TECHNICAL GUIDE

LX SERIES

DUCTLESS MULTI-ZONE SPLIT HEAT PUMPS

16 SEER – 1 PHASE

1.5 THRU 3.5 NOMINAL TONS

MODELS:
INDOOR-DHPM/OUTDOOR-DHMF

Due to continuous product improvement, specifications are subject to change without notice.

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WARRANTY SUMMARY*

Standard 2-Years limited parts warranty.
Standard 6-Years limited compressor warranty.

DESCRIPTION

The Multi Zone Series are ductless climate systems. They are designed with a matching indoor unit for optimum performance and efficiency. These climate systems are supported with accessories and documents to serve specific functions.

FEATURES

Variable Frequency Rotary Compressor - Twin rotary inverter compressor on all models features high efficiency operation that modulates down to 15 Hz and as high as 120 Hz for reduced vibration and quiet operation. Brushless DC motor uses powerful Neodymium magnets that are approximately 15-20 times stronger than ferrite magnets used in conventional AC compressors. The DC Inverter Control provides continuous operation, while adjusting capacity according to room temperature. The accurate sensing of cooling or heating loads prevents frequent changes in capacity and ensures efficient, economical operation.

Low Ambient Cooling Operation Down to 5 °F - This feature allows for a space to be air-conditioned even in outdoor temperatures as low as 5 °F. This cooling ability is important when dealing with server equipment rooms, surveillance mechanical rooms, restaurant kitchens, fitness centers, and more.

Load Variation Management System - The outdoor coil thermistor continuously monitors the temperature and communicates with the microprocessor. Depending on the temperature measured, the compressor will be allowed to increase the frequency if needed to meet the load or reduce frequency as the load is reduced.

High Pressure Discharge Temperature - The compressor discharge line thermistor continuously monitors the temperature and communicates with the microprocessor. Depending on the temperature measured, the compressor will be allowed to increase the frequency to meet the load or is forced to run at the current or reduced frequency. If the temperature gets excessively high, the compressor will be de-energized.

Defrost Control (Heat Pump Models) - Defrost cycle is automatically enabled if there is a build-up of frost on the outdoor coil. Outdoor fan and indoor blower operation is terminated during the defrost cycle. H1 is displayed on the indoor unit panel on the front cover during a defrost cycle.

Reversing Valve (Heat Pump Models) - 4-way interchange reversing valve effects a rapid change in direction of refrigerant flow resulting in quick changeover from cooling to heating and vice versa. Valve operates on system pressure differential between outdoor unit and indoor unit.

R-410A Refrigerant - Unit is pre-charged with R410A refrigerant that uses PVE refrigerant oil. Polyvinyl ether (PVE) is an innovative refrigerant oil specially formulated for hydrofluorocarbon (HFC) refrigeration systems. In addition to providing lubricating properties, it also has a number of other applied advantages that help to increase the reliability of the refrigeration systems where it is applied.

Refrigerant Line Connections, Service Valve - Outdoor units are designed with easy service and maintenance in mind. Maintenance points are located behind easy-access panels, to make installation and service a breeze for a trained technician. Flare connection lines are located on side of unit cabinet. Fully serviceable brass service valve prevents corrosion and provide access to refrigerant system. Shut-off valve that can be fully shut off while 2-way suction/vapor valve (with service port) may be front seated to manage refrigerant charge while servicing system.

Air Deflection Louvers - Horizontal louvers default to the cooling or heating position when the unit is operating. Horizontal louvers can be set to a preset oscillating range or fixed position from the wireless remote control. Full oscillating is the default setting when button is pushed. Vertical louvers can be manually adjusted to direct the airflow for optimal comfort.

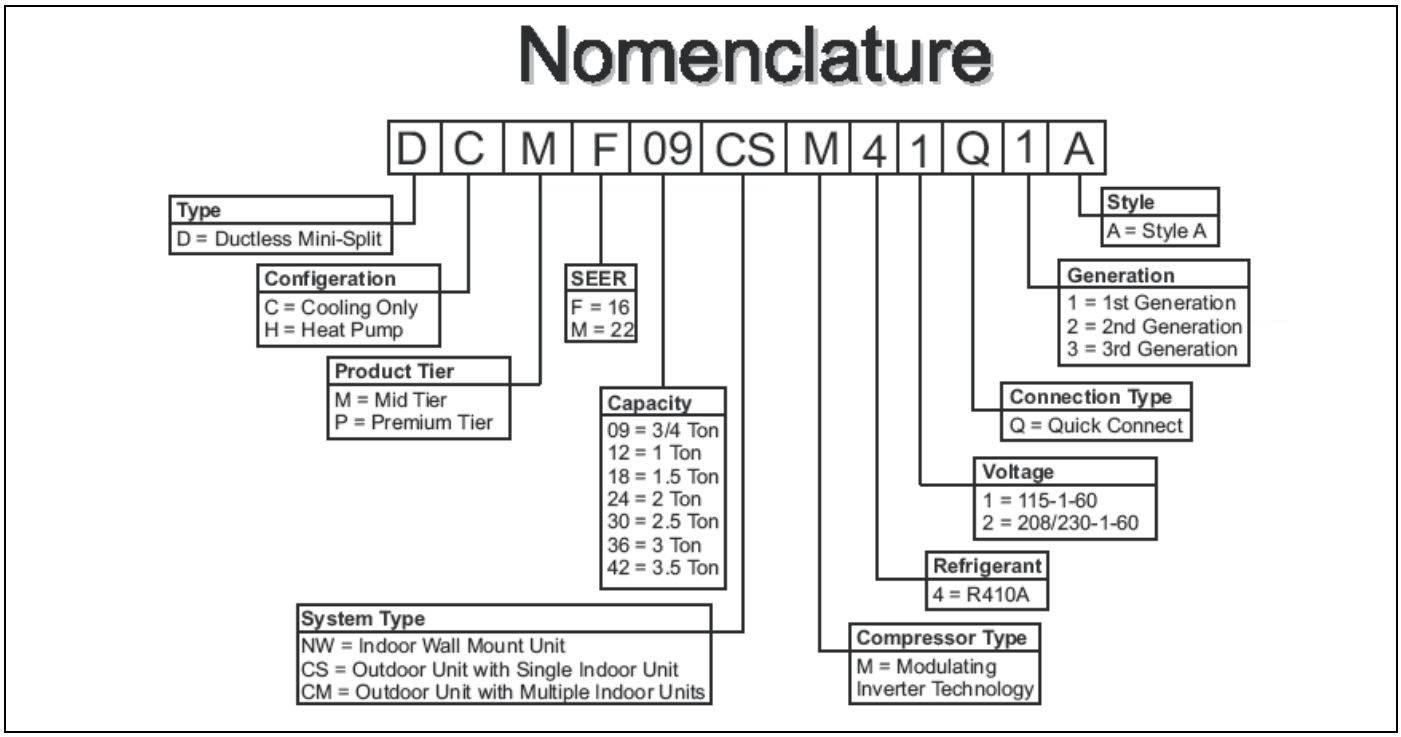
Indoor Coil Freeze Protection - The indoor coil thermistor monitors the coil temperature continuously. Any time the coil temperature drops below 30°F, the compressor and the outdoor fan (30 seconds later) will be switched off until the coil temperature rises above 43°F and the compressor has been off for a minimum of 3 minutes.

I FEEL Function - When I FEEL is activated, the system will satisfy the cooling or heating temperature set point where the remote control is located. When I FEEL is deactivated, the system will satisfy the cooling or heating temperature set point where the indoor unit is located. This feature provides homeowners with optimum comfort whether they are near or far from the indoor unit.

Hot Heat Pump (cold air prevention) - In heating mode, the indoor fan will be delayed from 1 to 3 minutes to allow refrigerant to warm up and avoid cold blow. This may occur during:

- Initial start-up of a heating cycle
- Immediately after completion of an Auto mode operation

Heating under extremely low indoor temperatures



SPECIFICATIONS

Systems With AHRI Certified Performance Ratings

LX 16 SEER Multi-Splits HP Models		Cooling			High Heating 47 °F		Low Heating 17 °F
Outdoor Model Number	**Indoor Model Number**	**Capacity (Btuh)**	**EER**	**SEER**	**Capacity (Btuh)**	**HSPF**	**Capacity (Btuh)**
DHMF18CMM42Q1	(2) DHPM09NWM42Q1	18,000	10.20	16	19,000	8.20	9,600
DHMF18CMM42Q1	(1) DHPM09NWM42Q1 + (1) DHPM12NWM42Q1	18,000	10.20	16	19,000	8.20	9,600
DHMF24CMM42Q1	(2) DHPM09NWM42Q1 + (1) DHPM12NWM42Q1	26,000	8.20	16	29,000	8.20	17,000
DHMF24CMM42Q1	(3) DHPM09NWM42Q1	26,000	8.20	16	29,000	8.20	17,000
DHMF24CMM42Q1	(1) DHPM09NWM42Q1 + (2) DHPM12NWM42Q1	26,000	8.20	16	29,000	8.20	17,000
DHMF30CMM42Q1	(4) DHPM09NWM42Q1	29,000	7.30	16	30,400	8.20	16,500
DHMF30CMM42Q1	(1) DHPM09NWM42Q1 + (2) DHPM12NWM42Q1 + (1) DHPM18NWM42Q1	29,000	7.30	16	30,400	8.20	16,500
DHMF42CMM42Q1	See Following Table for possible indoor combinations	40,000	9.30	16	44,500	8.00	24,800

42K Outdoor Unit And Possible Indoor Combinations With AHRI Certified Performance Rating

Multi-Splits HP Models		Cooling Capacity (Btu/h)					Heating Capacity (Btu/h)				
Outdoor Unit Model	Indoor Unit Model	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
42K	9K + 12K + 18K	8,530	10,918	16,036	-	-	10,663	13,648	20,046	-	-
42K	9K + 18K + 18K	7,165	15,013	15,013	-	-	8,155	17,084	17,084	-	-
42K	12K + 12K + 12K	11,771	11,771	11,942	-	-	14,716	14,716	14,928	-	-
42K	12K + 12K + 18K	10,918	10,918	13,648	-	-	13,648	13,648	17,060	-	-
42K	12K + 18K + 18K	9,554	15,013	15,013	-	-	10,871	17,084	17,084	-	-
42K	18K + 18K + 18K	13,193	13,193	13,193	-	-	15,012	15,012	15,012	-	-
42K	9K + 9K + 9K + 12K	8,189	8,189	8,189	10,918	-	10,236	10,236	10,236	13,648	-
42K	9K + 9K + 9K + 18K	7,848	7,848	7,848	16,036	-	8,929	8,929	8,929	18,247	-
42K	9K + 9K + 12K + 12K	7,165	7,165	10,577	10,577	-	8,957	8,957	13,222	13,222	-
42K	9K + 9K + 12K + 18K	6,824	6,824	10,577	15,354	-	7,766	7,766	12,038	17,473	-
42K	9K + 9K + 18K + 18K	6,483	6,483	13,307	13,307	-	7,377	7,377	15,142	15,142	-
42K	9K + 12K + 12K + 12K	7,848	10,577	10,577	10,577	-	8,929	12,038	12,038	12,038	-
42K	9K + 12K + 12K + 18K	7,165	8,701	8,701	15,013	-	8,155	9,902	9,902	17,084	-
42K	12K + 12K + 12K + 12K	9,895	9,895	9,895	9,895	-	11,260	11,260	11,260	11,260	-
42K	12K + 12K + 12K + 18K	8,359	8,359	8,359	14,501	-	9,513	9,513	9,513	16,500	-
42K	12K + 12K + 18K + 18K	7,848	7,848	11,942	11,942	-	8,929	8,929	13,590	13,590	-
42K	9K + 9K + 9K + 9K + 9K	7,916	7,916	7,916	7,916	7,916	9,008	9,008	9,008	9,008	9,008
42K	9K + 9K + 9K + 9K + 12K	7,421	7,421	7,421	7,421	9,895	8,445	8,445	8,445	8,445	11,260
42K	9K + 9K + 9K + 9K + 18K	6,824	6,824	6,824	6,824	12,283	7,766	7,766	7,766	7,766	13,979
42K	9K + 9K + 9K + 12K + 12K	7,165	7,165	7,165	9,042	9,042	8,155	8,155	8,155	10,291	10,291
42K	9K + 9K + 9K + 12K + 18K	6,483	6,483	6,483	8,274	11,857	7,377	7,377	7,377	9,414	13,491
42K	9K + 9K + 9K + 18K + 18K	6,483	6,483	6,483	10,065	10,065	7,377	7,377	7,377	11,454	11,454
42K	9K + 9K + 12K + 12K + 12K	6,483	6,483	8,871	8,871	8,871	7,377	7,377	10,096	10,096	10,096
42K	9K + 9K + 12K + 12K + 18K	5,971	5,971	8,018	8,018	11,601	6,793	6,793	9,124	6,124	13,201
42K	9K + 12K + 12K + 12K + 12K	6,483	8,274	8,274	8,274	8,274	7,377	9,414	9,414	9,414	9,414
42K	12K + 12K + 12K + 12K + 12K	7,916	7,916	7,916	7,916	7,916	9,008	9,008	9,008	9,008	9,008

Systems With No AHRI Certified Performance Ratings Listed

Multi-Splits HP Models		Cooling Capacity (Btu/h)				Heating Capacity (Btu/h)			
Outdoor Unit Model	Indoor Unit Model	Zone 1	Zone 2	Zone 3	Zone 4	Zone 1	Zone 2	Zone 3	Zone 4
24K	9K + 18K	8,400	16,600		-	9,000	18,000	-	-
24K	12K + 12K	12,000	12,000		-	13,000	13,000	-	-
24K	12K + 18K	10,000	15,000		-	11,200	16,800	-	-
24K	18K + 18K	12,750	12,750		-	14,250	14,250	-	-
24K	9K + 9K + 9K	8,667	8,667	8,667	-	9,667	9,667	9,667	-
24K	9K + 9K + 18K	7,000	7,000	12,000	-	6,000	6,000	17,000	-
24K	12K + 12K + 12K	8,667	8,667	8,667	-	9,667	9,667	9,667	-
Outdoor Unit Model	**Indoor Unit Model**	**Zone 1**	**Zone 2**	**Zone 3**	**Zone 4**	**Zone 1**	**Zone 2**	**Zone 3**	**Zone 4**
30K	9K + 12K + 18K	6,800	7,200	13,000	-	7,050	9,350	14,100	-
30K	12K + 12K + 12K	8,667	8,667	8,667	-	9,667	9,667	9,667	-
30K	12K + 12K + 18K	6,500	6,500	15,000	-	8,700	8,700	13,100	-
30K	9K + 9K + 9K + 12K	7,000	7,000	7,000	7,000	7,100	7,100	7,100	9,200
30K	9K + 9K + 12K + 12K	6,800	6,800	7,700	7,700	6,500	6,500	9,000	9,000

