

# SERVICE MANUAL



Indoor unit	Outdoor unit
AUXG24KRLB	AOHG24KBTB
AUXG30KRLB	AOHG30KBTB
AUXG36KRLB	AOHG36KBTB
AUXG45KRLB	AOHG45KBTB
AUXG54KRLB	AOHG54KBTB
UTG-UKGC-W	

## CONTENTS

SPECIFICATIONS.....	1
DIMENSIONS .....	7
REFRIGERANT SYSTEM DIAGRAM. . .	12
INDOOR PCB CIRCUIT DIAGRAM. . . .	14
OUTDOOR PCB CIRCUIT DIAGRAM. . .	15
ERROR DETECTION.....	18
PARTS (DECORATION PANEL) . . . . .	19
PARTS (INDOOR UNIT).....	22
PARTS (OUTDOOR UNIT).....	27
ACCESSORIES.....	43

# Specifications ( Indoor unit )

Type				Cassette			
				Inverter heat pump			
Model name				AUXG24KRLB	AUXG30KRLB	AUXG36KRLB	
Power supply				230 V ~ 50 Hz			
Power supply intake				Outdoor unit			
Available voltage range				198—264 V			
Capacity	Cooling	Rated	kW	6.8	8.5	9.5	
			Btu/h	23,200	29,000	32,400	
		Min.—Max.	kW	0.90—8.00	2.80—10.00	2.80—11.20	
	Btu/h		3,100—27,300	9,600—34,100	9,600—38,200		
	Heating	Rated	kW	7.5	10.0	10.8	
			Btu/h	25,600	34,100	36,850	
Min.—Max.		kW	0.90—9.10	2.70—11.20	2.70—12.70		
	Btu/h	3,100—31,000	9,200—38,200	9,200—43,300			
Input power	Cooling	Rated	kW	1.89	2.44	2.91	
		Max.		2.94	3.53	4.19	
	Heating	Rated		1.90	2.51	2.45	
		Max.		2.58	4.17	4.48	
	Fan	HIGH	W	21	52	87	
		MED		16	39	52	
		LOW		13	31	39	
		QUIET		9	20	23	
Current	Cooling	Rated	A	8.3	10.8	12.9	
	Heating			8.4	11.1	10.9	
Power factor	Cooling		%	98.6	98.2	98.0	
	Heating			98.7	98.2	98.0	
EER	Cooling		kW/kW	3.60	3.49	3.26	
COP	Heating			3.95	3.98	4.40	
Moisture removal			L/h (pints/h)	2.7 (4.8)	2.5 (4.4)	3.3 (5.8)	
Maximum operating current *1		Cooling	A	13.6	22.6	22.6	
		Heating		13.6	22.6	22.6	
Fan	Airflow rate	Cooling	m³/h	HIGH	1,150	1,600	1,870
				MED	1,050	1,400	1,560
				LOW	980	1,270	1,410
				QUIET	870	1,150	1,160
		Heating		HIGH	1,150	1,600	1,870
				MED	1,050	1,400	1,560
				LOW	980	1,270	1,410
				QUIET	870	1,150	1,160
	Type × Q'ty	Turbo fan × 1					
	Motor output		W	81			
Sound pressure level *2	Cooling	HIGH	dB (A)	35	40	44	
				MED	33	38	41
				LOW	32	36	38
				QUIET	29	33	34
	Heating	HIGH		35	40	44	
		MED		33	38	41	
		LOW		32	36	38	
		QUIET		29	33	34	
Heat exchanger type	Dimensions (H × W × D)		mm	Main1: 210 × 2,127 × 13.3 Main2: 210 × 2,061 × 13.3		Main1: 252 × 2,131 × 13.3 Main2: 252 × 2,064 × 13.3 Main3: 252 × 1,999 × 13.3	
	Fin pitch			1.2		1.3	
	Rows × Stages			1 × 10		1 × 12	1 × 12
	Pipe type			Copper tube			
	Fin type			Aluminum			
Dimensions (H × W × D)	Net		mm	246 × 840 × 840	288 × 840 × 840		
	Gross			298 × 960 × 950	340 × 960 × 950		
Weight	Net		kg	24	26	29	
	Gross			29	32	34	
Connection pipe	Size	Liquid	mm (in)	Ø 6.35 (Ø 1/4)	Ø 9.52 (Ø 3/8)		
		Gas		Ø 12.70 (Ø 1/2)	Ø 15.88 (Ø 5/8)		
Drain hose	Method			Flare			
	Material			PVC			
Operation range	Size		mm	Ø 25 (I.D.), Ø 32 (O.D.)			
	Cooling	°C		18 to 32			
		%RH		80 or less			
Cassette grille (Option)	Heating	°C	16 to 30				
		Material		Polystyrene			
	Color		White				
	Approximate color of MUNSELL N 9.25/						
	Dimensions (H × W × D)	Net	mm	53 × 950 × 950			
		Gross		110 × 1,000 × 1,010			
Weight	Net	kg	6.0				
	Gross		10.0				
Remote control (Option)				Wired remote controller, Wireless remote controller, Mobile app*3 (FGLair™)			

## NOTES:

- Specifications are based on the following conditions:
  - Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.
  - Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB.
  - Pipe length: 5 m, Height difference: 0 m. (Between outdoor unit and indoor unit.)
- Protective function might work when using it outside the operation range.
- \*1: Maximum operating current is the total current of the indoor unit and the outdoor unit.
- \*2: Sound pressure level:
  - Measured values in manufacturer's anechoic chamber.
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.
- \*3: Available on Google Play™ store or on App Store®. Optional WLAN adapter is also required. For details, refer to the setting manual.

