

**SHINING**

# SERVICE MANUAL

SPLIT SYSTEM  
ROOM AIR CONDITIONERS



# CONTENT

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WALL SPLIT

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INVERTER WALL SPLIT

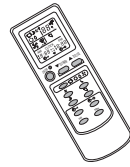
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DUAL WALL SPLIT

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## WALL SPLIT

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# Technical specifications



only cooling

Refrigerant R22

		7000Btu	9000Btu	12000Btu	18000Btu	24000Btu
Model		KF-23GW	KF-26GW	KF-34GW	KF-50GW	KF-70GW
Cooling capacity	W	2300	2600	3400	5000	7000
	Btu/h	7853	8877	11608	17071	23899
Rated power input	W	850	950	1290	1950	2500
Rated current	A	4.1	4.6	6.2	9.0	12.0
Power supply		220V/230~50Hz	220V/230~50Hz	220V/230~50Hz	220V/230~50Hz	220V/230~50Hz
Air flow(indoor/high speed)	m <sup>3</sup> /h	450	500	550	800	900
Noise(indoor/outdoor) db(A)		≤38/49	≤39/50	≤41/51	≤46/57	≤48/60
Refrigerant(R22)	g	600	800	1150	1600	2000
Refrigerant tube size	inch					
Liquid		1/4 "	1/4 "	1/4 "	1/4 "	3/8 "
Gas?		3/8 "	3/8 "	1/2 "	1/2 "	5/8 "
Connecting wire	mm <sup>2</sup>	3×1.0	3×1.0	3×1.5	3×1.5	3×2.5
Power wire	mm <sup>2</sup>	3×1.0/10A	3×1.0/10A	3×1.5/10A	3×1.5/16A	3×2.5
Drain hose	mm					
Indoor						
Outdoor		1. d φ 16	1. d φ 16	1. d φ 16	1. d φ 16	1. d φ 20
Dimension?	mm					
(W×H×D)						
Indoor		745×250×190	810×280×185	810×280×185	1000×325×190	1090×330×220
Outdoor		630×545×255	760×528×256	760×528×256	850×605×290	860×730×310
Weight	Kg					
Indoor		8.5	10.5	10.5	15	16.5
Outdoor		25	28.5	37.5	51	61

## Note:

- ①The cooling capacity under below conditions:  
Indoor temp:27°CDB, 19°CWB; Outdoor temp: 35°CDB, 24°CWB.4-meter connecting pipe.
- ②We get the noise in test room under cooling mode meantime.The fan runs at high speed.

# Technical specifications



## Heat pump

## Refrigerant R22

		7000Btu	9000Btu	12000Btu	18000Btu	24000Btu
Model		KFR-23GW	KFR-26GW	KFR-34GW	KFR-50GW	KFR-70GW
Cooling capacity	W	2300	2600	3400	5000	7000
	Btu/h	7853	8877	11608	17071	23899
Heating capacity	W	2500	2900	4100	5500	7000
	Btu/h	8535	9901	14000	18778	23899
Rated power input	W					
Cooling		880	980	1290	1950	2500
Heating		780	890	1450	2000	2400
Rated current	A					
Cooling		4.1	4.6	6.2	9.0	12.0
Heating		4.0	4.3	6.7	9.5	11.5
Power		220V/230~50Hz	220V/230~50Hz	220V/230~50Hz	220V/230~50Hz	220V/230~50Hz
Air flow(indoor/high speed)	m <sup>3</sup> /h	450	500	550	800	900
Noise(indoor/outdoor)	db(A)	≤38/49	≤39/50	≤41/51	≤46/57	≤48/60
Refrigerant(R22)	g	650	830	1180	1650	2000
Refrigerant tube size	inch					
Liquid		1/4 "	1/4 "	1/4 "	1/4 "	3/8 "
Gas?		3/8 "	3/8 "	1/2 "	1/2 "	5/8 "
Connecting wire	mm <sup>2</sup>	3×1.0+2×0.75	3×1.0+2×0.75	3×1.5+2×0.75	3×1.5+2×0.75	3×1.5+2×1.0
Power wire	mm <sup>2</sup>	3×1.0/10A	3×1.0/10A	3×1.5/10A	3×1.5/16A	3×2.5
Drain hose	mm					
Indoor		I. d φ 16	I. d φ 16	I. d φ 16	I. d φ 16	I. d φ 20
Outdoor						
Dimension(W×H×D)	mm					
Indoor		745×250×190	810×280×185	810×280×185	1000×325×190	1090×330×220
Outdoor		630×545×255	760×528×256	760×528×256	850×605×290	860×730×310
Weight(indoor/outdoor)	Kg	8.5/26	10.5/29.5	10.5/38.5	15/51	16.5/61

### Note:

- ① Rated cooling capacity under below conditions:  
Indoor temp:27°CDB, 19°CWB; Outdoor temp:35°CDB, 24°CWB.High speed;4-meter connecting pipe.
- ② Rated heating capacity under below conditions:  
Indoor temp:20°CDB;Outdoor temp:7°CDB, 6°CWB.High speed;4-meter connecting pipe.
- ③ We get the noise under heating mode meantime.The fan runs at high speed.

# Technical specifications



only cooling

Refrigerant R407C

		7000Btu	9000Btu	12000Btu	18000Btu	24000Btu
Model		KF-23GW	KF-26GW	KF-34GW	KF-50GW	KF-70GW
Cooling capacity	W	2300	2600	3400	5000	7000
	Btu/h	7853	8877	11608	17071	23899
Rated power input	W	850	950	1290	1950	2600
Rated current	A	4.1	4.6	6.2	9.0	12.5
Power supply		220V/230~50Hz	220V/230~50Hz	220V/230~50Hz	220V/230~50Hz	220V/230~50Hz
Air flow(indoor/high speed)	m <sup>3</sup> /h	450	500	550	800	900
Noise(indoor/outdoor) db(A)		≤38/49	≤39/50	≤41/51	≤46/57	≤48/60
Refrigerant(R407C)	g	600	800	1050	1600	2250
Refrigerant tube size inch						
Liquid		1/4 "	1/4 "	1/4 "	1/4 "	3/8 "
Gas		3/8 "	3/8 "	1/2 "	1/2 "	5/8 "
Connecting wire	mm <sup>2</sup>	3×1.0	3×1.0	3×1.0	3×1.5	3×2.5
Power wire	mm <sup>2</sup>	3×1.0/10A	3×1.0/10A	3×1.0/10A	3×1.5/16A	3×2.5
Drain hose mm						
Indoor						
Outdoor		I. d φ 16	I. d φ 16	I. d φ 16	I. d φ 16	I. d φ 20
Dimension mm						
(W×H×D)						
Indoor		745×250×190	810×280×185	810×280×185	1000×325×190	1090×330×220
Outdoor		630×545×255	760×528×256	760×528×256	850×605×290	860×730×310
Weight Kg						
Indoor		8.5	10.5	10.5	15	16.5
Outdoor		25	28.5	37.5	51	61

## Note:

- ① The cooling capacity under below conditions:  
Indoor temp:27°CDB, 19°CWB; Outdoor temp: 35°CDB, 24°CWB.4-meter connecting pipe.
- ② We get the noise in test room under cooling mode meantime.The fan runs at high speed.

# Technical specifications



## Heat pump

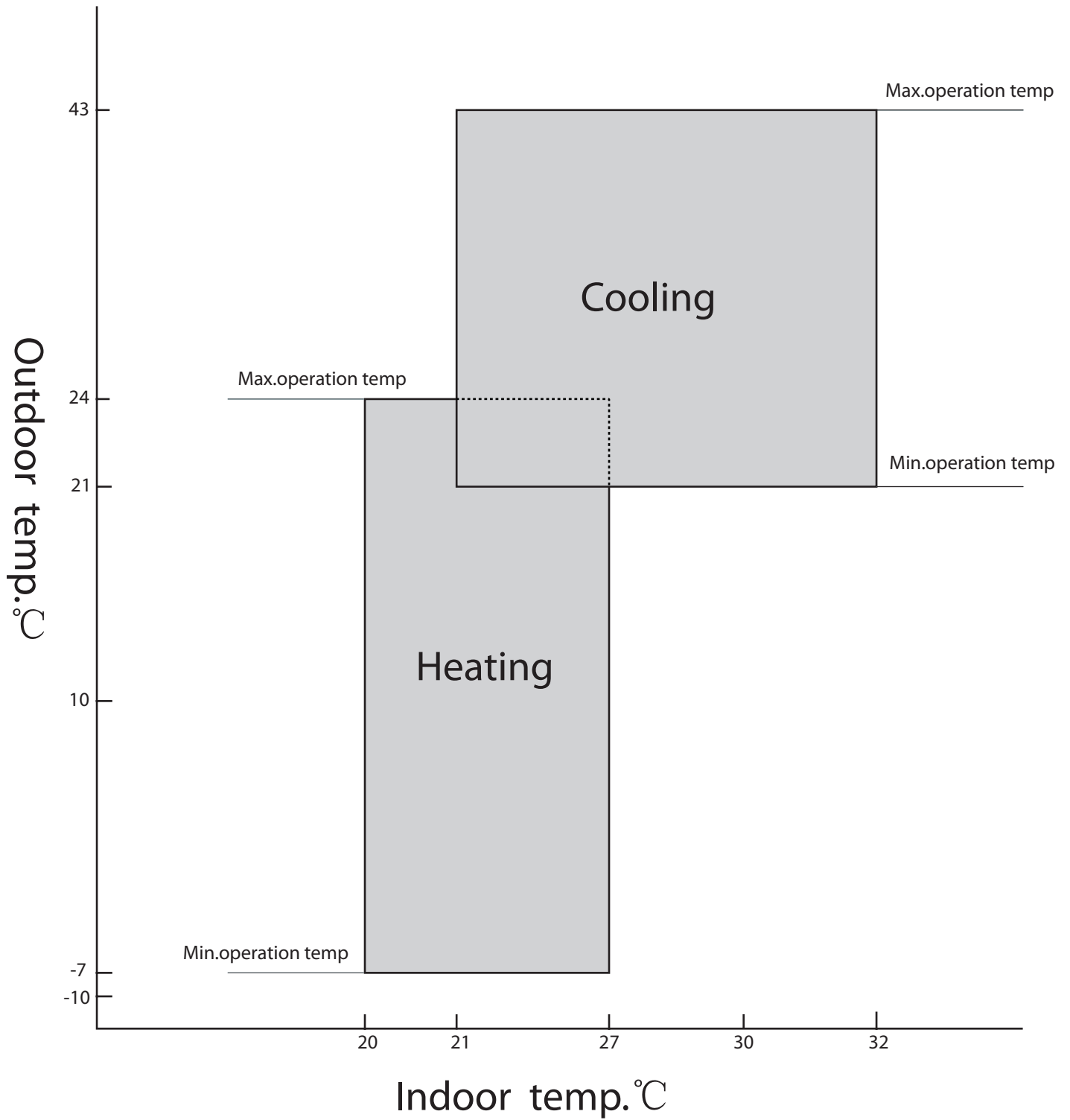
## Refrigerant R407C

		7000Btu	9000Btu	12000Btu	18000Btu	24000Btu
Model		KFR-23GW	KFR-26GW	KFR-34GW	KFR-50GW	KFR-70GW
Cooling capacity	W	2300	2600	3400	5000	7000
	Btu/h	7853	8877	11608	17071	23899
Heating capacity	W	2500	2900	4100	5500	7000
	Btu/h	8535	9901	1400	18778	23899
Rated power input	W					
Cooling		880	980	1340	1950	2600
Heating		890	890	1470	2000	2400
Rated current	A					
Cooling		4.2	4.6	6.3	9.0	12.1
Heating		4.0	4.3	6.8	9.5	11.5
Power		220V/230~50Hz	220V/230~50Hz	220V/230~50Hz	220V/230~50Hz	220V/230~50Hz
Air flow(indoor/high speed)	m <sup>3</sup> /h	450	500	500	800	900
Noise(indoor/outdoor)	db(A)	≤38/49	≤39/50	≤41/51	≤46/57	≤48/60
Refrigerant(R407C)	g	660	830	1250	1650	2300
Connecting pipe	inch					
Liquid		1/4"	1/4"	1/4"	1/4"	3/8"
Gas		3/8"	3/8"	1/2"	1/2"	5/8"
Connecting wire	mm <sup>2</sup>	3×1.0+2×0.75	3×1.0+2×0.75	3×1.5+2×0.75	3×1.5+2×0.75	3×1.5+2×1.0
Power wire	mm <sup>2</sup>	3×1.0/10A	3×1.0/10A	3×1.5/10A	3×1.5/16A	3×2.5
Drain hose	mm					
Indoor						
Outdoor		l. d φ 16	l. d φ 16	l. d φ 16	l. d φ 16	l. d φ 20
Dimension(W×H×D)	mm					
Indoor		745×250×190	810×280×185	810×280×185	1000×325×190	1090×330×220
Outdoor		630×545×255	760×528×256	760×528×256	850×605×290	860×730×310
Weight(indoor/outdoor)	Kg	8.5/25	10.5/29.5	10.5/38.5	15/51	16.5/61

### Note:

- ① Rated cooling capacity under below conditions:  
Indoor temp:27°CDB, 19°CWB; Outdoor temp:35°CDB, 24°CWB.High speed;4-meter connecting pipe.
- ② Rated heating capacity under below conditions:  
Indoor temp:20°CDB;Outdoor temp:7°CDB, 6°CWB.High speed;4-meter connecting pipe.
- ③ We get the noise under heating mode meantime.The fan runs at high speed.

# Working range





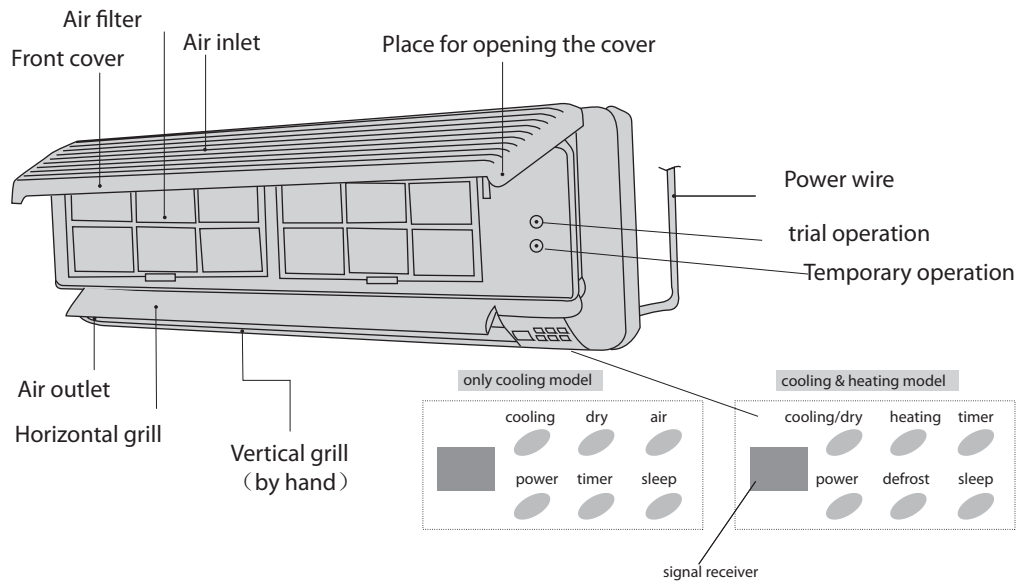
# Indoor unit



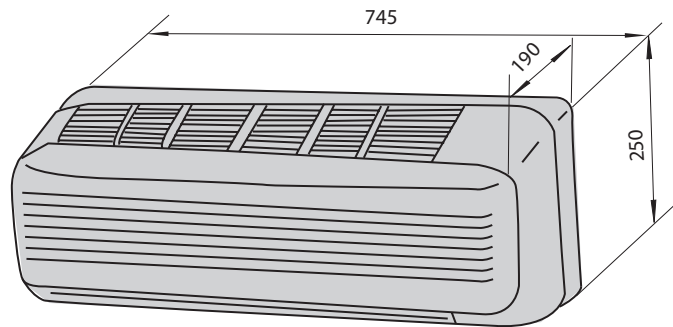
7000Btu

unit (mm)

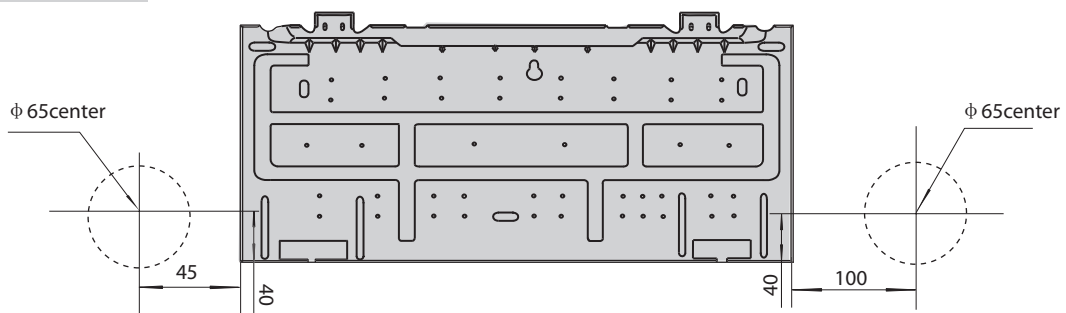
## Name of parts



## Dimensions



## Installation size



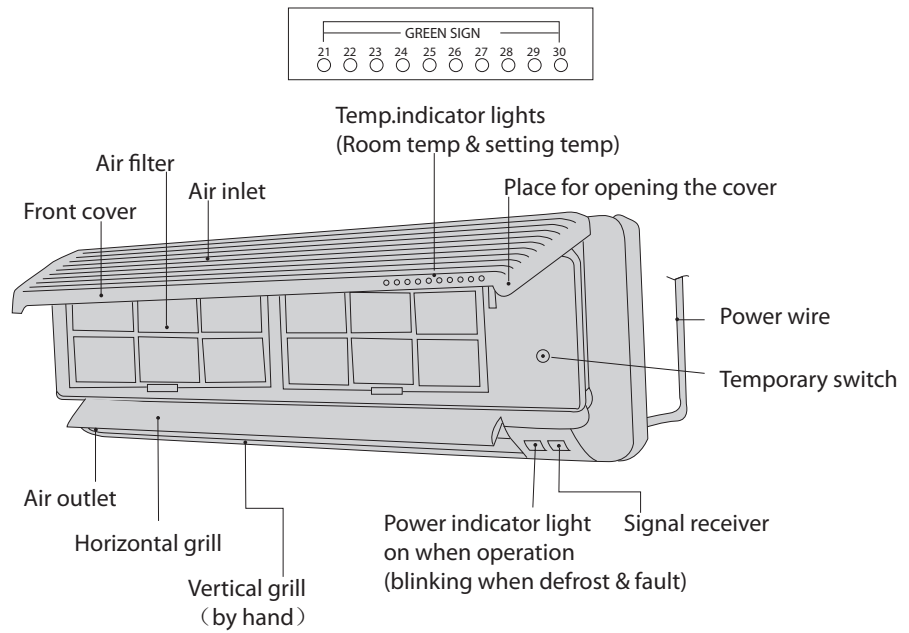
# Indoor unit



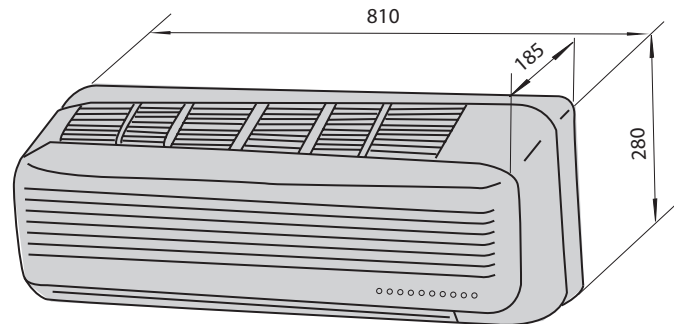
9000-12000Btu

unit (mm)

