ 86)	18 ~ 30 (64.4 ~ 86)	18 ~ 30 (64.4 ~ 86)
		Heating	°C(°F)	16 ~ 30 (60.8 ~ 86)	16 ~ 30 (60.8 ~ 86)	16 ~ 30 (60.8 ~ 86)	16 ~ 30 (60.8 ~ 86)
	Auto Operation (Micom Control)		-	-	-	-	
	Auto Changeover (Micom Control)		O	O	O	O	
	Self Diagnosis		O	O	O	O	
	Timer		24h, On/Off	24h, On/Off	24h, On/Off	24h, On/Off	
	Sleep Operation		O	O	O	O	
	Soft Dry Operation		O	O	O	O	
	Restart Delay(minute)		3	3	3	3	
	Deice Control(Defrost)		O	O	O	O	
	Hot Start		O	O	O	O	
	Jet Cool		O	O	O	O	
	Low Ambient Operation		O	O	O	O	
	Special Function		-	-	-	-	

Note : O : Applie, X : Not applied, - : No relation

• Filters are optional in some specific areas.

• For Circuit Breaker Rating, please conform to local standards whenever necessary.

# 4. Dimensional drawings

## 4.1 Indoor Units

**WALL MOUNTED**

210(8.3)

885(34.8)

③

210(8.3)

285(11.2)

23(0.9)

59.5(2.3)

159.5(6.3)

②

④

442(17.4)

133(5.2)

175(6.9)

95(3.7)

217(8.5)

070(2.8)

Unit Outline

Place a level on raised tab

Installation Plate

Left rear piping

Right rear piping

[Unit: mm (inch)]

■ Note

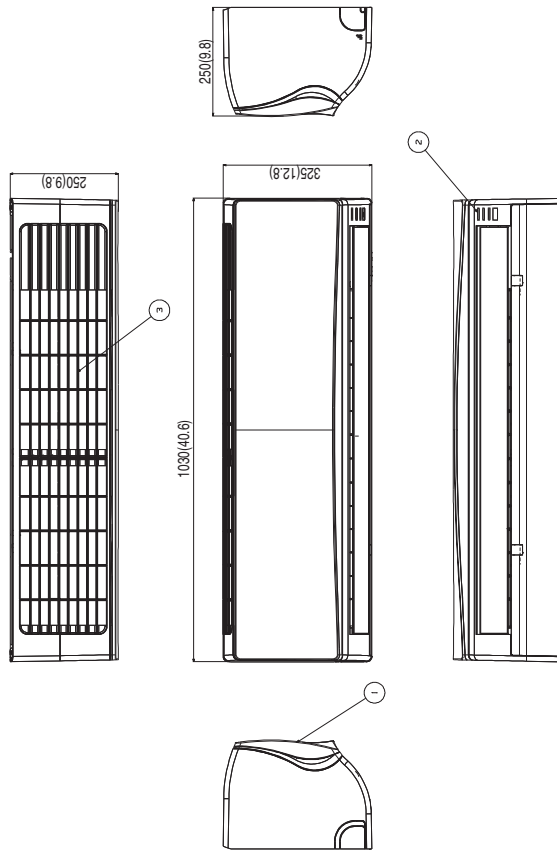
1. The unit should be installed according to installation manual which is in the product box.
2. The Unit is powered from the outdoor unit. So power cable should be connected with the outdoor unit.

Item No.	Part Name	Remark
1	Front Panel	
2	Display & Signal Receiver	
3	Air Suction Grille	
4	Knockout hole	For pipe and cable
5	Installation Plate	

CHASSIS CODE : SB

**LG Electronics**

**WALL MOUNTED**

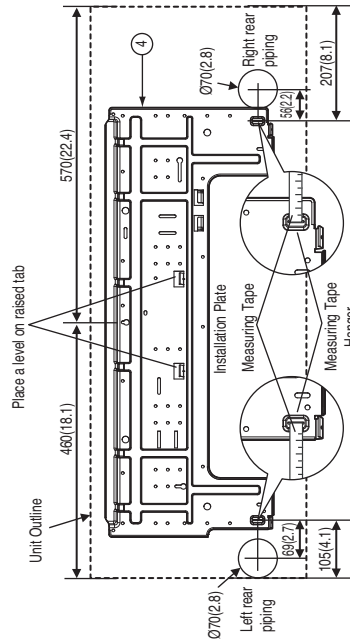


Item No.	Part Name	Remark
1	Front Panel	
2	Display & Signal Receiver	
3	Air Suction Grille	
4	Installation Plate	

**Note**

1. The unit should be installed according to installation manual which is in the product box.
2. The Unit is powered from the outdoor unit. So power cable should be connected with the outdoor unit.

[Unit: mm (inch)]

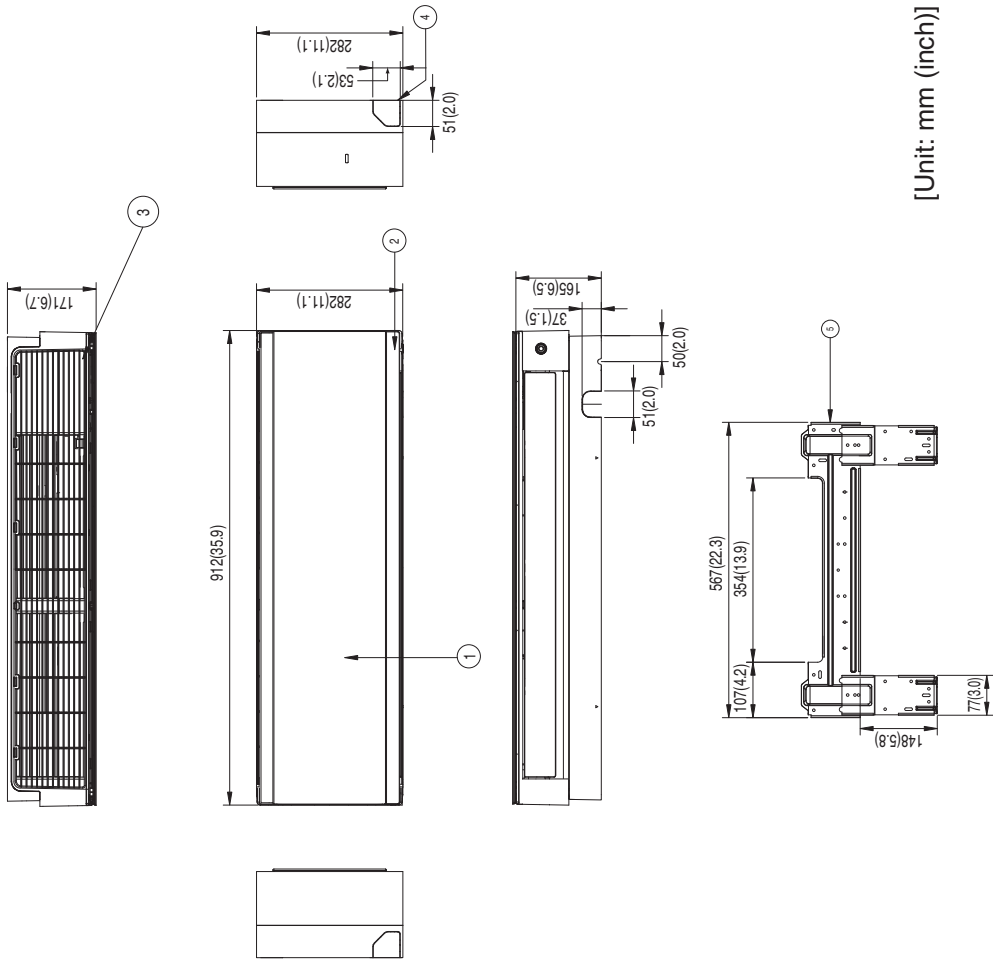


**LG Electronics**

CHASSIS CODE : SC



ART COOL Mirror



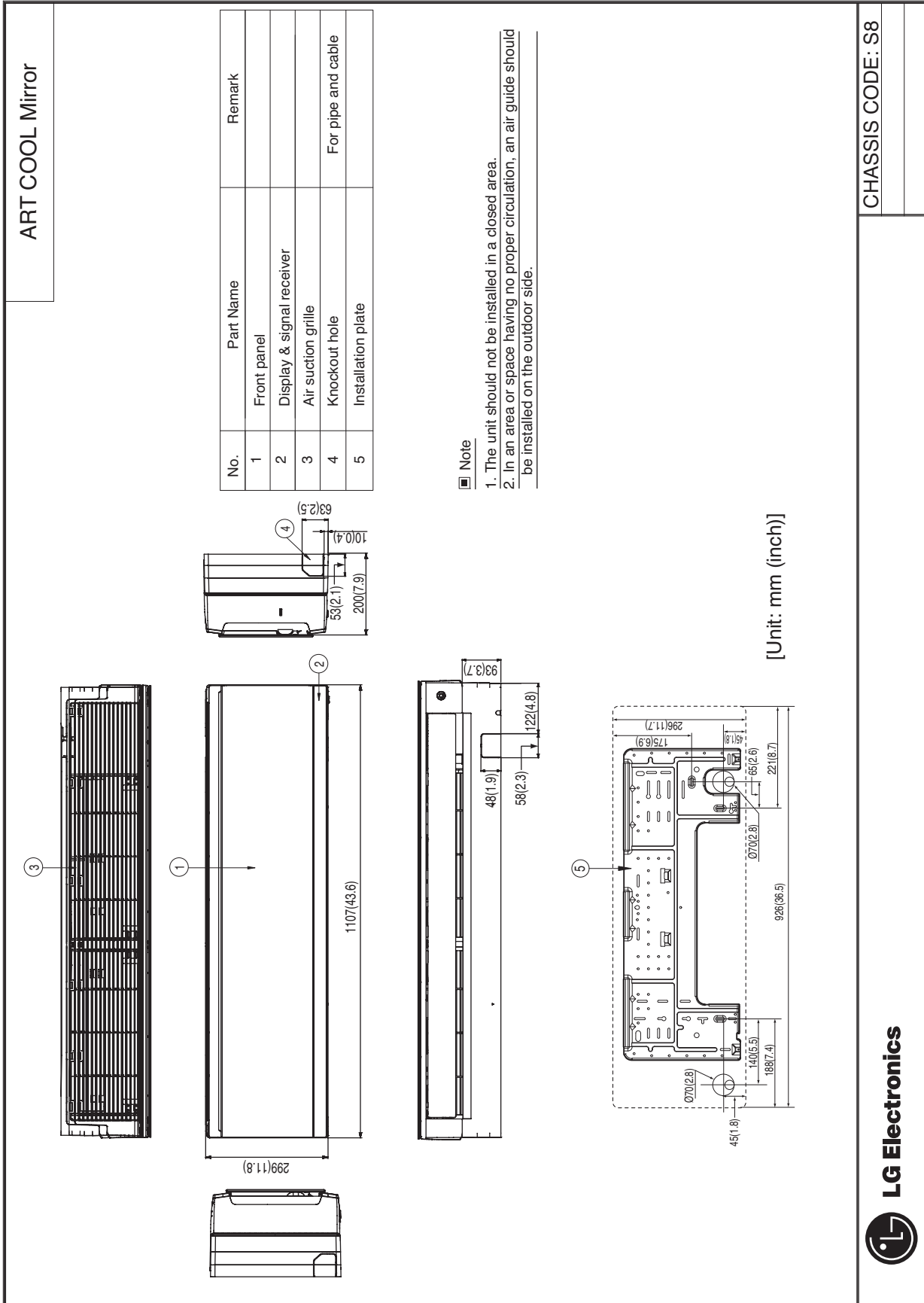
No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	For pipe and cable
5	Installation plate	

Note

1. Unit should be installed in compliance with the installation manual in the product box.
2. Unit shall be grounded in accordance with the local regulations or applicable national codes.
3. The Unit is powered from the outdoor unit. Therefore power cable should be connected with the outdoor unit.

CHASSIS CODE: SE





**WALL MOUNTED**

**Item No.**    **Part Name**    **Remark**

1	Front Panel	
2	Display & Signal Receiver	
3	Air Suction Grille	
4	Knockout hole	For pipe and cable
5	Installation Plate	

**Note**

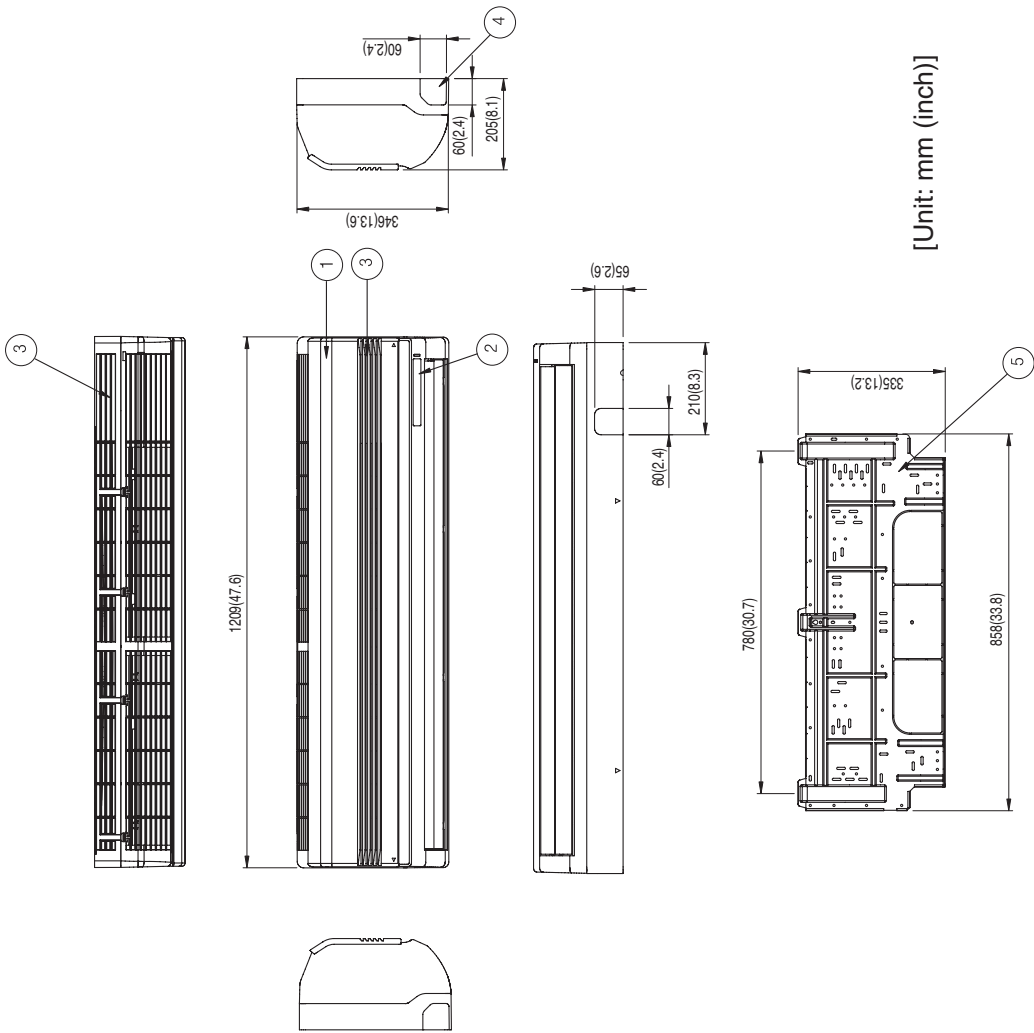
1. The unit should be installed according to installation manual which is in the product box.
2. The Unit is powered from the outdoor unit. So power cable should be connected with the outdoor unit.

[Unit: mm (inch)]

**CHASSIS CODE : S5**

WALL MOUNTED

Item No.	Part Name	Remark
1	Front panel	
2	Display & signal receiver	
3	Air suction grille	
4	Knockout hole	For pipe and cable
5	Installation plate	



[Unit: mm (inch)]

Note

1. The unit is not allowed to be installed in closed area.
2. In an area or a space having no proper air circulation, an air guide should be installed in the outdoor unit.

CHASSIS CODE : SD



## 4.2 Outdoor Units

Outdoor Unit

Item No	Part Name	Remark
1	Air Discharge Grille	
2	Gas Pipe Connection Port	
3	Liquid Pipe Connection Port	
4	Control Box	
5	Earth Screw	

**Note**

1. The unit is not allowed to be installed in closed area.
2. In an area or a space having no proper air circulation, an air guide should be installed in the outdoor unit.

The drawing includes three views of the outdoor unit:
 

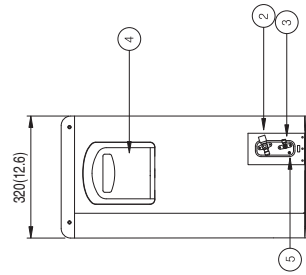
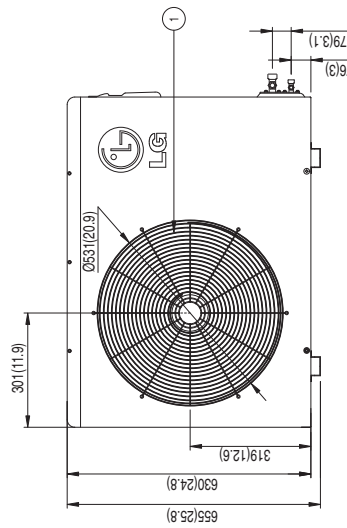
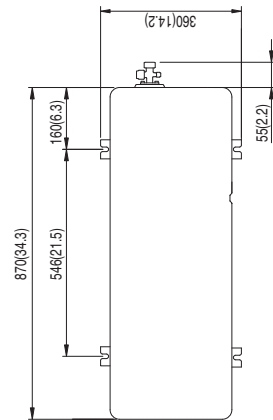
- Front View:** Shows a large circular air discharge grille (1) with a diameter of 464 mm (18.3 inches). The unit's width is 545 mm (21.5 inches) and its height is 530 mm (20.9 inches). The grille is positioned 277 mm (10.9 inches) from the top edge. Mounting holes are spaced 207 mm (8.1 inches) apart.
- Top View:** Shows the unit's width of 770 mm (30.3 inches) and a depth of 288 mm (11.3 inches). The control box (4) is located 154 mm (6.1 inches) from the left edge and 54 mm (2.1 inches) from the top edge. The gas pipe connection port (2) is 353 mm (13.9 inches) from the left edge.
- Side View:** Shows the unit's depth of 267 mm (10.5 inches).

[Unit: mm (inch)]

**CHASSIS CODE : UL2**

Outdoor Unit

Item No	Part Name	Remark
1	Air Discharge Grille	
2	Gas Pipe Connection Port	
3	Liquid Pipe Connection Port	
4	Control Box	
5	Earth Screw	



■ Note

1. The unit is not allowed to be installed in closed area.
2. In an area or a space having no proper air circulation, an air guide should be installed in the outdoor unit.

[Unit: mm (inch)]



**LG Electronics**

CHASSIS CODE : UE

Outdoor Unit

Item No.	Part Name	Remark
1	Air Discharge Grille	
2	Gas Pipe Connection Port	
3	Liquid Pipe Connection Port	
4	Control Box	
5	Earth Screw	

770(34.3)  
518(20.4)  
285(11.2)  
56(2.2)  
267

545(21.5)  
275(10.8)  
261(10.3)  
245(9.6)

**Note**

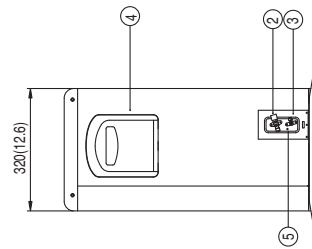
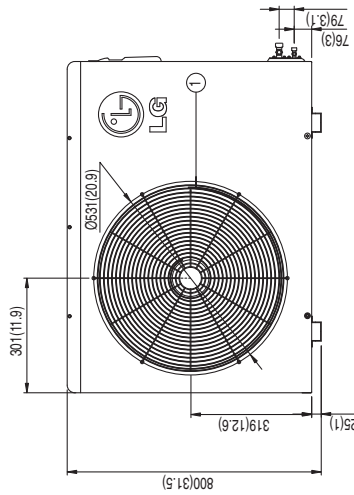
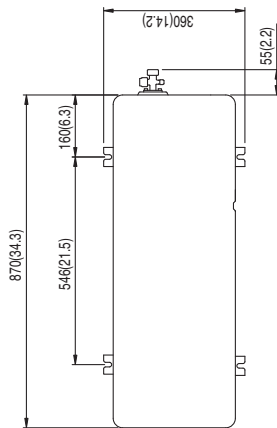
- The unit is not allowed to be installed in closed area.
- In an area or a space having no proper air circulation, an air guide should be installed in the outdoor unit.

[Unit: mm (inch)]

**LG Electronics**

CHASSIS CODE : UL

Outdoor Unit



Item No.	Part Name	Remark
1	Air Discharge Grille	
2	Gas Pipe Connection Port	
3	Liquid Pipe Connection Port	
4	Control Box	
5	Earth Screw	

Note

1. The unit is not allowed to be installed in closed area.
2. In an area or a space having no proper air circulation, an air guide should be installed in the outdoor unit.

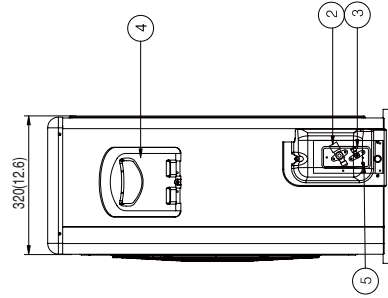
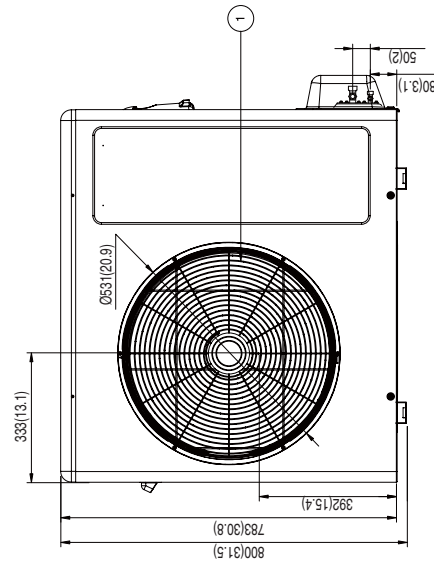
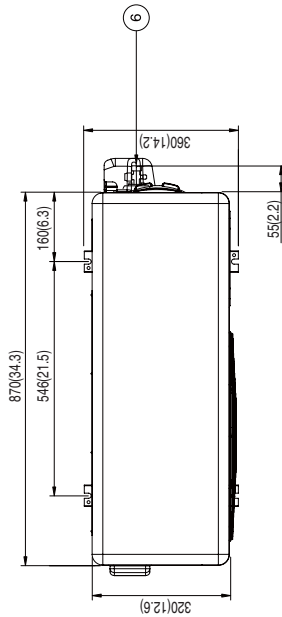
[Unit: mm (inch)]

CHASSIS CODE : UE1





Outdoor Unit



No.	Part Name
1	Air discharge grille
2	Gas pipe connection
3	Liquid pipe connection
4	Power & Transmission connection
5	Earth screw
6	SVC valve cover

Note

1. The unit is not allowed to be installed in closed area.
2. In an area or a space having no proper air circulation, an air guide should be installed in the outdoor unit.

[Unit: mm (inch)]

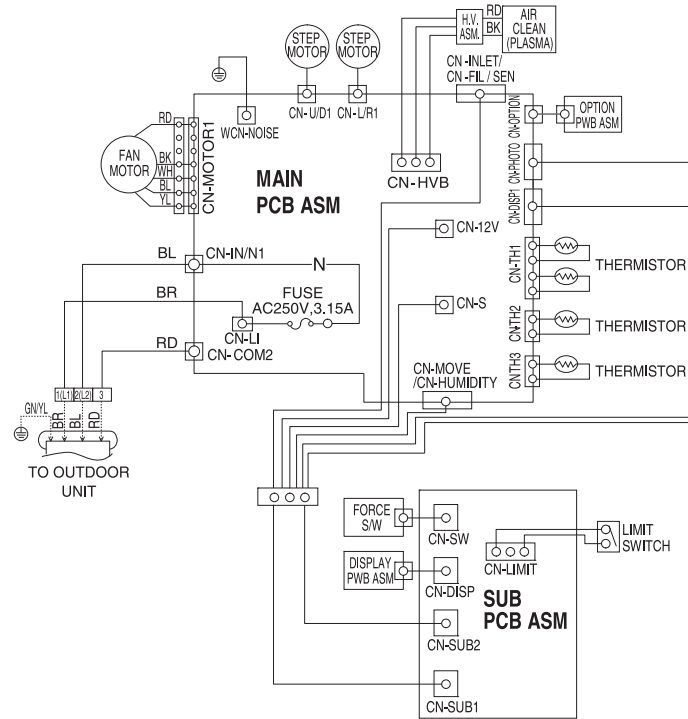
CHASSIS CODE : UE1+



# 5. Wiring diagrams

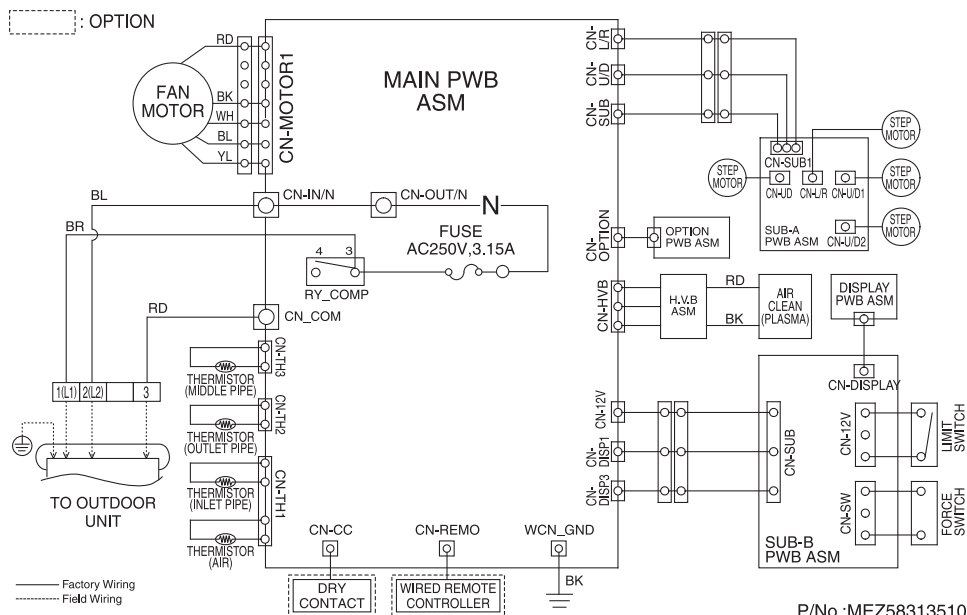
## 5.1 Indoor units

**Models: ASNW093B1U1(LSN091HSV), ASNW123B1U1(LSN121HSV)**



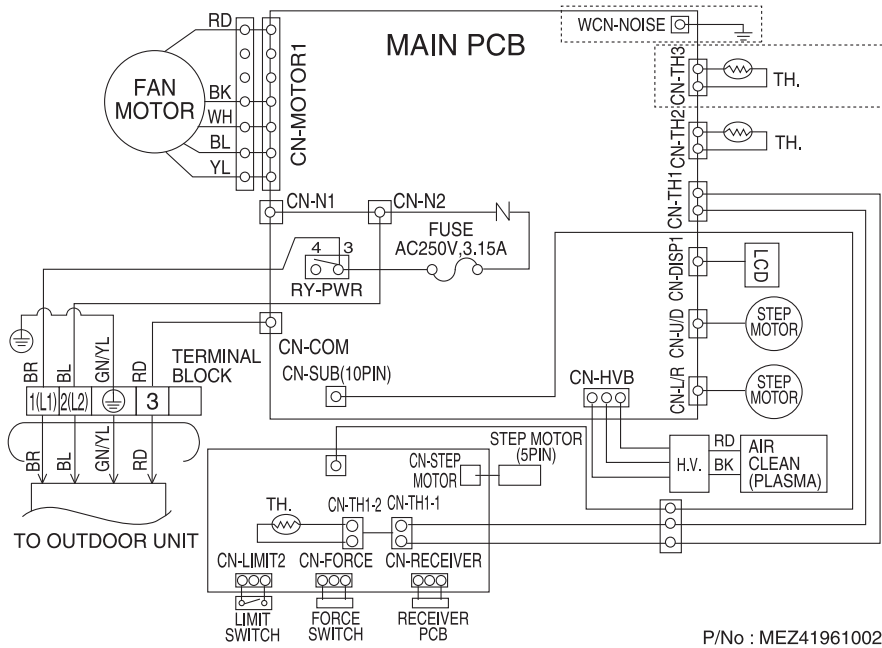
P/No : MEZ41961024

**Models: ASNW163C2U1(LSN161HSV), ASNW183C2U2(LSN181HSV)**

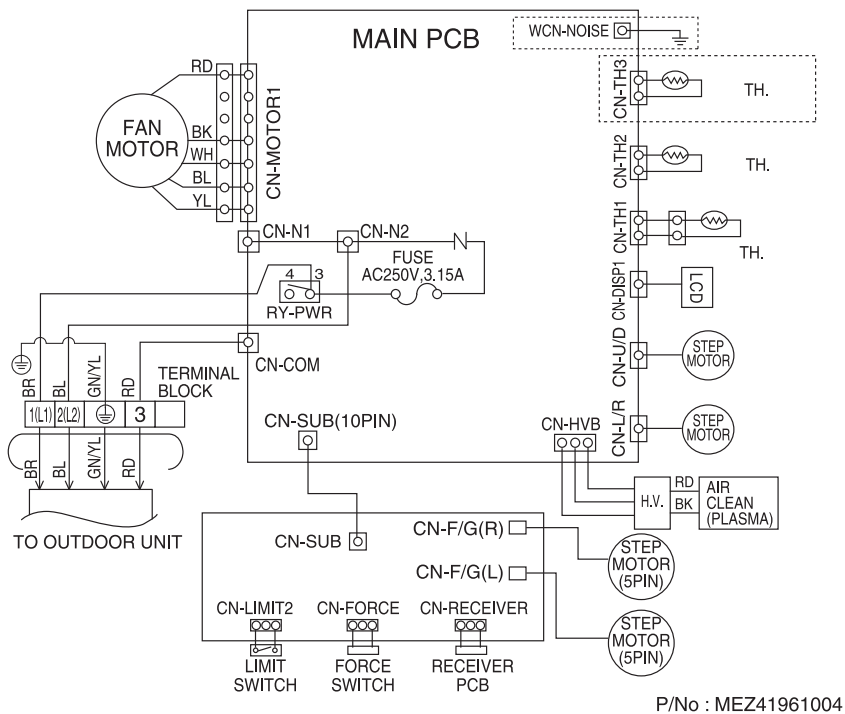


P/No.:MEZ58313510

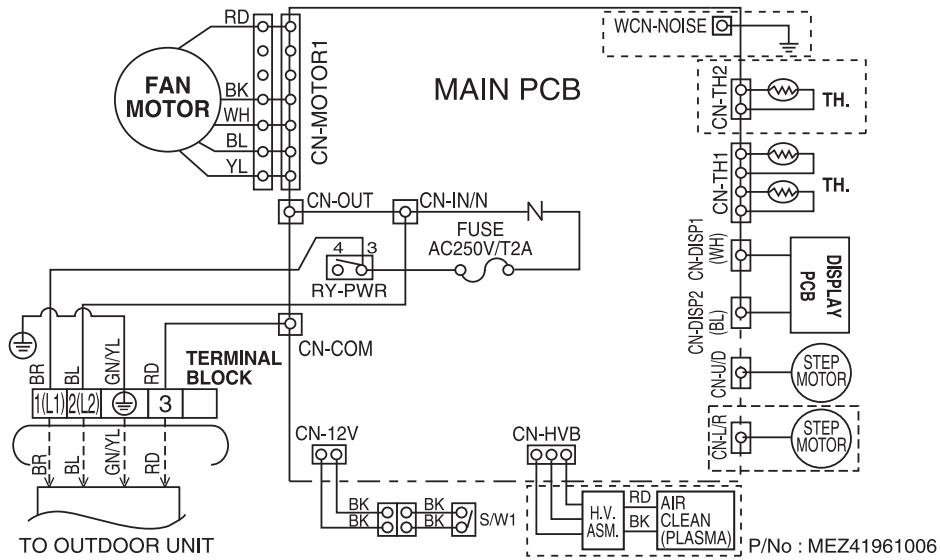
**Models: ASNW093ERH1(LAN096HV),ASNW123ERH1(LAN126HV)**