Specifications for ErP Lot10										
Model name				AUXG24KRLB		AUXG30KRLB		AUXG36KRLB		
Energy efficiency class	Cooling			A <sup>++</sup>						
	Heating (Average)			A <sup>+</sup>						
Pdesign	Cooling		kW	6.8 (35°C)		8.5 (35°C)		9.5 (35°C)		
	Heating (Average)			6.0 (-10°C)		8.0 (-10°C)		8.7 (-10°C)		
SEER	Cooling		kWh/kWh	6.60		6.70		6.55		
SCOP	Heating (Average)			4.20		4.30		4.30		
Annual energy consumption	QCE			360		444		507		
	QHE (Average)			1,999		2,601		2,828		
Sound power level	Cooling		HIGH	dB (A)	49		54		58	
	Heating				49		54		58	

Type				Cassette	
				Inverter heat pump	
Model name				AUXG45KRLB	AUXG54KRLB
Power supply				230 V ~ 50 Hz	
Power supply intake				Outdoor unit	
Available voltage range				198—264 V	
Capacity	Cooling	Rated	kW	12.1	13.4
			Btu/h	41,300	45,700
		Min.—Max.	kW	4.00—14.00	4.50—14.50
	Heating		Btu/h	13,600—47,800	15,400—49,500
		Rated	kW	13.5	15.5
			Btu/h	46,000	52,900
Input power	Cooling	Max.	kW	5.00	5.23
			Btu/h	17,000	17,800
		Rated	kW	3.21	4.16
	Heating	Max.	kW	4.69	4.77
			Btu/h	16,000	16,300
		Rated	kW	4.20—16.20	4.70—16.50
Current	Cooling	Max.	kW	14,300—55,300	16,000—56,300
			Btu/h		
		Rated	kW		
	Heating	Max.	kW		
			Btu/h		
		Rated	kW		
Power factor	Cooling	Max.	kW		
			Btu/h		
		Rated	kW		
	Heating	Max.	kW		
			Btu/h		
		Rated	kW		
EER	Cooling	Max.	kW		
			Btu/h		
		Rated	kW		
	Heating	Max.	kW		
			Btu/h		
		Rated	kW		
COP	Cooling	Max.	kW		
			Btu/h		
		Rated	kW		
	Heating	Max.	kW		
			Btu/h		
		Rated	kW		
Moisture removal	Cooling	Max.	kW		
			Btu/h		
		Rated	kW		
	Heating	Max.	kW		
			Btu/h		
		Rated	kW		
Maximum operating current *1	Cooling	Max.	kW		
			Btu/h		
		Rated	kW		
	Heating	Max.	kW		
			Btu/h		
		Rated	kW		
Fan	Cooling	Max.	kW		
			Btu/h		
		Rated	kW		
	Heating	Max.	kW		
			Btu/h		
		Rated	kW		
Sound pressure level *2	Cooling	Max.	kW		
			Btu/h		
		Rated	kW		
	Heating	Max.	kW		
			Btu/h		
		Rated	kW		
Heat exchanger type	Cooling	Max.	kW		
			Btu/h		
		Rated	kW		
	Heating	Max.	kW		
			Btu/h		
		Rated	kW		
Dimensions (H × W × D)	Cooling	Max.	kW		
			Btu/h		
		Rated	kW		
	Heating	Max.	kW		
			Btu/h		
		Rated	kW		
Weight	Cooling	Max.	kW		
			Btu/h		
		Rated	kW		
	Heating	Max.	kW		
			Btu/h		
		Rated	kW		
Connection pipe	Cooling	Max.	kW		
			Btu/h		
		Rated	kW		
	Heating	Max.	kW		
			Btu/h		
		Rated	kW		
Drain hose	Cooling	Max.	kW		
			Btu/h		
		Rated	kW		
	Heating	Max.	kW		
			Btu/h		
		Rated	kW		
Operation range	Cooling	Max.	kW		
			Btu/h		
		Rated	kW		
	Heating	Max.	kW		
			Btu/h		
		Rated	kW		
Cassette grille (Option)	Cooling	Max.	kW		
			Btu/h		
		Rated	kW		
	Heating	Max.	kW		
			Btu/h		
		Rated	kW		
Remote control (Option)	Cooling	Max.	kW		
			Btu/h		
		Rated	kW		
	Heating	Max.	kW		
			Btu/h		
		Rated	kW		

**NOTES:**

- Specifications are based on the following conditions:
  - Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.
  - Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB.
  - Pipe length: 5 m, Height difference: 0 m. (Between outdoor unit and indoor unit.)
- Protective function might work when using it outside the operation range.
- \*1: Maximum operating current is the total current of the indoor unit and the outdoor unit.
- \*2: Sound pressure level:
  - Measured values in manufacturer's anechoic chamber.
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.
- \*3: Available on Google Play™ store or on App Store®. Optional WLAN adapter is also required. For details, refer to the setting manual.