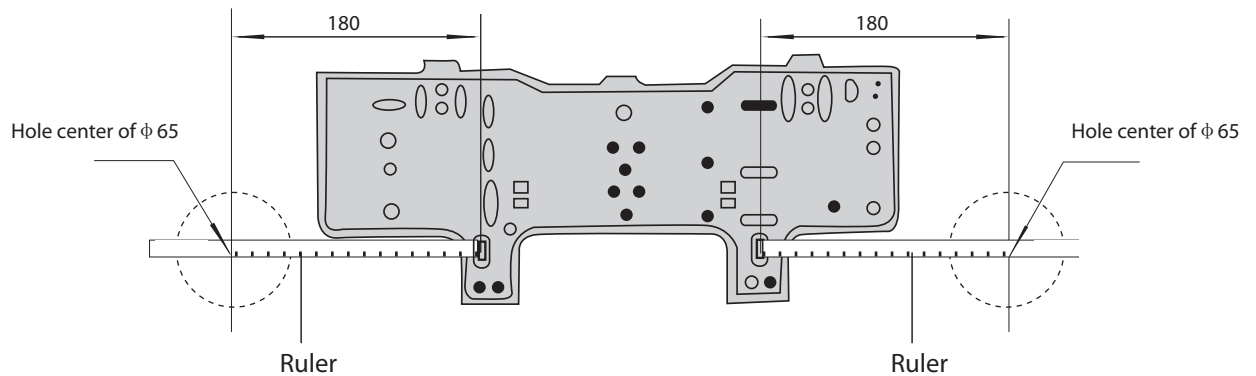
## Name of parts



## Dimensions



## Installation dimension

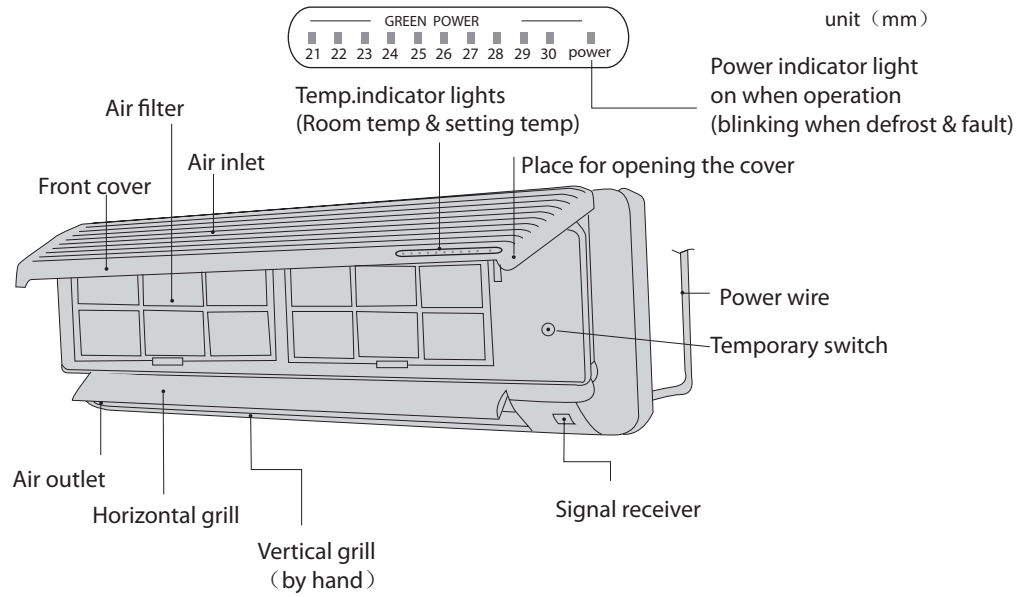


# Indoor unit

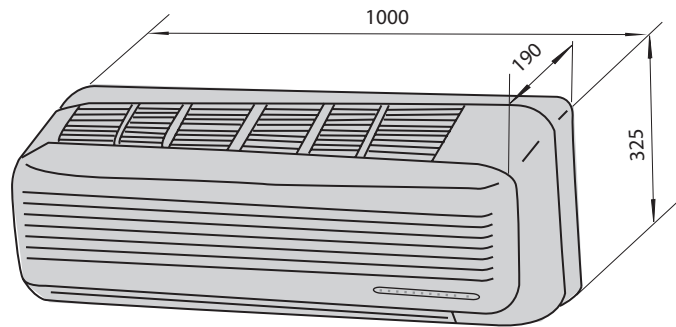


18000Btu

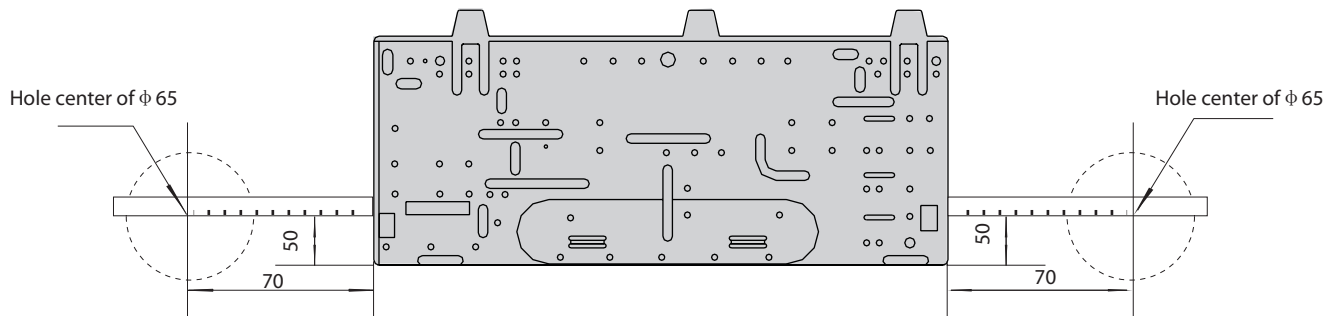
## Name of parts



## Dimensions



## Installation dimension

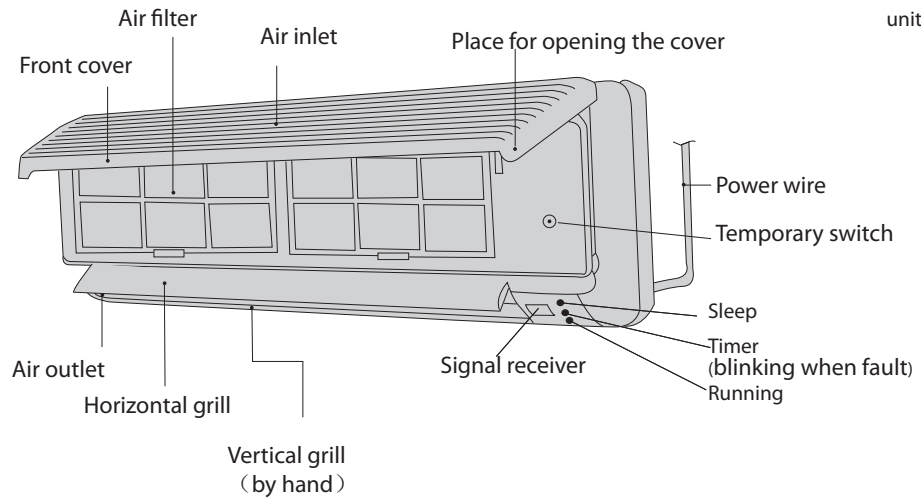


# Indoor unit

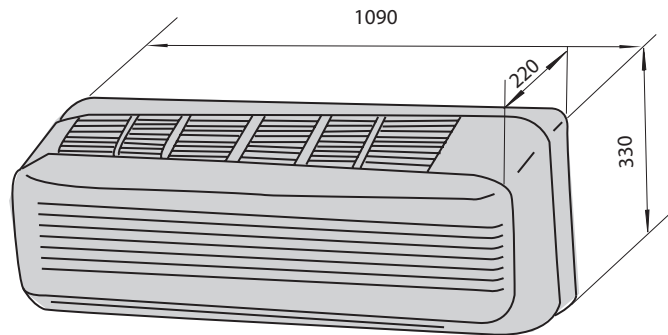


24000Btu

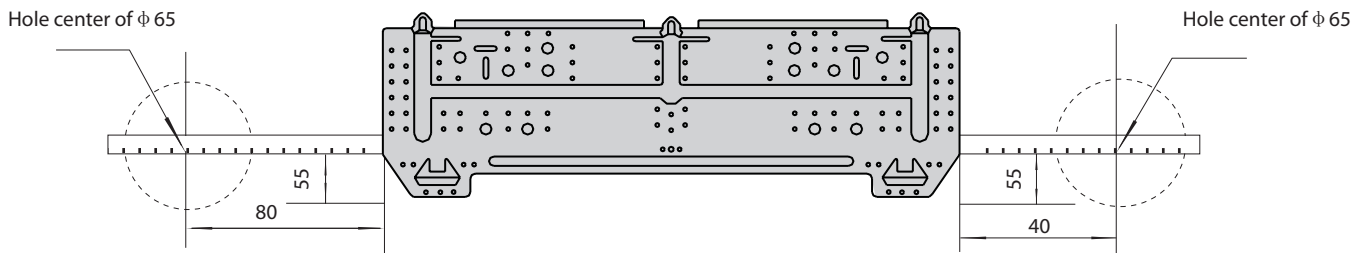
## Name of parts



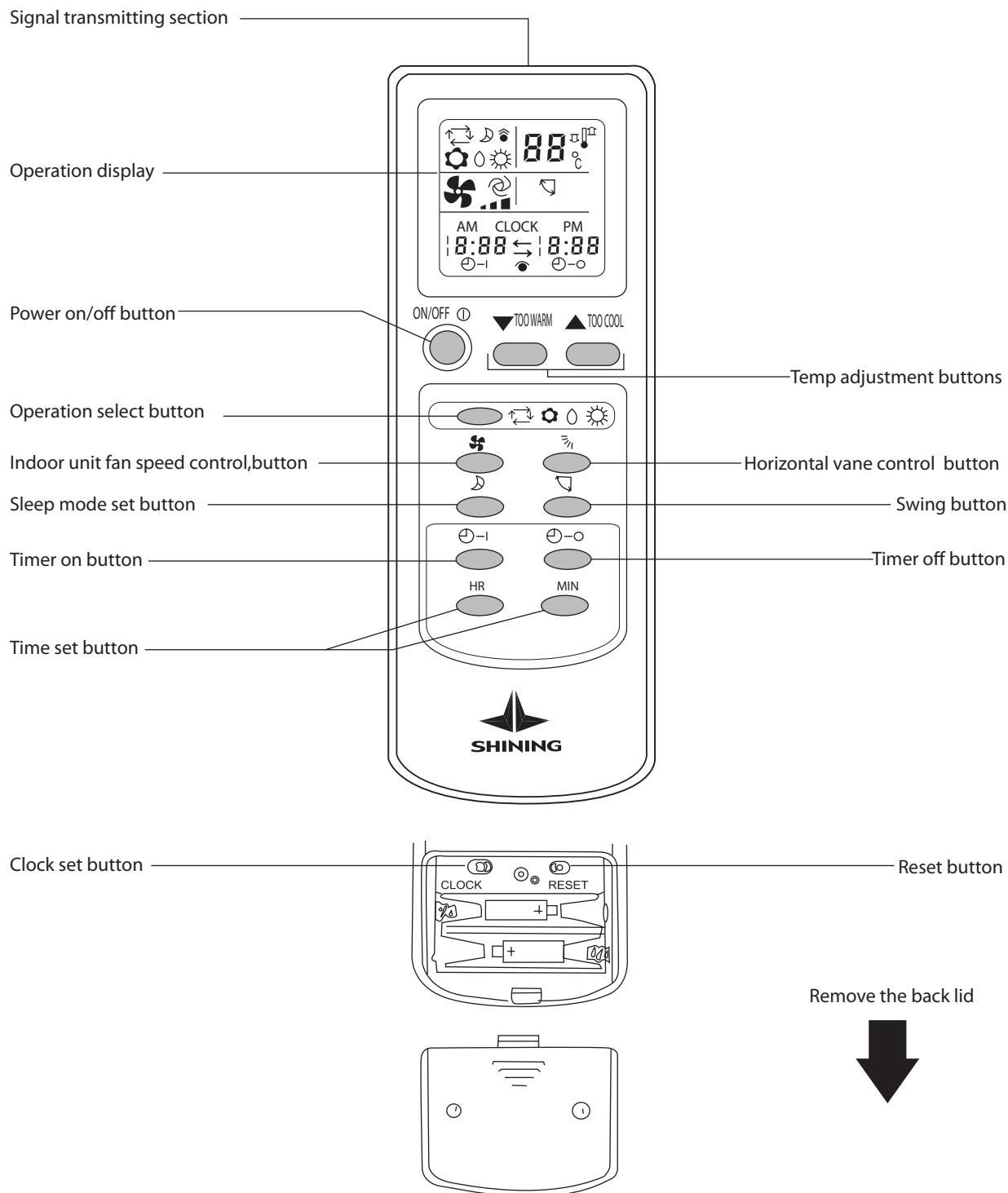
## Dimensions



## Installation dimension

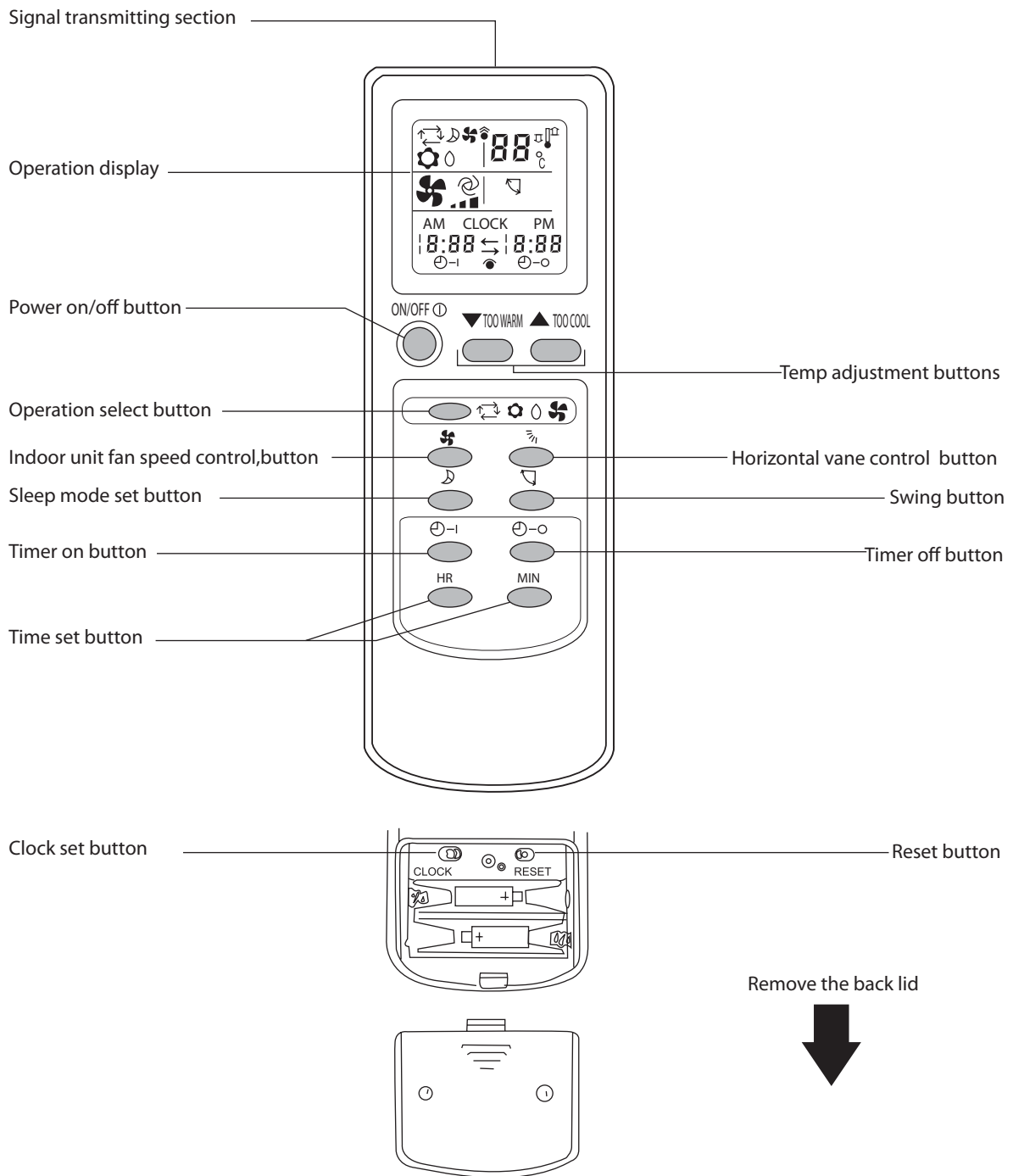


# Remote controller



- ① We show you all signal in led.
- ② Wall split cooling and heat pump models 7000Btu,9000Btu,12000Btu,18000Btu,24000Btu。
- ③ Dual split cooling and heat pump models 7000×2Btu, 9000×2Btu。
- ④ Inverter cooling and heat pump models 9000Btu, 12000Btu。

# Remote controller



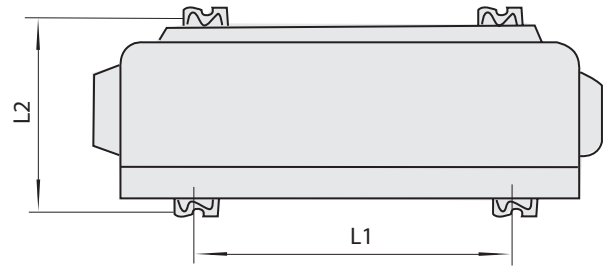
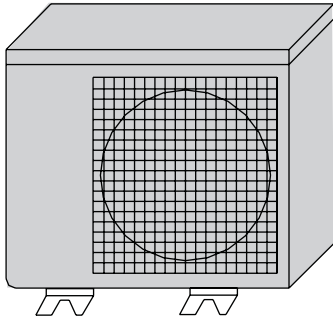
- ① We show you all signal in led.
- ② Wall split cooling only models 7000Btu,9000Btu,12000Btu,18000Btu,24000Btu。
- ③ Dual split cooling only models 7000×2Btu, 9000×2Btu。
- ④ Inverter cooling only models 9000Btu, 12000Btu。

# Outdoor unit

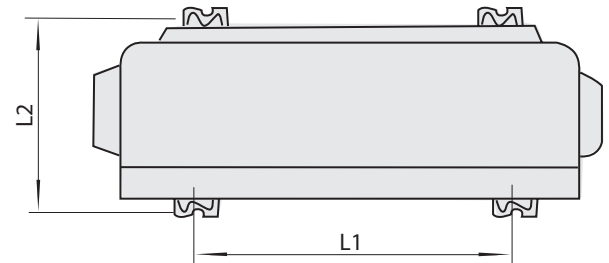
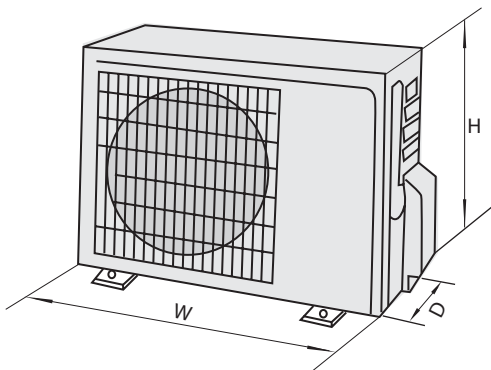


7000Btu

unit (mm)



9000-12000Btu

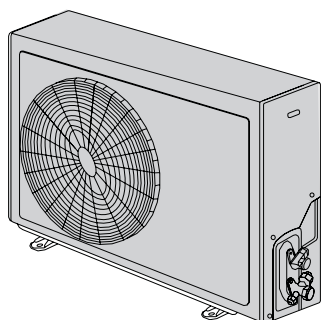


Dimension	7000Btu	9000Btu	12000Btu
W	590	760	760
H	545	528	528
D	255	256	256
L 1	362	538	538
L 2	285	283	283

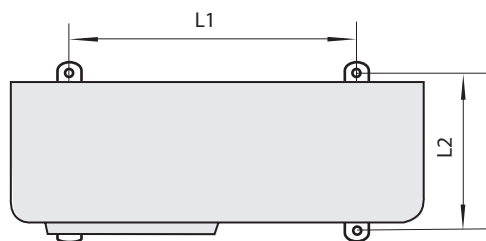
# Outdoor unit



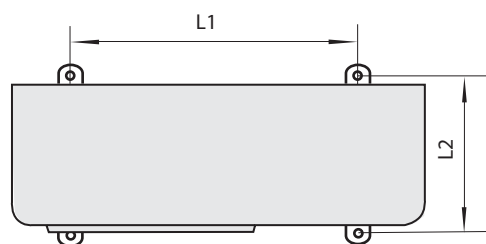
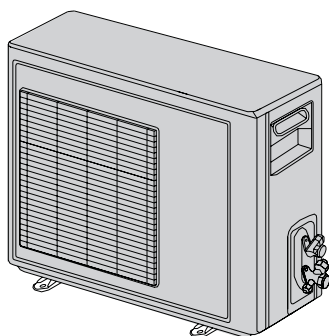
18000Btu(a)



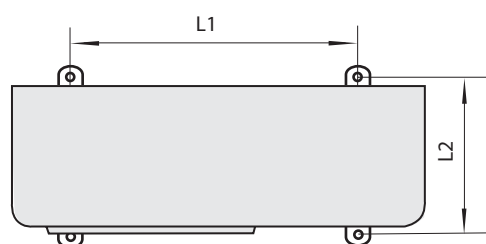
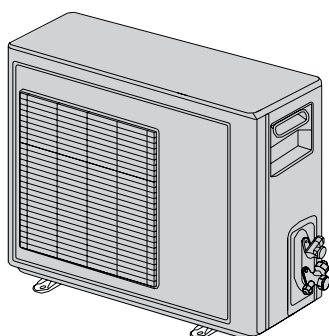
unit (mm)



18000Btu(b)



24000Btu



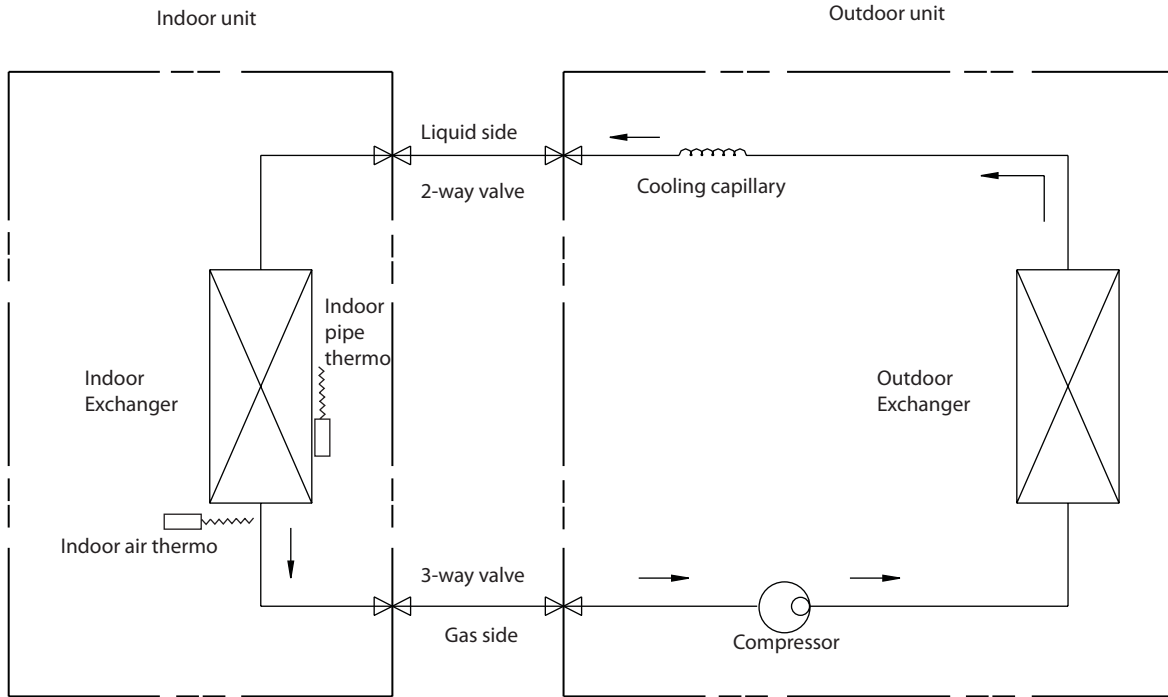
Dimension	18000Btu(a)	18000Btu(b)	24000Btu
W	850	850	860
H	605	600	730
D	290	290	310
L1	500	550	630
L2	310	310	340