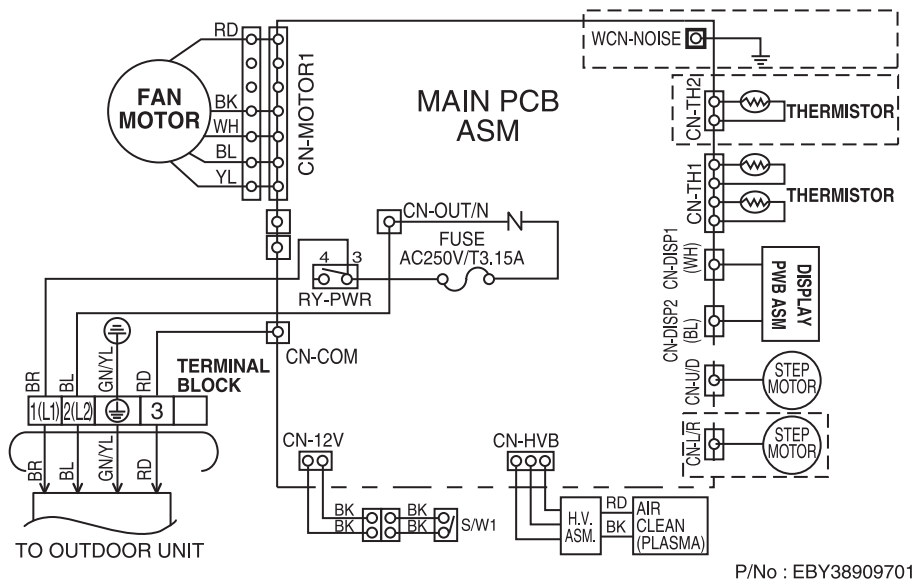
**Models: ASNW1838RH1(LAN186HV), ASNW2438RH1(LAN246HV)**



**Models: ASUW2435SZ1(LSU246HV)**

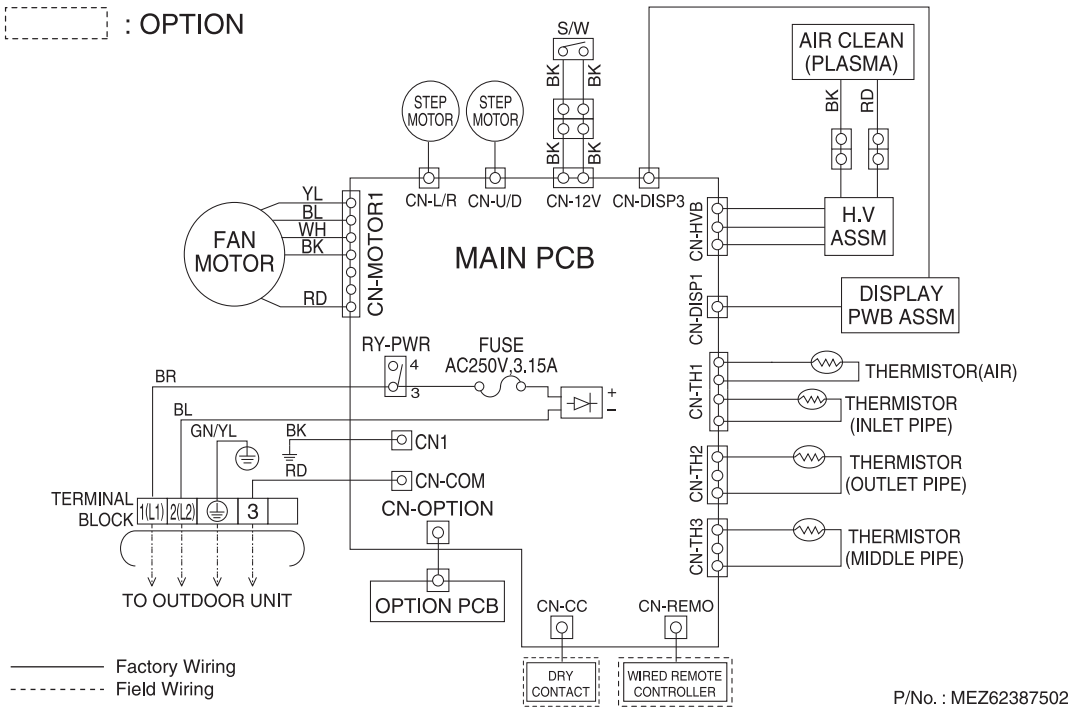


**Models: ASNW303DGH1(LSN306HV)**



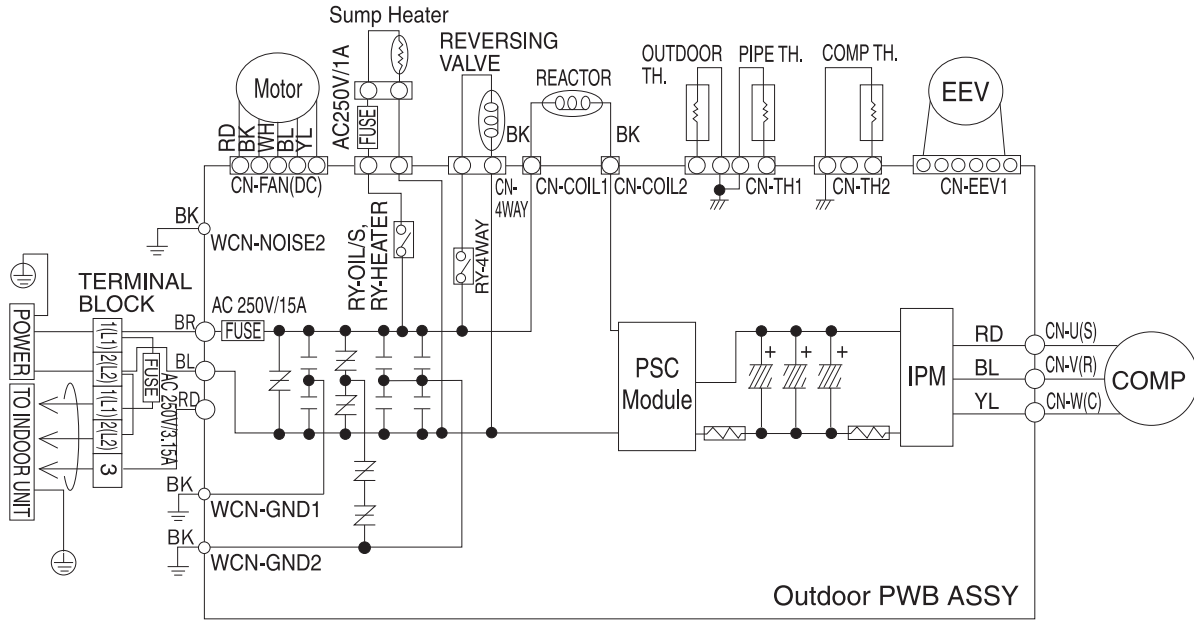
**Models: ASNW243DGU1(LS240HSV), ASNW363DGU1(LS360HV)**

   : OPTION



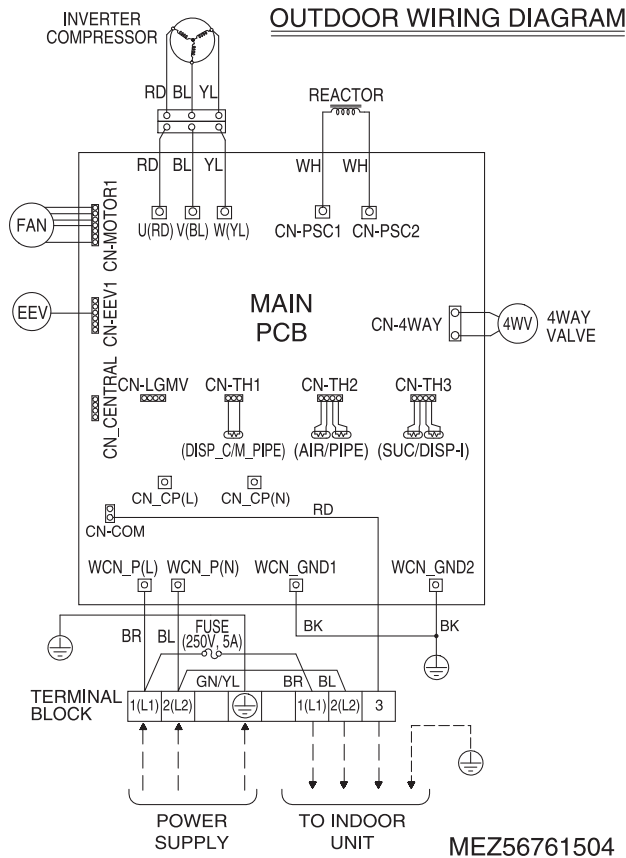
## 6.2 Outdoor units

**Models: ASUW093B1U1(LSU091HSV), ASUW123B1U1(LSU121HSV)**



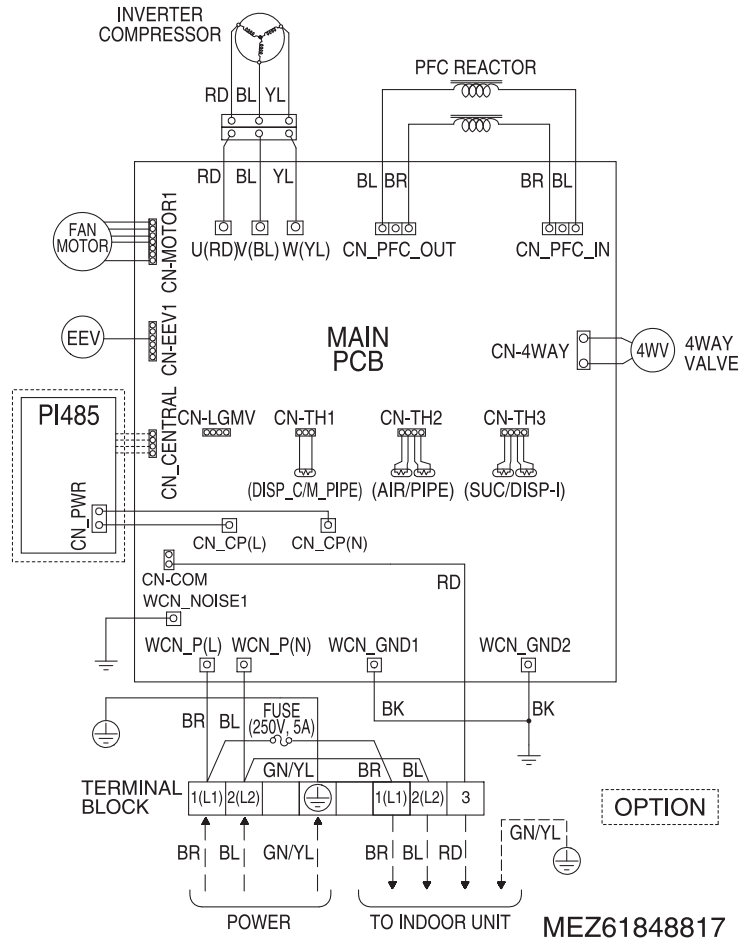
MEZ59862512

**Models: ASUW163C2U1(LSU161HSV)**

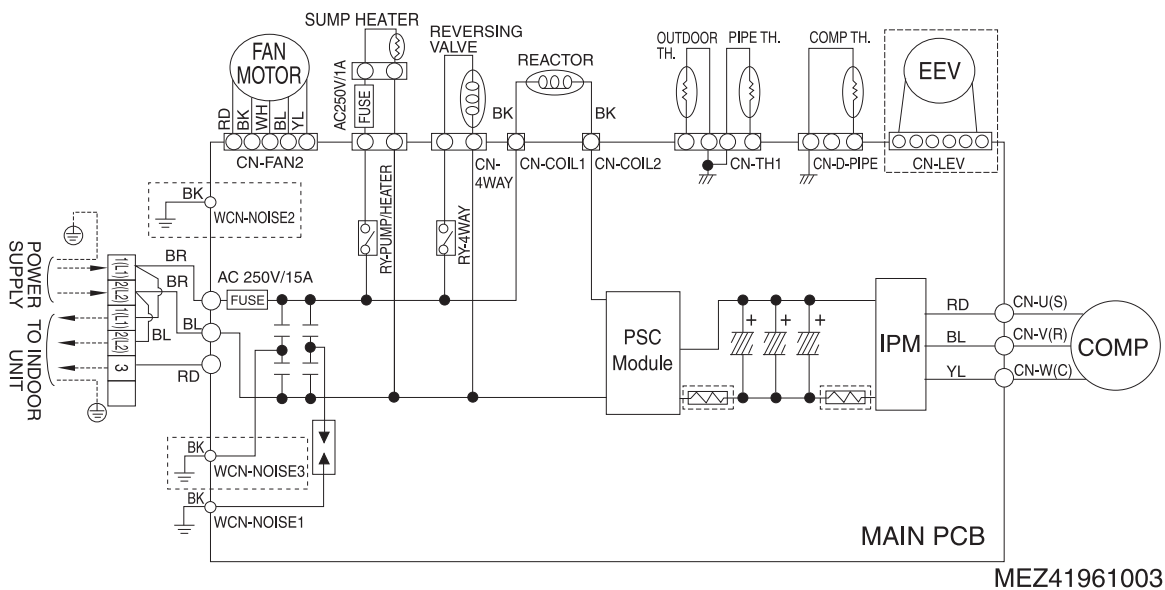


MEZ56761504

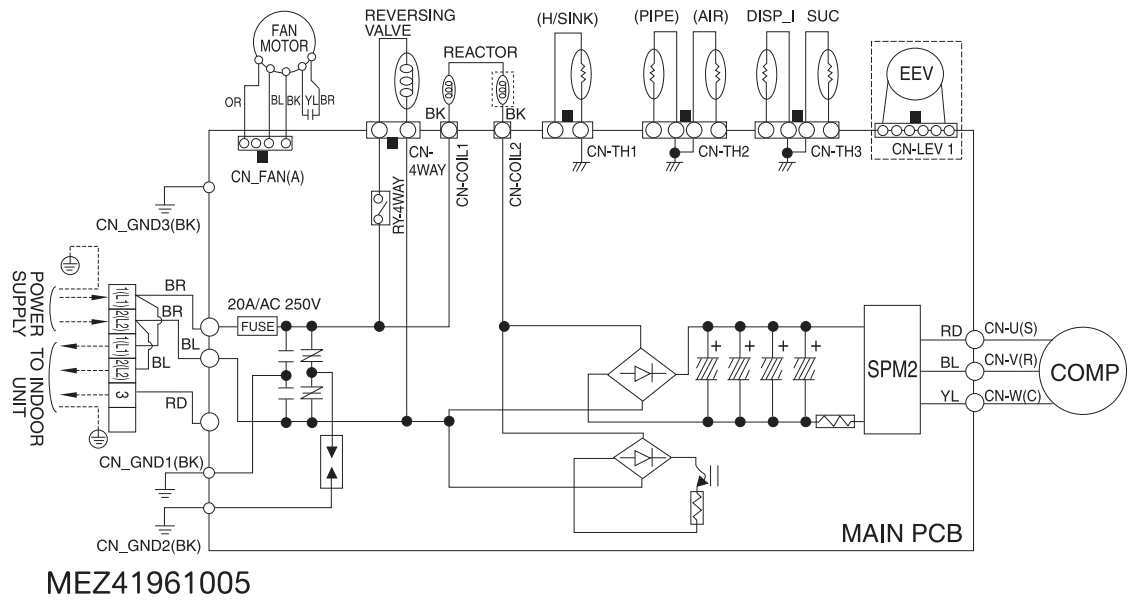
**Models: ASUW183C2U2(LSU181HSV),ASUW243DGU1(LSU240HSV),ASUW363DGU1(LSU360HV)**



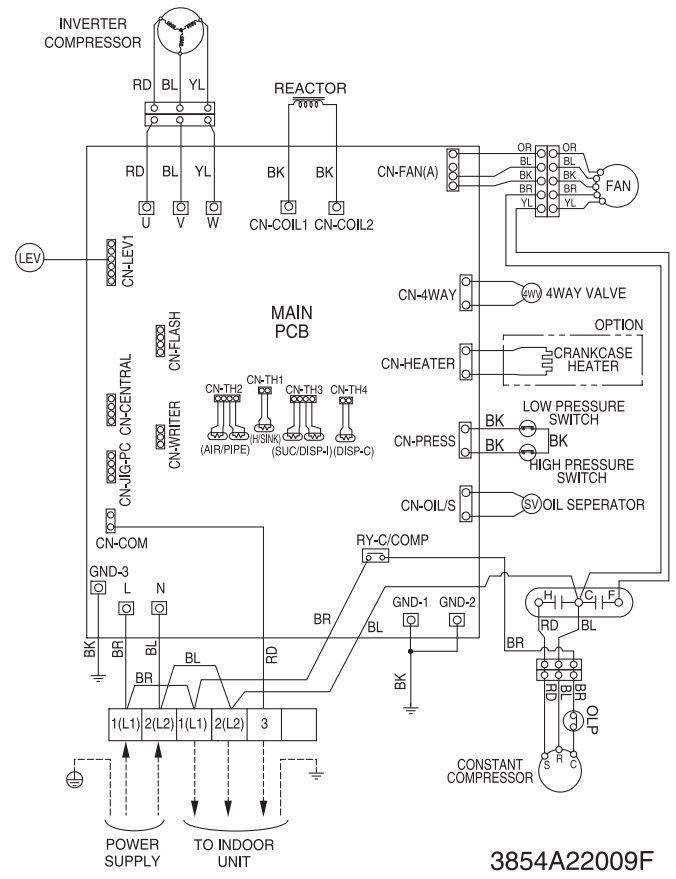
**Models: ASUW093EUH1(LAU096HV),ASUW123EUH1(LAU126HV)**



**Models: ASUW1838UH1(LAU186HV), ASUW2438UH1(LAU246HV), ASUW2435SZ1(LSU246HV)**



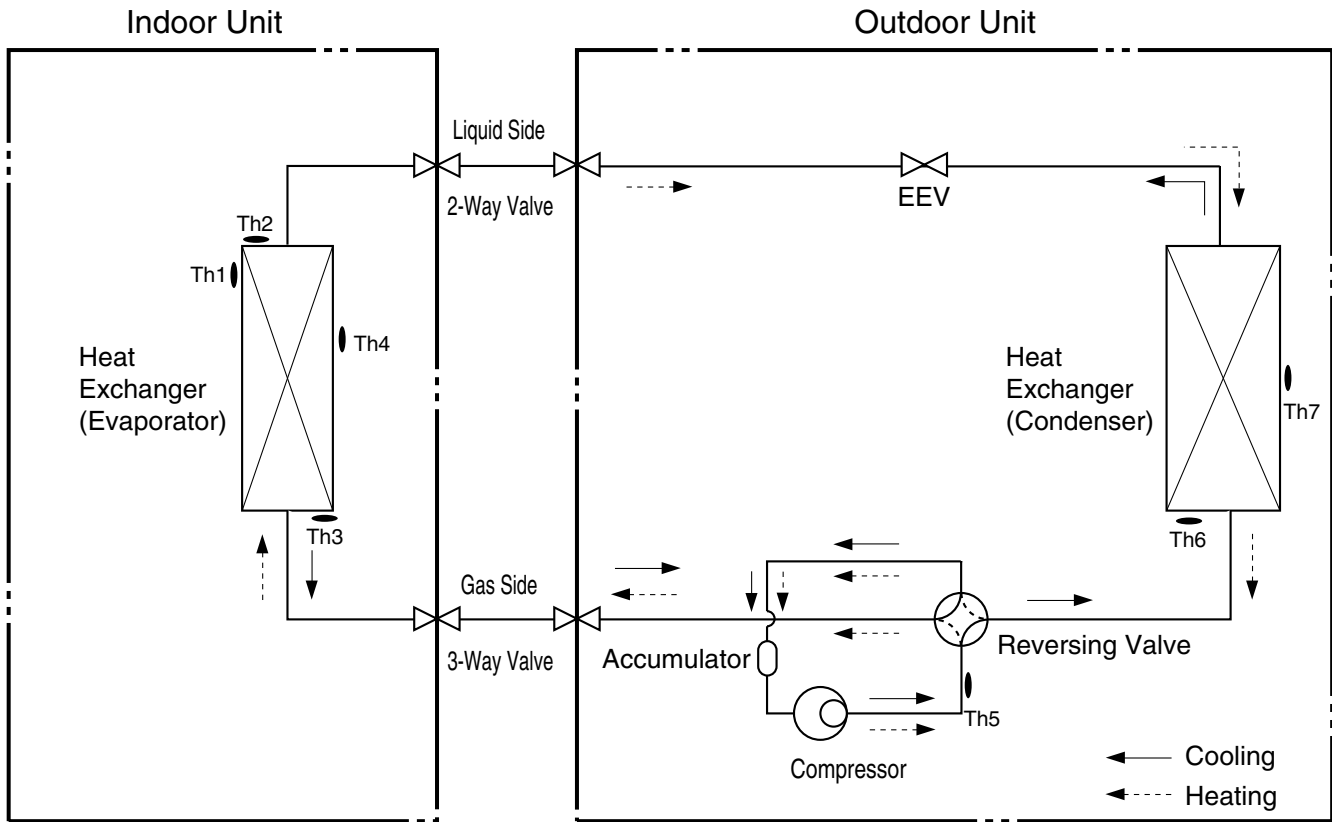
**Models: ASUW303DGH1(LSU306HV)**





## 6. Refrigerant cycle diagram

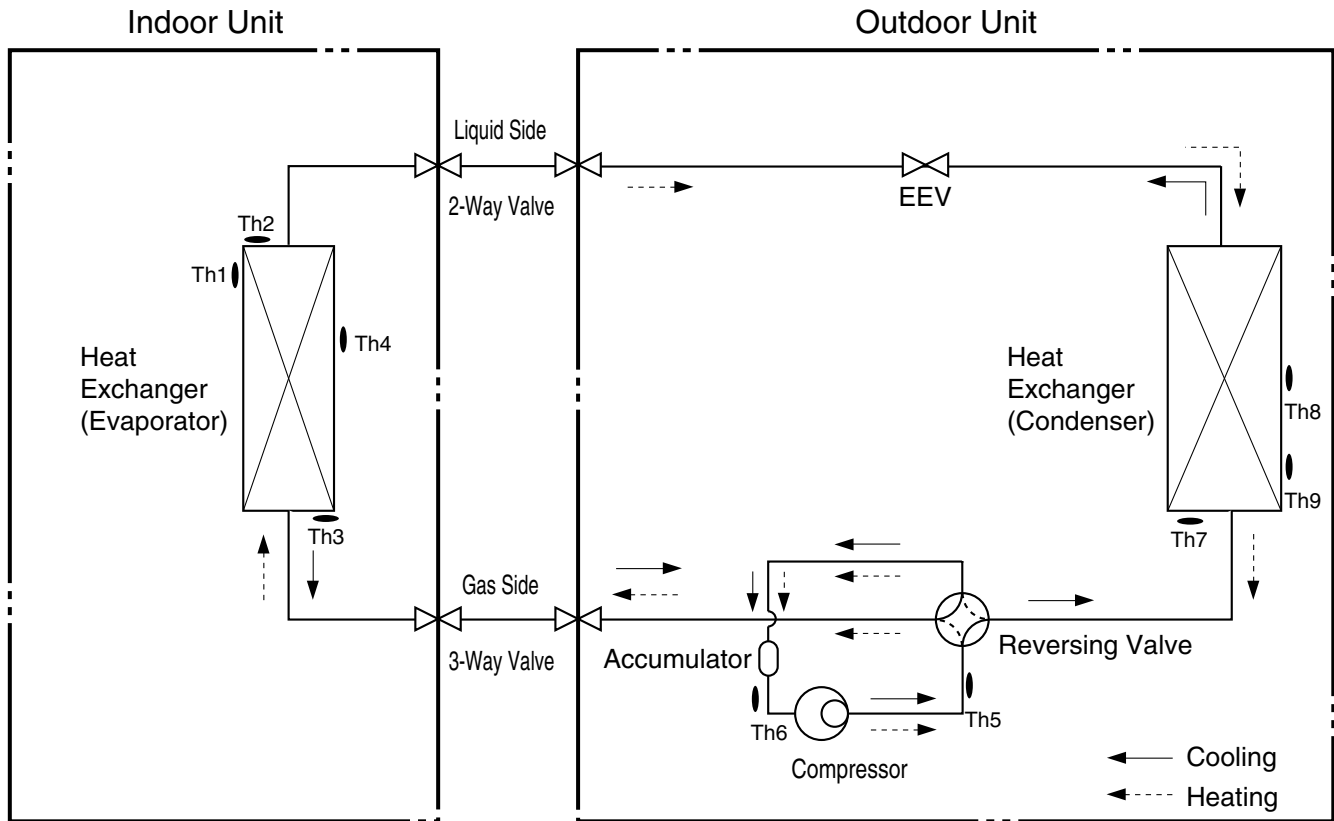
Models : AS-W093B1U1(LS091HSV), AS-W123B1U1(LS121HSV)



LOC.	Description	PCB Connector
Th1	Thermistor for suction air temperature	CN-TH1(Indoor)
Th2	Thermistor for evaporator inlet temperature	
Th3	Thermistor for evaporator outlet temperature	
Th4	Thermistor for evaporator middle temperature	CN-TH3(Indoor)
Th5	Thermistor for discharge pipe temperature	CN-TH2(OUTDOOR)
Th6	Thermistor for condensing temperature	CN-TH1(OUTDOOR)
Th7	Thermistor for outdoor air temperature	CN-TH1(OUTDOOR)

※ EEV : Electronic Expansion Valve

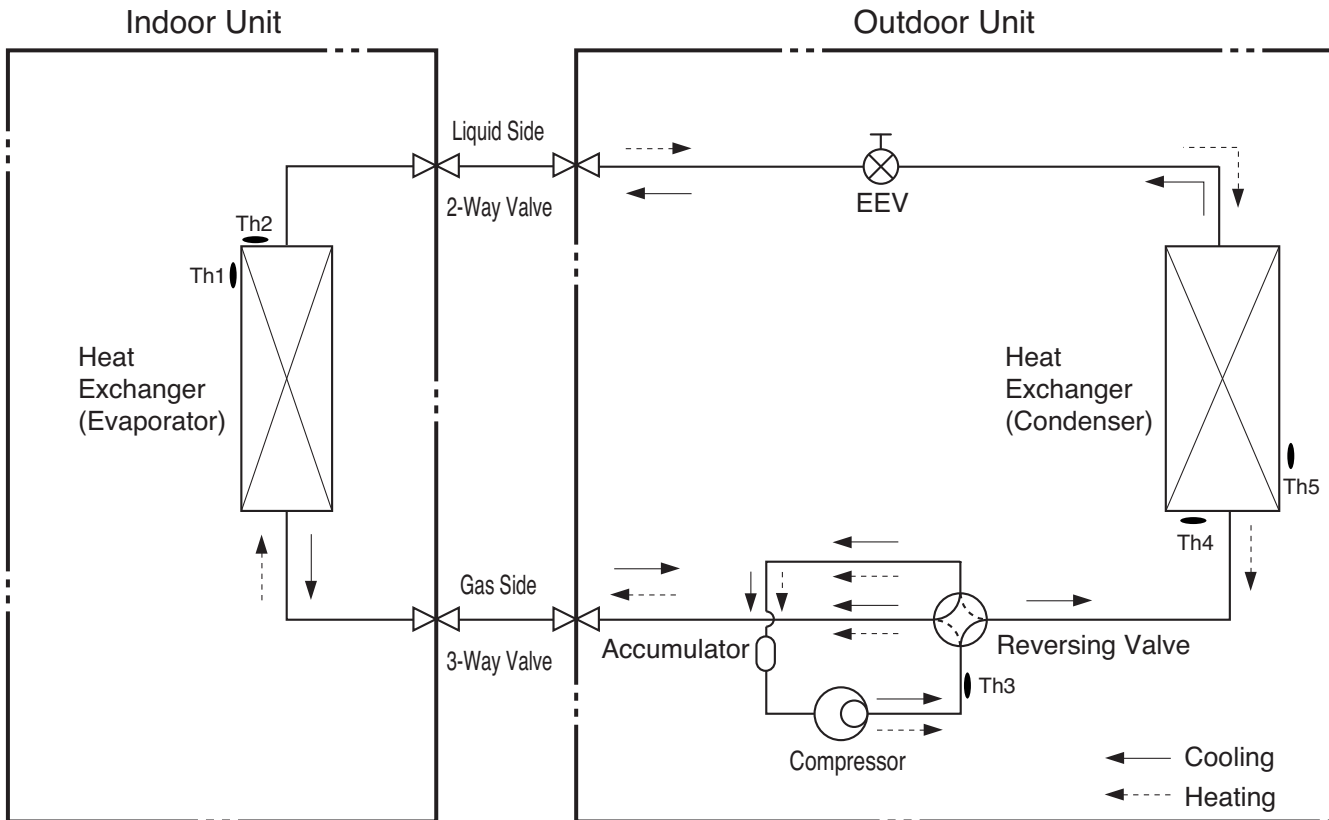
Models : AS-W163C2U1(LS161HSV), AS-W183C2U2(LS181HSV), AS-W243DGU1(LS240HSV), AS-W363DGU1(LS360HV)



LOC.	Description	PCB Connector
Th1	Thermistor for suction air temperature	CN-TH1(Indoor)
Th2	Thermistor for evaporator inlet temperature	
Th3	Thermistor for evaporator outlet temperature	CN-TH2(Indoor)
Th4	Thermistor for evaporator middle temperature	CN-TH3(Indoor)
Th5	Thermistor for discharge pipe temperature	CN-TH3(OUTDOOR)
Th6	Thermistor for suction pipe temperature	
Th7	Thermistor for condensing temperature	CN-TH2(OUTDOOR)
Th8	Thermistor for outdoor air temperature	CN-TH4(OUTDOOR)
Th9	Thermistor for condensing middle temperature	

