



Ceiling Duct Type Air Conditioner

SERVICE MANUAL

**MODELS: LB-D1861HL/CL, LB-D1863HL/CL
LB-D2461HL/CL, LB-D2463HL/CL
LB-F3061HL, LB-F3063HL
LB-F3661HL/CL, LB-F3663HL/CL
LB-F3681HL/CL, LB-F3683HL/CL
LB-F4261HL, LB-F4263HL
LB-E4881HL/CL, LB-E4883HL/CL
LB-E6081HL/CL, LB-E6083HL/CL**

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Cycle36

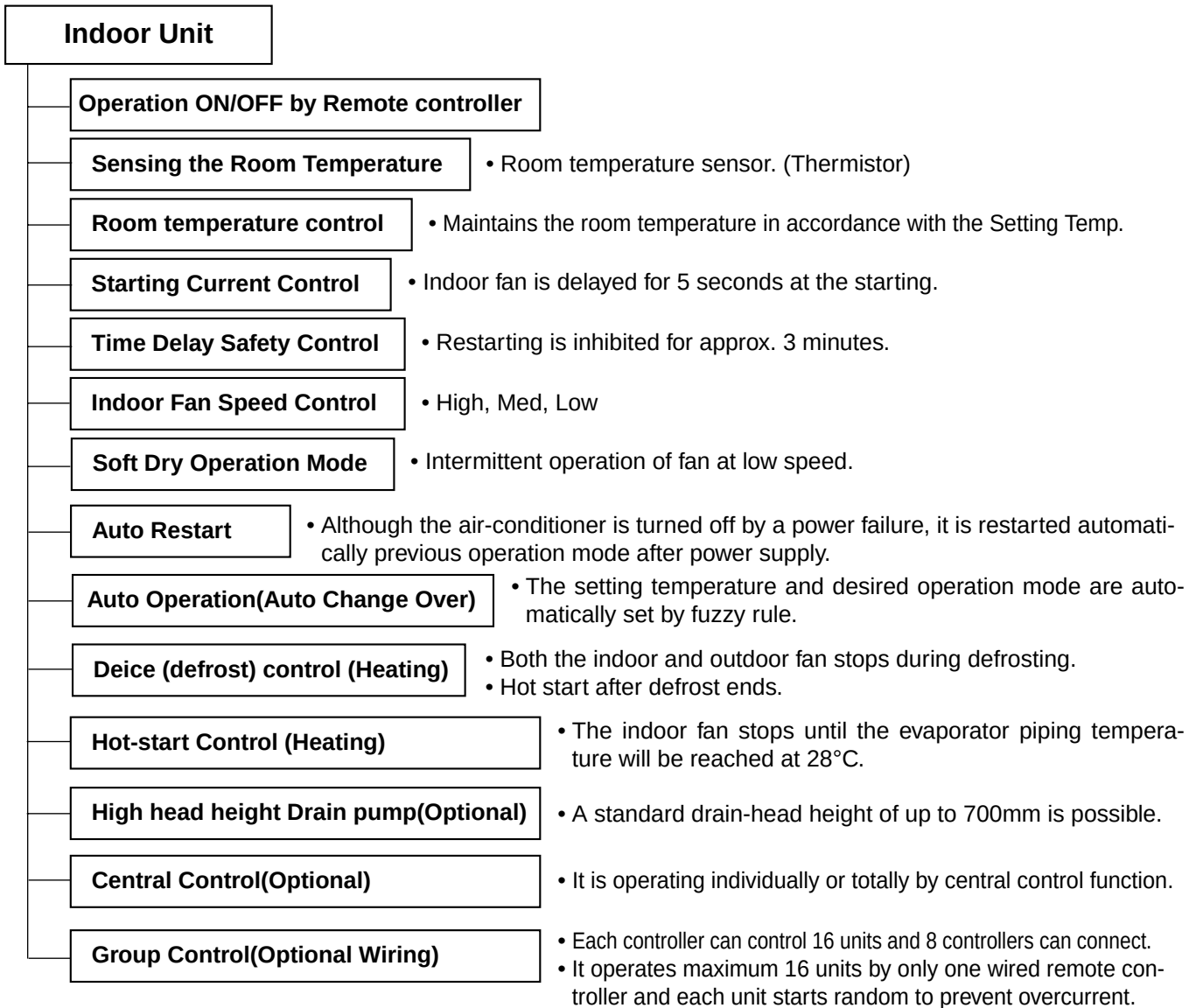
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Functions



Remote Controller

Operation ON/OFF



Operation Mode Selection



(Cooling
model only)



(Heating
model only)

Cooling Operation Mode ()

Heating Operation Mode ()

Soft Dry Operation Mode ()

Auto Operation Mode ()

Fan Speed Selection



LO (Low)



MED (Med)



HI (High)



AUTO

Room Temperature Display



: High:39°C ↔ LOW:11°C

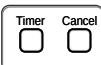
Temperature Setting



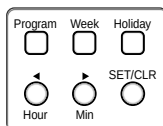
Cooling [Down to 18°C
Up to 30°C

Heating [Down to 16°C
Up to 30°C

Setting the Timer



Weekly Program



Fan Operation Mode

: Fan Operates without cooling & heating



Product Specifications (Cooling & Heating)

Item		Unit	LB-D1861CL/D1863CL	LB-D1861HL/D1863HL	LB-D2461CL/D2463CL	LB-D2461HL/D2463HL
Cooling Capacity		kcal/h(W)	4,536/5,274	4,536/5,274	6,048/7,032	6,048/7,032
		BTU/h	18,000	18,000	24,000	24,000
Heating Capacity		kcal/h(W)	-	4,536/5,274	-	6,048/7,032
		BTU/h	-	18,000	-	24,000
Input	Cooling/Heating	W	2,050/-	1,950/1,900	2,800/-	2,600/2,500
Running Current	Cooling/Heating	A	9.5/-	9.4/9	13/-	12/11
Starting Current	Cooling/Heating	A	45/-	45/45	45/-	45/45
E.E.R	Cooling	kcal/hW(W/W)	2.32(2.70)	2.4(2.84)	2.27(2.64)	2.4(2.84)
		BTU/hW	9.2	9.7	9.0	9.7
C.O.P	Heating	kcal/hW(W/W)	-	2.49(2.9)	-	2.49(2.9)
		BTU/hW	-	9.9	-	9.9
Power Supply		Ø,V,Hz	1,220-240,50	1,220-240,50	1,220-240,50	1,220-240,50
Power Factor		%	96	96	96	96
RPM	Cooling(H/M/L)	rpm	1,425/1,354/1,284	1,425/1,354/1,284	1,425/1,354/1,284	1,425/1,354/1,284
	Heating(H/M/L)	rpm	-	1,425/1,354/1,284	-	1,425/1,354/1,284
	Outdoor	rpm	800	800	800	800
Air Circulation	Indoor(H/M/L)	m³/min	16.5/14/12	16.5/14/12	16.5/14/12	16.5/14/12
	Outdoor	m³/min	49	49	49	49
External static pressure		mmAq(Pa)	8(80)	8(80)	8(80)	8(80)
Moisture Removal		l/h	2.00	2.00	2.50	2.50
Noise Level (Sound Press,1m)	Indoor(H/M/L)	dB(A)	36/34/32	36/34/32	36/34/32	36/34/32
	Outdoor Max	dB(A)	55	55	55	55
Drain hose	In/Out diameter	mm	22.6/25.4	22.6/25.4	22.6/25.4	22.6/25.4
Drain connection size(in/out)		inch	0.89/1	0.89/1	0.89/1	0.89/1
Main cable		No.X mm²	3*2.5	3*2.5	3*2.5	3*2.5
Connecting Cable		No.X mm²	4*0.75	6*0.75	4*0.75	6*0.75
Refrigerant Control Type			Capillary Type	Capillary Type	Capillary Type	Capillary Type
Refrigerant(R-22) charge		g	1,400	1,900	1,500	2,270
Compressor	Locked Rotor Amp.	A	45	45	-	-
	Type		ROTORY	ROTORY	ROTORY	ROTORY
	Model		2JS318G3AB02	2JS318G3AB02	2J44S235A1A	2J44S235A1A
	Maker		MATSUSHITA	MATSUSHITA	MATSUSHITA	MATSUSHITA
	Capacity	kcal/h(BTU/h)	4,910(19,480)	4,910(19,480)	6,750(26,783)	6,750(26,783)
	Motor Type		psc	psc	psc	psc
	Motor Input	W	1,885	1,885	2,510	2,510
	Oil Type		Suniso 4GDID	Suniso 4GDID	Suniso 4GDID	Suniso 4GDID
	Oil Charge	CC	1,130	1,130	1,130	1,130
	PTCR	Ω	-	-	-	-
O.L.P Type(model name)			Internal	Internal	Internal	Internal
Indoor motor	Type		condenser induced	condenser induced	condenser induced	condenser induced
	Model		808555JVA-A12EX	808555JVA-A12EX	808555JVA-A12EX	808555JVA-A12EX
	No. of Poles		4	4	4	4
	Input	W	144	144	144	144
	Current	A	0.7	0.7	0.7	0.7
	Capacitor	μF/Vac	10/370	10/370	10/370	10/370
Outdoor motor	Type		Condenser induced	Condenser induced	Condenser induced	Condenser induced
	Model		IC-1640LGFA	IC-1640LGFA	IC-1640LGFA	OBM-4003P2
	Input	W	151	151	151	151
	Current	A	0.35	0.35	0.35	0.35
	No. of Poles		6	6	6	6
	Capacitor	μF/Vac	6/370	6/370	6/370	6/370
SVC Valve	Liquid	inch(mm)	1/4(6.35)	1/4(6.35)	1/4(6.35)	1/4(6.35)
	Gas	inch(mm)	5/8(15.88)	5/8(15.88)	5/8(15.88)	5/8(15.88)
Connecting Tube (ø. Socket Flare)	Liquide Side	inch(mm)	1/4(6.35)	1/4(6.35)	1/4(6.35)	1/4(6.35)
	Gas Side	inch(mm)	5/8(15.88)	5/8(15.88)	5/8(15.88)	5/8(15.88)
	Length, std	m	7.5	7.5	7.5	7.5
	Max length(elevation)	m	50(30)	50(30)	50(30)	50(30)
Dimensions (WXHxD)	Indoor	mm(inch)	880*575*281(34.65*22.64*11.06)	880*575*281(34.65*22.64*11.06)	880*575*281(34.65*22.64*11.06)	880*575*281(34.65*22.64*11.06)
	Outdoor	mm(inch)	870*320*655(34.25*12.60*25.79)	870*320*655(34.25*12.60*25.79)	870*320*655(34.25*12.60*25.79)	870*320*655(34.25*12.60*25.79)
Net Weight	indoor	kg(lbs)	42(92.5)	42(92.5)	42(92.5)	42(92.5)
	Outdoor	kg(lbs)	57(125.6)	57(125.6)	60(132.2)	60(132.2)
Stuffing Quantity	With(Without)S/Parts	20/40ft	45/92(45/92)	45/92(45/92)	45/92(45/92)	45/92(45/92)

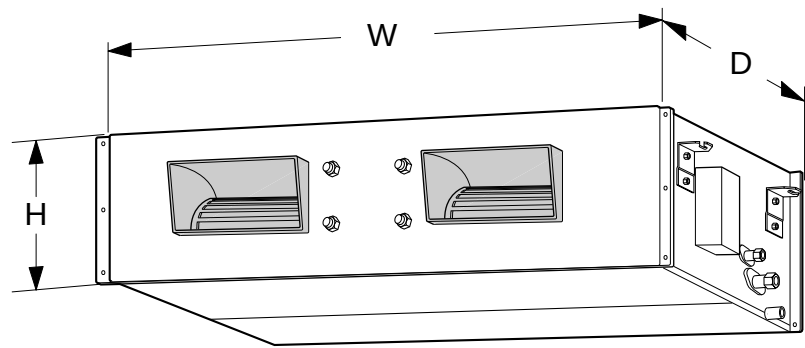
Item			Unit	LB-F3061HL/F3063HL	LB-F3661CL/F3663CL	LB-F3661HL/F3663HL	LB-F3681CL/F3683CL
Cooling Capacity			kcal/h(W)	7,560/8,790	9,072/10,548	9,072/10,548	9,072/10,548
			BTU/h	30,000	36,000	36,000	36,000
Heating Capacity			kcal/h(W)	7,560/8,790	-	9,072/10,548	-
			BTU/h	30,000	-	36,000	-
Input	Cooling/Heating		W	3,000/2,500	4,400/-	4,400/3,600	4,000/-
Running Current	Cooling/Heating		A	14/12	20/-	20/20	8/-
Starting Current	Cooling/Heating		A	110/110	125/-	125/125	45/-
E.E.R	Cooling		kcal/hW(W/W)	2.52(2.93)	2.17(2.52)	2.17(2.52)	2.39(2.78)
			BTU/hW	10.0	8.6	8.6	9.5
C.O.P	Heating		kcal/hW(W/W)	3.01(3.5)	-	2.67(3.1)	-
			BTU/hW	11.95	-	10.58	-
Power Supply			Ø,V,Hz	1,220-240,50	1,220-240,50	1,220-240,50	1,380-415,50
Power Factor			%	96	96	96	91
RPM	Cooling(H/M/L)		rpm	1,330/1,276/1,213	1,330/1,276/1,213	1,330/1,276/1,213	1,330/1,276/1,213
	Heating(H/M/L)		rpm	1,330/1,276/1,213	-	1,330/1,276/1,213	-
	Outdoor		rpm	930	940	940	940
Air Circulation	Indoor(H/M/L)		m³/min	31.5/29/25	31.5/29/25	31.5/29/25	31.5/29/25
	Outdoor		m³/min	49	52	52	52
External static pressure			mmAq(Pa)	10(100)	10(100)	10(100)	10(100)
Moisture Removal			l/h	3.50	4.50	4.50	4.50
Noise Level (Sound Press,1m)	Indoor(H/M/L)		dB(A)	42/40/38	42/40/38	42/40/38	42/40/38
	Outdoor Max		dB(A)	56	56	56	56
Drain hose	In/Out diameter		mm	22.6/25.4	22.6/25.4	22.6/25.4	22.6/25.4
Drain connection size(in/out)			inch	0.89/1	0.89/1	0.89/1	0.89/1
Main cable			No.X mm²	3*3.5	3*5.5	3*5.5	4*2.5
Connecting Cable			No.X mm²	5*0.75	4*0.75	5*0.75	4*0.75
Refrigerant Control Type				Capillary Type	Capillary Type	Capillary Type	Capillary Type
Refrigerant(R-22) charge			g	2,600	2,850	2,850	2,800
Compressor	Locked Rotor Amp.		A	110	125	125	45
	Type			RECIPROCATING	RECIPROCATING	RECIPROCATING	RECIPROCATING
	Model			H25B35QABHA	CR47K6-PFZ	CR47K6-PFZ	CR47K6-TFD
	Maker			BRISTOL	COPELAND	COPELAND	COPELAND
	Capacity	kcal/h(BTU/h)		7,560(30,000)	10,558(41,900)	10,558(41,900)	10,634(42,200)
	Motor Type			psc	psc	psc	psc
	Motor Input	W		2,780	4,340	4,340	4,290
	Oil Type			SUNISO 3GS	SONTEX 200LT	SONTEX 200LT	SUNISO 3GS
	Oil Charge	CC		1,180	1,627	1,627	1,627
	PTCR	Ω		20	20	20	-
O.L.P Type(model name)				Internal	Internal	Internal	Internal
Indoor motor	Type			Condenser inducted	Condenser inducted	Condenser inducted	Condenser inducted
	Model			IC-13470LGDM	IC-13470LGDM	IC-13470LGDM	IC-13470LGDM
	No. of Poles			4	4	4	4
	Input	W		353	353	353	353
	Current	A		1.65	1.65	1.65	1.65
	Capacitor	μF/Vac		10/370	10/370	10/370	10/370
Outdoor motor	Type			Condenser inducted	Condenser inducted	Condenser inducted	Condenser inducted
	Model			AMR-070B6	AMR032E6	AMR032E6	AMR032E6
	Input	W		151	151	151	151
	Current	A		0.35	0.62	0.62	0.62
	No. of Poles			6	4	4	4
	Capacitor	μF/Vac		6/370	2/400	2/400	2/400
SVC Valve	Liquid	inch(mm)		3/8(9.52)	3/8(9.52)	3/8(9.52)	3/8(9.52)
	Gas	inch(mm)		5/8(15.88)	5/8(15.88)	5/8(15.88)	5/8(15.88)
Connecting Tube (ø. Socket Flare)	Liquide Side	inch(mm)		3/8(9.52)	3/8(9.52)	3/8(9.52)	3/8(9.52)
	Gas Side	inch(mm)		5/8(15.88)	5/8(15.88)	5/8(15.88)	5/8(15.88)
	Length, std	m		7.5	7.5	7.5	7.5
	Max length(elevation)	m		50(30)	50(30)	50(30)	50(30)
Dimensions (WXHxD)	Indoor	mm(inch)		1,180*600*298(46.46*23.62*11.73)	1,180*600*298(46.46*23.62*11.73)	1,180*600*298(46.46*23.62*11.73)	1,180*600*298(46.46*23.62*11.73)
	Outdoor	mm(inch)		870*320*800(34.25*12.60*31.5)	790*320*965(31.10*12.6*37.99)	790*320*965(31.10*12.6*37.99)	790*320*965(31.10*12.6*37.99)
Net Weight	indoor	kg(lbs)		46(101.3)	46(101.3)	46(101.3)	46(101.3)
	Outdoor	kg(lbs)		55(121.2)	78(171.8)	78(171.8)	78(171.8)
Stuffing Quantity	With(Without)S/Parts		20/40ft	32/71(32/71)	34/72(34/72)	34/72(34/72)	34/72(34/72)

Item		Unit	LB-F3681HL/F3683HL	LB-F4261HL/F4263HL
Cooling Capacity		kcal/h(W)	9,072/10,548	10,584/12,306
		BTU/h	36000	42000
Heating Capacity		kcal/h(W)	9,072/10,548	10,584/12,306
		BTU/h	36000	42000
Input	Cooling/Heating	W	4,000/3,400	4,800/4,600
Running Current	Cooling/Heating	A	8/7	24/23
Starting Current	Cooling/Heating	A	45/45	125/125
E.E.R	Cooling	kcal/hW(W/W)	2.39(2.78)	2.32(2.70)
		BTU/hW	9.5	9.2
C.O.P	Heating	kcal/hW(W/W)	2.84(3.3)	2.41(2.8)
		BTU/hW	11.26	9.56
Power Supply		Ø,V,Hz	1,380-415,50	1,220-240,50
Power Factor		%	91	96
RPM	Cooling(H/M/L)	rpm	1,330/1,276/1,213	1,330/1,276/1,213
	Heating(H/M/L)	rpm	1,330/1,276/1,213	1,330/1,276/1,213
	Outdoor	rpm	940	940
Air Circulation	Indoor(H/M/L)	m³/min	31.5/29/25	31.5/29/25
	Outdoor	m³/min	52	105
External static pressure		mmAq(Pa)	10(100)	10(100)
Moisture Removal		l/h	4.5	5
Noise Level (Sound Press,1m)	Indoor(H/M/L)	dB(A)	42/40/38	42/40/38
	Outdoor Max	dB(A)	56	58
Drain hose	In/Out diameter	mm	22.6/25.4	22.6/25.4
Drain connection size(in/out)		inch	0.89/1	0.89/1
Main cable		No.X mm²	4*2.5	4*5.5
Connecting Cable		No.X mm²	5*0.75	5*0.75
Refrigerant Control Type			Capillary Type	Capillary Type
Refrigerant(R-22) charge		g	2800	4900
Compressor	Locked Rotor Amp.	A	45	125
	Type		RECIPROCATING	RECIPROCATING
	Model		CR47K6-TFD	AVB5558EXN
	Maker		COPELAND	TECUMSEH
	Capacity	kcal/h(BTU/h)	10,634(42,200)	14,490(57,500)
	Motor Type		psc	psc
	Motor Input	W	4290	5480
	Oil Type		SUNISO 3GS	SUNISO 3GS
	Oil Charge	CC	1627	1588
	PTCR	Ω	-	20
	O.L.P Type(model name)		Internal	Internal
Indoor motor	Type		Condenser inducted	Condenser inducted
	Model		IC-13470LGDM	IC-13470LGDM
	No. of Poles		4	4
	Input	W	353	353
	Current	A	1.65	1.65
	Capacitor	μF/Vac	10/370	10/370
Outdoor motor	Type		Condenser inducted	Condenser inducted
	Model		AMR032E6	OBM-4002P2
	Input	W	151	151
	Current	A	0.62	0.72
	No. of Poles		4	6
	Capacitor	μF/Vac	2/400	6/370
SVC Valve	Liquid	inch(mm)	3/8(9.52)	3/8(9.52)
	Gas	inch(mm)	5/8(15.88)	3/4(19.05)
Connecting Tube (ø. Socket Flare)	Liquide Side	inch(mm)	3/8(9.52)	3/8(9.52)
	Gas Side	inch(mm)	5/8(15.88)	3/4(19.05)
	Length, std	m	7.5	7.5
	Max length(elevation)	m	50(30)	50(30)
Dimensions (WXHXD)	Indoor	mm(inch)	1,180*600*298(46.46*23.62*11.73)	1,180*600*298(46.46*23.62*11.73)
	Outdoor	mm(inch)	790*320*965(31.10*12.6*37.99)	900*370*1220(35.43*14.57*48.03)
Net Weight	indoor	kg(lbs)	46(101.3)	46(101.3)
	Outdoor	kg(lbs)	78(171.8)	90(198.3)
Stuffing Quantity	With(Without)S/Parts	20/40ft	34/72(34/72)	22/48(22/48)