Indoor Unit Specification

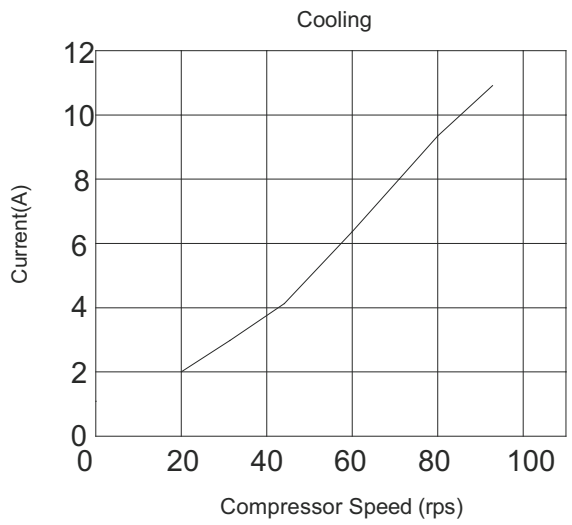
Model of Indoor Unit	**DHPM09NWM42Q1**	**DHPM12NWM42Q1**	**DHPM18NWM42Q1**
Fan Motor Speed (r/min) (SH/H/M/L)	1260/1100/950/750	1330/1100/950/750	1500/1200/1050/900
Output of Fan Motor (w)	20	20	20
Fan Motor Capacitor (uF)	1	1	1.5
Fan Motor RLA(A)	0.2	0.2	0.28
Fan Type-Piece	Cross-flow - 1	Cross-flow - 1	Cross-flow - 1
Diameter-Length (inch)	3.6 x 25.4	3.6 x 25.4	3.9 x 28.0
Diameter-Length (mm)	92×645	92×645	98×710
Evaporator	Aluminum Fin-copper Tube	Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
Pipe Diameter (inch)	Φ 0.276	Φ 0.276	Φ 0.276
Pipe Diameter (mm)	φ7	φ7	φ7
Row-Fin Gap (inch)	2 - 0.055	2 - 0.055	2 - 0.055
Row-Fin Gap (mm)	2-1.4	2-1.4	2-1.4
Coil length (L) x height (H) x coil width (W) (inch)	22.9 x 1.0 x 10.4	22.9 x 1.0 x 10.4	28.1 x 1.0 x 12.0
Coil length (L) x height (H) x coil width (W) (mm)	581×25.4×264	581×25.4×264	715×25.4×304.8
Output of Swing Motor (W)	2	2	2.5
Fuse (A)	3.15	3.15	3.15
Sound Pressure Level dB (A) (SH/H/M/L)	42 / 38 / 35 / 32	44 / 39 / 36 / 33	49 / 44 / 40 / 35
Sound Power Level dB (A)(SH/H/M/L)	52 / 48 / 45 / 42	54 / 49 / 46 / 43	59 / 54 / 50 / 45
Dimension (W/D/H) (inch)	33 x 7 x 11	33 x 7 x 11	37 x 8 x 12
Dimension (W/D/H) (mm)	838 × 178 × 279	838 × 178 × 279	940 × 203 × 305
Dimension of Package (L/W/H) (inch)	36.1 x 10.2 x 14.6	36.1 x 10.2 x 14.6	39.8 x 11.2 x 15.0
Dimension of Package (L/W/H) (mm)	918 × 258 × 370	918 × 258 × 370	1010 × 285 × 380
Net Weight /Gross Weight (lbs)	22.0 / 37	22.0 / 37	28.6 / 46
Net Weight /Gross Weight (kg)	10 / 17	10 / 17	13 / 17

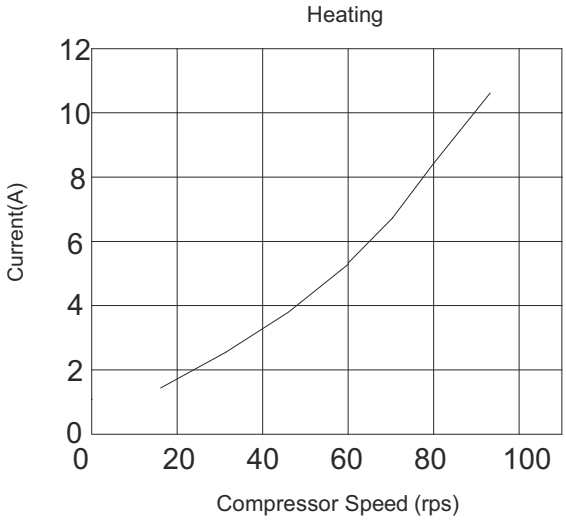
Outdoor unit Specification

Model of Outdoor Unit	**DHMF18CMM42Q1A**		**DHMF24CMM42Q1A**		**DHMF30CMM42Q1A**		**DHMF42CMM42Q1A**	
Function	**Cooling**	Heating	**Cooling**	Heating	**Cooling**	Heating	**Cooling**	Heating
Compressor Manufacturer/trademark	MITSUBISHI		MITSUBISHI		MITSUBISHI		MITSUBISHI	
Compressor Type	Inverter Rotary		Inverter Rotary		Inverter Rotary		Inverter Rotary	
L.R.A. (A)	27		45		45		60	
Compressor RLA(A)	9.56		14.698		19.62		19.07	
Compressor Power Input (W)	1245		2200		2200		3010	
Throttling Method	Electron Expansion Valve		Electron Expansion Valve		Electron Expansion Valve		Electron Expansion Valve	
Working Temp Range (^{O}F)	1 ~ 110	14 ~ 75	1 ~ 110	14 ~ 75	1 ~ 110	14 ~ 75	1 ~ 110	14 ~ 75
Condenser	Aluminum Fin-copper Tube		Aluminum Fin-copper Tube		Aluminum Fin-copper Tube		Aluminum Fin-copper Tube	
Pipe Diameter (inch)	Φ 5/16		Φ 3/8		Φ 3/8		Φ 5/16	
Rows-Fin Gap (inch)	2 - 0.055		2 - 0.055		2 - 0.055		2 - 0.055	
Coil Length (l) x height (H) x coil width (L) (inch)	30.6 x 21.7 x 1.5		35.0 x 25.0 x 1.7		35.0 x 25.0 x 1.7		40.2 x 41.6 x 1.5	
Fan Motor Speed (rpm)	830/670/500		690/600/500		690/600/500		860/650/550	
Output of Fan Motor (W)	60		60		60		140	
Fan Motor RLA(A)	0.54		0.59		0.59		1.1	
Fan Motor Capacitor (uF)	3.5		3.5		3.5		7	
Fuse (A)	20		30		30		40	
Air Flow Volume of Outdoor Unit (CFM)	1533		1533		1533		3244	
Fan Type-Piece	Axial-flow-1		Axial-flow-1		Axial-flow-1		Axial-flow-1	
Fan Diameter (inch)	17.5		20.5		20.5		20.5	
Defrosting Method	Automatic Defrosting		Automatic Defrosting		Automatic Defrosting		Automatic Defrosting	
Climate Type	T1		T1		T1		T1	
Permissible Excessive Operating Pressure for the Discharge Side (PSI)	624		624		624		624	
Permissible Excessive Operating Pressure for the Suction Side (PSI)	363		363		363		363	
Sound Pressure Level dB (A)	56		56		56		58	
Sound Power Level dB (A)	66		66		66		68	
Dimension (W/D/H) (inch)	35 x 14.9 x 23.5		37 x 15.6 x 27.6		37 x 15.6 x 27.6		43 x 17.3 x 43.4	
Dimension of Package (L/W/H)(inch)	37.2 x 16.4 x 24.8		40.4 x 17.9 x 28.9		40.4 x 17.9 x 28.9		45.5 x 18.9 x 43.9	
Net Weight /Gross Weight (lbs)	95 / 106		135 / 146		137 / 148		225 / 247	
Refrigerant Charge (oz)	47.62		77.6		77.6		169.3	
Refrigerant Charge (kg)	1.4		2.2		2.2		4.8	
Minimum Circuit Amps (MCA)	15.0		20.0		26.0		26.0	
Minimum Output Power (MOP)	20.0		30.0		30.0		40.0	
Length (ft)	24.6		24.6		24.6		24.6	
Outer Diameter Liquid Pipe (inch)	Φ 1/4		Φ 1/4		Φ 1/4		Φ 1/4	
Outer Diameter Gas Pipe (inch)	Φ 3/8		Φ 3/8		Φ 3/8		Φ 5/8	
Max Height Distance (ft)	33		33		33		33	
Max Length Distance With Multi Indoor Units (ft)	82		82		82		82	

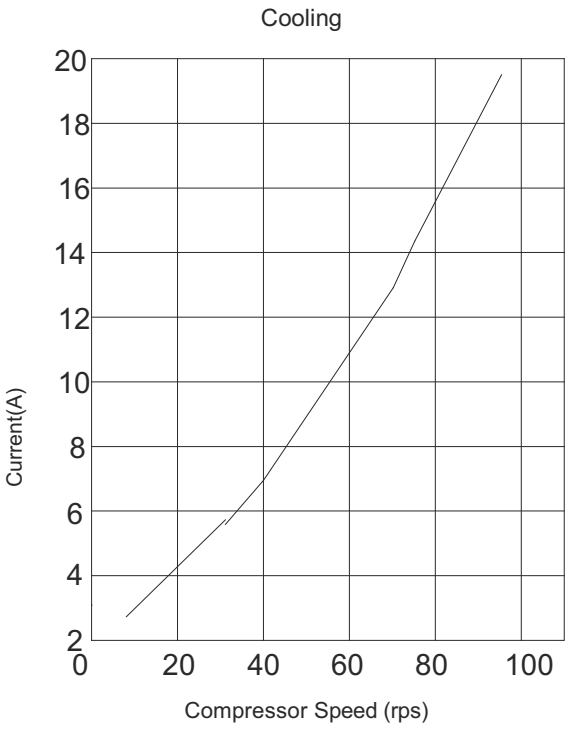
Note: Maximum length distance with multi indoor units (feet). Reference the installation manual for complete piping guidelines/limitations.

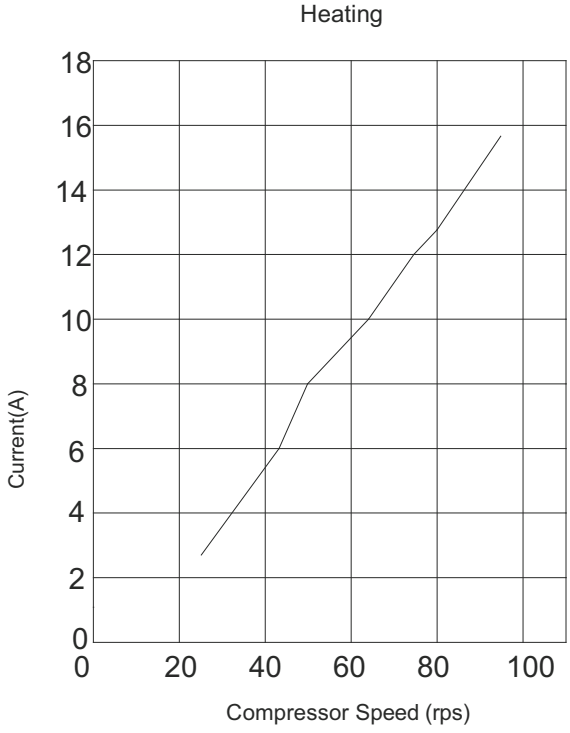
18K (9K + 9K)



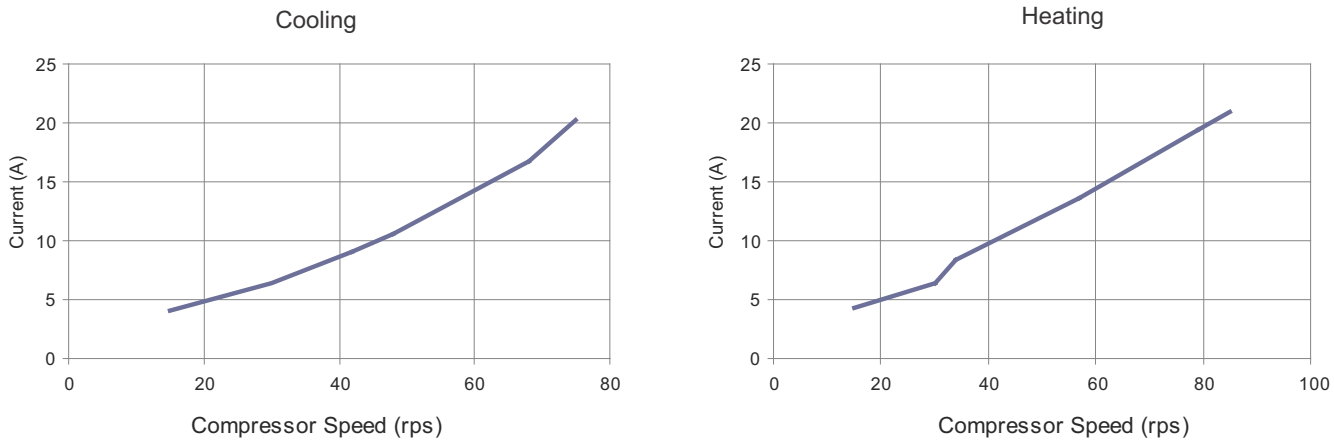


24K/30K (9K + 9K + 9K)



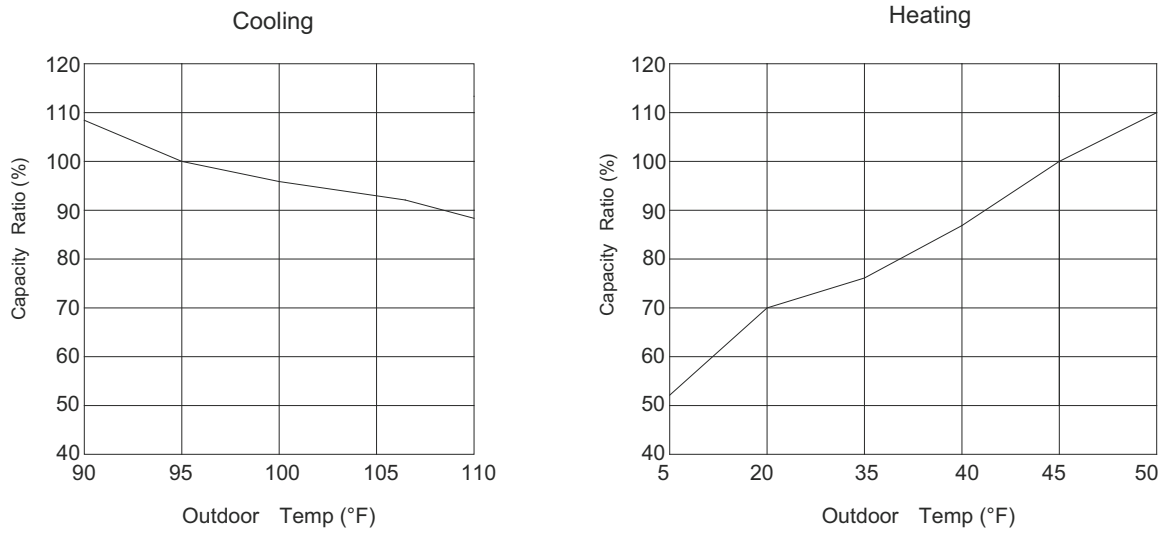


42K

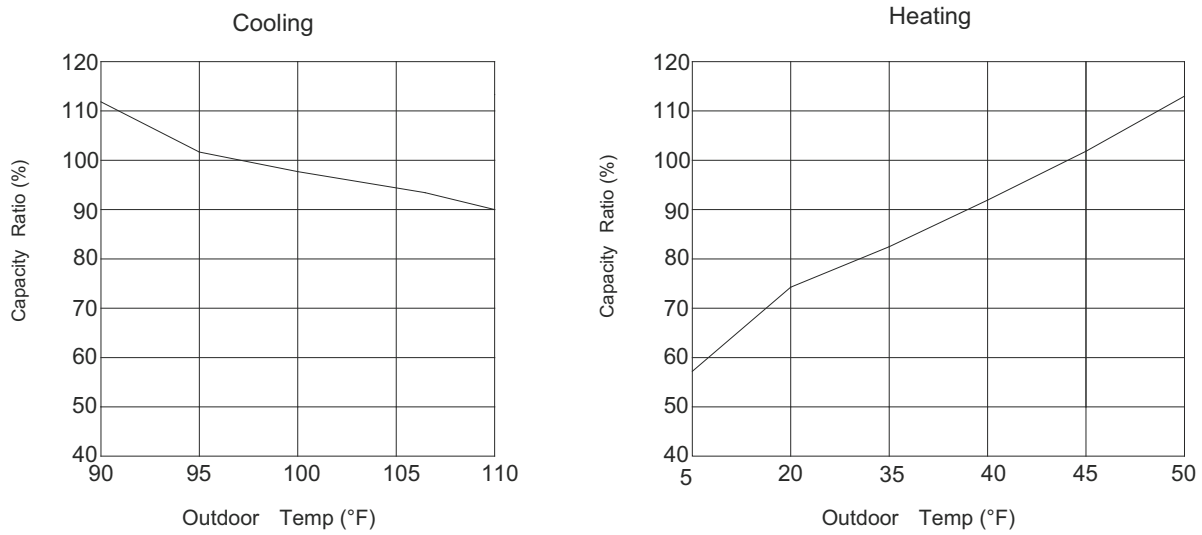


PRODUCT CAPACITY VARIATION RATIO

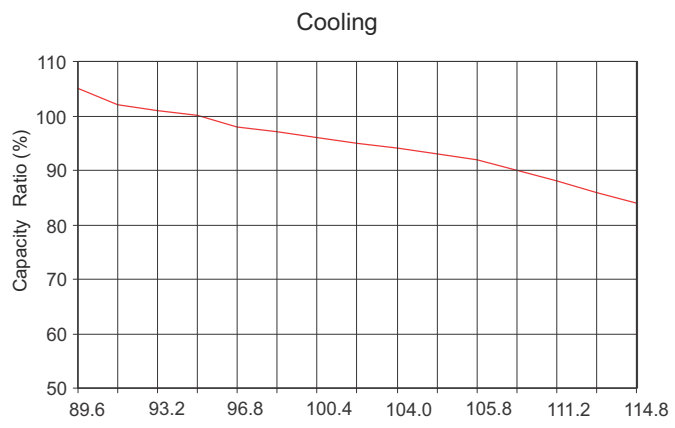
18K (9K + 9K)