※ EEV : Electronic Expansion Valve

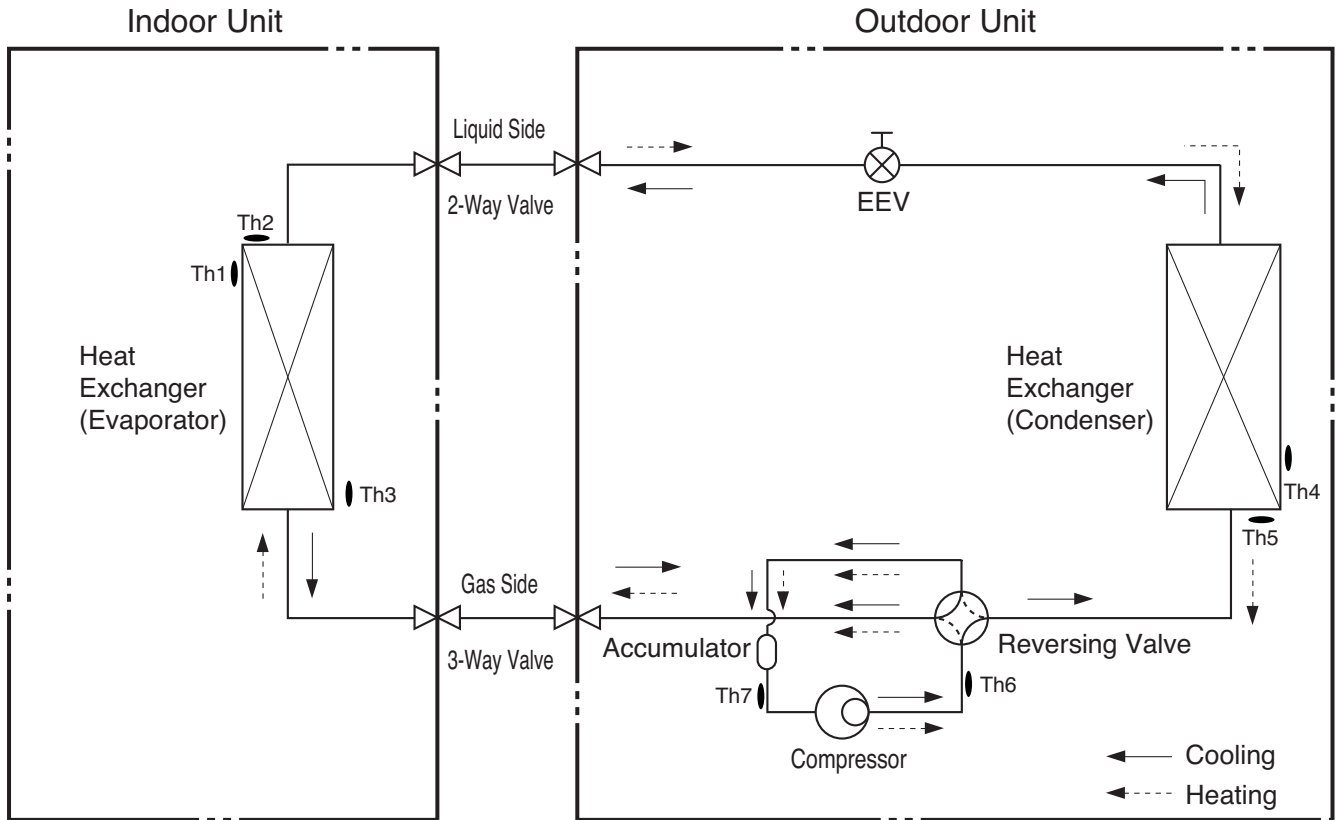
**Models : AS-W093ERH1(LA096HV),AS-W123ERH1(LA126HV)**



LOC.	Description	PCB Connector
Th1	Thermistor for indoor air temperature	CN_TH1(INDOOR)
Th2	Thermistor for evaporating temperature	CN_TH2(INDOOR)
Th3	Thermistor for discharge pipe temperature	CN_D_PIPE(OUTDOOR)
Th4	Thermistor for condensing temperature	CN_TH1(OUTDOOR)
Th5	Thermistor for outdoor air temperature	

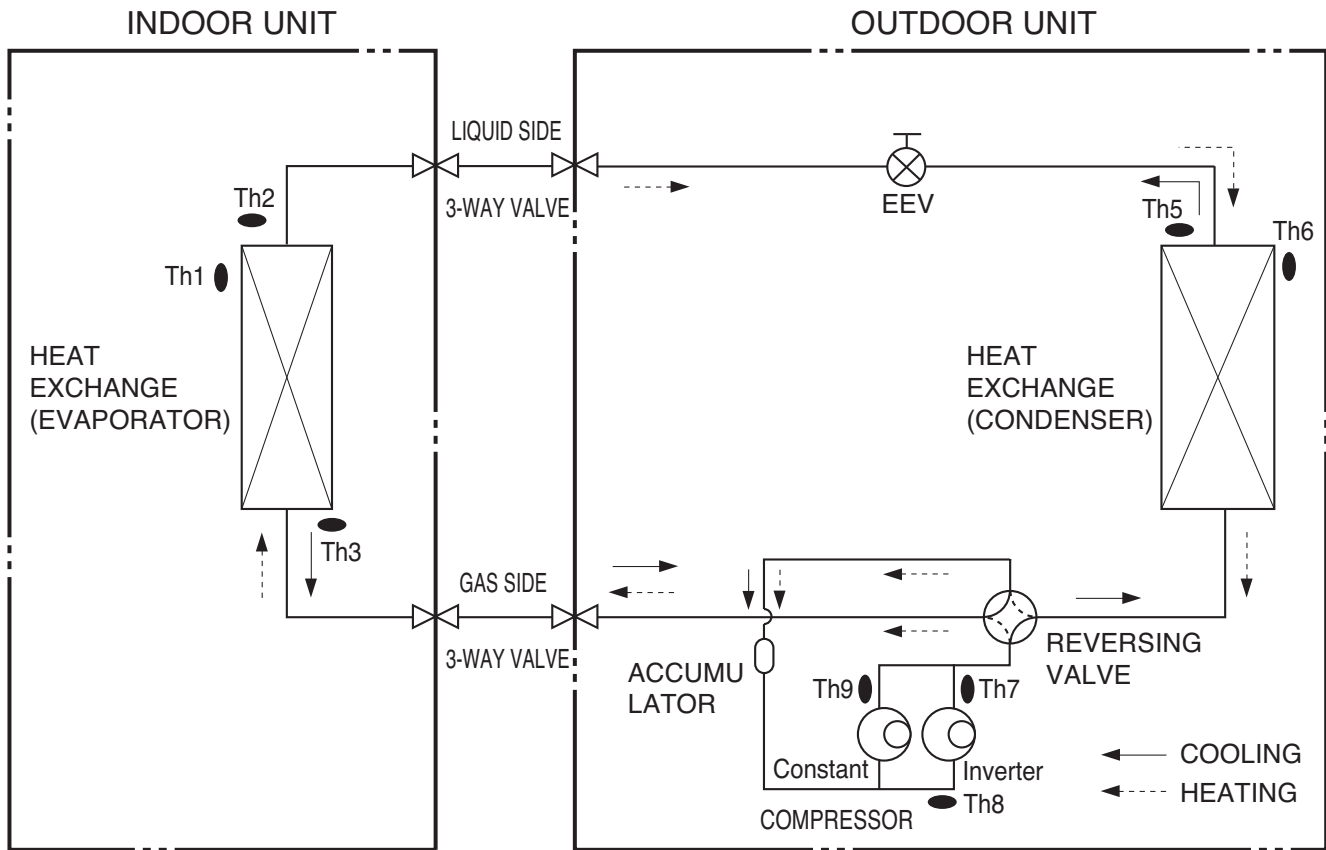
\* EEV : Electronic Expansion Valve.

**Modes : AS-W1838RH1(LA186HV), AS-W2438RH1(LA246HV), AS-W2435SZ1(LS246HV)**



LOC.	Description	PCB Connector
Th1	Thermistor for indoor air temperature	CN_TH1(INDOOR)
Th2	Thermistor for evaporating temperature	CN_TH2(INDOOR)
Th3		CN_TH3(INDOOR)
Th4	Thermistor for outdoor air temperature	CN_TH2(OUTDOOR)
Th5	Thermistor for condensing temperature	
Th6	Thermistor for discharge pipe temperature	CN_TH3(OUTDOOR)
Th7	Thermistor for suction pipe temperature	

**Models : AS-W303DGH1(LS306HV)**



LOC.	Description	PCB Connector
Th1	Thermister for indoor air temperature	CN-TH1(Indoor)
Th2	Thermister for indoor pipe(in) temperature	
Th3	Thermister for Indoor pipe(out) temperature	CN-TH2(Indoor)
Th4	Thermister for outdoor heat sink temperature	CN-TH1(Outdoor)
Th5	Thermister for outdoor pipe temperature	CN-TH2(Outdoor)
Th6	Thermister for outdoor air temperature	
Th7	Thermister for outdoor discharge pipe temperature(Inverter)	CN-TH3(Outdoor)
Th8	Thermister for outdoor suction pipe temperature (Inverter)	
Th9	Thermister for outdoor discharge pipe temperature(Constant)	CN-TH4 (Outdoor)

\* EEV : Electronic Expansion Valve

## 7. Capacity tables

### 7.1 Cooling Capacity

#### AS-W093B1U1(LS091HSV)

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)											
		20(68)			25(77)			32(89.6)			35(95)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	2.59	2.33	0.37	2.48	2.36	0.39	2.32	2.41	0.52	2.25	2.45	0.58
16(60.8)	22(71.6)	2.75	2.29	0.50	2.63	2.32	0.51	2.48	2.37	0.61	2.41	2.41	0.66
18(64.4)	25(77)	2.91	2.24	0.54	2.79	2.27	0.55	2.64	2.32	0.64	2.57	2.36	0.68
19(66.2)	27(80.6)	2.99	2.24	0.55	2.87	2.26	0.55	2.72	2.31	0.65	2.64	2.35	0.67
22(71.6)	30(86)	3.23	2.11	0.55	3.11	2.14	0.56	2.96	2.18	0.67	2.88	2.22	0.70
24(75.2)	32(89.6)	3.39	2.05	0.55	3.27	2.07	0.57	3.11	2.12	0.68	3.04	2.15	0.72

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)								
		40(104)			43(109.4)			46(114.8)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	2.16	2.44	0.64	2.10	2.46	0.62	2.04	2.48	0.56
16(60.8)	22(71.6)	2.31	2.39	0.69	2.25	2.43	0.65	2.19	2.44	0.57
18(64.4)	25(77)	2.47	2.34	0.69	2.41	2.38	0.65	2.35	2.39	0.55
19(66.2)	27(80.6)	2.55	2.34	0.70	2.49	2.38	0.65	2.43	2.38	0.55
22(71.6)	30(86)	2.78	2.21	0.71	2.72	2.24	0.66	2.66	2.25	0.55
24(75.2)	32(89.6)	2.94	2.14	0.72	2.88	2.18	0.67	2.82	2.18	0.56

#### AS-W123B1U1(LS121HSV)

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)											
		20(68)			25(77)			32(89.6)			35(95)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	3.24	2.62	0.49	3.10	2.65	0.51	2.91	2.71	0.69	2.82	2.75	0.77
16(60.8)	22(71.6)	3.43	2.58	0.67	3.29	2.60	0.67	3.10	2.66	0.81	3.01	2.71	0.87
18(64.4)	25(77)	3.63	2.52	0.72	3.49	2.55	0.72	3.30	2.60	0.85	3.21	2.65	0.91
19(66.2)	27(80.6)	3.73	2.51	0.73	3.59	2.54	0.74	3.40	2.60	0.86	3.30	2.64	0.89
22(71.6)	30(86)	4.03	2.37	0.73	3.89	2.40	0.75	3.69	2.45	0.88	3.60	2.49	0.93
24(75.2)	32(89.6)	4.23	2.30	0.72	4.09	2.33	0.75	3.89	2.38	0.90	3.80	2.42	0.95

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)								
		40(104)			43(109.4)			46(114.8)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	2.69	2.74	0.84	2.62	2.77	0.83	2.55	2.79	0.74
16(60.8)	22(71.6)	2.89	2.69	0.91	2.82	2.73	0.87	2.74	2.74	0.75
18(64.4)	25(77)	3.09	2.63	0.92	3.01	2.68	0.86	2.94	2.68	0.73
19(66.2)	27(80.6)	3.18	2.63	0.93	3.11	2.67	0.86	3.04	2.67	0.73
22(71.6)	30(86)	3.48	2.48	0.94	3.40	2.52	0.87	3.33	2.52	0.73
24(75.2)	32(89.6)	3.68	2.41	0.96	3.60	2.45	0.89	3.53	2.45	0.75

#### Symbol

AFR : Air flow rate	[m <sup>3</sup> /min]
DB : Dry bulb temperature	[°C]
WB : Wet bulb temperature	[°C]
TC : Total capacity	[kW]
SHC : Sensible capacity	[kW]
PI : Power Input	[kW]
(Comp.+ indoor fan motor+outdoor fan motor)	

#### Notes

- All capacities are net, evaporator fan motor heat is deducted.
- Indicates nominal maximum capacity.
- Direct interpolation is permissible. Do not extrapolate
- Capacities are based on the following conditions:
  - Interconnecting Piping Length 7.5m
  - Level Difference of Zero.

**AS-W163C2U1(LS161HSV)**

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)											
		20(68)			25(77)			32(89.6)			35(95)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	4.69	3.98	0.72	4.48	4.03	0.75	4.21	4.12	1.01	4.08	4.18	1.12
16(60.8)	22(71.6)	4.98	3.91	0.97	4.77	3.96	0.98	4.49	4.04	1.19	4.37	4.11	1.28
18(64.4)	25(77)	5.26	3.83	1.05	5.06	3.87	1.06	4.78	3.95	1.25	4.65	4.02	1.32
19(66.2)	27(80.6)	5.41	3.82	1.06	5.20	3.86	1.07	4.92	3.94	1.26	4.78	4.01	1.30
22(71.6)	30(86)	5.84	3.61	1.06	5.63	3.65	1.09	5.35	3.73	1.29	5.22	3.79	1.36
24(75.2)	32(89.6)	6.13	3.50	1.06	5.92	3.54	1.10	5.64	3.62	1.31	5.50	3.68	1.39

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)								
		40(104)			43(109.4)			46(114.8)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	3.90	4.16	1.23	3.79	4.21	1.21	3.69	4.24	1.09
16(60.8)	22(71.6)	4.19	4.09	1.33	4.08	4.15	1.27	3.97	4.16	1.10
18(64.4)	25(77)	4.47	4.00	1.35	4.36	4.06	1.26	4.26	4.07	1.07
19(66.2)	27(80.6)	4.61	3.99	1.35	4.51	4.05	1.26	4.40	4.06	1.06
22(71.6)	30(86)	5.04	3.77	1.37	4.93	3.83	1.27	4.82	3.83	1.06
24(75.2)	32(89.6)	5.32	3.66	1.40	5.22	3.72	1.30	5.11	3.72	1.09

**AS-W183C2U2(LS181HSV)**

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)											
		20(68)			25(77)			32(89.6)			35(95)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	5.23	4.58	0.80	5.00	4.63	0.84	4.69	4.73	1.12	4.55	4.81	1.25
16(60.8)	22(71.6)	5.55	4.50	1.09	5.32	4.55	1.10	5.01	4.65	1.32	4.87	4.72	1.42
18(64.4)	25(77)	5.87	4.40	1.17	5.64	4.45	1.18	5.33	4.55	1.39	5.18	4.62	1.48
19(66.2)	27(80.6)	6.03	4.39	1.19	5.80	4.44	1.20	5.49	4.54	1.41	5.33	4.61	1.45
22(71.6)	30(86)	6.51	4.15	1.19	6.28	4.19	1.22	5.97	4.28	1.44	5.82	4.35	1.52
24(75.2)	32(89.6)	6.83	4.02	1.18	6.60	4.07	1.23	6.29	4.16	1.47	6.14	4.23	1.55

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)								
		40(104)			43(109.4)			46(114.8)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	4.35	4.78	1.38	4.23	4.83	1.35	4.11	4.87	1.21
16(60.8)	22(71.6)	4.67	4.70	1.48	4.55	4.78	1.41	4.43	4.78	1.23
18(64.4)	25(77)	4.99	4.60	1.50	4.87	4.67	1.41	4.75	4.68	1.20
19(66.2)	27(80.6)	5.14	4.58	1.51	5.02	4.66	1.41	4.90	4.67	1.18
22(71.6)	30(86)	5.62	4.33	1.53	5.50	4.40	1.42	5.38	4.41	1.19
24(75.2)	32(89.6)	5.94	4.20	1.56	5.82	4.27	1.45	5.70	4.28	1.21

**Symbol**

AFR : Air flow rate	[m³/min]
DB : Dry bulb temperature	[°C]
WB : Wet bulb temperature	[°C]
TC : Total capacity	[kW]
SHC : Sensible capacity	[kW]
PI : Power Input	[kW]
(Comp.+ indoor fan motor+outdoor fan motor)	

**Notes**

- All capacities are net, evaporator fan motor heat is deducted.
- Indicates nominal maximum capacity.
- Direct interpolation is permissible. Do not extrapolate
- Capacities are based on the following conditions:
  - Interconnecting Piping Length 7.5m
  - Level Difference of Zero.

**AS-W243DGU1(LS240HSV)**

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)											
		20(68)			25(77)			32(89.6)			35(95)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	6.32	5.32	0.97	6.05	5.38	1.02	5.68	5.50	1.36	5.51	5.59	1.52
16(60.8)	22(71.6)	6.71	5.23	1.32	6.44	5.29	1.33	6.07	5.40	1.61	5.89	5.49	1.73
18(64.4)	25(77)	7.10	5.12	1.43	6.82	5.17	1.43	6.45	5.29	1.69	6.27	5.37	1.79
19(66.2)	27(80.6)	7.30	5.10	1.44	7.02	5.16	1.45	6.64	5.27	1.71	6.45	5.36	1.76
22(71.6)	30(86)	7.88	4.82	1.44	7.60	4.87	1.48	7.22	4.98	1.75	7.04	5.06	1.84
24(75.2)	32(89.6)	8.27	4.68	1.43	7.99	4.73	1.49	7.61	4.83	1.78	7.42	4.91	1.88

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)								
		40(104)			43(109.4)			46(114.8)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	5.27	5.56	1.67	5.12	5.62	1.64	4.98	5.66	1.47
16(60.8)	22(71.6)	5.65	5.46	1.80	5.50	5.55	1.71	5.36	5.56	1.49
18(64.4)	25(77)	6.03	5.34	1.83	5.89	5.43	1.71	5.74	5.44	1.45
19(66.2)	27(80.6)	6.22	5.33	1.83	6.08	5.42	1.71	5.93	5.43	1.44
22(71.6)	30(86)	6.80	5.03	1.86	6.66	5.12	1.72	6.51	5.13	1.44
24(75.2)	32(89.6)	7.18	4.89	1.90	7.04	4.97	1.76	6.89	4.98	1.47

**AS-W093ERH1(LA096HV)**

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)											
		20(68)			25(77)			32(89.6)			35(95)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	2.59	2.21	0.39	2.48	2.23	0.41	2.32	2.28	0.55	2.25	2.32	0.61
16(60.8)	22(71.6)	2.75	2.17	0.53	2.63	2.19	0.54	2.48	2.24	0.65	2.41	2.27	0.70
18(64.4)	25(77)	2.91	2.12	0.57	2.79	2.14	0.58	2.64	2.19	0.68	2.57	2.23	0.72
19(66.2)	27(80.6)	2.99	2.11	0.58	2.87	2.14	0.59	2.72	2.18	0.69	2.64	2.22	0.71
22(71.6)	30(86)	3.23	2.00	0.58	3.11	2.02	0.60	2.96	2.06	0.70	2.88	2.10	0.74
24(75.2)	32(89.6)	3.39	1.94	0.58	3.27	1.96	0.60	3.11	2.00	0.72	3.04	2.03	0.76

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)								
		40(104)			43(109.4)			46(114.8)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	2.16	2.30	0.67	2.10	2.33	0.66	2.04	2.35	0.59
16(60.8)	22(71.6)	2.31	2.26	0.73	2.25	2.30	0.69	2.19	2.30	0.60
18(64.4)	25(77)	2.47	2.21	0.74	2.41	2.25	0.69	2.35	2.25	0.59
19(66.2)	27(80.6)	2.55	2.21	0.74	2.49	2.24	0.69	2.43	2.25	0.58
22(71.6)	30(86)	2.78	2.08	0.75	2.72	2.12	0.70	2.66	2.12	0.58
24(75.2)	32(89.6)	2.94	2.02	0.77	2.88	2.06	0.71	2.82	2.06	0.59

**Symbol**

AFR : Air flow rate	[m <sup>3</sup> /min]
DB : Dry bulb temperature	[°C]
WB : Wet bulb temperature	[°C]
TC : Total capacity	[kW]
SHC : Sensible capacity	[kW]
PI : Power Input	[kW]
(Comp.+ indoor fan motor+outdoor fan motor)	

**Notes**

- All capacities are net, evaporator fan motor heat is deducted.
- Indicates nominal maximum capacity.
- Direct interpolation is permissible. Do not extrapolate
- Capacities are based on the following conditions:
  - Interconnecting Piping Length 7.5m
  - Level Difference of Zero.



**AS-W123ERH1(LA126HV)**

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)											
		20(68)			25(77)			32(89.6)			35(95)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	3.39	2.37	0.64	3.25	2.40	0.67	3.05	2.45	0.90	2.95	2.49	1.00
16(60.8)	22(71.6)	3.60	2.33	0.87	3.45	2.36	0.88	3.25	2.41	1.06	3.16	2.45	1.14
18(64.4)	25(77)	3.81	2.28	0.94	3.66	2.31	0.94	3.46	2.36	1.11	3.37	2.40	1.18
19(66.2)	27(80.6)	3.91	2.28	0.95	3.76	2.30	0.96	3.56	2.35	1.13	3.46	2.39	1.16
22(71.6)	30(86)	4.23	2.15	0.95	4.08	2.17	0.97	3.87	2.22	1.15	3.78	2.26	1.22
24(75.2)	32(89.6)	4.44	2.09	0.94	4.28	2.11	0.98	4.08	2.16	1.17	3.98	2.19	1.24

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)								
		40(104)			43(109.4)			46(114.8)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	2.82	2.48	1.10	2.75	2.51	1.08	2.67	2.52	0.97
16(60.8)	22(71.6)	3.03	2.44	1.19	2.95	2.48	1.13	2.87	2.48	0.98
18(64.4)	25(77)	3.24	2.38	1.20	3.16	2.42	1.13	3.08	2.43	0.96
19(66.2)	27(80.6)	3.34	2.38	1.21	3.26	2.42	1.13	3.18	2.42	0.95
22(71.6)	30(86)	3.65	2.24	1.23	3.57	2.28	1.14	3.49	2.29	0.95
24(75.2)	32(89.6)	3.85	2.18	1.25	3.78	2.21	1.16	3.70	2.22	0.97

**AS-W1838RH1(LA186HV)**

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)											
		20(68)			25(77)			32(89.6)			35(95)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	5.06	3.84	1.00	4.84	3.89	1.04	4.54	3.97	1.40	4.41	4.04	1.56
16(60.8)	22(71.6)	5.37	3.78	1.36	5.15	3.82	1.37	4.85	3.90	1.65	4.71	3.97	1.78
18(64.4)	25(77)	5.68	3.69	1.47	5.46	3.74	1.47	5.16	3.82	1.74	5.02	3.88	1.84
19(66.2)	27(80.6)	5.84	3.68	1.48	5.61	3.73	1.50	5.31	3.81	1.76	5.16	3.87	1.81
22(71.6)	30(86)	6.31	3.48	1.48	6.08	3.52	1.52	5.78	3.60	1.80	5.63	3.65	1.90
24(75.2)	32(89.6)	6.62	3.38	1.47	6.39	3.42	1.53	6.09	3.49	1.83	5.94	3.55	1.94

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)								
		40(104)			43(109.4)			46(114.8)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	4.21	4.01	1.72	4.10	4.06	1.68	3.98	4.09	1.51
16(60.8)	22(71.6)	4.52	3.94	1.85	4.40	4.01	1.76	4.29	4.02	1.53
18(64.4)	25(77)	4.83	3.86	1.88	4.71	3.92	1.76	4.59	3.93	1.49
19(66.2)	27(80.6)	4.98	3.85	1.88	4.86	3.91	1.76	4.75	3.92	1.48
22(71.6)	30(86)	5.44	3.63	1.91	5.32	3.69	1.77	5.21	3.70	1.48
24(75.2)	32(89.6)	5.75	3.53	1.95	5.63	3.59	1.81	5.52	3.59	1.52

**Symbol**

AFR : Air flow rate	[m <sup>3</sup> /min]
DB : Dry bulb temperature	[°C]
WB : Wet bulb temperature	[°C]
TC : Total capacity	[kW]
SHC : Sensible capacity	[kW]
PI : Power Input	[kW]
(Comp.+ indoor fan motor+outdoor fan motor)	

**Notes**

- All capacities are net, evaporator fan motor heat is deducted.
- Indicates nominal maximum capacity.
- Direct interpolation is permissible. Do not extrapolate
- Capacities are based on the following conditions:
  - Interconnecting Piping Length 7.5m
  - Level Difference of Zero.

**AS-W2438RH1(LA246HV)**

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)											
		20(68)			25(77)			32(89.6)			35(95)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	6.95	4.87	1.44	6.65	4.92	1.50	6.24	5.03	2.01	6.05	5.11	2.25
16(60.8)	22(71.6)	7.38	4.78	1.95	7.08	4.83	1.96	6.67	4.94	2.38	6.47	5.02	2.55
18(64.4)	25(77)	7.81	4.68	2.11	7.50	4.73	2.12	7.09	4.83	2.49	6.90	4.91	2.64
19(66.2)	27(80.6)	8.02	4.67	2.13	7.71	4.72	2.15	7.30	4.82	2.52	7.09	4.90	2.60
22(71.6)	30(86)	8.66	4.41	2.13	8.35	4.46	2.19	7.94	4.55	2.58	7.74	4.63	2.73
24(75.2)	32(89.6)	9.09	4.28	2.12	8.78	4.32	2.20	8.36	4.42	2.63	8.16	4.49	2.78

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)								
		40(104)			43(109.4)			46(114.8)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	5.79	5.08	2.47	5.63	5.14	2.42	5.47	5.18	2.17
16(60.8)	22(71.6)	6.21	4.99	2.66	6.05	5.08	2.53	5.89	5.08	2.20
18(64.4)	25(77)	6.63	4.88	2.70	6.47	4.97	2.53	6.31	4.97	2.14
19(66.2)	27(80.6)	6.84	4.87	2.70	6.68	4.95	2.52	6.52	4.96	2.12
22(71.6)	30(86)	7.47	4.60	2.75	7.32	4.68	2.55	7.16	4.69	2.13
24(75.2)	32(89.6)	7.90	4.47	2.81	7.74	4.54	2.60	7.58	4.55	2.18

**AS-W2435SZ1(LS246HV)**

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)											
		20(68)			25(77)			32(89.6)			35(95)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	7.01	5.23	1.46	6.71	5.29	1.53	6.30	5.41	2.05	6.10	5.50	2.29
16(60.8)	22(71.6)	7.44	5.14	1.98	7.14	5.20	2.00	6.72	5.31	2.42	6.53	5.40	2.60
18(64.4)	25(77)	7.87	5.03	2.15	7.56	5.09	2.16	7.15	5.20	2.54	6.95	5.28	2.70
19(66.2)	27(80.6)	8.09	5.02	2.17	7.78	5.07	2.19	7.36	5.18	2.57	7.15	5.27	2.65
22(71.6)	30(86)	8.74	4.74	2.17	8.42	4.79	2.23	8.01	4.90	2.63	7.81	4.98	2.78
24(75.2)	32(89.6)	9.17	4.60	2.16	8.85	4.65	2.25	8.43	4.75	2.68	8.23	4.83	2.83

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)								
		40(104)			43(109.4)			46(114.8)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	5.84	5.47	2.52	5.68	5.53	2.46	5.52	5.57	2.21
16(60.8)	22(71.6)	6.26	5.37	2.71	6.10	5.46	2.58	5.94	5.47	2.24
18(64.4)	25(77)	6.69	5.25	2.75	6.53	5.34	2.58	6.37	5.35	2.19
19(66.2)	27(80.6)	6.90	5.24	2.76	6.74	5.33	2.57	6.58	5.34	2.17
22(71.6)	30(86)	7.54	4.95	2.80	7.38	5.03	2.60	7.22	5.04	2.17
24(75.2)	32(89.6)	7.96	4.80	2.86	7.80	4.88	2.65	7.64	4.89	2.22

**Symbol**

AFR : Air flow rate	[m <sup>3</sup> /min]
DB : Dry bulb temperature	[°C]
WB : Wet bulb temperature	[°C]
TC : Total capacity	[kW]
SHC : Sensible capacity	[kW]
PI : Power Input	[kW]
(Comp.+ indoor fan motor+outdoor fan motor)	

**Notes**

- All capacities are net, evaporator fan motor heat is deducted.
- Indicates nominal maximum capacity.
- Direct interpolation is permissible. Do not extrapolate
- Capacities are based on the following conditions:
  - Interconnecting Piping Length 7.5m
  - Level Difference of Zero.

**AS-W303DGH1(LS306HV)**

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)											
		20(68)			25(77)			32(89.6)			35(95)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	7.59	5.70	1.76	7.26	5.77	1.83	6.82	5.89	2.46	6.61	5.99	2.75
16(60.8)	22(71.6)	8.06	5.60	2.38	7.72	5.66	2.40	7.28	5.79	2.91	7.07	5.88	3.12
18(64.4)	25(77)	8.52	5.48	2.57	8.19	5.54	2.59	7.74	5.66	3.05	7.53	5.75	3.23
19(66.2)	27(80.6)	8.76	5.47	2.60	8.42	5.53	2.63	7.97	5.65	3.08	7.74	5.74	3.18
22(71.6)	30(86)	9.46	5.16	2.60	9.12	5.22	2.67	8.67	5.33	3.16	8.45	5.42	3.33
24(75.2)	32(89.6)	9.93	5.01	2.59	9.58	5.07	2.70	9.13	5.18	3.22	8.91	5.26	3.40

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)								
		40(104)			43(109.4)			46(114.8)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	6.32	5.95	3.02	6.14	6.02	2.96	5.97	6.06	2.65
16(60.8)	22(71.6)	6.78	5.85	3.25	6.60	5.95	3.10	6.43	5.96	2.69
18(64.4)	25(77)	7.24	5.72	3.30	7.07	5.82	3.09	6.89	5.83	2.62
19(66.2)	27(80.6)	7.47	5.71	3.31	7.30	5.80	3.08	7.12	5.81	2.60
22(71.6)	30(86)	8.16	5.39	3.36	7.99	5.48	3.11	7.81	5.49	2.60
24(75.2)	32(89.6)	8.62	5.23	3.43	8.45	5.32	3.18	8.27	5.33	2.66

**AS-W363DGU1(LS360HV)**

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)											
		20(68)			25(77)			32(89.6)			35(95)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	9.51	6.58	2.23	9.10	6.65	2.33	8.54	6.79	3.13	8.28	6.91	3.49
16(60.8)	22(71.6)	10.10	6.46	3.02	9.68	6.53	3.05	9.12	6.67	3.69	8.86	6.78	3.96
18(64.4)	25(77)	10.68	6.32	3.27	10.26	6.39	3.29	9.70	6.53	3.87	9.44	6.64	4.10
19(66.2)	27(80.6)	10.97	6.30	3.30	10.55	6.37	3.33	9.99	6.51	3.91	9.70	6.62	4.04
22(71.6)	30(86)	11.85	5.95	3.30	11.43	6.02	3.39	10.86	6.15	4.01	10.59	6.25	4.23
24(75.2)	32(89.6)	12.44	5.78	3.28	12.01	5.84	3.42	11.44	5.97	4.08	11.17	6.07	4.31

Indoor Air Temperature		Outdoor Air Temperature : DB°C(°F)								
		40(104)			43(109.4)			46(114.8)		
WB°C(°F)	DB°C(°F)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14(57.2)	20(68)	7.92	6.87	3.83	7.70	6.94	3.75	7.48	6.99	3.37
16(60.8)	22(71.6)	8.50	6.75	4.13	8.28	6.86	3.93	8.06	6.87	3.41
18(64.4)	25(77)	9.07	6.60	4.19	8.85	6.71	3.92	8.64	6.72	3.33
19(66.2)	27(80.6)	9.36	6.58	4.20	9.14	6.69	3.91	8.93	6.70	3.30
22(71.6)	30(86)	10.23	6.22	4.26	10.01	6.32	3.95	9.79	6.33	3.30
24(75.2)	32(89.6)	10.80	6.03	4.35	10.59	6.13	4.04	10.37	6.14	3.38

**Symbol**

AFR : Air flow rate	[m <sup>3</sup> /min]
DB : Dry bulb temperature	[°C]
WB : Wet bulb temperature	[°C]
TC : Total capacity	[kW]
SHC : Sensible capacity	[kW]
PI : Power Input	[kW]
(Comp.+ indoor fan motor+outdoor fan motor)	

**Notes**

- All capacities are net, evaporator fan motor heat is deducted.
- █ Indicates nominal maximum capacity.
- Direct interpolation is permissible. Do not extrapolate
- Capacities are based on the following conditions:
  - Interconnecting Piping Length 7.5m
  - Level Difference of Zero.