Item			Unit	LB-E4881CL/E4883CL	LB-E4881HL/E4883HL	LB-E6081CL/E6083CL	LB-E6081HL/E6083HL
Cooling Capacity			kcal/h(W)	12,096/14,064	12,096/14,064	15,120/17,580	15,120/17,580
			BTU/h	48,000	48,000	60,000	60,000
Heating Capacity			kcal/h(W)	-	12,096/14,064	-	15,120/17,580
			BTU/h	-	48,000	-	60,000
Input	Cooling/Heating		W	6,000/-	5,500/4,500	6,000/-	6,150/4,900
Running Current	Cooling/Heating		A	9.5/-	9/8	10/-	10.5/8.5
Starting Current	Cooling/Heating		A	125/-	125/125	101/-	101/101
E.E.R	Cooling		kcal/hW(W/W)	2.12(2.46)	2.32(2.70)	2.29(3.02)	2.4(2.84)
			BTU/hW	8.4	9.2	10.3	9.7
C.O.P	Heating		kcal/hW(W/W)	-	2.84(3.3)	-	3.27(3.8)
			BTU/hW	-	11.26	-	12.97
Power Supply			Ø,V,Hz	3,380-415,50	3,380-415,50	3,380-415,50	3,380-415,50
Power Factor			%	90	90	90	90
RPM	Cooling(H/M/L)		rpm	1,034/976/932	1,034/976/932	1,151/1,075/1,030	1,151/1,075/1,030
	Heating(H/M/L)		rpm	-	1,034/976/932	-	1,151/1,075/1,030
	Outdoor		rpm	880	880	880	880
Air Circulation	Indoor(H/M/L)		m³/min	40/35/31	40/35/31	46/40/35	46/40/35
	Outdoor		m³/min	105	105	105	105
External static pressure			mmAq(Pa)	10/15(100/150)	10/15(100/150)	10/15(100/150)	10/15(100/150)
Moisture Removal			l/h	6.00	6.00	6.50	6.50
Noise Level (Sound Press,1m)	Indoor(H/M/L)		dB(A)	42/40/38	42/40/38	45/43/41	45/43/41
	Outdoor Max		dB(A)	62	62	62	62
Drain hose	In/Out diameter		mm	22.6/25.4	22.6/25.4	22.6/25.4	22.6/25.4
Drain connection size(in/out)			inch	0.89/1	0.89/1	0.89/1	0.89/1
Main cable			No.X mm²	3*3.5	3*3.5	3*3.5	3*3.5
Connecting Cable			No.X mm²	4*1.25	5*1.25	4*1.25	5*1.25
Refrigerant Control Type				Capillary Type	Capillary Type	Capillary Type	Capillary Type
Refrigerant(R-22) charge			g	3,030	4,250	6,250	6,550
Compressor	Locked Rotor Amp.		A	125	125	101	101
	Type			RECIPROCATING	RECIPROCATING	RECIPROCATING	RECIPROCATING
	Model			H23A623DBEA	H23A623DBEA	H26A72QDBEA	H26A72QDBEA
	Maker			BRISTOL	BRISTOL	BRISTOL	BRISTOL
	Capacity	kcal/h(BTU/h)		13,054(51,800)	13,054(51,800)	15,518(61,580)	15,518(61,580)
	Motor Type			psc	psc	psc	psc
	Motor Input	W		5,480	5,480	6,200	6,200
	Oil Type			Sunsino 3GS	Sunsino 3GS	Sunsino 3GS	Sunsino 3GS
	Oil Charge	CC		2,070	2,070	1,774	1,774
	PTCR	Ω		-	-	-	-
O.L.P Type(model name)				Internal	Internal	Internal	Internal
Indoor motor	Type			Condenser induced	Condenser induced	Condenser induced	Condenser induced
	Model			808555AVA-A12EX	808555AVA-A12EX	808555PVA-A18EX	808555PVA-A18EX
	No. of Poles			4	4	4	4
	Input	W		604	604	590	590
	Current	A		2.7	2.7	2.6	2.6
	Capacitor	μF/Vac		12/450	12/450	15/450	15/450
Outdoor motor	Type			Condenser induced	Condenser induced	Condenser induced	Condenser induced
	Model			OBM-4006P2	OBM-4004P2	OBM-4006P2	OBM-4006P2
	Input	W		151	151	151	151
	Current	A		1.02	1.02	1.02	1.02
	No. of Poles			6	6	6	6
	Capacitor	μF/Vac		6/370	6/370	6/370	6/370
SVC Valve	Liquid	inch(mm)		3/8(9.52)	3/8(9.52)	1/2(12.7)	1/2(12.7)
	Gas	inch(mm)		3/4(19.05)	3/4(19.05)	3/4(19.05)	3/4(19.05)
Connecting Tube (ø. Socket Flare)	Liquide Side	inch(mm)		3/8(9.52)	3/8(9.52)	1/2(12.7)	1/2(12.7)
	Gas Side	inch(mm)		3/4(19.05)	3/4(19.05)	3/4(19.05)	3/4(19.05)
	Length, std	m		7.5	7.5	7.5	7.5
	Max length(elevation)	m		50(30)	50(30)	50(30)	50(30)
Dimensions (WXDXH)	Indoor	mm(inch)		1,230*680*370(48.43*26.77*14.57)	1,230*680*370(48.43*26.77*14.57)	1,230*680*370(48.43*26.77*14.57)	1,230*680*370(48.43*26.77*14.57)
	Outdoor	mm(inch)		900*370*1,220(35.43*14.57*48.03)	900*370*1,220(35.43*14.57*48.03)	900*370*1,220(35.43*14.57*48.03)	900*370*1,220(35.43*14.57*48.03)
Net Weight	indoor	kg(lbs)		70(154.2)	70(154.2)	70(154.2)	70(154.2)
	Outdoor	kg(lbs)		90(198.3)	95	90(198.3)	95(209.3)
Stuffing Quantity	With(Without)S/Parts		20/40ft	20/45(20/45)	20/45(20/45)	20/45(20/45)	20/45(20/45)

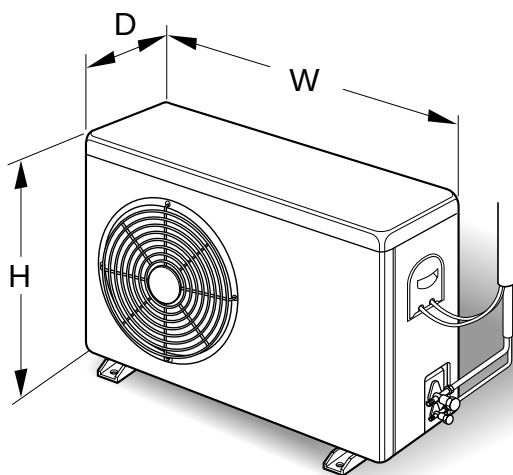
Dimensions

(1) Indoor Unit

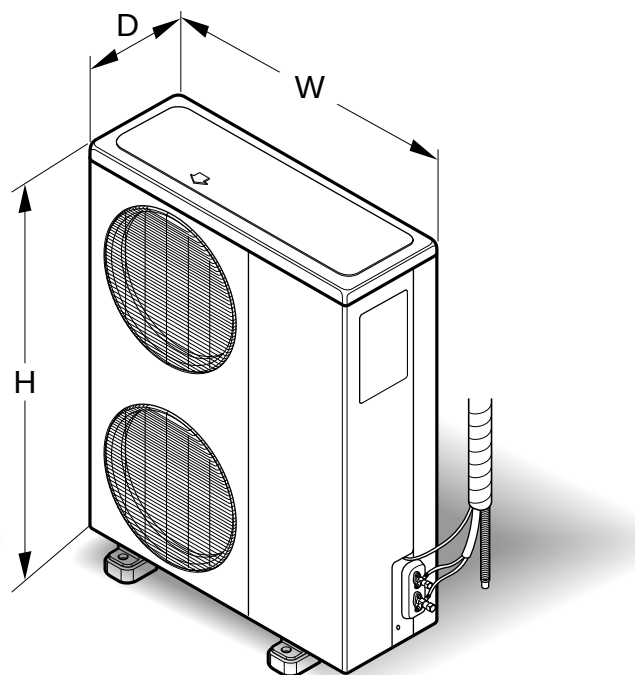


MODEL DIM	18K	24K	30K	36K	42K	48K	60K
W(mm)	880	880	1180	1180	1180	1230	1230
H(mm)	281	281	298	298	298	370	370
D(mm)	575	575	600	600	600	680	680

(2) Outdoor Unit



(18K/24K/30K)

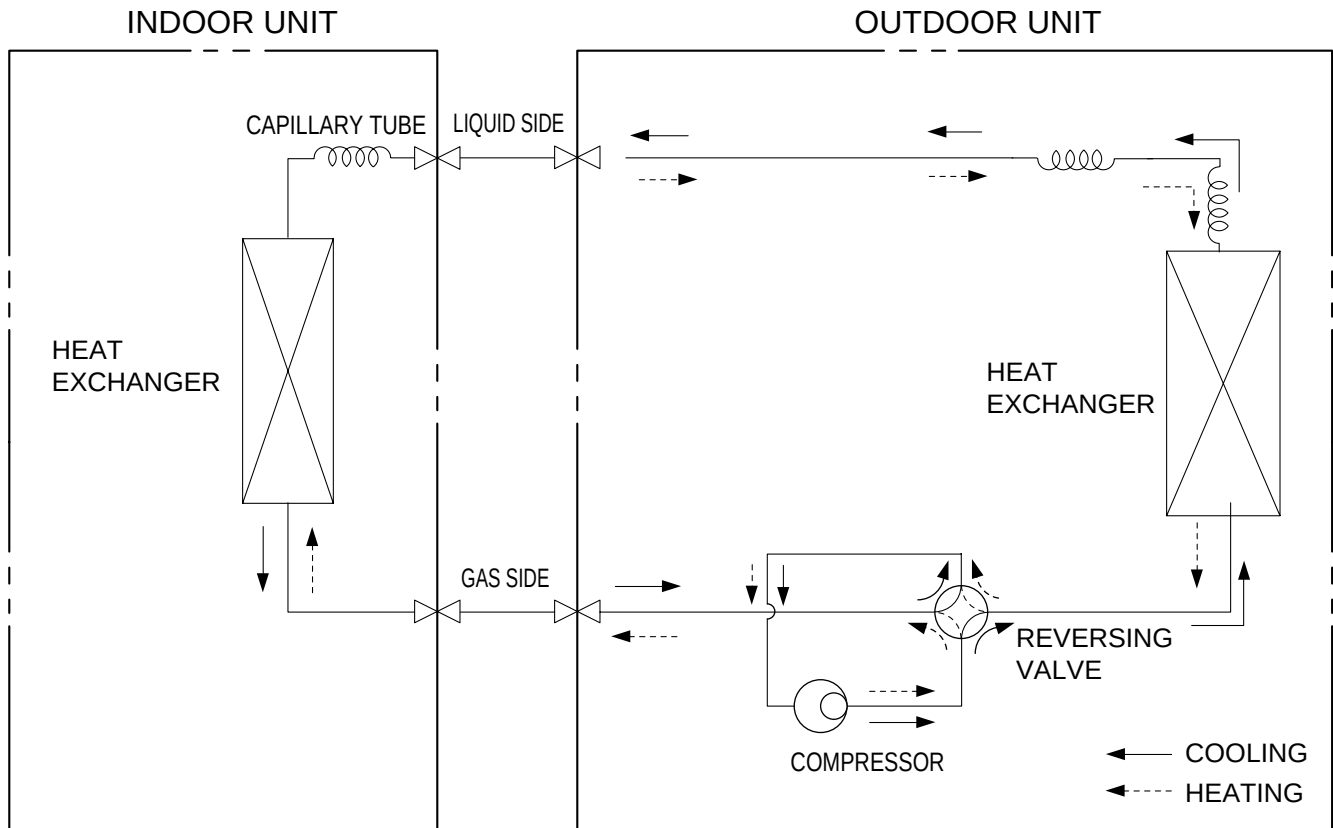


(36K/42K/48K/60K)

DIM \ MODEL	18K	24K	30K	36K	42K	48K	60K
W(mm)	870	870	870	790	900	900	900
H(mm)	655	655	800	965	1,220	1,220	1,220
D(mm)	320	320	320	320	370	370	370

Refrigeration Cycle Diagram

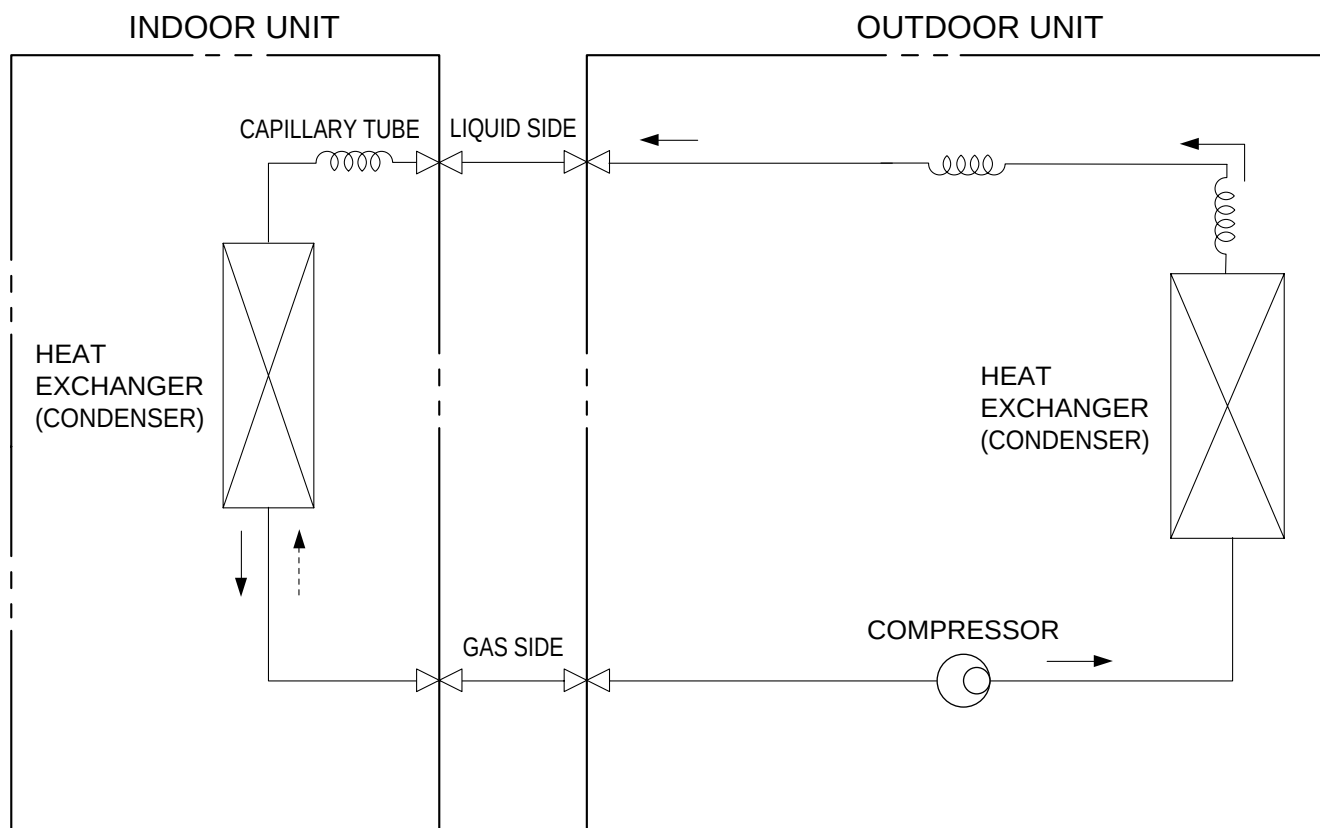
- **HEAT PUMP** (LB-D1861HL/LB-D1863HL/LB-D2461HL/LB-D2463HL/LB-F3061HL/LB-F3063HL/LB-F3661HL/LB-F3663HL/LB-F3681HL/LB-F3683HL/LB-F4261HL/LB-F4263HL/LB-E4881HL/LB-E4883HL/LB-E6081HL/LB-E6083HL)



MODEL	Pipe size(Diameter: ø)		Piping length(m)		Elevation(m)		*Additional refrigerant (g/m)
	Gas	Liquid	Rated	Max.	Rated	Max.	
18K	5/8"	1/4"	7.5	50	5	30	25
24K	5/8"	1/4"	7.5	50	5	30	30
30K	5/8"	3/8"	7.5	50	5	30	50
36K	5/8"	3/8"	7.5	50	5	30	40
42K	3/4"	3/8"	7.5	50	5	30	50
48K	3/4"	3/8"	7.5	50	5	30	50
60K	3/4"	1/2"	7.5	50	5	30	60

- Rated performance for refrigerant line length of: 7.5m
- If 18K Model is installed at a distance of 15m, 188g of refrigerant should be added $(15-7.5) \times 25g = 188g$

- **COOLING ONLY** (LB-D1861CL/LB-D1863CL/LB-D2461CL/LB-D2463CL/LB-F3661CL/
LB-D3663CL/LB-F3681CL/LB-F3683CL/LB-E4881CL/LB-E4883CL/
LB-E6081CL/LB-E6083CL)



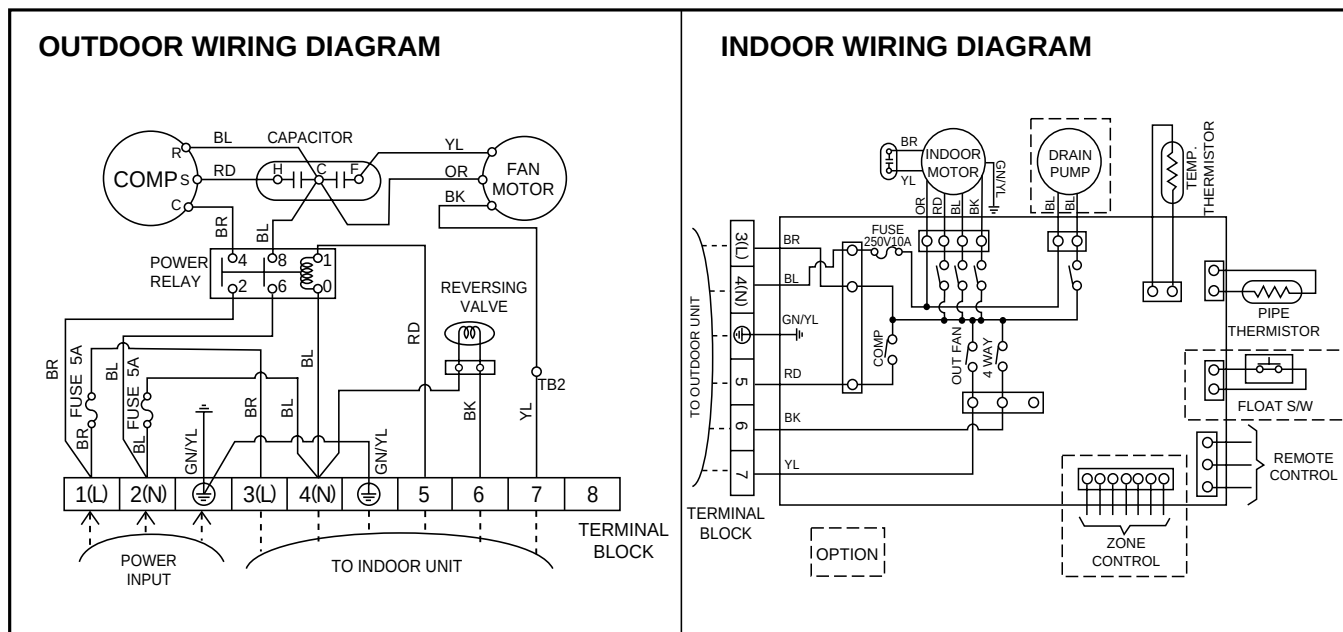
MODEL	Pipe size(Diameter: ø)		Piping length(m)		Elevation(m)		*Additional refrigerant (g/m)
	Gas	Liquid	Rated	Max.	Rated	Max.	
18K	5/8"	1/4"	7.5	50	5	30	25
24K	5/8"	1/4"	7.5	50	5	30	25
36K	5/8"	3/8"	7.5	50	5	30	40
48K	3/4"	3/8"	7.5	50	5	30	50
60K	3/4"	1/2"	7.5	50	5	30	60

- Rated performance for refrigerant line length of: 7.5m
- If 18K Model is installed at a distance of 15m, 188g of refrigerant should be added $(15-7.5) \times 25\text{g} = 188\text{g}$

Wiring Diagram

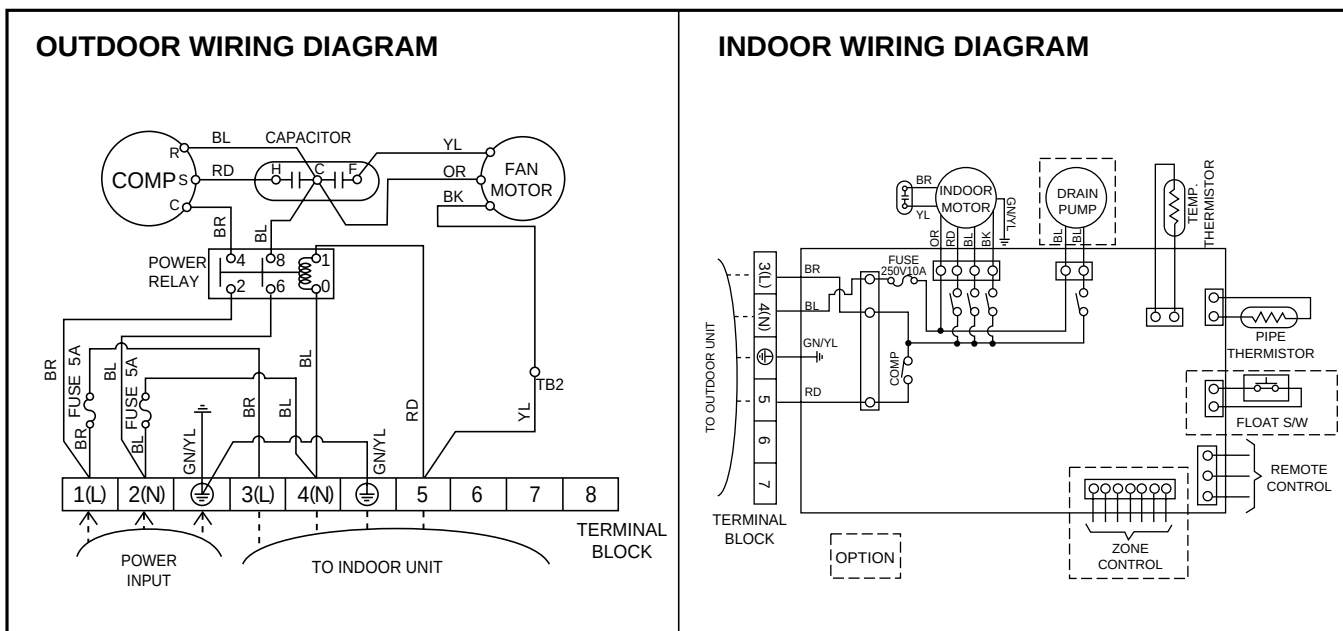
HEAT PUMP

Model : LB-D1861HL/LB-D1863HL/LB-D2461HL/LB-D2463HL



COOLING ONLY

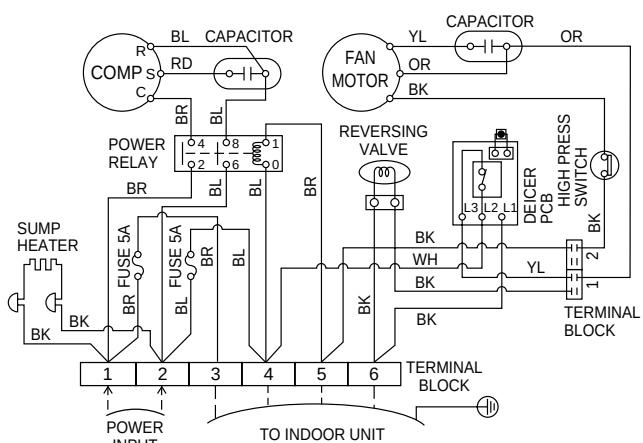
Model : LB-D1861CL/LB-D1863CL/LB-D2461CL/LB-2463CL