# Specifications ( Outdoor unit )

Type				Inverter heat pump	
Model name				AOHG24KBTB	
Power supply				230 V ~ 50 Hz	
Power supply intake				Outdoor unit	
Available voltage range				198—264 V	
Starting current			A	8.4	
Fan	Airflow rate	Cooling	m³/h	2,700	
		Heating		2,700	
	Type × Q'ty		Propeller × 1		
	Motor output		W	49	
Sound pressure level *1		Cooling	dB (A)	53	
		Heating		54	
Sound power level		Cooling	dB (A)	65	
		Heating		66	
Heat exchanger type		Dimensions (H × W × D)	mm	Main1: 672 × 881 × 18.2 Main2: 672 × 851 × 18.2	
		Fin pitch		1.3	
		Rows × Stages		2 × 32	
		Pipe type		Copper tube	
		Fin	Type (Material)	Aluminum	
			Surface treatment	PC fin	
Compressor	Type × Q'ty		DC Twin rotary × 1		
	Motor output		W	1,060	
Refrigerant		Type (Global warming potential)		R32 (675)	
		Factory charge	g	1,250	
Refrigerant oil		Type		RmM68AF	
		Amount	cm³	400	
Enclosure		Material		Steel sheet	
		Color		Beige Approximate color of Munsell 10YR 7.5/1.0	
Dimensions (H × W × D)	Net		mm	716 × 820 × 315	
	Gross			776 × 961 × 450	
Weight	Net		kg	42	
	Gross			46	
Connection pipe	Size	Liquid	mm (in)	Ø6.35 (1/4)	
		Gas		Ø12.70 (1/2)	
	Method		Flare		
	Pre-charge length		m	20	
	Max. length			30	
	Max. height difference			25	
Operation range		Cooling	°C	-15 to 46	
		Heating		-15 to 24	
Drain hose		Material		PP	
		Size	mm	Ø13.0 (I. D.), Ø16.0 to Ø16.8 (O. D.)	
NOTES:					
<ul style="list-style-type: none"><li>Specifications are based on the following conditions:<ul style="list-style-type: none"><li>Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.</li><li>Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB.</li><li>Pipe length: 5 m, Height difference: 0 m. (Between outdoor unit and indoor unit.)</li></ul></li><li>Protective function might work when using it outside the operation range.</li><li>*1: Sound pressure level<ul style="list-style-type: none"><li>Measured values in manufacturer's anechoic chamber.</li><li>Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</li></ul></li></ul>					