## 7.2 Heating Capacity

### AS-W093B1U1(LS091HSV)

Indoor Air Temperature	Outdoor Air Temperature : WB°C(°F)													
	-15(5)		-10(14)		-5(23)		0(32)		6(42.8)		10(50)		15(59)	
DB°C(°F)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
16(60.8)	2.38	0.67	2.51	0.65	2.72	0.68	2.90	0.73	3.22	0.78	3.41	0.82	3.70	0.87
18(64.4)	2.36	0.68	2.50	0.67	2.72	0.70	2.90	0.75	3.20	0.80	3.36	0.83	3.68	0.88
20(68)	2.34	0.69	2.50	0.69	2.72	0.72	2.89	0.77	3.17	0.82	3.34	0.85	3.69	0.88
21(69.8)	2.34	0.70	2.50	0.70	2.72	0.73	2.89	0.78	3.15	0.83	3.34	0.85	3.67	0.89
22(71.6)	2.33	0.71	2.50	0.70	2.72	0.74	2.88	0.79	3.13	0.83	3.34	0.86	3.64	0.89
24(75.2)	2.31	0.72	2.48	0.73	2.69	0.76	2.86	0.81	3.10	0.85	3.28	0.86	3.59	0.89

### AS-W123B1U1(LS121HSV)

Indoor Air Temperature	Outdoor Air Temperature : WB°C(°F)													
	-15(5)		-10(14)		-5(23)		0(32)		6(42.8)		10(50)		15(59)	
DB°C(°F)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
16(60.8)	2.93	0.86	3.09	0.84	3.34	0.88	3.57	0.95	3.96	1.01	4.19	1.06	4.55	1.12
18(64.4)	2.90	0.88	3.08	0.86	3.35	0.91	3.57	0.97	3.94	1.04	4.14	1.08	4.53	1.14
20(68)	2.88	0.89	3.08	0.89	3.35	0.93	3.56	1.00	3.90	1.06	4.11	1.09	4.54	1.14
21(69.8)	2.88	0.90	3.08	0.90	3.35	0.95	3.55	1.01	3.88	1.07	4.11	1.10	4.51	1.15
22(71.6)	2.87	0.91	3.08	0.91	3.35	0.96	3.54	1.03	3.85	1.08	4.10	1.11	4.47	1.15
24(75.2)	2.84	0.93	3.05	0.94	3.31	0.99	3.51	1.05	3.82	1.10	4.04	1.12	4.42	1.15

### AS-W163C2U1(LS161HSV)

Indoor Air Temperature	Outdoor Air Temperature : WB°C(°F)													
	-15(5)		-10(14)		-5(23)		0(32)		6(42.8)		10(50)		15(59)	
DB°C(°F)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
16(60.8)	4.45	1.39	4.68	1.36	5.08	1.42	5.42	1.53	6.02	1.64	6.36	1.70	6.90	1.81
18(64.4)	4.41	1.41	4.68	1.39	5.08	1.46	5.42	1.57	5.98	1.68	6.28	1.74	6.88	1.83
20(68)	4.38	1.44	4.67	1.43	5.09	1.51	5.40	1.61	5.92	1.71	6.24	1.76	6.89	1.85
21(69.8)	4.37	1.45	4.67	1.45	5.08	1.53	5.39	1.64	5.88	1.73	6.24	1.77	6.85	1.85
22(71.6)	4.36	1.47	4.68	1.47	5.08	1.55	5.38	1.66	5.84	1.74	6.23	1.78	6.79	1.85
24(75.2)	4.31	1.51	4.63	1.51	5.02	1.59	5.34	1.70	5.79	1.77	6.13	1.80	6.71	1.86

### AS-W183C2U2(LS181HSV)

Indoor Air Temperature	Outdoor Air Temperature : WB°C(°F)													
	-15(5)		-10(14)		-5(23)		0(32)		6(42.8)		10(50)		15(59)	
DB°C(°F)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
16(60.8)	4.85	1.40	5.10	1.37	5.53	1.43	5.91	1.54	6.56	1.65	6.93	1.71	7.52	1.82
18(64.4)	4.80	1.42	5.09	1.40	5.54	1.47	5.90	1.58	6.51	1.68	6.84	1.75	7.50	1.84
20(68)	4.77	1.45	5.09	1.44	5.54	1.52	5.89	1.62	6.45	1.72	6.80	1.77	7.51	1.86
21(69.8)	4.76	1.46	5.09	1.46	5.54	1.54	5.88	1.64	6.41	1.74	6.80	1.78	7.46	1.86
22(71.6)	4.75	1.48	5.09	1.48	5.54	1.56	5.86	1.67	6.36	1.75	6.79	1.79	7.40	1.86
24(75.2)	4.69	1.52	5.04	1.52	5.47	1.60	5.81	1.71	6.31	1.78	6.67	1.81	7.31	1.87

#### Symbol

AFR : Air flow rate	[m <sup>3</sup> /min]
DB : Dry bulb temperature	[°C]
WB : Wet bulb temperature	[°C]
TC : Total capacity	[kW]
SHC : Sensible capacity	[kW]
PI : Power Input	[kW]
(Comp.+ indoor fan motor+outdoor fan motor)	

#### Notes

- All capacities are net, evaporator fan motor heat is deducted.
- Indicates nominal maximum capacity.
- Direct interpolation is permissible. Do not extrapolate
- Capacities are based on the following conditions:
  - Interconnecting Piping Length 7.5m
  - Level Difference of Zero.
  - Outdoor air : 85%RH. However, the condition on nominal capacity is 7°CDB/6°CWB

**AS-W243DGU1(LS240HSV)**

Indoor Air Temperature	Outdoor Air Temperature : WB°C(°F)													
	-15(5)		-10(14)		-5(23)		0(32)		6(42.8)		10(50)		15(59)	
DB°C(°F)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
16(60.8)	6.08	1.63	6.40	1.59	6.94	1.66	7.41	1.79	8.22	1.91	8.69	1.99	9.43	2.12
18(64.4)	6.02	1.65	6.39	1.63	6.95	1.71	7.40	1.84	8.17	1.96	8.58	2.03	9.40	2.15
20(68)	5.98	1.68	6.39	1.67	6.95	1.76	7.39	1.89	8.09	2.00	8.52	2.06	9.42	2.16
21(69.8)	5.97	1.70	6.39	1.70	6.95	1.79	7.37	1.91	8.04	2.02	8.52	2.07	9.36	2.16
22(71.6)	5.96	1.72	6.39	1.72	6.95	1.81	7.35	1.94	7.98	2.04	8.51	2.09	9.28	2.16
24(75.2)	5.88	1.76	6.33	1.77	6.86	1.86	7.29	1.98	7.92	2.07	8.37	2.10	9.17	2.18

**AS-W093ERH1(LA096HV)**

Indoor Air Temperature	Outdoor Air Temperature : WB°C(°F)													
	-15(5)		-10(14)		-5(23)		0(32)		6(42.8)		10(50)		15(59)	
DB°C(°F)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
16(60.8)	2.58	0.75	2.71	0.73	2.94	0.77	3.14	0.82	3.49	0.88	3.68	0.92	4.00	0.98
18(64.4)	2.55	0.76	2.71	0.75	2.94	0.79	3.14	0.85	3.46	0.90	3.64	0.93	3.99	0.99
20(68)	2.54	0.77	2.71	0.77	2.95	0.81	3.13	0.87	3.43	0.92	3.61	0.95	3.99	0.99
21(69.8)	2.53	0.78	2.71	0.78	2.95	0.82	3.12	0.88	3.41	0.93	3.61	0.95	3.97	0.99
22(71.6)	2.53	0.79	2.71	0.79	2.94	0.83	3.12	0.89	3.38	0.94	3.61	0.96	3.93	0.99
24(75.2)	2.49	0.81	2.68	0.81	2.91	0.86	3.09	0.91	3.36	0.95	3.55	0.97	3.89	1.00

**AS-W123ERH1(LA126HV)**

Indoor Air Temperature	Outdoor Air Temperature : WB°C(°F)													
	-15(5)		-10(14)		-5(23)		0(32)		6(42.8)		10(50)		15(59)	
DB°C(°F)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
16(60.8)	3.33	1.11	3.50	1.08	3.80	1.13	4.06	1.22	4.50	1.30	4.76	1.35	5.16	1.44
18(64.4)	3.30	1.13	3.50	1.11	3.80	1.16	4.05	1.25	4.47	1.33	4.70	1.38	5.15	1.46
20(68)	3.27	1.15	3.50	1.14	3.81	1.20	4.04	1.28	4.43	1.36	4.67	1.40	5.16	1.47
21(69.8)	3.27	1.16	3.50	1.15	3.80	1.22	4.04	1.30	4.40	1.37	4.67	1.41	5.12	1.47
22(71.6)	3.26	1.17	3.50	1.17	3.80	1.23	4.02	1.32	4.37	1.38	4.66	1.42	5.08	1.47
24(75.2)	3.22	1.20	3.46	1.20	3.76	1.27	3.99	1.35	4.34	1.41	4.58	1.43	5.02	1.48

**AS-W1838RH1(LA186HV)**

Indoor Air Temperature	Outdoor Air Temperature : WB°C(°F)													
	-15(5)		-10(14)		-5(23)		0(32)		6(42.8)		10(50)		15(59)	
DB°C(°F)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
16(60.8)	4.50	1.44	4.73	1.41	5.13	1.47	5.48	1.58	6.08	1.69	6.42	1.76	6.97	1.88
18(64.4)	4.45	1.46	4.72	1.44	5.13	1.52	5.47	1.63	6.04	1.73	6.34	1.80	6.95	1.90
20(68)	4.42	1.49	4.72	1.48	5.14	1.56	5.46	1.67	5.98	1.77	6.30	1.82	6.96	1.91
21(69.8)	4.41	1.51	4.72	1.50	5.14	1.58	5.45	1.69	5.94	1.79	6.30	1.84	6.92	1.91
22(71.6)	4.40	1.52	4.72	1.52	5.13	1.60	5.43	1.71	5.90	1.80	6.29	1.85	6.86	1.91
24(75.2)	4.35	1.56	4.68	1.57	5.07	1.65	5.39	1.75	5.85	1.83	6.19	1.86	6.78	1.93

**Symbol**

AFR : Air flow rate	[m <sup>3</sup> /min]
DB : Dry bulb temperature	[°C]
WB : Wet bulb temperature	[°C]
TC : Total capacity	[kW]
SHC : Sensible capacity	[kW]
PI : Power Input	[kW]
(Comp.+ indoor fan motor+outdoor fan motor)	

**Notes**

- All capacities are net, evaporator fan motor heat is deducted.
- Indicates nominal maximum capacity.
- Direct interpolation is permissible. Do not extrapolate
- Capacities are based on the following conditions:
  - Interconnecting Piping Length 7.5m
  - Level Difference of Zero.
  - Outdoor air : 85%RH. However, the condition on nominal capacity is 7°CDB/6°CWB

**AS-W2438RH1(LA246HV)**

Indoor Air Temperature	Outdoor Air Temperature : WB°C(°F)													
	-15(5)		-10(14)		-5(23)		0(32)		6(42.8)		10(50)		15(59)	
DB°C(°F)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
16(60.8)	5.95	2.36	6.26	2.31	6.78	2.41	7.24	2.59	8.04	2.78	8.50	2.89	9.22	3.08
18(64.4)	5.89	2.40	6.25	2.36	6.79	2.48	7.24	2.67	7.99	2.84	8.39	2.94	9.19	3.11
20(68)	5.85	2.44	6.25	2.43	6.79	2.55	7.22	2.74	7.91	2.90	8.33	2.99	9.21	3.13
21(69.8)	5.83	2.47	6.25	2.46	6.79	2.59	7.21	2.77	7.86	2.93	8.33	3.01	9.15	3.13
22(71.6)	5.82	2.49	6.25	2.49	6.79	2.63	7.19	2.81	7.80	2.95	8.32	3.02	9.07	3.13
24(75.2)	5.75	2.55	6.19	2.56	6.71	2.70	7.13	2.87	7.74	3.00	8.18	3.05	8.97	3.16

**AS-W2435SZ1(LS246HV)**

Indoor Air Temperature	Outdoor Air Temperature : WB°C(°F)													
	-15(5)		-10(14)		-5(23)		0(32)		6(42.8)		10(50)		15(59)	
DB°C(°F)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
16(60.8)	5.73	2.36	6.03	2.31	6.53	2.41	6.98	2.59	7.75	2.78	8.19	2.89	8.88	3.08
18(64.4)	5.67	2.40	6.02	2.36	6.54	2.48	6.97	2.67	7.70	2.84	8.08	2.94	8.85	3.11
20(68)	5.63	2.44	6.02	2.43	6.55	2.55	6.96	2.74	7.62	2.90	8.03	2.99	8.87	3.13
21(69.8)	5.62	2.47	6.02	2.46	6.54	2.59	6.94	2.77	7.57	2.93	8.03	3.01	8.81	3.13
22(71.6)	5.61	2.49	6.02	2.49	6.54	2.63	6.92	2.81	7.52	2.95	8.02	3.02	8.74	3.13
24(75.2)	5.54	2.55	5.96	2.56	6.46	2.70	6.87	2.87	7.46	3.00	7.88	3.05	8.64	3.16

**AS-W303DGH1(LS306HV)**

Indoor Air Temperature	Outdoor Air Temperature : WB°C(°F)													
	-15(5)		-10(14)		-5(23)		0(32)		6(42.8)		10(50)		15(59)	
DB°C(°F)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
16(60.8)	6.70	2.61	7.05	2.55	7.64	2.66	8.16	2.86	9.06	3.06	9.57	3.19	10.39	3.39
18(64.4)	6.63	2.65	7.04	2.61	7.65	2.74	8.16	2.94	9.00	3.13	9.45	3.25	10.35	3.43
20(68)	6.59	2.70	7.04	2.68	7.65	2.82	8.13	3.02	8.91	3.20	9.39	3.30	10.37	3.45
21(69.8)	6.57	2.72	7.04	2.71	7.65	2.86	8.12	3.06	8.85	3.23	9.39	3.32	10.30	3.46
22(71.6)	6.56	2.75	7.04	2.75	7.65	2.90	8.09	3.10	8.79	3.26	9.38	3.34	10.22	3.46
24(75.2)	6.48	2.82	6.97	2.83	7.56	2.98	8.03	3.17	8.72	3.31	9.22	3.37	10.10	3.48

**AS-W363DGU1(LS360HV)**

Indoor Air Temperature	Outdoor Air Temperature : WB°C(°F)													
	-15(5)		-10(14)		-5(23)		0(32)		6(42.8)		10(50)		15(59)	
DB°C(°F)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
16(60.8)	7.75	3.13	8.16	3.05	8.84	3.20	9.44	3.43	10.48	3.67	11.07	3.82	12.02	4.07
18(64.4)	7.67	3.18	8.14	3.13	8.85	3.29	9.44	3.53	10.41	3.76	10.94	3.90	11.98	4.12
20(68)	7.62	3.23	8.14	3.21	8.86	3.38	9.41	3.63	10.31	3.84	10.86	3.96	12.00	4.14
21(69.8)	7.60	3.27	8.14	3.26	8.86	3.43	9.39	3.67	10.25	3.88	10.86	3.98	11.92	4.15
22(71.6)	7.59	3.30	8.14	3.30	8.85	3.48	9.37	3.72	10.17	3.91	10.85	4.00	11.82	4.15
24(75.2)	7.50	3.38	8.06	3.40	8.74	3.58	9.29	3.81	10.09	3.97	10.67	4.04	11.69	4.18

**Symbol**

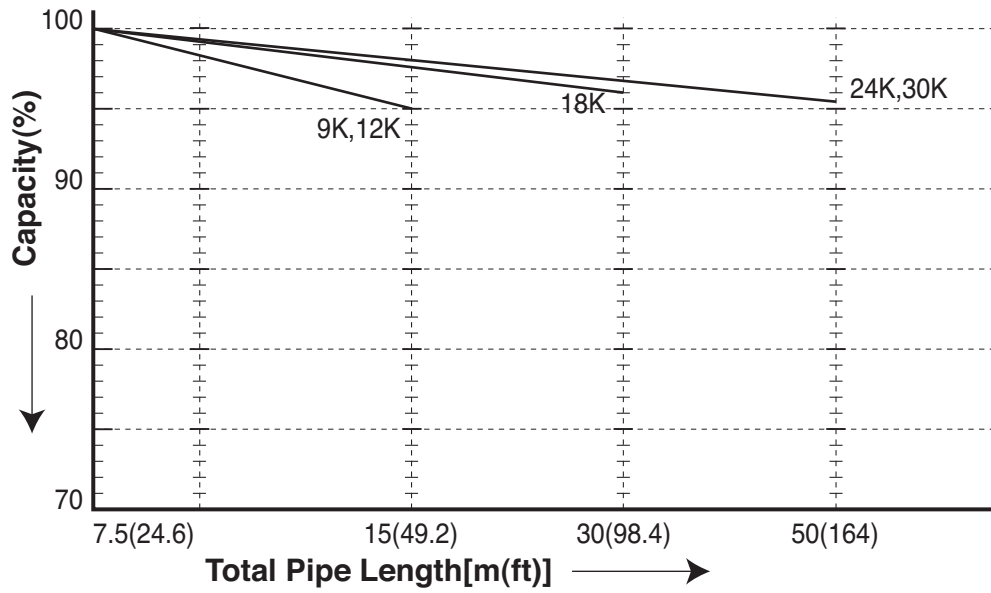
AFR : Air flow rate	[m <sup>3</sup> /min]
DB : Dry bulb temperature	[°C]
WB : Wet bulb temperature	[°C]
TC : Total capacity	[kW]
SHC : Sensible capacity	[kW]
PI : Power Input	[kW]
(Comp.+ indoor fan motor+outdoor fan motor)	

**Notes**

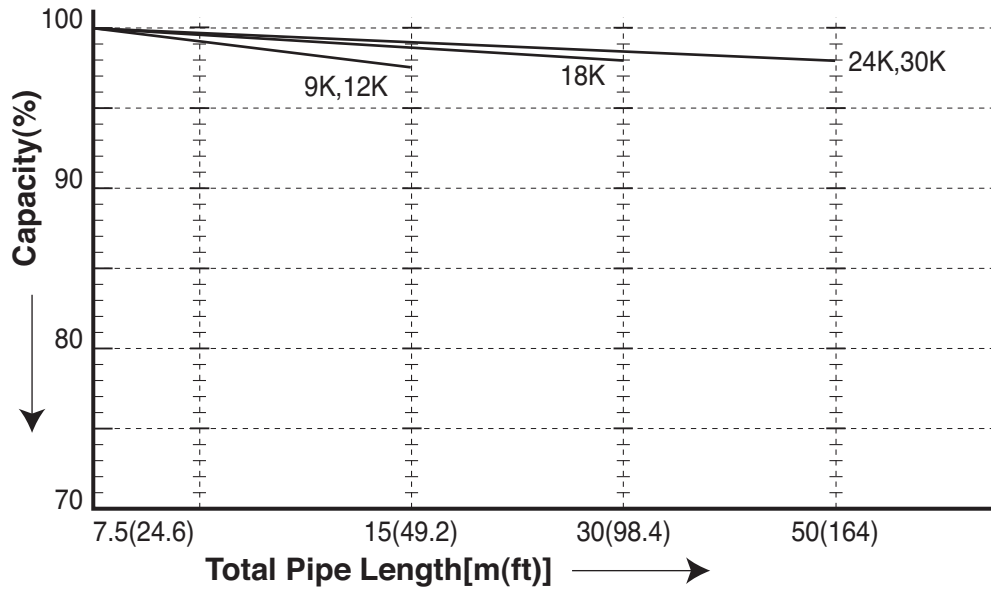
- All capacities are net, evaporator fan motor heat is deducted.
- Indicates nominal maximum capacity.
- Direct interpolation is permissible. Do not extrapolate
- Capacities are based on the following conditions:
  - Interconnecting Piping Length 7.5m
  - Level Difference of Zero.
  - Outdoor air : 85%RH. However, the condition on nominal capacity is 7°CDB/6°CWB

# 8. Capacity coefficient factor

## Cooling

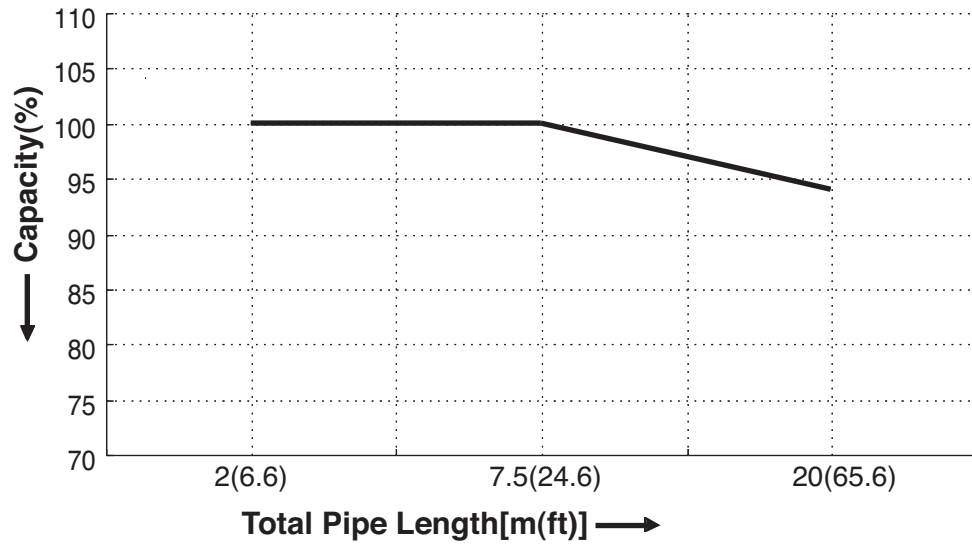


## Heating

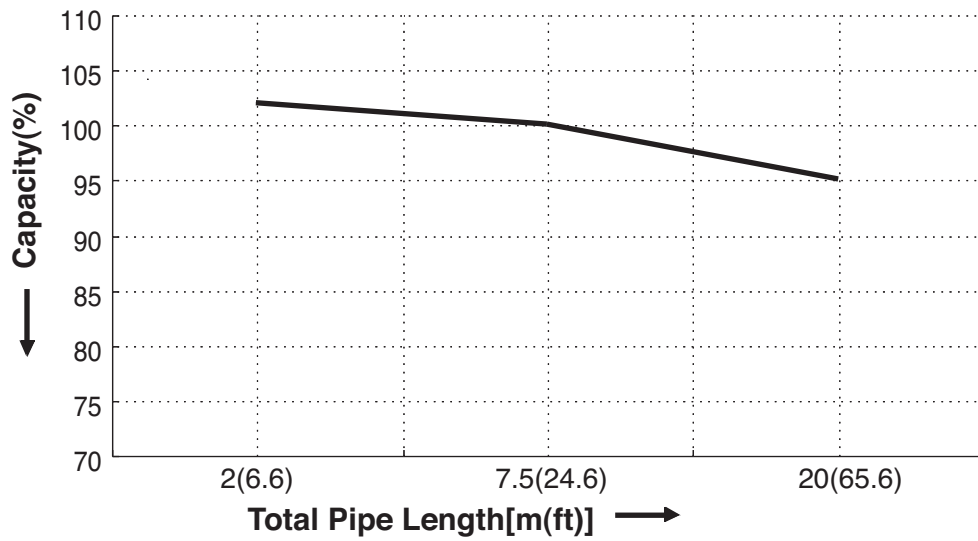


### High Efficiency models

#### Cooling

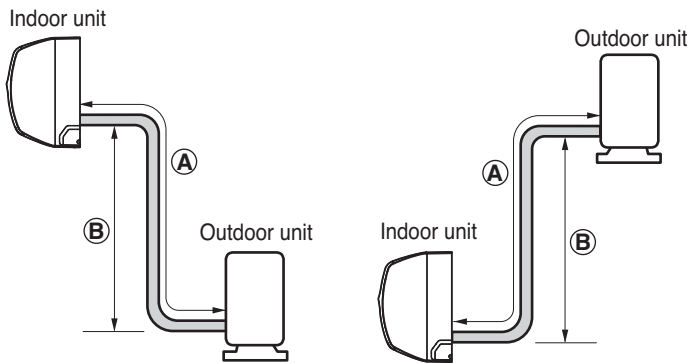


#### Heating





Models	Max. Pipe Length[m(ft)]	Max. Elevation[m(ft)]	Additional Refrigerant[g/m(oz/ft)]
AS-W093B1U1(LS091HSV)	20(65.6)	10(32.8)	20(0.22)
AS-W123B1U1(LS121HSV)	20(65.6)	10(32.8)	20(0.22)
AS-W163C2U1(LS161HSV)	20(65.6)	15(49.2)	20(0.22)
AS-W183C2U2(LS181HSV)	30(98.4)	15(49.2)	35(0.38)
AS-W243DGU1(LS240HSV)	30(98.4)	15(49.2)	35(0.38)
AS-W093ERH1(LA096HV)	15(49.2)	7.5(24.6)	20(0.22)
AS-W123ERH1(LA126HV)	15(49.2)	7.5(24.6)	20(0.22)
AS-W1838RH1(LA186HV)	15(49.2)	7.5(24.6)	20(0.22)
AS-W2438RH1(LA246HV)	30(98.4)	15(49.2)	30(0.32)
AS-W2435SZ1(LS246HV)	30(98.4)	15(49.2)	30(0.32)
AS-W303DGH1(LS306HV)	30(98.4)	15(49.2)	20(0.22)
AS-W363DGU1(LS360HV)	30(98.4)	15(49.2)	35(0.38)

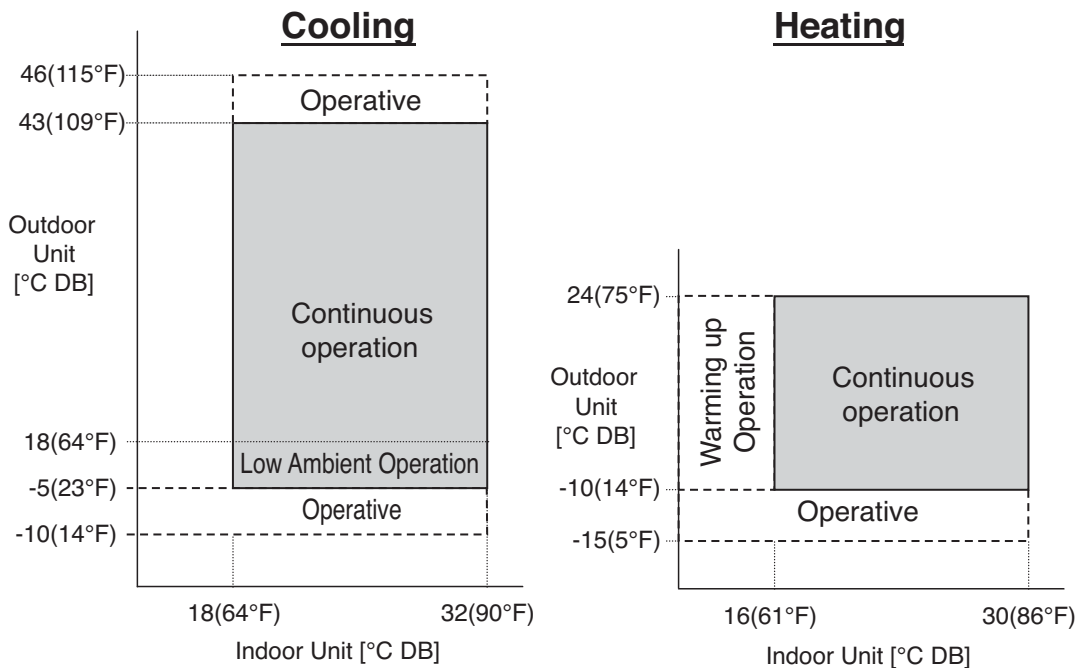
**CAUTION:**

- Capacity is based on standard length and maximum allowance length is on the basis of reliability.