HEAT PUMP

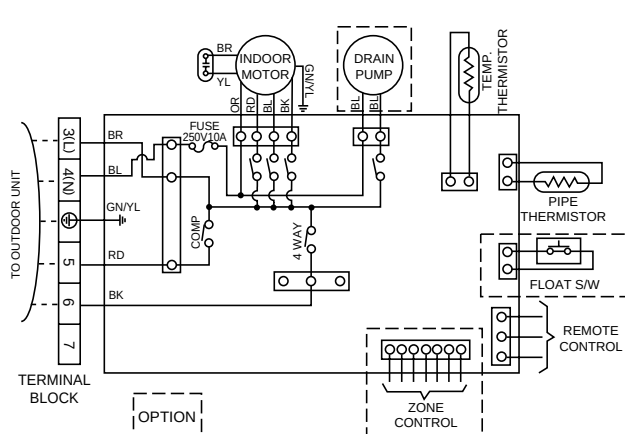
Model : LB-F3061HL/LB-F3063HL

OUTDOOR WIRING DIAGRAM



3854AP2708T

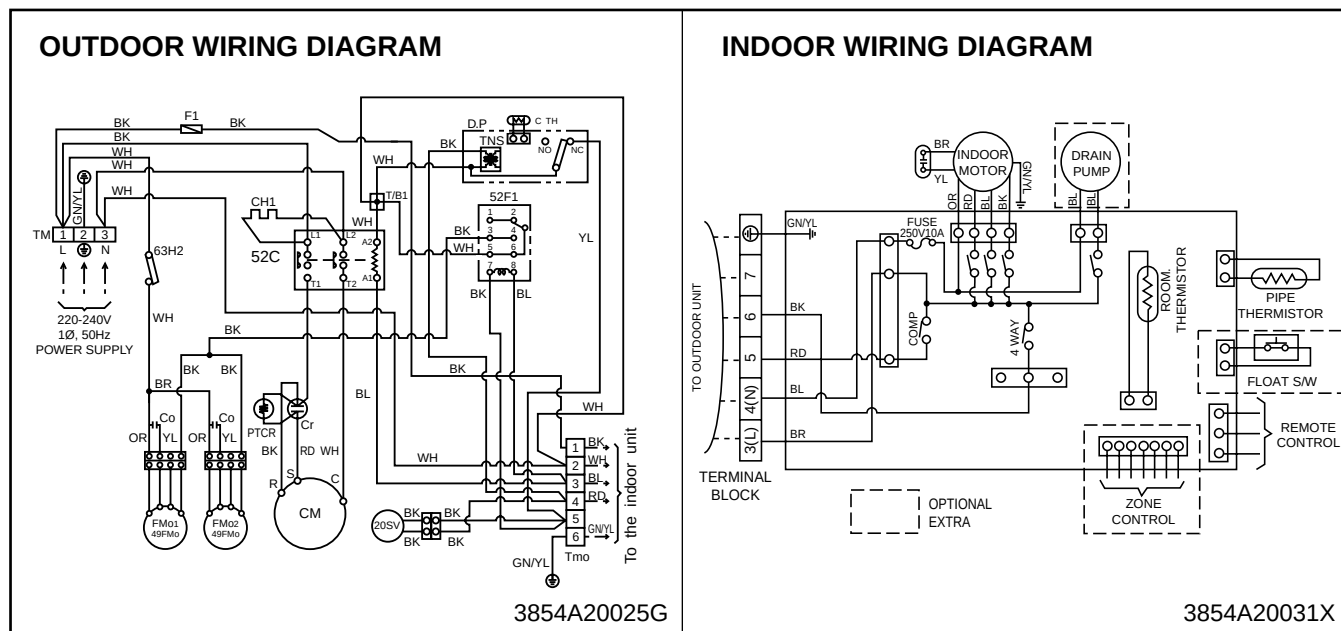
INDOOR WIRING DIAGRAM



3854A30086Q

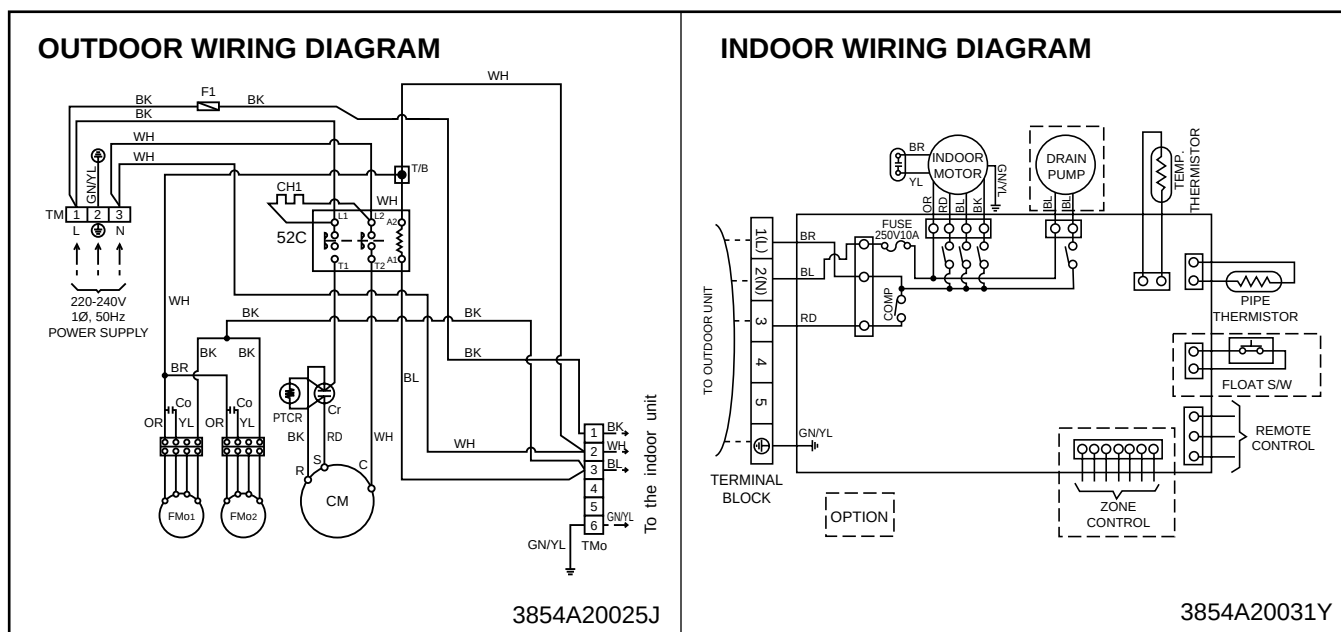
HEAT PUMP

Model : LB-F3661HL/LB-F3663HL



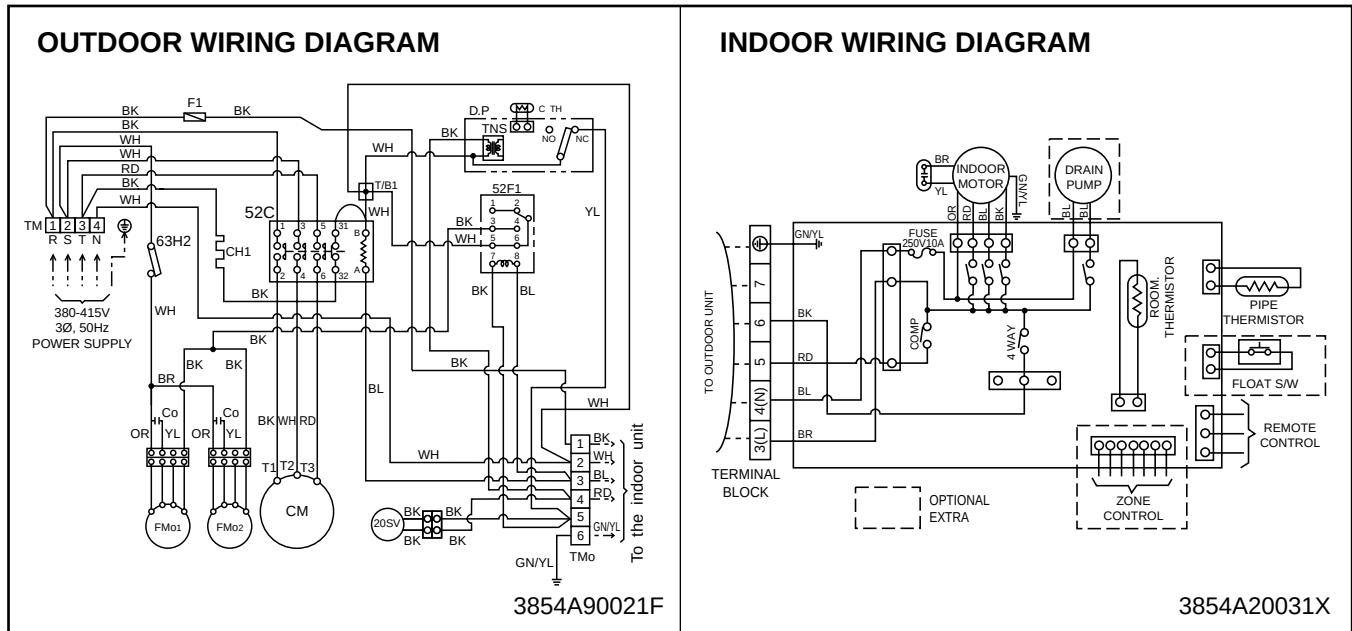
COOLING ONLY

Model : LB-F3661CL/LB-F3663CL



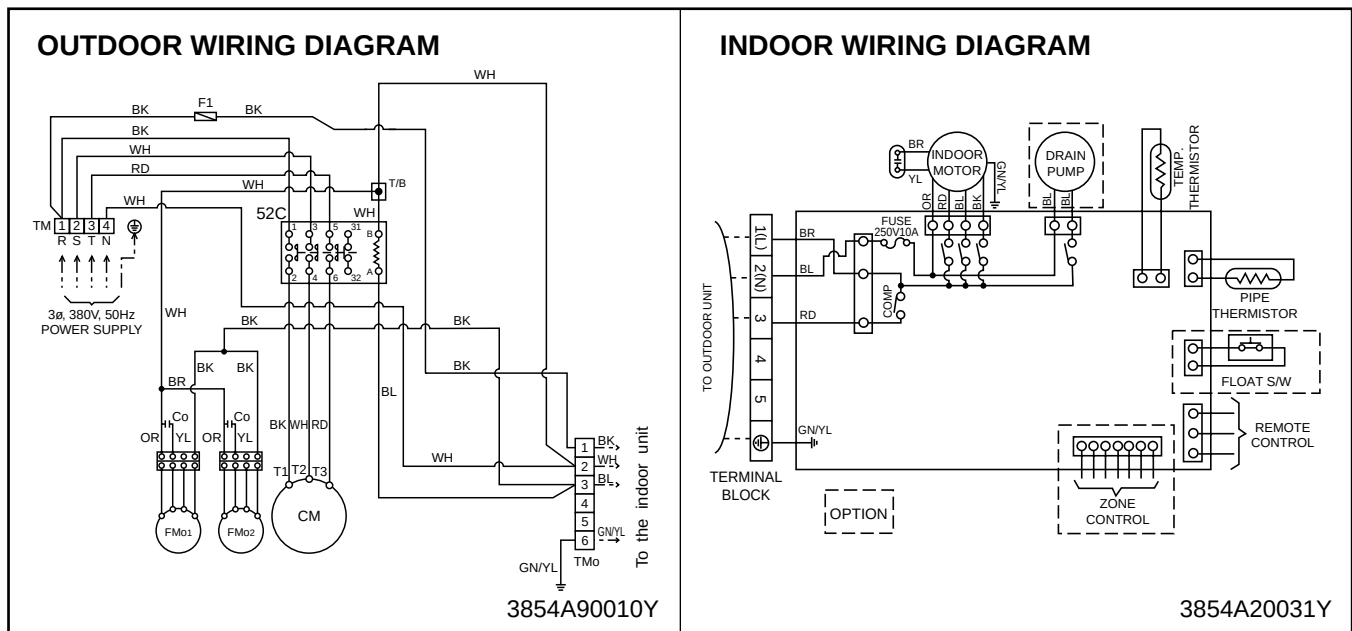
HEAT PUMP

Model : LB-F3681HL/LB-F3683HL



COOLING ONLY

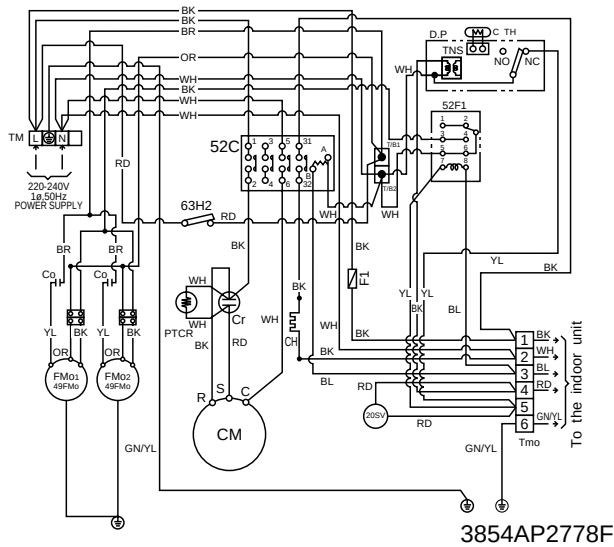
Model : LB-F3681CL/LB-F3683CL



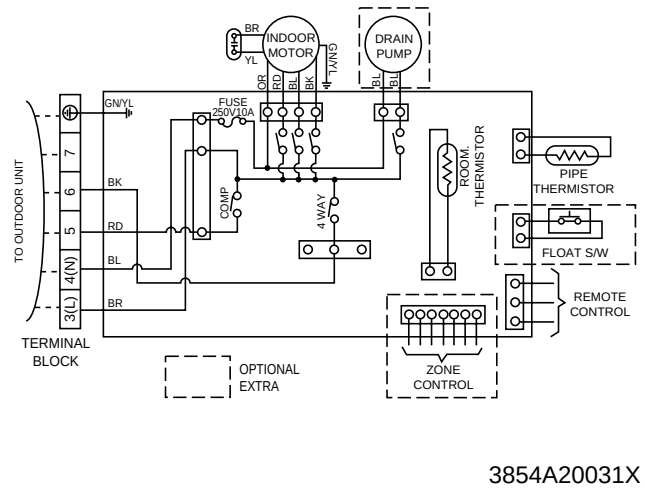
HEAT PUMP

Model : LB-F4261HL/LB-F4263HL

OUTDOOR WIRING DIAGRAM

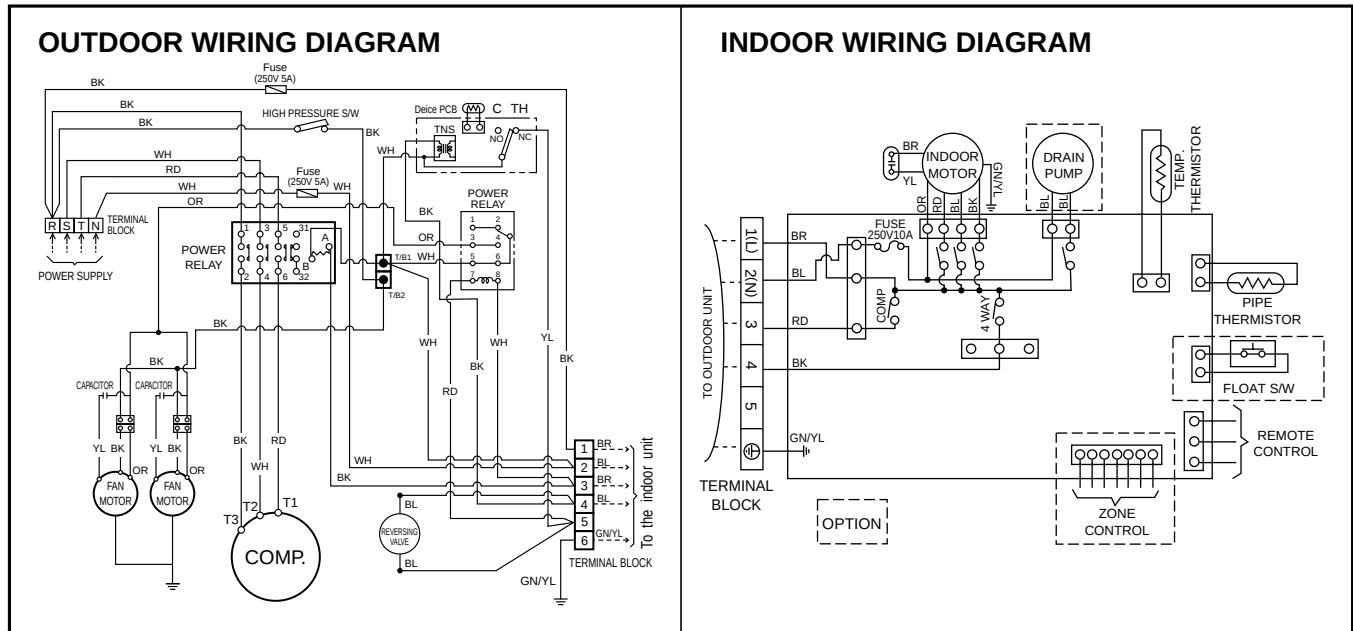


INDOOR WIRING DIAGRAM



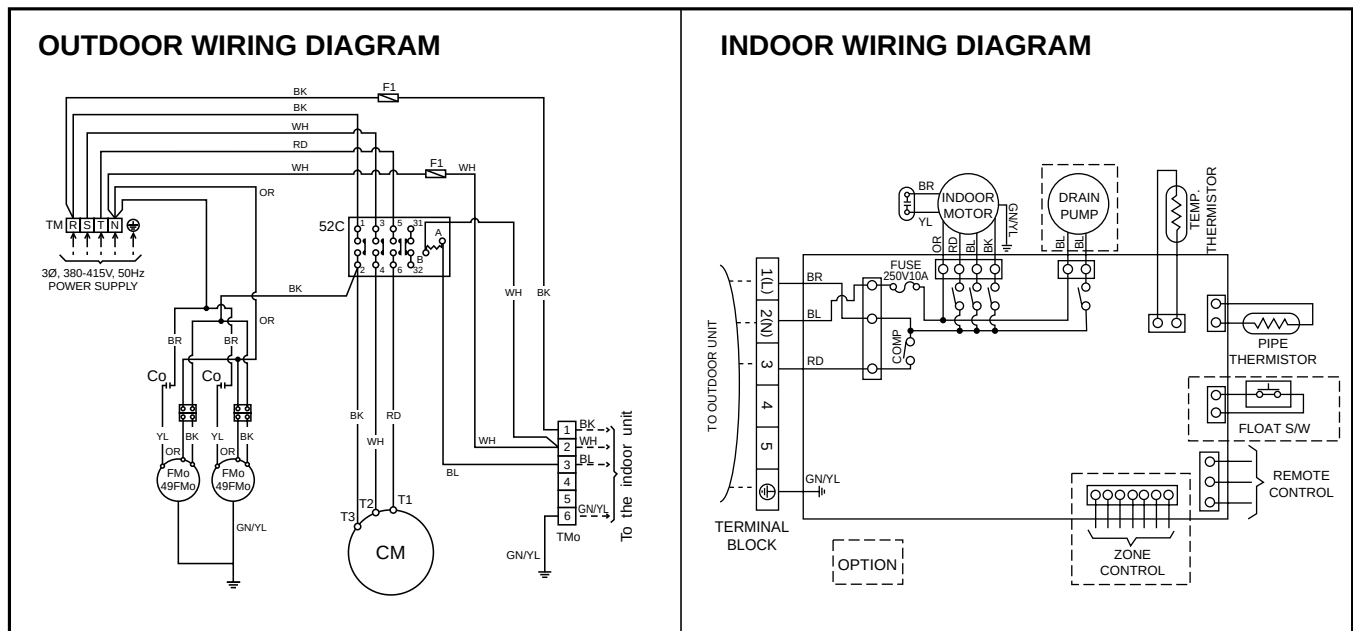
HEAT PUMP

Model : LB-E4881HL/LB-E4883HL/LB-E6081HL/LB-E6083HL



COOLING ONLY

Model : LB-E4881CL/LB-E4883CL/LB-E6081CL/LB-E6083CL



Operation Details

(1) The function of main control

1. Time Delay safety Control

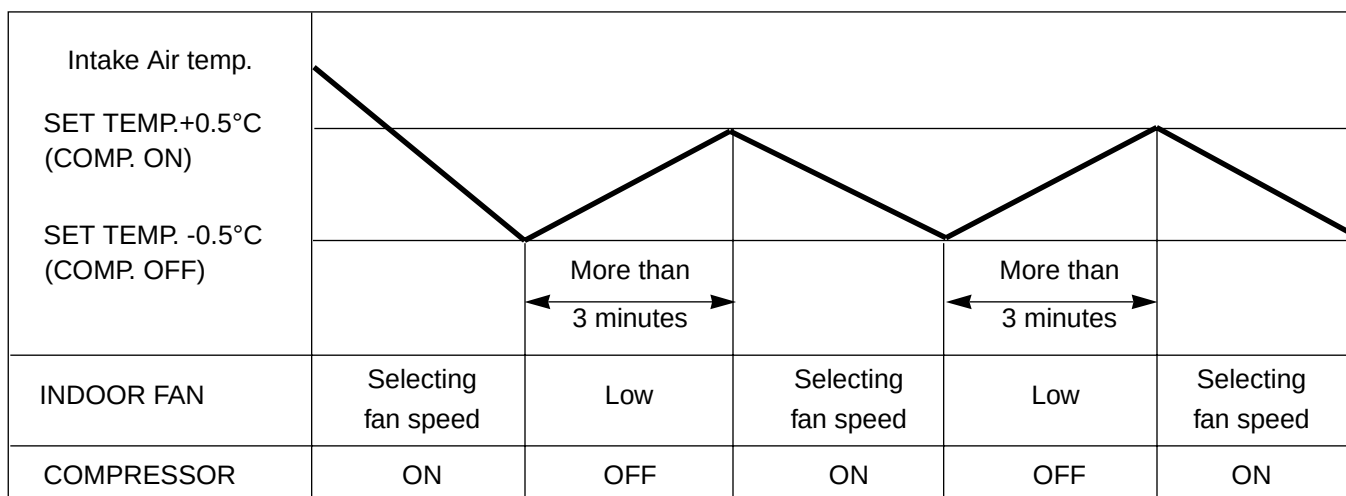
- 3min... The compressor is ceased for 3minutes to balance the pressure in the refrigeration cycle.
(Protection of compressor)
- 30sec... The 4-way valve is ceased for 30sec. to prevent the refrigerant-gas abnormal noise when the Heating operation is OFF or switched to the other operation mode while compress is off.
While compressor is running, it takes 3~5 seconds to switch.

2. Soft-Dry Operation

- The indoor fan speed is automatically set to the low, so the shift of the indoor fan speed is impossible because of already being set to the best speed for Dry Operation by Micom Control.

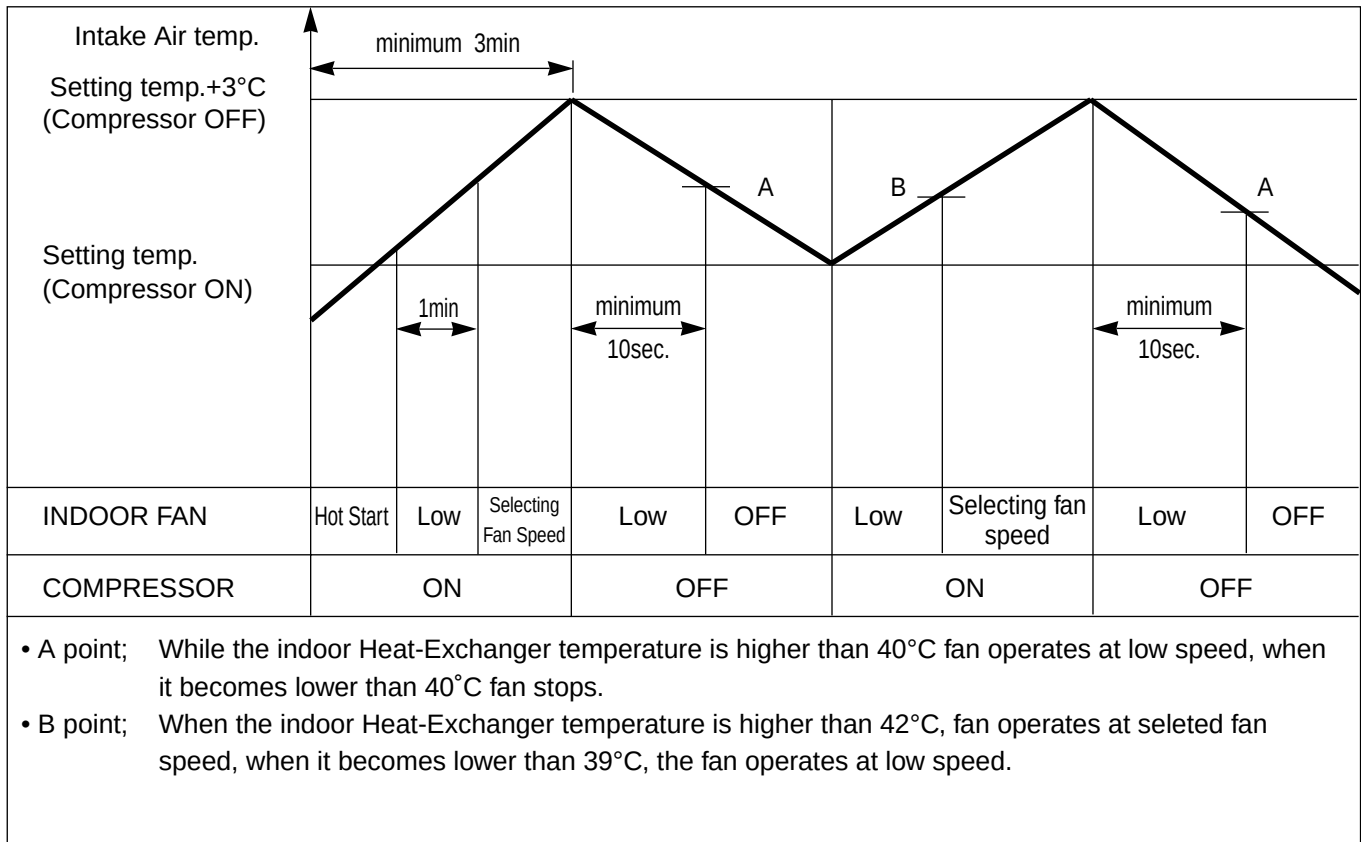
3. Cooling Mode Operation

- When selecting the Cooling(※) Mode Operation, the unit will operate according to the setting by the remote controller and the operation diagram is as following.