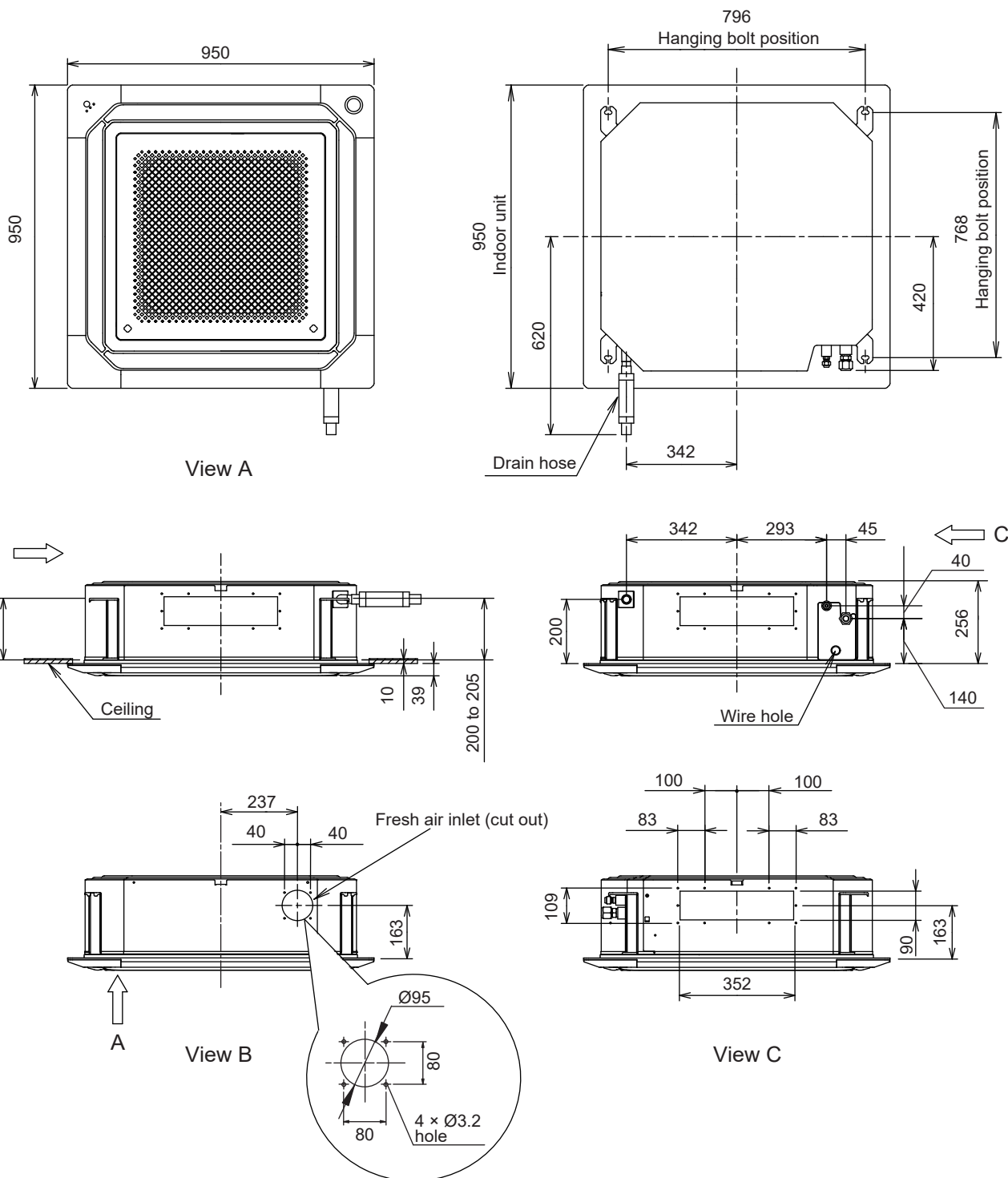
Type				Inverter heat pump	
Model name				AOHG30KBTB	AOHG36KBTB
Power supply				230 V ~ 50 Hz	
Power supply intake				Outdoor unit	
Available voltage range				198—264 V	
Starting current			A	11.1	12.9
Fan	Airflow rate	Cooling	m³/h	3,750	
		Heating		3,750	
	Type × Q'ty			Propeller × 1	
	Motor output		W	100	
Sound pressure level *1		Cooling	dB (A)	53	55
		Heating		55	55
Sound power level		Cooling	dB (A)	68	70
		Heating		69	70
Heat exchanger type		Dimensions (H × W × D)	mm	Main1: 756 × 905 × 18.2 Main2: 756 × 905 × 18.2	
		Fin pitch		1.45	
		Rows × Stages		1 × 36	
		Pipe type		Copper	
		Fin	Type (Material)	Aluminum	
			Surface treatment	Blue fin	
Compressor	Type × Q'ty	DC Twin rotary × 1			
	Motor output	W	1,500		
Refrigerant		Type (Global warming potential)		R32 (675)	
		Factory charge	g	1,900	
Refrigerant oil		Type		FW68D	
		Amount	cm³	600	
Enclosure		Material		Steel sheet	
		Color		Beige Approximate color of Munsell 10YR 7.5/1.0	
Dimensions (H × W × D)	Net	mm	788 × 940 × 320		
	Gross		966 × 1,027 × 445		
Weight	Net	kg	52		
	Gross		60		
Connection pipe	Size	Liquid	mm (in)	Ø9.52 (3/8)	
		Gas		Ø15.88 (5/8)	
	Method		m	Flare	
	Pre-charge length			30	
	Max. length			50	
	Max. height difference			30	
Operation range		Cooling	°C	-15 to 46	
		Heating		-15 to 24	
Drain hose		Material		LDPE	
		Size	mm	Ø13.0 (I. D.), Ø16.0 to Ø16.8 (O. D.)	
NOTES:					
<ul style="list-style-type: none"><li>Specifications are based on the following conditions:<ul style="list-style-type: none"><li>Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.</li><li>Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB.</li><li>Pipe length: 5 m, Height difference: 0 m. (Between outdoor unit and indoor unit.)</li></ul></li><li>Protective function might work when using it outside the operation range.</li><li>*1: Sound pressure level<ul style="list-style-type: none"><li>Measured values in manufacturer's anechoic chamber.</li><li>Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</li></ul></li></ul>					