**Notes**

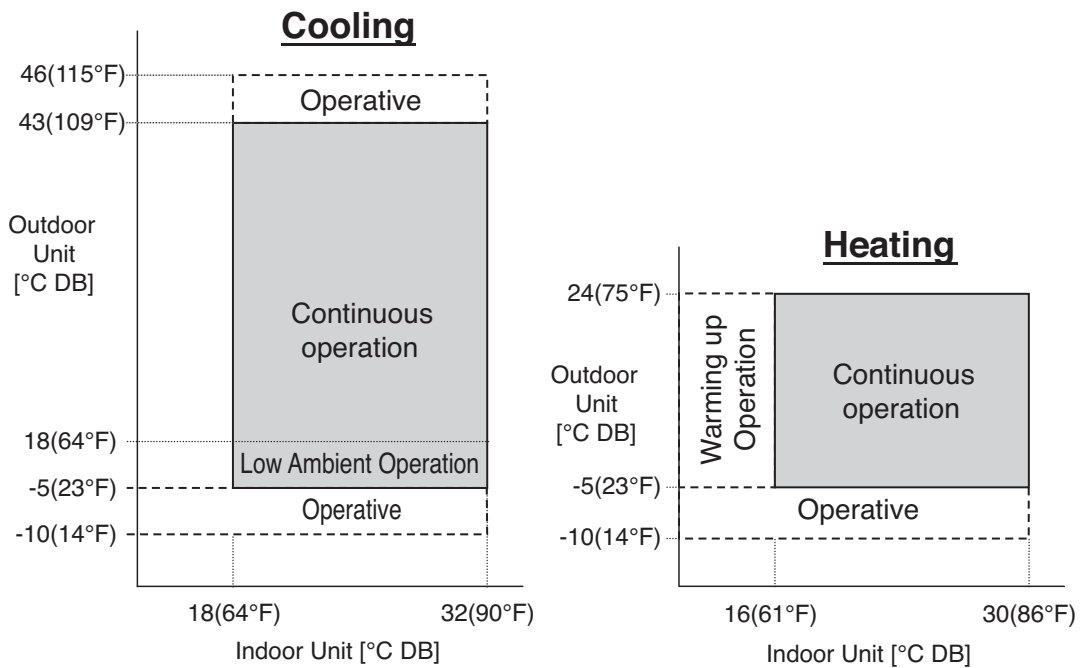
- \* Equivalent pipe length = actual pipe length + number of band x 0.3
- \* Additional Refrigerant Charge  
Example: For Model 12k Btu/h having 20m pipe length, additional refrigerant to be charged is  $(20-7) \times 20 = 260\text{g}$
- \* Refer to the specification for the maximum pipe length of each model.
- \* Specially LS091HSV / LS121HSV  
Additional refrigerant must be charged after 12.5m(41ft) (there is no need to charge till 12.5m(41ft) based on reliability)

# 9. Operation range



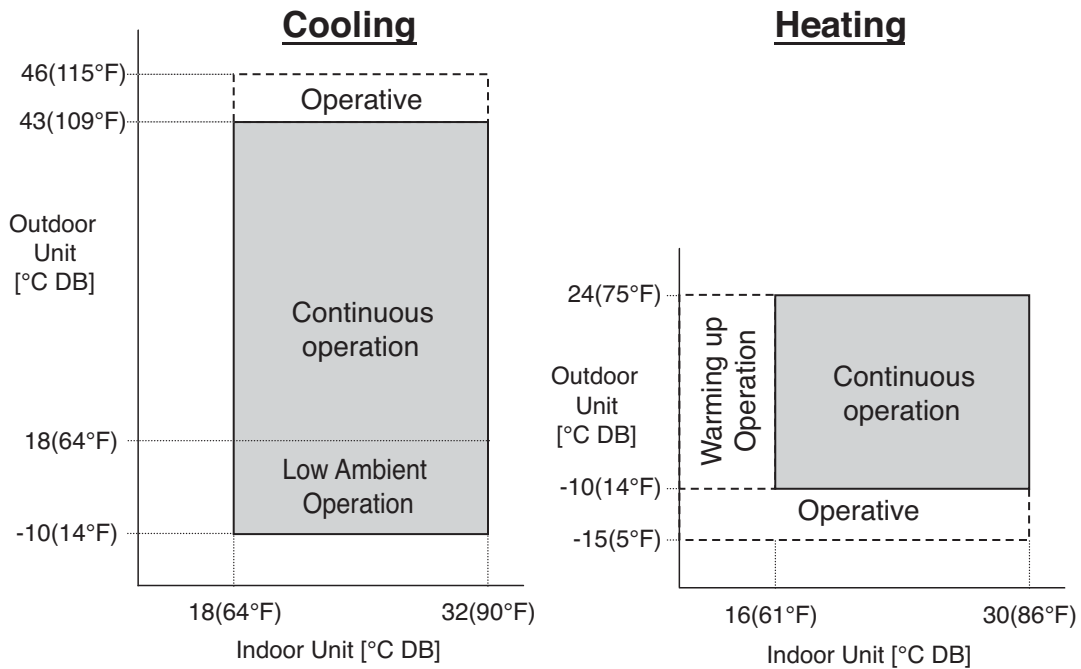
Operative: Intermittent operation due to the operational conditions (indoor/outdoor temperature, humidity, load etc.) can cause the heating capacity to decrease.

\* Applied Model : LA096HV, LA126HV, LA186HV, LA246HV



Operative: Intermittent operation due to the operational conditions (indoor/outdoor temperature, humidity, load etc.) can cause the heating capacity to decrease.

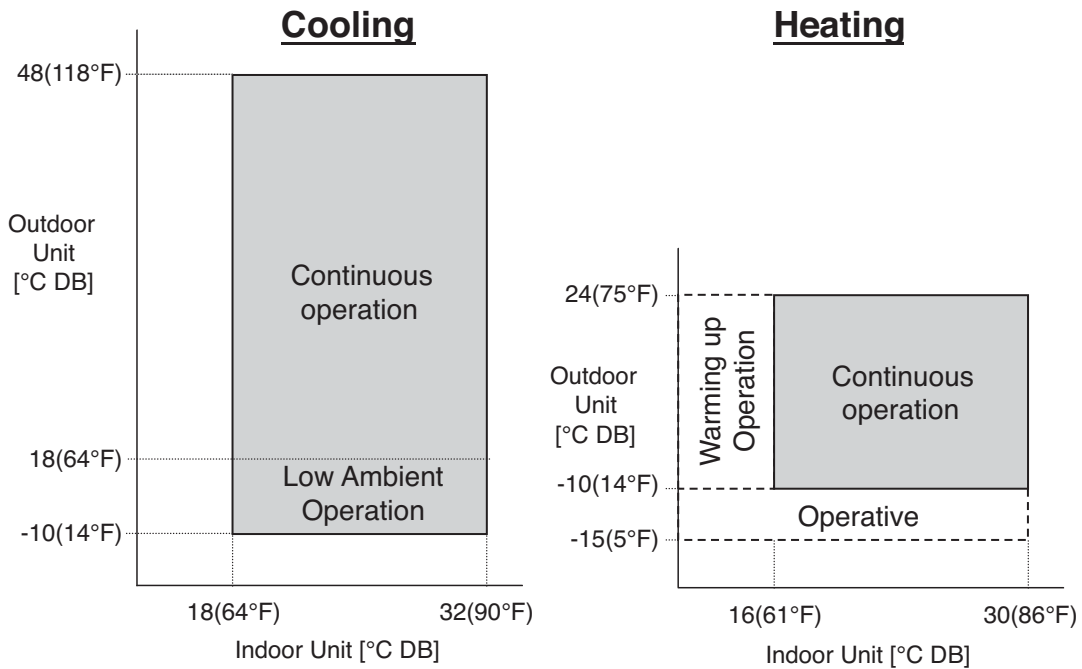
\* Applied Model : LS306HV



Operative: Intermittent operation due to the operational conditions (indoor/outdoor temperature, humidity, load etc.) can cause the heating capacity to decrease.

\* Applied Model : LS246HV, LS360HV

**High Efficiency models**



Operative: Intermittent operation due to the operational conditions (indoor/outdoor temperature, humidity, load etc.) can cause the heating capacity to decrease.

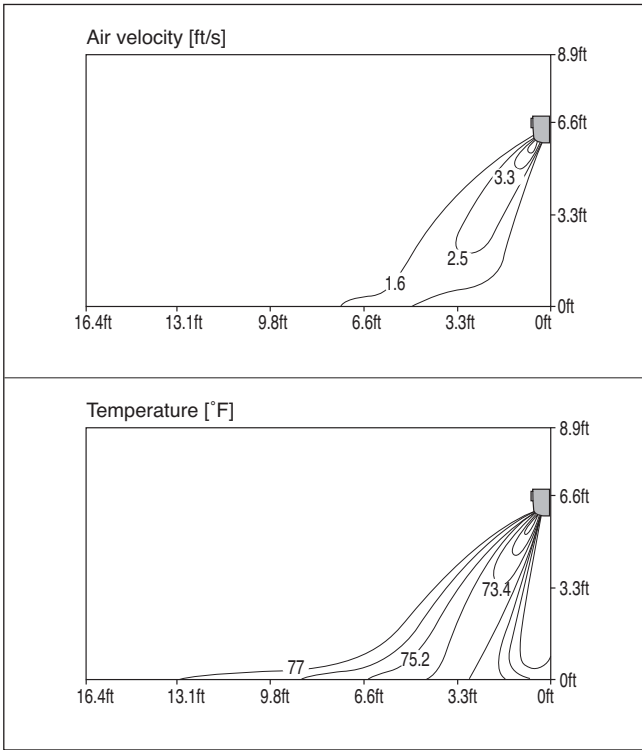
\* Applied Model : LS091HSV, LS121HSV, LS161HSV, LS181HSV, LS240HSV

# 10. Air flow and temperature distributions(reference data)

## 2.63 kW (9kBtu/h)

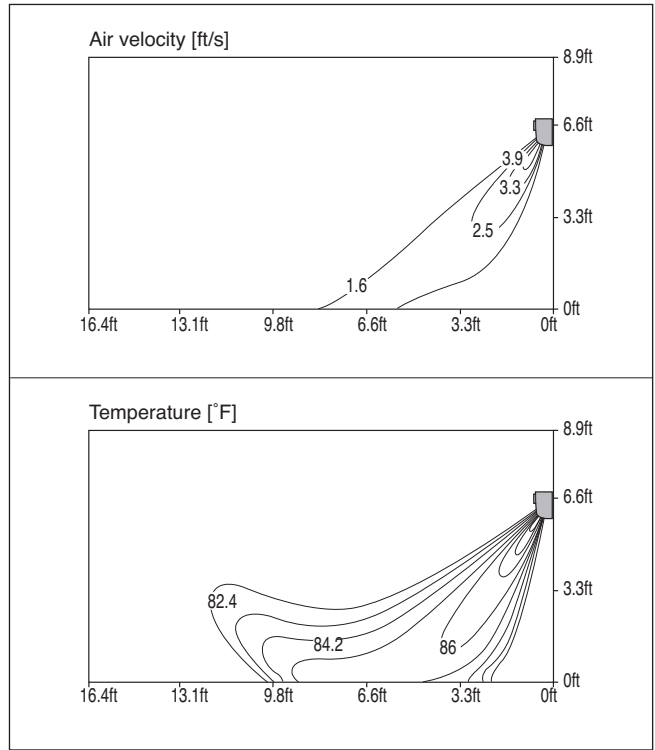
### Cooling

Discharge angle:45°



### Heating

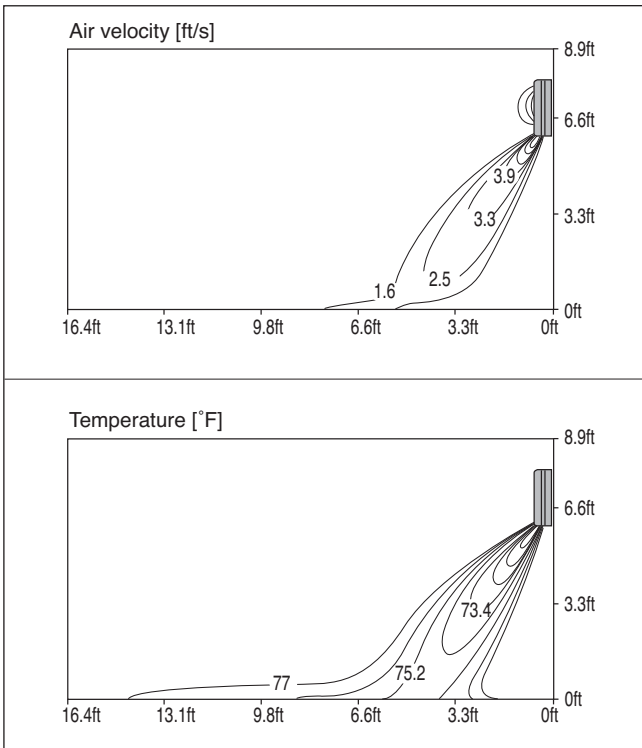
Discharge angle:50°



## 3.51 kW (12kBtu/h)

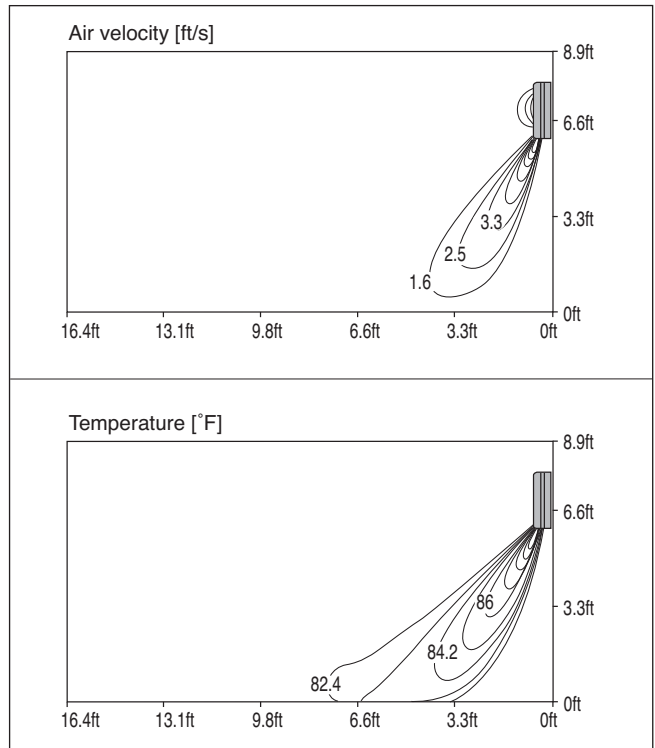
### Cooling

Discharge angle:45°



### Heating

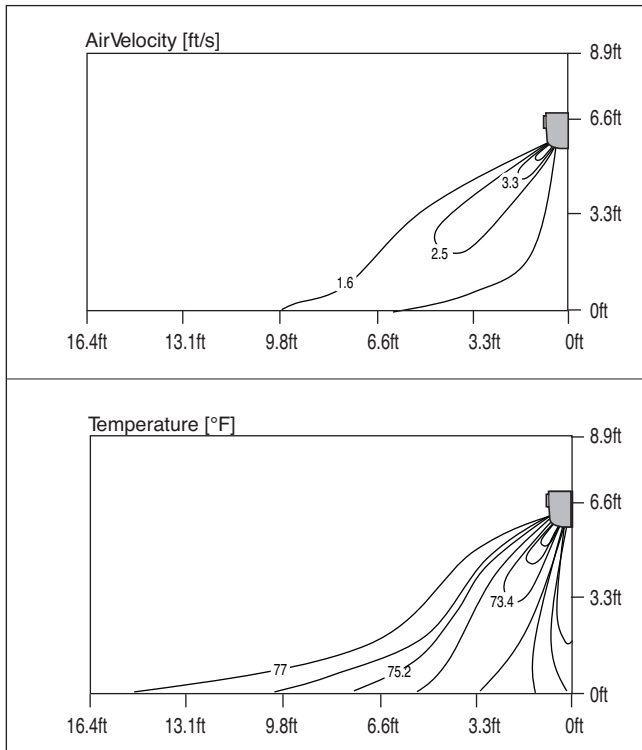
Discharge angle:50°



### High Efficiency 2.63 kW (9kBtu/h)

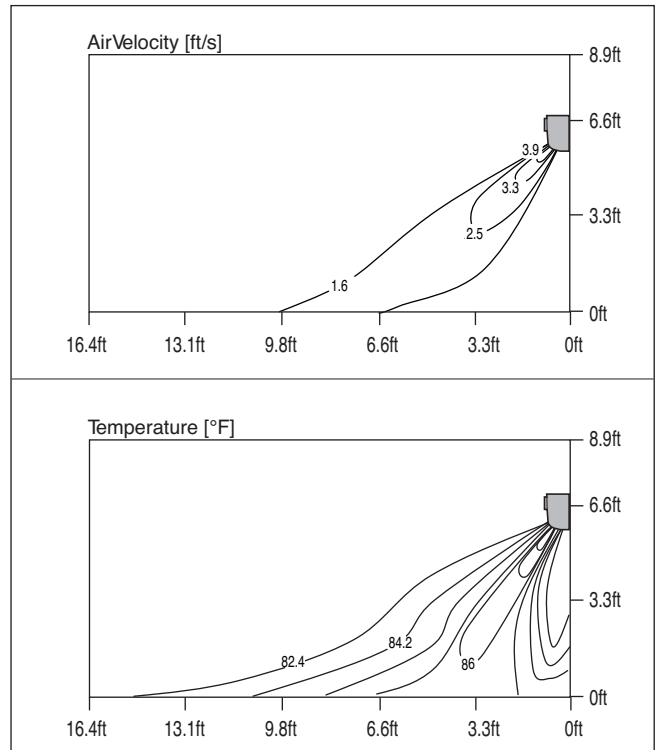
#### Cooling

Discharge angle:45°



#### Heating

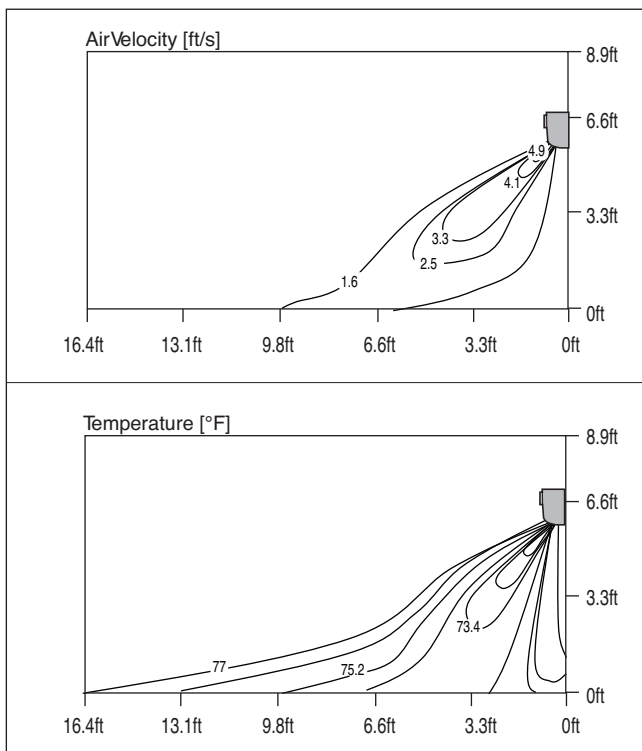
Discharge angle:50°



### High Efficiency 3.51 kW (12kBtu/h)

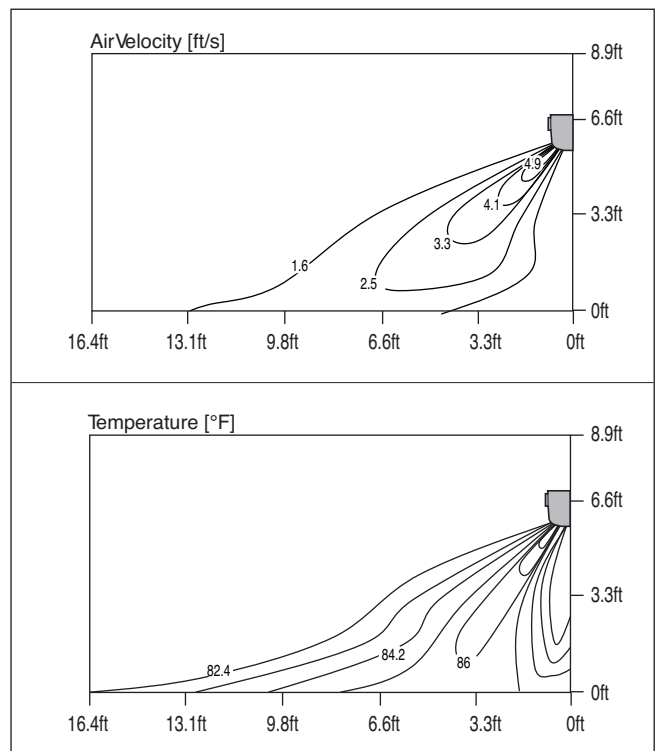
#### Cooling

Discharge angle:45°



#### Heating

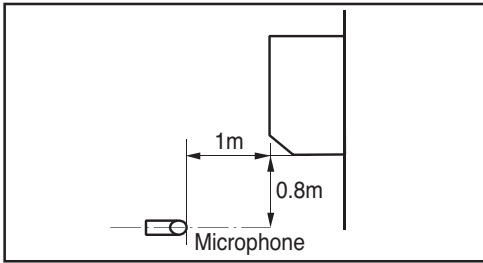
Discharge angle:50°



# 11. Sound levels

## 11.1 Indoor Units

### Overall



**Notes:**

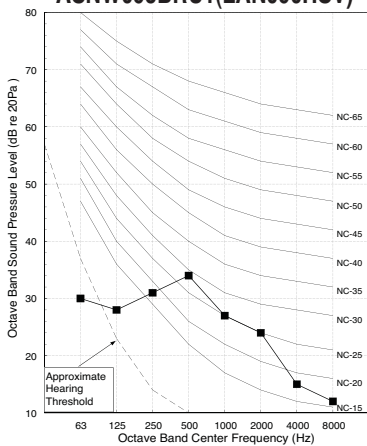
- Sound measured at 1m away from the center of the unit.
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Reference acoustic pressure 0dB=20Pa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

Model	Sound Levels [dB(A)]		
	H	M	L
ASNW093B1U1 (LSN091HSV)	38	33	24
ASNW123B1U1 (LSN121HSV)	39	33	24
ASNW163C2U1 (LSN161HSV)	42	38	34
ASNW183C2U2 (LSN181HSV)	45	40	35
ASNW243DGU1 (LSN240HSV)	46	43	39
ASNW093BRU1 (LAN090HSV)	38	33	24
ASNW123BRU1 (LAN120HSV)	39	33	24
ASNW183CRU1 (LAN180HSV)	45	40	35
ASNW243CRU1 (LAN240HSV)	45	40	35

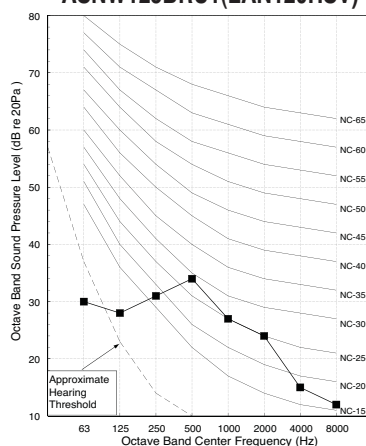
Model	Sound Levels [dB(A)]		
	H	M	L
ASNW093ERH1 (LAN096HV)	36	33	30
ASNW123ERH1 (LAN126HV)	39	33	30
ASNW183ERH1 (LAN186HV)	40	37	34
ASNW243ERH1 (LAN246HV)	45	40	37
ASNW243SZ1 (LSN246HV)	45	40	37
ASNW303DGH1 (LSN306HV)	47	43	41
ASNW303DGU1 (LSN307HV)	48	44	39
ASNW363DGU1 (LSN360HV)	49	44	39

### Sound Pressure Level

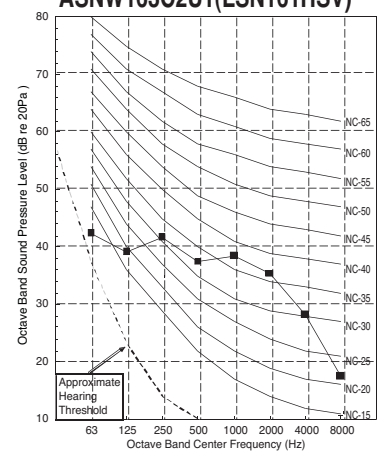
ASNW093B1U1(LSN091HSV)  
ASNW093BRU1(LAN090HSV)



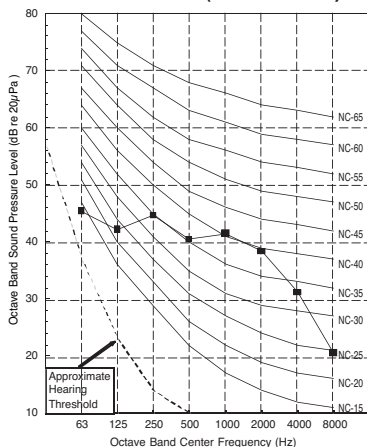
ASNW123B1U1(LSN121HSV)  
ASNW123BRU1(LAN120HSV)



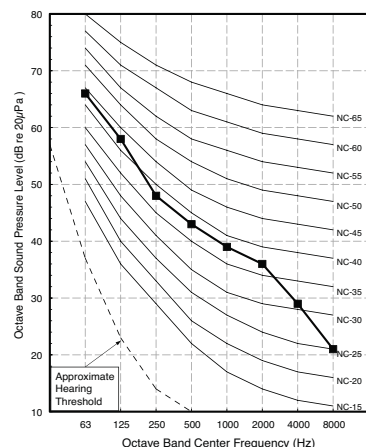
ASNW163C2U1(LSN161HSV)



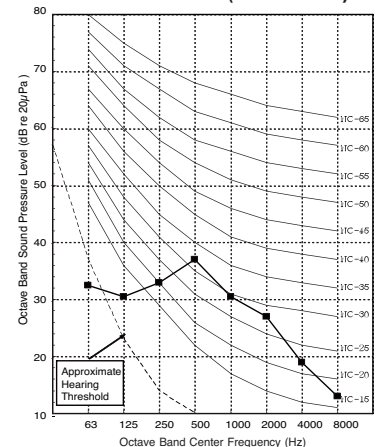
ASNW183C2U2(LSN181HSV)  
ASNW183CRU1(LAN180HSV)  
ASNW243CRU1(LAN240HSV)



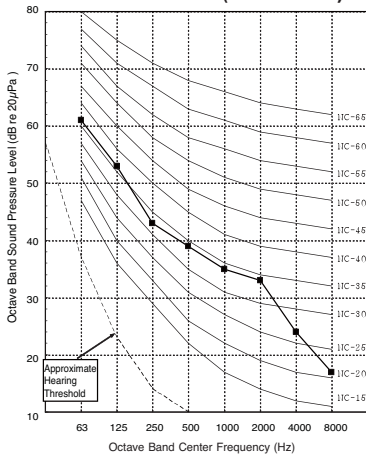
ASNW243DGU1((LSN240HSV)



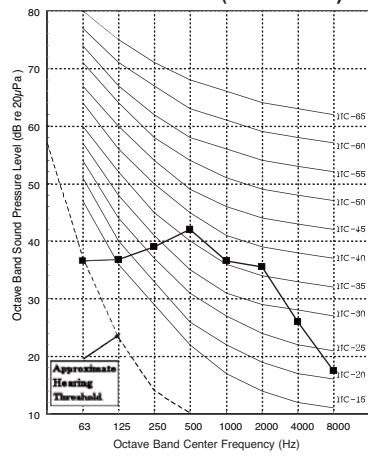
ASNW093ERH1(LAN096HV)



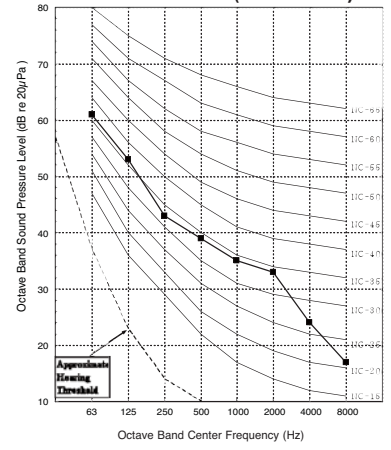
**ASNW123ERH1(LAN126HV)**



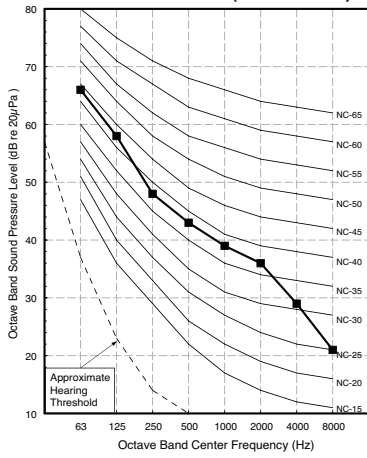
**ASNW1838RH1(LAN186HV)**



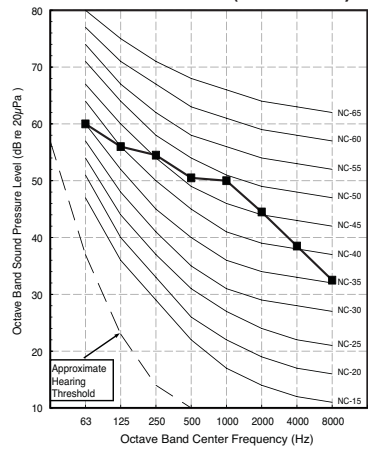
**ASNW2438RH1(LAN246HV)  
ASNW2435SZ1(LSN246HV)**



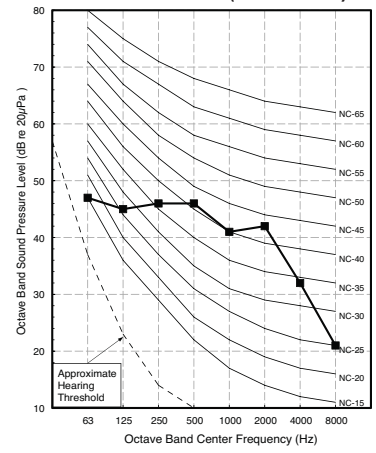
**ASNW303DGH1(LSN306HV)**



**ASNW363DGU1(LSN360HV)**

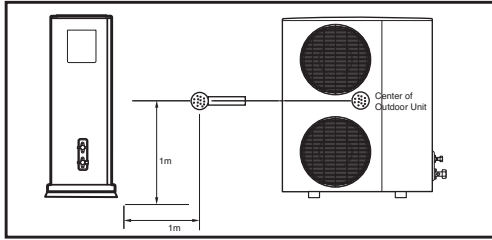


**ASNW303DGU1(LSN307HV)**



## 11.2 Outdoor Units

### Overall



**Notes:**

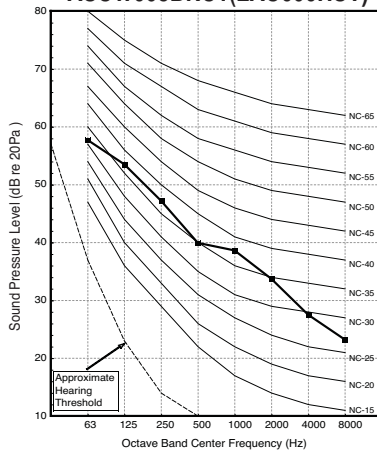
- Sound measured at 1m away from the center of the unit.
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Reference acoustic pressure 0dB=20Pa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

Model	Sound Levels [dB(A)]
	H
ASUW093B1U1(LSU091HSV)	45
ASUW123B1U1(LSU121HSV)	45
ASUW163C2U1(LSU161HSV)	51
ASUW183C2U2(LSU181HSV)	53
ASUW243DGU1 (LSU240HSV)	54
ASUW093BRU1 (LAU090HSV)	45
ASUW123BRU1 (LAU120HSV)	45
ASUW183CRU1 (LAU180HSV)	53
ASUW243CRU1 (LAU240HSV)	53

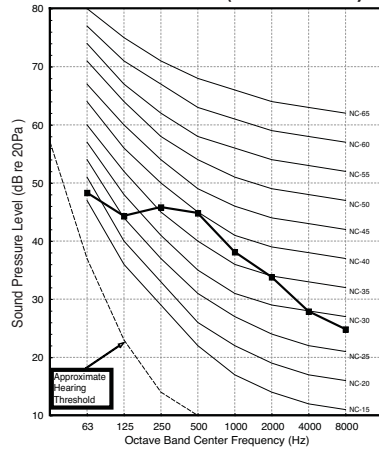
Model	Sound Levels [dB(A)]
	H
ASUW093EUH1(LAU096HV)	45
ASUW123EUH1(LAU126HV)	45
ASUW183UH1(LAU186HV)	53
ASUW243UH1(LAU246HV)	54
ASUW2435SZ1(LSU246HV)	54
ASUW303DGH1(LSU306HV)	58
ASUW363DGU1 (LSU360HV)	55
ASUW303DGU1 (LSU307HV)	55