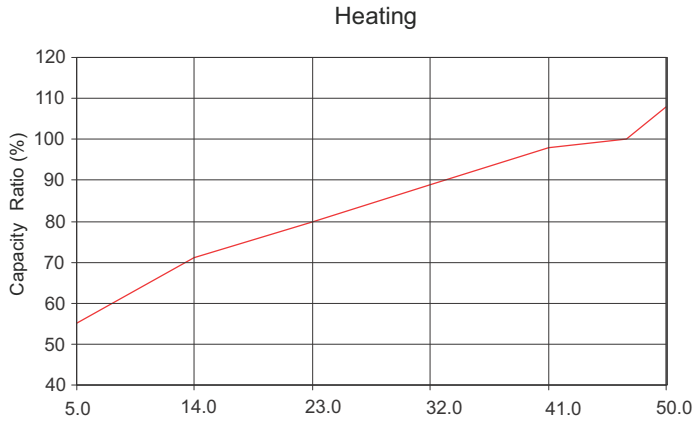


24K/30K (9K + 9K + 9K)



42K





OPERATION DATA

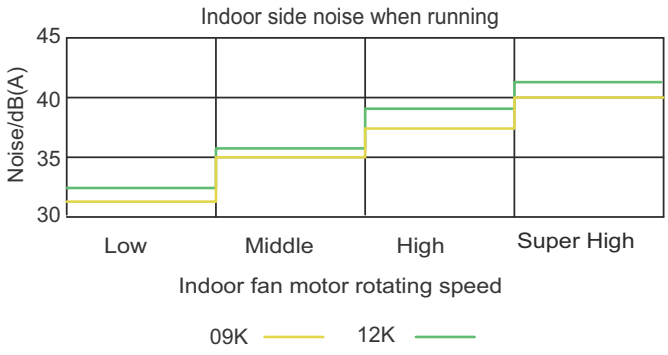
Temperature Condition (°F)		Model name	Standard Pressure	Heat Exchanger Pipe Temperature		Indoor Fan Mode	Outdoor Fan Mode	Compressor Frequency (Hz)
Indoor	Outdoor		P (MPa)	T1 (°F)	T2 (°F)			
COOLING								
80/66.9	95/75	18K(9K+9K)	0.9 to 1.1	50 to 55	150 to 104	Super High	High	76
80/66.9	95/75	24K/30K(9K+9K+9K)	0.9 to 1.1	54 to 59	158 to 104	Super High	High	70
80/66.9	95/75	42K	0.9 to 1.1	53.6 to 57.2	158 to 104	Super High	High	75
HEATING								
70/60	46.9/43	18K(9K+9K)	2.3 to 2.7	150 to 100	35 to 40	Super High	High	76
70/60	46.9/43	24K/30K(9K+9K+9K)	2.3 to 2.7	150 to 100	35 to 40	Super High	High	76
70/60	46.9/43	42K	2.3 to 2.8	158 to 95	33.8 to 41.0	Super High	High	85

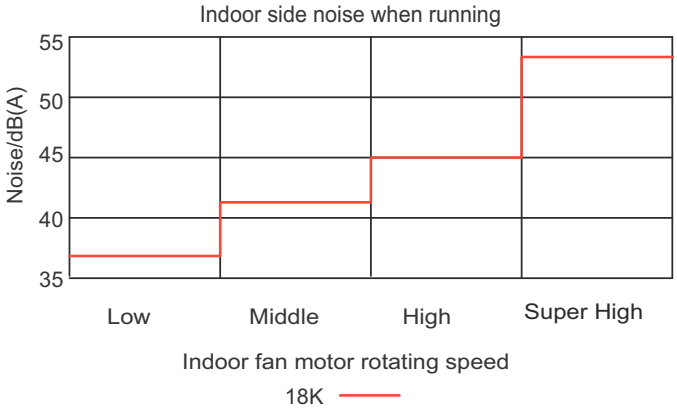
Notes:
Measure surface temperature of heat exchanger pipe around center of heat exchanger path U bent. (Thermistor thermometer).
Connecting piping condition: 24.6 ft.
P: pressure of air pipe connected to the indoor and outdoor units (gas valve side),
T1: Inlet and outlet temperature for evaporator,
T2: Inlet and outlet temperature for condenser.

SOUND DATA

INDOOR UNITS

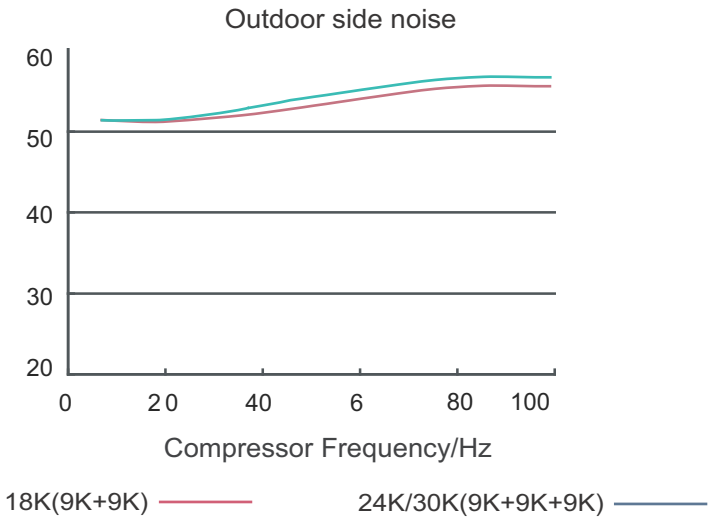
09K/12K/18K Unit



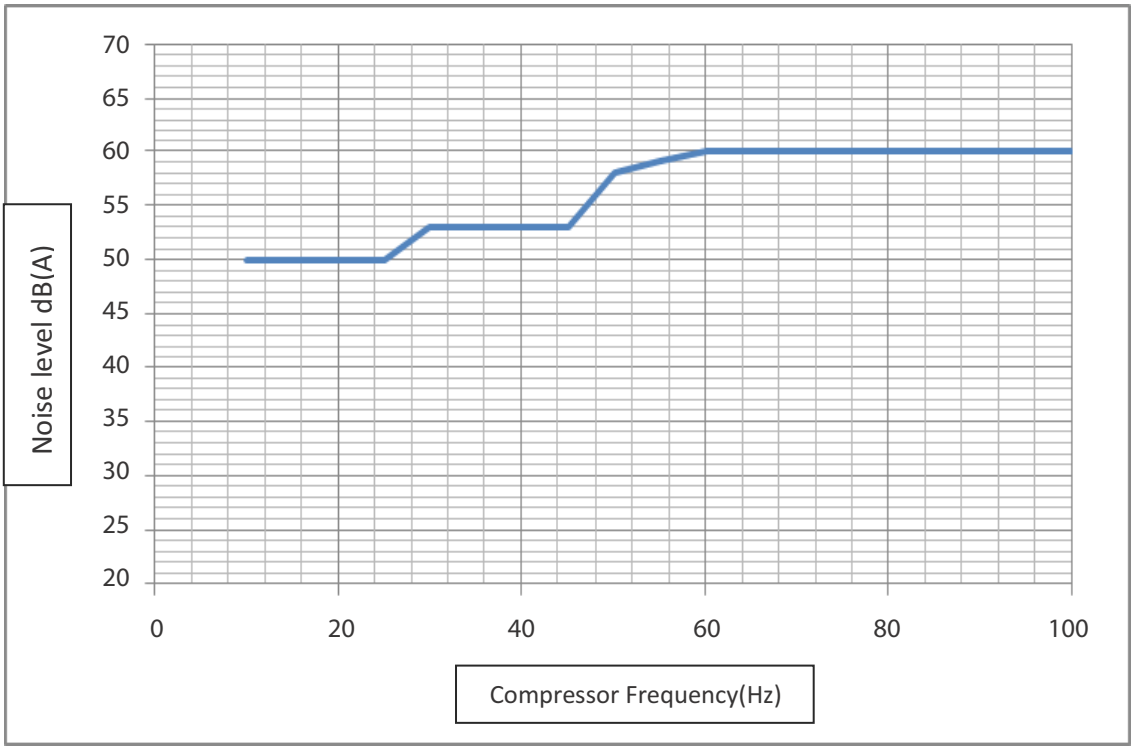


OUTDOOR UNITS

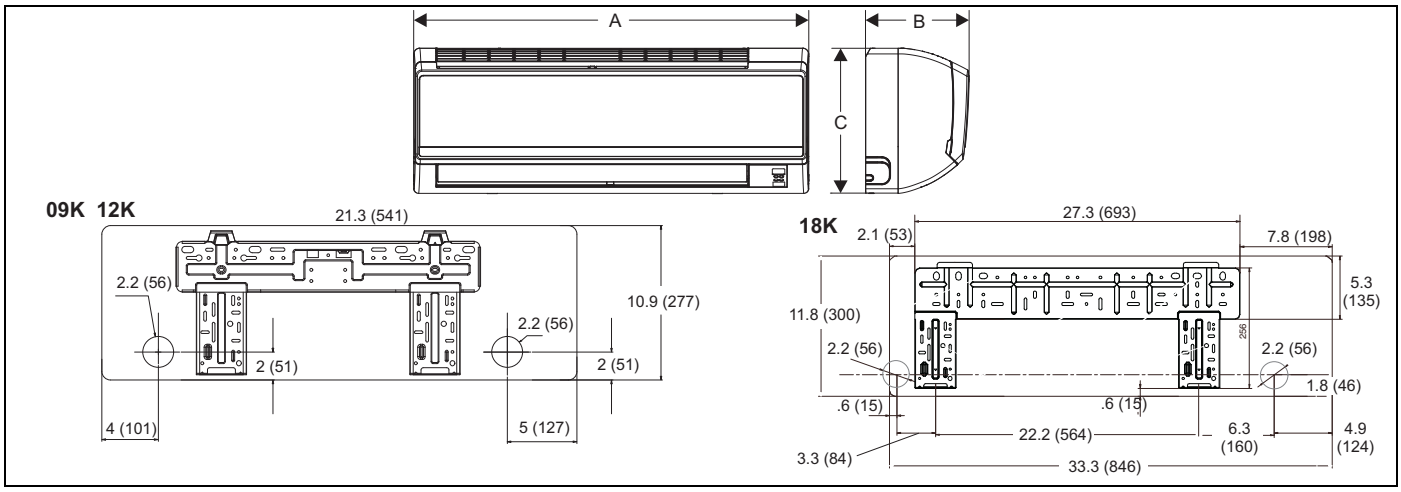
18K/24K/30K Unit



42K Unit

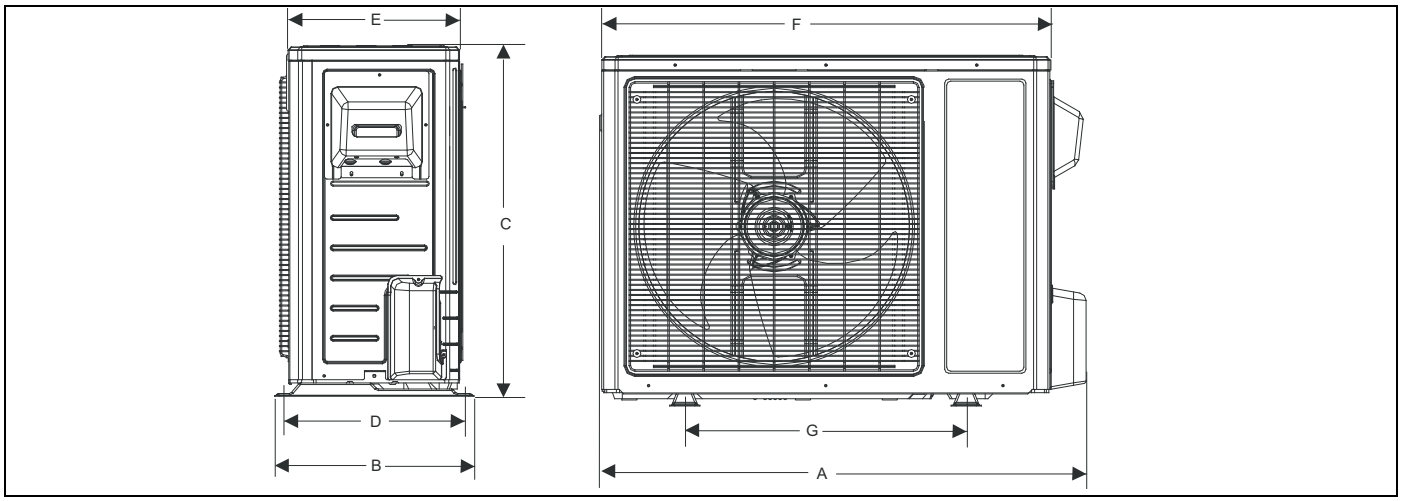


PRODUCT CONSTUCTION VIEW & DIMENSIONS



Indoor Unit Dimensions

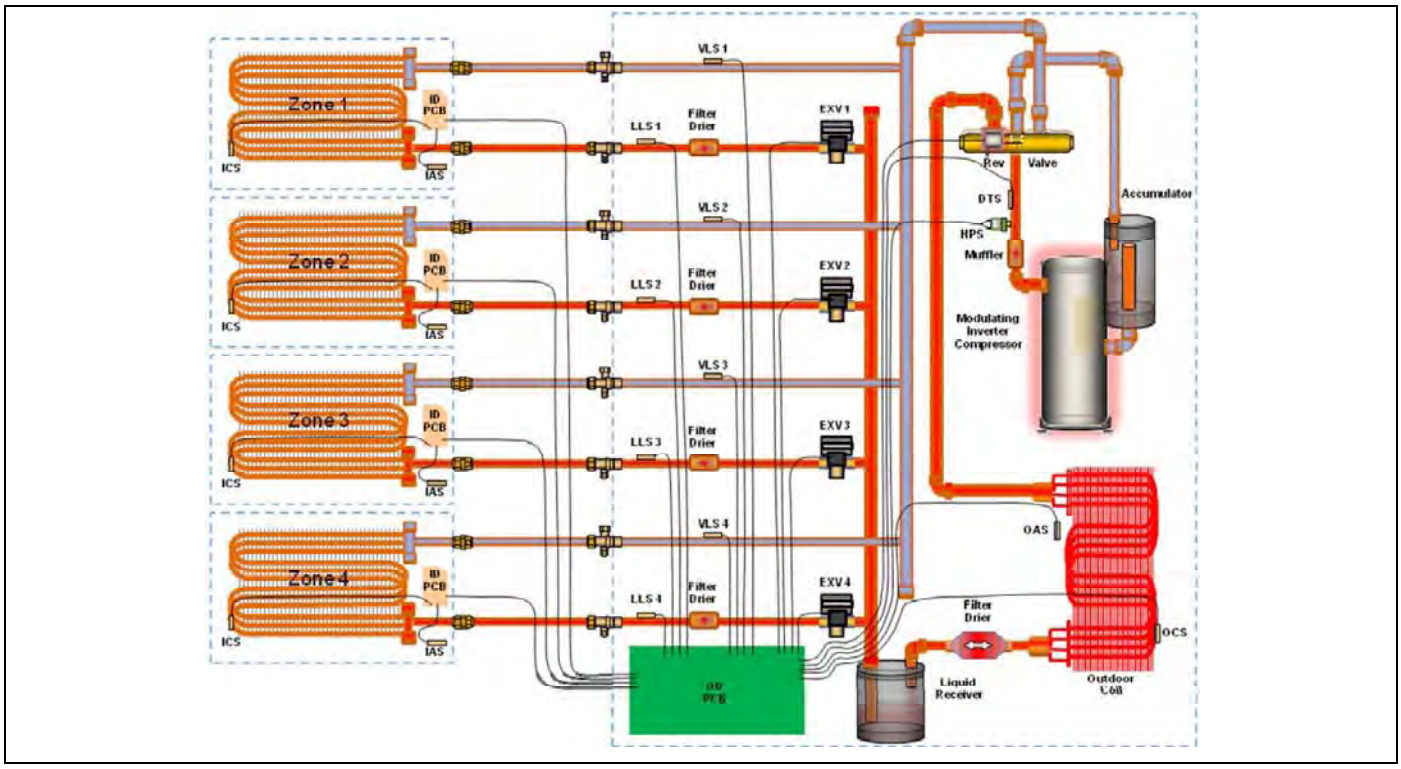
Model Size	A	B	C	Unit Gross Weight
				Heat Pump
09K & 12K	33 (838)	7 (178)	11 (279)	37 lbs (17 kg)
18K	37 (940)	8 (203)	12 (305)	46 lbs (21 kg)



Outdoor Unit Dimensions

Model Size	A	B	C	D	E	F	G	Unit Gross Weight
								Heat Pump
18K	35 (899)	14.9 (378)	23.5 (596)	13.5 (343)	12.4 (316)	32 (815)	21.7 (550)	106 lbs (48 kg)
24K	37 (946)	15.6 (396)	27.6 (700)	14.5 (368)	13.4 (341)	35.1 (892)	22 (560)	146 lbs (66 kg)
30K	37 (946)	15.6 (396)	27.6 (700)	14.5 (368)	13.4 (341)	35.1 (892)	22 (560)	148 lbs (67 kg)
42K	43 (1087)	17.3 (440)	43.4 (1103)	15.8 (401)	14.2 (360)	40 (1015)	25 (631)	247 lbs (112 kg)

REFRIGERANT SYSTEM DIAGRAM



See Page 8 for notes.