Type				Inverter heat pump				
Model name				AOHG45KBTB		AOHG54KBTB		
Power supply				230 V ~ 50 Hz				
Power supply intake				Outdoor unit				
Available voltage range				198—264 V				
Starting current			A		16.0		19.4	
Fan	Airflow rate	Cooling	m³/h	4,450		4,450		
		Heating		4,450		4,450		
	Type × Q'ty		Propeller × 1					
	Motor output		W		120			
Sound pressure level *1		Cooling	dB (A)	57		57		
		Heating		57		59		
Sound power level		Cooling	dB (A)	71		73		
		Heating		71		73		
Heat exchanger type		Dimensions (H × W × D)	mm	Main1: 966 × 905 × 18.2 Main2: 966 × 905 × 18.2 Sub: 966 × 543 × 18.2				
		Fin pitch		1.45				
		Rows × Stages		1 × 46				
		Pipe type		Copper				
		Fin	Type (Material)	Aluminum				
			Surface treatment	Blue fin				
Compressor	Type × Q'ty	W		DC Twin rotary × 1				
	Motor output			2,180				
Refrigerant		Type (Global warming potential)		R32 (675)				
		Factory charge	g	2,700				
Refrigerant oil		Type		RmM68AF				
		Amount	cm³	800				
Enclosure		Material		Steel sheet				
		Color		Beige Approximate color of Munsell 10YR 7.5/1.0				
Dimensions (H × W × D)	Net		mm	998 × 940 × 320				
	Gross			1,176 × 1,027 × 445				