### Sound Pressure Level

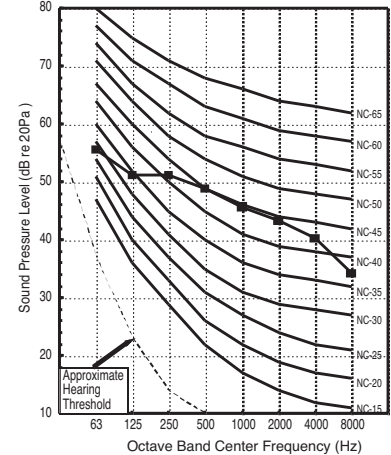
ASUW093B1U1(LSU091HSV)  
ASUW093BRU1(LAU090HSV)



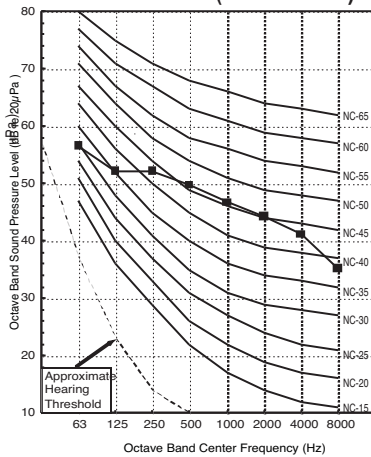
ASUW123B1U1(LSU121HSV)  
ASUW123BRU1(LAU120HSV)



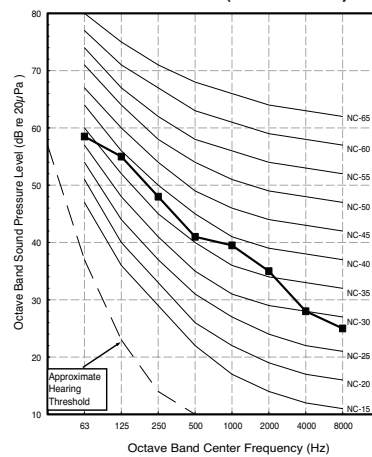
ASUW163C2U1(LSU161HSV)



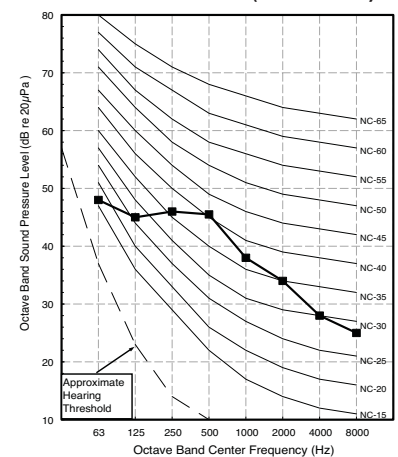
ASUW183C2U2(LSU181HSV)  
ASUW183CRU1(LAU180HSV)  
ASUW243CRU1(LAU240HSV)



ASUW093EUH1(LAU096HV)

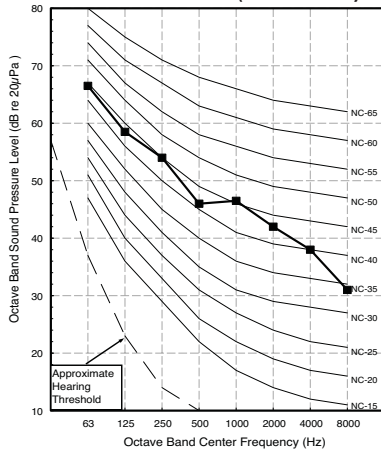


ASUW123EUH1(LAU126HV)

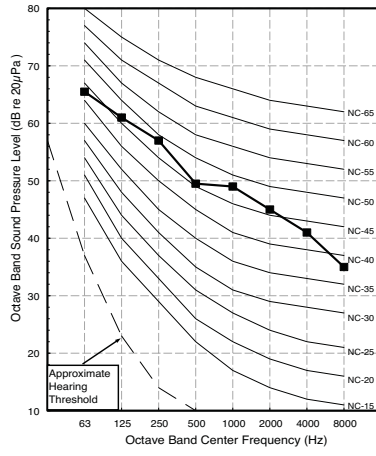




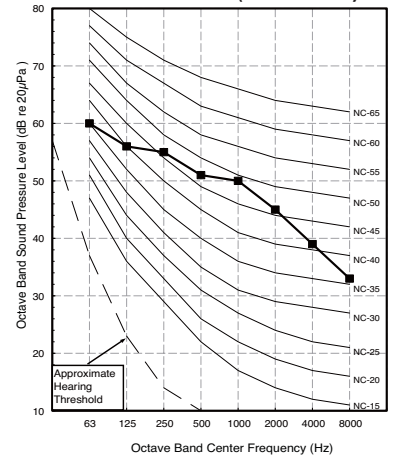
**ASUW1838UH1(LAU186HV)**



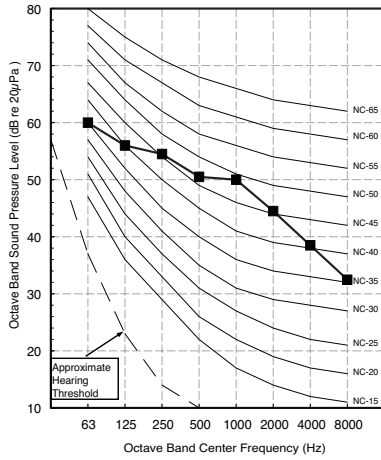
**ASUW2438UH1(LAU246HV)  
ASUW2435SZ1(LSU246HV)**



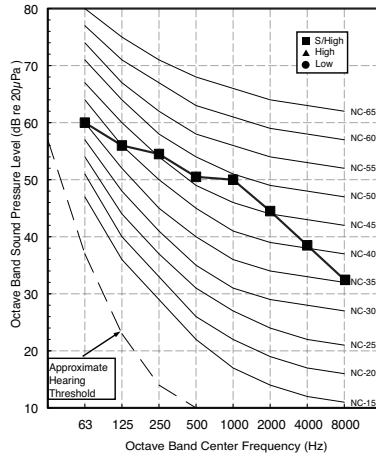
**ASUW303DGH1(LSU306HV)**



**ASUW363DGU1(LSU360HV)  
ASUW303DGU1(LSU307HV)**



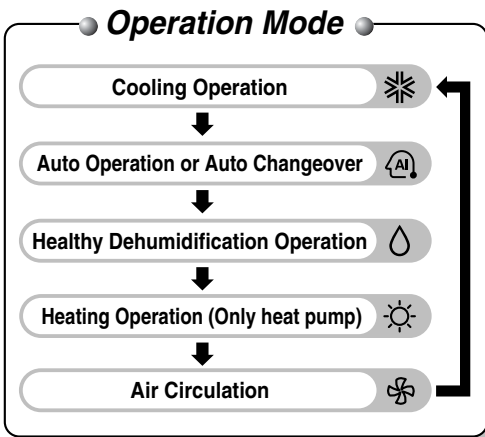
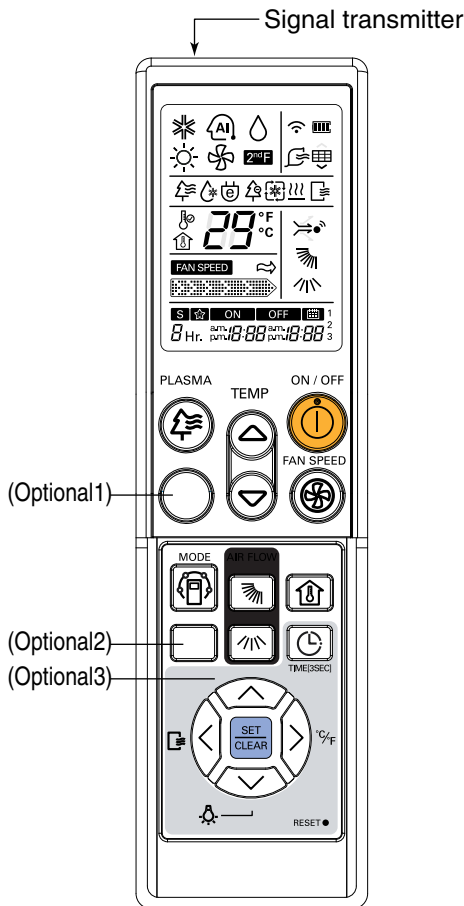
**ASUW243DGU1(LSU240HSV)**


















# 12. Remote controller

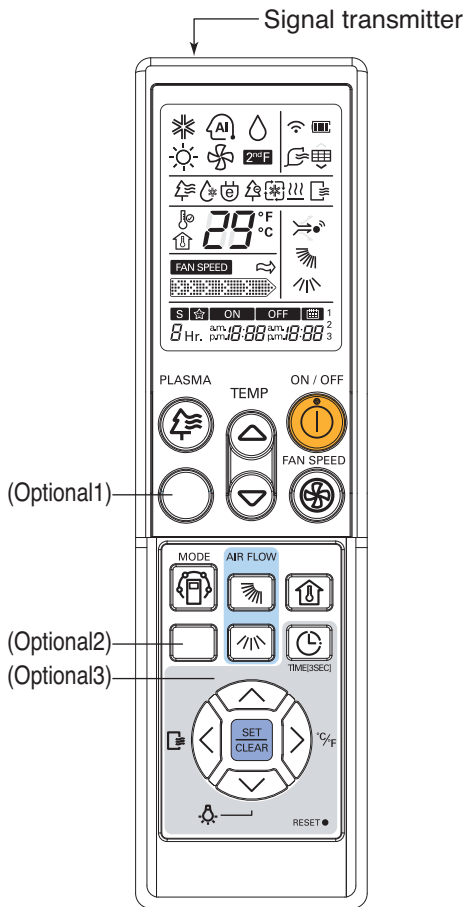
## Wireless Remote Controller




The controls will look like the following.

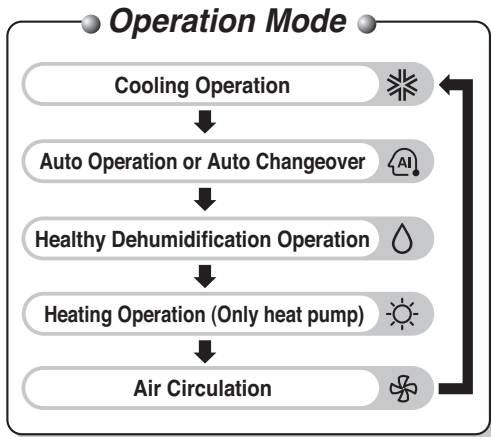


-  **ON/OFF BUTTON**  
Used to turn off/on the unit.
-  **OPERATION MODE SELECTION BUTTON**  
Used to select the operation mode.
-  **ROOM TEMPERATURE SETTING BUTTONS**  
Used to select the room temperature.
-  **INDOOR FAN SPEED SELECTION BUTTON**  
Used to select fan speed in six steps low, medium-low, medium, medium-high, high and natural wind.
-  **HORIZONTAL VANE CONTROL BUTTON**  
Used to set the desired vertical airflow direction.
-  **VERTICAL LOUVER CONTROL BUTTON(Optional)**  
Used to set the desired horizontal airflow direction.
-  **AUTO CLEAN BUTTON**  
Used to set auto clean.
-  **C TO F SWITCHING BUTTON**  
Used to switch temperature reading from Centigrade to Fahrenheit.
-  **ROOM TEMPERATURE CHECKING BUTTON**  
Used to check the room temperature.
-  **TIMER BUTTON(before adjusting)**  
Used to set the current time and the time of starting / stopping.
-  **TIME ADJUSTING BUTTONS**  
Used to adjust the time.
-  **TIMER SET/CLEAR BUTTON(after adjusting)**  
Used to set and to cancel the timer operation.
-  **RESET BUTTON**  
Used prior to resetting time.
-  **PLASMA BUTTON(Optional)**  
Used to start or stop the plasma-purification.
-  **LED LUMINOSITY BUTTON(Optional)**  
Used to adjust LED luminosity.

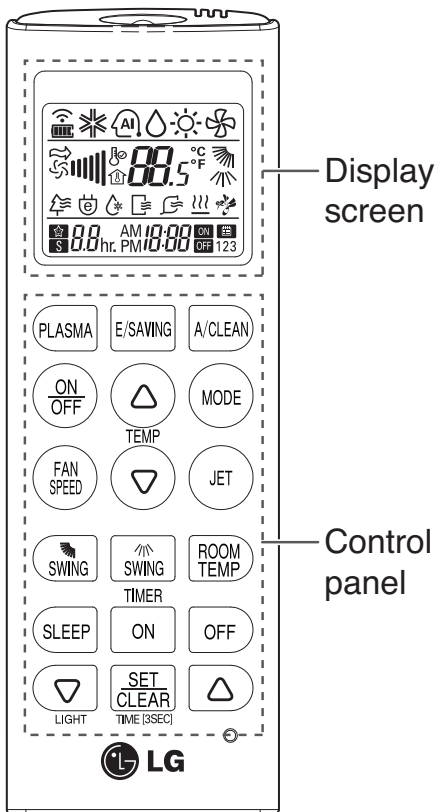
The controls will look like the following.



- Optional1  
 **SLEEP MODE AUTO BUTTON**  
 Used to set sleep mode auto operation.
  
- Optional2  
 **JET COOL BUTTON**  
 Used to start or stop the speed cooling.  
 The Jet Cool operates fan in super high speed in cooling mode.
  
- Optional3  
 **ENERGY SAVING COOLING BUTTON**  
 Used to save Energy



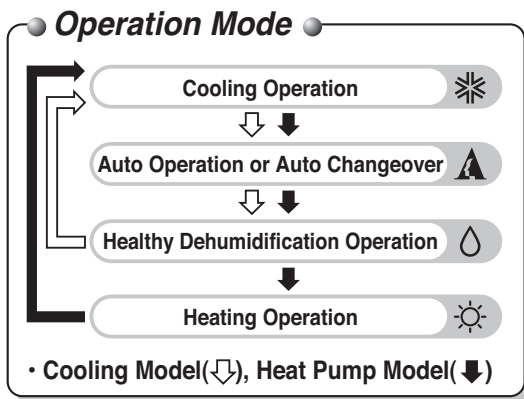
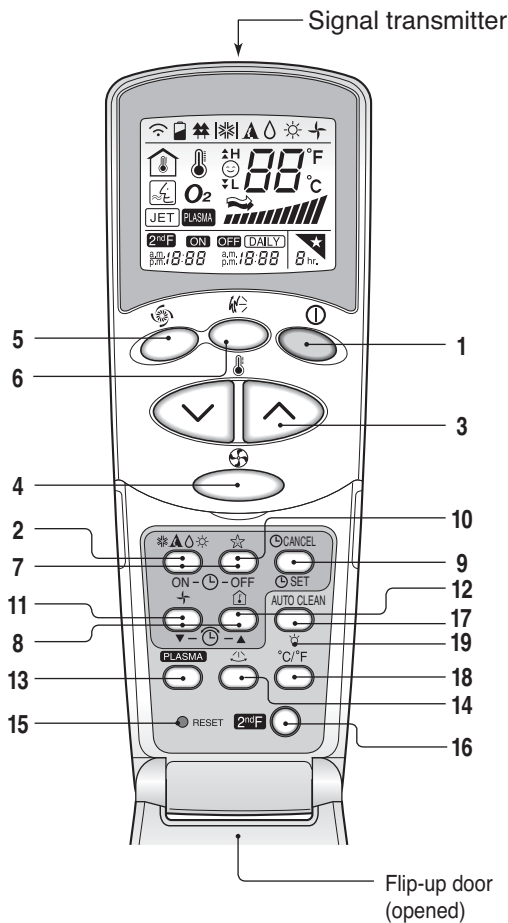
## Wireless Remote Controller



Control panel	Display screen	Description
		<b>Plasma button*</b> : Purifies the air by removing particles that enter the indoor unit.
		<b>Sleep mode auto button*</b> : Sets the sleep mode auto operation.
		<b>Temperature adjustment buttons</b> : Adjusts the room temperature when cooling and heating.
	-	<b>On/Off button</b> : Turns the power on/off.
		<b>Indoor fan speed button</b> : Adjusts the fan speed.
		<b>Operation mode selection button*</b> : Selects the operation mode. Cooling operation (❄️) / Auto operation or auto changeover (A/C) / Dehumidifying operation (💧) / Heating operation (🔥) / Air circulation (🌀)
		<b>Jet cooling/heating button*</b> : Warms up or cools down the indoor temperature within a short period of time.
		<b>Air flow direction button</b> : Adjusts the air flow direction vertically or horizontally.
		<b>Temperature display button</b> : Displays the room temperature. Also changes unit from °C to °F if pressed for 3 seconds.
		<b>Timer button</b> : Sets the current time and the start / end time.
		<b>Navigation and functions button*</b> : Adjusts the time and sets the special functions. : Auto clean / : Operates energy saving cooling / : Adjusts the brightness of the indoor unit display
	-	<b>Set/clear button</b> : Sets or cancels functions.
	-	<b>Reset button</b> : Resets the air conditioner settings.

\* Some functions may not be supported, depending on the model.

The controls will look like the following.



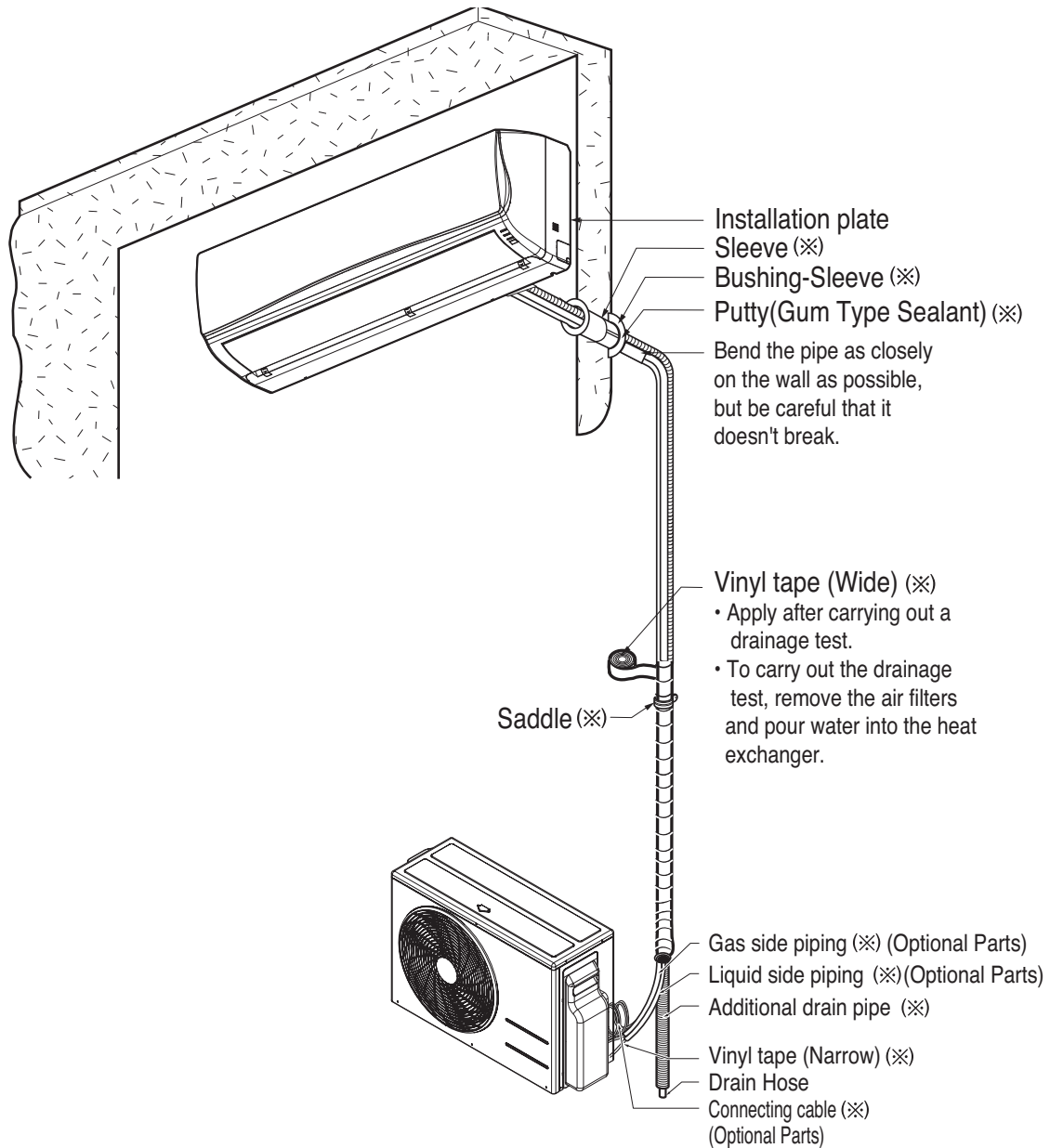
**NOTE**

To use the functions printed in blue at the bottom of the buttons press 2<sup>nd</sup> F button first and then the required function button. Pressing the 2<sup>nd</sup> F button activates the blue printed function of the respective button. To cancel the function press the 2<sup>nd</sup> F button again else it will automatically cancel if remains idle after 10 seconds.

- 1. START/STOP BUTTON**  
Used to turn off/on the unit.
- 2. OPERATION MODE SELECTION BUTTON**  
Used to select the operation mode.
- 3. ROOM TEMPERATURE SETTING BUTTONS**  
Used to select the room temperature.
- 4. INDOOR FAN SPEED SELECTOR BUTTON**  
Used to select fan speed in four steps low, medium, high and CHAOS.
- 5. JET COOL/HEAT BUTTON**  
Used to start or stop the speed cooling/heating. (It operates fan in super high speed)
- 6. CHAOS SWING BUTTON**  
Used to stop or start louver movement and set the desired up/down airflow direction.
- 7. ON/OFF TIMER BUTTONS**  
Used to set the time of starting and stopping operation.
- 8. TIME SETTING BUTTONS**  
Used to adjust the time.
- 9. TIMER SET/CANCEL BUTTON**  
Used to set and to cancel the timer operation.
- 10. SLEEP MODE AUTO BUTTON**  
Used to set sleep mode auto operation.
- 11. AIR CIRCULATION BUTTON(OPTIONAL)**  
Used to circulate the room air without cooling or heating.
- ENERGY-SAVING COOLING MODE BUTTON (OPTIONAL) For inverter type models**
- 12. ROOM TEMPERATURE CHECKING BUTTON**  
Used to check the room temperature.
- 13. PLASMA BUTTON(OPTIONAL)**  
Used to start or stop the plasma-purification function.
- 14. HORIZONTAL AIRFLOW DIRECTION CONTROL BUTTON (OPTIONAL)**  
Used to set the desired horizontal airflow direction.
- 15. RESET BUTTON**  
Used prior to resetting time.
- 16. 2nd F BUTTON**  
Used prior to using modes printed in blue at the bottom of buttons.
- 17. AUTO CLEAN BUTTON(OPTIONAL)**  
Used to set auto clean mode. In some models this button has a 2nd function of LED luminosity control.
- 18. °C TO °F SWITCHING BUTTON**  
Used to switch temperature reading from Centigrade to Fahrenheit.
- 19. LCD LUMINOSITY BUTTON(OPTIONAL)**  
Used to adjust LCD luminosity.

# 13. Installation

## Installation Map



- The feature can be changed according a type of model.

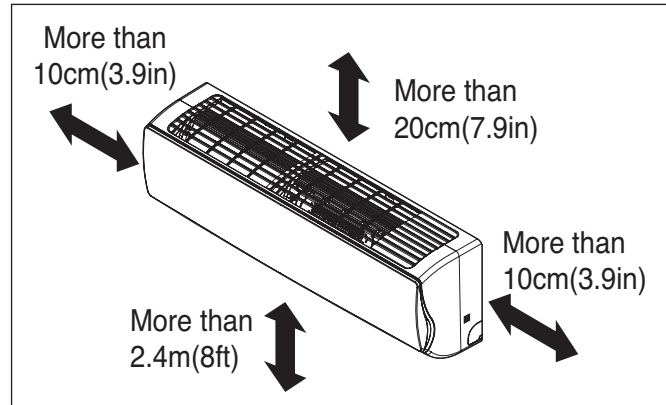
### NOTICE

(※) You should purchase the installation parts.

## Select the best Location

### Indoor unit

1. There should not be any heat or steam near the unit.
2. Select a place where there are no obstacles around of the unit.
3. Make sure that condensation drainage can be conveniently routed away.
4. Do not install near a doorway.
5. Ensure that the interval between a wall and the left (or right) of the unit is more than 10cm(3.9in). The unit should be installed as high as possible on the wall, allowing a minimum of 20cm(7.9in) from ceiling.
6. Use a metal detector to locate studs to prevent unnecessary damage to the wall.

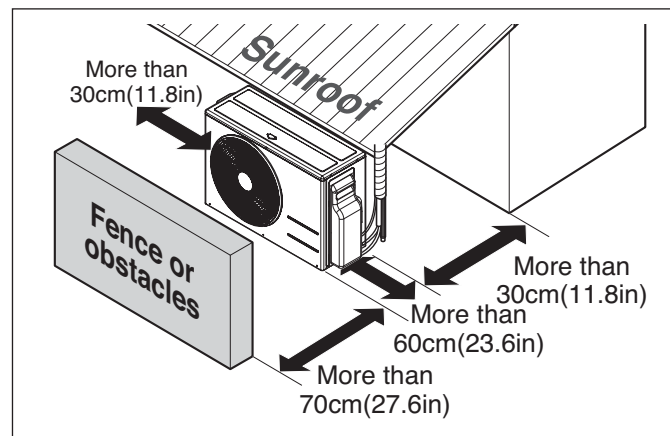


### ⚠ CAUTION

Install the indoor unit on the wall where the height from the floor is more than 2.3 meters.

### Outdoor unit

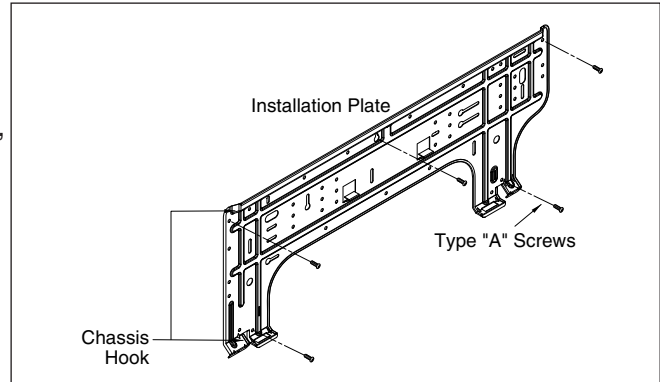
1. If an awning is built over the unit to prevent direct sunlight or rain exposure, make sure that heat radiation from the condenser is not restricted.
2. Ensure that the space around the back and sides is more than 30cm(11.8in). The space in front of the unit should be more than 70cm(27.6in) of space.
3. Do not place animals and plants in the path of the warm air.
4. Take the weight of the air conditioner into account and select a place where noise and vibration are minimum.
5. Select a place where the warm air and noise from the air conditioner do not disturb neighbors.



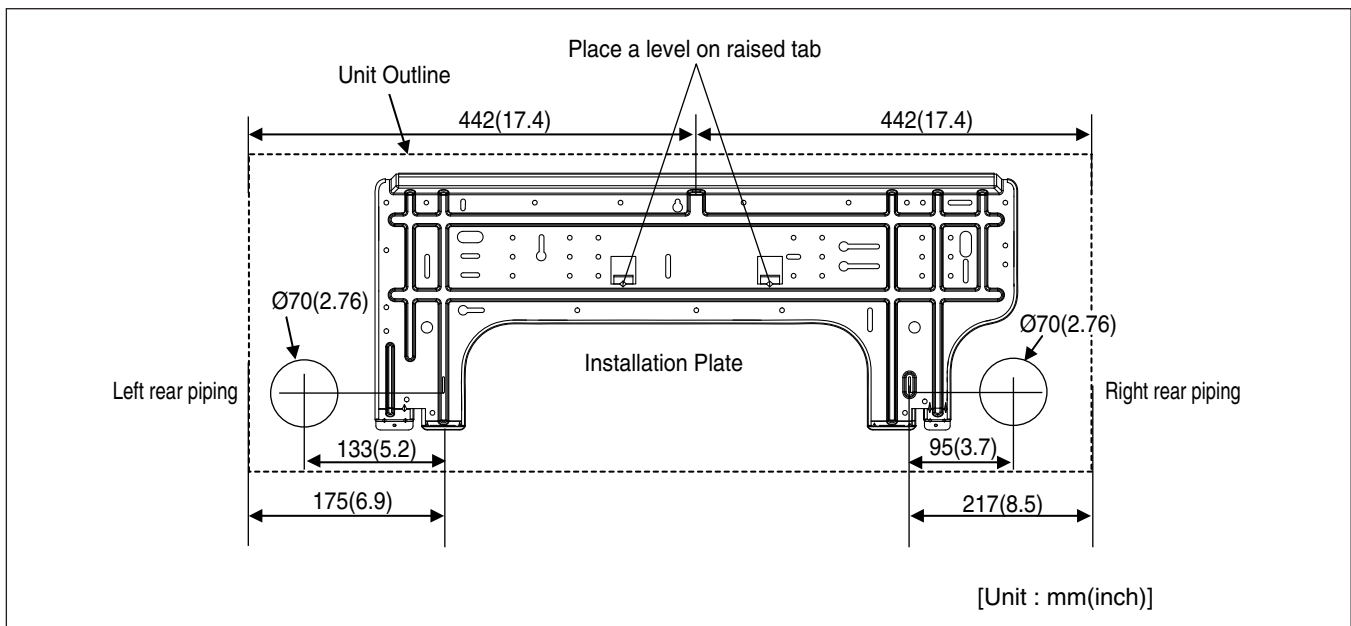
## Fixing Installation Plate

The wall you select should be strong and solid enough to prevent vibration

1. Mount the installation plate on the wall with type "A" screws. If mounting the unit on a concrete wall, use anchor bolts.
- Mount the installation plate horizontally by aligning the centerline using Horizontal meter .

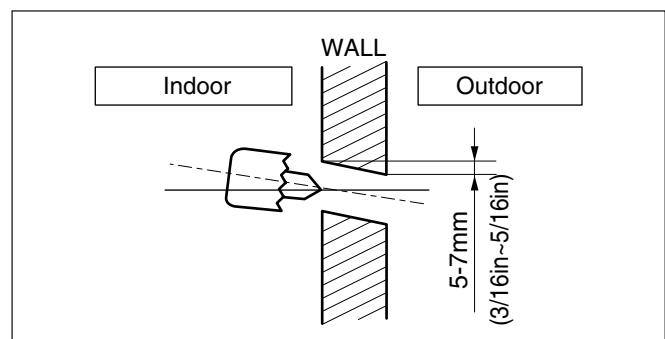


2. Measure the wall and mark the centerline. It is also important to use caution concerning the location of the installation plate. Routing of the wiring to power outlets is through the walls typically. Drilling the hole through the wall for piping connections must be done safely.