# Refrigeration cycle diagram

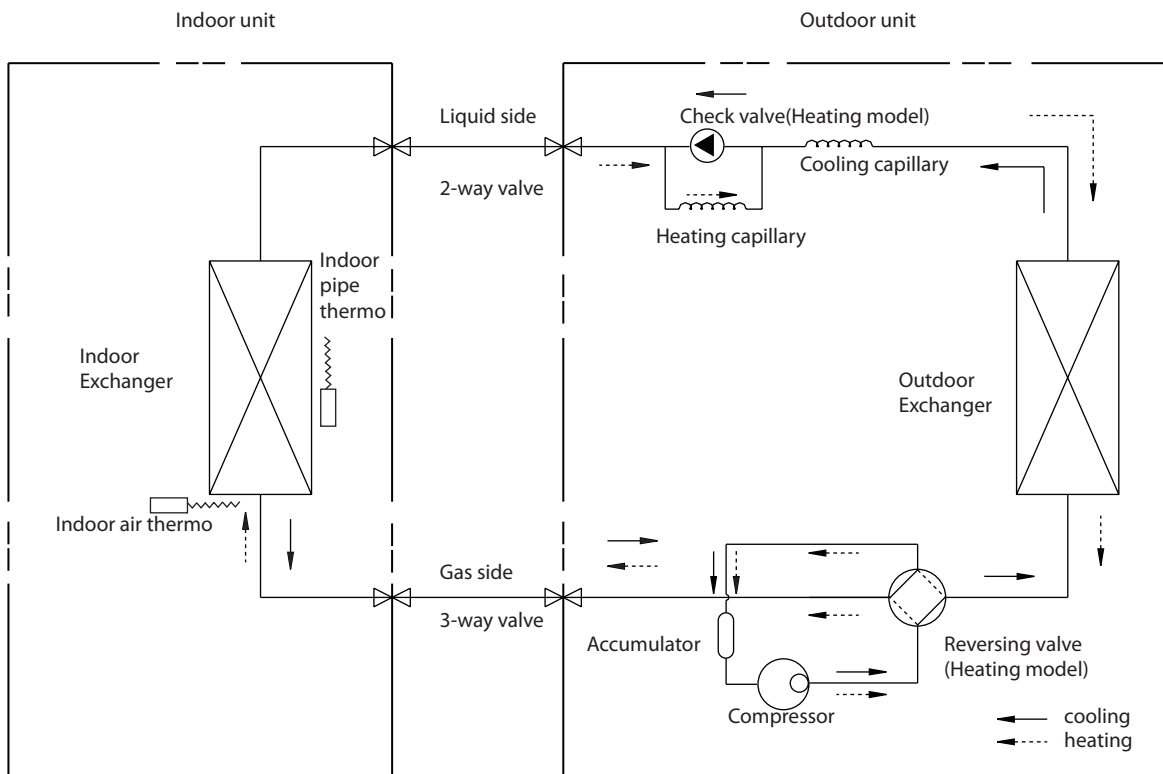


## COOLING ONLY MODELS



Models:7000-12000Btu

## COOLING AND HEATING MODELS

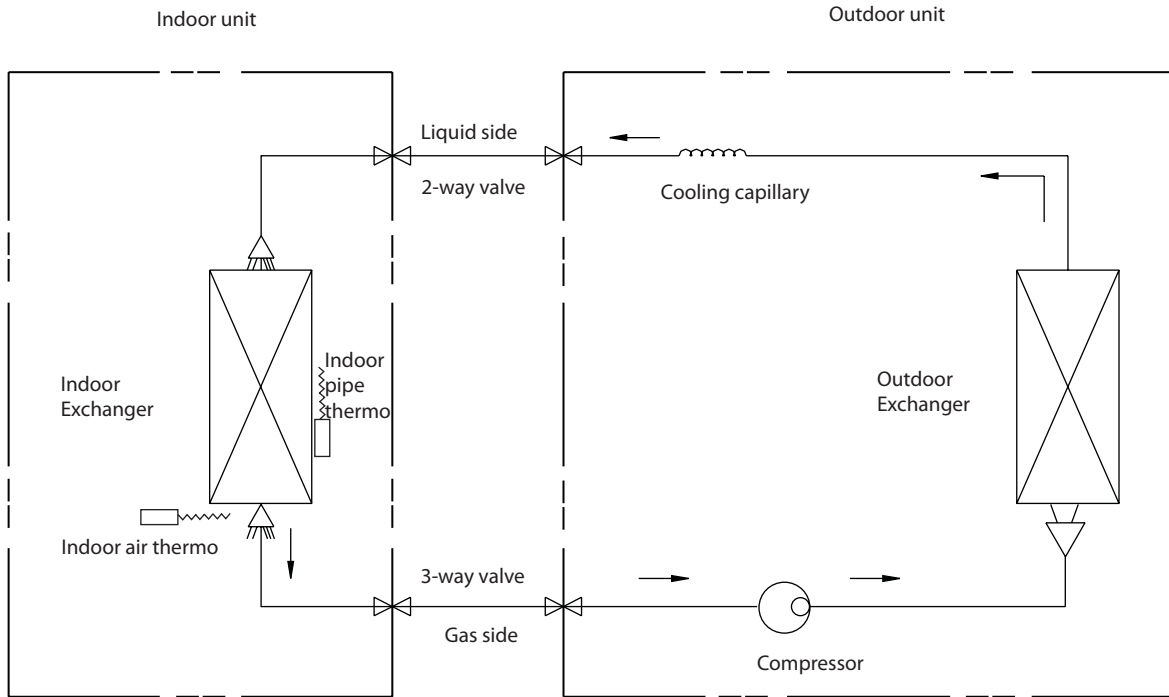


Models:7000-12000Btu

# Refrigeration cycle diagram

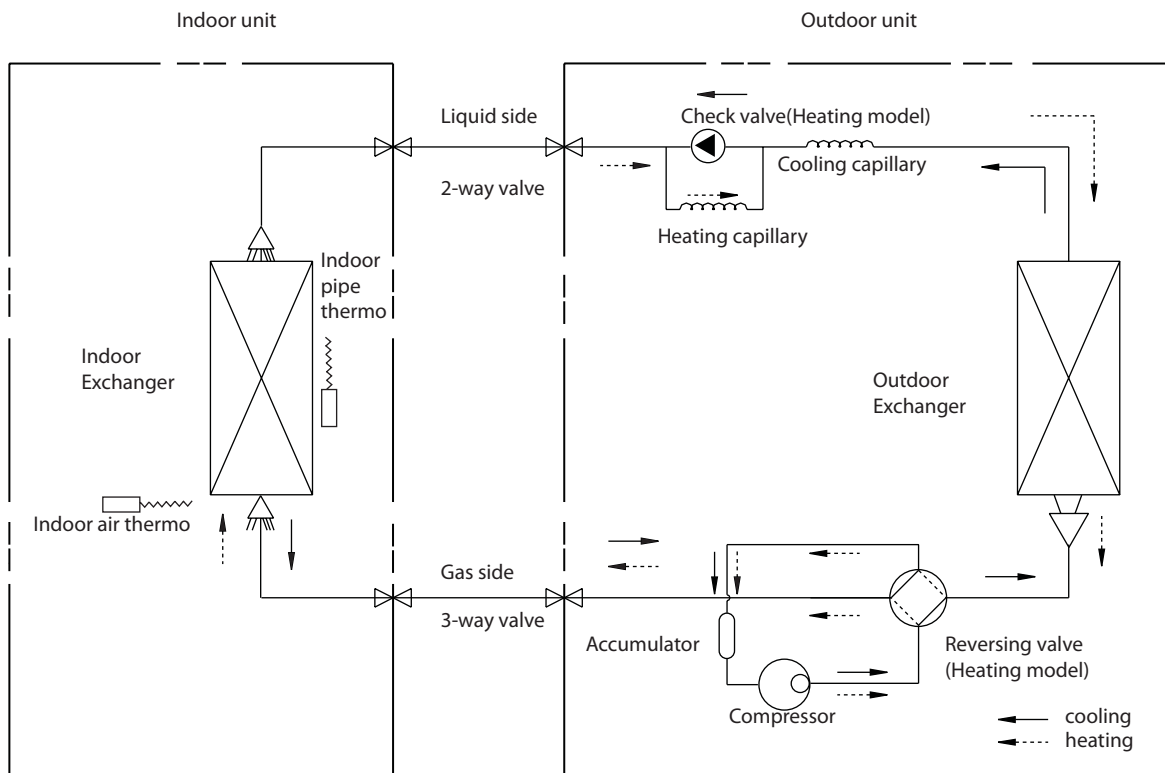


## COOLING ONLY MODELS



Models:18000Btu

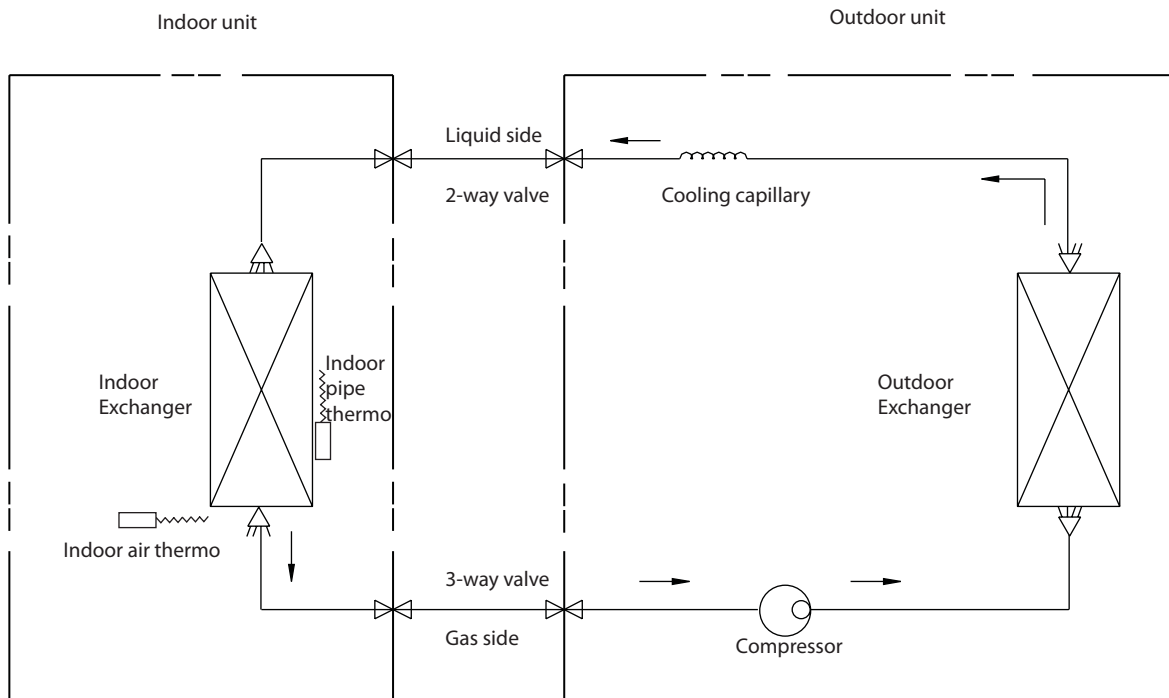
## COOLING AND HEATING MODELS



Models:18000Btu

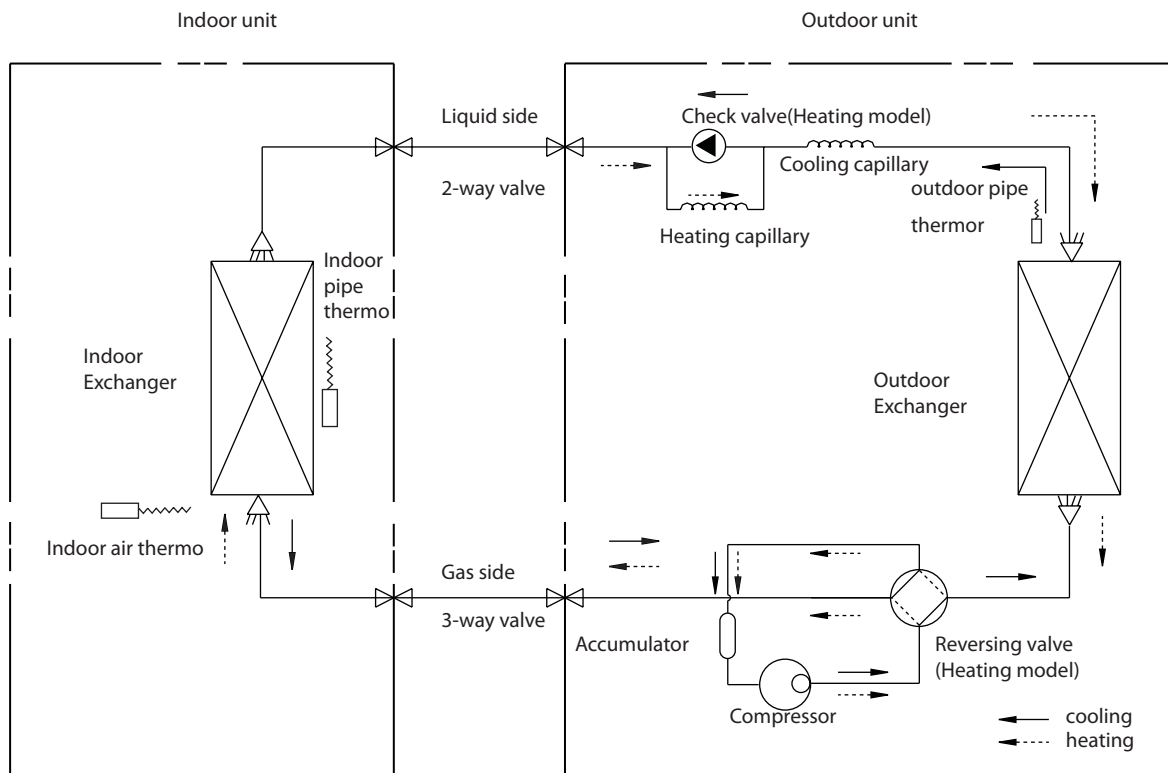
# Refrigeration cycle diagram

## COOLING ONLY MODELS



Models:24000Btu

## COOLING AND HEATING MODELS

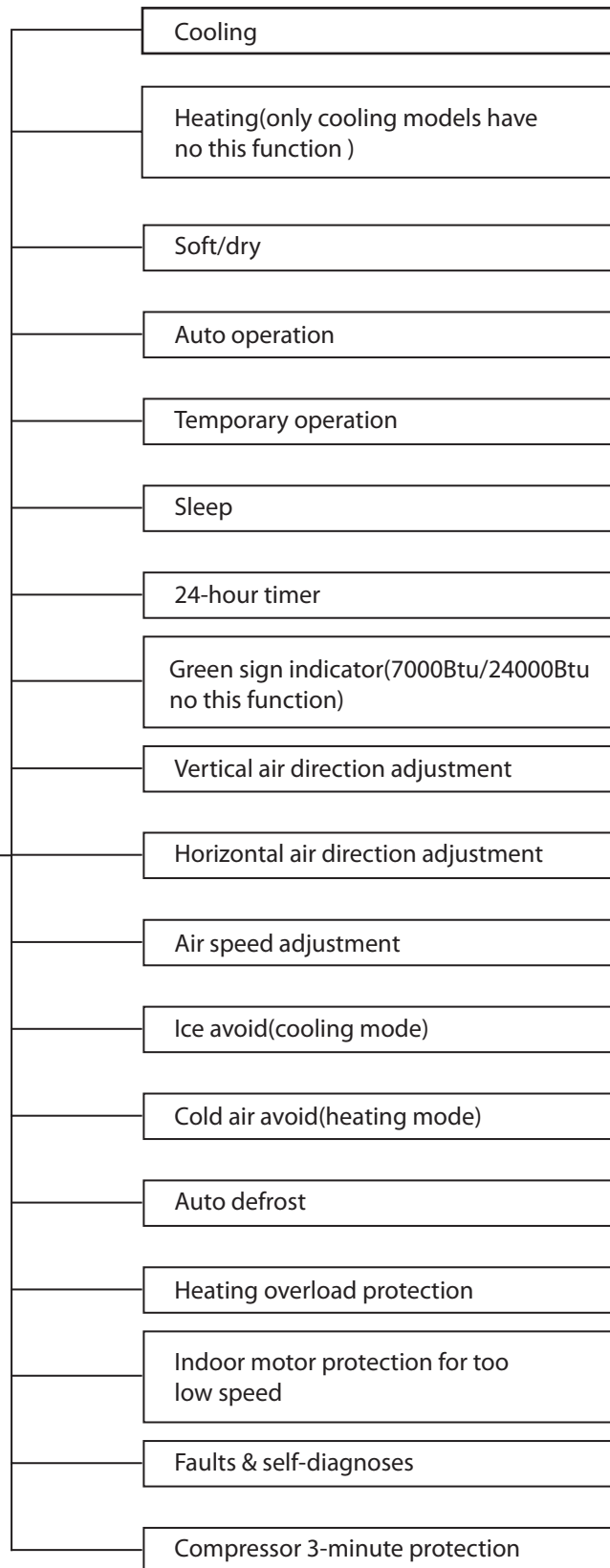


Models:24000Btu

# Main function

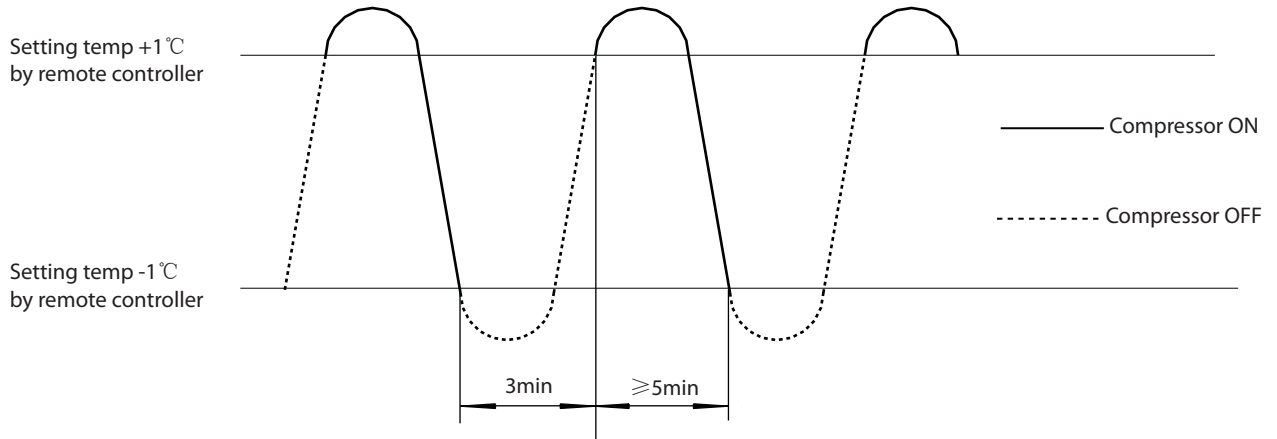


## Main function



## Cooling operation

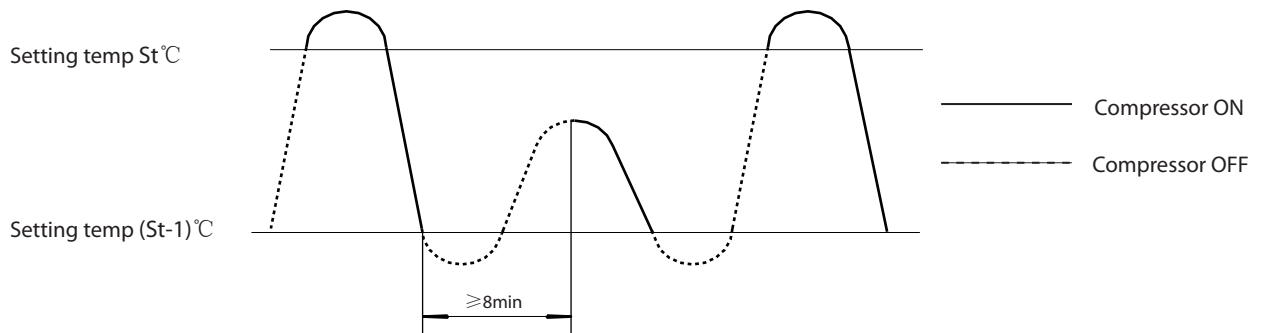
Temp range 16°C ~31°C



- When  $R_t \geq St + 1^\circ\text{C}$ , compressor & outdoor motor ON, indoor fan motor with setting speed.
- When  $R_t \leq St - 1^\circ\text{C}$ , compressor & outdoor motor OFF, indoor fan motor with setting speed.

## Soft/dry

Temp range 18°C ~28°C

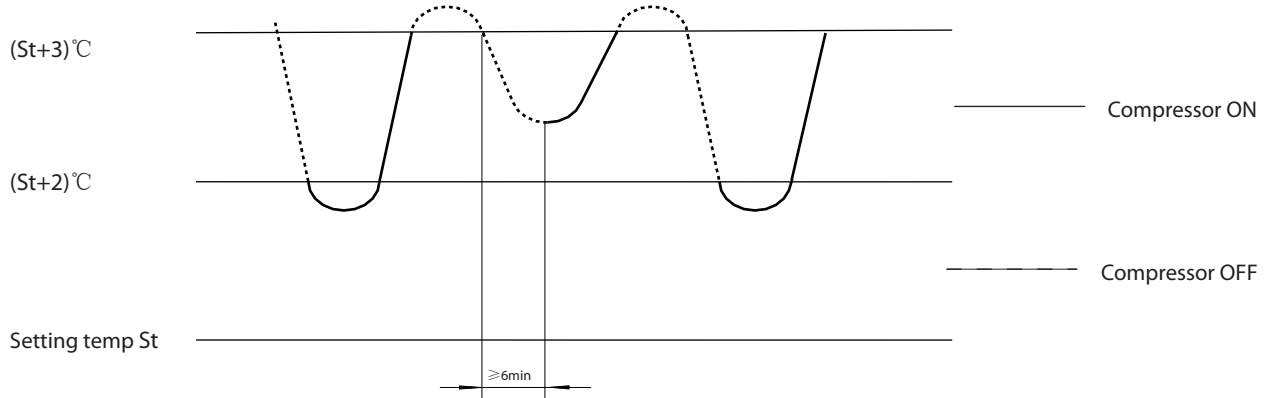


- When room temp  $R_t \geq$  setting temp  $St$ , compressor ON.
- If  $R_t \leq St - 1^\circ\text{C}$ , compressor OFF.
- When  $St - 1 < R_t \leq St$ , and the compressor OFF  $\geq 8\text{min}$ , compressor ON.
- Under soft dry mode, the indoor fan run at low speed.



## Heating operation

Temp range 16°C ~31°C



- When  $Rt \leq St+2^\circ\text{C}$ , compressor ON.
- When  $Rt \geq St+3^\circ\text{C}$ , compressor OFF
- When  $St+2^\circ\text{C} < Rt < St+3^\circ\text{C}$ , and the compressor OFF  $\geq 6\text{min}$ , the compressor ON.

## Auto operation

Setting temp range 19°C ~29°C

Room temp before operation	Auto operation mode	Auto temp
$tr \geq 27^\circ\text{C}$	cooling	27°C
$21^\circ\text{C} < tr < 27^\circ\text{C}$	dry	Room temp tr
$tr \leq 21^\circ\text{C}$	heating	21°C

- After operation for 15 minutes, if you press "too warm" or "too cool" button, you can adjust the setting temp  $\pm 2^\circ\text{C}$ .
- Once start a mode, it will cost 2 hours, then you can choose another one.

## Timer

You can set timer to on/off in 24 hours

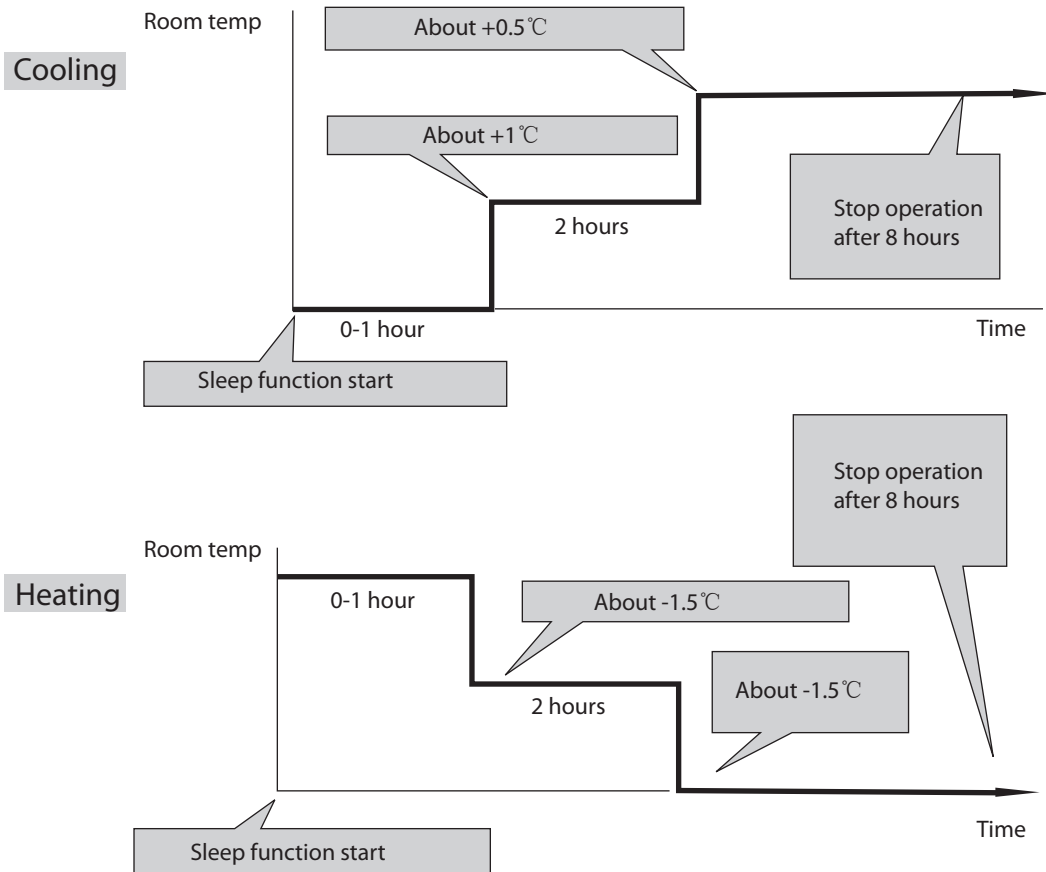
### Timer on

Mode	Condition	Start time
Cooling(including auto)	$Rt - St \geq 2^\circ\text{C}$	45min before setting time
Heating(including auto)	$St - Rt \geq 3^\circ\text{C}$	60min before setting time
Dry(including auto)		On setting time

## Timer off

- The air conditioner when it is setting-off time:OFF

## Sleep



- In sleep model, the fan speed will be low automatically.

## Temporary operation

- If there is a fault with the remote controller or you lose it, you can operate it by this function. Press the temporary switch, the unit will enter auto operation model.

## Protection functions

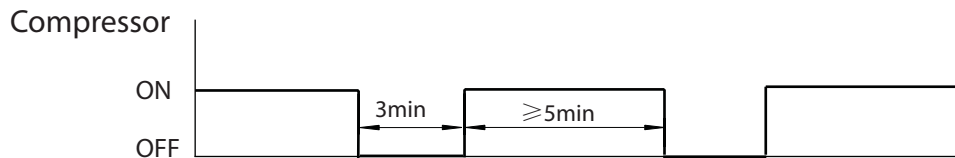
### 3-minute waiting

- It should wait 3 minutes when we restart the compressor.

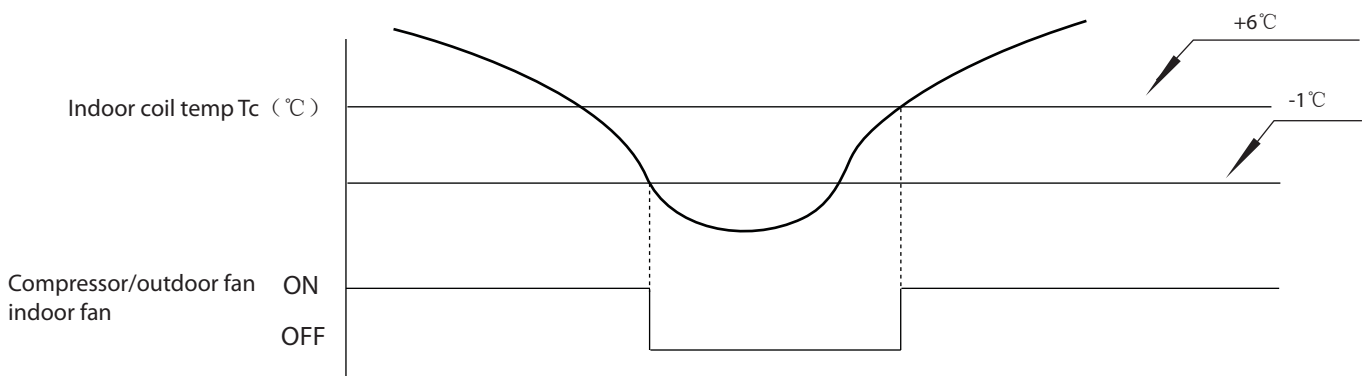


## 5 minutes continuous working

Once the compress start to work,it will work at least 5 minutes.



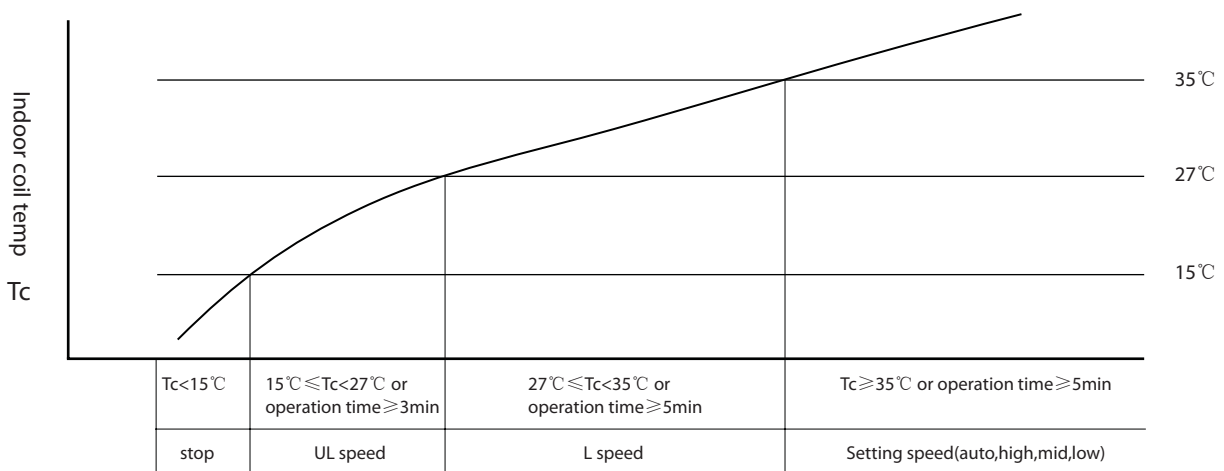
## Ice protection



- During cooling(dry) model:when Indoor coil temp  $T_c \leq -1^\circ\text{C}$ , compressor,indoor & outdoor fan OFF.  
when Indoor coil temp  $T_c \geq 6^\circ\text{C}$ , compressor,indoor & outdoor fan ON.
- 5 minutes continuous working piore to 3-minute waiting.

## Cold air avoid

- In order to avoid the cold air when we start the heating model in winter.The unit will control the fan speed by checking the indoor coil temp.