Weight	Net		kg	67				
	Gross			75				
Connection pipe	Size	Liquid	mm (in)	Ø9.52 (3/8)				
		Gas		Ø15.88 (5/8)				
	Method		Flare					
	Pre-charge length		m	30				
	Max. length			50				
	Max. height difference			30				
Operation range		Cooling	°C	-15 to 46				
		Heating		-15 to 24				
Drain hose		Material		LDPE				
		Size	mm	Ø13.0 (I. D.), Ø16.0 to Ø16.8 (O. D.)				
<b>NOTES:</b> <ul style="list-style-type: none"><li>Specifications are based on the following conditions:<ul style="list-style-type: none"><li>Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.</li><li>Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB.</li><li>Pipe length: 5 m, Height difference: 0 m. (Between outdoor unit and indoor unit.)</li></ul></li><li>Protective function might work when using it outside the operation range.</li><li>*1: Sound pressure level<ul style="list-style-type: none"><li>Measured values in manufacturer's anechoic chamber.</li><li>Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</li></ul></li></ul>								

# Dimensions

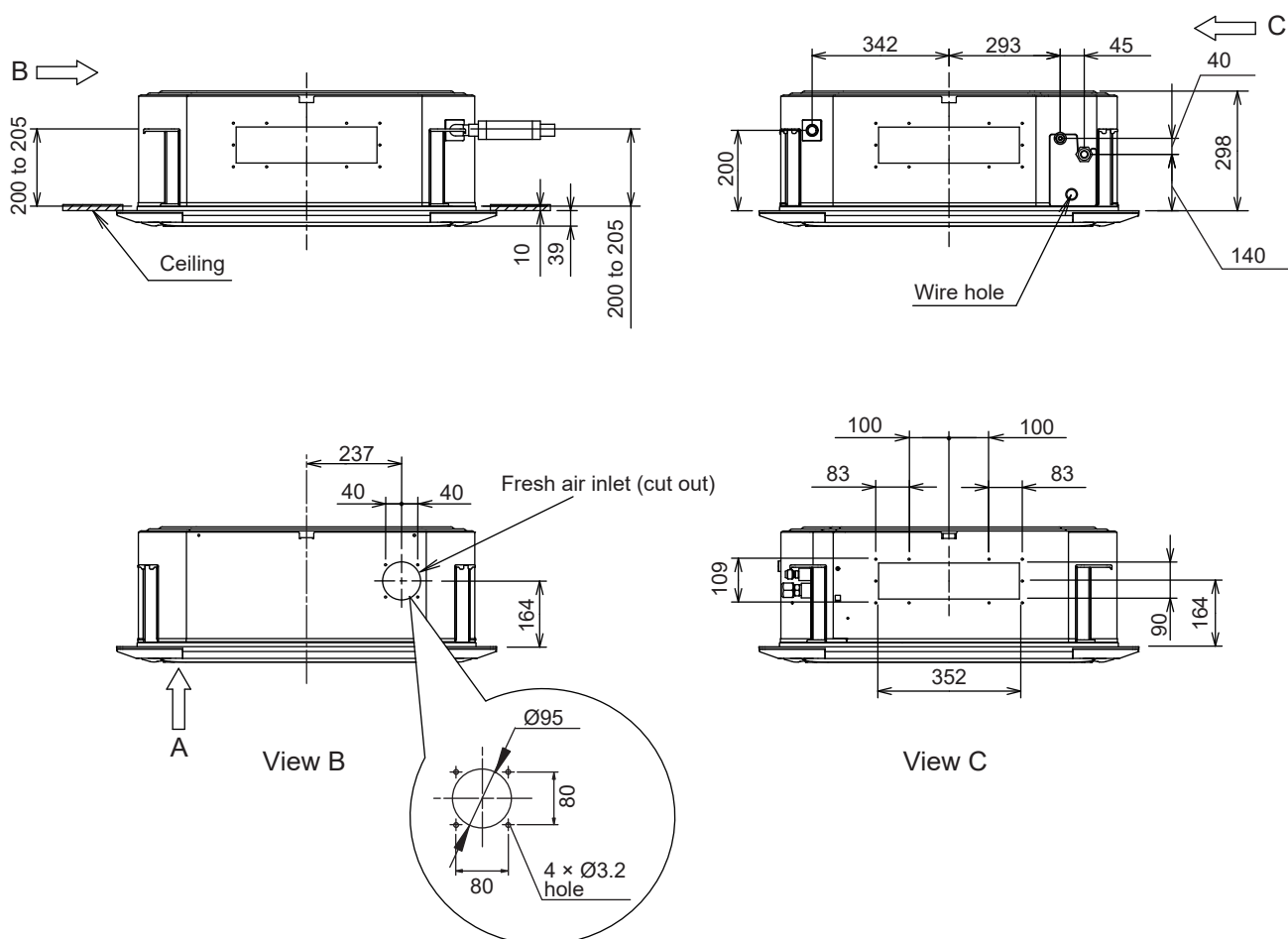
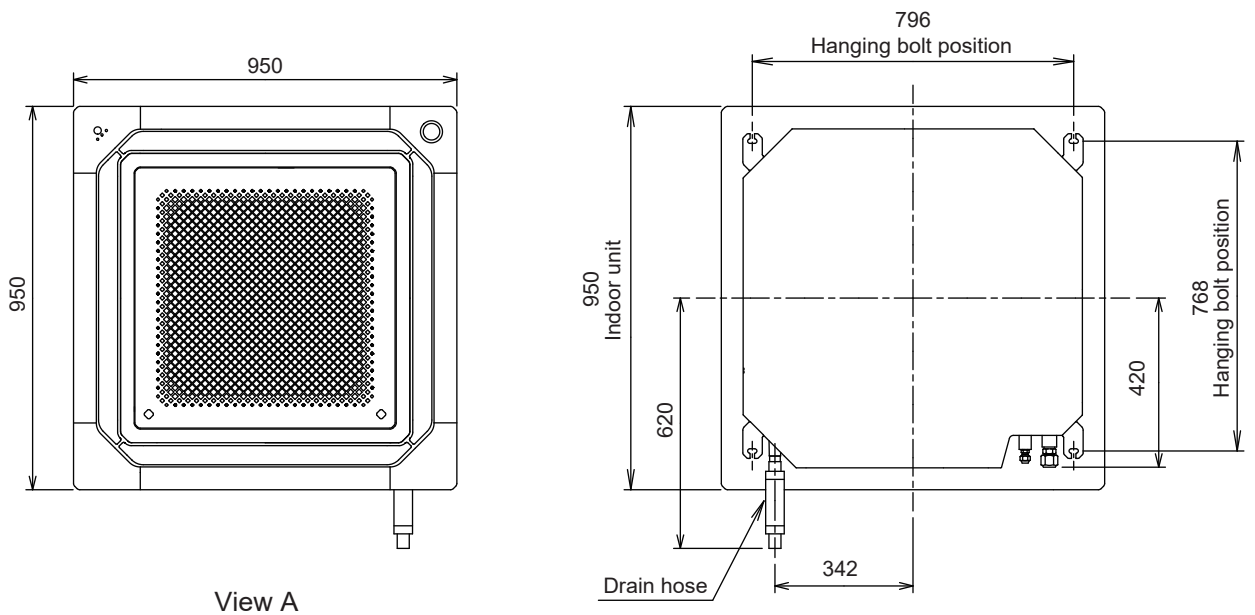
## Model: AUXG24KRLB