## Drill a Hole in the Wall

- Drill the piping hole with a  $\varnothing 70\text{mm}$ (2.76in) hole core drill. Drill the piping hole at either the right or the left with the hole slightly slanted to the outdoor side.



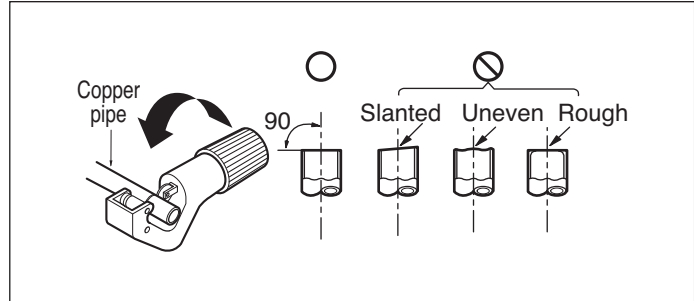


# Flaring Work

Main cause for gas leakage is due to defect of flaring work. Carry out correct flaring work in the following procedure.

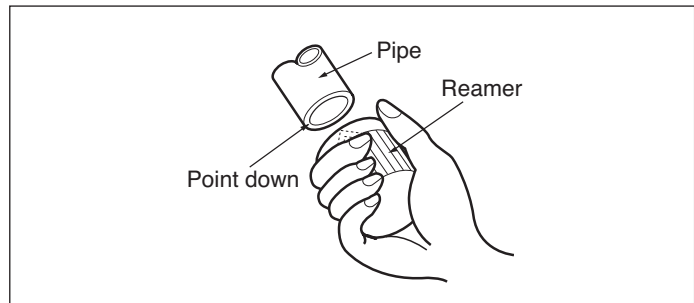
## Cut the pipes and the cable.

1. Use the piping kit accessory or the pipes purchased locally.
2. Measure the distance between the indoor and the outdoor unit.
3. Cut the pipes a little longer than measured distance.
4. Cut the cable 1.5m(59.1 in) longer than the pipe length.



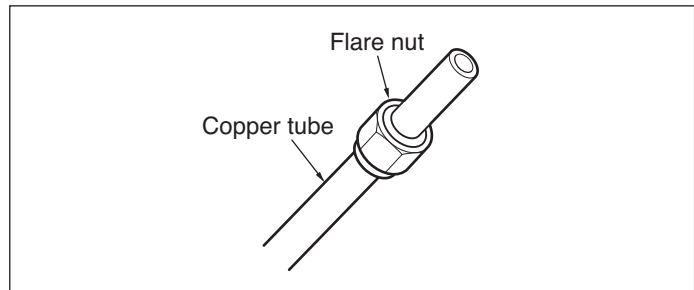
## Burrs removal

1. Completely remove all burrs from the cut cross section of pipe/tube.
2. While removing burrs put the end of the copper tube/pipe in a downward direction while removing burrs location is also changed in order to avoid dropping burrs into the tubing.



## Putting nut on

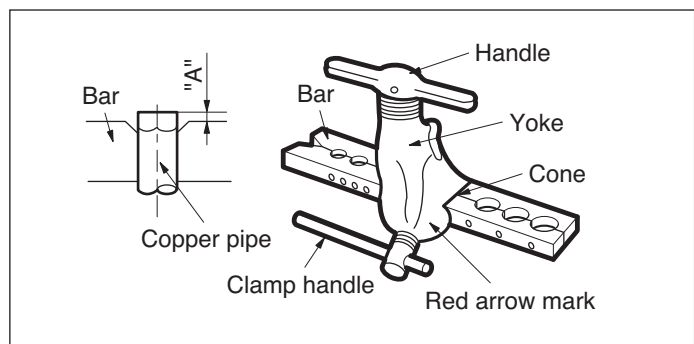
- Remove flare nuts attached to indoor and outdoor unit, then put them on pipe/tube having completed burr removal.  
(not possible to put them on after finishing flare work)



## Flaring work

1. Firmly hold copper pipe in a bar with the dimension shown in table below.

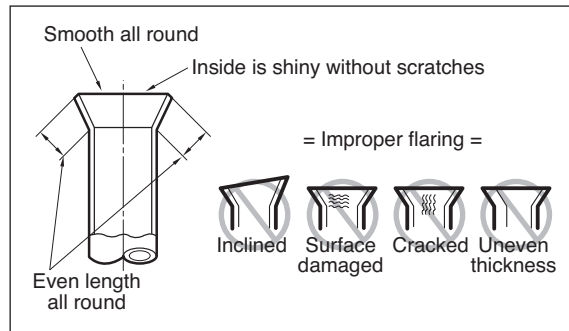
Outside diameter		A
mm	inch	mm
Ø6.35	1/4	1.1~1.3
Ø9.52	3/8	1.5~1.7
Ø12.7	1/2	1.6~1.8
Ø15.88	5/8	1.6~1.8
Ø19.05	3/4	1.9~2.1



2. Carry out flaring work with the flaring tool.

## Check

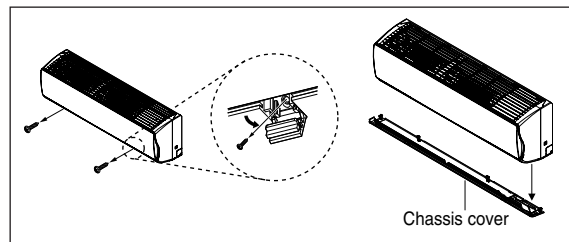
1. Compare the flared work with the figure by.
2. If a flared section is defective, cut it off and do flaring work again.



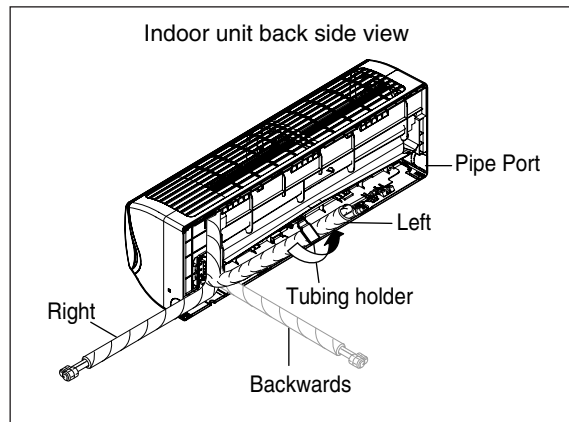
## Connecting the Piping

### Indoor unit

1. Pull the screw cap at the bottom of the indoor unit
2. Remove the chassis cover from the unit by loosening 2 screws



3. Pull back the tubing holder.
4. Remove pipe port cover and positioning the tubing

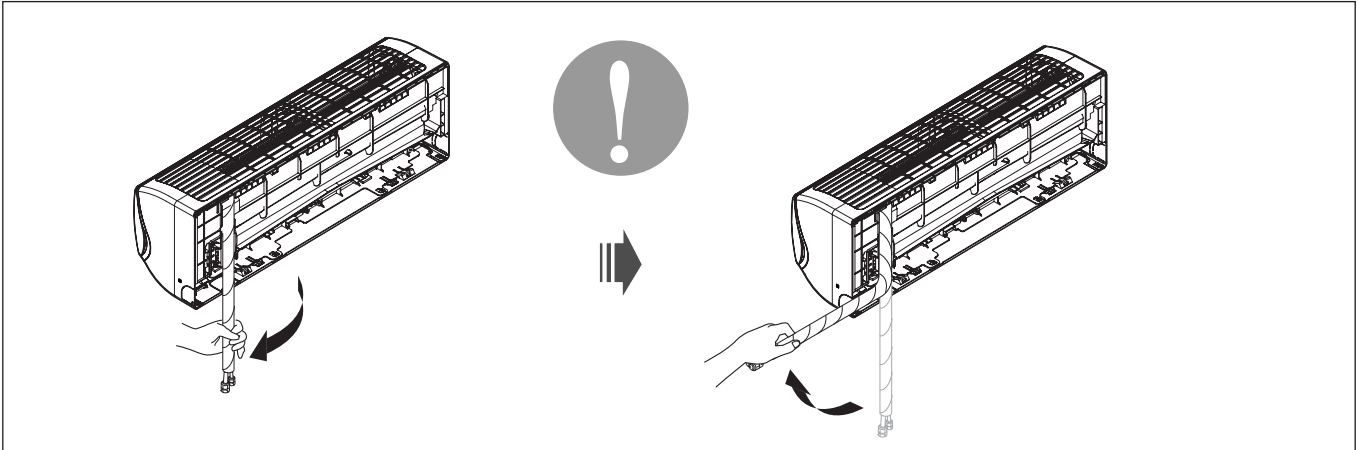


**⚠ CAUTION**

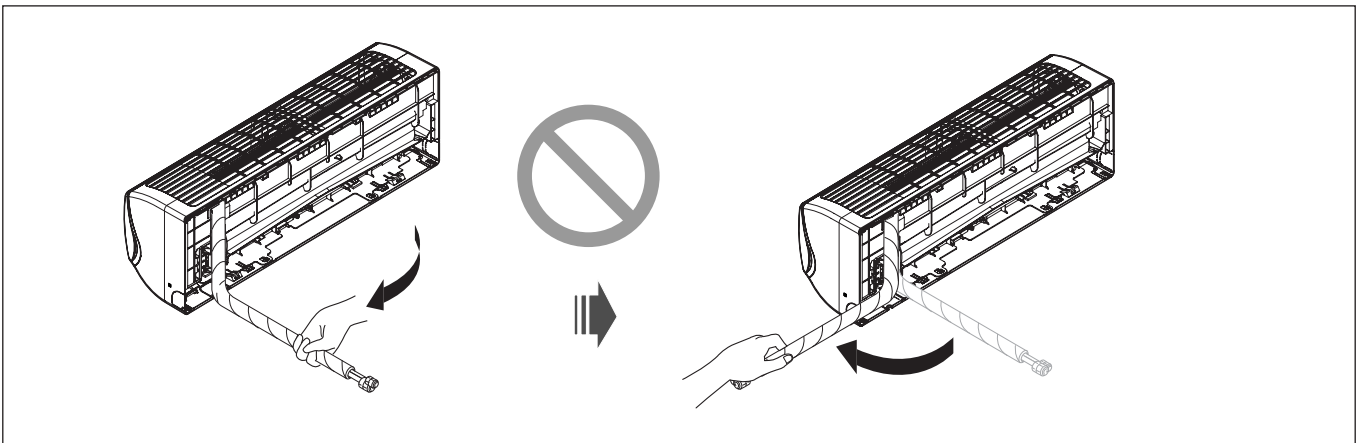
Installation Information. For right piping. Follow the instruction below.

**Good case**

- Press on the tubing cover and unfold the tubing to downward slowly. And then bend to the left side slowly.

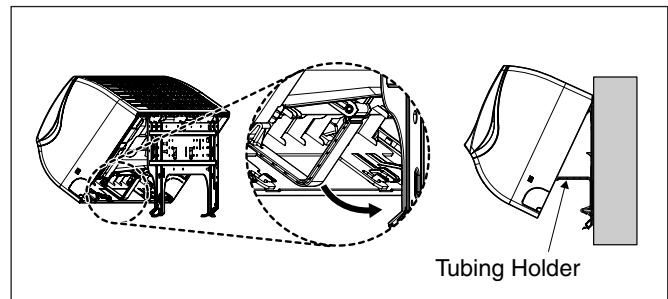
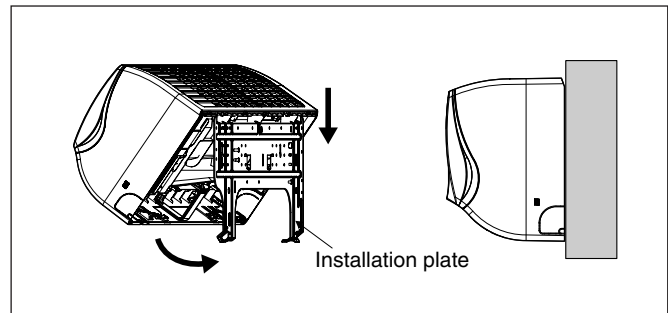
**Bad case**

- Following bending case from right to left directly may cause damage to the tubing.



## Installation of Indoor Unit

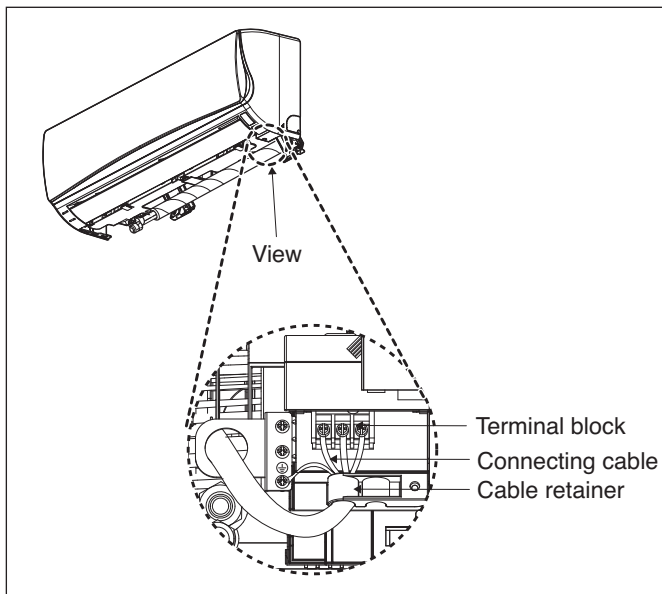
1. Hook the indoor unit onto the upper portion of the installation plate. (engage the three hooks at the top of the indoor unit with the upper edge of the installation plate) Ensure that the hooks are properly seated on the installation plate by moving it left and right
2. Unlock the tubing holder from the chassis and mount between the chassis and installation plate in order to separate the bottom side of the indoor unit from the wall



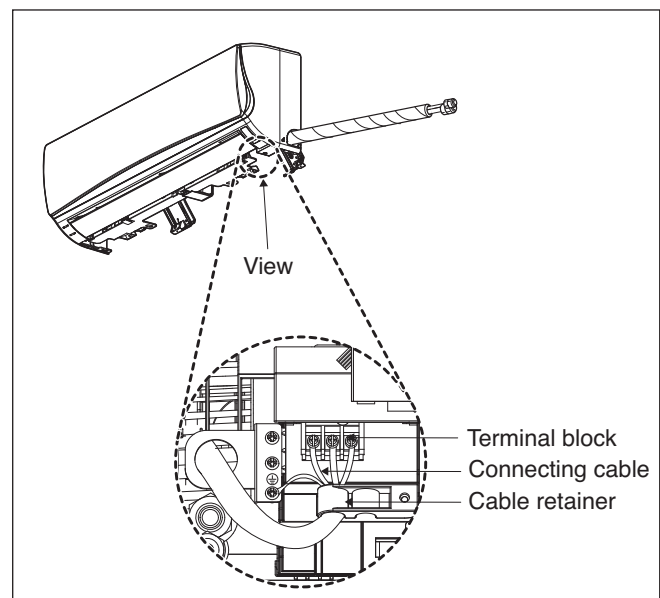
## Piping

1. Insert the connecting cable through the bottom side of indoor unit and connect the cable (You can see detail contents in 'Connecting the cables' section)

<Left side piping>



<Right side piping>



2. Secure the cable onto the control board with the cable retainer.
3. Tape the tubing pipe, drain hose and the connection cable. Be sure that the drain hose is located at the lowest side of the bundle. Locating at the upper side can cause overflow from the drain pan through the inside of the unit.

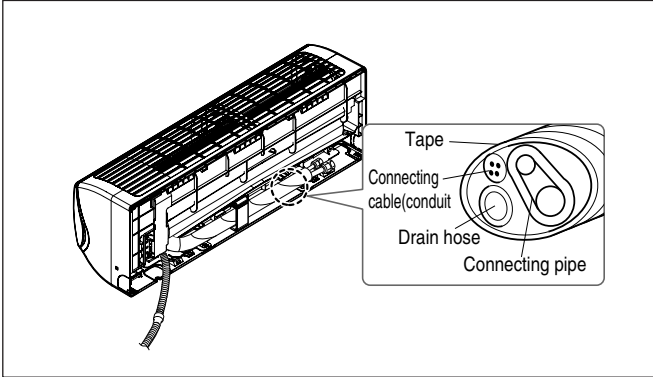
**⚠ CAUTION**

If the drain hose is routed inside the room insulate the hose with an insulation material\* so that dripping from sweating (condensation) will not damage furniture or floors.

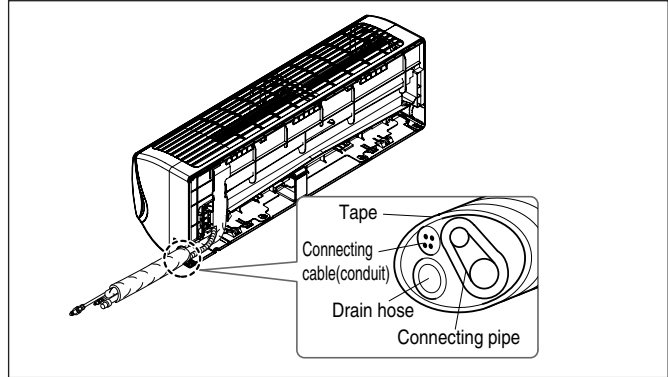
Be sure to install in the sequence of Connecting cable (Conduit), Drain hose and Connecting pipe as the picture below describes.

\* Foamed polyethylene or equivalent is recommended.

<Left side piping>

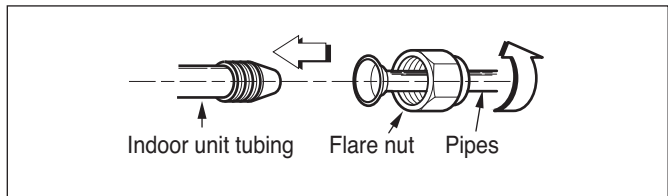


<Right side piping>



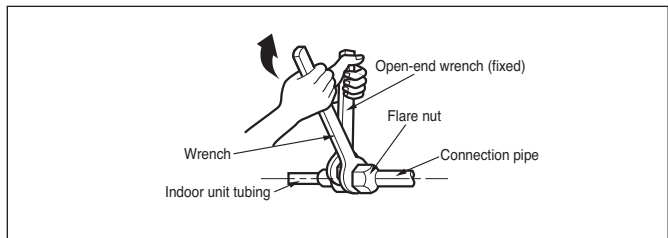
**Connecting the installation pipe and drain hose to the indoor unit.**

1. Align the center of the pipes and sufficiently tighten the flare nut by hand

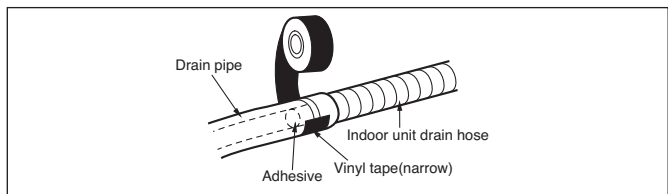


2. Tighten the flare nut with a wrench

Outside diameter		Torque	
mm	inch	kgf·m	lbf·ft
Ø6.35	1/4	1.8~2.5	13~18
Ø9.52	3/8	3.4~4.2	24.6~30.4
Ø12.7	1/2	5.5~6.6	39.8~47.7
Ø15.88	5/8	6.3~8.2	45.6~59.3

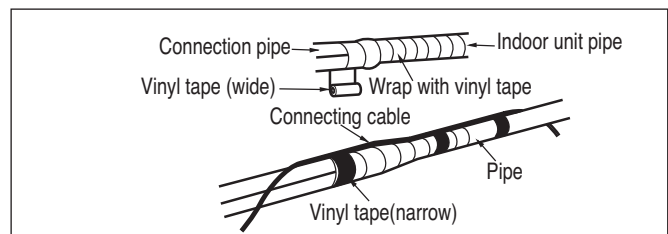
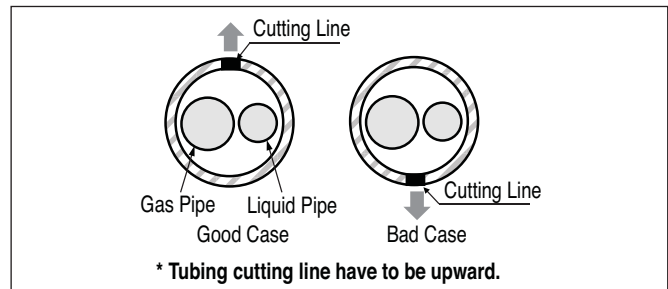
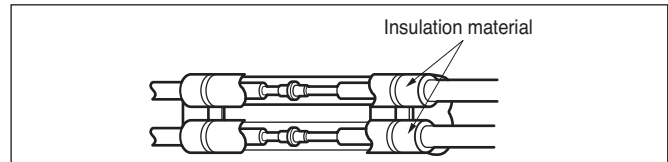


3. When needed to extend the drain hose of indoor unit, assembly the drain pipe as shown on the drawing

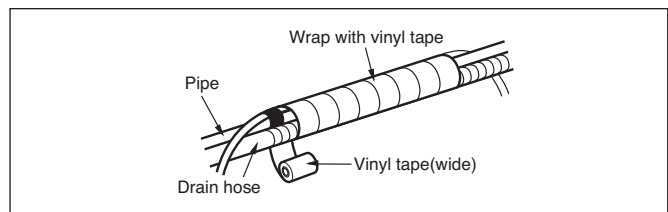


### Wrap the insulation material around the connecting portion.

1. Overlap the connection pipe insulation material and the indoor unit pipe insulation material. Bind them together with vinyl tape so that there may be no gap.
2. Set the tubing cutting line upward.  
Wrap the area which accommodates the rear piping housing section with vinyl tape.

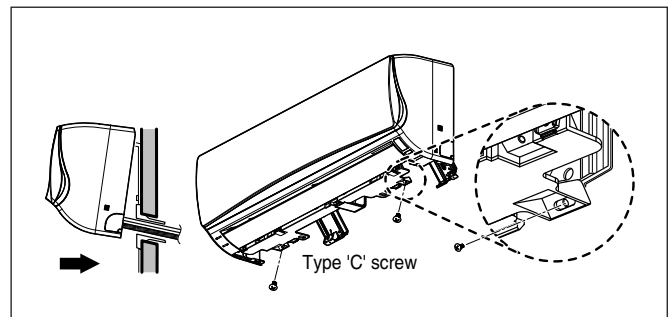


3. Bundle the piping and drain hose together by wrapping them with vinyl tape sufficient enough to cover where they fit into the rear piping housing section.



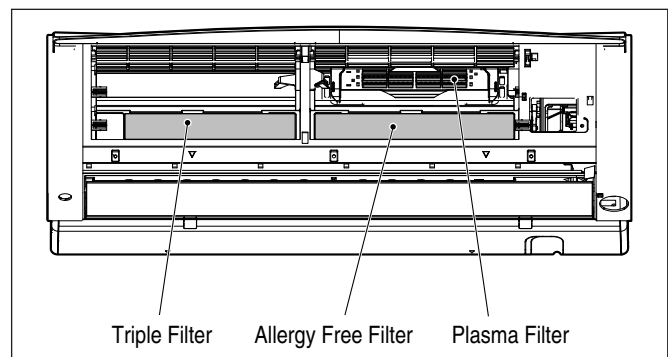
### Finishing the indoor unit installation

1. Mount the tubing holder in the original position.
2. Ensure that the hooks are properly seated on the installation plate by moving it left and right.
3. Press the lower left and right sides of the unit against the installation plate until the hooks engage into their slots (clicking sound).
4. Finish the assembly by screwing the unit to the installation plate by using two pieces of type "C" screws. And assemble a chassis cover.



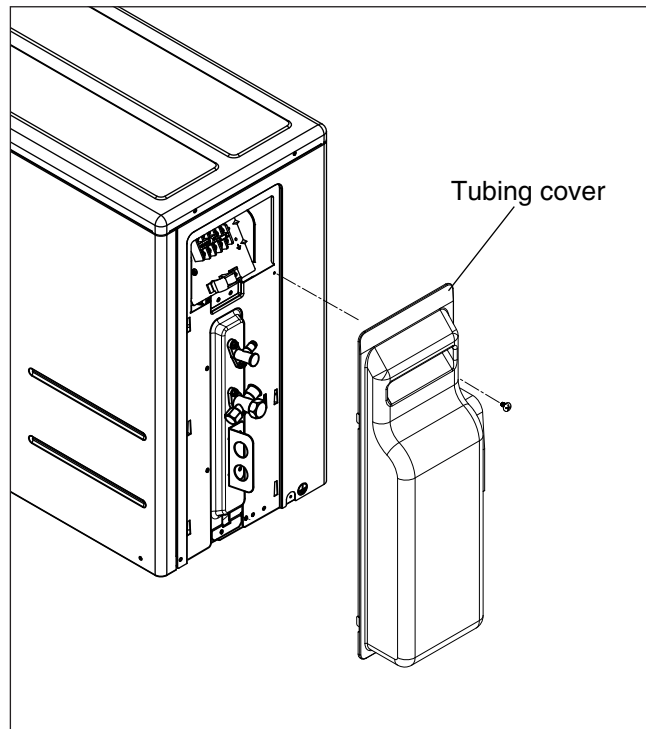
### Installation of filters

1. Pull out the triple filter and allergy free filter from the separately packed plastic bag.
2. Insert the triple filter into the left case and insert the allergy free filter into the right case.
3. Detach two attached tapes from the plasma filter.

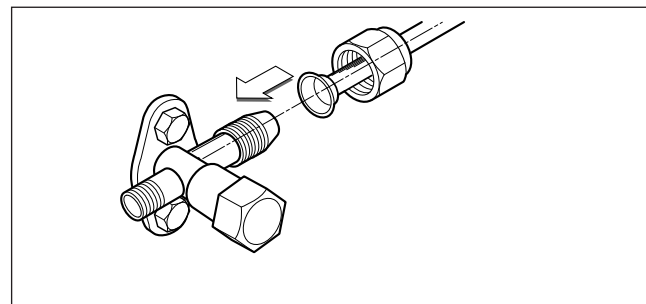


## Outdoor unit

1. Remove the tubing cover from the unit by loosening the screw.

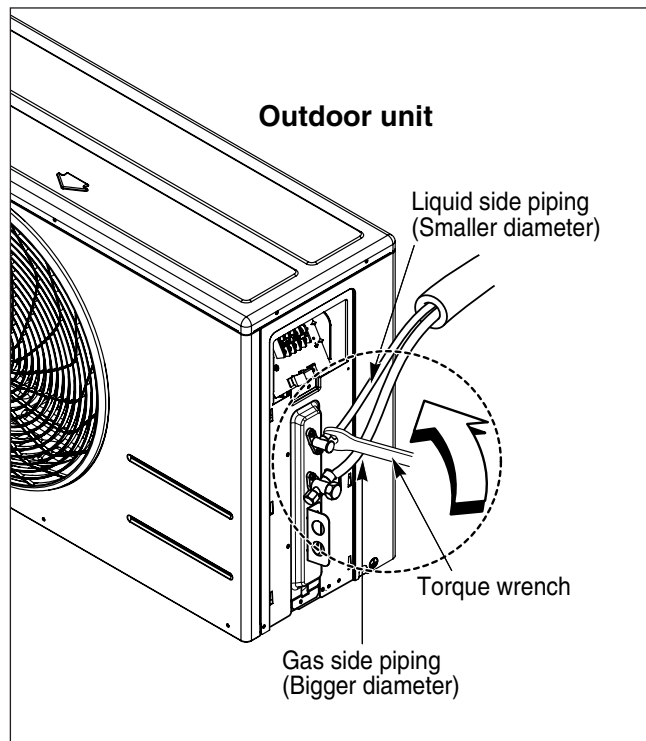


2. Align the center of the pipings and sufficiently tighten the flare nut by hand.



3. Finally, tighten the flare nut with torque wrench until the wrench clicks.
  - When tightening the flare nut with torque wrench, ensure the direction for tightening follows the arrow on the wrench.

Outside diameter		Torque	
mm	inch	kgf·m	lbf·ft
Ø6.35	1/4	1.8~2.5	13~18
Ø9.52	3/8	3.4~4.2	24.6~30.4
Ø12.7	1/2	5.5~6.6	39.8~47.7
Ø15.88	5/8	6.3~8.2	45.6~59.3
Ø19.05	3/4	9.9~12.1	71.6~87.5



## Connecting the Cables

### Indoor

Connect the cable to the indoor unit by connecting the wires to the terminals on the control board individually according to the outdoor unit connection. (Ensure that the color of the wires of the outdoor unit and the terminal No. are the same as those of the indoor unit.)

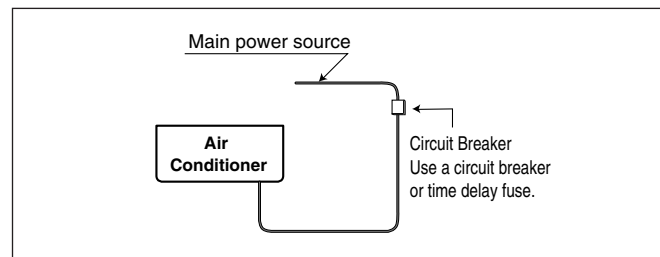
### ⚠ CAUTION

- The circuit diagram is a subject to change without notice.
- The earth wire should be longer than the common wires.
- When installing, refer to the circuit diagram on the chassis cover.
- Connect the wires firmly so that they may not be pulled out easily.
- Connect the wires according to color codes, referring to the wiring diagram.
- Connect the wires should be sized per local code.

### ⚠ CAUTION

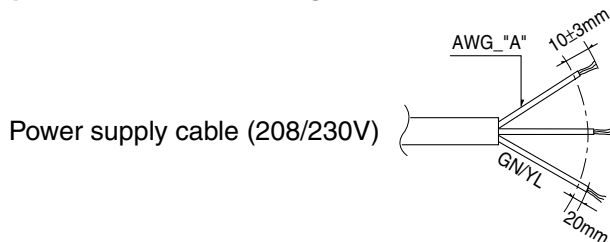
**Provide a circuit breaker between power source and the outdoor unit as shown below.**

Circuit Breaker (A)	Capacity(Btu/h)		
	9k~12k	18k	24k~36k
15		20	25



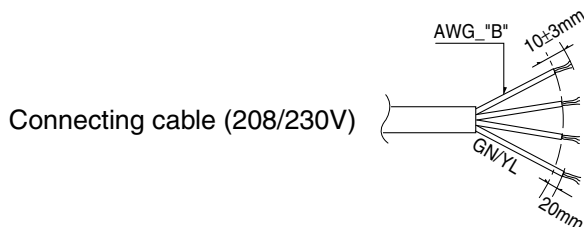
### ⚠ CAUTION

**The power cord connected to the outdoor unit should be complied with the following specifications (UL recognized or CAS certified).**



Power	Capacity(Btu/h)	
	9k/12k/18k	24k/30k/36k
"A"	14	12

**The power connecting cable connected to the indoor and outdoor unit should be complied with the following specifications (UL recognized or CAS certified).**



Power	Capacity(Btu/h)	
	9k/12k/16k/18k/24k/30k/36k	
"B"	18	

※ Field wiring shall be done such that the current carrying conductors become taut before the earthing conductor if the cord slips out of the cord anchorage.