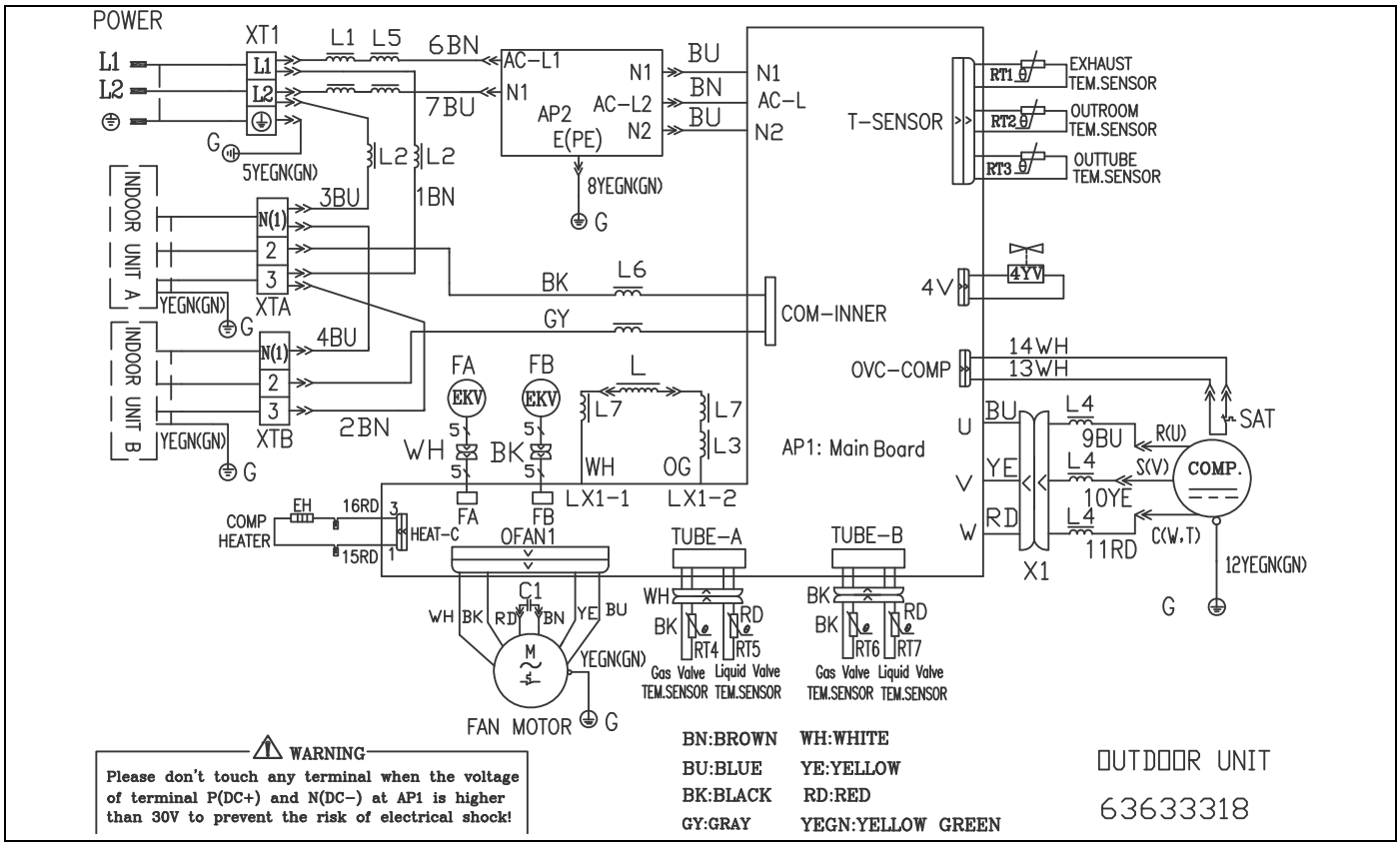
WIRING DIAGRAM

Electrical Data

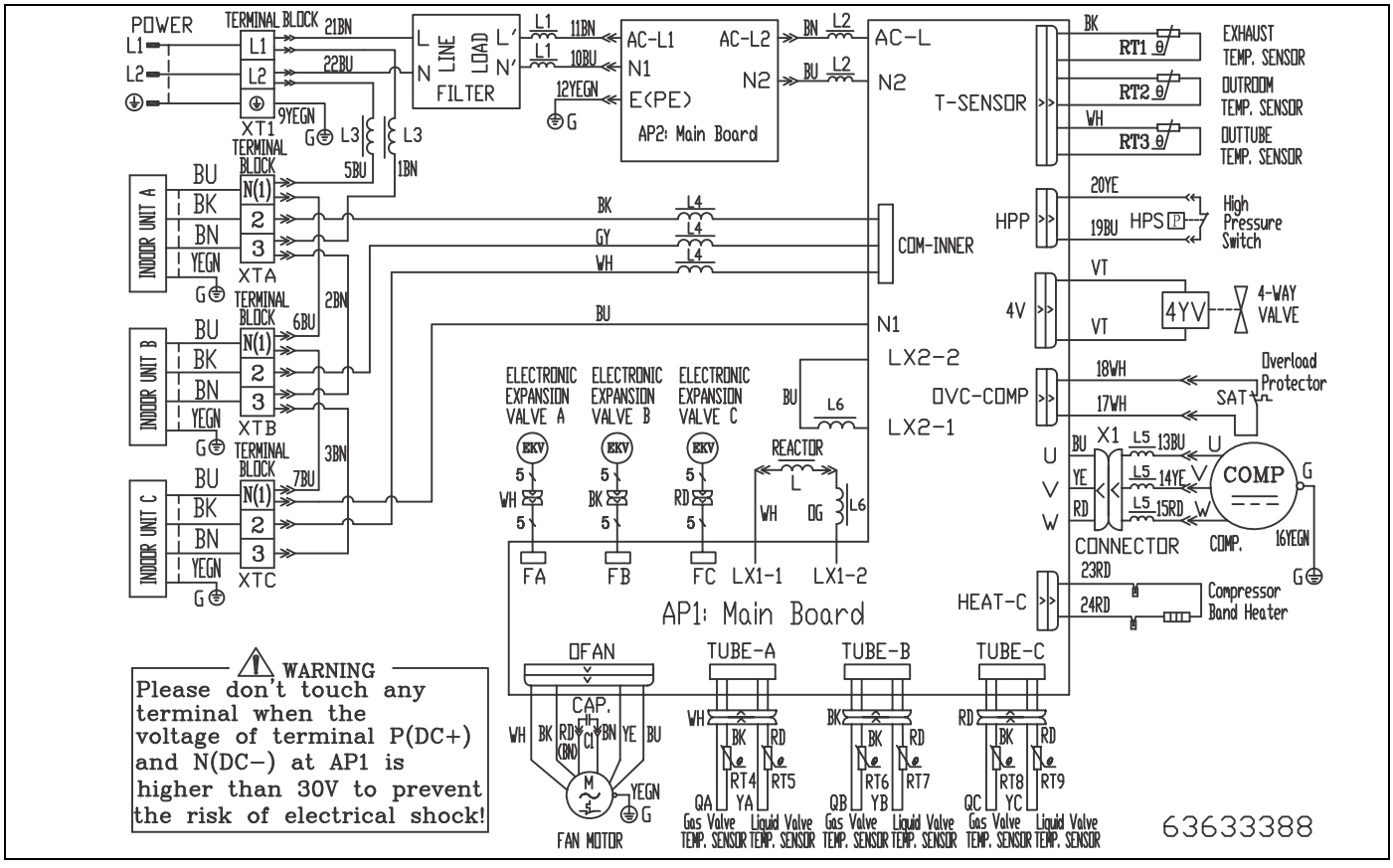
Symbol	Color Symbol	Symbol	Color Symbol	Symbol	Part Name
INDOOR UNIT					
BU	BlUE	BN	BROWN	⏚	PROTECTIVE EARTH
YE	YELLOW	GN	GREEN	/	/
RD	RED	BK	BLACK	/	/
YEGN	YELLOW GREEN	/	/	/	/

OUTDOOR UNIT					
Symbol	**Part Name**	**Symbol**	**Color Symbol**	**Symbol**	**Color Symbol**
C1	CBB61	BN	BROWN	WH	WHITE
C2	CBB65	BU	BLUE	YE	YELLOW
SAT	OVERLOAD	BK	BLACK	RD	RED
COMP	COMPRESSOR	OG	ORANGE	YEGN	YELLOW GREEN
⏚	PROTECTIVE EARTH	WH	WHITE	/	/