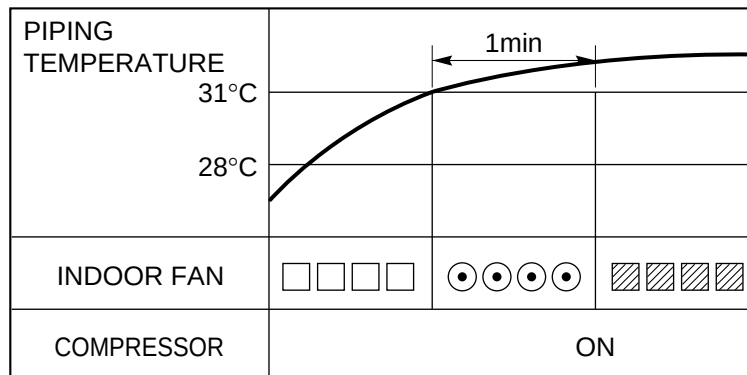
4. Heating Mode Operation (Except Cooling Model)

The unit will operate according to the setting by the remote controller and the operation diagram is shown as following.



5. Hot-Start Control

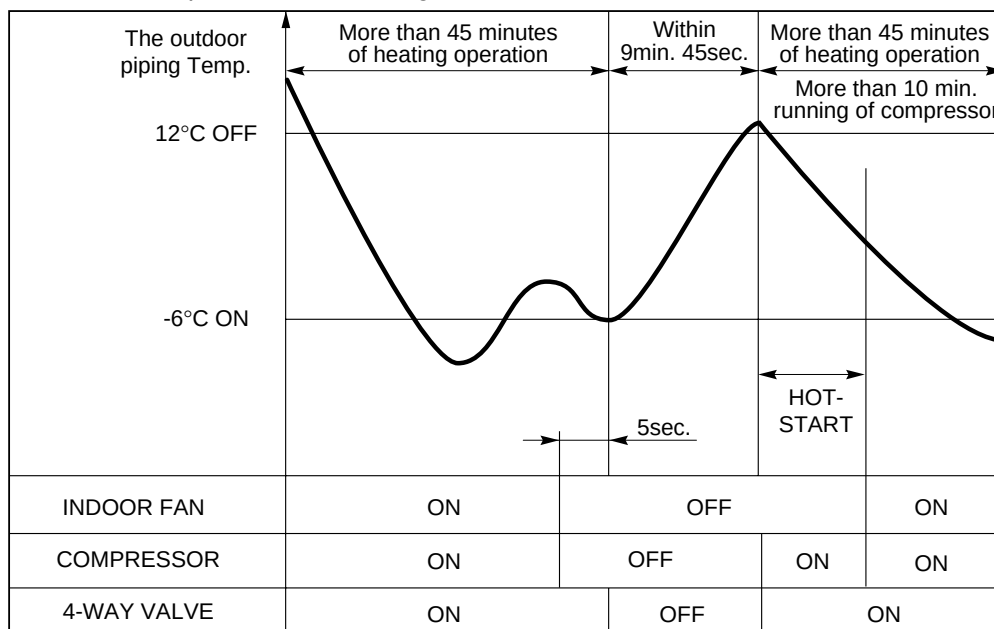
- The indoor fan stops until the evaporator piping temperature will be reached to 31°C.
- The operation diagram is as following.



▨ : Selected Fan ● : Low Fan □ : Fan Stop

6. Defrost Control(30K/36K/42K/48K/60K)

- Defrost control is available 45 minutes later since heating mode operation started, and it will not prolong over 10 minutes.
- Defrost control is carried out when the outdoor pipe temp. falls below -6°C for more than 3 minutes after 45 minutes passed from starting of heating operation.
- Defrost ends after 10 minutes passed from starting of defrost operation or when the outdoor pipe temp. rises over 12°C after 5 minutes passed from starting of defrost.



■ Defrost Control (New Type Defrost Control) (18K/24K)

- While in heating mode operation in order to protect the evaporator pipe of the outdoor unit from freezing, reversed to cooling cycle to defrost the evaporator pipe of the outdoor unit.
- Defrost control is available 45 min. later since heating mode operation started, and it will not prolong over 10 min.
- Defrost control is carried out according to the following priority order while in heating mode operation.
 - 1st priority : Defrost control is carried out according to the indoor pipe temp 60 min. later since heating mode operation started.
 - 2nd priority : The temp differences between the indoor pipe temp and the intake air temp 25 min. later ($\Delta T1$) and 45 min. later ($\Delta T2$) since heating mode operation started are measured, then defrost control is carried out according to the difference ($\Delta T = \Delta T1 - \Delta T2$)
 - 3rd priority : Defrost control is carried out according to the temp difference ($E = TE1 - TE2$) between the indoor pipe temperatures of 25 min later ($TE1$) and 45 min later ($TE2$) after heating mode operation started.
- When the indoor pipe temp is 41°C or above, defrost control is not carried out even if the condition is one of the defrost conditions above.
- While in defrost control, the compressor is on and the indoor fan, the outdoor fan, and the 4 way valve are off.

7. Self-diagnosis Function

- 'CHECK' will flash in the remote controller display when a problem occurs. Then please contact your dealer.
- Correct the accident point as shown in the table below before restarting operation.
- During the normal operation 'CHECK' won't be displayed in the remote controller.

Remote controller LCD	Accident Point
CH 01	Indoor room temperature thermistor error
CH 02	Indoor piping thermistor error
CH 03	Indoor main body / Remote controller unit communication error
CH 04(Optional)	Water level float switch error

Installation of Indoor, Outdoor Unit

1. Selection of the best location

1) Indoor unit

Select location

Install the air conditioner in the location that satisfies the following conditions.

- The place shall easily bear a load exceeding four times the indoor unit's weight.
- The place shall be able to inspect the unit as the figure.
- The place where the unit shall be leveled.
- The place shall allow easy water drainage.(Suitable dimension "H" is necessary to get a slope to drain as figure.)
- The place shall easily connect with the outdoor unit.
- The place where the unit is not affected by an electrical noise.
- The place where air circulation in the room will be good .
- There should not be any heat source or steam near the unit.

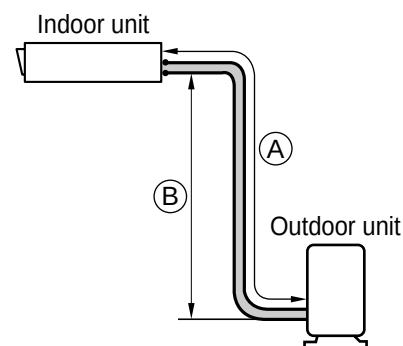
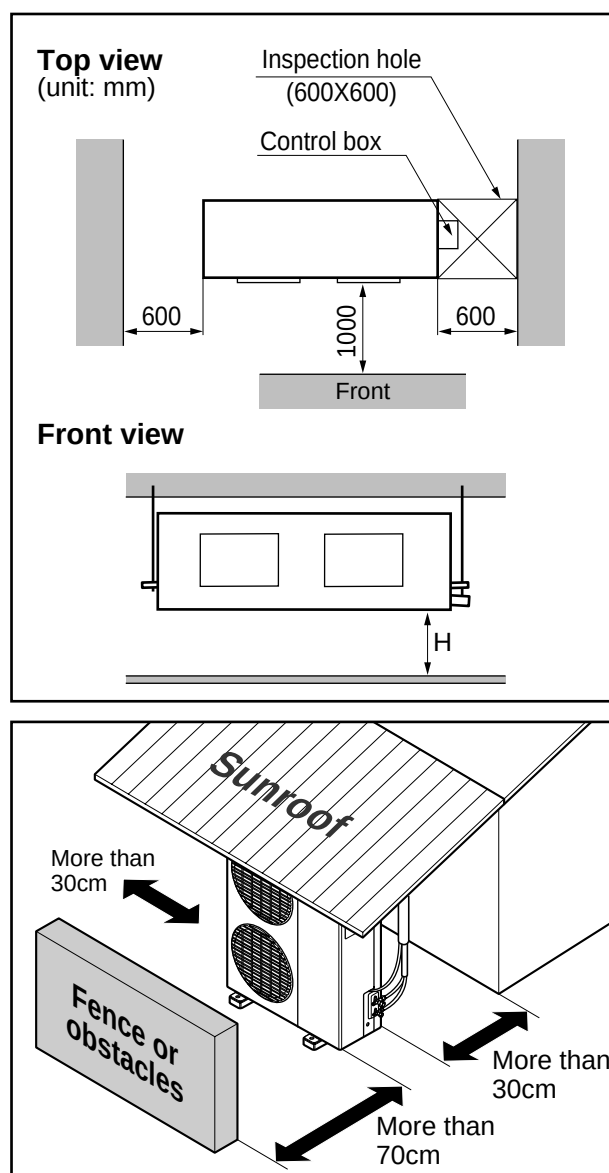
2) Outdoor unit

- If an awning is built over the unit to prevent direct sunlight or rain exposure, be careful that heat radiation from the condenser is not restricted.
- There should not be any animals or plants which could be affected by hot air discharged.
- Ensure the spaces indicated by arrows from the wall, ceiling, fence or other obstacles.

3) Piping length and the elevation

Capacity	Pipe Size (Diameter: Ø)		Length A(m)		Elevation B(m)		* Additional refrigerant (g/m)
	Gas	Liquid	Standard	Max.	Standard	Max.	
18K BTU/h	5/8"	1/4"	7.5	50	5	30	25
24K BTU/h	H/P	5/8"	7.5	50	5	30	30
	C/O	5/8"	7.5	50	5	30	25
30K BTU/h	5/8"	3/8"	7.5	50	5	30	50
36K BTU/h	5/8"	3/8"	7.5	50	5	30	40
42K BTU/h	3/4"	3/8"	7.5	50	5	30	50
48K BTU/h	3/4"	3/8"	7.5	50	5	30	50
60K BTU/h	3/4"	1/2"	7.5	50	5	30	60

- If 18K Model is installed at a distance of 15m,
188g of refrigerant should be added $(15-7.5) \times 25g = 188g$
- Capacity is based on standard length and maximum allowance length is on the basis of reliability.



2. Ceiling dimension and hanging bolt location

■ Installation of Unit

Install the unit above the ceiling correctly.

CASE 1

POSITION OF SUSPENSION BOLT

- Apply a joint-canvas between the unit and duct to absorb unnecessary vibration.
- Apply a filter Accessory at air return hole.

(Unit:mm)

Dimension Capacity	A	B	C	D	E	F	(G)	H	I
18K BTU/h	942	880	466	54	575	30	87	750	186
24K BTU/h	942	880	466	54	575	30	87	750	186
30K BTU/h	1242	1180	492	54	600	30	87	830	186
36K BTU/h (LB-F36)	1242	1180	492	54	600	30	87	830	186
42K BTU/h	1242	1180	492	54	600	30	87	830	186
48K BTU/h (LB-E48)	1292	1230	570.5	54	680	30	120	1006	294
60K BTU/h (LB-E60)	1292	1230	570.5	54	680	30	120	1006	294

- Install the unit leaning to a drainage hole side as a figure for easy water drainage.

CASE 2

POSITION OF CONSOLE BOLT

- A place where the unit will be leveled and that can support the weight of the unit.
- A place where the unit can withstand its vibration.
- A place where service can be easily performed.

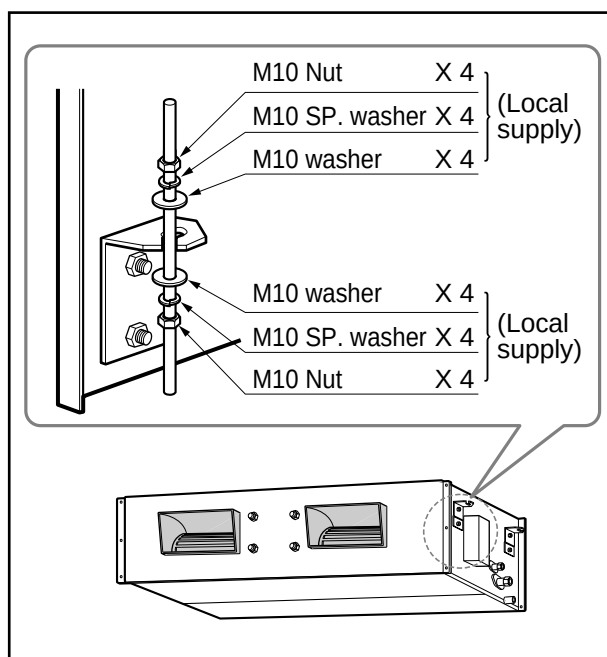
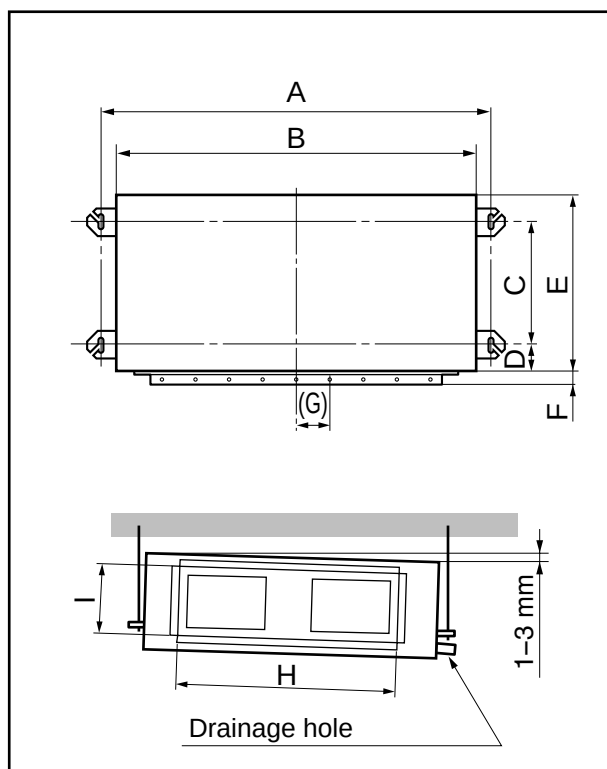
NOTE:

- Thoroughly study the following installation locations:

1. In such places as restaurants and kitchens, considerable amount of oil steam and flour adhere to the fan, the fin of the heat exchanger, resulting in heat exchange reduction, spraying, dispersing of water drops, etc.

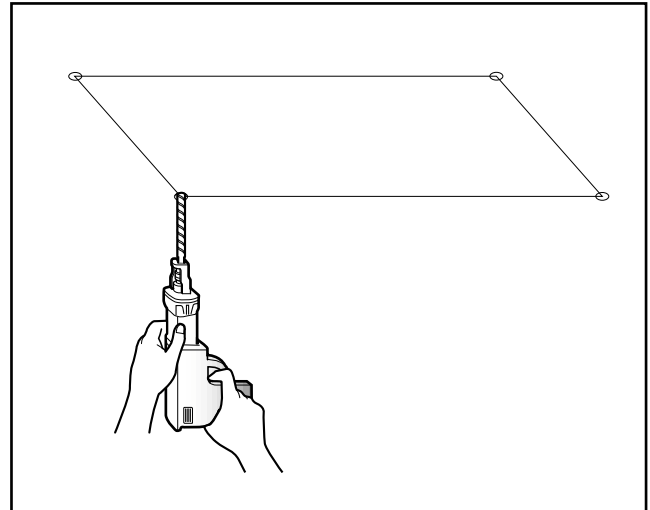
In these cases, take the following actions:

- Make sure that the ventilation fan for smoke-collecting hood on a cooking table has sufficient capacity so that it draws oily steam which should not flow into the suction of the air conditioner.
 - Make enough distance from a cooking room to install the air conditioner in such a place where it may not suck in oil steam.
2. Avoid installing air conditioner in such circumstances where cutting oil mist or iron powder is in suspension in factories, etc.
 3. Avoid places where inflammable gas is generated, flows in, is stored or vented.
 4. Avoid places where sulfurous acid gas or corrosive gas is generated.
 5. Avoid places near high frequency generators.



3. The Indoor Unit Installation

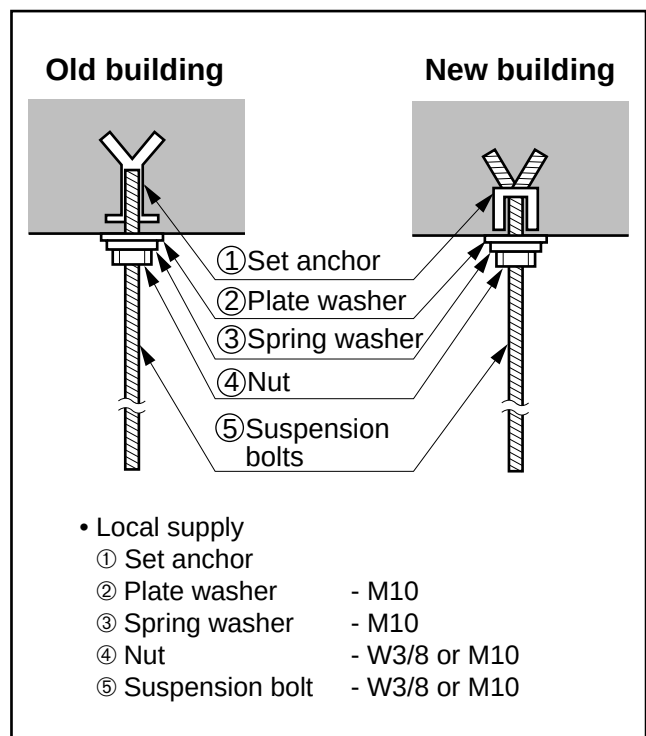
- Select and mark the position for fixing bolts.
- Drill the hole for set anchor on the face of ceiling.



- Insert the set anchor and washer onto the suspension bolts for locking the suspension bolts on the ceiling.
- Mount the suspension bolts to the set anchor firmly.
- Secure the installation plates onto the suspension bolts (adjust level roughly) using nuts, washers and spring washers.

CAUTION

Tighten the nut and bolt to prevent unit falling.



4. Remote Controller Installation

- Although the room temperature sensor is in the indoor unit, the remote controller should be installed in such places away from direct sunlight and high humidity.

Installation of the remote controller

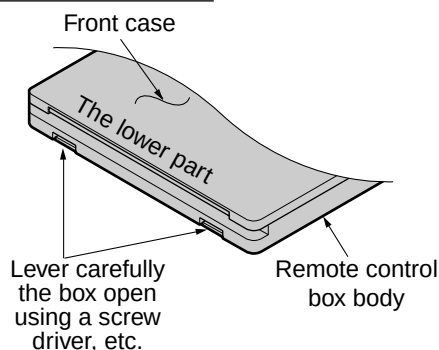
- Select places that are not splashed with water.
- Select control position after receiving customer approval.
- The room temperature sensor is built in the indoor unit.
- This remote controller equipped with liquid crystal display. If this position is higher or lower, display is difficult to see. (The standard height is 1.2 ~ 1.5m high)

Routing of the remote controller cord

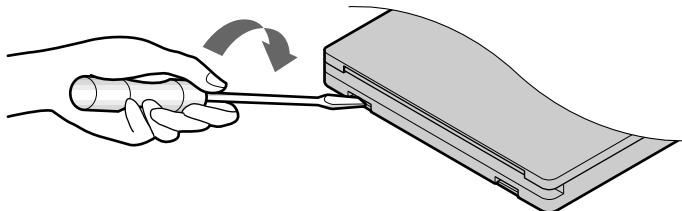
- Keep the remote controller cord away from the refrigerant piping and the drain piping.
- To protect the remote controller cord from electrical noise, place the cord at least 5cm away from other power cables (audio equipment, television set, etc.)
- If the remote controller cord is secured to the wall, provide a trap at the top of the cord to prevent water droplets from running.

WIRED REMOTE CONTROL INSTALLATION

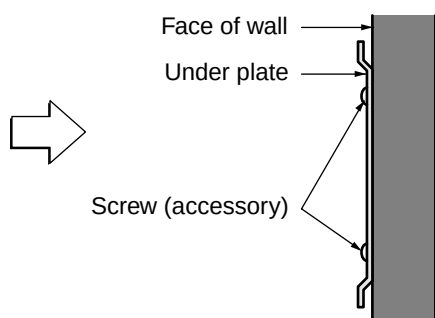
DISASSEMBLING



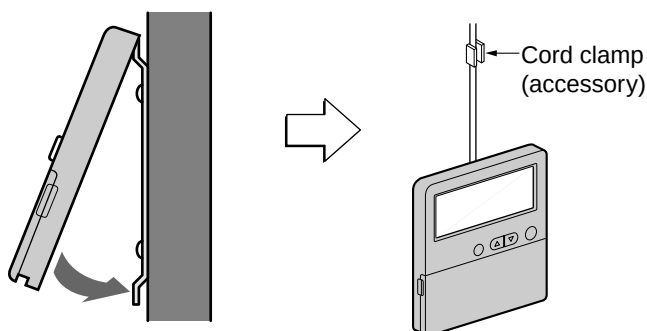
- Separate the under plate from Remote control box.



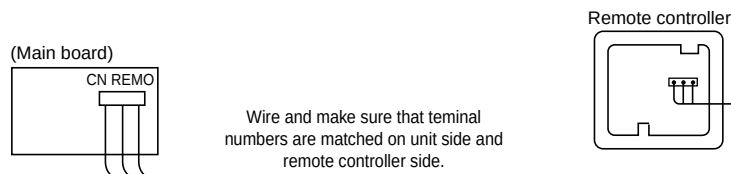
- Fix the under plate on the wall



- Fix the cord clamps on the wall by $\varnothing 3$ tapping screws (accessory).
- Fix the remote control cord.



ELECTRICAL WIRING

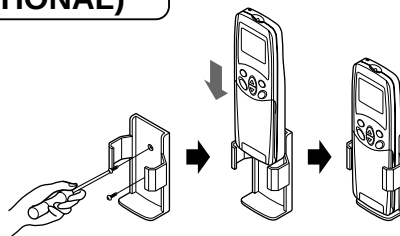


Wire and make sure that terminal numbers are matched on unit side and remote controller side.

The maximum length of the cord is 100m.
If the length of the cord exceeds 50m,
use a wire size greater than 0.5mm².

REMOTE CONTROL PREPARATION(OPTIONAL)

HOW TO MOUNT ONTO A WALL



HOW TO INSERT BATTERIES

- 1 Remove the battery cover from the remote controller.
 - Slide the cover according to the arrow direction.
- 2 Insert the two batteries.
 - Be sure that the (+) and (-) directions are correct.
 - Be sure that both batteries are new.
- 3 Re-attach the cover.
 - Slide it back into position.