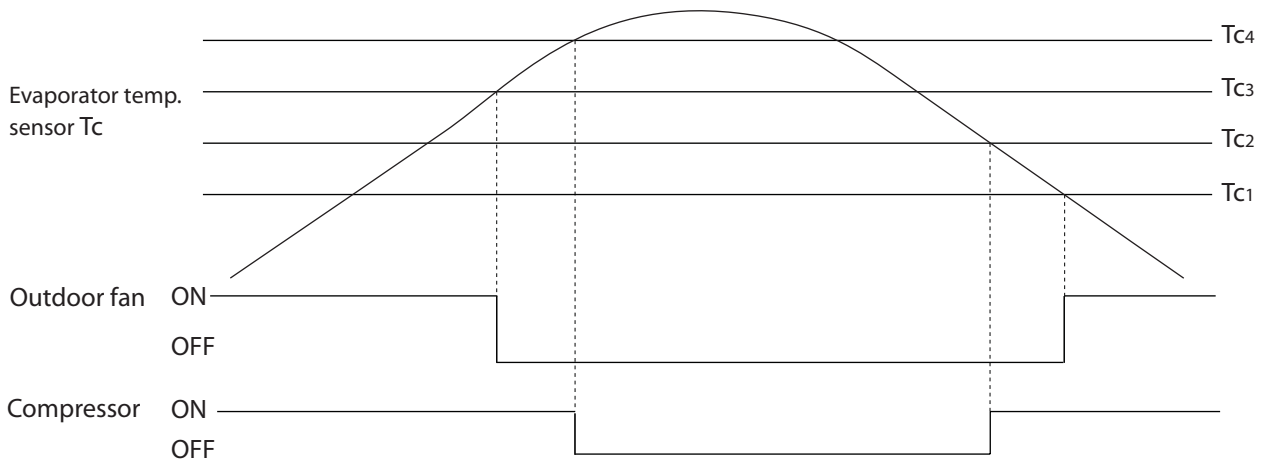
- Once setting the fan speed,it will not slow down.





## Heating overload protection

During heating model, when outdoor temperature rise or the filter of indoor unit is blocked up, the pressure of system is over loading, so must uninstall to protect indoor to advance security.



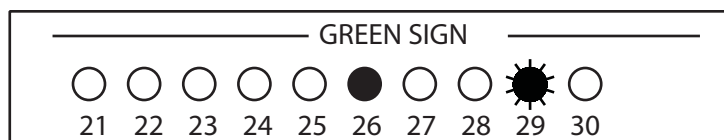
The point of too heating temp Tc				
Outdoor fan off(Tc3)	Outdoor fan on(Tc1)	Compressor off(Tc4)	Compressor on(Tc2)	
$\geq 48^{\circ}\text{C}$	$\leq 40^{\circ}\text{C}$	$\geq 56^{\circ}\text{C}$	$\leq 44^{\circ}\text{C}$	7000-9000Btu
$\geq 55^{\circ}\text{C}$	$\leq 42^{\circ}\text{C}$	$\geq 60^{\circ}\text{C}$	$\leq 44^{\circ}\text{C}$	12000Btu
$\geq 52^{\circ}\text{C}$	$\leq 42^{\circ}\text{C}$	$\geq 58^{\circ}\text{C}$	$\leq 44^{\circ}\text{C}$	18000Btu
$\geq 56^{\circ}\text{C}$	$\leq 45^{\circ}\text{C}$	$\geq 63^{\circ}\text{C}$	$\leq 44^{\circ}\text{C}$	24000Btu

## Indoor motor protection for stop running

When rotate speed of indoor motor fan is less than 500rpm and lasting time is more than 30s, the unit will be closed compulsively.

## Green signal indicator

Remind you the room temperature is too high or too low at any moment, avoid too cool or too heat.



- Lighting shows setting temp.
  - Blinking shows room temp.
- The lamp is lighting when room temp is same with setting temp.

## Defrost

### ■ Conditions required to start defrost.

- $T_c < 44^\circ\text{C}$ .
- $T_c$  will not be higher in 3 min.
- $T_c - T_r < (T_c - T_r)_{\text{max}} \times 80\%$ .
- Compressor run totally exceeds 50min.
- Compressor continuous run exceeds 20min.
- Frost time exceeds 4min.

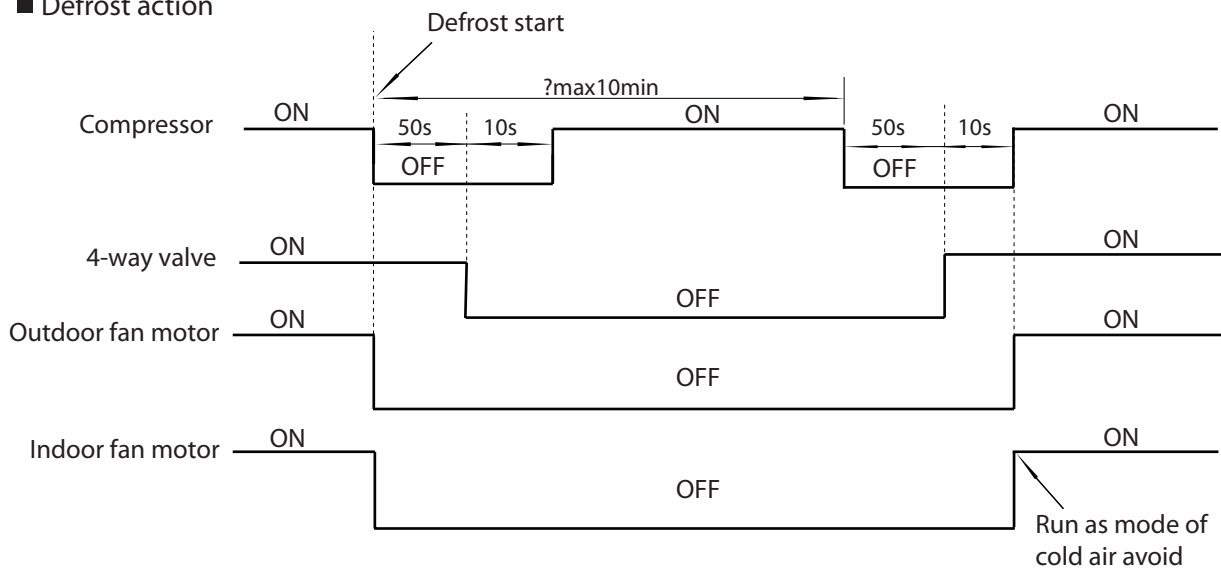
$T_r$  means room temp.

$T_c$  means temp of indoor coil sensor.

### ■ Conditions required to end defrost.

- Defrost lasts for 10 minutes.