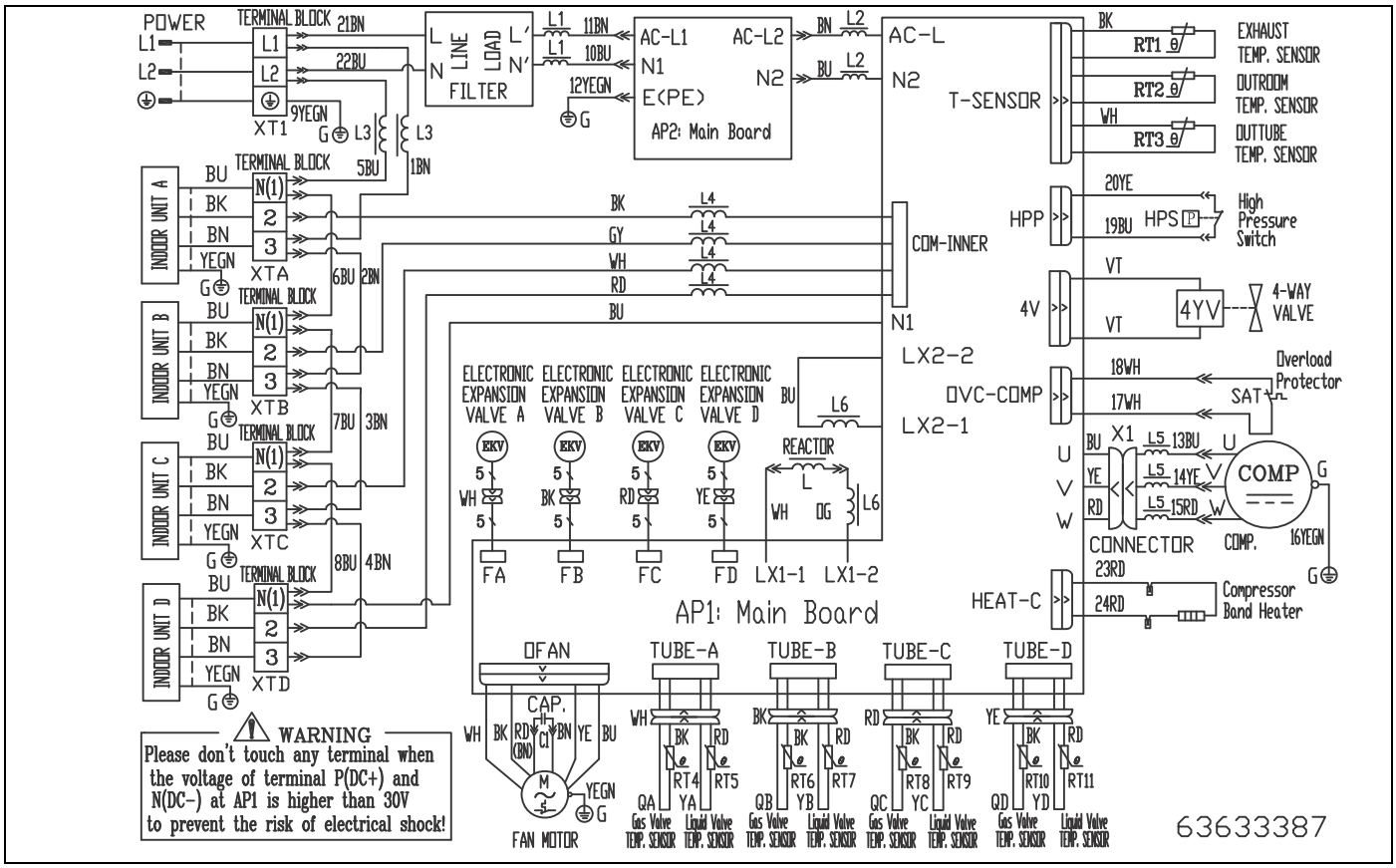
Electrical Wiring



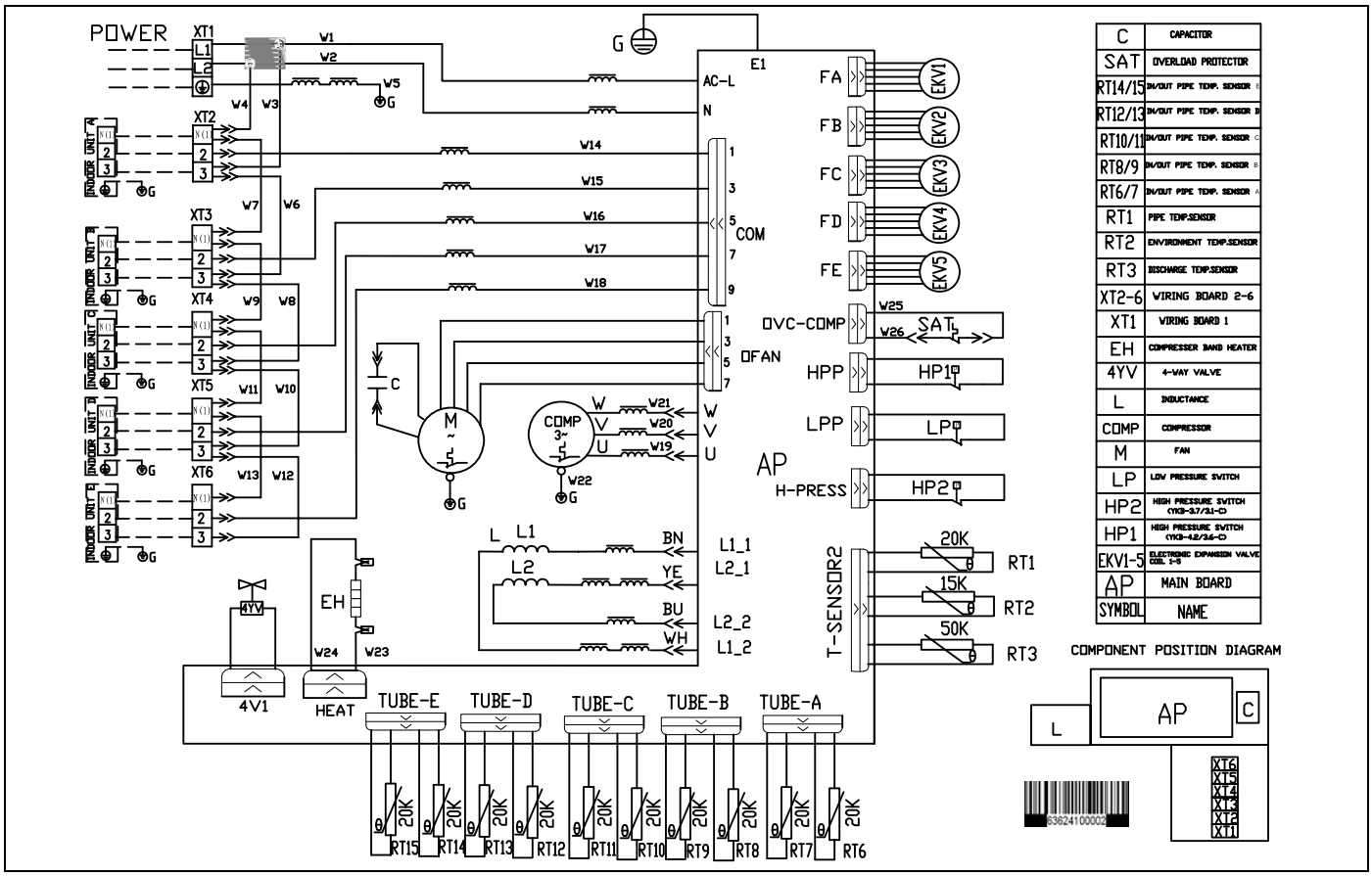
18K Outdoor Heat Pumps



24K Outdoor Heat Pumps



30K Outdoor Heat Pumps



42K Outdoor Heat Pumps

DESCRIPTION OF EACH CONTROL OPERATION

System Basic Functions

Cooling Mode

If the compressor is not running and one of the indoor units makes a call for cooling, the electronic expansion valve, the outdoor fan and the compressor start operating. When a call for cooling is satisfied, the compressor stops immediately and the outdoor fan stops running after 1 minute. In cases when some indoor units have satisfied the cooling set point temperature and some have not, the compressor does not stop running. It adjusts to a lower frequency. For the indoor unit with no cooling requirement, the corresponding electronic expansion valve closes to OP.

1. **Cooling Mode Switching to Heating Mode:** When the unit transfers to heating mode, the 4-way valve is energized after the compressor stops for 2 minutes. The other components react the same way described in Cooling Mode section. When the switch occurs, the 4-way valve closes.
2. **Outdoor Fan in Cooling Mode:** Once the compressor starts running, the outdoor fan follows after 5 seconds delay. The outdoor fan runs at high speed for the first 3 minutes then it will adjust to run at set speed. The fan will run at every speed for at least 80 seconds. When the number of running indoor units is changed, the outdoor unit will run according to sections 1.3.5.1 and 1.3.5.2. When the compressor stops, the outdoor fan continues to run at current speed and stops after 1 minute delay.

Dry Mode

1. The dry conditions and process are the same as those in cooling mode;
2. The status of 4-way valve: closed;
3. The temperature setting range: 61 °F ~ 86 °F;

Heating Mode

1. Heating Mode:

- When one of the indoor units calls for heating operation, that indoor unit starts heating operation.
- When all the indoor units satisfy heating conditions, the compressor stops and the outdoor fan stops 1 minute after.
- When some of the indoor units satisfy heating conditions and other don't, the compressor reduces its frequency immediately and operates according to the required frequency load.
- When heating mode switches to cooling mode (or dry mode) or fan mode, the compressor stops and the power of 4-way valve is shut off 2 minutes after, then the outdoor fan stops 1 minute later. The 4-way valve stays energized.

2. **Outdoor fan in heating mode:** The outdoor fan starts 5 seconds before the start of the compressor. It will run at its maximum speed for 40 seconds. The fan will run at every speed for at least 80 seconds. When the compressor stops, the outdoor fan stops 1 minute later.
3. **Defrosting function:** When defrost conditions are met, the compressor stops, the electronic expansion valves of all indoor units are wide open, the outdoor fan stops 40 seconds after the compressor is de-energized, the 4-way valve reverses direction of the refrigerant flow, which is followed by the start of the compressor. The defrost timer is initiated and the frequency of the compressor increases to reach the defrost frequency.
4. **Oil-returned in heating mode:** Oil-return happens when the system has been operating at low frequency for a long time. When this occurs, H1 will be displayed on the indoor unit. The oil return timer in heating mode is 5 minutes.

Fan Mode

When the system is in fan mode operation, the compressor, the outdoor fan and the 4-way valve are de-energized. Temperature setting range for fan mode is between 61 °F and 86 °F.

Protection Functions

Mode Conflict Protection of indoor unit

When different indoor units have different mode settings, the system will run as follow:

- The mode of the first operating indoor unit is the basic mode. This operating mode is compared to the mode of the other indoor units to determine if there is a conflict (cooling mode (dry mode) in conflict with heating mode).
- Fan mode in conflict with heating mode. In this case, the heating mode is the basic mode no matter what mode was initiated first.

1. Overload Protection

- Cooling Overload
  - When $T_{tube} \leq 126^0$F, the system operates normally.
    - When $T_{tube} \geq 131^0$F, compressor frequency is not allowed to increase.
    - When $T_{tube} \geq 136^0$F, compressor will run at reduced frequency.
    - When $T_{tube} \geq 144^0$F, compressor is de-energized and the indoor fan will continue to run at preset speed.
  - Heating Overload
    - When $T_{tube} \leq 126^0$F, the system operates normally.
    - When $T_{tube} \geq 131^0$F, compressor frequency is not allowed to increase.
    - When $T_{tube} \geq 136^0$F, compressor will run at reduced frequency.
    - When $T_{tube} \geq 144^0$F, compressor is de-energized and the indoor fan will continue to run for about 30 seconds and stops.

2. High Discharge Temperature Compressor Protection

- When compressor discharge temperature is ≥ 208 ^{0}F, compressor frequency is not allowed to increase.
- When compressor discharge temperature is ≥ 217 ^{0}F, compressor will run at reduced frequency.
- When compressor discharge temperature is ≥ 230 ^{0}F, the compressor will stop.
- When compressor discharge temperature is ≤ 194 ^{0}F and the compressor has been idle for at least 3 minutes, it will resume its operation.

3. Communication Fault

If the system fails to receive communication signals for more than 3 minutes, its operation will stop.

4. Module Protection

- Under module protection mode, the compressor will stop.
- If the compressor remains idle for at least 3 minutes, it will resume its operation.
- If module protection occurs six consecutive times, the compressor will not be allowed to start again.

5. Overload Protection

- If the overload temperature is over 239 ^{0}F, the compressor will stop and the outdoor fan will stop after 30 seconds.
- If the overload temperature drops below 203 ^{0}F, the compressor overload protection is reset.
- If voltage on the DC bus is below 150V or over 420V, the compressor will stop and the outdoor fan will stop after 30 seconds.

- When voltage on the DC bus returns to its normal value and the compressor has been idle for at least 3 minutes, the compressor will resume its operation.

6. Temperature Sensors Faults

Designation of Sensors	Faults
Indoor ambient temperature	The sensor is detected to be open-circuited or short-circuited for a continuous 30 seconds.
Indoor tube temperature	The sensor is detected to be open-circuited or short-circuited for a continuous 30 seconds.
Outdoor ambient temperature	The sensor is detected to be open-circuited or short-circuited for a continuous 30 seconds.
Outdoor tube temperature	The sensor is detected to be open-circuited or short-circuited for a continuous 30 seconds and no detection is performed within 10 minutes after defrost begins.
Exhaust	After the compressor has operated for 3minutes, the sensor is detected to be open-circuited or short-circuited for a continuous 30 seconds.
Overload	After the compressor has operated for 3minutes, the sensor is detected to be open-circuited or short-circuited for a continuous 30 seconds.

RESISTANCE TABLES

Resistance Table of Ambient Temperature Sensor for Indoor and Outdoor Units (15K)

Temp. (°F)	Resistance (kΩ)	Temp. (°F)	Resistance (kΩ)	Temp. (°F)	Resistance (kΩ)	Temp. (°F)	Resistance (kΩ)
-2.2	138.1	68	18.75	138.2	3.848	208.4	1.071
-0.4	128.6	69.8	17.93	140	3.711	210.2	1.039
1.4	121.6	71.6	17.14	141.8	3.579	212	1.009
3.2	115	73.4	16.39	143.6	3.454	213.8	0.98
5	108.7	75.2	15.68	145.4	3.333	215.6	0.952
6.8	102.9	77	15	147.2	3.217	217.4	0.925
8.6	97.4	78.8	14.36	149	3.105	219.2	0.898
10.4	92.22	80.6	13.74	150.8	2.998	221	0.873
12.2	87.35	82.4	13.16	152.6	2.896	222.8	0.848
14	82.75	84.2	12.6	154.4	2.797	224.6	0.825
15.8	78.43	86	12.07	156.2	2.702	226.4	0.802
17.6	74.35	87.8	11.57	158	2.611	228.2	0.779
19.4	70.5	89.6	11.09	159.8	2.523	230	0.758
21.2	66.88	91.4	10.63	161.6	2.439	231.8	0.737
23	63.46	93.2	10.2	163.4	2.358	233.6	0.717
24.8	60.23	95	9.779	165.2	2.28	235.4	0.697
26.6	57.18	96.8	9.382	167	2.206	237.2	0.678
28.4	54.31	98.6	9.003	168.8	2.133	239	0.66
30.2	51.59	100.4	8.642	170.6	2.064	240.8	0.642
32	49.02	102.2	8.297	172.4	1.997	242.6	0.625
33.8	46.6	104	7.967	174.2	1.933	244.4	0.608
35.6	44.31	105.8	7.653	176	1.871	246.2	0.592
37.4	42.14	107.6	7.352	177.8	1.811	248	0.577
39.2	40.09	109.4	7.065	179.6	1.754	249.8	0.561
41	38.15	111.2	6.791	181.4	1.699	251.6	0.547
42.8	36.32	113	6.529	183.2	1.645	253.4	0.532
44.6	34.58	114.8	6.278	185	1.594	255.2	0.519
46.4	32.94	116.6	6.038	186.8	1.544	257	0.505
48.2	31.38	118.4	5.809	188.6	1.497	258.8	0.492
50	29.9	120.2	5.589	190.4	1.451	260.6	0.48
51.8	28.51	122	5.379	192.2	1.408	262.4	0.467
53.6	27.18	123.8	5.197	194	1.363	264.2	0.456
55.4	25.92	125.6	4.986	195.8	1.322	266	0.444
57.2	24.73	127.4	4.802	197.6	1.282	267.8	0.433
59	23.6	129.2	4.625	199.4	1.244	269.6	0.422
60.8	22.53	131	4.456	201.2	1.207	271.4	0.412
62.6	21.51	132.8	4.294	203	1.171	273.2	0.401
64.4	20.54	134.6	4.139	204.8	1.136	275	0.391
66.2	19.63	136.4	3.99	206.6	1.103	276.8	0.382

Resistance Table of Outdoor and Indoor Tube Temperature Sensors (20K)							
Temp. (°F)	**Resistance (kΩ)**	**Temp. (°F)**	**Resistance (kΩ)**	**Temp. (°F)**	**Resistance (kΩ)**	**Temp. (°F)**	**Resistance (kΩ)**
-2.2	181.4	68	25.01	138.2	5.13	208.4	1.427
-0.4	171.4	69.8	23.9	140	4.948	210.2	1.386
1.4	162.1	71.6	22.85	141.8	4.773	212	1.346
3.2	153.3	73.4	21.85	143.6	4.605	213.8	1.307
5	145	75.2	20.9	145.4	4.443	215.6	1.269
6.8	137.2	77	20	147.2	4.289	217.4	1.233
8.6	129.9	78.8	19.14	149	4.14	219.2	1.198
10.4	123	80.6	18.13	150.8	3.998	221	1.164
12.2	116.5	82.4	17.55	152.6	3.861	222.8	1.131
14	110.3	84.2	16.8	154.4	3.729	224.6	1.099
15.8	104.6	86	16.1	156.2	3.603	226.4	1.069
17.6	99.13	87.8	15.43	158	3.481	228.2	1.039
19.4	94	89.6	14.79	159.8	3.364	230	1.01
21.2	89.17	91.4	14.18	161.6	3.252	231.8	0.983
23	84.61	93.2	13.59	163.4	3.144	233.6	0.956
24.8	80.31	95	13.04	165.2	3.04	235.4	0.93
26.6	76.24	96.8	12.51	167	2.94	237.2	0.904
28.4	72.41	98.6	12	168.8	2.844	239	0.88
30.2	68.79	100.4	11.52	170.6	2.752	240.8	0.856
32	65.37	102.2	11.06	172.4	2.663	242.6	0.833
33.8	62.13	104	10.62	174.2	2.577	244.4	0.811
35.6	59.08	105.8	10.2	176	2.495	246.2	0.77
37.4	56.19	107.6	9.803	177.8	2.415	248	0.769
39.2	53.46	109.4	9.42	179.6	2.339	249.8	0.746
41	50.87	111.2	9.054	181.4	2.265	251.6	0.729
42.8	48.42	113	8.705	183.2	2.194	253.4	0.71
44.6	46.11	114.8	8.37	185	2.125	255.2	0.692
46.4	43.92	116.6	8.051	186.8	2.059	257	0.674
48.2	41.84	118.4	7.745	188.6	1.996	258.8	0.658
50	39.87	120.2	7.453	190.4	1.934	260.6	0.64
51.8	38.01	122	7.173	192.2	1.875	262.4	0.623
53.6	36.24	123.8	6.905	194	1.818	264.2	0.607
55.4	34.57	125.6	6.648	195.8	1.736	266	0.592
57.2	32.98	127.4	6.403	197.6	1.71	267.8	0.577
59	31.47	129.2	6.167	199.4	1.658	269.6	0.563
60.8	30.04	131	5.942	201.2	1.609	271.4	0.549
62.6	28.68	132.8	5.726	203	1.561	273.2	0.535
64.4	27.39	134.6	5.519	204.8	1.515	275	0.521
66.2	26.17	136.4	5.32	206.6	1.47	276.8	0.509