- Do not use rechargeable batteries, such batteries differ from standard dry cells in shape, dimensions, and performance.
- Remove the batteries from the remote controller if the air conditioner is not going to be used for some long time.

5. Connecting Cables between Indoor Unit and Outdoor Unit

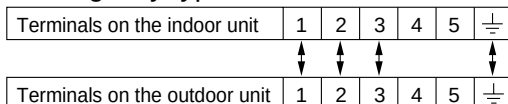
1) Connecting cables to the Indoor Unit

Connect the wires to the terminals on the control board individually according to the outdoor unit connection.

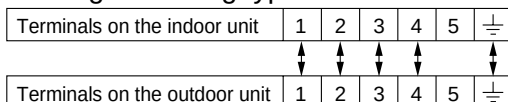
- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively

36K/42K/48K/60K Btu

• Cooling only type

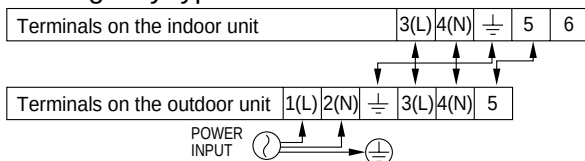


• Cooling & Heating type

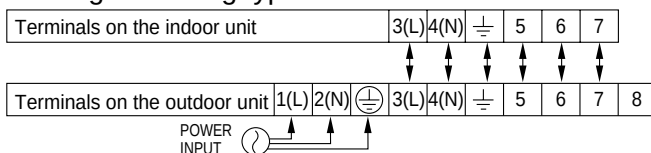


18K/24K Btu

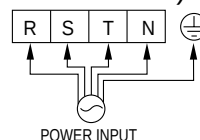
• Cooling only type



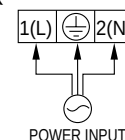
• Cooling & Heating type



(380-415V3N~)

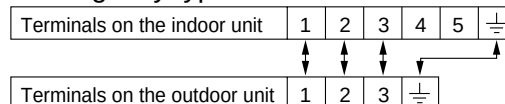


(220-240V~)



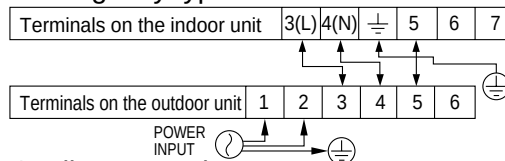
60K Btu(LB-E6082CL)

• Cooling only type

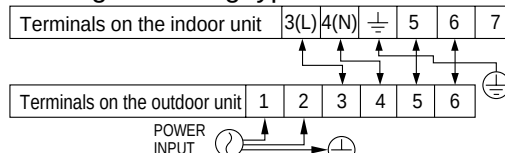


30K Btu

• Cooling only type

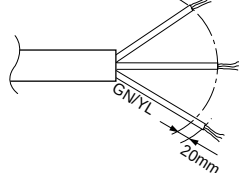


• Cooling & Heating type



CAUTION

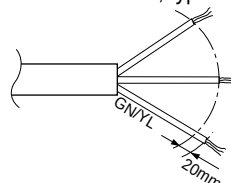
The power cord connected to the outdoor unit should be complied with the following specifications (Rubber insulation, type H05RN-F approved by HAR or SAA).



NORMAL CROSS-SECTIONAL AREA

Capacity	1 Phase	3 Phase
18K BTU/h	2.5mm ²	-
24K BTU/h	2.5mm ²	-
30K BTU/h	3.3mm ²	-
36K BTU/h	5.5mm ²	2.5mm ²
42K BTU/h	8.5mm ²	-
48K BTU/h	-	3.5mm ²
60K BTU/h	-	3.5mm ²

The connecting cable connected to the indoor and outdoor unit should be complied with the following specifications (Rubber insulation, type H05RN-F approved by HAR or SAA).



NORMAL CROSS-SECTIONAL

AREA 0.75mm² (18K/24K)
1.25mm² (30K/36K/42K/48K/60K)

If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer of its service agent.

⚠ WARNING

Make sure that the screws of the terminal are free from looseness.

2) Clamping of cables

- 1) Arrange 2 power cables on the control panel.
- 2) First, fasten the steel clamp with a screw to the inner boss of control panel.
- 3) For the cooling model, fix the other side of the clamp with a screw strongly.
For the heat pump model, put the 0.75mm² cable(thinner cable) on the clamp and tighten it with a plastic clamp to the other boss of the control panel.
- 4) In Australia, the length of power supply cord measured from the entry of the power supply cord to the middle of live pin on the power plug should be over 1.8m.

ELECTRICAL WIRING

Perform the electrical wiring work according to the electrical wiring connection.

- All wiring must comply with local requirements.
- Select a power source that is capable of supplying the current required by the air conditioner.
- Use a recognized circuit breaker between the power source and the unit. A disconnection device to adequately disconnect all supply lines must be fitted.
- Capacity of circuit breaker

Capacity	1 Phase	3 Phase
18K BTU/h	20A	-
24K BTU/h	25A	-
30K BTU/h	25A	-
36K BTU/h	35A	25A
42K BTU/h	40A	-
48K BTU/h	-	25A
60K BTU/h	-	25A

WIRING CONNECTION

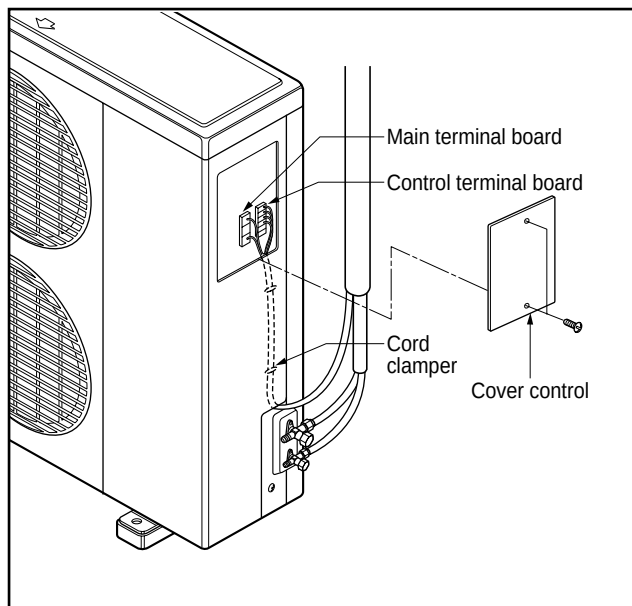
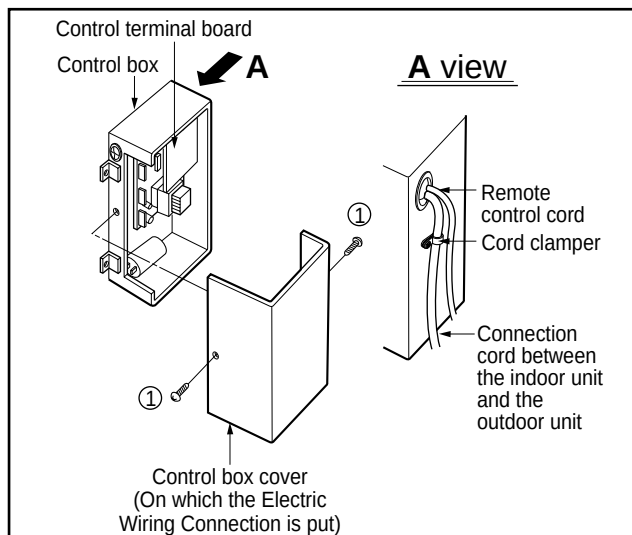
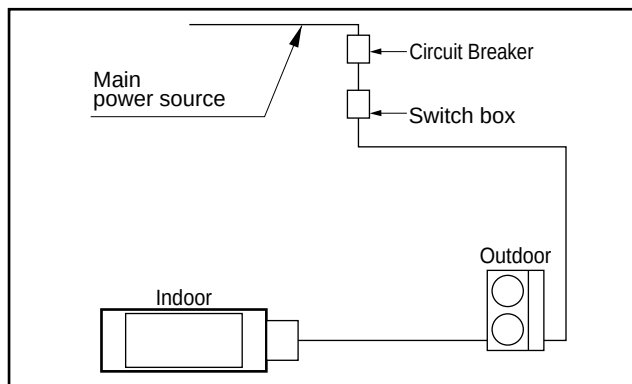
INDOOR UNIT

- Remove the control box cover for electrical connection between the indoor and outdoor unit. (Remove two screws ①.)
- Use the cord clamber to fix the cord.

OUTDOOR UNIT

- Remove the control cover for wiring connection.
- Use the cord clamber to fix the cord.
- Earthing work
Connect the cable of diameter 1.6mm² or more to the earthing terminal provided in the control box and do earthing.

※ Please check !!



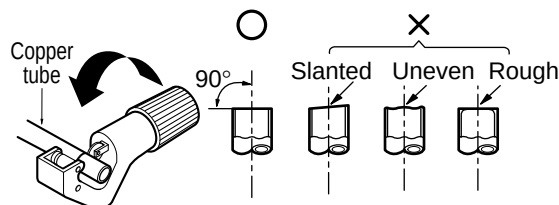
6. Connecting Pipes to the Indoor Unit

• Preparation of Piping

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

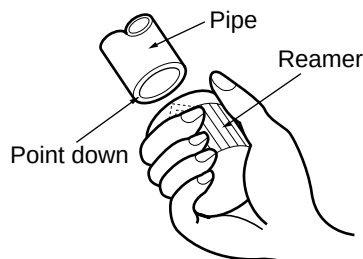
1) Cut the pipes and the cable.

- Use the accessory piping kit or the pipes purchased locally.
- Measure the distance between the indoor and the outdoor unit.
- Cut the pipes a little longer than measured distance.
- Cut the cable 1.5m longer than the pipe length.



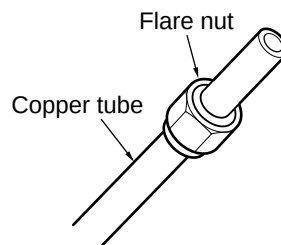
2) Burrs removal

- Completely remove all burrs from the cut cross section of pipe/tube.
- Put the end of the copper tube/pipe to downward direction as you remove burrs in order to avoid to let burrs drop in the tubing.



3) Putting nut on

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

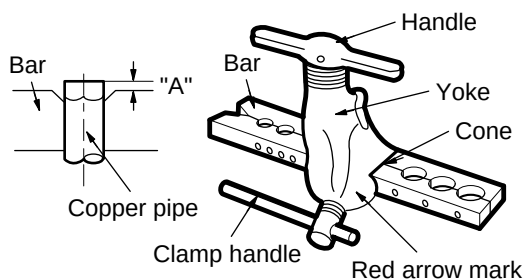


4) Flaring work

- Carry out flaring work using flaring tool as shown below.

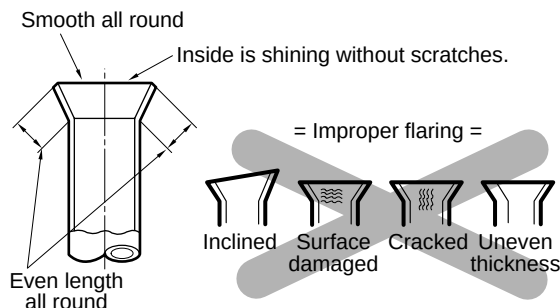
Capacity	Outside Diameter		"A"	
	Gas	Liquid	Gas	Liquid
18K BTU/h	5/8"	1/4"	0.8~1.0	0~0.5
24K BTU/h	5/8"	1/4"	0.8~1.0	0~0.5
30K BTU/h	5/8"	3/8"	0.8~1.0	0.5~0.8
36K BTU/h	5/8"	3/8"	0.8~1.0	0.5~0.8
42K BTU/h	3/4"	3/8"	1.0~1.3	0.5~0.8
48K BTU/h	3/4"	3/8"	1.0~1.3	0.5~0.8
60K BTU/h	3/4"	1/2"	1.0~1.3	0.5~0.8

Firmly hold copper tube in a bar(or die) as indicated dimension in the table above.



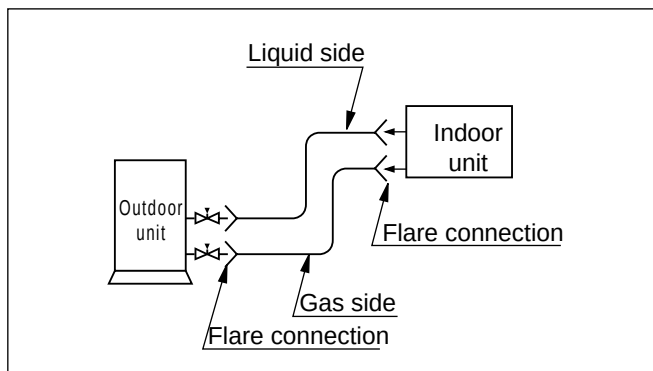
5) Check

- Compare the flared work with figure below.
- If flare is noted to be defective, cut off the flared section and do flaring work again.



Piping Connection

1. Form the piping according to its routing. Avoid bending and bending back the same piping point more than three times. (This will result in hardening the pipe.)
2. After deforming the piping, align centers of the union fitting of the indoor unit and the piping, and tighten them firmly with wrenches.
3. Connect pipe to the service valve or ball valve which is located below the outdoor unit.
4. After completing the piping connection, be sure to check if there is gas leakage in indoor and outdoor connection.



Vacuum drying

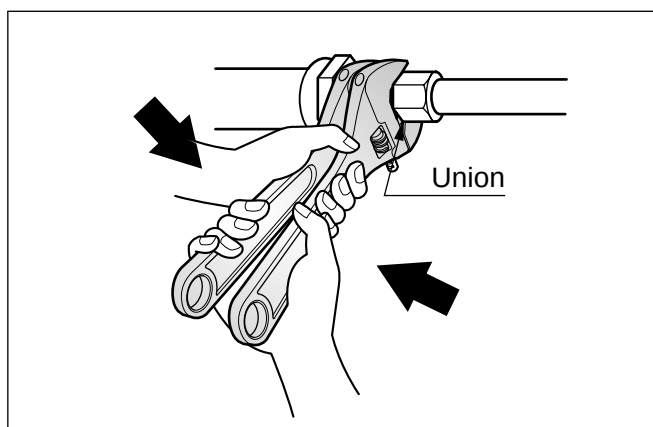
After completing the piping connection, execute vacuum drying for the connecting piping and the indoor unit. The vacuum drying must be carried out using the service ports of both the liquid and gas side valves.

Model	Liquid side piping	Gas side piping
18K, 24K Btu/h	1/4"	5/8"
30K Btu/h	3/8"	5/8"
36K Btu/h	3/8"	5/8"
42K Btu/h	3/8"	3/4"
48K Btu/h	3/8"	3/4"
60K Btu/h	1/2"	3/4"

⚠ CAUTION

Use two wrenches and tighten with regular torque.

Flare nut fastening torque	
Ø6.35mm	1.8kg·m
Ø9.52mm	4.0kg·m
Ø12.7mm	5.5kg·m
Ø15.88mm	6.6kg·m
Ø19.05mm	6.6kg·m

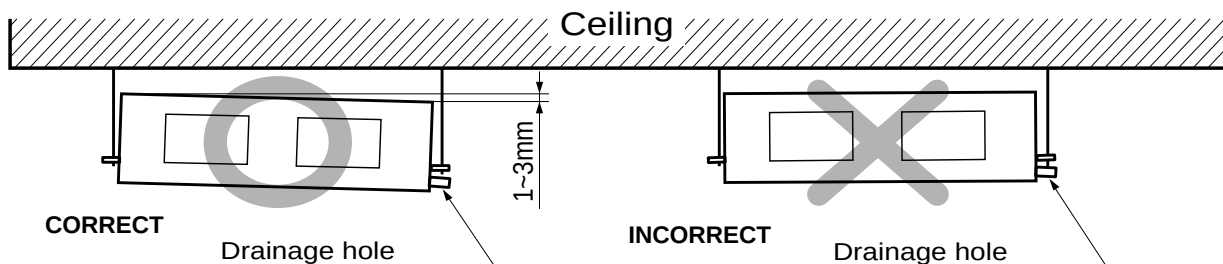


CAUTION

1. **Install declination** of the indoor unit is very **important for the drain** of the duct type air conditioner.
2. Minimum thickness of the insulation for the connecting pipe shall be 5mm.

Front of view

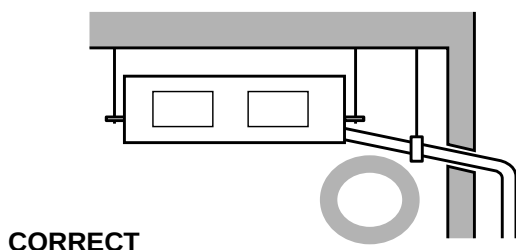
- The unit must be horizontal or declined to the drain hose connected when finished installation.



CAUTION FOR GRADIENT OF UNIT AND DRAIN PIPING

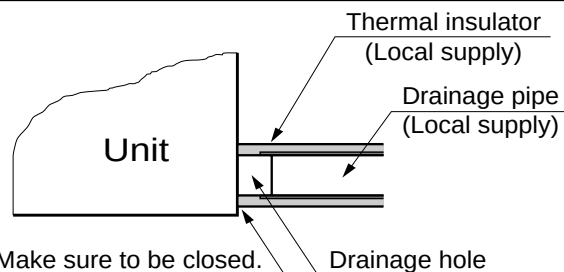
Lay the drain hose with a downware inclination so water will drain out.

- Always lay the drain with downward inclination (1/50 to 1/100). Prevent any upward flow or reverse flow in any part.
- 5mm or thicker formed thermal insulator shall always be provided for the drain pipe.

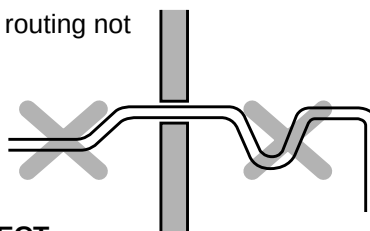


CORRECT

- Install the P-Trap (or U-Trap) to prevent a water leakage caused by the blocking of intake air filter.



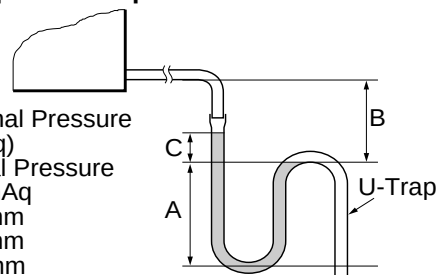
- Upward routing not allowed



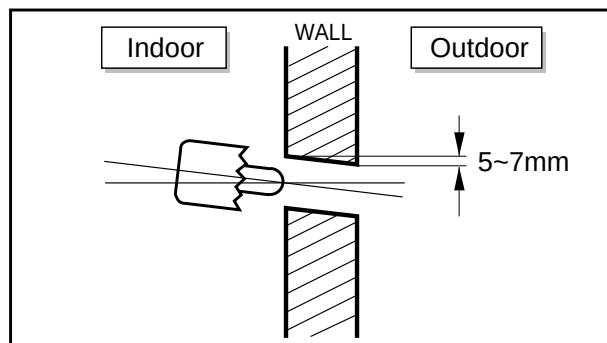
INCORRECT

Applied U-Trap Dimension

- $A \geq 70\text{mm}$
- $B \geq 2C$
- $C \geq 2 \times \text{SP}$
- SP = External Pressure (mmAq)
- Ex) External Pressure = 10mmAq
- $A \geq 70\text{mm}$
- $B \geq 40\text{mm}$
- $C \geq 20\text{mm}$



- Drill the piping hole with 70mm dia, hole core drill.
- Piping hole should be slightly slant to the outdoor side.



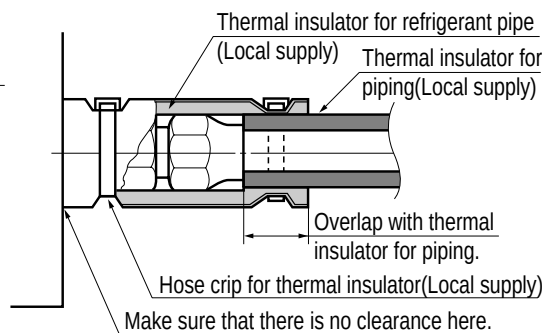
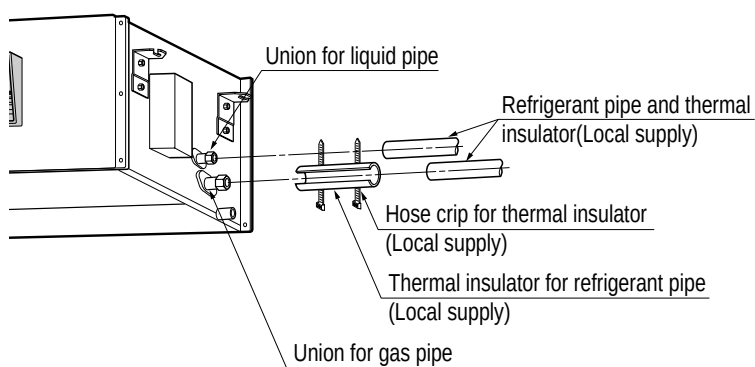
INSULATION, OTHERS

Insulate the joint and tubes completely.

THERMAL INSULATION

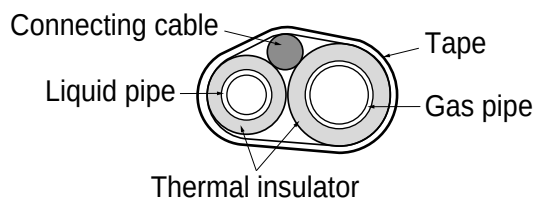
All thermal insulation must comply with local requirement.

INDOOR UNIT



REFRIGERANT PIPE

- Insulate and tape both the gas piping and liquid piping.



FORM THE PIPINGS

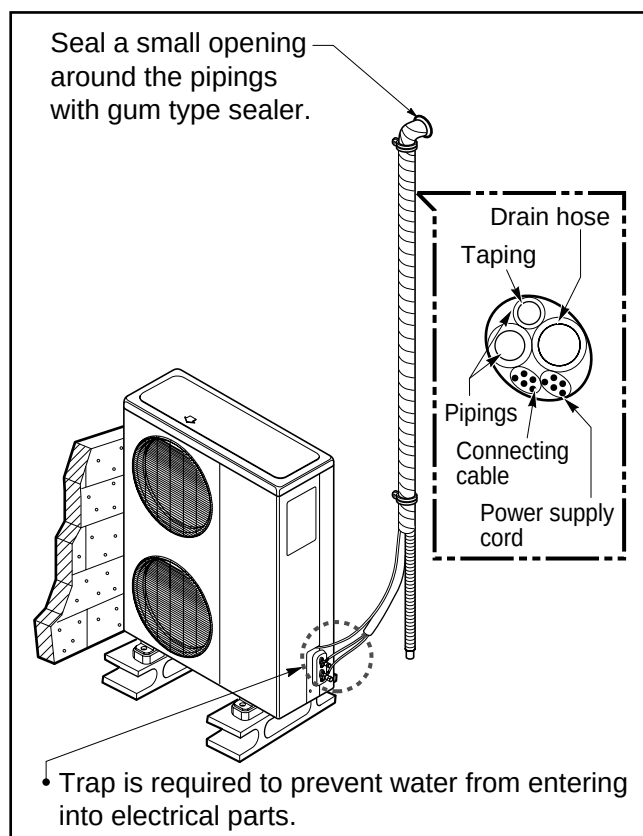
1. Wrap the connecting portion of indoor unit with the Insulation material and secure it with two Plastic Bands. (for the right pipings)

- If you want to connect an additional drain hose, the end of the drain-outlet should keep distance from the ground. (Do not dip it into water, and fix it on the wall to avoid swinging in the wind.)