Unit: mm



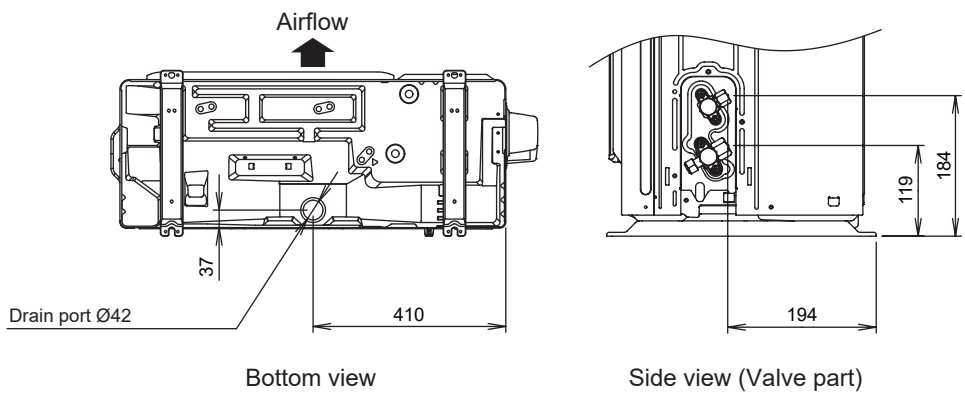
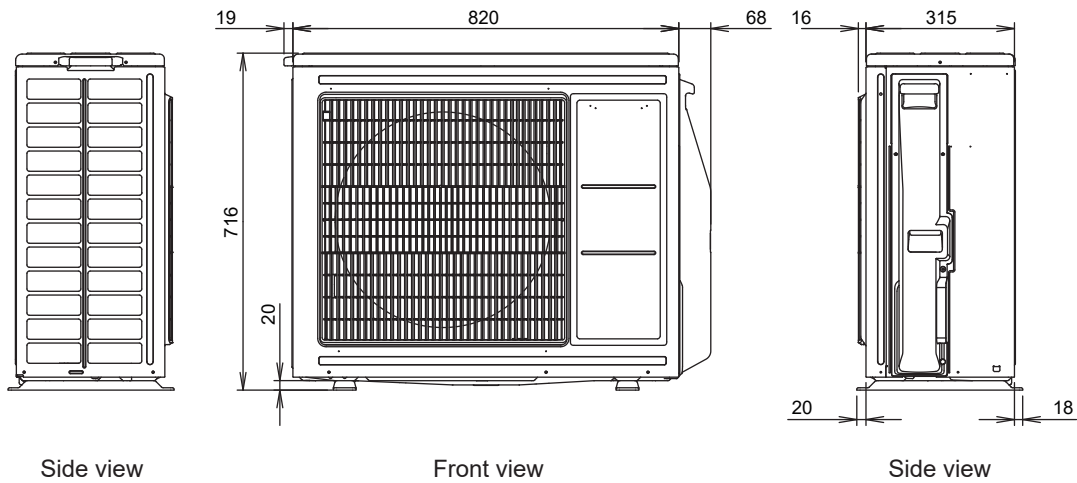
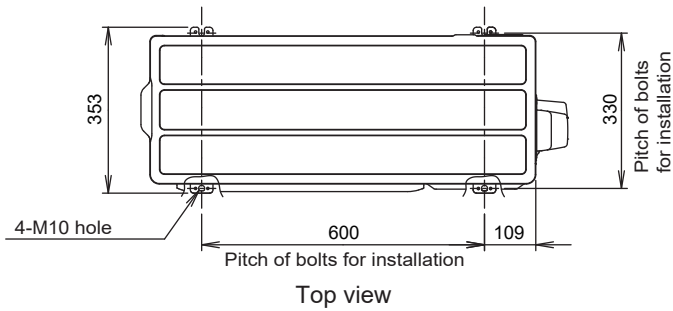
**Models: AUXG30KRLB, AUXG36KRLB, AUXG45KRLB, and  
AUXG54KRLB**