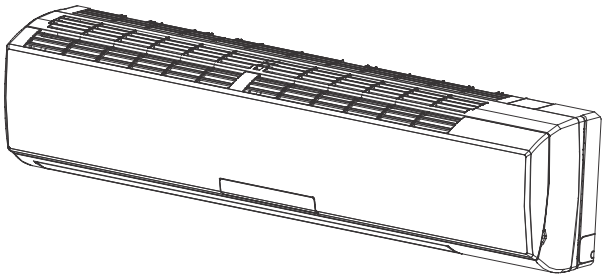
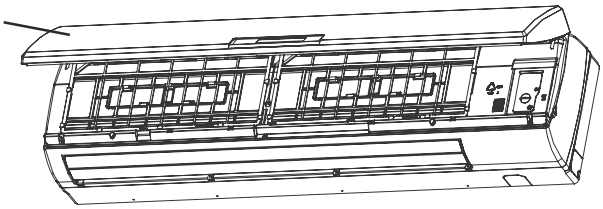
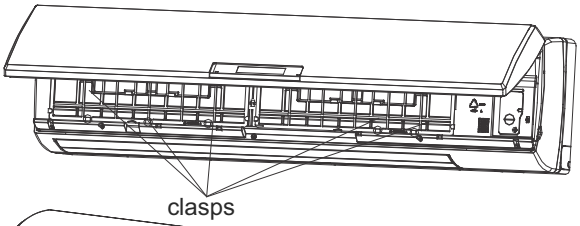
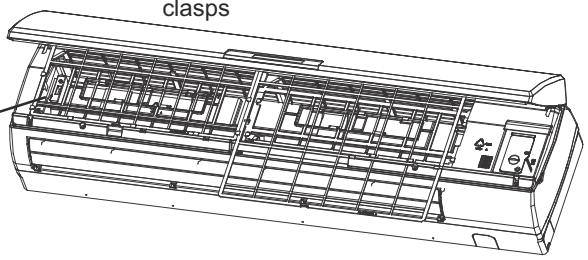
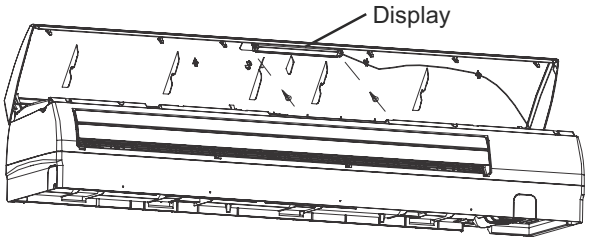
Resistance Table of Outdoor Discharge Temperature Sensor (50K)							
Temp. (°F)	**Resistance (kΩ)**	**Temp. (°F)**	**Resistance (kΩ)**	**Temp. (°F)**	**Resistance (kΩ)**	**Temp. (°F)**	**Resistance (kΩ)**
-20.2	853.5	50	98	120.2	18.34	190.4	4.754
-18.4	799.8	51.8	93.42	122	17.65	192.2	4.609
-16.6	750	53.6	89.07	123.8	16.99	194	4.469
-14.8	703.8	55.4	84.95	125.6	16.36	195.8	4.334
-13	660.8	57.2	81.05	127.4	15.75	197.6	4.204
-11.2	620.8	59	77.35	129.2	15.17	199.4	4.079
-9.4	580.6	60.8	73.83	131	14.62	201.2	3.958
-7.6	548.9	62.6	70.5	132.8	14.09	203	3.841
-5.8	516.6	64.4	67.34	134.6	13.58	204.8	3.728
-4	486.5	66.2	64.33	136.4	13.09	206.6	3.619
-2.2	458.3	68	61.48	138.2	12.62	208.4	3.514
-0.4	432	69.8	58.77	140	12.17	210.2	3.413
1.4	407.4	71.6	56.19	141.8	11.74	212	3.315
3.2	384.5	73.4	53.74	143.6	11.32	213.8	3.22
5	362.9	75.2	51.41	145.4	10.93	215.6	3.129
6.8	342.8	77	49.19	147.2	10.54	217.4	3.04
8.6	323.9	78.8	47.08	149	10.18	219.2	2.955
10.4	306.2	80.6	45.07	150.8	9.827	221	2.872
12.2	289.6	82.4	43.16	152.6	9.489	222.8	2.792
14	274	84.2	41.34	154.4	9.165	224.6	2.715
15.8	259.3	86	39.61	156.2	8.854	226.4	2.64
17.6	245.6	87.8	37.96	158	8.555	228.2	2.568
19.4	232.6	89.6	36.38	159.8	8.268	230	2.498
21.2	220.5	91.4	34.88	161.6	7.991	231.8	2.431
23	209	93.2	33.45	163.4	7.726	233.6	2.365
24.8	198.3	95	32.09	165.2	7.47	235.4	2.302
26.6	199.1	96.8	30.79	167	7.224	237.2	2.241
28.4	178.5	98.6	29.54	168.8	6.998	239	2.182
30.2	169.5	100.4	28.36	170.6	6.761	240.8	2.124
32	161	102.2	27.23	172.4	6.542	242.6	2.069
33.8	153	104	26.15	174.2	6.331	244.4	2.015
35.6	145.4	105.8	25.11	176	6.129	246.2	1.963
37.4	138.3	107.6	24.13	177.8	5.933	248	1.912
39.2	131.5	109.4	23.19	179.6	5.746	249.8	1.863
41	125.1	111.2	22.29	181.4	5.565	251.6	1.816
42.8	119.1	113	21.43	183.2	5.39	253.4	1.77
44.6	113.4	114.8	20.6	185	5.222	255.2	1.725
46.4	108	116.6	19.81	186.8	5.06	257	1.682
48.2	102.8	118.4	19.06	188.6	4.904	258.8	1.64

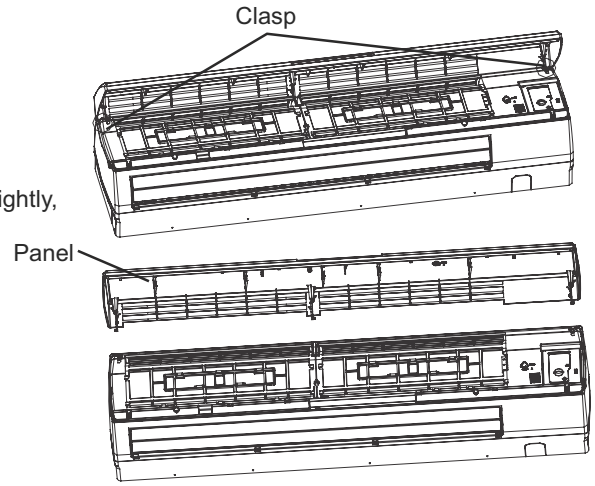
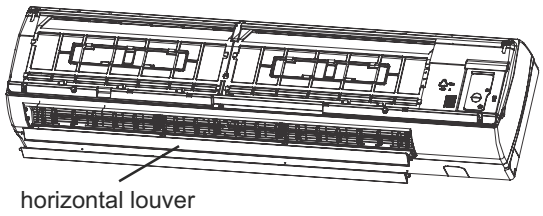
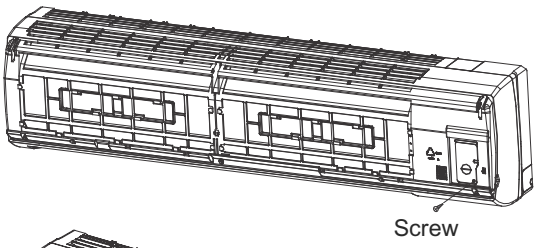
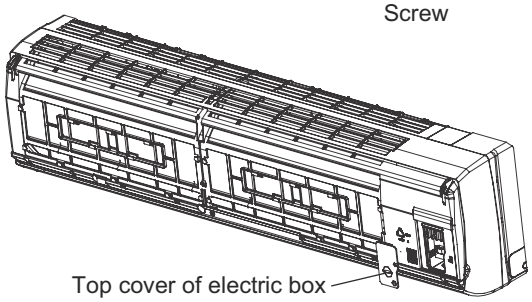
REMOVAL PROCEDURE

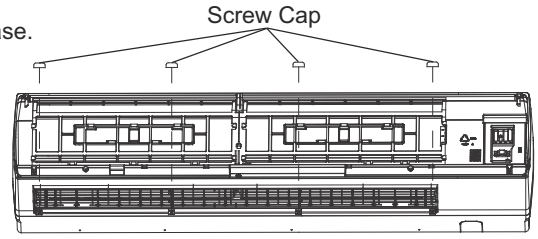
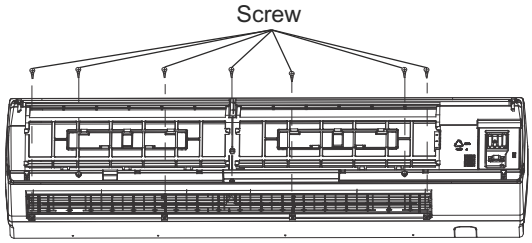
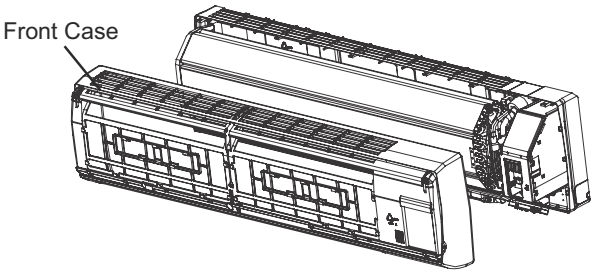
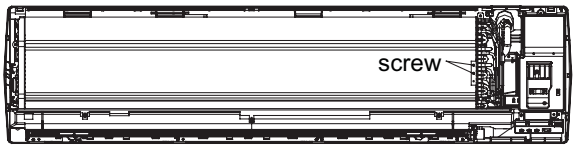
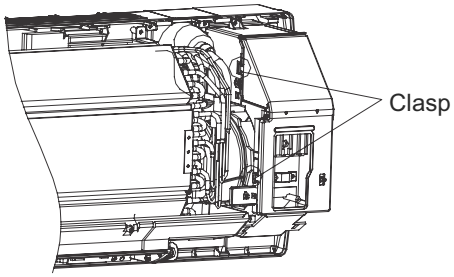
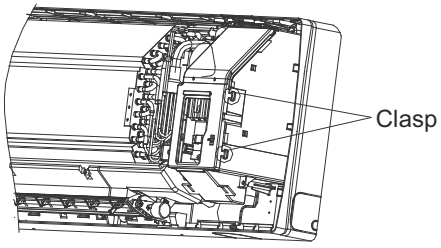
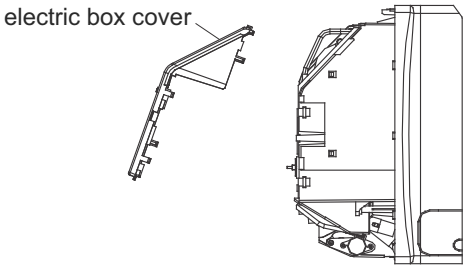
Removal Procedure of Indoor Unit

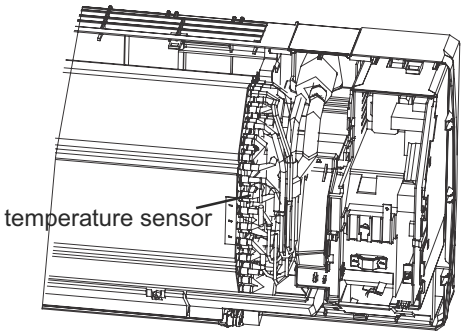
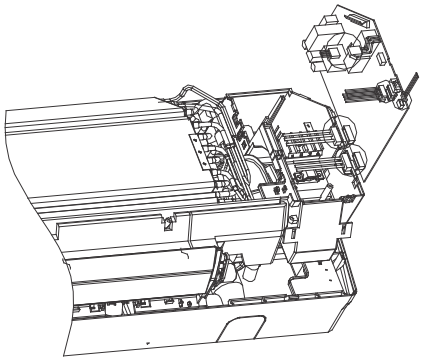
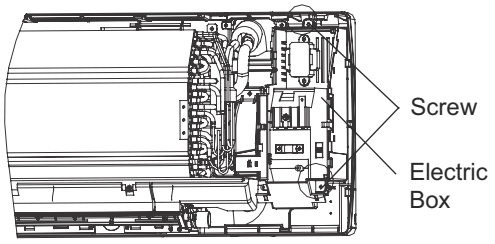
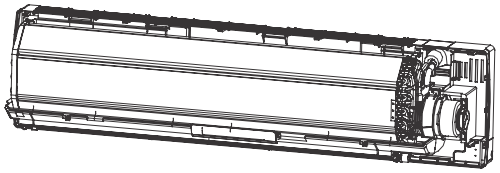
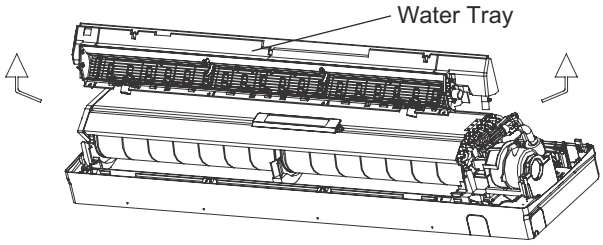
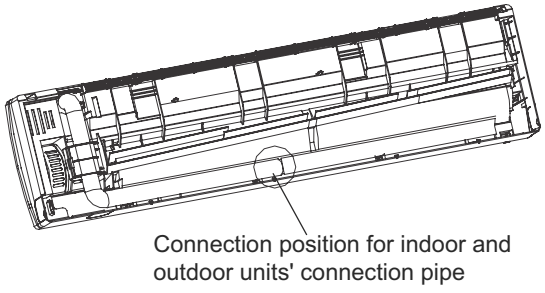
⚠WARNING

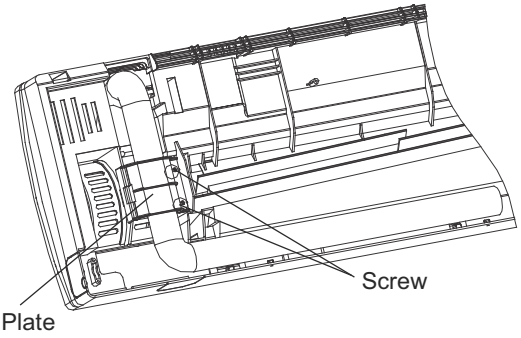
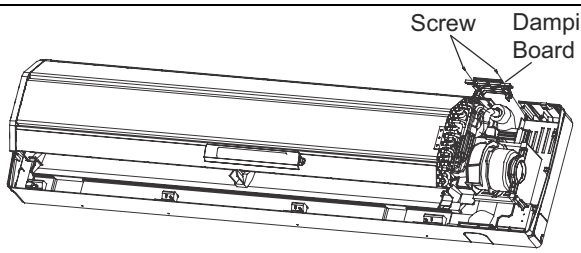
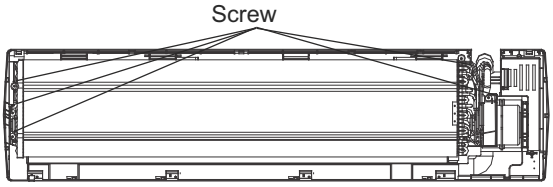
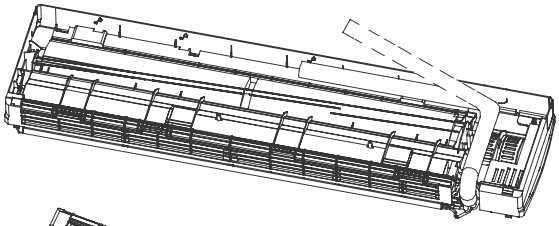
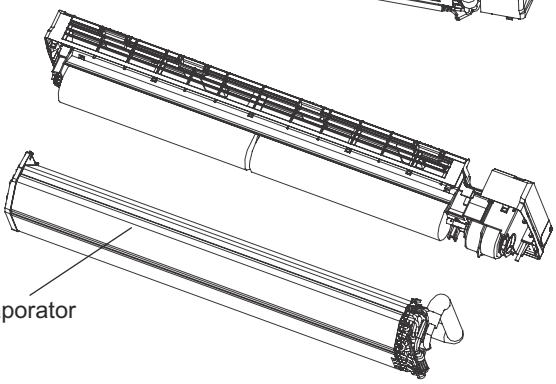
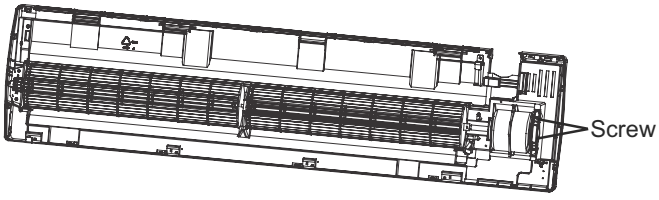
Be sure to wait for a minimum of 10 minutes after turning off all power supplies before disassembly.