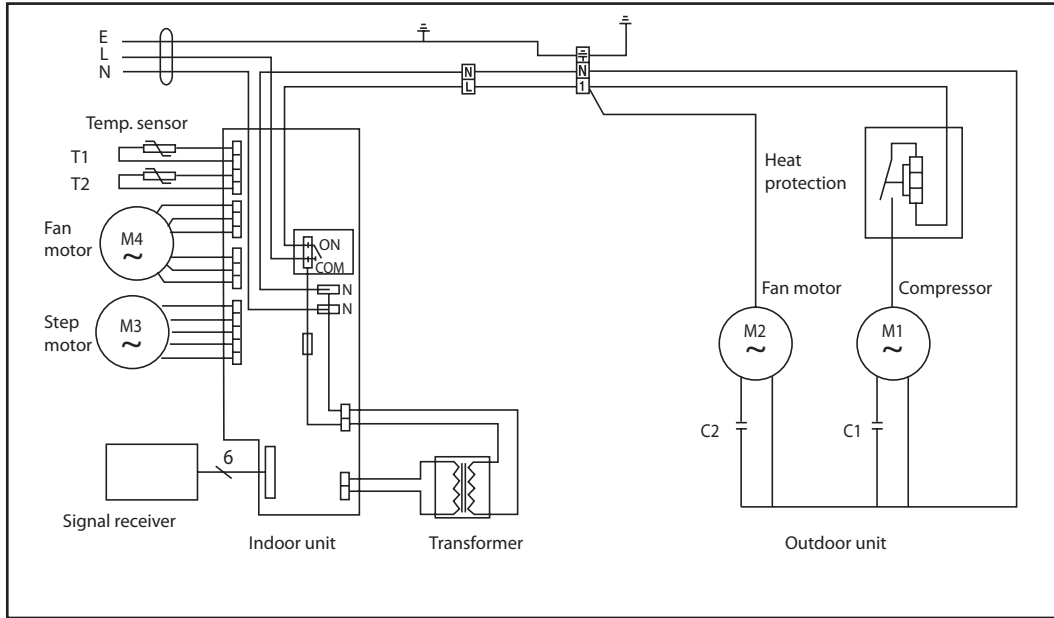
### ■ Defrost action



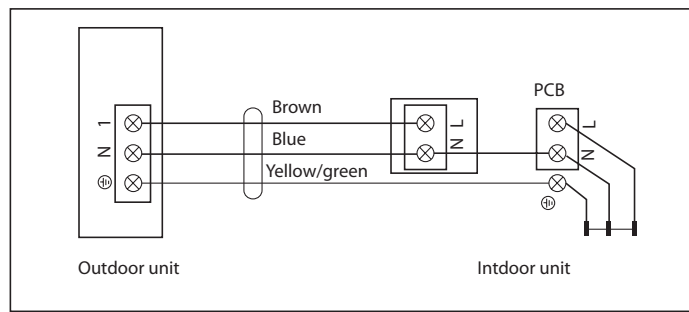
# Wiring diagram



Only cooling models



Models: 7000Btu

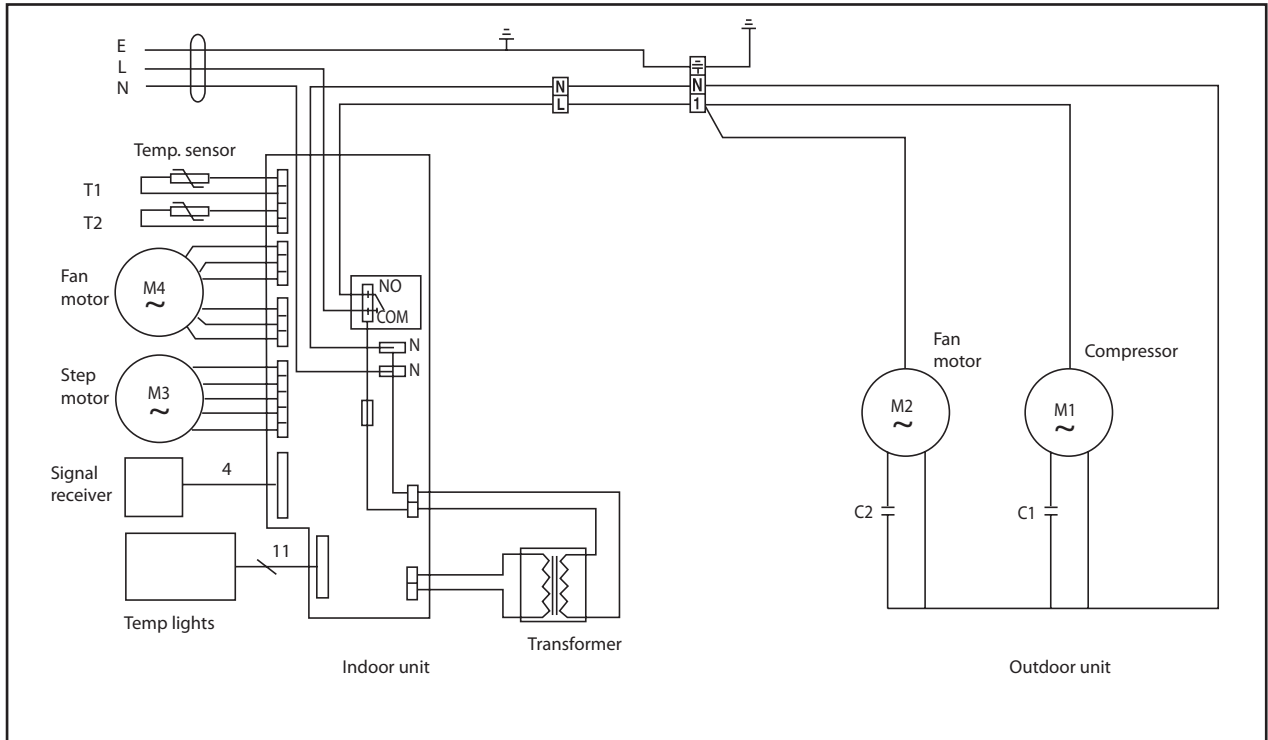


Connecting diagram of 7000Btu indoor and outdoor

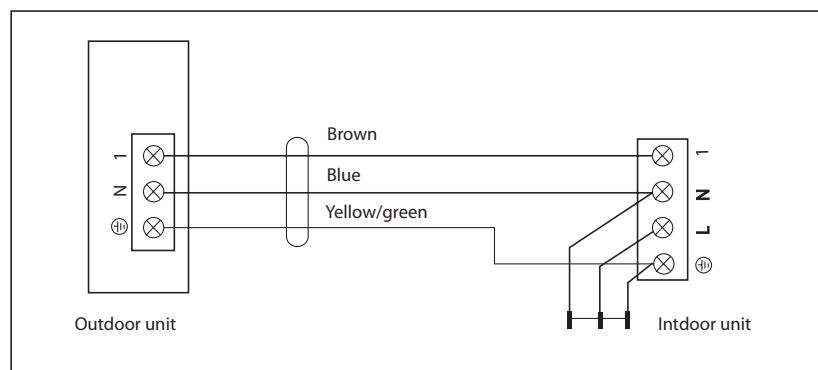
# Wiring diagram



Only cooling models



Models: 9000-18000Btu

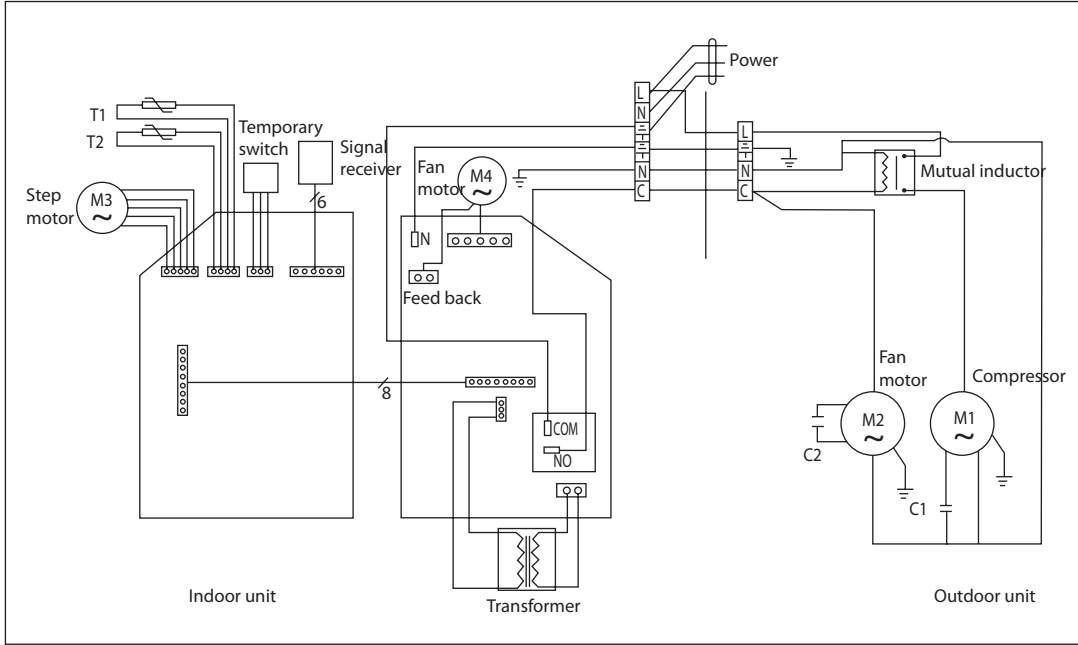


Connecting diagram of 9000-18000Btu indoor and outdoor

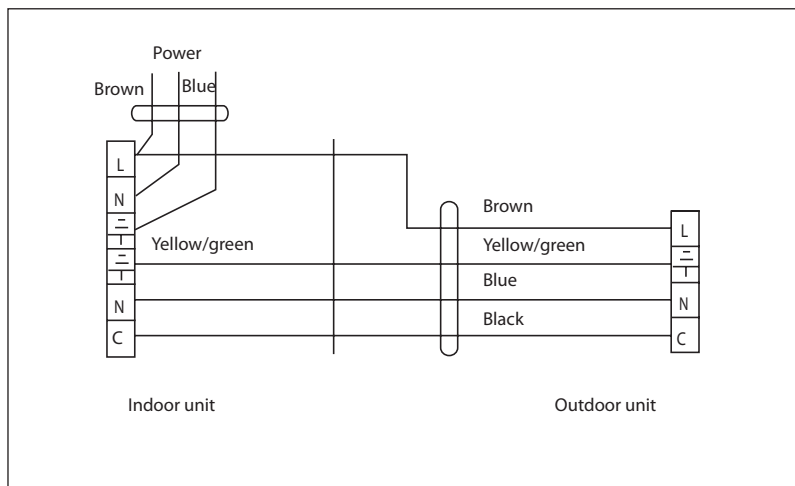
# Wiring diagram



Only cooling models



Models: 24000Btu

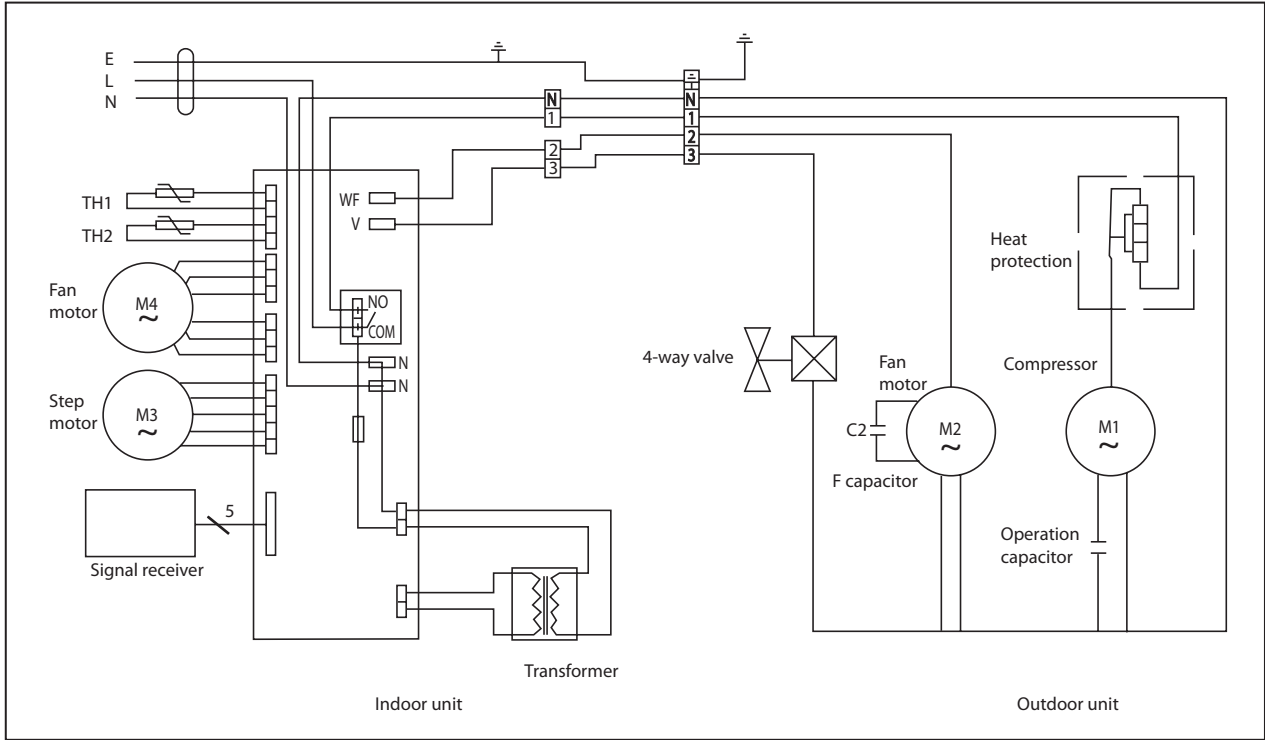


Connecting diagram of 24000Btu indoor and outdoor

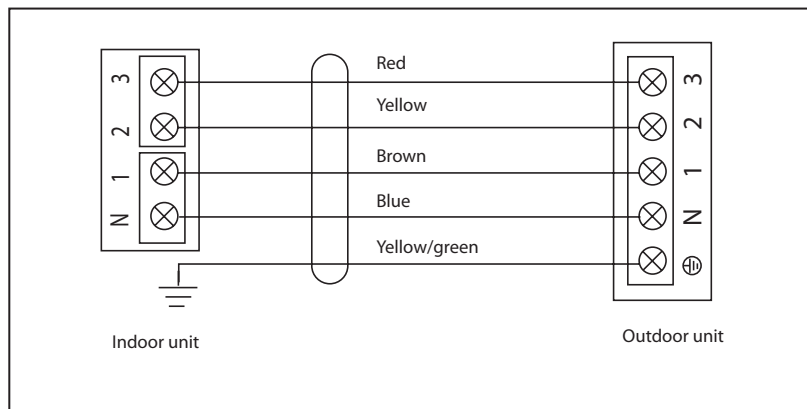
# Wiring diagram



## Heat pump



Models: 7000Btu

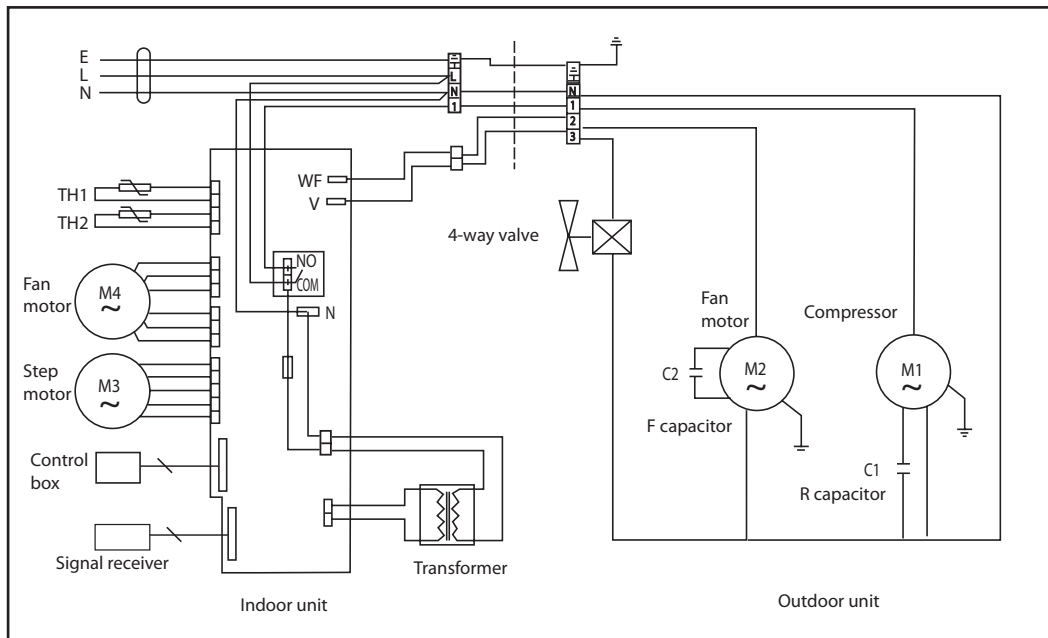


Connecting diagram of 7000Btu indoor and outdoor

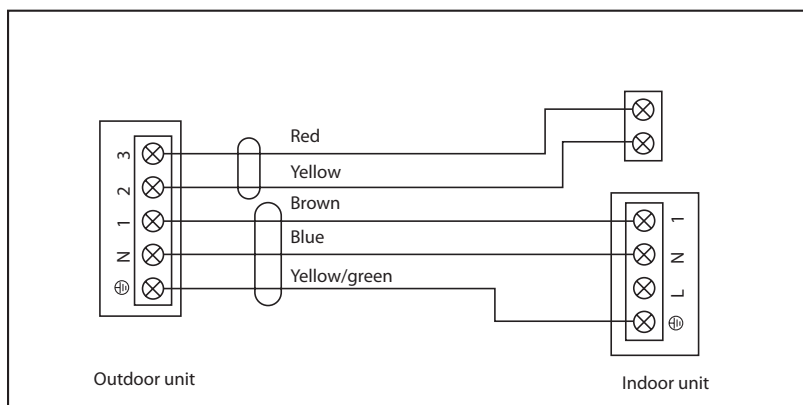
# Wiring diagram



## Heat pump



Models: 9000-18000Btu

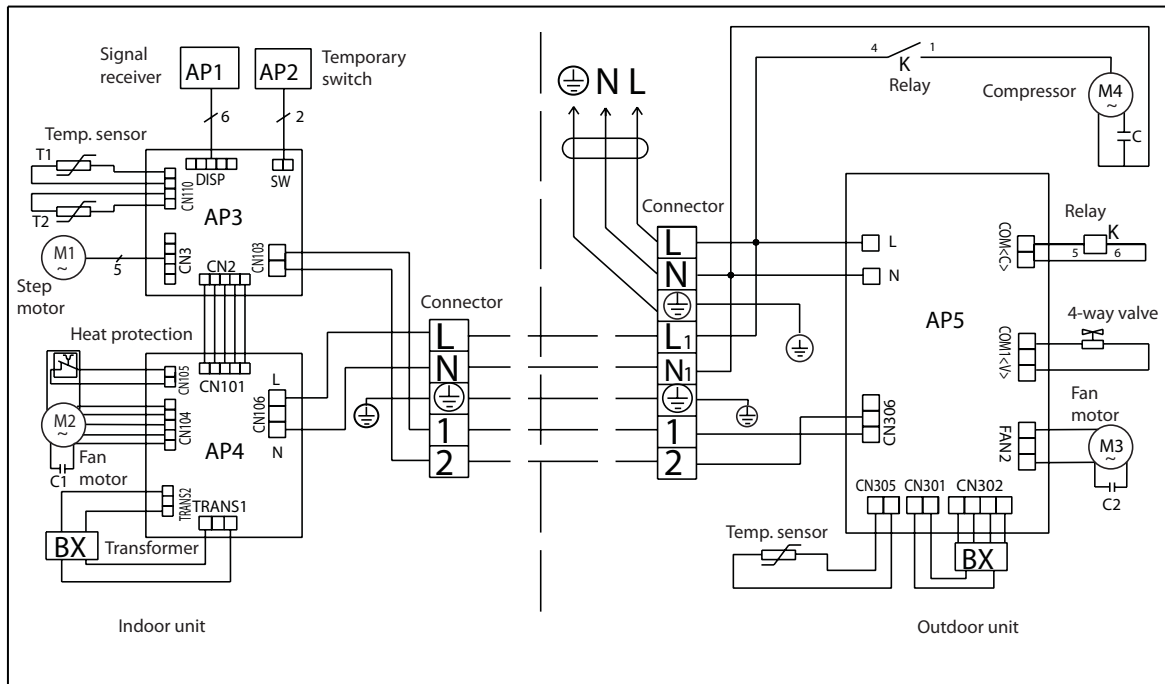


Connecting diagram of 9000-18000Btu indoor and outdoor

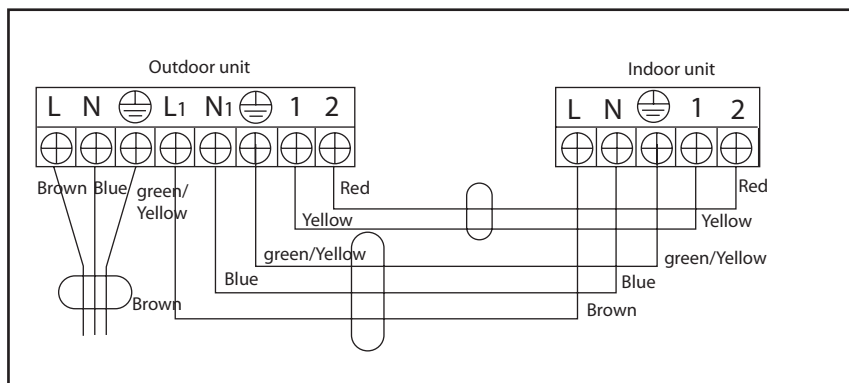
# Wiring diagram



## Heat pump



Models: 24000Btu



Connecting diagram of 24000Btu indoor and outdoor



# Wiring diagram



## Main parts list

name of parts \ models	7000Btu	9000Btu	12000Btu	18000Btu	24000Btu
Indoor unit					
Remote controller	cooling & heating	cooling & heating	cooling & heating	cooling & heating	cooling & heating
Fan motor (PG)	YYST116-4 16w,220v,50Hz, 0.25A 4P	220V/50Hz, 0.23A 16w	220V/50Hz, 0.23A 16w	YYS20-4PG 20w,220v,50Hz 0.24A 4P	YDK-4J,220V, 50Hz20w, 0.25A 4P
Step motor	28BYJ-C01	25BYJ-B	25BYJ-B	28BYJ-D01	35 BYJ-A
Relay	HG4138;AC240V 30A,012-1H01B	HG4138;AC240V 30A,012-1H01B	HG4138;AC240V 30A,012-1H01B	HG4138;AC240V 30A,012-1H01B	HG4138;AC240V 30A,012-1H01B
Fan capacitor	CBB611A 1.2μf/500v	CBB611A 1.2μf/500v	CBB611A 1.2μf/500v	CBB611A 2.0μf/450v	CBB61 1.2μf/450v
Indoor temp. sensor	R25=5.0K Ω B25/50=3470K	R25=5.0K Ω B25/50=3470K	R25=5.0K Ω B25/50=3470K	R25=5.0K Ω B25/50=3470K	R25=5.0K Ω B25/50=3470K
Evaporator temp. sensor	R25=5.0 K Ω B25/50=3470K	R25=5.0 K Ω B25/50=3470K	R25=5.0 K Ω B25/50=3470K	R25=5.0 K Ω B25/50=3470K	R25=5.0 K Ω B25/50=3470K
Fuse	AC 250V 3.15A	AC 250V 3.15A	AC 250V 3.15A	AC 250V 3.15A	AC 250V 3.15A
Transformer	HHE14818 INPUT:AC220V/50Hz OUTPUT:12.5V/300mA	HHE14820 INPUT:AC220V/50Hz OUTPUT:15V/500mA	HHE14820 INPUT:AC220V/50Hz OUTPUT:15V/500mA	HHE14820 INPUT:AC220V/50Hz OUTPUT:15V/500mA	DB-6-04H(in) DB-10-13(out)
Outdoor unit					
Compressor (R22)	KH145VLLC	SG633PB1-A	SH833UA5UU	SHX33SC4-U	SHV33YC6-G
Compressor (R407C)	PG150X1C-4DZ2	PG165X1C-4DZ2	CH833UA5UU	CHX33SC4-U	CHV33YC6-G
4-way valve	DHF-5	DHF-5	DHF-9	DHF-9	DHF-9
Fan motor	KF-16 ,220V, 50Hz 16w,6P,0.25A	KF-20B,220V/50Hz 20w,6P,0.32A2μf/450v	KF-20B,220V/50Hz 20w,6P,0.32A2μf/450v	KF-40,220V 50Hz 40w,6P,0.4A	YDK120/30-6 220V 50Hz,70w0.70A,6P
Fan capacitor	1.5μF/450v	2.0μF/450v	2.0μF/450v	3.5μF/450v	4.0μF/450v
R capacitor	20μF/450v/25μF/450v	35μF/450v/25μF/450v	720μF/450v/25μF/450v	50μF/450v	750μF/450v

# Faults & self-diagnoses




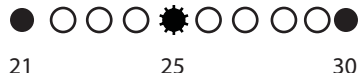


## Faults & self-diagnoses

- By the blinking lights, we can find the fault(7000Btu,24000Btu).
- By the lights on or blinking, we can find the fault(9000-18000Btu).

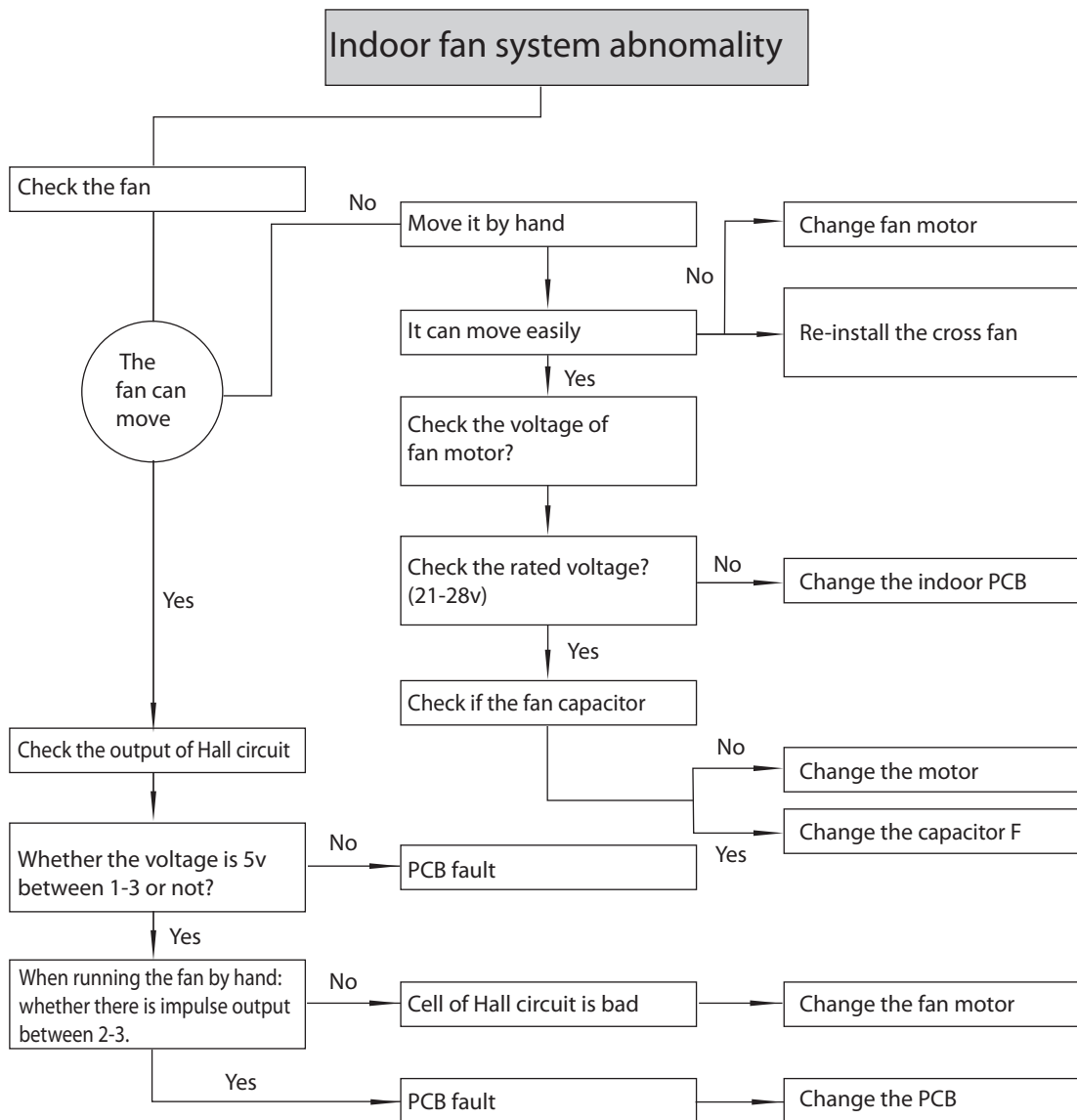
## Light of timer blinking

Timer light	Fault	Air-conditioner running phenomena
Blinking 3 times within 10 seconds	Indoor fan fault	The unit stop operation after indoor fan running 30 seconds at high speed.
Blinking 5 times within 10 seconds	Cooling system fault	Compressor run $\geq 10\text{min}$ , $\rightarrow  T_c - T_R  \leq 5^\circ\text{C}$ $\rightarrow$ indoor fan run 5 min at L.speed.but still $ T_c - T_R  \leq 5^\circ\text{C} \rightarrow$ stop
Blinking 2 times within 10 seconds	Room temp sensor fault	The unit stop 10 minutes after operates for 1 hour.
Blinking 1 times within 10 seconds	Indoor coil sensor fault	Defrost 6 minutes after heating 1 hour. Stop operation 10 minutes after cooling 1 hour.

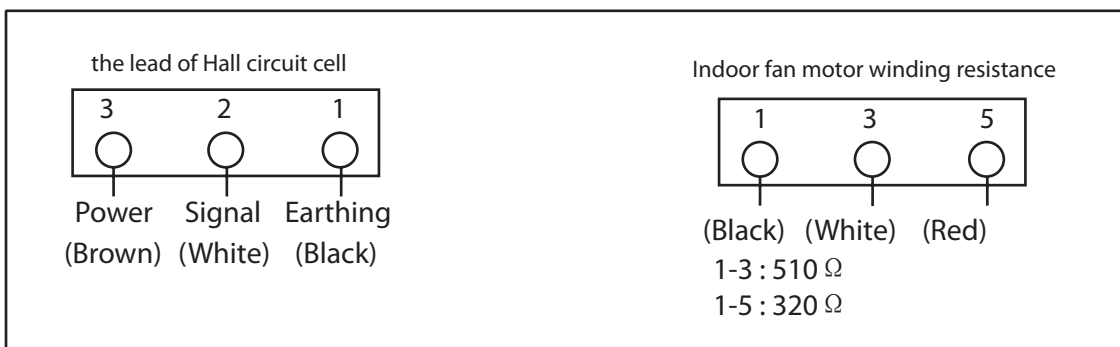
## Light of temp blinking & twinkle

Temp lights	Faults	Air-conditioner running phenomena
	Indoor fan fault	The unit stop operation after indoor fan running 30 seconds at high speed.
	Cooling system fault	Compressor run $\geq 10\text{min}$ , $\rightarrow  T_c - T_R  \leq 5^\circ\text{C}$ $\rightarrow$ indoor fan run 5 min at L.speed.but still $ T_c - T_R  \leq 5^\circ\text{C} \rightarrow$ stop
	Room temp sensor fault	The unit stop 10 minutes after operates for 1 hour.
	Indoor coil sensor fault	Defrost 6 minutes after heating 1 hour. Stop operation 10 minutes after cooling 1 hour

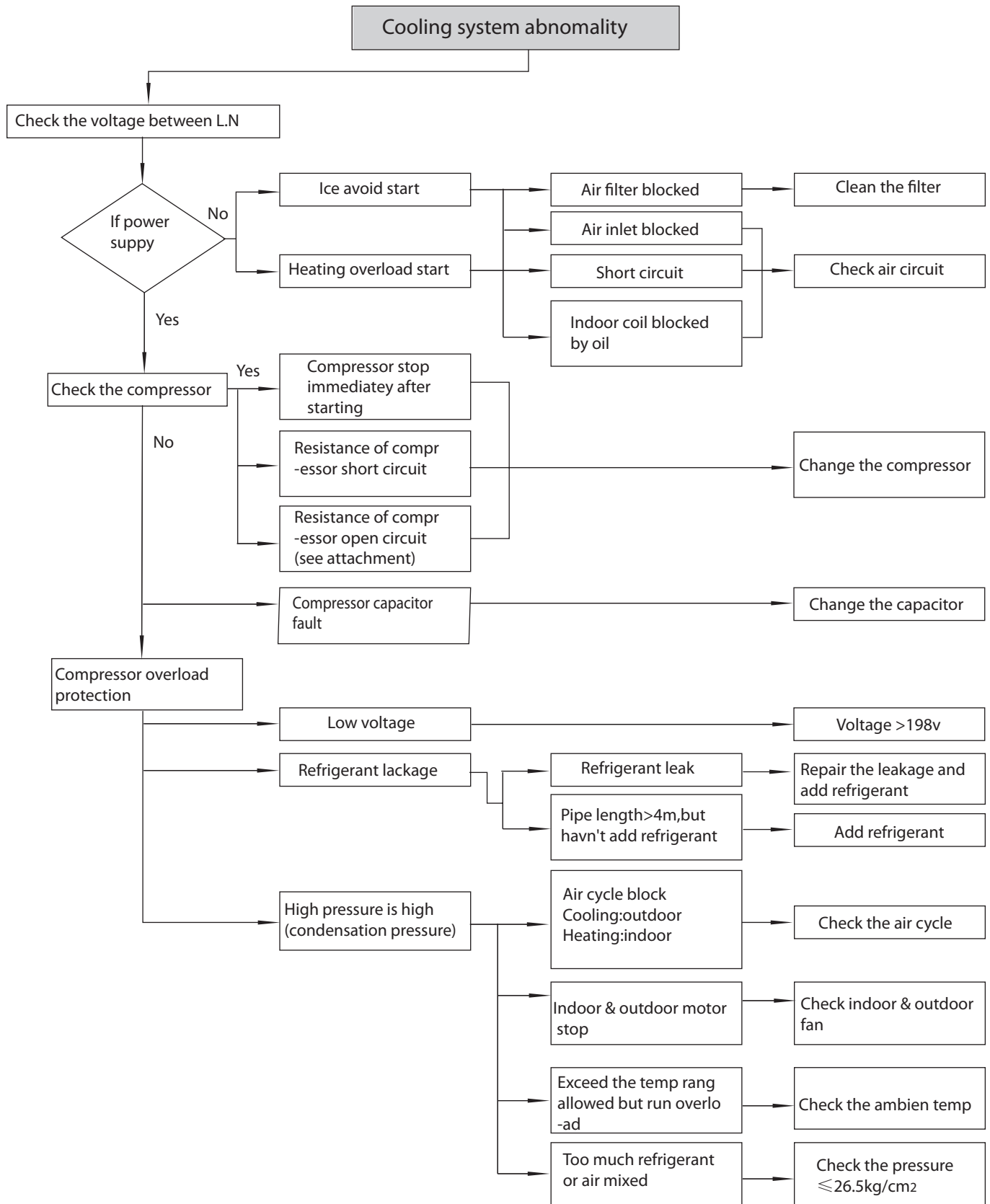
# Faults & self-diagnoses



When check the cell of Hall circuit,do it under the condition of opening the power,unrunning and connecting connector.



# Faults & self-diagnoses



# Faults & self-diagnoses



## ■ Resistance of compressor motor

- Wall split air conditioner(R22)

Model of compressor	model	Value of compressor motor (Ω) (20℃)	
		R-C	S-C
KH145VLLC	7000Btu	3.99	6.43
SG633PB1-A	9000Btu	3.75	3.34
SH833UA5UU	12000Btu	2.46	2.24
SHX33SC4-U	18000Btu	1.47	2.88
SHV33YC6-G	24000Btu	1.04	2.86

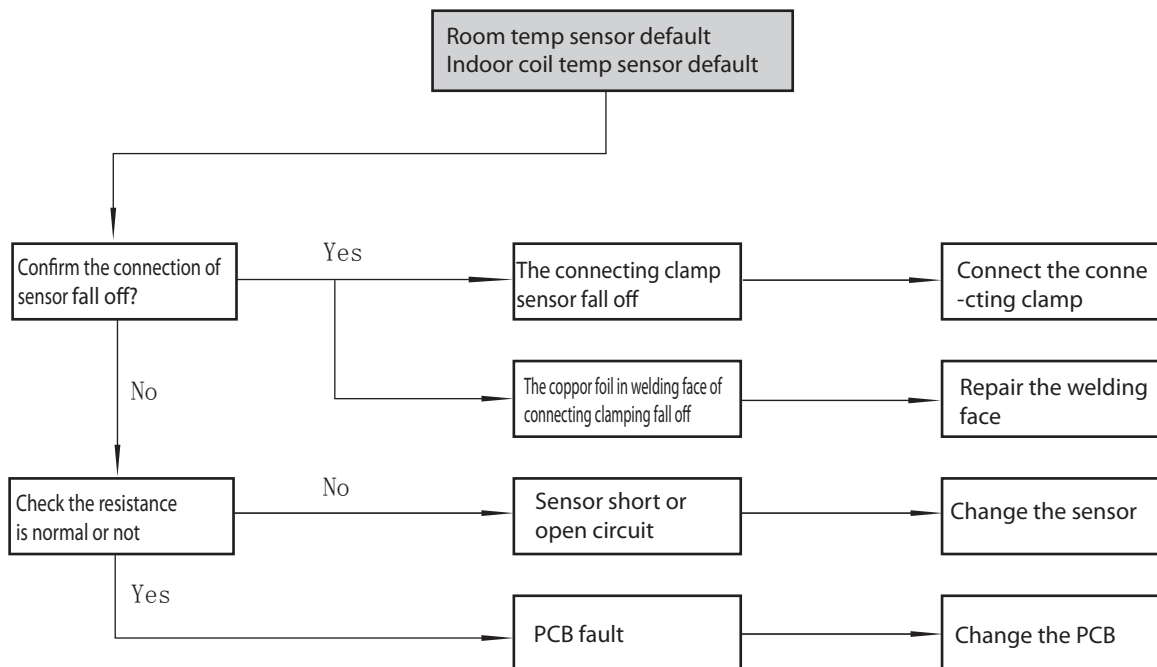
- Wall split air conditioner(R407C)

Model of compressor	model	Value of compressor motor (Ω) (20℃)	
		R-C	S-C
PG150x1C-4DZ2	7000Btu	3.75	4.75
PG165x1C-4DZ2	9000Btu	3.75	4.75
CH833UA5UU	12000Btu	2.48	3.42
CHX33SC4-U	18000Btu	1.51	2.95
CHV33YC6-G	24000Btu	1.22	2.81

# Faults & self-diagnoses



## ■ The flow chart of faults diagnoses.



## ■ Nomal resistance of indoor coil temp sensor.

Room temp,indoor coil sensor,R25=5K Ω ,B25/50=3470K

Temp °C	Resistance(k Ω )
-10	22.40
-8	20.38
-6	18.56
-4	16.93
-2	15.45
0	14.12
2	12.92
4	11.84
6	10.85
8	9.962
10	9.153
12	8.418
14	7.749
16	7.141
18	6.587
20	6.081
22	5.619
24	5.197
25	5.000

Temp °C	Resistance(k Ω )
26	4.811
28	4.458
30	4.134
32	3.837
34	3.564
36	3.313
38	3.083
40	2.870
42	2.675
44	2.494
46	2.328
48	2.174
50	2.032
52	1.901
54	1.779
56	1.666
58	1.562
60	1.465

# Faults & self-diagnoses



■ The air conditioner running status when temp sensor is abnormal.

Model	Name of sensors	Operation mode	Operation mode	
			Short circuit	Open circuit
Indoor unit	Room temp sensor	cooling	Continuous running in cooling mode. ● Don't control the temp start/stop. ● Indoor fan unit :starting.High speed running in auto.	Can not run in cooling mode ● Indoor motor continuous run ● Compressor & outdoor fan stop
		Heating	Can't heating operate ● Compressor,indoor & outdoor fan stop	Continuous running in heating mode. ● Don't control the temp start/stop. ● Indoor fan unit :starting.High speed running in auto.
		Auto	Cooling ok	Heating ok
	Indoor coil temp sensor	cooling	Cooling mode ok ● Continuous under ice avoid mode ● Continuous under the mode of cooling 10 minutes and stop 3 minutes later.	Can not run in cooling mode ● Indoor motor continuous run ● Compressor & outdoor fan stop
		Heating	Can not run in heating mode ● Continuous under heating over-load protection.Indoor fan start and run at high speed during auto mode ● Compressor,outdoor fan motor:stop	Can not run in heating mode ● Compressor,outdoor fan motor: start ● Indoor fan motor:stop ● Cold air avoid
		Auto	Cooling:ok(Continuous under ice avoid mode) Heating:can not run in heating mode ● Continuous under heating over-load protection.	Cooling:always ice protection Heating:always under cold air avoid mode

# Service Parts List



## Indoor Unit

R22、R407C

REF.NO	Parts Name	Parts No											
		7000Btu (only cooling)	QTY	7000Btu (heat pump)	QTY	9000Btu (only cooling)	QTY	9000Btu (heat pump)	QTY	12000Btu (only cooling)	QTY	12000Btu (heat pump)	QTY
<b>Electrical Parts</b>													
1	Fan motor	0209-N0001	1	0209-N0001	1	0209-N0001	1	0209-N0001	1	0209-N0001	1	0209-N0001	1
2	Remote controller	0209-N0002	1	0212-N0001	1	0209-N0002	1	0212-N0001	1	0209-N0002	1	0212-N0001	1
3	Control board	0207-N0001	1	0207-N0033	1	0209-N0044	1	0209-N0051	1	0212-N0006	1	0212-N0008	1
4	Indicator board	0207-N0002	1	0207-N0038	1	0209-N0045	1	0209-N0045	1	0209-N0045	1	0209-N0045	1
5	Receiving board					0209-N0046	1	0209-N0046	1	0209-N0046	1	0209-N0046	1
6	Switch board	0207-N0039	1	0207-N0039	1		0		0		0		0
7	Power wire	0207-N0037	1	0207-N0037	1	0209-N0003	1	0209-N0003	1	0209-N0003	1	0209-N0003	1
8	Terminal	0207-N0003	1	0207-N0003	1	0209-N0004	1	0209-N0004	1	0209-N0004	1	0209-N0004	1
9	F capacitor	0209-N0005	1	0209-N0005	1	0209-N0005	1	0209-N0005	1	0209-N0005	1	0209-N0005	1
10	Temp.sensor indoor	0207-N0004	1	0207-N0004	1	0207-N0004	1	0207-N0004	1	0207-N0004	1	0207-N0004	1
11	Evaporator temp.sensor	0207-N0005	1	0207-N0005	1	0207-N0005	1	0207-N0005	1	0207-N0005	1	0207-N0005	1
12	Step motor	0207-N0006	1	0207-N0006	1	0209-N0006	1	0209-N0006	1	0209-N0006	1	0209-N0006	1
13	Transformer	0207-N0007	1	0207-N0007	1	0209-N0047	1	0209-N0047	1	0209-N0047	1	0209-N0047	1
<b>Construct Parts</b>													
14	Installation plate	0207-N0008	1	0207-N0008	1	0209-N0007	1	0209-N0007	1	0209-N0007	1	0209-N0007	1
15	Air-outlet ass'y	0207-N0009	1	0207-N0009	1	0209-N0008	1	0209-N0008	1	0209-N0008	1	0209-N0008	1
16	Motion link	0207-N0010	1	0207-N0010	1	0209-N0009	2	0209-N0009	2	0209-N0009	1	0209-N0009	1
17	Horizontal eliminating vane A	0207-N0011	13	0207-N0011	13	0209-N0010	12	0209-N0010	12	0209-N0010	12	0209-N0010	12
18	Horizontal eliminating vane B		0		0	0209-N0011	2	0209-N0011	2	0209-N0011	2	0209-N0011	2
19	Running handle	0207-N0012	2	0207-N0012	2		0		0		0		0
20	Vertical eliminating vane	0207-N0013	1	0207-N0013	1	0209-N0012	1	0209-N0012	1	0209-N0012	1	0209-N0012	1
21	Drain plug		0		0	0209-N0013	1	0209-N0013	1	0209-N0013	1	0209-N0013	1
22	Drain hose	0209-N0014	1	0209-N0014	1	0209-N0014	1	0209-N0014	1	0209-N0014	1	0209-N0014	1
23	Front panel	0207-N0014	1	0207-N0014	1	0209-N0015	1	0209-N0015	1	0209-N0015	1	0209-N0015	1
24	Front frame	0207-N0015	1	0207-N0034	1	0209-N0016	1	0209-N0016	1	0209-N0016	1	0209-N0016	1
25	Screw cover	0207-N0016	3	0207-N0016	3	0209-N0017	2	0209-N0017	2	0209-N0017	2	0209-N0017	2
26	Received signal cover	0207-N0017	1	0207-N0017	1	0209-N0018	1	0209-N0018	1	0209-N0018	1	0209-N0018	1
27	Power indicator stick		0		0	0209-N0019	1	0209-N0019	1	0209-N0019	1	0209-N0019	1