In case of the Outdoor unit being installed below position of the Indoor unit.

2. Tape the Pplings, drain hose and Connecting Cable from bottom to top.

3. Form the pplings gathered by taping along the exterior wall and fix it onto the wall by saddle or equivalent.



Test running

1) PRECAUTIONS IN TEST RUN

- The initial power supply must provide at least 90% of the rated voltage. Otherwise, the air conditioner should not be operated.

Caution

- ① For test run, carry out the cooling operation firstly even during heating season. If heating operation is carried out firstly, it leads to the trouble of compressor. Then attention must be paid.
- ② Carry out the test run more than 5 minutes without fail.
(Test run will be cancelled 18 minutes later automatically)

- The test run is started by pressing the room temperature checking button and down timer button for 3 seconds at the same time.
- To cancel the test run, press any button.

CHECK THE FOLLOWING ITEMS WHEN INSTALLATION IS COMPLETE

- After completing work, be sure to measure and record trial run properties, and store measured data, etc.
- Measuring items are room temperature, outside temperature, suction temperature, blow out temperature, wind velocity, wind volume, voltage, current, presence of abnormal vibration and noise, operating pressure, piping temperature, compressive pressure.
- As to the structure and appearance, check following items.

☐ Is the circulation of air adequate?	☐ Is the remote controller switch operated?
☐ Is the draining smooth?	☐ Is there any faulty wiring?
☐ Is the heat insulation complete (refrigerant and drain piping)?	☐ Are not terminal screws loosened?
☐ Is there any leakage of refrigerant?	

M4...118N·cm{12kgf·cm}
M6...245N·cm{25kgf·cm}

M5...196N·cm{20kgf·cm}
M8...588N·cm{60kgf·cm}

2) Connection of power supply

- 1. Connect the power supply cord to the independent power supply.**
 - Circuit breaker is required.
- 2. Operate the unit for fifteen minutes or more.**

3) Evaluation of the performance

1. Measure the temperature of the intake and discharge air.
2. Ensure the difference between the intake temperature and the discharge one is more than 8°C (Cooling) or reversely (Heating).

CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

- 1) Never fail to have an individual power specialized for the air conditioner. As for the method of wiring, be guided by the circuit diagram pasted on the inside of control box cover.**
- 2) Provide a circuit breaker switch between power source and the unit.**
- 3) 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 give rise to burn-out of the wires.)**
- 4) Specification of power source**
- 5) Confirm that electrical capacity is sufficient.**
- 6) Be sure that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.**
- 7) Confirm that the cable thickness is as specified in the power sources specification. (Particularly note the relation between cable length and thickness.)**
- 8) Never fail to equip a leakage breaker where it is wet or moist.**
- 9) The following troubles would be caused by voltage drop-down.**
 - Vibration of a magnetic switch, damage on the contact point there of, fuse breaking, disturbance to the normal function of a overload protection device.
 - Proper starting power is not given to the compressor.

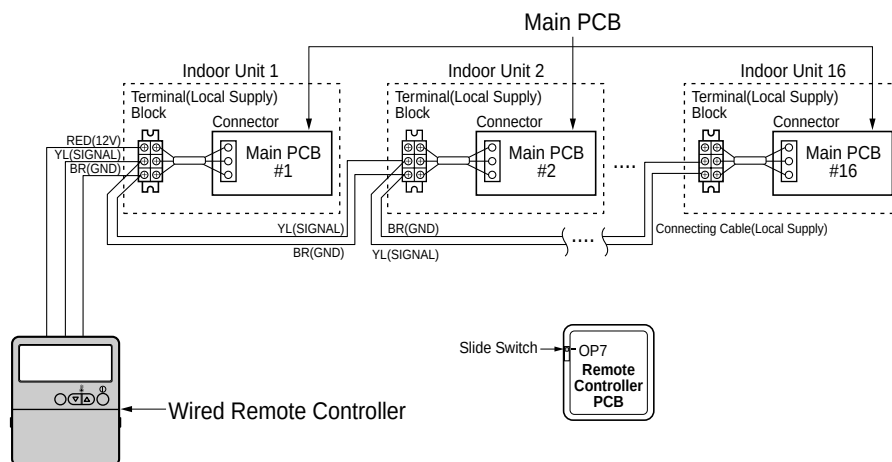
HAND OVER

Teach the customer the operation and maintenance procedures, using the operation manual (air filter cleaning, temperature control, etc.).

2) Group Control(Optional Wiring)

- You can use a group control operation after connecting the brown and yellow wire of each air-conditioner.
- Remove the resistor "OP 7" in remote controller.
- It operates maximum 16 Units by only one Wired Remote Controller, and each Unit starts sequentially to prevent overcurrent.

Wiring design



Features

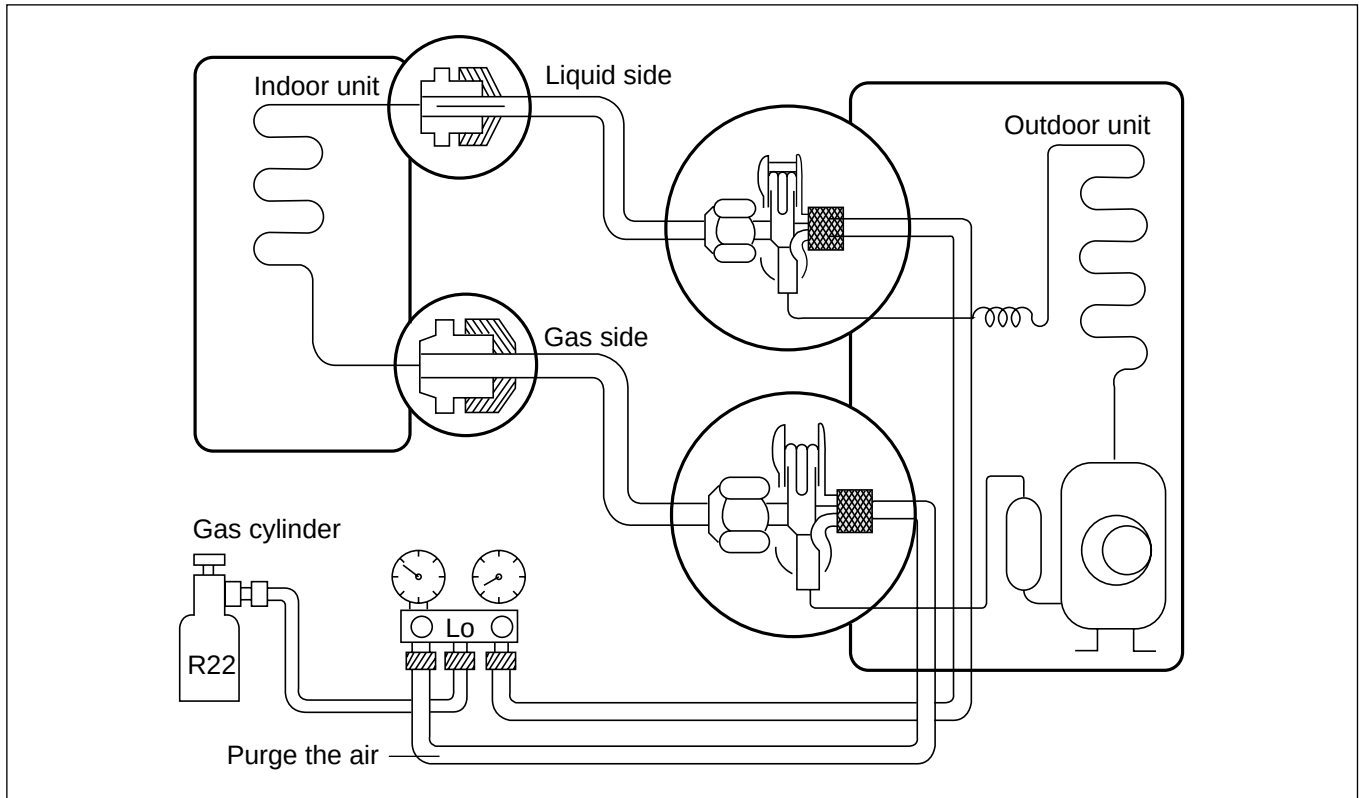
- Use Only One Wired Remote Controller with several air conditioners(max. 16 Units)
- Random starting to prevent overcurrent.

CAUTION

- Be careful not to exchange the color of wires.
- The maximum length of connecting wire should be below 200m(25Ω) on connecting each units.
- Use a wire more than 0.5mm²

Cycle

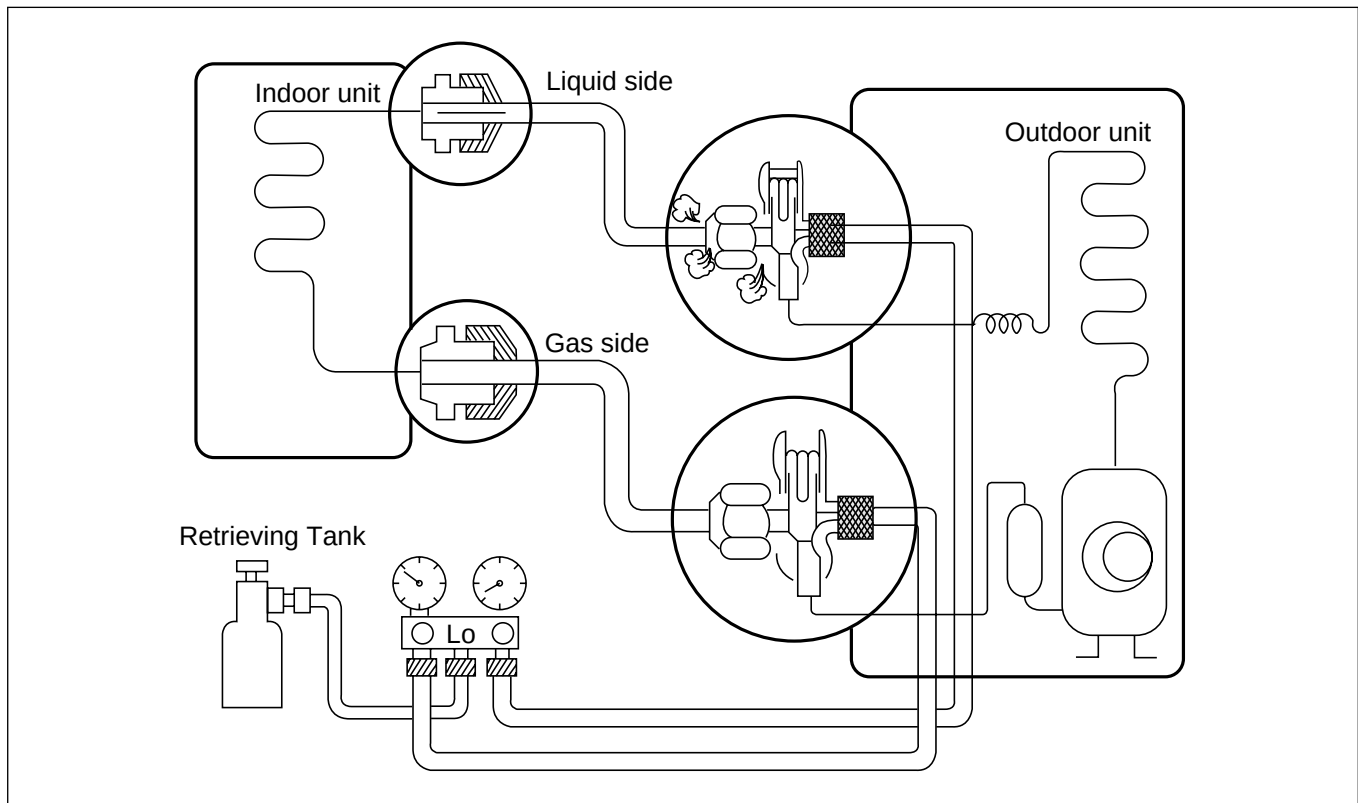
1. Installation (Connecting the piping between indoor and outdoor unit)



• Installation

- (1) **Connect the piping between the indoor and outdoor unit firmly.**
 - Incorrect connection may cause the leakage and incomplete vacuuming.
- (2) **Attach the charging hose (manifold gage) to the service port.**
 - Charging hose is necessary to check the pressure and to inject R22 for leakage test.
 - The valve of charging hose must be closed before being connected.
- (3) **Inject the 100~300g R22 through the charging hose opening the valve.**
- (4) **Check the joint part using a gas detector or soapy water for leakage.**
 - On checking, the service valve of main service port must be closed, this test is only for checking whether pipe connection is ok or not.
- (5) **If there is no leakage, discharge R22 in piping completely into tank for retrieving.**
 - Complete discharge is needed for vacuuming.
 - If leakage is found, please fasten the joint more tightly.
- (6) **After closing the valve of charging hose, disconnect the tank and connect the vacuum pump to charging hose and open the valve again for vacuuming.**
- (7) **Turn on the vacuum pump until the pressure drops below 0kg/cm².**
- (8) **After vacuuming, disconnect the vacuum pump and open the spindle of service port (liquid-side) slightly for 30 sec and then open the spindle of (gas side) with hexagonal wrench.**
- (9) **Open the liquid side completely first and then the gas side fully in order.**

2. Disconnection (on moving)

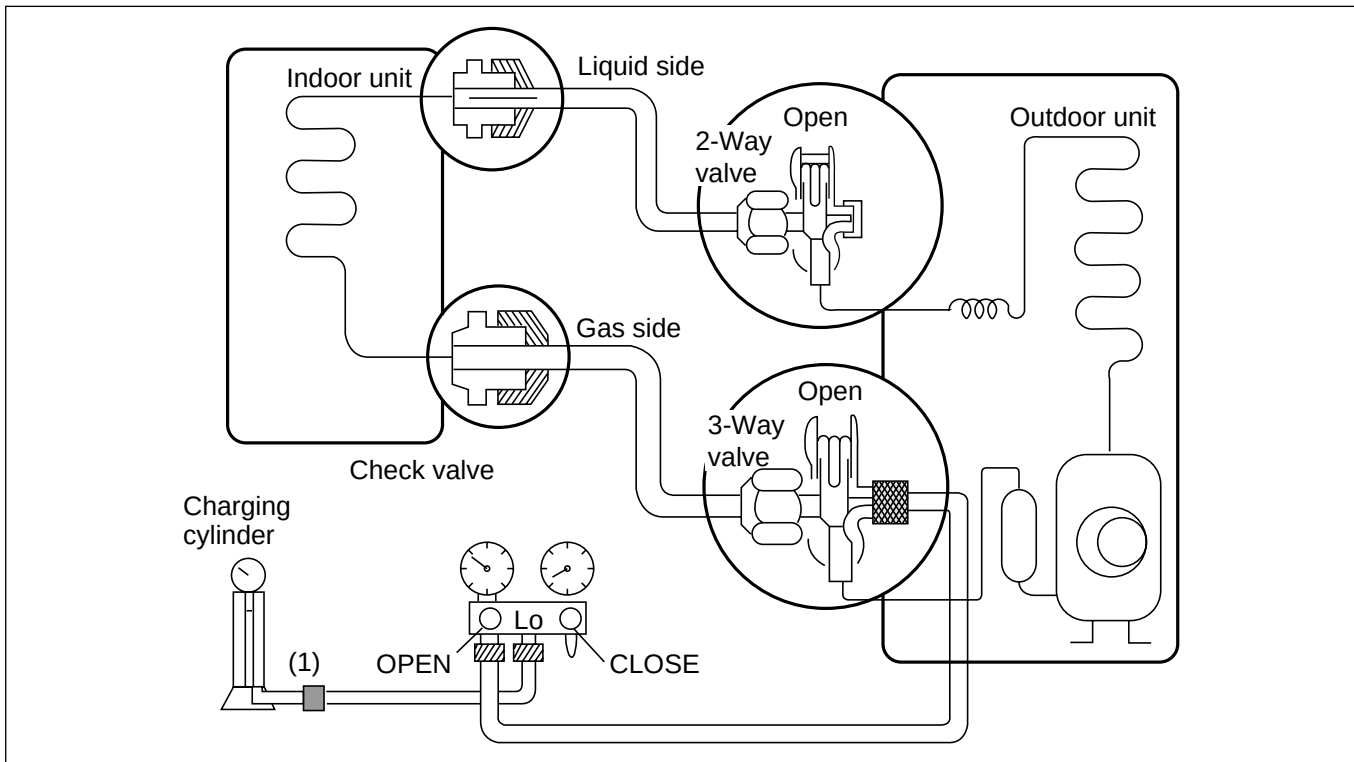


• Disconnection

- (1) **Attach the charging hose (manifold gage) to the service port.**
 - Connect the manifold gage once to the service port not stopping. Stopping in the middle of process may cause the leakage.
- (2) **Purge the air in hose into special device such as retrieving tank opening the valve of charging- hose (gas side) slightly and then close it tightly.**
- (3) **Operate the air conditioner for 10~15 min until cycle is stabilized.**
- (4) **Close the spindle of service port (liquid side-high pressure) and wait till pressure of gas side (low pressure) drops below 0kgf/cm².**
- (5) **After the needle of gage indicates below 0 kgf/cm², close the valve of gas side quickly and turn off the power.**
- (6) **Disconnect the piping between indoor and outdoor unit and then put on service cap to the service port.**

3. Gas Charging

(After Evacuation)



• Procedure

(1) Connect the charge hose to the charging cylinder.

- Connect the charge hose which you disconnected from the vacuum pump to the valve at the bottom of the cylinder.
- If you are using a gas cylinder, also use a scale and reverse the cylinder so that the system can be charged in liquid state.

(2) Purge the air from the charge hose.

- Open the valve at the bottom of the cylinder and press the check valve on the charge set to purge the air. (Be careful of the liquid refrigerant). The procedure is the same if using a gas cylinder.

(3) Open the valve (Lo side on the charge set and charge the system with liquid refrigerant.

- If the system can not be charged with the specified amount of refrigerant, it can be charged with a little at a time (approximately 150g each time) while operating the air conditioner in the cooling cycle; however, one time is not sufficient, wait approximately 1 minute and then repeat the procedure.

This is different from previous procedures.

Because you are charging with liquid refrigerant from the gas side, absolutely do not attempt to charge with larger amounts of liquid refrigerant while operating the air conditioner.

(4) Immediately disconnect the charge hose from the 3-way valve's service port.

- Stopping partway will allow the gas to be discharged.
- If the system has been charged with liquid refrigerant while operating the air conditioner, turn off the air conditioner before disconnecting the hose.

(5) Mount the valve stem nuts and the service port nut.

- Use torque wrench to tighten the service port nut to a torque of 1.8 kg.m.
- Be sure to check for gas leakage.

Cycle Troubleshooting Guide

Trouble analysis

1. Check temperature difference between intake and discharge air and operating current.

	Temp. difference : approx. 0°C Current : less than 80% of rated current	All amount of refrigerant leaked out Check refrigeration cycle
Temp. Difference	Temp. difference : approx. 8°C Current : less than 80% of rated current	Refrigerant leakage Clog of refrigeration cycle Defective compressor
Operating Current	Temp. difference : less than 8°C Current : over the rated current	Excessive amount of refrigerant
	Temp. difference : over 8°C	Normal

Notice :

Temperature difference between intake and discharge air depends on room air humidity. When the room air humidity is relatively higher, temperature difference is smaller. When the room air humidity is relatively lower temperature difference is larger.

2. Check temperature and pressure of refrigeration cycle.

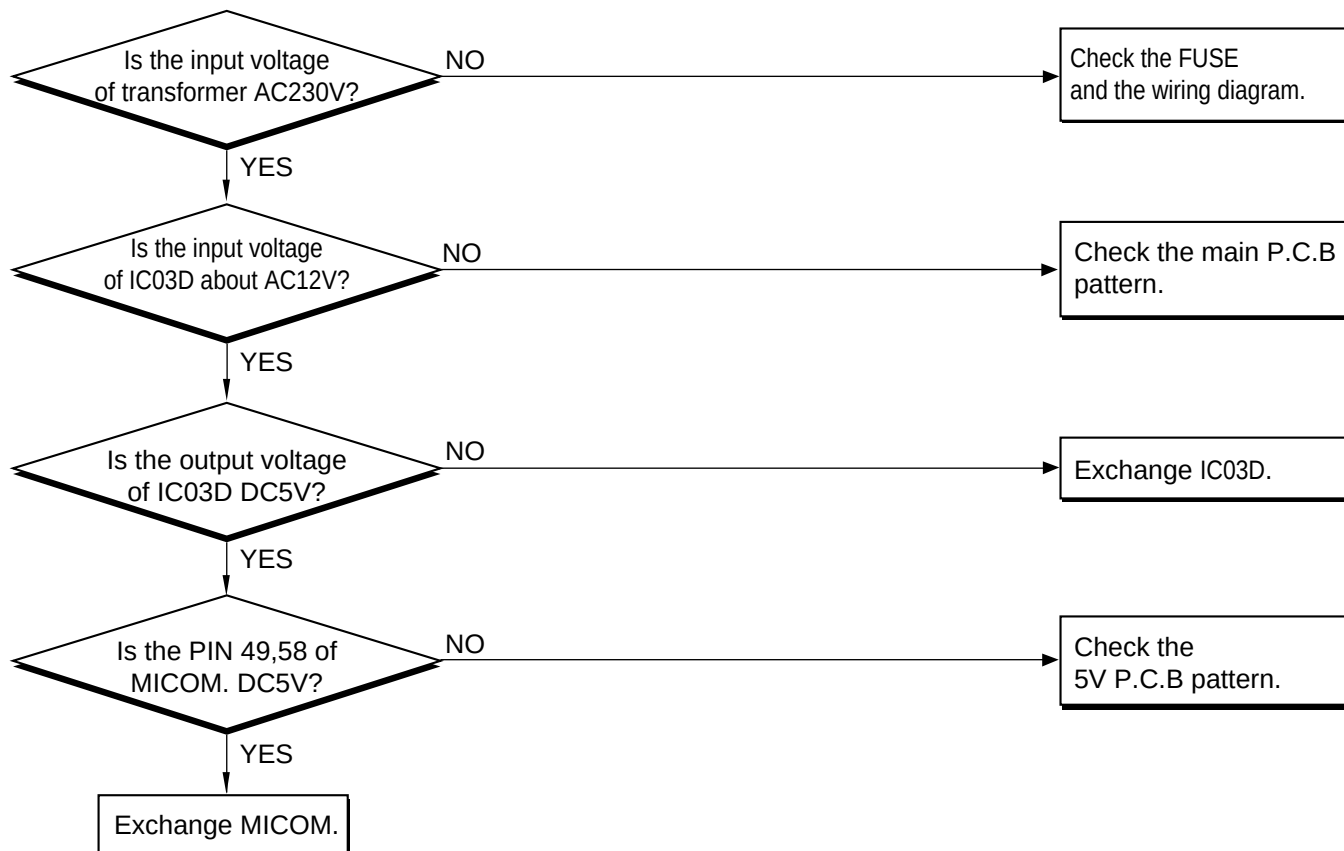
Suction pressure (Compared with the normal value)	Temperature (Compared with the normal value)	Cause of Trouble	Description
Higher	High	Defective compressor Defective 4-way reverse valve	Current is low
	Normal	Excessive amount of refrigerant	High pressure does not quickly rise at the beginning of operation
Lower	Higher	Insufficient amount of refrigerant (Leakage) Clogging	Current is low Current is low

Notice :

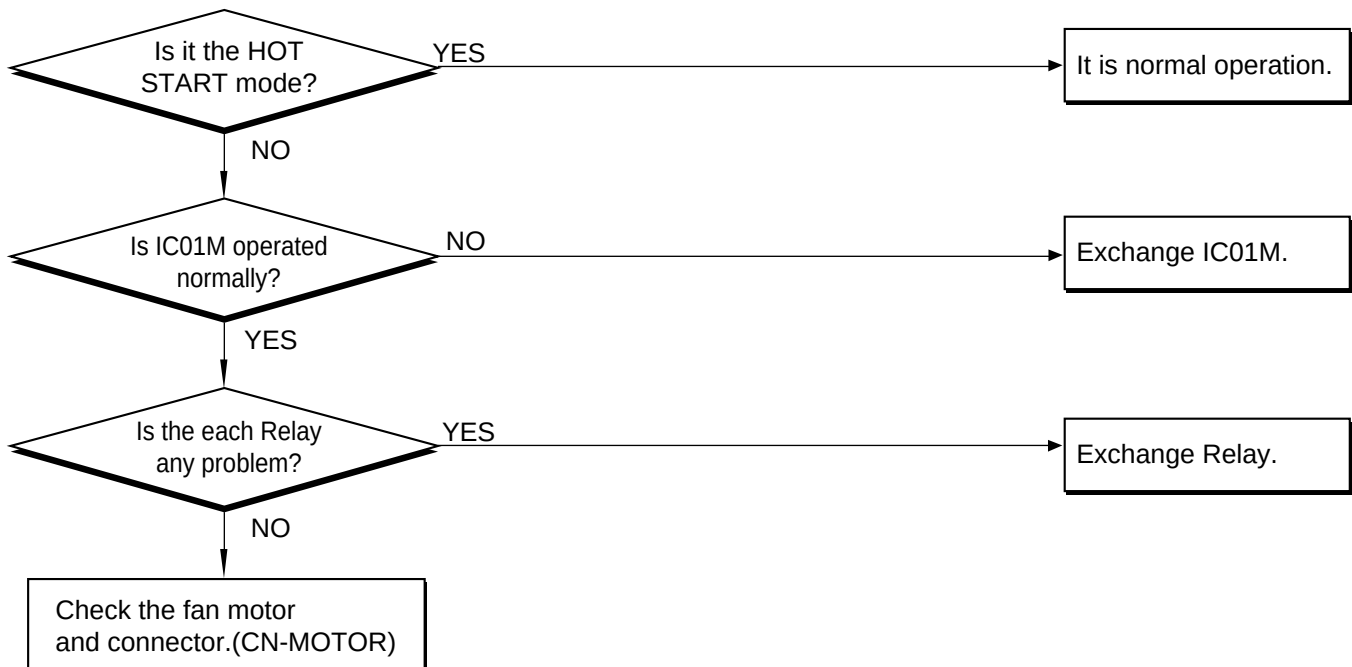
1. The suction pressure is usually 4.5~6.0 kg/cm²G at normal condition.
2. The temperature can be measured by attaching the thermometer to the low pressure tubing and wrap it with putty.