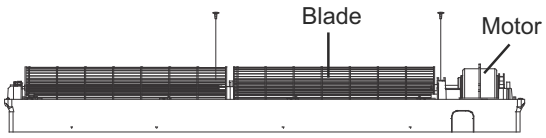
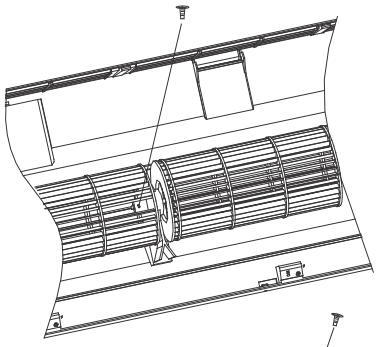
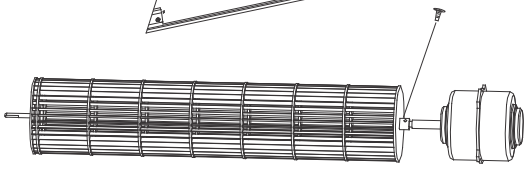
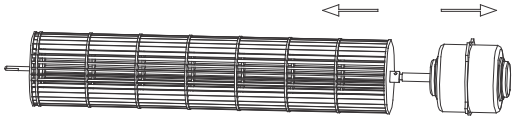
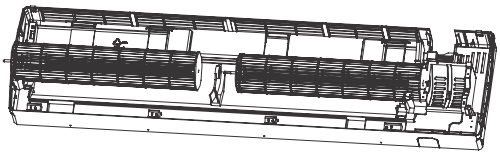
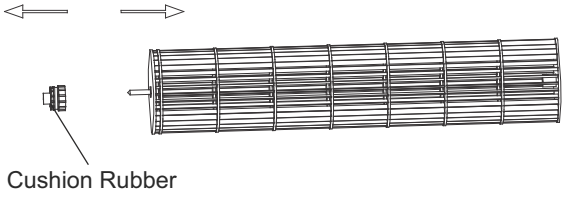
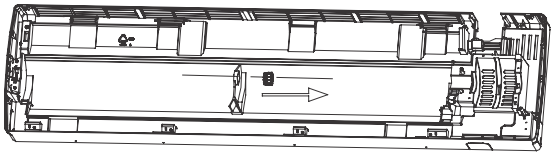
STEPS	PROCEDURES
1. Before disassembly of the unit	Axonometric drawing for the complete unit. 
2. Remove filter	a. Open the panel.  b. Loosen the clasps on the filter.  c. Draw out two pieces of filter. 
3. Remove display	Remove 2 screws fixing display, and then remove the filter. 

STEPS	PROCEDURES
4. Remove panel	Pull the clasps at both sides slightly, and then remove the panel. 
5. Remove horizontal louver	Remove the axial bush on the horizontal louver, and then remove the horizontal louver. 
6. Remove top cover of electric box	a. Remove screws fixing the top cover of electric box.  b. Remove the top cover of electric box. 

STEPS	PROCEDURES
7. Remove front case	a. Remove the screw caps on front case.  b. Remove screws connecting the front case.  c. Remove the front case. 
8. Remove earthing wire	Remove earthing screws, and then remove the earthing wire. 
9. Remove electric box cover	a. Loosen clasps at the left side of electric box.  b. Loosen clasps on the right side of electric box.  c. Remove electric box cover. 

STEPS	PROCEDURES
10. Remove temperature sensor	Pull out the indoor temperature sensor. 
11. Remove electric box	a. Pull out 6 sockets on PCB board.  b. Pull out two screws on electric box.  c. Remove the electric box. 
12. Remove water tray	Pull the water tray upwards, and then remove the water tray. 
13. Remove connection pipe between indoor and outdoor units	Separate the connection pipe between indoor and outdoor units. 

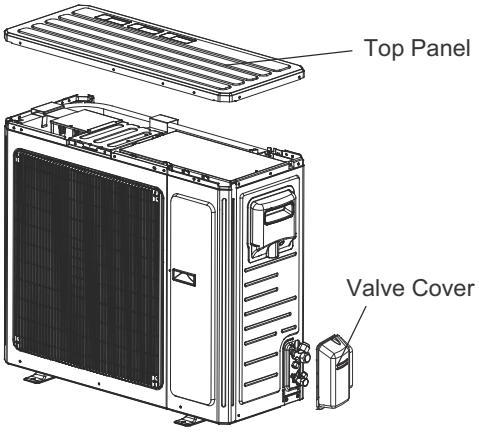
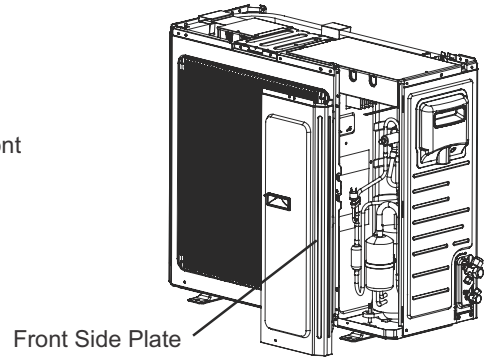
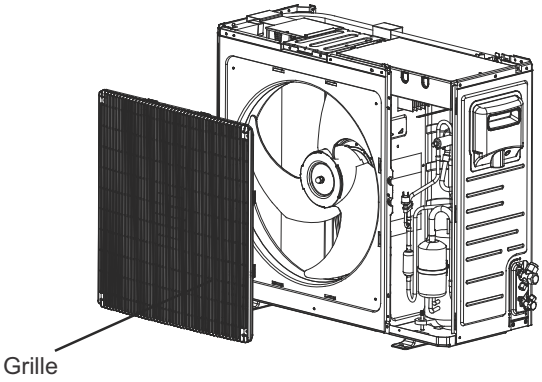
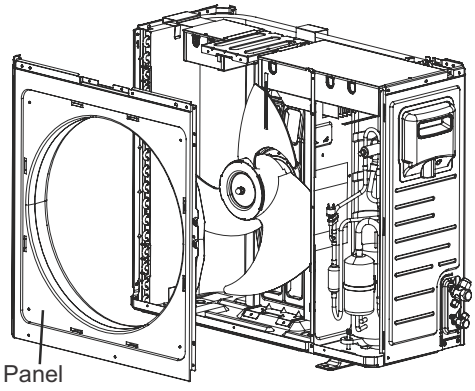
STEPS	PROCEDURES
14. Remove pipe-stopping plate	Remove two screws on pipe-stopping plate for indoor unit, and then remove the pipe-stopping 
15. Remove damping board	Remove 2 screws on damping board, and then remove the damping board. 
16. Remove evaporator	a. Remove screws between evaporator and bottom case.  b. Turn over the indoor unit and adjust the pipe line to the position as shown by the broken line.  c. Lift up the evaporator, and then remove the evaporator. 
17. Remove the fixing plate of motor	Remove 2 screws on fixing plate of motor, and then remove the fixing pate of motor. 

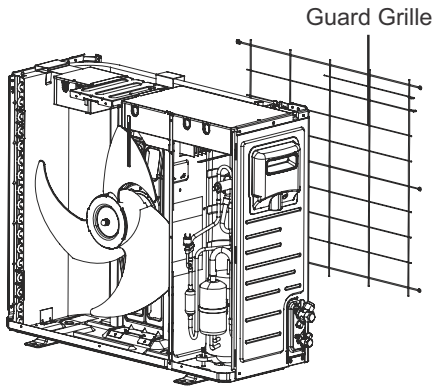
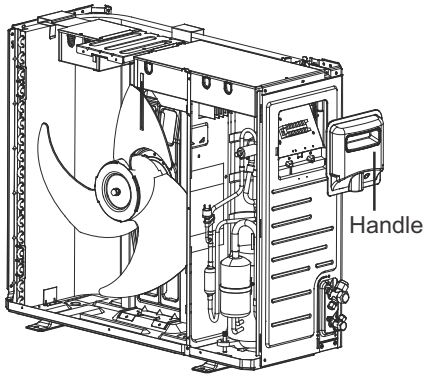
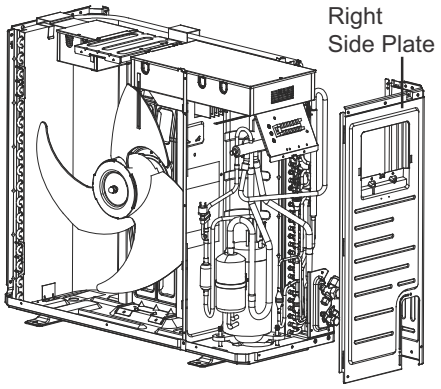
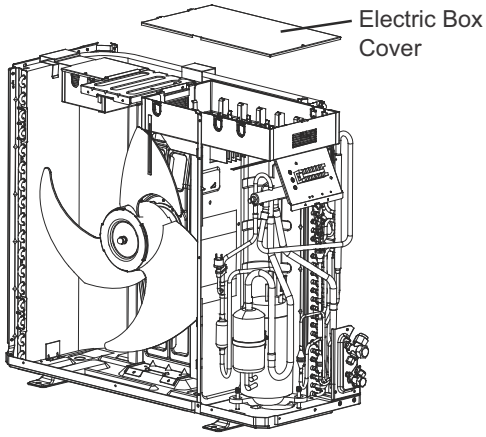
STEPS	PROCEDURES
18. Remove cross flow blade and motor	a. Remove screws fixing cross flow blade and motor.    b. Remove the motor sub-assy.  c. Separate two cross flow blade. 
19. Remove cushion rubber	a. Remove the cushion rubber on cross flow blade.  b. Remove the cushion rubber from the base. 

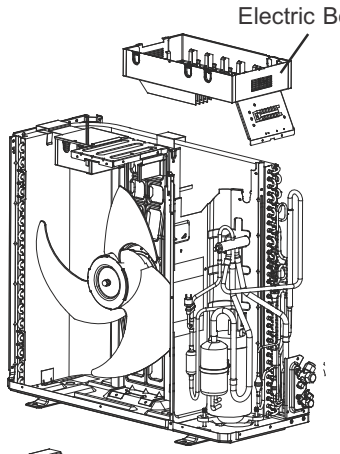
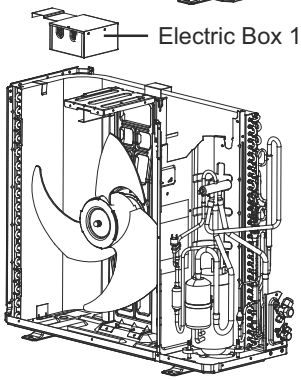
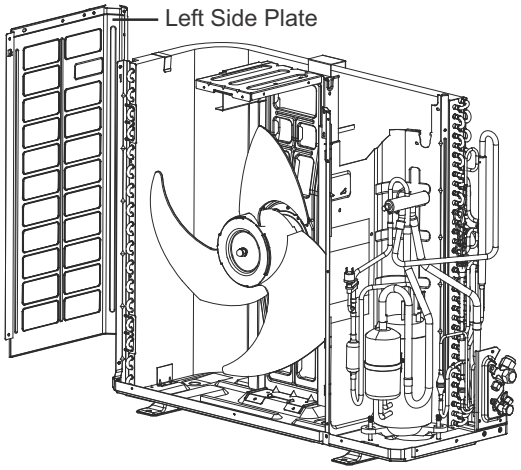
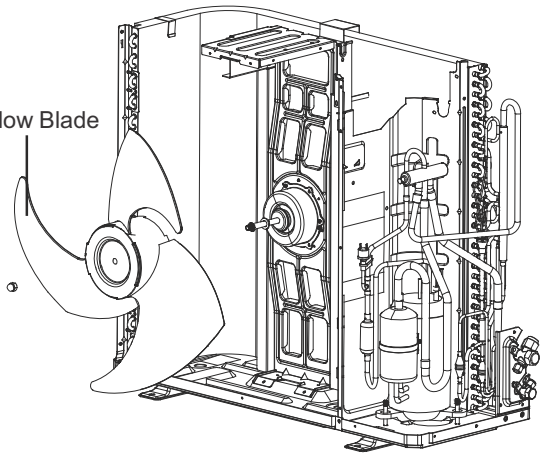
Removal Procedure of Outdoor Unit

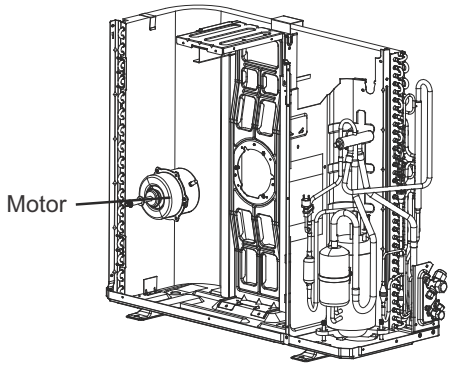
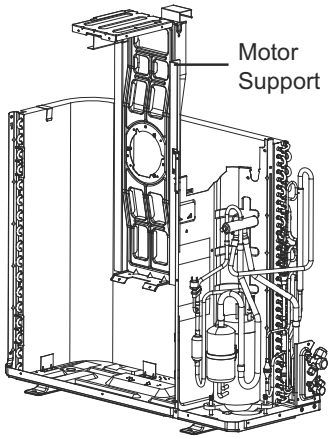
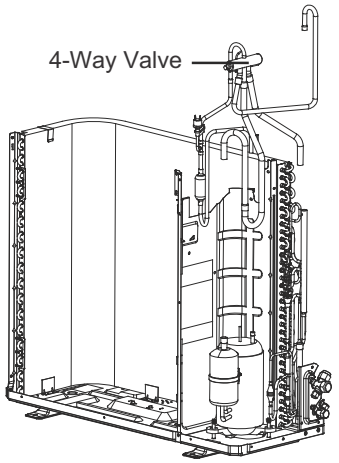
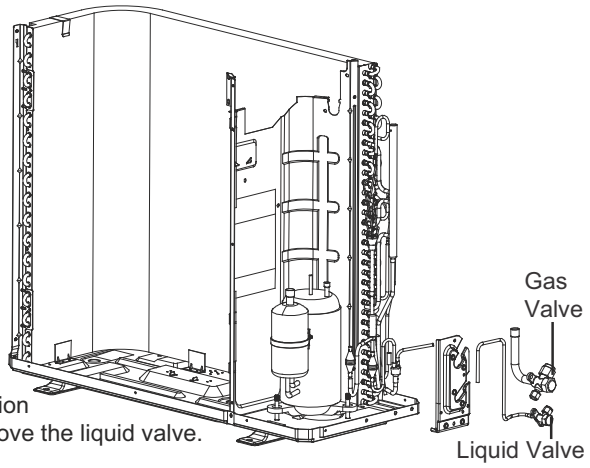
⚠WARNING

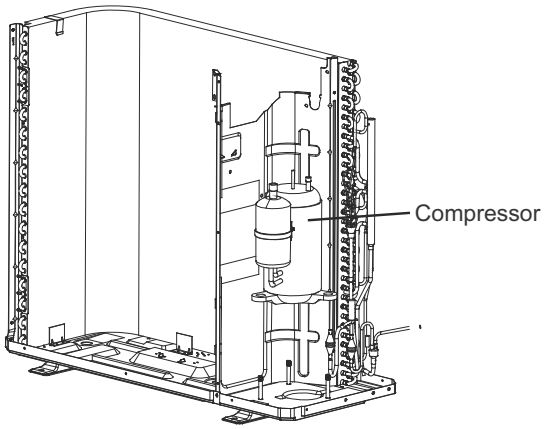
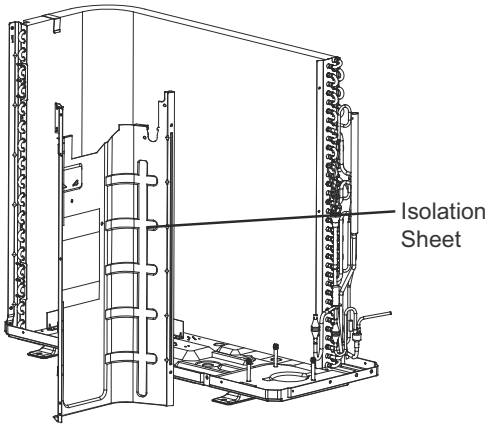
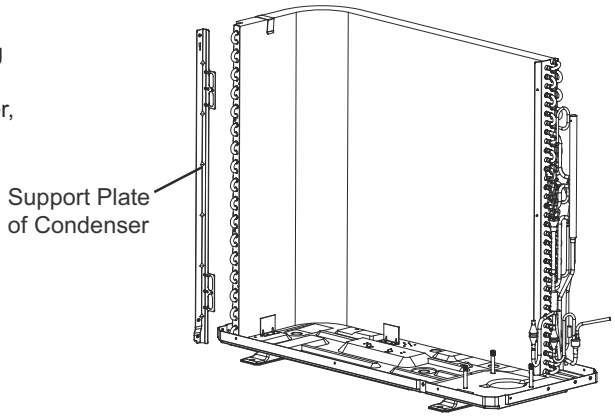
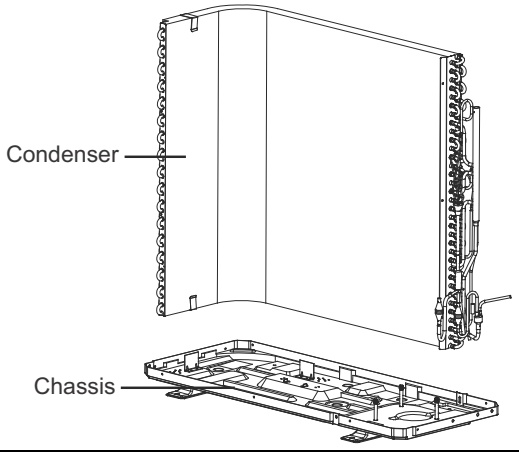
Be sure to wait for a minimum of 10 minutes after turning off all power supplies before disassembly.