# Service Parts List



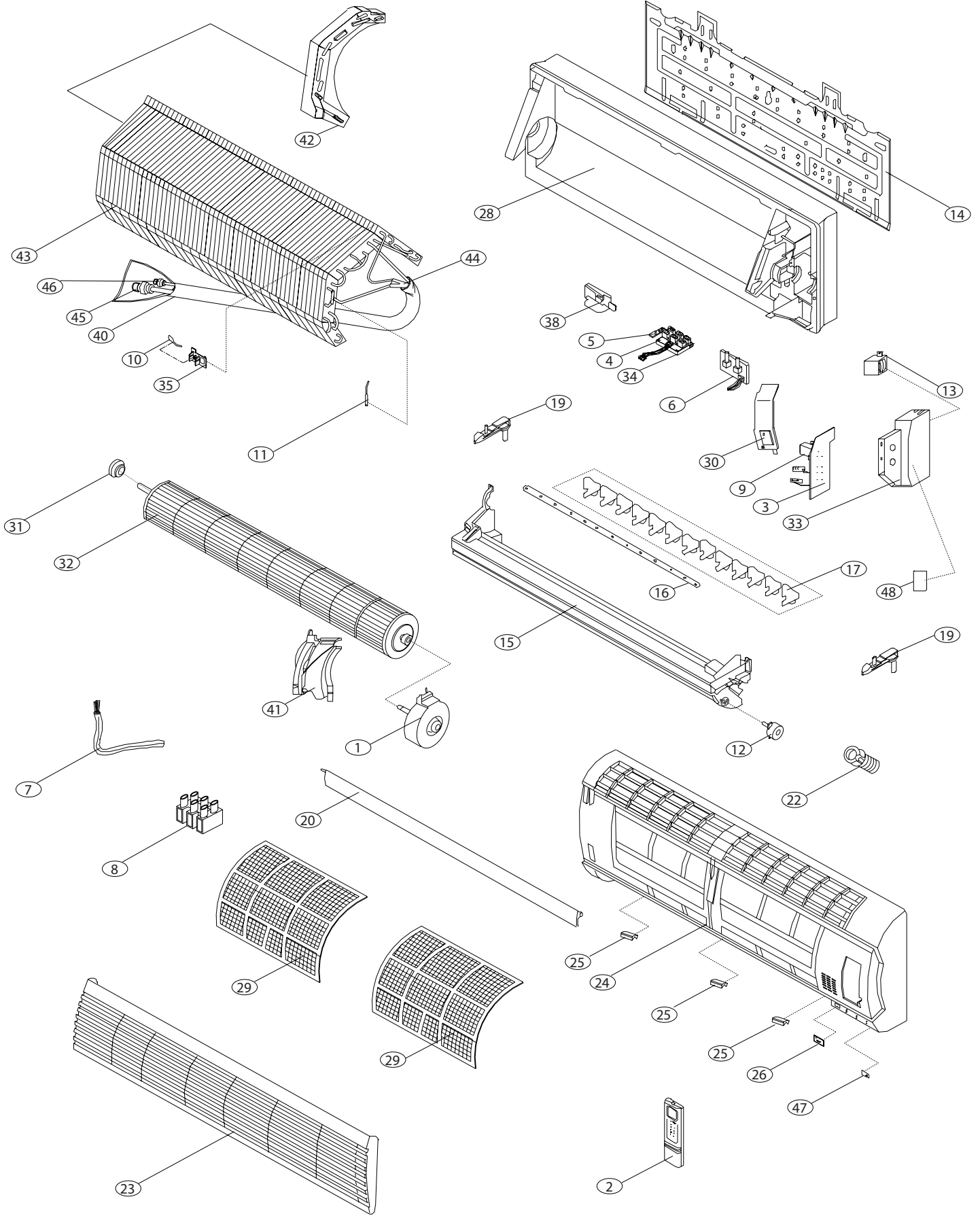
Indoor Unit

R22、R407C

REF.NO	Parts Name	Parts No											
		7000Btu (only cooling)	QTY	7000Btu (heat pump)	QTY	9000Btu (only cooling)	QTY	9000Btu (heat pump)	QTY	12000Btu (only cooling)	QTY	12000Btu (heat pump)	QTY
28	Basing ass'y	0207-N0018	1	0207-N0018	1	0209-N0020	1	0209-N0020	1	0209-N0020	1	0209-N0020	1
29	Air filter	0207-N0019	2	0207-N0019	2	0209-N0021	2	0209-N0021	2	0209-N0021	2	0209-N0021	2
30	Control box cover	0207-N0020	1	0207-N0020	1	0209-N0022	1	0209-N0022	1	0209-N0022	1	0209-N0022	1
31	Bearing ass's'y	0207-N0021	1	0207-N0021	1	0209-N0023	1	0209-N0023	1	0209-N0023	1	0209-N0023	1
32	Cross flow fan	0207-N0022	1	0207-N0022	1	0209-N0024	1	0209-N0024	1	0209-N0024	1	0209-N0024	1
33	Control box	0207-N0023	1	0207-N0023	1	0209-N0025	1	0209-N0025	1	0209-N0025	1	0209-N0025	1
34	Receiving and indicating board bracket	0207-N0024	1	0207-N0024	1	0209-N0026	1	0209-N0026	1	0209-N0026	1	0209-N0026	1
35	Sensor bracket	0209-N0027	1	0209-N0027	1	0209-N0027	1	0209-N0027	1	0209-N0027	1	0209-N0027	1
36	Control board fixed bracket		0		0	0209-N0028	1	0209-N0028	1	0209-N0028	1	0209-N0028	1
37	Control box front bracket		0		0	0209-N0029	1	0209-N0029	1	0209-N0029	1	0209-N0029	1
38	Distribution fixed plate	0207-N0025	1	0207-N0025	1	0209-N0035	1	0209-N0035	1	0209-N0035	1	0209-N0035	1
39	Pipe cover		0		0	0209-N0036	1	0209-N0036	1	0209-N0036	1	0209-N0036	1
40	Distribution tubing jacket	0207-N0026	1	0207-N0026	1	0209-N0037	1	0209-N0037	1	0209-N0037	1	0209-N0037	1
41	Motor fixed plate	0207-N0027	1	0207-N0027	1	0209-N0038	1	0209-N0038	1	0209-N0038	1	0209-N0038	1
42	Evaporator left bracket	0207-N0028	1	0207-N0028	1	0209-N0048	1	0209-N0048	1	0209-N0048	1	0209-N0048	1
Cycle parts													
43	Evaporator ass'y	0207-N0029	1	0207-N0029	1	0209-N0039	1	0209-N0039	1	0212-N0003	1	0212-N0003	1
44	Evaporator induced tube	0207-N0030	1	0207-N0030	1	0209-N0040	1	0209-N0040	1	0212-N0004	1	0212-N0004	1
45	nut 1	0209-N0041	1	0209-N0041	1	0209-N0041	1	0209-N0041	1	0212-N0005	1	0212-N0005	1
46	nut 2	0209-N0042	1	0209-N0042	1	0209-N0042	1	0209-N0042	1	0209-N0042	1	0209-N0042	1
Printing parts													
47	Name plate	0207-N0031	1	0207-N0035	1	0209-N0049	1	0209-N0053	1	0212-N0007	1	0209-N0009	1
48	Wiring diagram	0207-N0032	1	0207-N0036	1	0209-N0050	1	0209-N0054	1	0209-N0050	1	0209-N0054	1

Indoor unit

Heat pump & cooling only

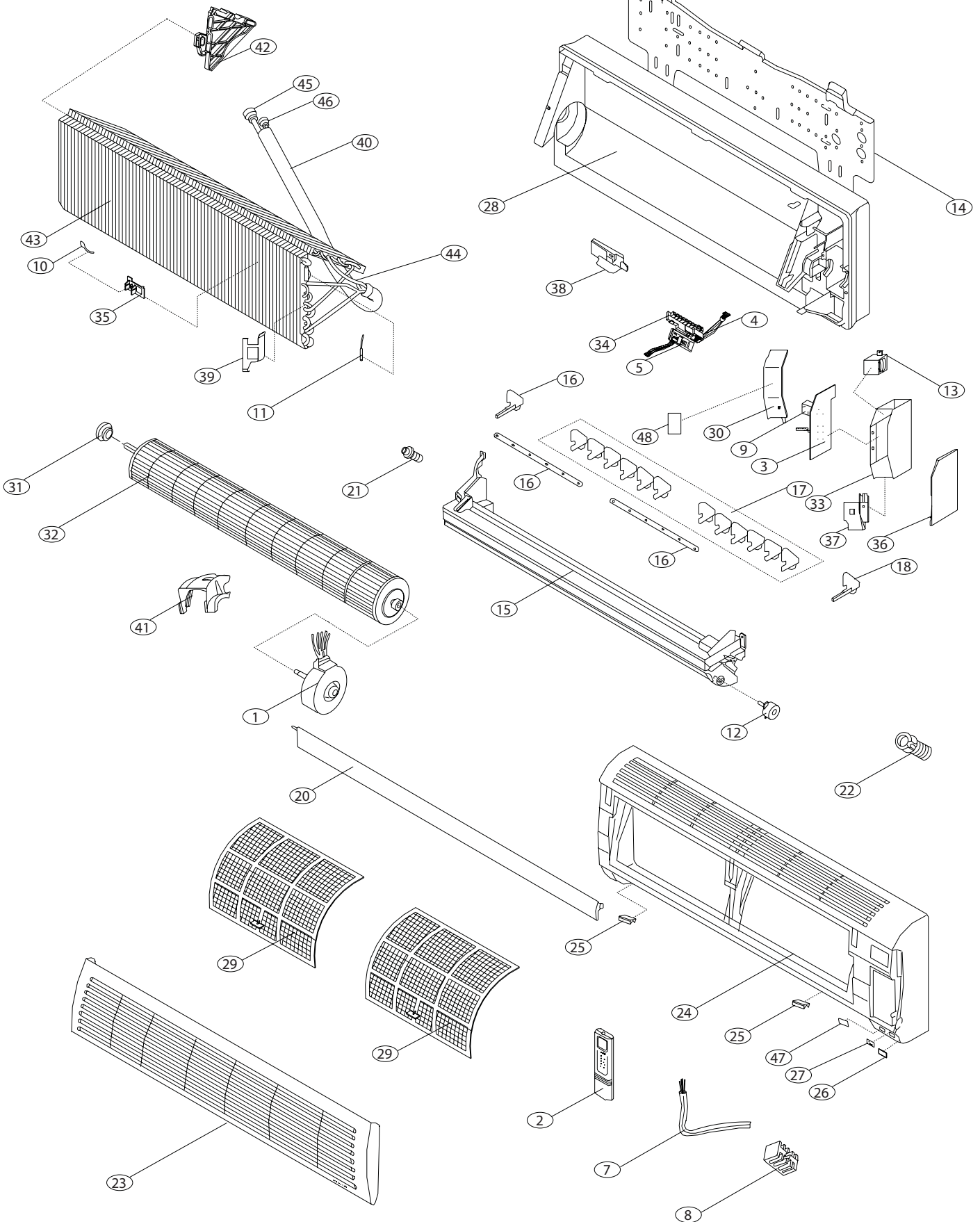


R22 R407C

7000Btu

Indoor unit

Heat pump & cooling only



R22 R407C

9000-12000Btu

# Service Parts List



## Outdoor Unit

## R407C

REFNO	Parts Name	Parts No											
		7000Btu (only cooling)	QTY	7000Btu (heat pump)	QTY	9000Btu (only cooling)	QTY	9000Btu (heat pump)	QTY	12000Btu (only cooling)	QTY	12000Btu (heat pump)	QTY
<b>Electrical Parts</b>													
1	Fan motor	0207-W0001	1	0207-W0001	1	0209-W0025	1	0209-W0025	1	0209-W0025	1	0209-W0025	1
2	Terminal board	0207-W0002	1	0207-W0040	1	0207-W0002	1	0207-W0040	1	0207-W0002	1	0207-W0040	1
3	F capacitor	0207-W0003	1	0207-W0003	1	0209-W0026	1	0209-W0026	1	0209-W0026	1	0209-W0026	1
4	R capacitor	0207-W0004	1	0207-W0004	1	0209-W0027	1	0209-W0027	1	0212-W0002	1	0212-W0002	1
5	4-way valve		0	0207-W0041	1		0	0209-W0041	1		0	0212-W0020	1
<b>Construct Parts</b>													
6	Basing ass'y	0207-W0005	1	0207-W0005	1	0209-W0028	1	0209-W0028	1	0212-W0003	1	0212-W0003	1
7	Compressor cushion rubber	0207-W0006	3	0207-W0006	3	0207-W0006	3	0207-W0006	3	0212-W0004	3	0212-W0004	3
8	Base seal A		0		0	0209-W0001	1	0209-W0001	1	0209-W0001	1	0209-W0001	1
9	Base seal B		0		0	0209-W0002	5	0209-W0002	5	0209-W0002	5	0209-W0002	5
10	Valve base	0207-W0010	1	0207-W0010	1	0209-W0003	1	0209-W0003	1	0209-W0003	1	0209-W0003	1
11	Valve set bolt	0209-W0004	4	0209-W0004	4	0209-W0004	4	0209-W0004	4	0209-W0004	4	0209-W0004	4
12	Compressor damping pad	0209-W0005	3	0209-W0005	3	0209-W0005	3	0209-W0005	3	0209-W0005	3	0209-W0005	3
13	Compressor damping nut	0209-W0006	3	0209-W0006	3	0209-W0006	3	0209-W0006	3	0209-W0006	3	0209-W0006	3
14	Motor angle	0207-W0011	1	0207-W0011	1	0209-W0007	1	0209-W0007	1	0212-W0001	1	0212-W0001	1
15	Angle seal A		0		0	0209-W0008	1	0209-W0008	1	0209-W0008	1	0209-W0008	1
16	Angle seal B		0		0	0209-W0009	1	0209-W0009	1	0209-W0009	1	0209-W0009	1
17	Propeller fan	0207-W0015	1	0207-W0015	1	0209-W0010	1	0209-W0010	1	0209-W0010	1	0209-W0010	1
18	Fan fixed nut	0209-W0011	1	0209-W0011	1	0209-W0011	1	0209-W0011	1	0209-W0011	1	0209-W0011	1
19	Bulkhead	0207-W0016	1	0207-W0016	1	0209-W0030	1	0209-W0030	1	0212-W0005	1	0212-W0005	1
20	Compressor cover	0207-W0017	1	0207-W0017	1	0209-W0031	1	0209-W0031	1	0212-W0006	1	0212-W0006	1
21	Control box	0207-W0018	1	0207-W0018	1	0209-W0032	1	0209-W0032	1	0209-W0032	1	0209-W0032	1
22	Right side plate		0		0	0209-W0012	1	0209-W0012	1	0209-W0012	1	0209-W0012	1
23	Left side plate	0207-W0019	1	0207-W0019	1		0		0		0		0
24	Wire fixed board spacer		0		0	0209-W0013	1	0209-W0013	1	0209-W0013	1	0209-W0013	1
25	Wire fixed board	0209-W0014	1	0209-W0014	1	0209-W0014	1	0209-W0014	1	0209-W0014	1	0209-W0014	1
26	Front panel	0207-W0020	1	0207-W0020	1	0209-W0015	1	0209-W0015	1	0209-W0015	1	0209-W0015	1
27	Fan guard		0		0	0209-W0033	1	0209-W0033	1	0209-W0033	1	0209-W0033	1

# Service Parts List



## Outdoor Unit

R407C

REF.NO	Parts Name	Parts No											
		7000Btu (only cooling)	QTY	7000Btu (heat pump)	QTY	9000Btu (only cooling)	QTY	9000Btu (heat pump)	QTY	12000Btu (only cooling)	QTY	12000Btu (heat pump)	QTY
28	Handle		0		0	0209-W0016	1	0209-W0016	1	0209-W0016	1	0209-W0016	1
29	Air-inlet grill		0		0	0209-W0017	1	0209-W0017	1	0209-W0017	1	0209-W0017	1
30	Covering plate	0207-W0022	1	0207-W0022	1	0209-W0018	1	0209-W0018	1	0209-W0018	1	0209-W0018	1
31	Control box cover		0		0	0209-W0019	1	0209-W0019	1	0209-W0019	1	0209-W0019	1
32	R capacitor clip	0207-W0023	1	0207-W0023	1	0207-W0023	1	0207-W0023	1	0212-W0008	1	0212-W0008	1
33	Drain plug		0	0209BW0051	1		0	0209BW0051	1		0	0209BW0051	1
Cycle parts													
34	Compressor ass'y	0207-W0024	1	0207-W0024	1	0209-W0035	1	0209-W0035	1	0212-W0009	1	0212-W0009	1
35	Terminal cover	0207-W0025	1	0207-W0025	1	0207-W0025	1	0207-W0025	1	0212-W0010	1	0212-W0010	1
36	Terminal cover gasket	0207-W0026	1	0207-W0026	1	0207-W0026	1	0207-W0026	1	0212-W0011	1	0212-W0011	1
37	Terminal cover nut	0207-W0027	1	0207-W0027	1	0207-W0027	1	0207-W0027	1	0212-W0012	1	0212-W0012	1
38	Rubber-washer	0207-W0028	1	0207-W0028	1	0207-W0028	1	0207-W0028	1	0212-W0013	1	0212-W0013	1
39	Condenser ass'y	0207-W0029	1	0207-W0042	1	0209-W0036	1	0209-W0044	1	0212-W0014	1	0212-W0014	1
40	4-way valve ass'y		0	0207-W0043	1		0	0209-W0045	1		0	0212-W0021	1
41	Capillary tube ass'y	0207-W0030	1	0207-W0044	1	0209-W0037	1	0209-W0046	1	0212-W0015	1	0212-W0022	1
42	Suction tube	0207-W0031	1		0	0209-W0038	1		0	0212-W0016	1		0
43	Discharge tube	0207-W0032	1		0	0209-W0039	1		0	0212-W0017	1		0
44	4 - way valve		0	0207-W0045	1		0	0207-W0045	1		0	0212-W0023	1
45	2 - way valve	0207-W0033	1	0207-W0033	1	0209-W0040	1	0209-W0040	1	0209-W0040	1	0209-W0040	1
46	3 - way valve	0207-W0034	1	0207-W0034	1	0209-W0041	1	0209-W0041	1	0212-W0018	1	0212-W0018	1
47	1/4 " nut	0209-N0042	1	0209-N0042	1	0209-N0042	1	0209-N0042	1	0209-N0042	1	0209-N0042	1
48	3/8 " nut	0209-N0041	1	0209-N0041	1	0209-N0041	1	0209-N0041	1		0		0
49	1/2 " nut		0		0		0		0	0212-N0005	1	0212-N0005	1
50	Service cap nut	0209-W0020	1	0209-W0020	1	0209-W0020	1	0209-W0020	1	0209-W0020	1	0209-W0020	1
51	Valve cap(big)	0207-W0048	1	0207-W0048	1	0207-W0048	1	0207-W0048	1	0212-W0025	1	0212-W0025	1
52	Valve cap(small)	0207-W0048	1	0207-W0048	1	0207-W0048	1	0207-W0048	1	0207-W0048	1	0207-W0048	1
Printing parts													
53	Name plate	0207-W0035	1	0207-W0046	1	0209-W0042	1	0209-W0047	1	0212-W0019	1	0212-W0024	1
54	Wiring diagram	0207-W0036	1	0207-W0047	1	0209-W0043	1	0209-W0048	1	0209-W0043	1	0209-W0048	1



## Outdoor Unit

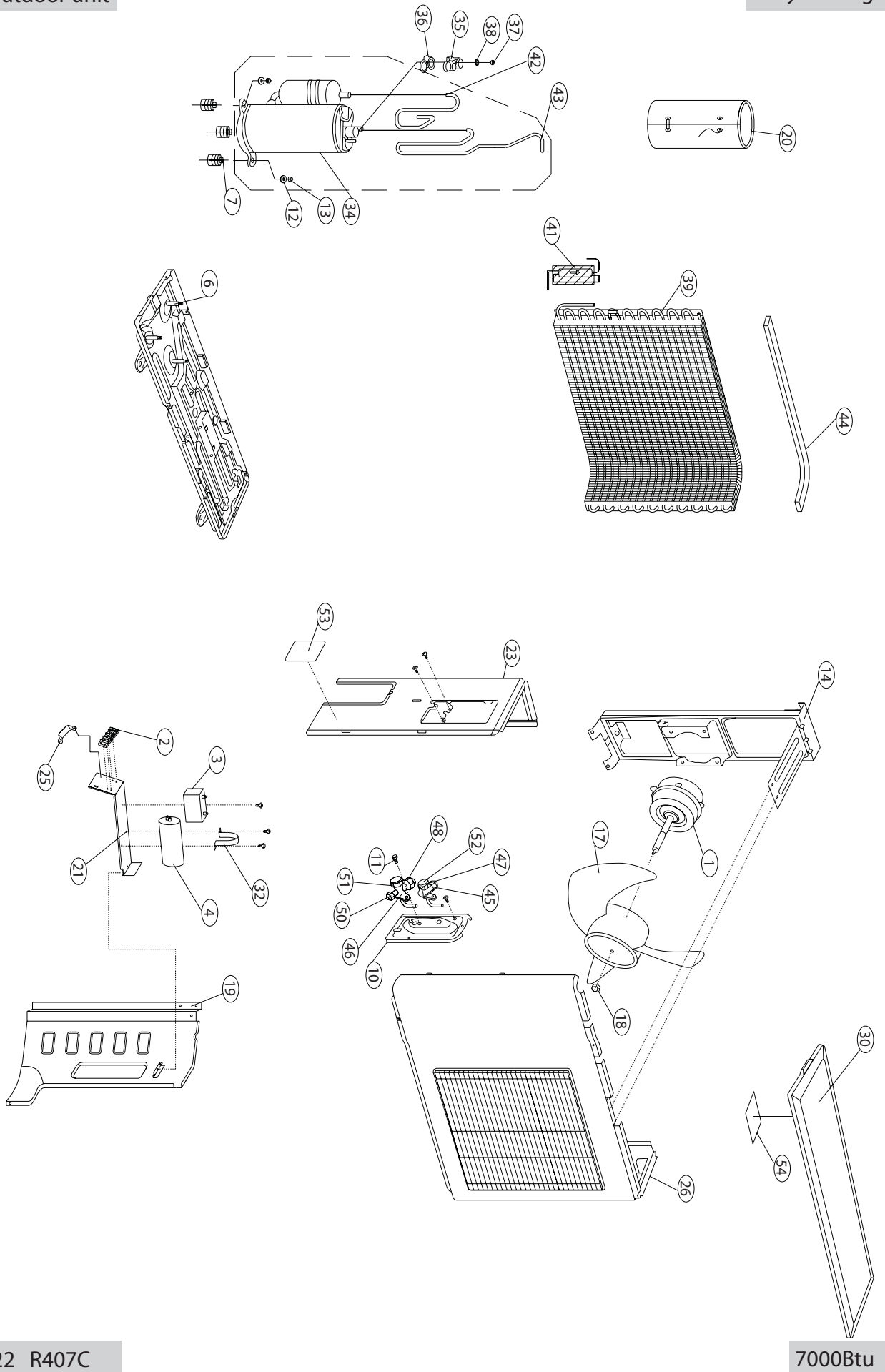
R22

REF.NO	Parts Name	Parts No											
		7000Btu (only cooling)	QTY	7000Btu (heat pump)	QTY	9000Btu (only cooling)	QTY	9000Btu (heat pump)	QTY	12000Btu (only cooling)	QTY	12000Btu (heat pump)	QTY
34	Compressor ass'y	0207-W0049	1	0207-W0049	1	0209-W0049	1	0209-W0049	1	0212-W0026	1	0212-W0026	1
45	2 - way valve	0207-W0050	1	0207-W0050	1	0209-W0050	1	0209-W0050	1	0209-W0050	1	0209-W0050	1
46	3 - way valve	0207-W0051	1	0207-W0051	1	0209-W0051	1	0209-W0051	1	0212-W0027	1	0212-W0027	1
53	Name plate	0207-W0052	1	0207-W0053	1	0209-W0052	1	0209-W0053	1	0212-W0028	1	0212-W0029	1

Except above ,other are same as models with R407C parts.