Electronic Parts Troubleshooting Guide

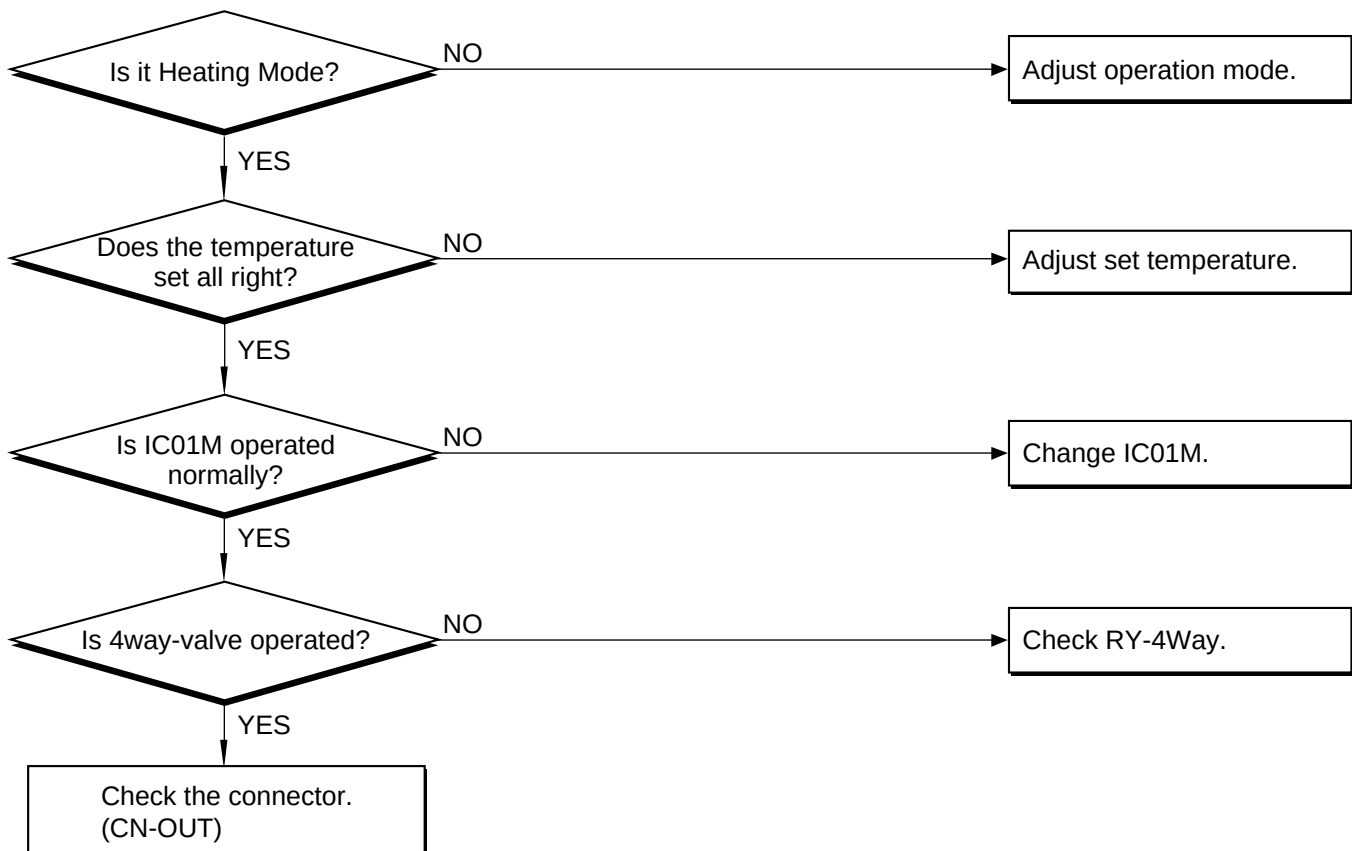
Possible Trouble 1 : The unit does not operate.



Possible Trouble 2 : The indoor fan does not operate.

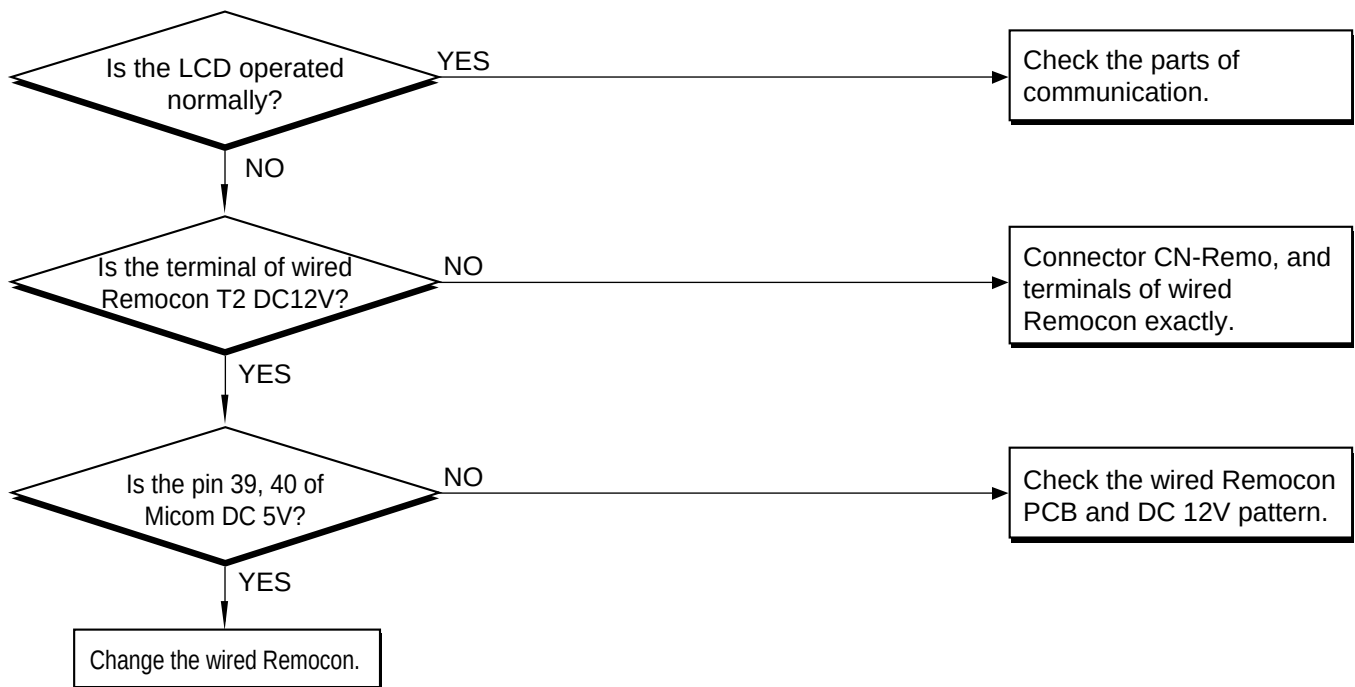


Possible Trouble 3 : Ineffective Heating



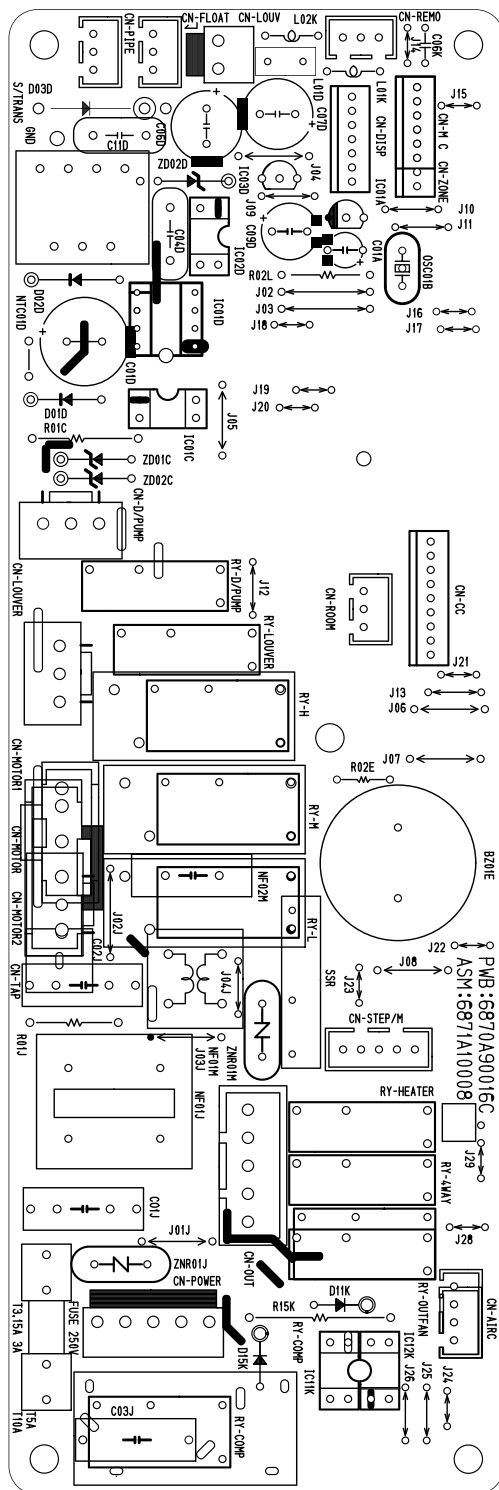
Possible Trouble 4

: Wired remote controller does not operate.



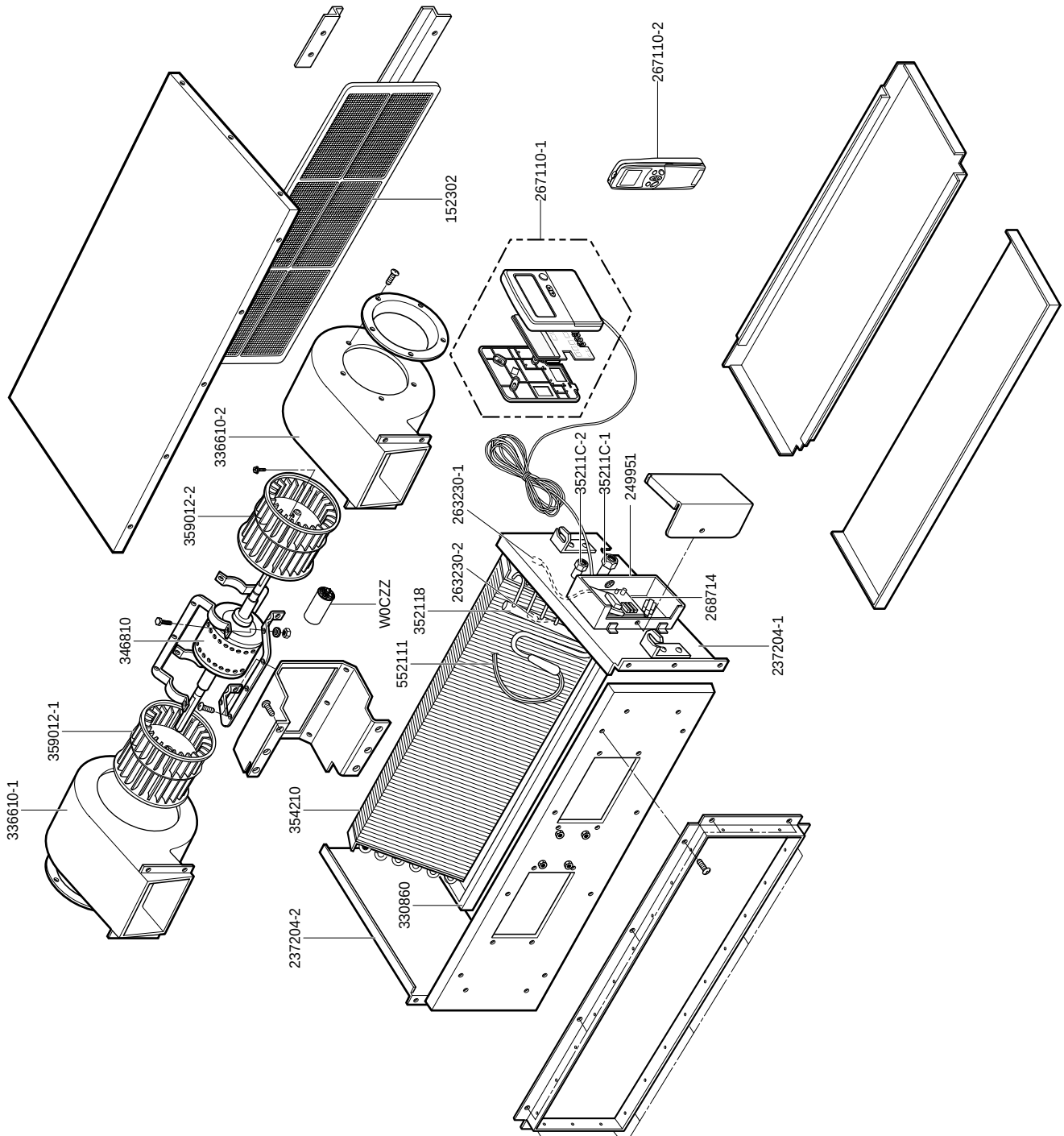
Electronic control device

■ MAIN P.C.B ASM



1. Indoor Unit

- **Models:** (LB-D1861HL/CL, LB-D1863HL/CL, LB-D2461HL/CL, LB-D2463HL/CL, LB-F3061HL/CL, LB-F3063HL/CL, LB-F3661HL/CL, LB-F3663HL/CL, LB-F3681HL/CL, LB-F3683HL/CL, LB-F4261HL/CL, LB-F4263HL/CL, LB-E4881HL/CL, LB-E4883HL/CL, LB-E6081HL/CL, LB-E6083HL/CL)



Parts List

• 18K/24K/30K

LOCATION No.	DESCRIPTION	Part No.					REMARKS
		LB-D1861HL LB-D1863HL	LB-D1861CL LB-D1863CL	LB-D2461HL LB-D2463HL	LB-D2461CL LB-D2463CL	LB-F3061HL LB-F3063HL	
152302	FILTER(MECH), A/C	5230A30001D	5230A30001D	5230A30001D	5230A30001D	5230A30001F	R
237204-1	PANEL, SIDE	3720A20027Y	3720A20027Y	3720A20027Y	3720A20027Y	3720A20067Y	R
237204-2	PANEL, SIDE	3720A20028Y	3720A20028Y	3720A20028Y	3720A20028Y	3720A20068Y	R
249951	CONTROL BOX ASSY, INDOOR	4995A2001Q	4995A2001R	4995A2001Q	4995A2001R	4995A20011V	R
263230-1	THERMISTOR ASSY	6323AQ3214Q	6323AQ3214Q	6323AQ3214Q	6323AQ3214Q	6323AQ3214Q	R
263230-2	THERMISTOR ASSY	6323AQ3226G	6323AQ3226G	6323AQ3226G	6323AQ3226G	6323AQ3226G	R
267110-1	REMOTE CONTROLLER ASSY	6711A10002D	6711A10002C	6711A10002D	6711A10002C	6711A10002D	R
267110-2	REMOTE CONTROLLER ASSY	6711A20041E	6711A20041D	6711A20041E	6711A20041D	6711A20041E	R
268714	PWB(PCB) ASSY, MAIN	6871A10008B	6871A10008D	6871A10008B	6871A10008D	6871A10008C	R
330860	DRAIN PAN	3086A30001F	3086A30001F	3086A30001F	3086A30001F	3086A30001K	R
336610-1	HOUSING ASSY(MECH)	3661A10009A	3661A10009A	3661A10009A	3661A10009A	3661A10009C	R
336610-2	HOUSING ASSY(MECH)	3661A10009B	3661A10009B	3661A10009B	3661A10009B	3661A10009D	R
346810	MOTOR ASSY, INDOOR	4681A20005L	4681A20005L	4681A20005L	4681A20005L	4681A20005M	R
		4681A20005W	4681A20005W	4681A20005W	4681A20005W	4681A20005X	R
35211C-1	TUBE ASSY, DISCHARGE	5211A30094A	5211A30094A	5211A30094A	5211A30094A	5211A30094A	R
35211C-2	TUBE ASSY, DISCHARGE	5211A30094C	5211A30094C	5211A30094C	5211A30094C	5211A30094B	R
352118	TUBE ASSY, MANIFOLD(INDOOR)	5211A30093A	5211A30093A	5211A30093A	5211A30093A	5211A30093B	R
354210	EVAPORATOR ASSY	5421A20008G	5421A20008G	5421A20008C	5421A20008C	5421A20008D	R
359012-1	FAN ASSY, BLOWER	5901A10015A	5901A10015A	5901A10015A	5901A10015A	5901A10015C	R
359012-2	FAN ASSY, BLOWER	5901A10015B	5901A10015B	5901A10015B	5901A10015B	5901A10015D	R
552111	TUBE ASSY, CAPILLARY	5211A30123K	5211A30123K	5211A301213P	5211A30123K	5211A30123S	R
W0CZZ	CAPACITOR, DRAWING	2H00841C	2H00841C	2H00841C	2H00841C	2H00841C	R

Parts List

• 36K

LOCATION NO	DESCRIPTION	Part No.				REMARKS
		LB-F3661HL LB-F3663HL	LB-F3661CL LB-F3663CL	LB-F3681HL LB-F3683HL	LB-F3681CL LB-F3683CL	
152302	FILTER(MECH), A/C	5230A30001F	5230A30001F	5230A30001F	5230A30001F	R
237204-1	PANEL, SIDE	3720A20067Y	3720A20067Y	3720A20067Y	3720A20067Y	R
237204-2	PANEL, SIDE	3720A20068Y	3720A20068Y	3720A20068Y	3720A20068Y	R
249951	CONTROL BOX ASSY, INDOOR	4995A20011S	4995A20011T	4995A20011S	4995A20011T	R
263230-1	THERMISTOR ASSY	6323AQ3214Q	6323AQ3214Q	6323AQ3214Q	6323AQ3214Q	R
263230-2	THERMISTOR ASSY	6323AQ3226G	6323AQ3226G	6323AQ3226G	6323AQ3226G	R
267110-1	REMOTE CONTROLLER ASSY	6711A10002Y	6711A10002C	6711A10002Y	6711A10002C	R
267110-2	REMOTE CONTROLLER ASSY	6711A20041H	6711A20041D	6711A20041H	6711A20041D	R
268714	PWB(PCB) ASSY, MAIN	6871A10008C	6871A10008C	6871A10008C	6871A10008D	R
330860	DRAIN PAN	3086A30001K	3086A30001K	3086A30001K	3086A30001K	R
336610-1	HOUSING ASSY(MECH)	3661A10009C	3661A10009C	3661A10009C	3661A10009C	R
336610-2	HOUSING ASSY(MECH)	3661A10009D	3661A10009D	3661A10009D	3661A10009D	R
346810	MOTOR ASSY, INDOOR	4681A20005M	4681A20005M	4681A20005M	4681A20005M	R
		4681A20005X	4681A20005X	4681A20005X	4681A20005X	R
35211C-1	TUBE ASSY, DISCHARGE	5211A30094A	5211A30094A	5211A30094A	5211A30094A	R
35211C-2	TUBE ASSY, DISCHARGE	5211A30094B	5211A30094B	5211A30094B	5211A30094B	R
352118	TUBE ASSY, MANIFOLD(INDOOR)	5211A30093B	5211A30093B	5211A30093B	5211A30093B	R
354210	EVAPORATOR ASSY	5421A20008D	5421A20008D	5421A20008D	5421A20008D	R
359012-1	FAN ASSY, BLOWER	5901A10015C	5901A10015C	5901A10015C	5901A10015C	R
359012-2	FAN ASSY, BLOWER	5901A10015D	5901A10015D	5901A10015D	5901A10015D	R
552111	TUBE ASSY, CAPILLARY	5211A30123Q	5211A30123Q	5211A30123Q	5211A30123Q	R
W0CZZ	CAPACITOR, DRAWING	2H00841C	2H00841C	2H00841C	2H00841C	R