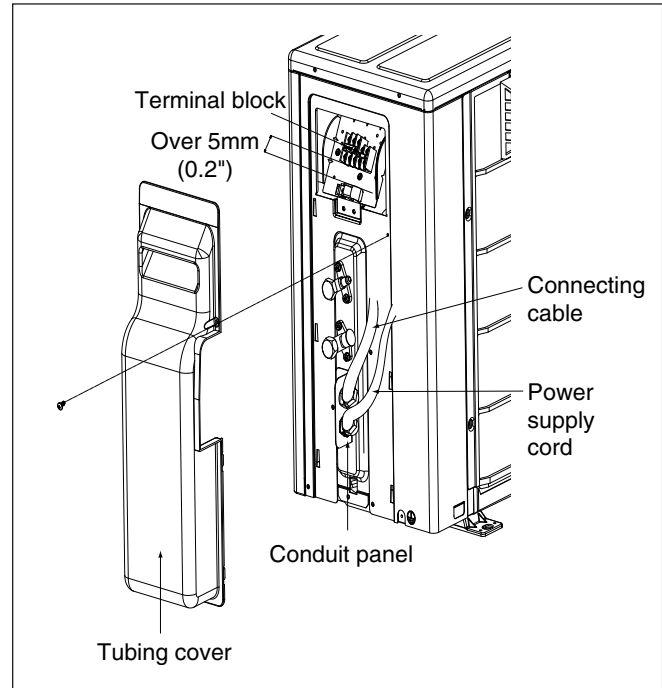
### ⚠ CAUTION

**When using the separate wire as the power cord, please fix the separate wire into the control box panel by using tie wrap as the fixture.**



## Outdoor

1. Remove the cover control from the unit by loosening the screw.  
Connect the wires to the terminals on the control board individually as the following.
2. Secure the cable onto the control board with the holder (clamber).
3. Refix the cover control to the original position with the screw.



## NOTICE

1. Separately wire power supply cord and connecting cable.
2. Use heat-proof electrical wiring capable of withstanding temperature up to 75°C(167°F).
3. Use outdoor and waterproof connection cable rated more than 300V for the connection between indoor and outdoor unit. (For example, Type SJO-WA)

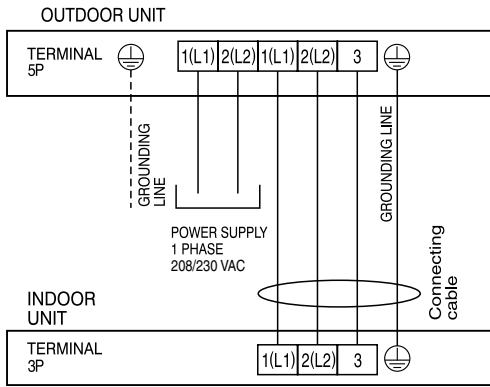
## ⚠ WARNING

- Be sure to comply with local codes while running the wire from the indoor unit to the outdoor unit(size of wire and wiring method, etc).
- Every wire must be connected firmly.
- No wire should be allowed to touch refrigerant tubing, the compressor or any moving parts.

# Wiring Diagram

AS-W093B1U1(LS091HSV)

AS-W123B1U1(LS121HSV)

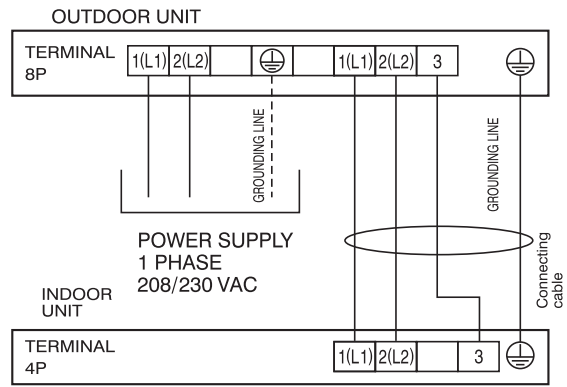


AS-W186C2U1(LS161HSV)

AS-W183C2U2(LS181HSV)

AS-W243DGU1(LS240HSV)

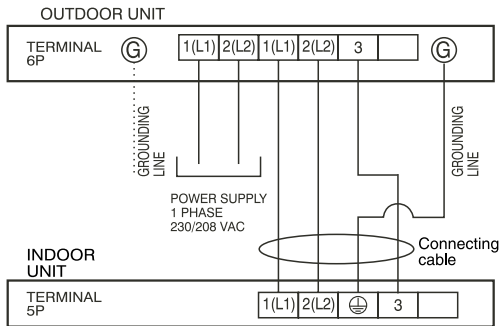
AS-W363DGU1(LS360HV)



AS-W093ERH1(LA096HV), AS-W123ERH1(LA126HV)

AS-W1838RH1(LA186HV), AS-W2438RH1(LA246HV)

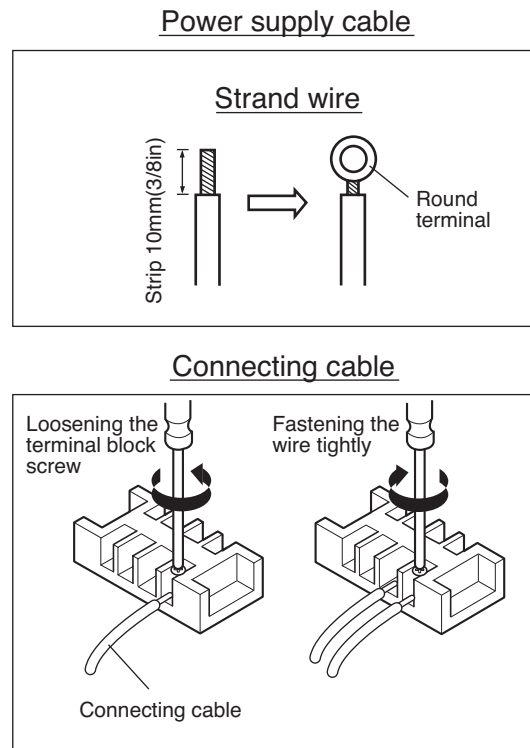
AS-W2435SZ1(LS246HV), AS-W303DGH1(LS306HV)



## How to connect wiring to the terminals

### ■ For strand wiring

- (1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to expose the strand wiring about 10mm(3/8in).
- (2) Using a screwdriver, remove the terminal screw(s) on the terminal plate.
- (3) Using a round terminal fastener or pliers, securely clamp each stripped wire end with a round terminal.
- (4) Position the round terminal wire, and replace and tighten the terminal screw using a screwdriver.



## ⚠ CAUTION

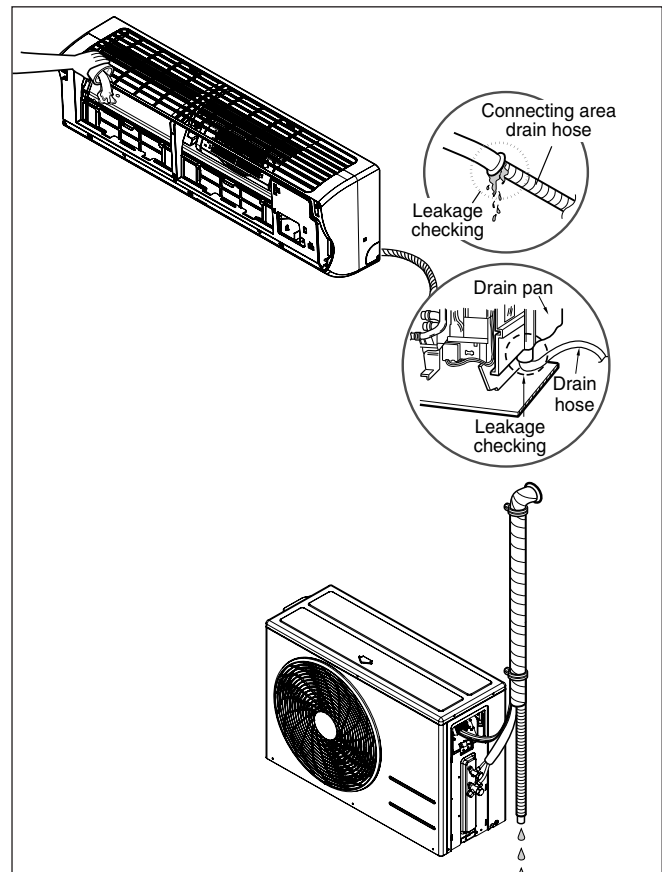
According to the confirmation of the above conditions, prepare the wiring as follows.

1. Never fail to have an individual power circuit specifically for the air conditioner. As for the method of wiring, be guided by the circuit diagram posted on the inside of control cover.
2. The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could cause burn-out of the wires.)
3. Specification of power source.
4. Confirm that electrical capacity is sufficient.
5. See that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.
6. Confirm that the cable thickness is as specified in the power source specification. (Particularly note the relation between cable length and thickness.)
7. Always install an earth leakage circuit breaker in a wet or moist area.
8. The following would be caused by voltage drop.
  - Vibration of a magnetic switch, which will damage the contact point, fuse breaking, disturbance of the normal function of the overload.
9. The means for disconnection from a power supply shall be incorporated in the fixed wiring and have an air gap contact separation of at least 3mm in each active(phase) conductors.

## Checking the Drainage

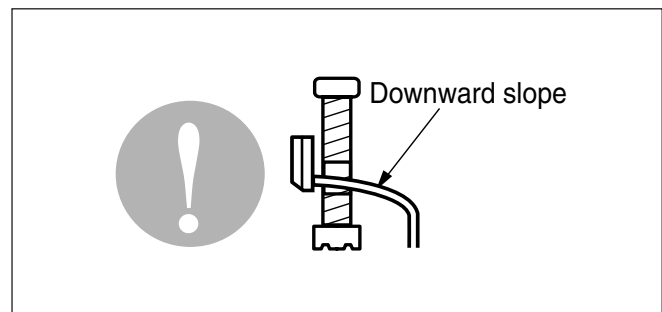
### To check the drainage.

1. Pour a glass of water on the evaporator.
2. Ensure the water flows through the drain hose of the indoor unit without any leakage and goes out the drain exit.

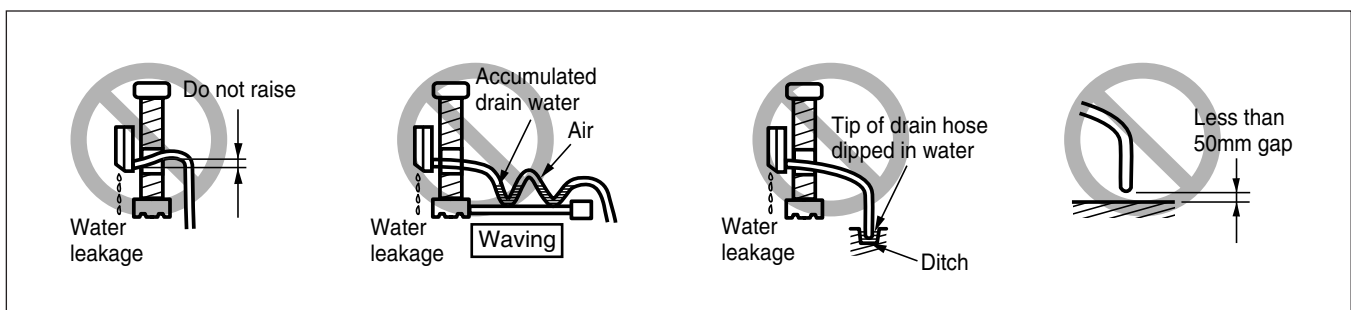


### Drain piping

1. The drain hose should point downward for easy drain flow.



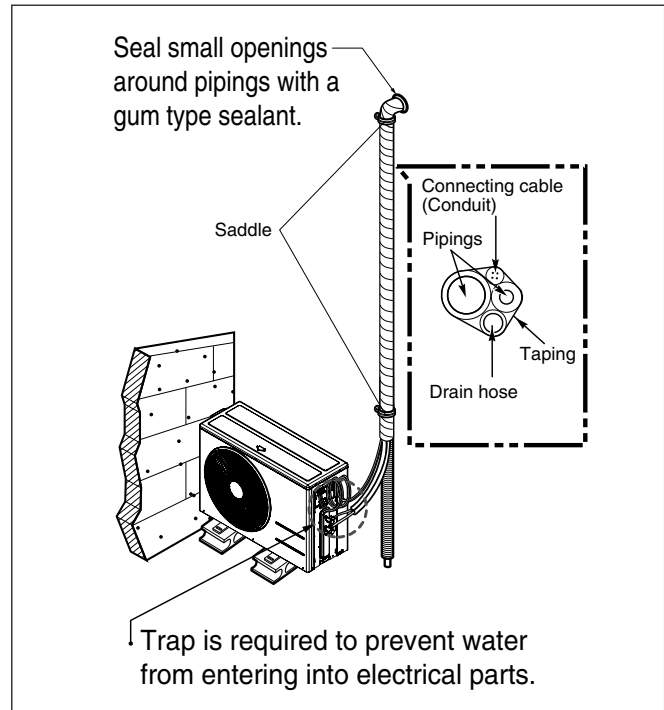
2. Do not make drain piping like the following.



## Forming the Piping

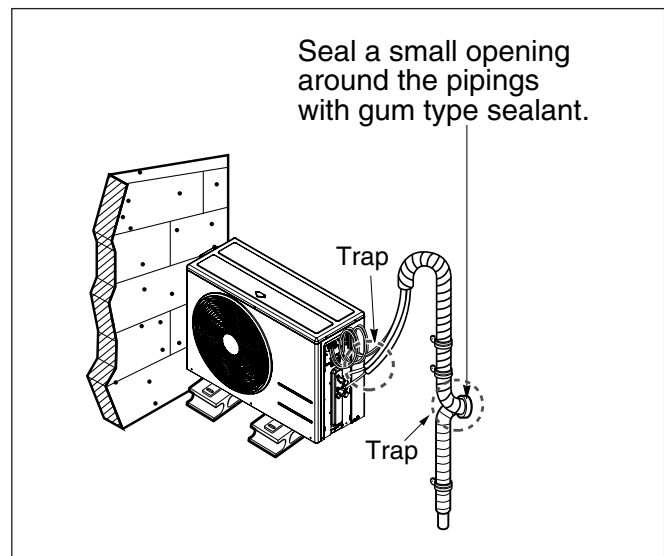
**In cases where the outdoor unit is installed below the indoor unit perform the following.**

1. Tape the piping, drain hose and connecting cable from down to up.
2. Secure the tapped piping along the exterior wall using saddle or equivalent.



**In cases where the Outdoor unit is installed above the Indoor unit perform the following.**

1. Tape the piping and connecting cable from down to up.
2. Secure the taped piping along the exterior wall. Form a trap to prevent water entering the room.
3. Fix the piping onto the wall using saddle or equivalent.



## Air Purging

The air and moisture remaining in the refrigerant system have undesirable effects as indicated below.

1. Pressure in the system rises.
2. Operating current rises.
3. Cooling(or heating) efficiency drops.
4. Moisture in the refrigerant circuit may freeze and block capillary tubing.
5. Water may lead to corrosion of parts in the refrigeration system.

Therefore, after evacuating the system, take a leak test for the piping and tubing between the indoor and outdoor unit.

### Air purging with vacuum pump

#### 1. Preparation

- Check that each tube(both liquid and gas side tubes) between the indoor and outdoor units have been properly connected and all wiring for the test run has been completed. Remove the service valve caps from both the gas and the liquid side on the outdoor unit. Note that both the liquid and the gas side service valves on the outdoor unit are kept closed at this stage.

#### 2. Leak test

- Connect the manifold valve(with pressure gauges) and dry nitrogen gas cylinder to this service port with charge hoses.

### ⚠ CAUTION

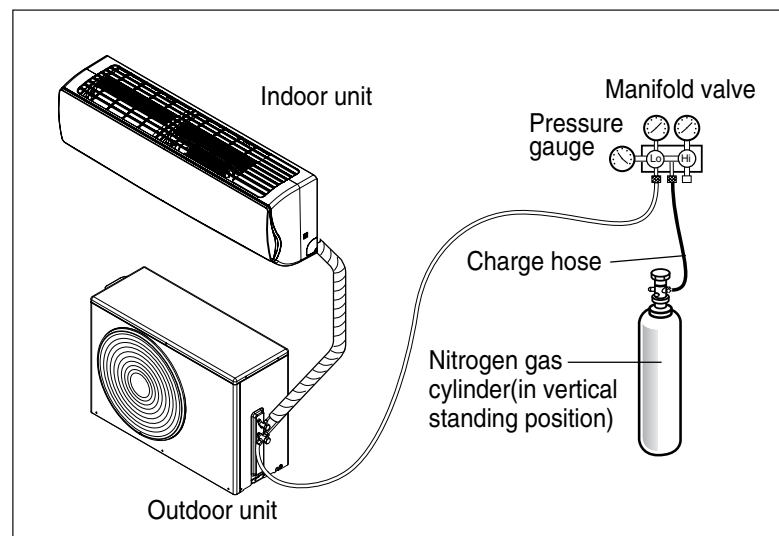
Be sure to use a manifold valve for air purging. If it is not available, use a stop valve for this purpose. The knob of the 3-way valve must always be kept close.

- Pressurize the system to not more than 150 P.S.I.G. with dry nitrogen gas and close the cylinder valve when the gauge reading reaches 150 P.S.I.G. Next, test for leaks with liquid soap.

### ⚠ CAUTION

To avoid nitrogen entering the refrigerant system in a liquid state, the top of the cylinder must be higher than its bottom when you pressurize the system. Usually, the cylinder is used in a vertical standing position.

1. Do a leak test of all joints of the tubing(both indoor and outdoor) and both gas and liquid side service valves. Bubbles indicate a leak. Be sure to wipe off the soap with a clean cloth.
2. After the system is found to be free of leaks, relieve the nitrogen pressure by loosening the charge hose connector at the nitrogen cylinder. When the system pressure is reduced to normal, disconnect the hose from the cylinder.



## Soap water method

1. Remove the caps from the 2-way and 3-way valves.
2. Remove the service-port cap from the 3-way valve.
3. Apply a soap water or a liquid neutral detergent on the indoor unit connection or outdoor unit connections by a soft brush to check for leakage of the connecting points of the piping.
4. If bubbles come out, the pipes have leakage

## Evacuation

1. Connect the charge hose end described in the preceding steps to the vacuum pump to evacuate the tubing and indoor unit.

Confirm the "Lo" knob of the pressure Gauge is open. Then, run the vacuum pump.

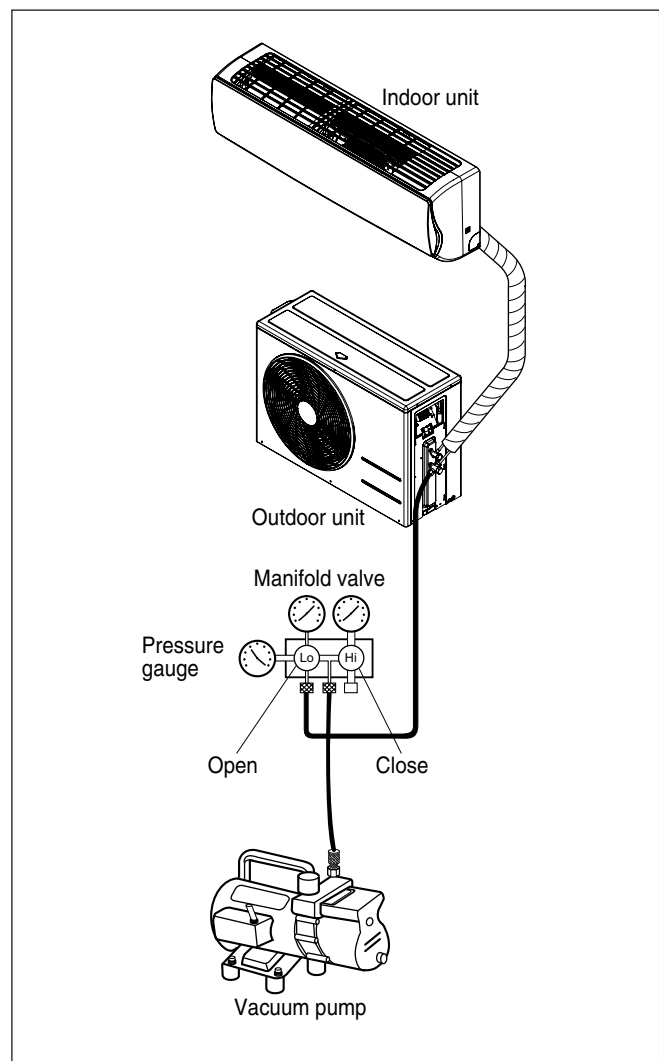
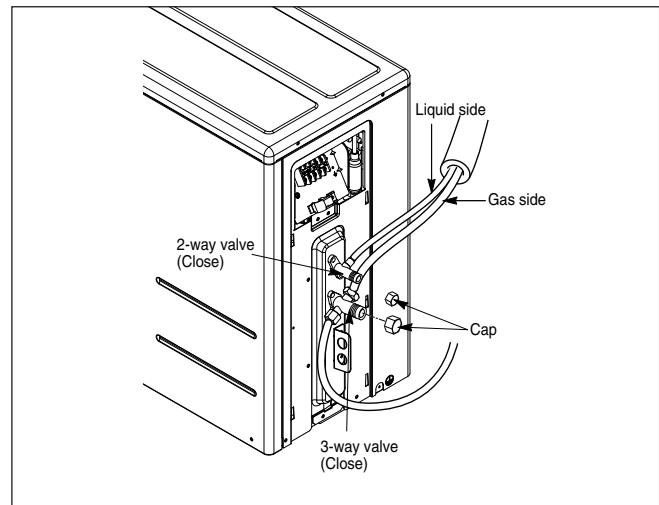
The operation time for evacuation varies with tubing length and capacity of the pump. The following table shows the time required for evacuation.

Required time for evacuation when 30 gal/h vacuum pump is used	
If tubing length is less than 10m (33 ft)	If tubing length is longer than 10m (33 ft)
10 min. or more	15 min. or more

2. When the desired vacuum is reached, close the knob of the 3-way valve and stop the vacuum pump.

## Finishing the Job

1. With a service valve wrench, turn the valve of liquid side counter-clockwise to fully open the valve
2. Turn the valve of gas side counter clockwise to fully open the valve
3. Loosen the charge hose connected to the gas side service port slightly to release the pressure, then remove the hose.
4. Replace the flare nut and its bonnet on the gas side service port and fasten the flare nut securely with an adjustable wrench. This process is very important to prevent leakage from the system
5. Replace the valve caps at both gas and liquid side service valves and fasten them tight. This completes air purging with a vacuum pump.
6. Replace the pipe cover to the outdoor unit by one screw  
Now the air conditioner is ready for test run.



## Test Running

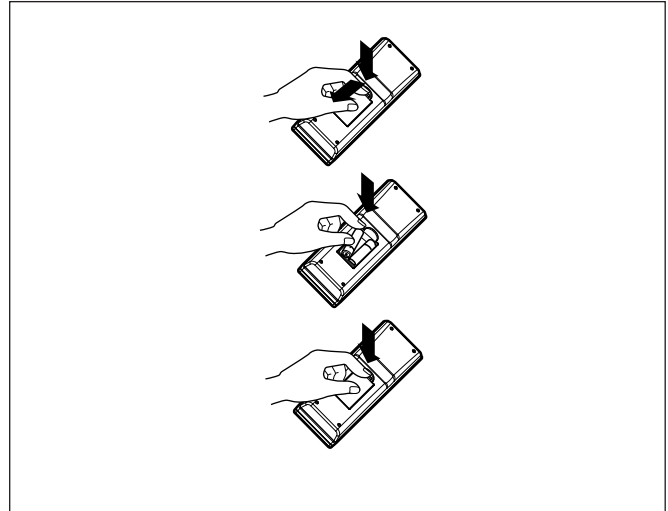
1. Check that all tubing and wiring are properly connected.
2. Check that the gas and liquid side service valves are fully open.

### Prepare remote controller

1. Remove the battery cover by pulling it according to the arrow direction.
2. Insert new batteries making sure that the (+) and (-) of battery are installed correctly.
3. Reattach the cover by pushing it back into position.

#### **NOTICE**

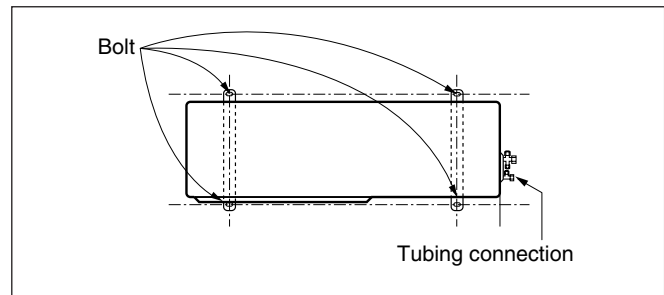
- Use 2 AAA(1.5volt) batteries. Do not use rechargeable batteries.
- Remove the batteries from the remote controller if the system is not used for a long time.





## Settlement of outdoor unit

1. Fix the outdoor unit with a bolt and nut( $\phi 10\text{mm}$ ) tightly and horizontally on a concrete or rigid mount.
2. When installing on the wall, roof or rooftop, anchor the mounting base securely with a nail or wire assuming the influence of wind and earthquake.
3. If the vibration of the unit is transmitted to the pipe, secure the unit with an anti-vibration rubber.

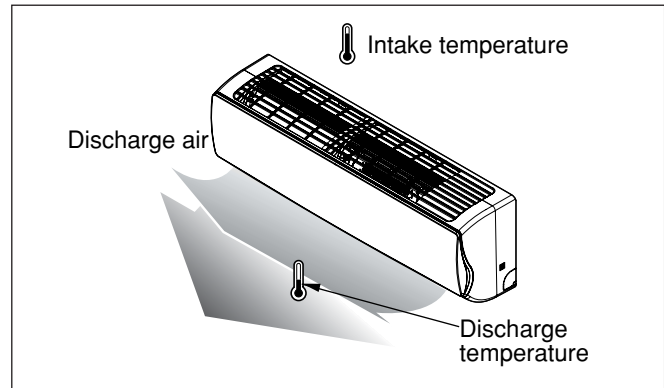


## Evaluation of the performance

Operate the unit for 15~20 minutes, then check the system refrigerant charge:

1. Measure the pressure of the gas side service valve.
2. Measure the air temperature from inlet and outlet of air conditioner.
3. Ensure the difference between the inlet and outlet temperature is more than  $8^{\circ}\text{C}$ ( $46.4^{\circ}\text{F}$ ).
4. For reference; the gas side pressure at optimum condition is shown on table (cooling)

The air conditioner is now ready to use.



Refrigerant	Outside ambient TEMP.	The pressure of the gas side
R-410A	$35^{\circ}\text{C}$ ( $95^{\circ}\text{F}$ )	$8.5\sim 9.5\text{kg}/\text{cm}^2\text{G}$ ( $120\sim 135\text{ P.S.I.G.}$ )

## NOTICE

If the actual pressure is higher than shown, the system is most likely over-charged, and charge should be removed. If the actual pressure are lower than shown, the system is most likely undercharged, and charge should be added.

## PUMP DOWN

**This is performed when the unit is relocated or the refrigerant circuit is serviced.**

Pump Down means collecting all refrigerant into the outdoor unit without the loss of refrigerant.

## CAUTION

Be sure to perform Pump Down procedure in the cooling mode.

## Pump Down Procedure

1. Connect a low-pressure gauge manifold hose to the charge port on the gas side service valve.
2. Open the gas side service valve halfway and purge the air in the manifold hose using the refrigerant.
3. Close the liquid side service valve(all the way).
4. Turn on the unit's operating switch and start the cooling operation.
5. When the low-pressure gauge reading becomes 1 to  $0.5\text{kg}/\text{cm}^2\text{ G}$ ( $14.2$  to  $7.1\text{ P.S.I.G.}$ ), fully close the gas side valve and then quickly turn off the unit. Now Pump Down procedure is completed, and all refrigerant is collected into the outdoor unit.

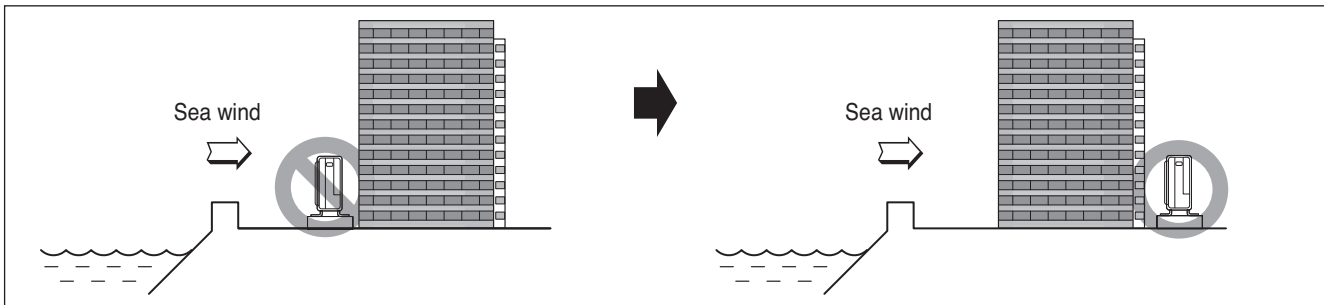
## Installation Guide at the Seaside

### **!** CAUTION

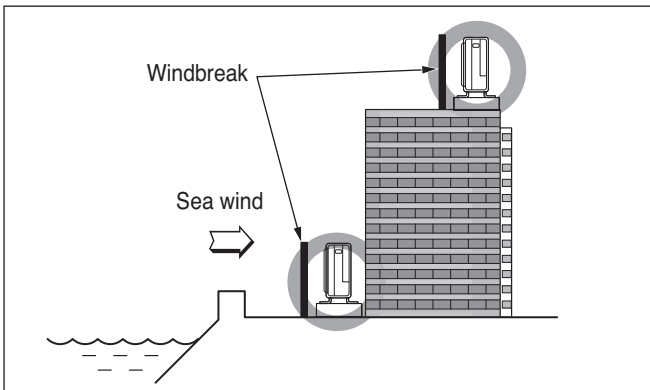
1. Air conditioners should not be installed in areas where corrosive gases, such as acid or alkaline gas, are produced.
2. Do not install the product where it could be exposed to sea wind (salty wind) directly. It can result corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient performance.
3. If outdoor unit is installed close to the seaside, it should avoid direct exposure to the sea wind. Otherwise it needs additional anticorrosion treatment on the heat exchanger.

### Selecting the location(Outdoor Unit)

- 1) If the outdoor unit is to be installed close to the seaside, direct exposure to the sea wind should be avoided. Install the outdoor unit on the opposite side of the sea wind direction.



- 2) In case, to install the outdoor unit on the seaside, set up a windbreak not to be exposed to the sea wind.



- It should be strong enough like concrete to prevent the sea wind from the sea.
- The height and width should be more than 150% of the outdoor unit.
- It should be keep more than 70cm (27.6 inch) of space between outdoor unit and the windbreak for easy air flow.

- 3) Select a well-drained place.

1. If you can't meet above guide line in the seaside installation, please contact LG Electronics for the additional anticorrosion treatment.
2. Periodic ( more than once/year ) cleaning of the dust or salt particles stuck on the heat exchanger by using water



P/No.: 3828A20892Z



**Air Conditioner**

20 Yeouido-dong, Yeongdeungpo-gu,  
Yeouido P.O.Box 335 Seoul,  
150-721, Korea.  
<http://www.lgeaircon.com>

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The air conditioners manufactured by LG have received ISO9001 certificate for  
quality assurance and ISO14001 certificate for environmental management system.