Outdoor unit

Only cooling

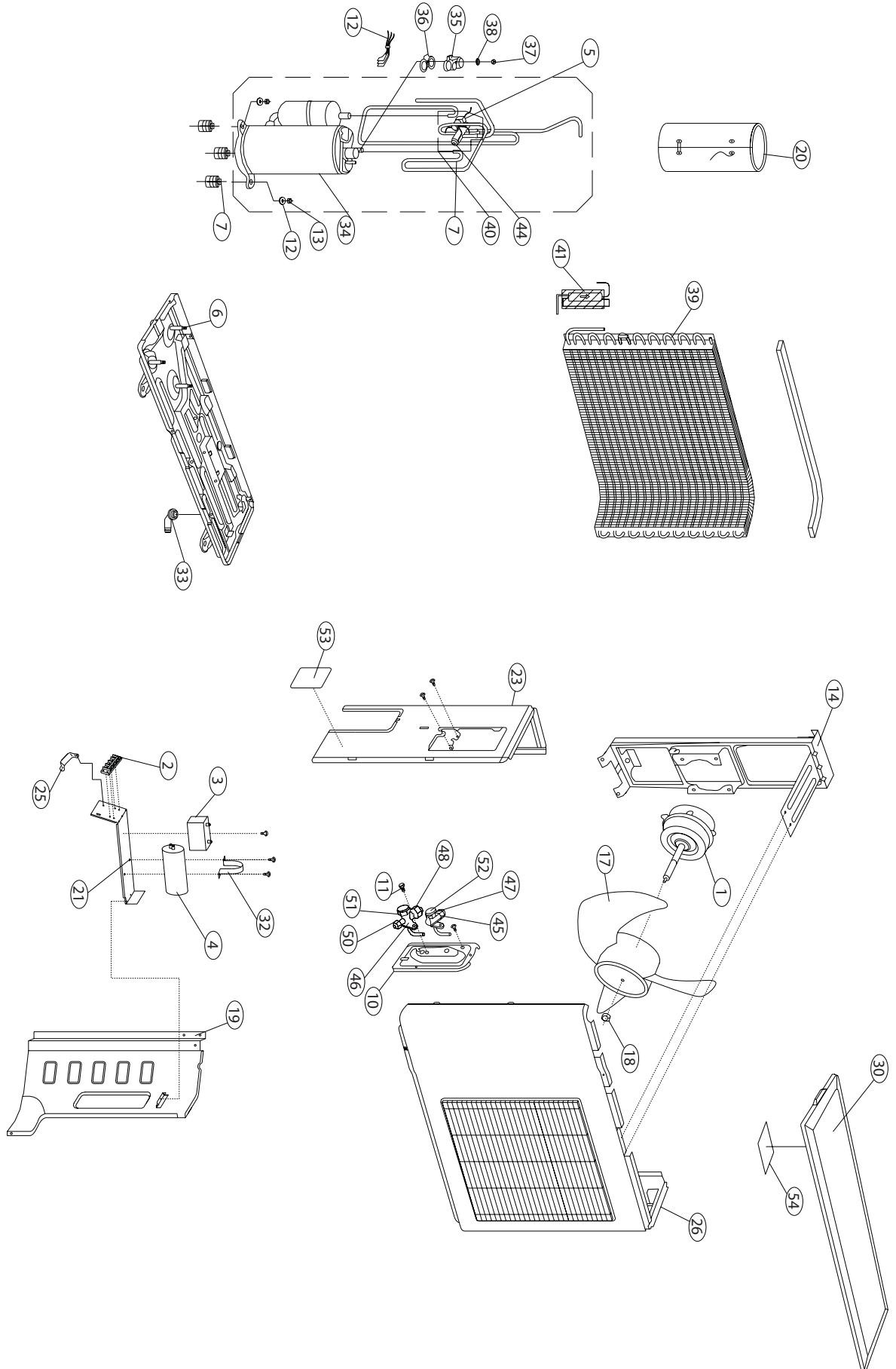


R22 R407C

7000Btu

Outdoor unit

Heat pump



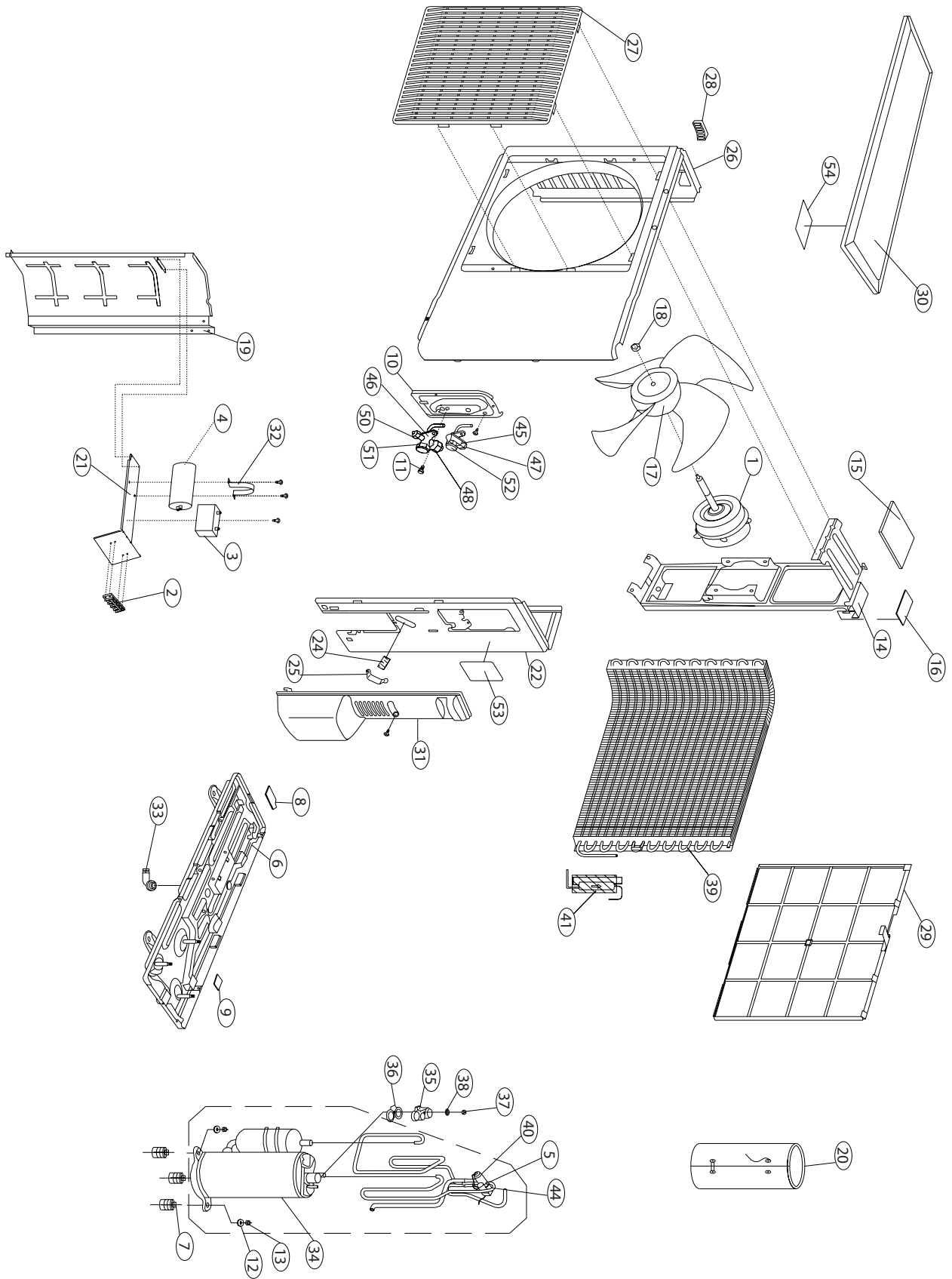
R22 R407C

7000Btu



Outdoor unit

Heat pump

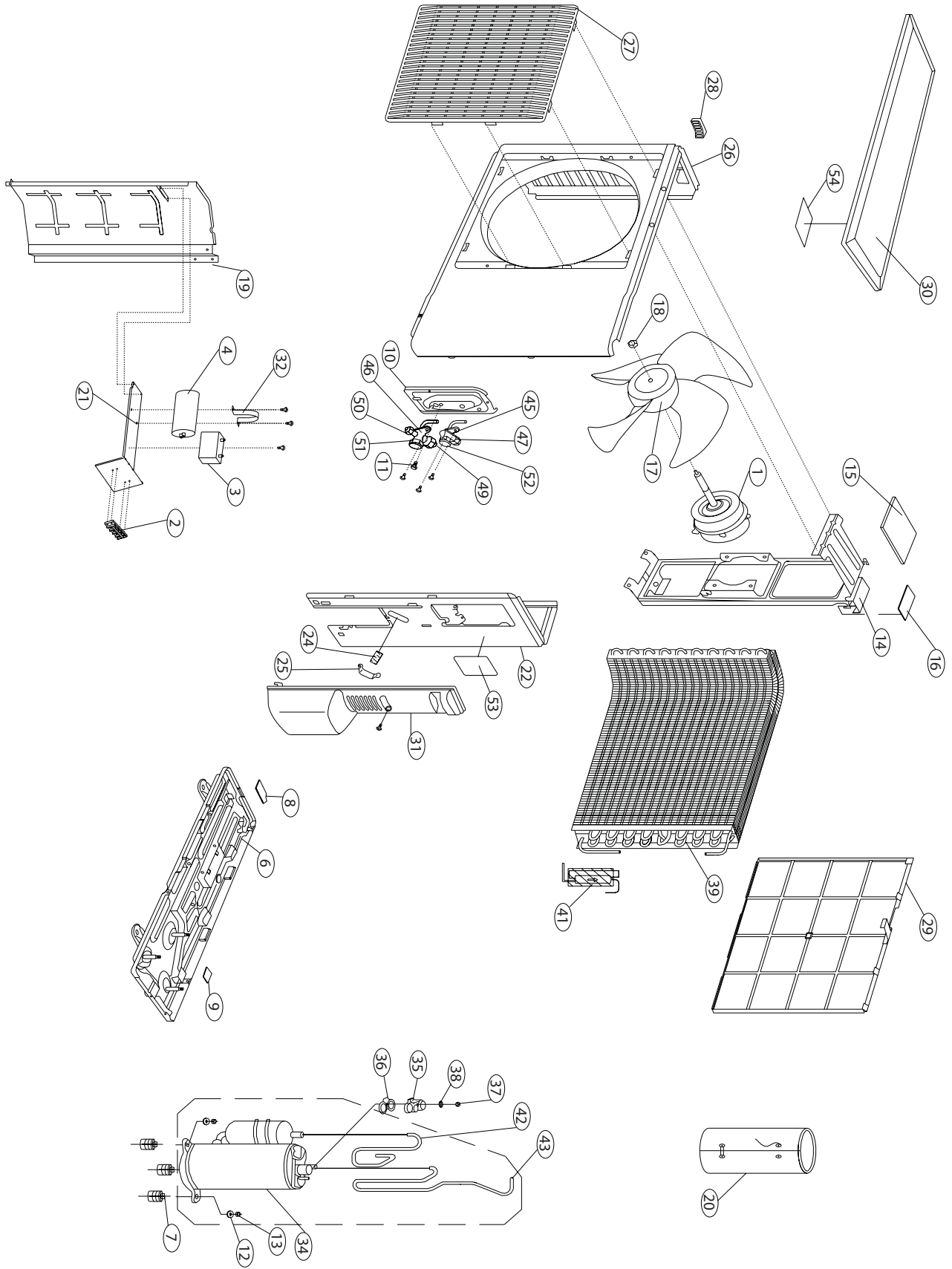


R22 R407C

9000Btu

Outdoor unit

Only cooling

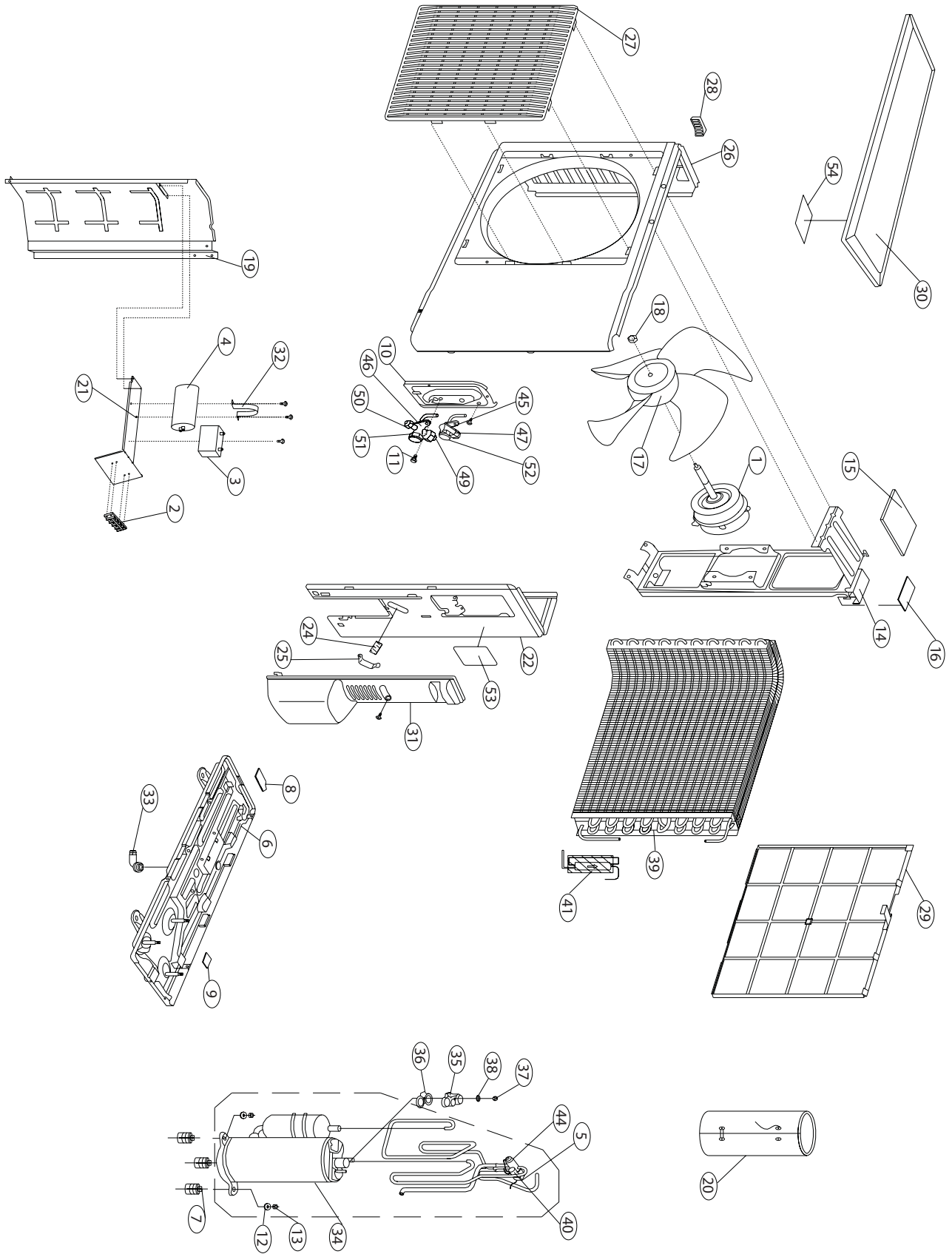


R22 R407C

12000Btu

Outdoor unit

Heat pump



R22 R407C

12000Btu

# Service Parts List



## Indoor Unit

## R22、R407C

REFNO	Parts Name	Parts No							
		18000Btu (only cooling)	Q'TY	18000Btu (heat pump)	Q'TY	24000Btu (only cooling)	Q'TY	24000Btu (heat pump)	Q'TY
<b>Electrical Parts</b>									
1	Fan motor	0218-N0001	1	0218-N0001	1	0224-N0001	1	0224-N0001	1
2	Remote controller	0209-N0002	1	0212-N0001	1	0209-N0002	1	0212-N0001	1
3	Control board	0218-N0002	1	0218-N0040	1	0224-N0002	1	0224-N0038	1
4	Indicator board	0218-N0003	1	0218-N0003	1	0224-N0003	1	0224-N0003	1
5	Receiving board	0218-N0004	1	0218-N0004	1	0224-N0004	1	0224-N0004	1
6	Power wire	0218-N0005	1	0218-N0005	1	0224-N0005	1	0224-N0005	1
7	Terminal	0209-N0004	1	0209-N0004	1	0224-N0006	1	0224-N0006	1
8	F capacitor	0218-N0006	1	0218-N0006	1	0224-N0007	1	0224-N0007	1
9	Temp.sensor indoor	0207-N0004	1	0207-N0004	1	0207-N0004	1	0207-N0004	1
10	Evaporator temp.sensor	0207-N0005	1	0207-N0005	1	0207-N0005	1	0207-N0005	1
11	Step motor	0218-N0007	1	0218-N0007	1	0224-N0008	1	0218-N0008	1
12	Transformer	0218-N0008	1	0218-N0008	1	0224-N0009	1	0218-N0009	1
<b>Construct Parts</b>									
13	Installation plate	0218-N0009	1	0218-N0009	1	0224-N0010	1	0224-N0010	1
14	Air-outlet ass'y	0218-N0010	1	0218-N0010	1	0224-N0011	1	0224-N0011	1
15	Motion link	0218-N0011	2	0218-N0011	2	0224-N0012	4	0224-N0012	4
16	Horizontal eliminating vane A	0218-N0012	14	0218-N0012	14	0224-N0013	12	0224-N0013	12
17	Horizontal eliminating vane B	0218-N0013	2	0218-N0013	2	0224-N0014	4	0224-N0014	4
18	Vertical eliminating vane	0218-N0014	1	0218-N0014	1	0224-N0015	1	0224-N0015	1
19	Drain plug	0218-N0015	1	0218-N0015	1		0		0
20	Drain hose	0218-N0016	1	0218-N0016	1	0224-N0016	1	0224-N0016	1
21	Front panel	0218-N0017	1	0218-N0017	1	0224-N0017	1	0224-N0017	1
22	Front frame	0218-N0018	1	0218-N0018	1	0224-N0018	1	0224-N0018	1
23	Screw cover	0218-N0019	3	0218-N0019	3	0224-N0019	3	0224-N0019	3
24	Received signal cover	0218-N0020	1	0218-N0020	1	0224-N0020	1	0224-N0020	1
25	Power indicator stick	0218-N0021	1	0218-N0021	1		0		0
26	Basing ass'y	0218-N0022	1	0218-N0022	1	0224-N0021	1	0224-N0021	1
27	Bearing seat fixed board	0218-N0023	1	0218-N0023	1		0		0

# Service Parts List



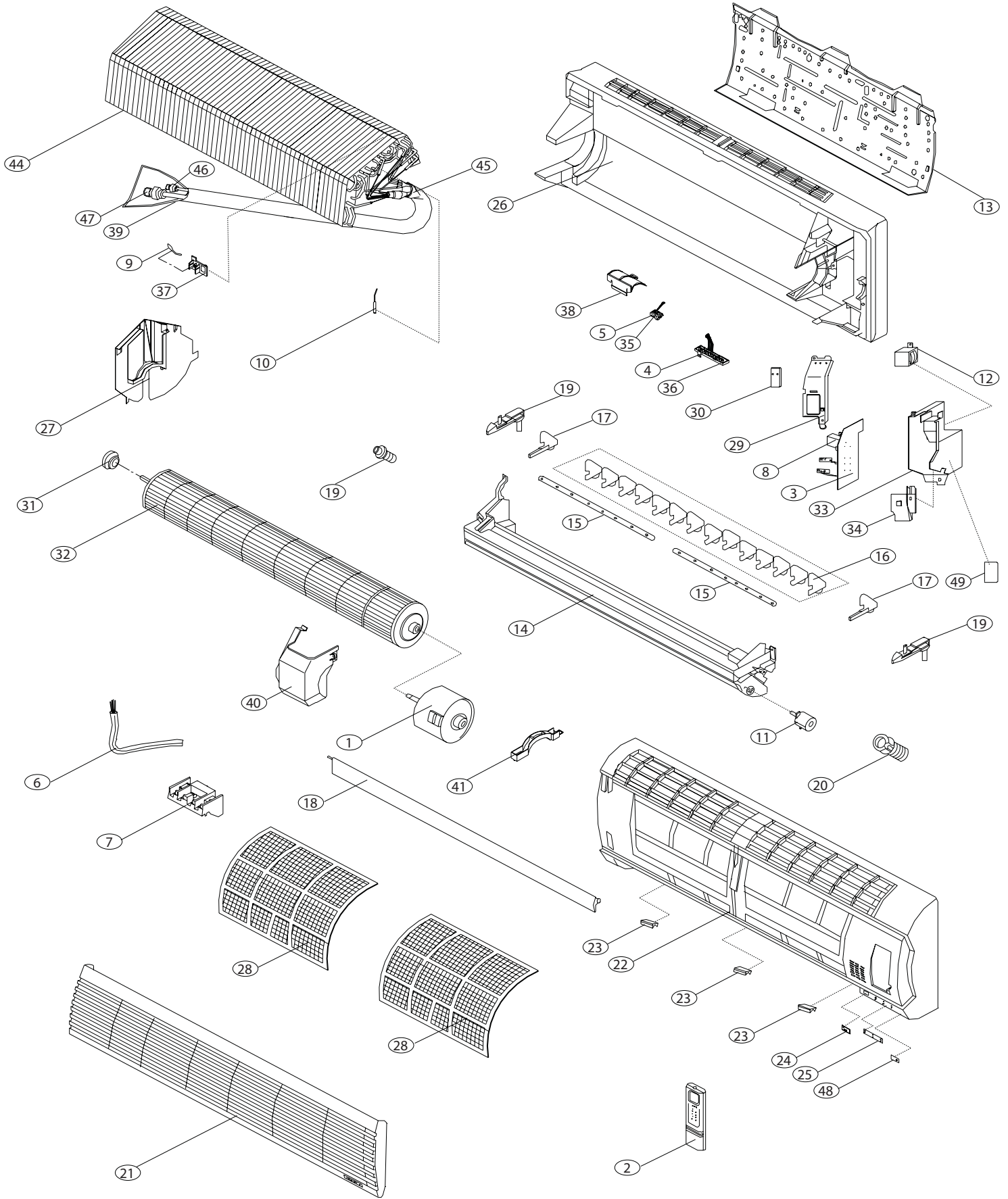
Indoor Unit

R22、R407C

REF.NO	Parts Name	Parts No							
		18000Btu (only cooling)	Q'TY	18000Btu (heat pump)	Q'TY	24000Btu (only cooling)	Q'TY	24000Btu (heat pump)	Q'TY
28	Air filter	0218-N0024	2	0218-N0024	2	0224-N0022	2	0224-N0022	2
29	Control box cover ass'y	0218-N0025	1	0218-N0025	1	0224-N0023	1	0224-N0023	1
30	Control box cover	0218-N0026	1	0218-N0026	1		0		0
31	Bearing ass'y	0218-N0027	1	0218-N0027	1	0224-N0024	1	0224-N0024	1
32	Cross flow fan	0218-N0028	1	0218-N0028	1	0224-N0025	1	0224-N0025	1
33	Control box ass'y	0218-N0029	1	0218-N0029	1	0224-N0026	1	0224-N0026	1
34	Control box front bracket	0218-N0030	1	0218-N0030	1		0		0
35	Receiving board bracket	0218-N0031	1	0218-N0031	1		0		0
36	Indicating board bracket	0218-N0032	1	0218-N0032	1		0		0
37	Sensor bracket	0209-N0027	1	0209-N0027	1	0209-N0027	1	0209-N0027	1
38	Distribution fixed plate(right)	0218-N0033	1	0218-N0033	1	0224-N0027	1	0224-N0027	1
39	Distribution tubing jacket	0218-N0034	1	0218-N0034	1	0224-N0028	1	0224-N0028	1
40	Motor fixed plate(left)	0218-N0035	1	0218-N0035	1		0		0
41	Motor fixed plate(right)	0218-N0036	1	0218-N0036	1		0		0
42	Motor cover		0		0	0224-N0029	1	0224-N0029	1
43	Distribution fixed plate(mid)		0		0	0224-N0030	2	0224-N0030	2
Cycle parts									
44	Evaporator ass'y	0218-N0037	1	0218-N0037	1	0224-N0031	1	0224-N0031	1
45	Evaporator induced tube	0218-N0038	1	0218-N0038	1	0224-N0032	1	0224-N0032	1
46	Nut 1	0209-N0042	1	0209-N0042	1	0209-N0041	1	0209-N0041	1
47	Nut 2	0212-N0005	1	0212-N0005	1	0224-N0033	1	0224-N0033	1
Printing parts									
48	Name plate	0218-N0039	1	0218-N0041	1	0224-N0034	1	0224-N0036	1
49	Wiring diagram?	0209-N0050	1	0209-N0054	1	0224-N0035	1	0224-N0037	1