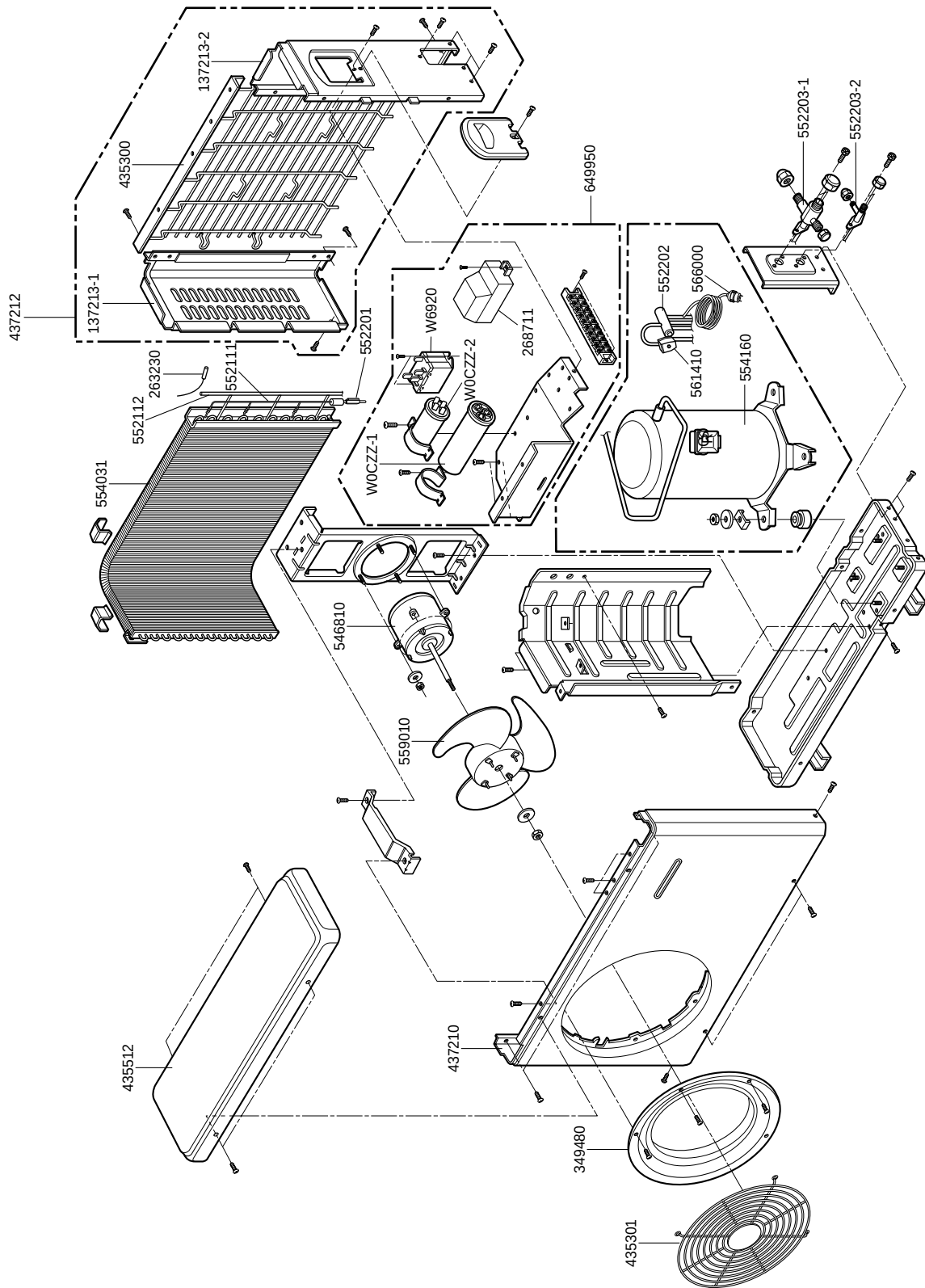
Parts List

• 42K/48K/60K

LOCATION No.	DESCRIPTION	Part No.					REMARKS
		LB-F4261HL LB-F4263HL	LB-E4881HL LB-E4883HL	LB-E4881CL LB-E4883CL	LB-E6081HL LB-E6083HL	LB-E6081CL LB-E6083CL	
152302	FILTER(MECH), A/C	5230A30001F	5230A30001A	5230A30001A	5230A30001A	5230A30001A	R
237204-1	PANEL, SIDE	3720A20067Y	3720A20010X	3720A20010X	3720A20010X	3720A20010X	R
237204-2	PANEL, SIDE	3720A20068Y	3720A20011X	3720A20011X	3720A20011X	3720A20011X	R
249951	CONTROL BOX ASSY, INDOOR	4995A20011S	4995A20011S	4995A20011T	4995A20011S	4995A20011T	R
263230-1	THERMISTOR ASSY	6323AQ3214Q	6323AQ3214Q	6323AQ3214Q	6323AQ3214Q	6323AQ3214Q	R
263230-2	THERMISTOR ASSY	6323AQ3226G	6323AQ3226G	6323AQ3226G	6323AQ3226G	6323AQ3226G	R
267110-1	REMOTE CONTROLLER ASSY	6711A10002D	6711A10002D	6711A10002C	6711A10002D	6711A10002C	R
267110-2	REMOTE CONTROLLER ASSY	6711A20041E	6711A20041E	6711A20041D	6711A20041E	6711A20041D	R
268714	PWB(PCB) ASSY, MAIN	6871A10008C	6871A10008C	6871A10008D	6871A10008C	6871A10008D	R
330860	DRAIN PAN	3086A30001K	3086A30001H	3086A30001H	3086A30001H	3086A30001H	R
336610-1	HOUSING ASSY(MECH)	3661A10009C	3661A10009E	3661A10009E	3661A10009E	3661A10009E	R
336610-2	HOUSING ASSY(MECH)	3661A10009D	3661A10009F	3661A10009F	3661A10009F	3661A10009F	R
346810	MOTOR ASSY, INDOOR	4681A20005M	4681A20005K	4681A20005K	4681A20005Q	4681A20005Q	R
		4681A20005X	4681A20005U	4681A20005U	4681A20005V	4681A20005V	R
35211C-1	TUBE ASSY, DISCHARGE	5211A30077A	5211A30077A	5211A30077A	5211A30077A	5211A30077A	R
35211C-2	TUBE ASSY, DISCHARGE	5211A30094B	5211A30094B	5211A30094B	5211A30094B	5211A30094B	R
352118	TUBE ASSY, MANIFOLD(INDOOR)	5211A30093C	5211A30076A	5211A30076A	5211A30076A	5211A30076A	R
354210	EVAPORATOR ASSY	5421A20008F	5421A20008A	5421A20008A	5421A20008E	5421A20008E	R
359012-1	FAN ASSY, BLOWER	5901A10015C	5901A20015E	5901A20015E	5901A20015E	5901A20015E	R
359012-2	FAN ASSY, BLOWER	5901A10015D	5901A20015F	5901A20015F	5901A20015F	5901A20015F	R
552111	TUBE ASSY, CAPILLARY	5211A30123T	5211A30123M	5211A30123L	5211A30123N	5211A30123N	R
W0CZZ	CAPACITOR, DRAWING	2H00841C	0CZZA20001C	0CZZA20001C	0CZZA20001B	0CZZA20001B	R
			2A00986D	2A00986D	2A00986D	2A00986D	

2. Outdoor Unit

- Models: LB-D1861HL/CL, LB-D1863HL/CL, LB-D2461HL/CL, LB-D2463HL/CL, LB-F3061HL, LB-F3063HL

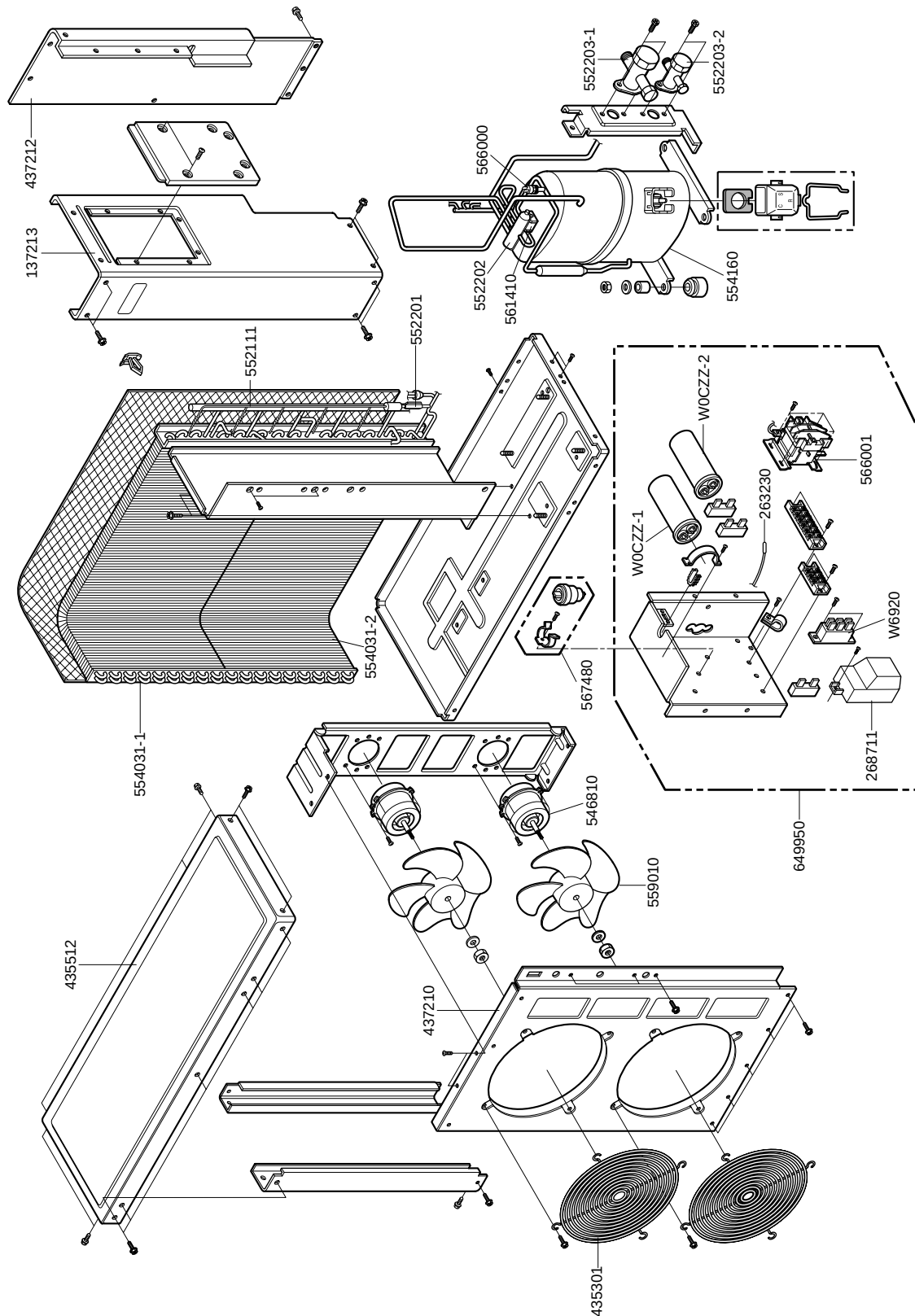


Parts List

• 18K/24K/30K

LOCATION No.	DESCRIPTION	Part No.					REMARKS
		LB-D1861HL LB-D1863HL	LB-D1861CL LB-D1863CL	LB-D2461HL LB-D2463HL	LB-D2461CL LB-D2463CL	LB-F3061HL LB-F3063HL	
137213-1	PANEL ASSY, SIDE	-	-	-	-	1A00202C	R
137213-2	PANEL ASSY, SIDE	-	-	-	-	1A00204F	R
263230	THERMISTOR ASSY	-	-	-	-	3Q35015G	R
268711	PWB(PCB) ASSY, DEICER	-	-	-	-	6871A20015R	R
349480	ORIFICE	4948AP2527A	4948AP2527A	4948AP2527A	4948AP2527A	4948AP2527A	R
435300	GRILLE, REAR	-	-	-	-	1A00208D	R
435301	GRILLE, DISCHARGE	3530AP2289V	3530AP2289V	3530AP2289V	3530AP2289V	3530A20007B	R
435512	COVER	2A00915J	2A00915J	2A00915J	2A00915J	2A00915A	R
437210	PANEL, FRONT	1A00196N	1A00196N	1A00196N	1A00196N	1A00197C	R
437212	PANEL ASSY, REAR	3720AP0003L	3720AP0003L	3720AP0003L	3720AP0003L	-	R
546810	MOTOR ASSY, OUTDOOR	4681A20013A	4681A20013A	4681A20008N	4681A20013A	4681A20008N	R
552111	TUBE ASSY, CAPILLARY	5211A20252B	5211A20252C	5211A20252E	5211A20252D	5425AP7190N	R
552112	TUBE ASSY, CONDENSER IN	3H03258C	-	3H03258C	-	5211A20063A	R
552201	VALVE, CHECK	-	-	3A01020H	-	3A01020H	R
552202	VALVE, REVERSING	3A02027A	-	3A02027A	-	3A02027B	R
552203-1	VALVE, SERVICE	2A00392E	2A00392E	2A00392E	2A00392E	2A00392E	R
552203-2	VALVE, SERVICE	2H02479B	2H02479B	2H02479B	2H02479B	2A00393Q	R
554031	CONDENSER ASSY, BENT	5402AR2347B	5402AR2347H	5402AR2347B	5402AR2347H	6140AP2096Q	R
554160	COMPRESSOR	5416A20016A	5416A20016A	5416A20016B	5416A20016B	2A01032A	R
559010	FAN ASSY, PROPELLER	1A00195B	1A00195B	1A00195B	1A00195B	1A00195B	R
561410	COIL ASSY, REVERSING VALVE	3A02028B	-	3A02028B	-	3A02028B	R
566000	SWITCH, PRESSURE	-	-	-	-	3A02524A	R
649950	CONTROL BOX ASSY, OUTDOOR	4995A20014C	4995A20014D	4995A20014C	4995A20014D	4995A20025R	R
W6920	RELAY	6920AP3400A	6920AP3400A	6920AP3400A	6920AP3400A	6920AP3400A	R
W0CZZ-1	CAPACITOR, DRAWING	6120AR2194K	6120AR2194K	6120AR2194K	6120AR2194K	2A00986A	R
W0CZZ-2	CAPACITOR, DRAWING	-	-	-	-	2A00986D	R

• Models: LB-F3661HL/CL, LB-F3663HL/CL, LB-F3681HL/CL, LB-F3683HL/CL

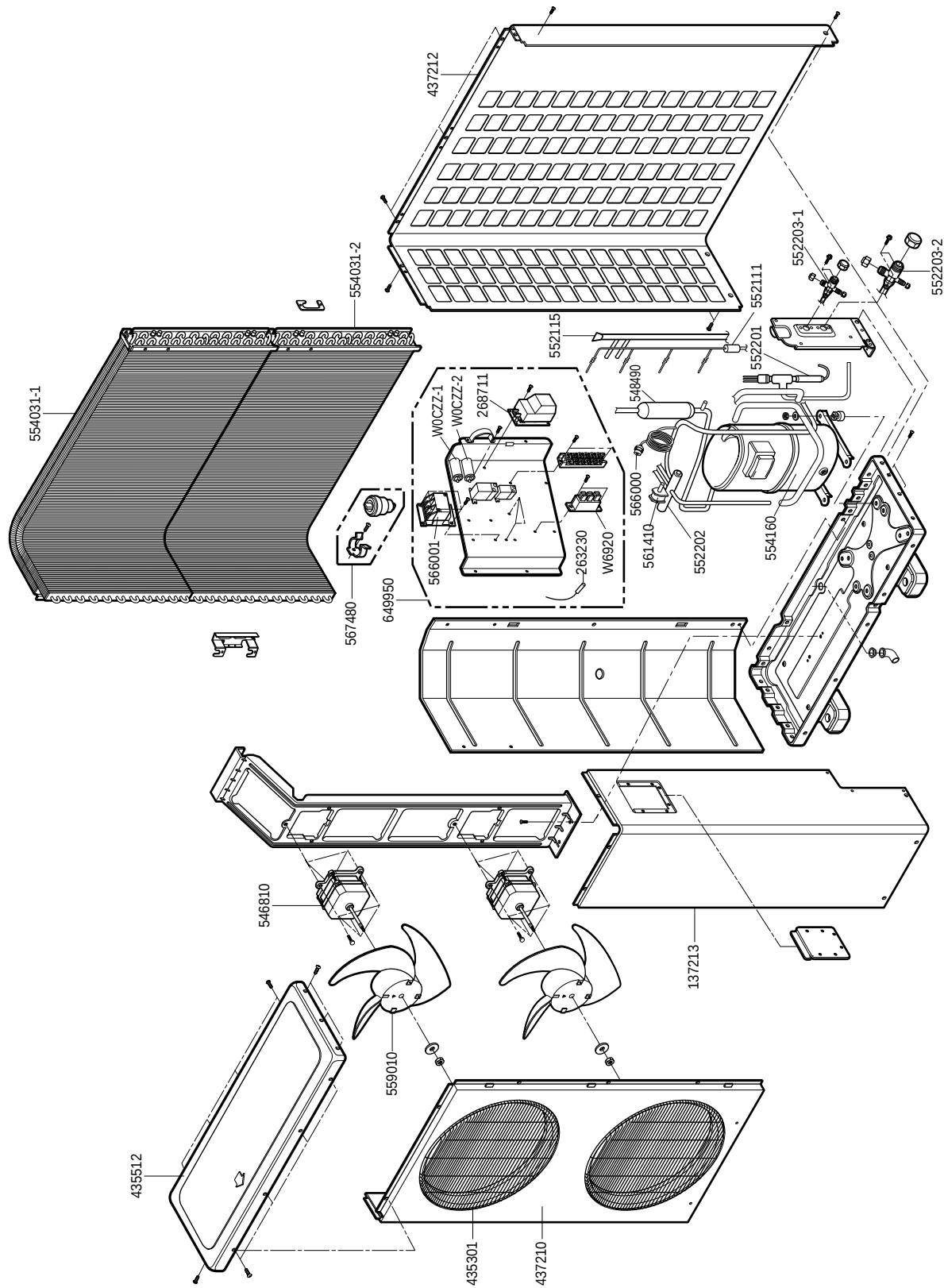


Parts List

• 36K

LOCATION NO	DESCRIPTION	Part No.				REMARKS
		LB-F3661HL LB-F3663HL	LB-F3661CL LB-F3663CL	LB-F3681HL LB-F3683HL	LB-F3681CL LB-F3683CL	
137213	PANEL ASSY, SIDE	3A01055Z	3A01055Z	3A01055Z	3A01055Z	R
263230	THERMISTOR ASSY	3Q35015H	-	3Q35015H	-	R
268711	PWB(PCB) ASSY, DEICER	6871A20015N	-	6871A20015U	-	R
435301	GRILLE ASSY, DISCHARGE(OUTDOOR)	2A00144Y	2A00144Y	2A00144Y	2A00144Y	R
435512	COVER ASSY, TOP(OUTDOOR)	3A01040Y	3A01040Y	3A01040Y	3A01040Y	R
437210	PANEL ASSY, FRONT SUB	3A00426X	3A00426X	3A00426X	2A00251Z	R
437212	PANEL ASSY, REAR	2A00252Z	2A00252Z	2A00252Z	2A00252Z	R
546810	MOTOR ASSY, OUTDOOR	2H00430X	2H00430X	2H00430X	2H00430X	R
552111	TUBE ASSY, CAPILLARY	5211A10151B	5211A10151B	5211A10151A	5211A10151C	R
552201	VALVE, CHECK	3A01020H	-	3A01020H	-	R
552202	VALVE, REVERSING	3A02027B	3A02027B	3A02027B	3A02027B	R
552203-1	VALVE, SERVICE	2A00392A	2A00392A	2A00392A	2A00392A	R
552203-2	VALVE, SERVICE	2A00393A	2A00393A	2A00393A	2A00393A	R
554031-1	CONDENSER ASSY, BENT	5403A20006A	5403A20006A	5403A20006A	5403A20006A	R
554031-2	CONDENSER ASSY, BENT	5403A20006G	5403A20006G	5403A20006G	5403A20006G	R
554160	COMPRESSOR ASSY, FINAL	5417A90001F	5417A90001F	5417A90001E	5417A90001E	R
559010	FAN ASSY, PROPELLER	1H00156B	1H00156B	1H00156B	1H00156B	R
561410	COIL ASSY, REVERSING VALVE	3A02028B	-	3A02028B	-	R
566000	SWITCH, PRESSURE	3A02524A	-	3A02524A	-	R
567480	P.T.C ASSY	3A01911B	3A01911B	-	-	R
649950	CONTROL BOX ASSY, OUTDOOR	4995AZ20003X	4995AZ20003R	4995AZ20003W	4995AP1089J	R
566001	SWITCH, MAGNET	2A00771D	2A00771D	2A01031A	2A01031A	R
W6920	RELAY	3A00261C	3A00261C	3A00261C	-	R
W0CZZ-1	CAPACITOR, DRAWING	0CZZA20001D	2A00986X	-	-	R
W0CZZ-2	CAPACITOR, DRAWING	3A02157A	3A02157A	3A02157A	3A02157A	R

- Models: LB-F4261HL/CL, LB-F4263HL/CL, LB-E4881HL/CL, LB-E4883HL/CL, LB-E6081HL/CL, LB-E6083HL/CL



Parts List

• 42K/48K/60K

LOCATION No.	DESCRIPTION	Part No.					REMARKS
		LB-F4261HL LB-F4263HL	LB-E4881HL LB-E4883HL	LB-E4881CL LB-E4883CL	LB-E6081HL LB-E6083HL	LB-E6081CL LB-E6083CL	
137213	PANEL ASSY, SIDE	3720AP1215B	3720AP1215B	3720AP1215B	3720AP1215B	3720AP1215B	R
263230	THERMISTOR ASSY	3Q35015E	3Q35015E	-	3Q35015E	-	R
268711	PWB(PCB) ASSY, DEICER	6871A20015U	6871A20015N	-	6871A20015N	-	R
435301	GRILLE, DISCHARGE	3530AP1225B	3530AP1225B	3530AP1225B	3530AP1225B	3530AP1225B	R
435512	COVER ASSY, TOP(OUTDOOR)	3550AP1213B	3550AP1213B	3550AP1213A	3550AP1213B	3550AP1213B	R
437210	PANEL ASSY, FRONT SUB	3720AP1212B	3720AP1212B	3720AP1212B	3720AP1212B	3720AP1212B	R
437212	RNAEL ASSY, REAR	3720AP1202C	3720AP1202C	3720AP1202C	3720AP1202C	3720AP1202C	R
546810	MOTOR ASSY, OUTDOOR	4680AP2135M	4681A20008R	4681A20008P	4681A20008P	4681A20008P	R
552111	TUBE ASSY, CAPILLARY	5425AP7109L	5211A10120A	5211A10119A	5211A10120B	5211A10120C	R
552115	TUBE ASSY, MANIFOLD(OUTDOOR)	5211AP3988A	5211AP3988A	5211A30124B	5211AP3988A	5211AP3988A	R
552201	VALVE, CHECK	4A00322A	4A00322A	-	4A00322A	-	R
552202	VALVE, REVERSING	3A02080A	3A02080A	-	3A02080A	-	R
552203-1	VALVE, SERVICE	2A00393Q	2A00393Q	2A00393Q	2H0189G	2H0189G	R
552203-2	VALVE, SERVICE	2A00499A	2A00499A	2A00499A	2A00499A	2A00499A	R
554031-1	CONDENSER ASSY, BENT	5403AP2378K	5403AP2378D	5403A20001H	5403AP2378D	5403A20003M	R
554031-2	CONDENSER ASSY, BENT	5403AP2378Z	5403AP2378F	5403A20001H	5403AP2378F	5403A20003P	R
554160	COMPRESSOR ASSY, FINAL	5416A10001A	5417A30002A	5417A30002A	5417A20008G	5417A20008G	R
559010	FAN ASSY, PROPELLER	1A00195B	1A00195B	1A00195B	1A00195B	1A00195B	R
561410	COIL ASSY, REVERSING VALVE	3A02028B	3A02028B	-	3A02028B	-	R
566000	SWITCH, PRESSURE	3A01100A	3A01100A	-	3A01100A	-	R
567480	P.T.C ASSY	3A01911B	-	-	-	-	R
649950	CONTROL BOX ASSY, OUTDOOR	6625AP2772R	6615AP2772Y	6615AP2772Z	6615AP2772Y	6615AP2772Z	R
566001	SWITCH, MAGNET	2A01031C	2A01031A	2A01031C	2A01031A	2A01031C	R
W6920	RELAY	3A00261C	3A00261C	-	3A00261C	-	R
W0CZZ-1	CAPACITOR, DRAWING	2A00986D	2A00986D	2A00986D	2A00986D	2A00986D	R
W0CZZ-2	CAPACITOR, DRAWING	6120AR2194Y	-	-	-	-	R