STEPS	PROCEDURES
1. Remove top cover and front side plate	a. Use the screwdriver to remove the screws connecting the top panel and panel and side panels. Remove the top panel. Loosen the screws fixing the valve cover and then remove the valve cover.  b. Loosen the screws connecting the front side panel and mask and chassis. Remove the front side panel. 
2. Remove grille	Twist off the screws connecting the grille and panel, and then remove the grille. 
3. Remove panel	Twist off the screws connecting the panel, chassis and motor support with screwd-river, and then remove the panel. 

STEPS	PROCEDURES
4. Remove guard grille	Twist off the screws fixing the guard grille and then remove the guard grille. 
5. Remove handle	Twist off the screws fixing the handle and then remove the handle. 
6. Remove right side plate	Twist off the screws connecting the right side plate and chassis, valve support and condenser, and then remove the right side plate. 
7. Remove electric box	a. Twist off the screws on electric box cover with screwdriver, and then remove the electric box cover. 

STEPS	PROCEDURES
7. Remove electric box (Continued)	b. Twist off the screws on electric box, cut off the tieline with scissors or pliers, pull out the wiring terminal, pull it upwards to remove the electric box.  c. Twist off the screws between electric box 1 and left side plate with screwdriver, pull it upwards to remove the electric box 1. 
8. Remove left side plate	Twist off the screws connecting the left side plate and chassis with screwdriver, and then remove the left side plate. 
9. Remove axial flow blade	Twist off the nuts on blade with wrench and then remove the axial flow blade. 

STEPS	PROCEDURES
10. Remove motor and motor support	a. Twist off the tapping screws fixing the motor, pull out the pin of leading wire for motor and then remove the motor.  b. Twist off the tapping screws fixing the motor support, pull it upwards and then remove the motor support. 
11. Remove 4-way valve	Unsolder the pipeline between compressor, condenser, gas and liquid valve, and then remove the 4-way valve. (note: release all refrigerant before unsoldering). 
12. Remove gas valve and liquid valve	Twist off the 2 bolts fixing the valve sub-assy. Unsolder the soldering joint between gas valve and air-return pipe and then remove the gas valve. (note: when unsoldering the soldering joint, wrap the gas valve with wet cloth completely to avoid the damage to valve, and release all refrigerant completely at first). Unsolder the soldering joint between liquid valve and connection pipe of liquid valve, and then remove the liquid valve. 

STEPS	PROCEDURES
13. Remove compressor	Twist off the 3 foot nuts on compressor and then remove the compressor. 
14. Remove isolation sheet	Twist off the screws connecting isolation sheet and end plate of condenser and chassis, and then remove the isolation sheet. 
15. Remove support plate of condenser	Twist off the screws connecting the support plate of condenser and condenser with screwdriver, and then remove the support plate of condenser. 
16. Remove chassis and condenser	Pull it upwards to separate the chassis and condenser. 

ACCESSORIES

PART NUMBER	DESCRIPTION
OTHER ACCESSORIES	
S1-DL30510050	Remote Control
S1-DL26150003	Remote Control Holder
S1-DL11200511	Catechin Filter
S1-230-DL16	5/8” Drain Line
MOUNTING ACCESSORIES	
S1-1836-2	PAD,UNIT,ECOPAD,18X36X2 (M50)
S1-ACP1836-2	PAD,UNIT,DURAGRID,18X36X2 (M50)
S1-EL1838-3	PAD,UNIT,ELITE PLASTIC,18X38X3 (M16)
S1-UC1636-2	PAD,UNIT,ULTRALITE,16X36X2 (M20)
S1-UC1636-3	PAD,UNIT,ULTRALITE,16X36X3 (M15)
S1-230-MB14W	BLOCK,MOUNTING,MINISPLIT,14",PK OF 2(M6)
S1-230-MB17W	BLOCK,MOUNTING,MINISPLIT,17",PK OF 2(M6)
S1-230-MB36W	BLOCK,MOUNTING,MINISPLIT,36",PK OF 2(M6)
S1-230-MBCW	CAP,END,MTG BLOCK,MINISPLIT,4/PACK (M25)
S1-WBB300	BRACKET,WALL,MINISPLIT,300-LB
S1-CNG	STAND,CONDENSER
S1-PR-351N-M	RISER,CONDENSER,4"H X 18"L (M20)
S1-NP-R410 10PK	CAP,REFRIG,LOCKING,NOVENT,PINK,R-410
S1-NP-R410 2PK	CAP,REFRIG,LOCKING,NOVENT,PINK,R-410
S1-NP-R410 SDT	SCREWDRIVER/KEY,CAP,REFRIG,LOCKING,R-410
CONDENSATE HANDLING	
S1-ASP-MA-UNI	KIT,PUMP,CONDS,MINISPLIT,100-250V,AQUA
S1-ASP-MAXO-230	KIT,PUMP,CONDS,MINISPLIT,230V,ORANGE
S1-ASP-MLF-UNI	KIT,PUMP,CONDS,MINISPLIT,100-250V,LIME
S1-ASP-MW-UNI	KIT,PUMP,CONDS,MINISPLIT,100-250V,WHITE
S1-CVMINI	PUMP,CONDS,MINISPLIT,120/230V (M6)
S1-IQP-KUBE	PUMP,CONDS,0-15 FT,115V,MINISPLIT (M6)
S1-IQP-KUBE-SHROUD	PUMP,CONDS,0-15 FT,115V,MINI,W/SHRD (M6)
S1-553676	PUMP,CONDS,46',230V,MINISPLIT,TPR (M4)
S1-553712	PUMP,CONDS,29',230V,MSPLIT,EC-OP-K (M4)
S1-EZT-180	TRAP,CONDENSATE,WATERLESS,5/8" (M10)
S1-SS610E	SWITCH,CONDS,MINISPLIT,W/DIAG DISP (M12)
S1-230-DPML	PAN,CONDS,OUTDOOR,MINISPLIT,LARGE
S1-230-DPMM	PAN,CONDS,OUTDOOR,MINISPLIT,MEDIUM
S1-230-DPPL	PAN,CONDS,OUTDOOR,MINISPLIT,LARGE
S1-230-DPPM	PAN,CONDS,OUTDOOR,MINISPLIT,MEDIUM
S1-DH-16S	HOSE,DRAIN,16MM (5/8") X 20' (M5)
S1-230-DL16	LINE,DRAIN,MINISPLIT,5/8" ID X 160'
S1-230-DL20	LINE,DRAIN,MINISPLIT,3/4" ID X 160'
S1-230-DLF16	ADAPTER,DRAIN,MINISPLIT,16MM (M10)
S1-230-DLF18	ADAPTER,DRAIN,MINISPLIT,18MM (M10)
S1-230-DLF20	ADAPTER,DRAIN,MINISPLIT,20MM (M10)
S1-230-DLF25	ADAPTER,DRAIN,MINISPLIT,25MM (M10)
S1-230-DLF32	ADAPTER,DRAIN,MINISPLIT,32MM (M10)
S1-230-DLFY	Y,DRAIN,MINISPLIT (M10)
LINESET COVERS AND FITTINGS	
S1-LDK-122-W	KIT,LINESET COVER,4.5" X 12',WHITE
S1-LDK-92-W	KIT,LINESET COVER,3.5" X 12',WHITE
S1-NFP-75	SLEEVE,WALL,ADJUSTABLE,3"DIA (M10)
S1-230-CP3	CPLG,UNION,SPEEDICHANNEL,3" (M10)
S1-230-CP4	CPLG,UNION,SPEEDICHANNEL,4" (M10)
S1-230-CP6	CPLG,UNION,SPEEDICHANNEL,6" (M10)
S1-230-D3	COVER,LINESET,SPEEDICHANNEL,3" (M6)
S1-230-D4	COVER,LINESET,SPEEDICHANNEL,4" (M6)
S1-230-D6	COVER,LINESET,SPEEDICHANNEL,6" (M5)
S1-230-DC3	CAP,END,SPEEDICHANNEL,3" (M10)
S1-230-DC4	CAP,END,SPEEDICHANNEL,4" (M10)
S1-230-DC6	CAP,END,SPEEDICHANNEL,6" (M10)
S1-230-DCLIP	CLIP,SPEEDICHANNEL,PK OF 50
S1-230-DE3	END,DUCT,SPEEDICHANNEL,3" (M10)
S1-230-DE4	END,DUCT,SPEEDICHANNEL,4" (M10)
S1-230-DE6	END,DUCT,SPEEDICHANNEL,6" (M10)
S1-230-DSCREW	SCREW,SPEEDICHANNEL,PK OF 100
S1-230-EB3	ELBOW,INSIDE,90DEG,SPEEDICHANNEL,3"(M10)
S1-230-EB4	ELBOW,INSIDE,90DEG,SPEEDICHANNEL,4"(M10)
S1-230-EB6	ELBOW,INSIDE,90DEG,SPEEDICHANNEL,6"(M10)
S1-230-EIN3	ELBOW,OUTSD,90DEG,SPEEDICHANNEL,3"(M10)
S1-230-EIN4	ELBOW,OUTSD,90DEG,SPEEDICHANNEL,4"(M10)
S1-230-EIN6	ELBOW,OUTSD,90DEG,SPEEDICHANNEL,6"(M10)
S1-230-FB3	BEND,FLAT,90 DEG,SPEEDICHANNEL,3" (M10)
S1-230-FB4	BEND,FLAT,90 DEG,SPEEDICHANNEL,4" (M10)
S1-230-FB453	BEND,FLAT,45 DEG,SPEEDICHANNEL,3" (M10)
S1-230-FB454	BEND,FLAT,45 DEG,SPEEDICHANNEL,4" (M10)
S1-230-FB456	BEND,FLAT,45 DEG,SPEEDICHANNEL,6" (M10)
S1-230-FB6	BEND,FLAT,90 DEG,SPEEDICHANNEL,6" (M10)
S1-230-FJ3	JOINT,FLEX.SPEEDICHANNEL,3" (M10)
S1-230-FJ4	JOINT,FLEX.SPEEDICHANNEL,4" (M10)
S1-230-FR3	ESCUTCH,FLAT,WALL,SPEEDICHANNEL,3" (M10)
S1-230-FR4	ESCUTCH,FLAT,WALL,SPEEDICHANNEL,4" (M10)
S1-230-FR6	ESCUTCH,FLAT,WALL,SPEEDICHANNEL,6" (M10)
S1-230-LFB3	BEND,FLAT,LGRAD,90DEG,SPEEDICHNL,3"(M10)
S1-230-LFB4	BEND,FLAT,LGRAD,90DEG,SPEEDICHNL,4"(M10)
S1-230-LFB6	BEND,FLAT,LGRAD,90DEG,SPEEDICHNL,6"(M10)
S1-230-TC34	CPLG,REDUCER,SPEEDICHANNEL,3"X4" (M10)
S1-230-TC46	CPLG,REDUCER,SPEEDICHANNEL,4"X6" (M10)
S1-230-TJ4	TEE,SPEEDICHANNEL,4" (M10)
S1-230-TJ6	TEE,SPEEDICHANNEL,6" (M10)
S1-230-WC3	CVR,WALL PEN,SPEEDICHANNEL,3" (M10)
S1-230-WC4	CVR,WALL PEN,SPEEDICHANNEL,4" (M10)
S1-230-WC6	CVR,WALL PEN,SPEEDICHANNEL,6" (M10)
S1-230-WR3	ESCUTCHEON,WALL,SPEEDICHANNEL,3" (M10)
S1-230-WR4	ESCUTCHEON,WALL,SPEEDICHANNEL,4" (M10)
S1-230-WR6	ESCUTCHEON,WALL,SPEEDICHANNEL,6" (M10)
S1-230-WS2	SLV,WALL PEN,SPEEDICHANNEL,2-1/2" (M10)
MINISPLIT LINESETS (BOTH LINES INSULATED WITH FLARE NUTS)	
S1-52642437015	LINEST,MINISPLIT,1/4LX3/8SX15',3/8(M8)
S1-52642437020	LINEST,MINISPLIT,1/4LX3/8SX20',3/8(M8)
S1-52642437025	LINEST,MINISPLIT,1/4LX3/8SX25',3/8(M8)
S1-52642437030	LINEST,MINISPLIT,1/4LX3/8SX30',3/8(M8)
S1-52642437035	LINEST,MINISPLIT,1/4LX3/8SX35',3/8(M8)
S1-52642437050	LINEST,MINISPLIT,1/4LX3/8SX50',3/8(M8)
S1-52642438015	LINEST,MINISPLIT,1/4LX1/2SX15',3/8(M8)
S1-52642438020	LINEST,MINISPLIT,1/4LX1/2SX20',3/8(M8)
S1-52642438025	LINEST,MINISPLIT,1/4LX1/2SX25',3/8(M8)
S1-52642438030	LINEST,MINISPLIT,1/4LX1/2SX30',3/8(M8)
S1-52642438035	LINEST,MINISPLIT,1/4LX1/2SX35',3/8(M8)
S1-52642438050	LINESET,MINISPLIT,1/4LX1/2SX50',3/8(M8)
S1-52642439015	LINESET,MINISPLIT,1/4LX5/8SX15',3/8(M8)
S1-52642439020	LINESET,MINISPLIT,1/4LX5/8SX20',3/8(M8)
S1-52642439025	LINESET,MINISPLIT,1/4LX5/8SX25',3/8(M8)
S1-52642439030	LINESET,MINISPLIT,1/4LX5/8SX30',3/8(M8)
S1-52642439035	LINESET,MINISPLIT,1/4LX5/8SX35',3/8(M8)
S1-52642439050	LINESET,MINISPLIT,1/4LX5/8SX50',3/8(M6)
S1-52642440015	LINESET,MINISPLIT,1/4LX3/4SX15',3/8(M8)
S1-52642440020	LINESET,MINISPLIT,1/4LX3/4SX20',3/8(M8)
S1-52642440025	LINESET,MINISPLIT,1/4LX3/4SX25',3/8(M8)
S1-52642440030	LINESET,MINISPLIT,1/4LX3/4SX30',3/8(M8)
S1-52642440035	LINESET,MINISPLIT,1/4LX3/4SX35',3/8(M8)
S1-52642440050	LINESET,MINISPLIT,1/4LX3/4SX50',3/8(M6)
S1-52642441015	LINESET,MINISPLIT,3/8LX5/8SX15',3/8(M8)
S1-52642441020	LINESET,MINISPLIT,3/8LX5/8SX20',3/8(M8)
S1-52642441025	LINESET,MINISPLIT,3/8LX5/8SX25',3/8(M8)
S1-52642441030	LINESET,MINISPLIT,3/8LX5/8SX30',3/8(M8)
S1-52642441035	LINESET,MINISPLIT,3/8LX5/8SX35',3/8(M8)
S1-52642441050	LINESET,MINISPLIT,3/8LX5/8SX50',3/8(M6)
S1-52642442015	LINESET,MINISPLIT,3/8LX3/4SX15',3/8(M8)
S1-52642442020	LINESET,MINISPLIT,3/8LX3/4SX20',3/8(M8)
S1-52642442025	LINESET,MINISPLIT,3/8LX3/4SX25',3/8(M8)
S1-52642442030	LINESET,MINISPLIT,3/8LX3/4SX30',3/8(M8)
S1-52642442035	LINESET,MINISPLIT,3/8LX3/4SX35',3/8(M8)
S1-52642442050	LINESET,MINISPLIT,3/8LX3/4SX50',3/8(M6)
S1-52642443015	LINESET,MINISPLIT,3/8LX7/8SX15',3/8(M8)
S1-52642443025	LINESET,MINISPLIT,3/8LX7/8SX25',3/8INS

NOTES

923212-UTG-B-0114
Supersedes: 923212-UTG-A-0113

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