Indoor unit

Heat pump & cooling only

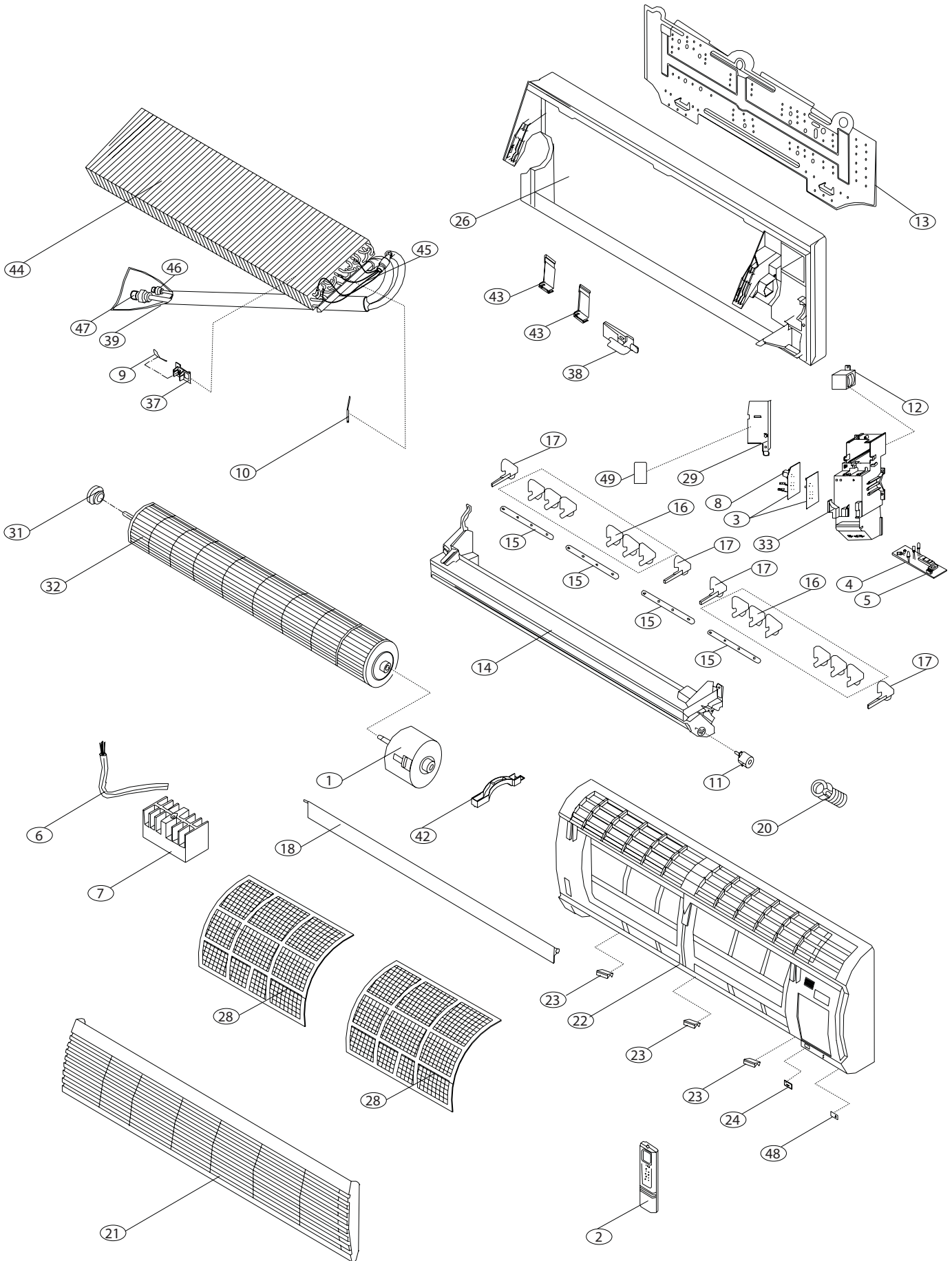


R22 R407C

18000Btu

Indoor unit

Heat pump & cooling only



R22 R407C

24000Btu

## Outdoor Unit

## R407C

REF.NO	Parts Name	Parts No							
		18000Btu (only cooling)	Q'TY	18000Btu (heat pump)	Q'TY	24000Btu (only cooling)	Q'TY	24000Btu (heat pump)	Q'TY
<b>Electrical Parts</b>									
1	Fan motor	0218-W0001	1	0218-W0001	1	0224-W0001	1	0224-W0001	1
2	Terminal board	0207-W0002	1	0207-W0040	1	0207-W0002	1	0224-W0029	1
3	F capacitor	0218-W0002	1	0218-W0002	1	0224-W0002	1	0224-W0002	1
4	R capacitor	0212-W0002	1	0212-W0002	1	0212-W0002	1	0212-W0002	1
5	4-way valve coil		0	0212-W0020	1		0	0212-W0020	1
6	Control board		0		0		0	0224-W0030	1
<b>Construct Parts</b>									
7	Chassis	0218-W0003	1	0218-W0003	1	0224-W0003	1	0224-W0003	1
8	Compressor cushion rubber	0218-W0004	3	0218-W0004	3	0218-W0004	3	0218-W0004	3
9	Valve base		0		0	0224-W0004	1	0224-W0004	1
10	Valve set bolt	0209-W0004	4	0209-W0004	4	0224-W0040	4	0224-W0040	4
11	Compressor damping pad	0209-W0005	3	0209-W0005	3	0224-W0041	4	0224-W0041	4
12	Compressor damping nut	0209-W0006	3	0209-W0006	3	0209-W0006	3	0209-W0006	3
13	Motor angle	0218-W0005	1	0218-W0005	1	0224-W0005	1	0224-W0005	1
14	Control box bracket	0218-W0006	1	0218-W0006	1		0		0
15	Bulkhead bracket	0218-W0007	1	0218-W0007	1		0		0
16	Propeller fan	0218-W0008	1	0218-W0008	1	0218-W0008	1	0218-W0008	1
17	Fan fixed nut	0218-W0009	1	0218-W0009	1	0218-W0009	1	0218-W0009	1
18	Motor axis of motor	0224-W0008	1	0224-W0008	1	0224-W0008	1	0224-W0008	1
19	Bulkhead	0218-W0010	1	0218-W0010	1	0224-W0009	1	0224-W0009	1
20	Compressor cover	0218-W0011	1	0218-W0011	1	0224-W0010	1	0224-W0010	1
21	Control box	0218-W0012	1	0218-W0012	1	0224-W0011	1	0224-W0011	1
22	Right side plate	0218-W0013	1	0218-W0013	1	0224-W0012	1	0224-W0012	1



# Service Parts List



Outdoor Unit

R407C

REF. NO	Parts Name	Parts No							
		18000Btu (only cooling)	Q'TY	18000Btu (heat pump)	Q'TY	24000Btu (only cooling)	Q'TY	24000Btu (heat pump)	Q'TY
23	Left side plate	0218-W0014	1	0218-W0014	1	0224-W0013	1	0224-W0013	1
24	Condenser fixed board	0218-W0015	1	0218-W0015	1		0		0
25	Wire fixed board	0218-W0016	1	0218-W0016	1	0218-W0016	1	0218-W0016	1
26	Front panel	0218-W0017	1	0218-W0017	1	0224-W0014	1	0224-W0014	1
27	Fan guard	0218-W0018	1	0218-W0018	1		0		0
28	Handle	0218-W0019	1	0218-W0019	1	0224-W0015	1	0224-W0015	1
29	Air-inlet grill		0		0	0224-W0016	1	0224-W0016	1
30	Covering plate		0		0	0224-W0017	1	0224-W0017	1
31	Control box cover		0		0	0224-W0018	1	0224-W0018	1
32	R capacitor clip	0218-W0020	1	0218-W0020	1	0218-W0020	1	0218-W0020	1
Cycle parts									
33	Compressor ass'y	0218-W0021	1	0218-W0021	1	0224-W0019	1	0224-W0019	1
34	Terminal cover	0218-W0022	1	0218-W0022	1	0218-W0022	1	0218-W0022	1
35	Terminal cover gasket	0218-W0023	1	0218-W0023	1	0218-W0023	1	0218-W0023	1
36	Terminal cover nut	0218-W0024	1	0218-W0024	1	0218-W0024	1	0218-W0024	1
37	Rubber-washer	0218-W0025	1	0218-W0025	1	0218-W0025	1	0218-W0025	1
38	Condenser ass'y	0218-W0026	1	0218-W0031	1	0224-W0020	1	0224-W0031	1
39	4-way valve ass'y		0	0218-W0032	1		0	0224-W0032	1
40	Capillary tube ass'y	0218-W0027	1	0218-W0033	1	0224-W0021	1	0224-W0033	1
41	Suction tube	0218-W0028	1		0	0224-W0022	1		0
42	Discharge tube	0218-W0029	1		0	0224-W0023	1		0
43	4 - way valve		0	0212-W0023	1		0	0212-W0023	1
44	2 - way valve	0209-W0040	1	0209-W0040	1	0224-W0024	1	0224-W0024	1
45	3 - way valve	0209-W0041	1	0209-W0041	1	0224-W0025	1	0224-W0025	1

# Service Parts List



## Outdoor Unit

R407C

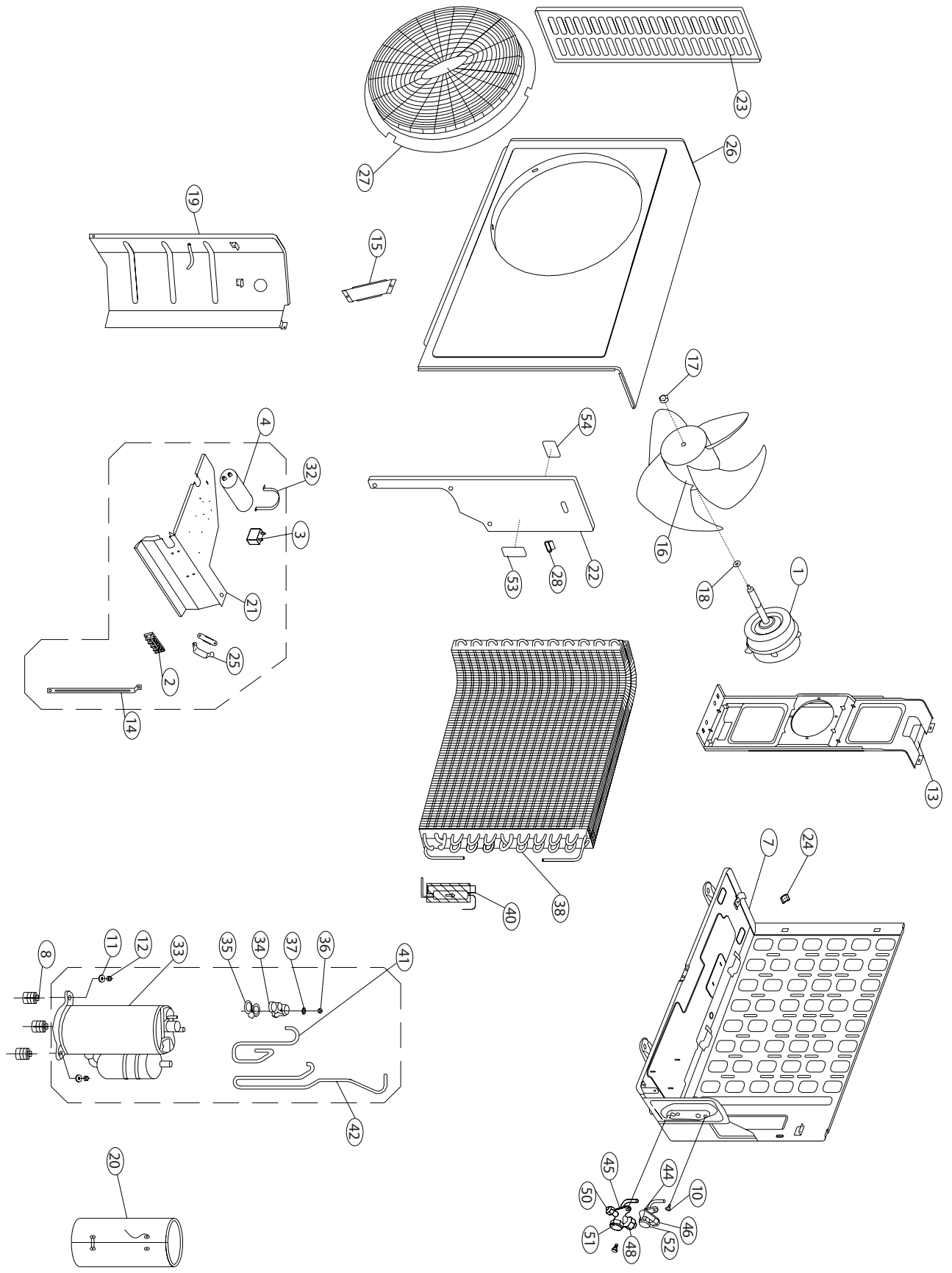
REF.NO	Parts Name	Parts No							
		18000Btu (only cooling)	Q'TY	18000Btu (heat pump)	Q'TY	24000Btu (only cooling)	Q'TY	24000Btu (heat pump)	Q'TY
46	1/4 " nut	0209-N0042	1	0209-N0042	1		0		0
47	3/8 " nut		0		0	0209-N0041	1	0209-N0041	1
48	1/2 " nut	0212-N0005	1	0212-N0005	1		0		0
49	5/8 " nut		0		0	0224-N0026	1	0224-N0026	1
50	Service cap nut	0209-W0020	1	0209-W0020	1	0209-W0020	1	0209-W0020	1
51	Valve cap (big)	0212-W0025	1	0212-W0025	1	0224-W0027	1	0224-W0027	1
52	Valve cap (small)	0207-W0048	1	0207-W0048	1	0212-W0025	1	0209-W0025	1
Printing parts									
53	Name plate	0218-W0030	1	0218-W0034	1	0224-W0028	1	0224-W0034	1
54	Wiring diagram	0209-W0043	1	0209-W0048	1	0209-W0043	1	0224-W0035	1

## Outdoor Unit

R22

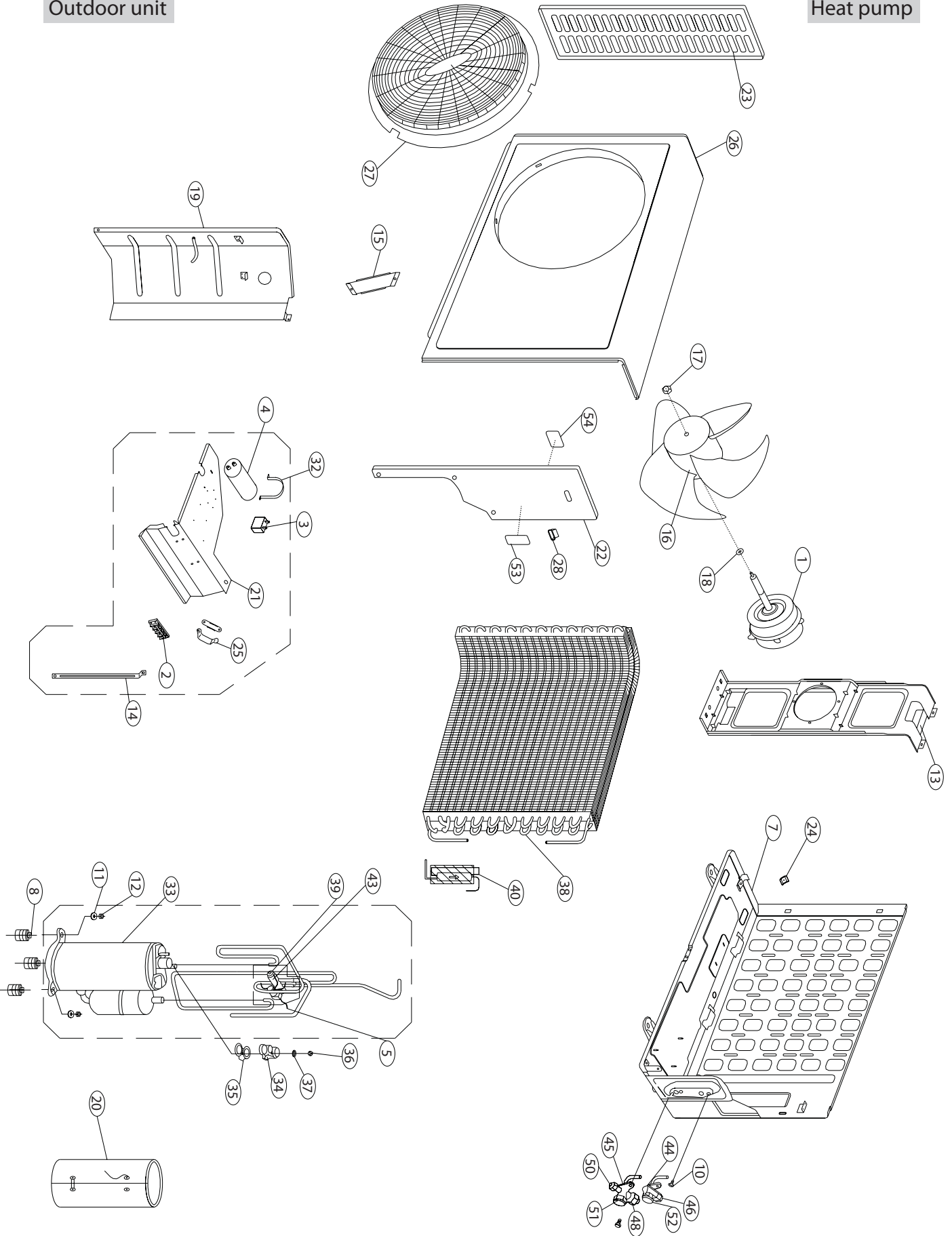
REF.NO	Parts Name	Parts No							
		18000Btu (only cooling)	Q'TY	18000Btu (heat pump)	Q'TY	24000Btu (only cooling)	Q'TY	24000Btu (heat pump)	Q'TY
33	Compressor ass'y	0218-W0035	1	0218-W0035	1	0224-W0036	1	0224-W0036	1
44	2 - way valve	0209-W0050	1	0209-W0050	1	0224-W0037	1	0224-W0037	1
45	3 - way valve	0212-W0027	1	0212-W0027	1	0224-W0038	1	0224-W0038	1
53	Name plate	0218-W0036	1	0218-W0037	1	0224-W0039	1	0224-W0039	1

• Except above ,other are same as models with R407C parts.



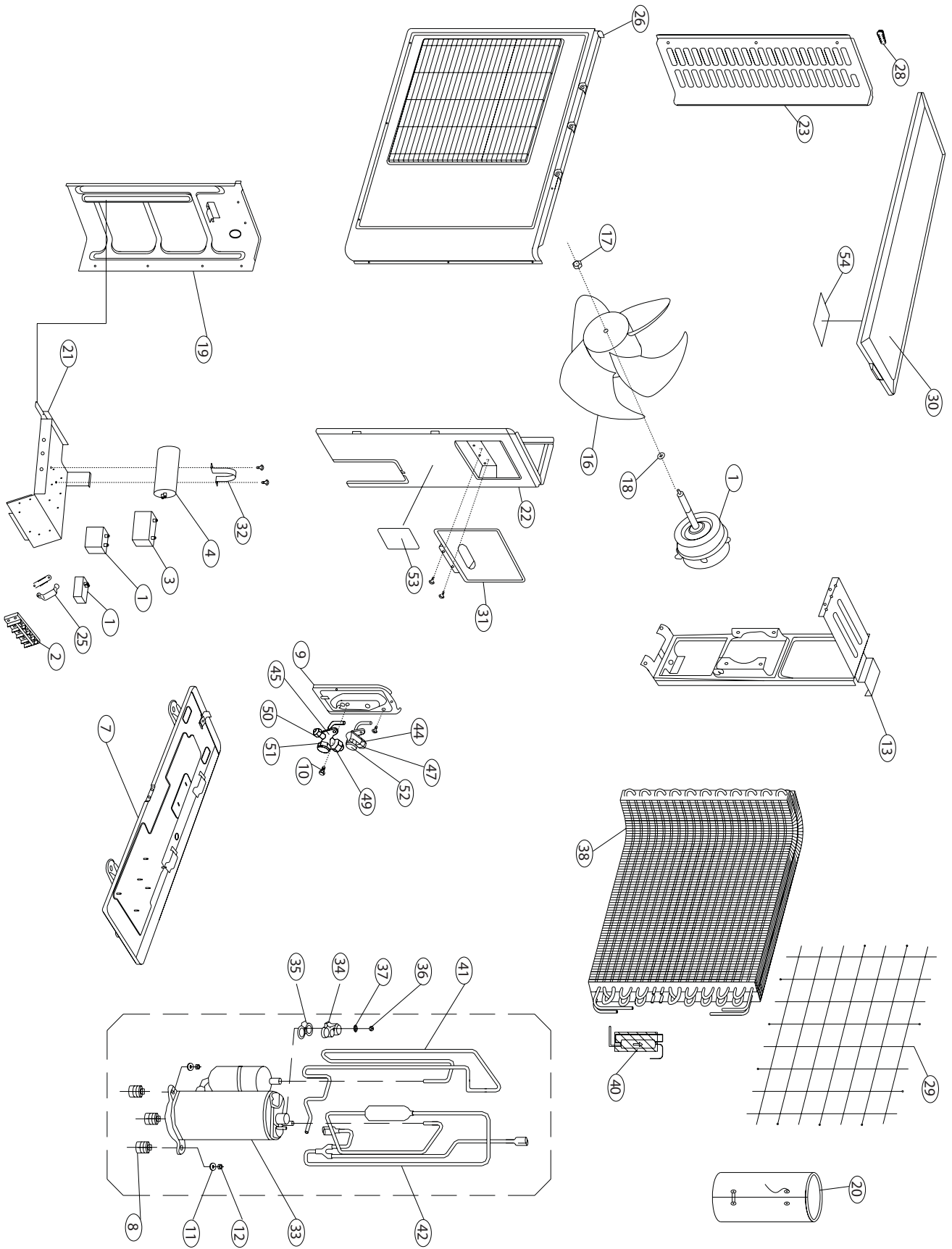
Outdoor unit

Heat pump

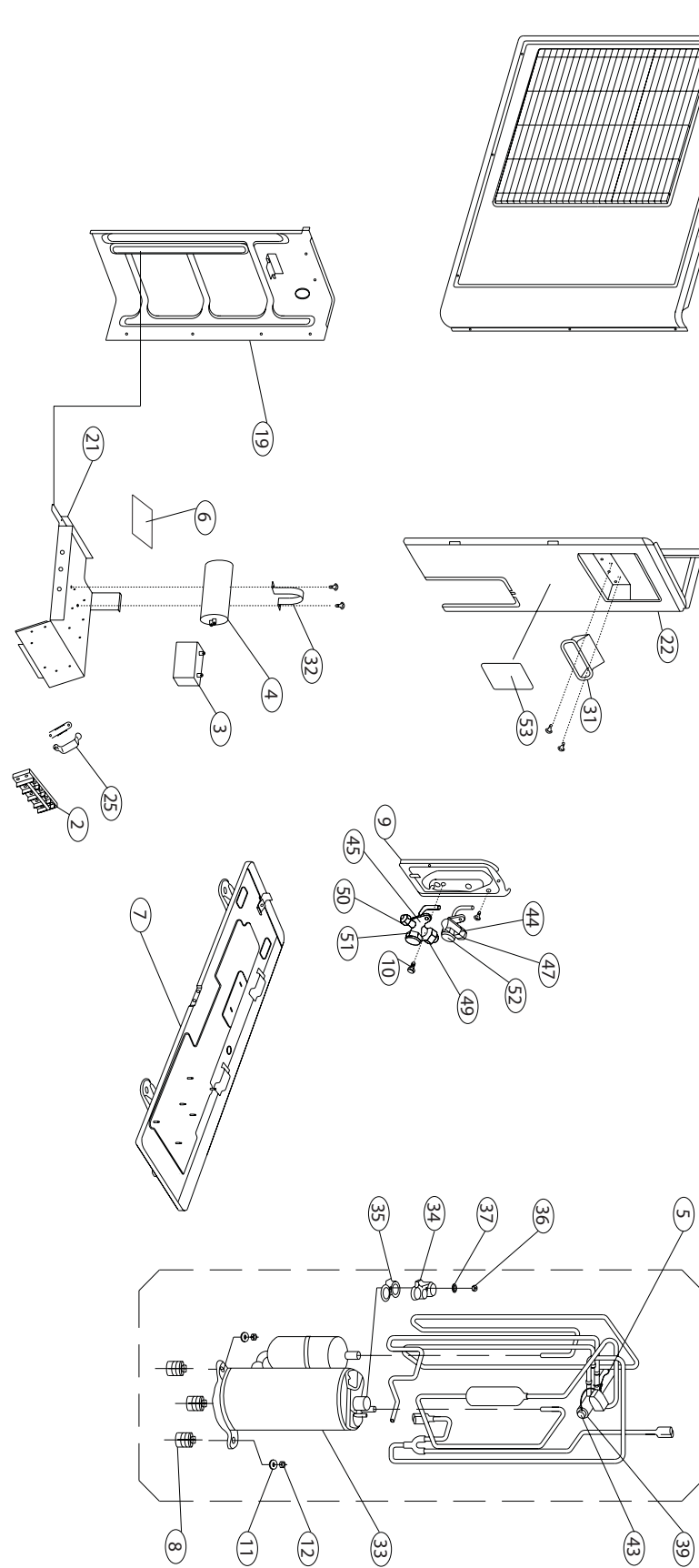


R22 R407C

18000Btu

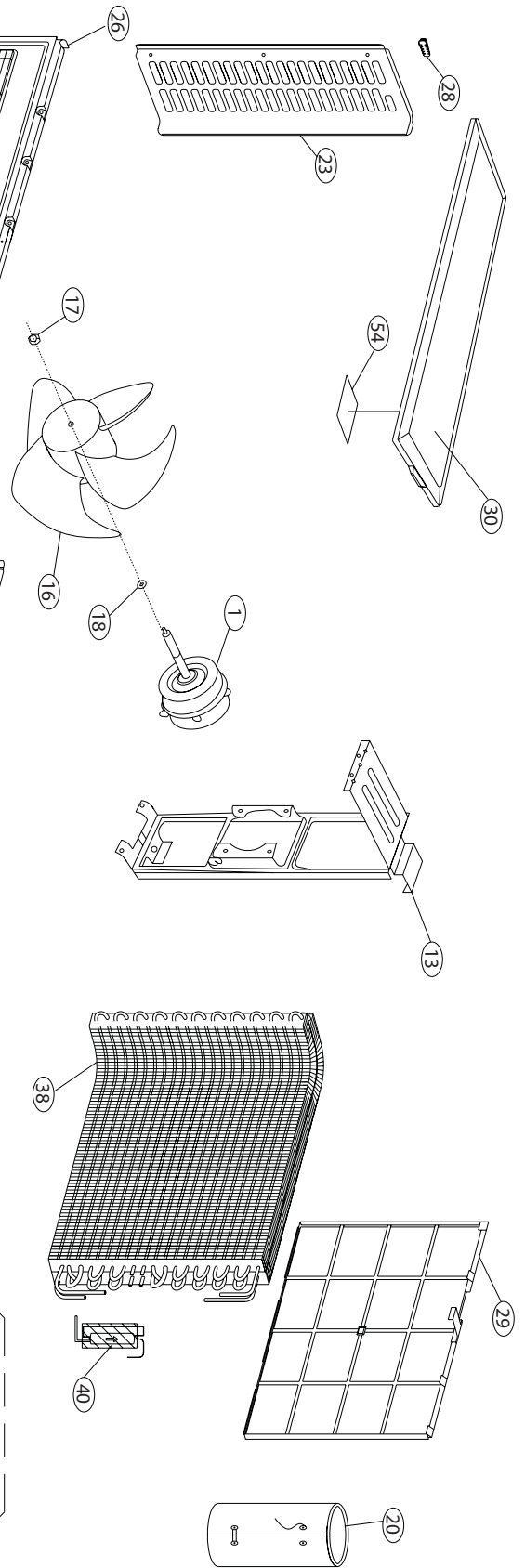


Outdoor unit



R22 R407C

Heat pump



24000Btu