Unit: mm



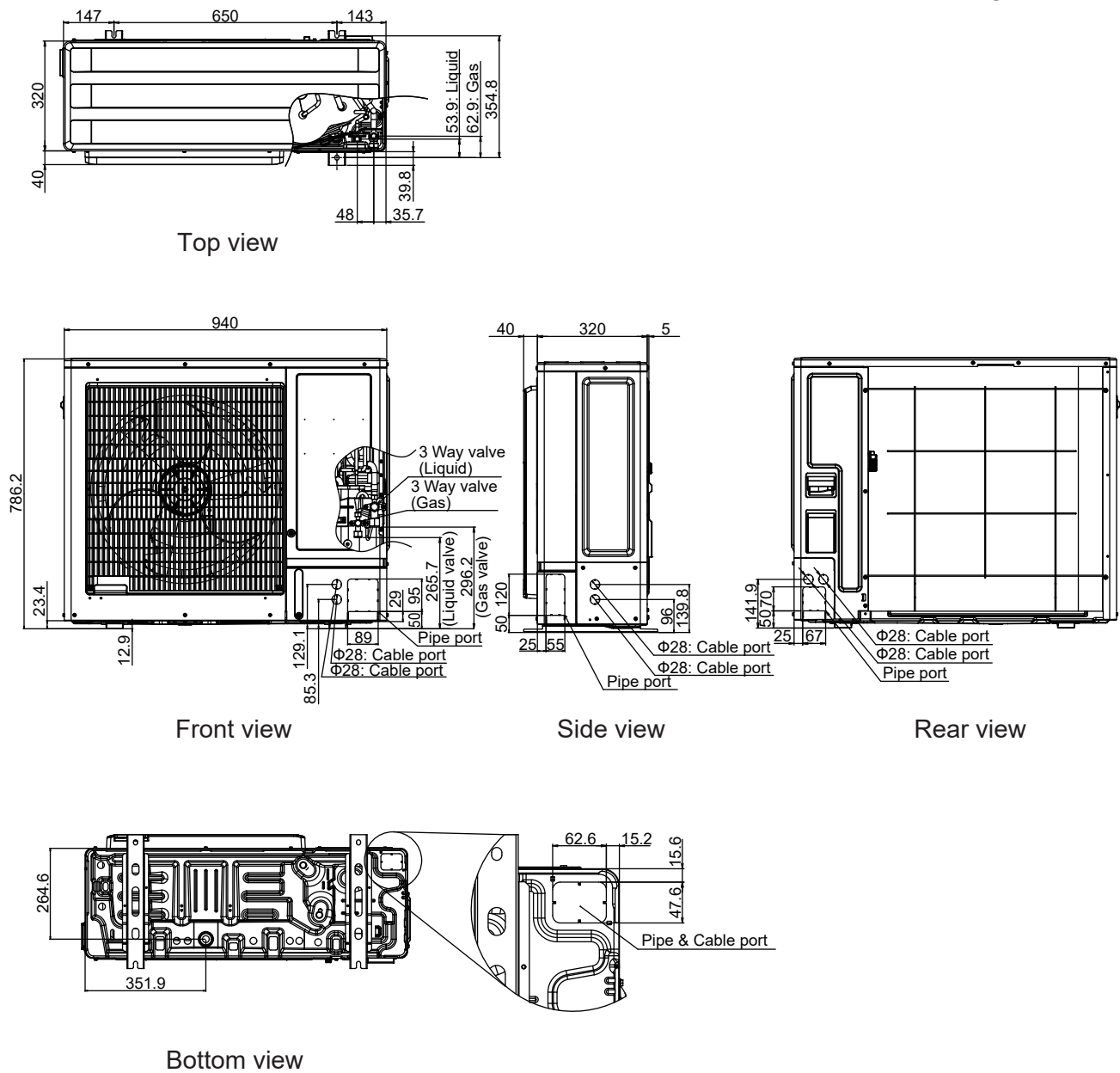
Model: AOHG24KBTB

Unit: mm



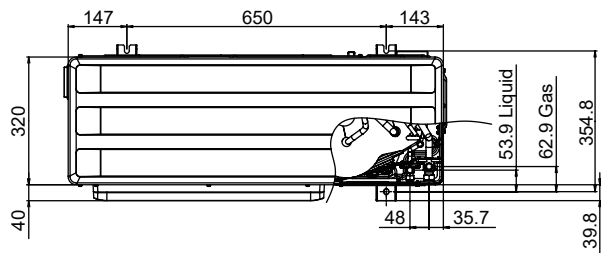
Models: AOHG30KBTB and AOHG36KBTB

Unit: mm

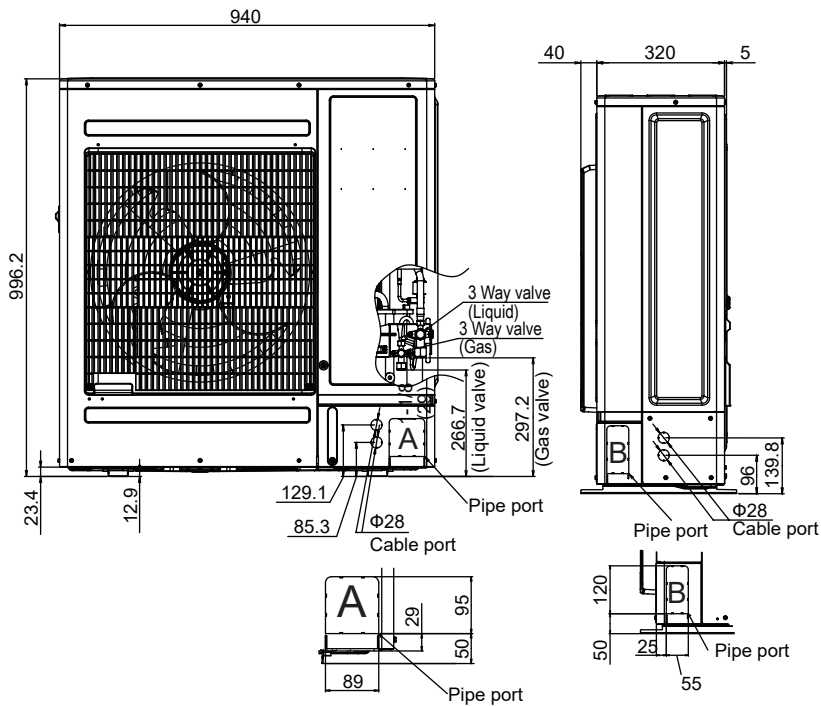


Models: AOHG45KBTB and AOHG54KBTB

Unit: mm

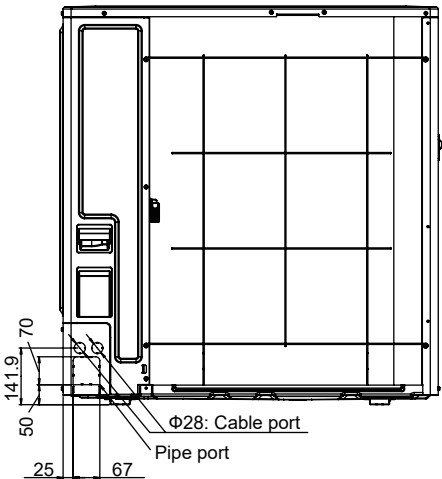


Top view

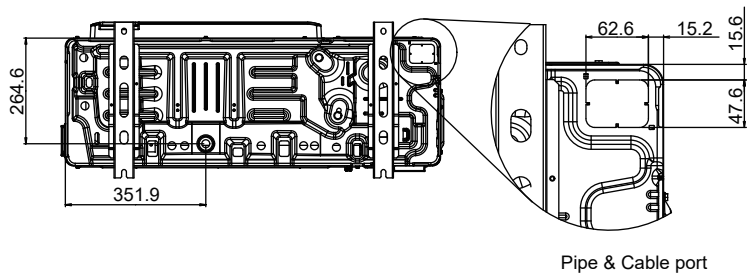


Front view

Side view



Rear view

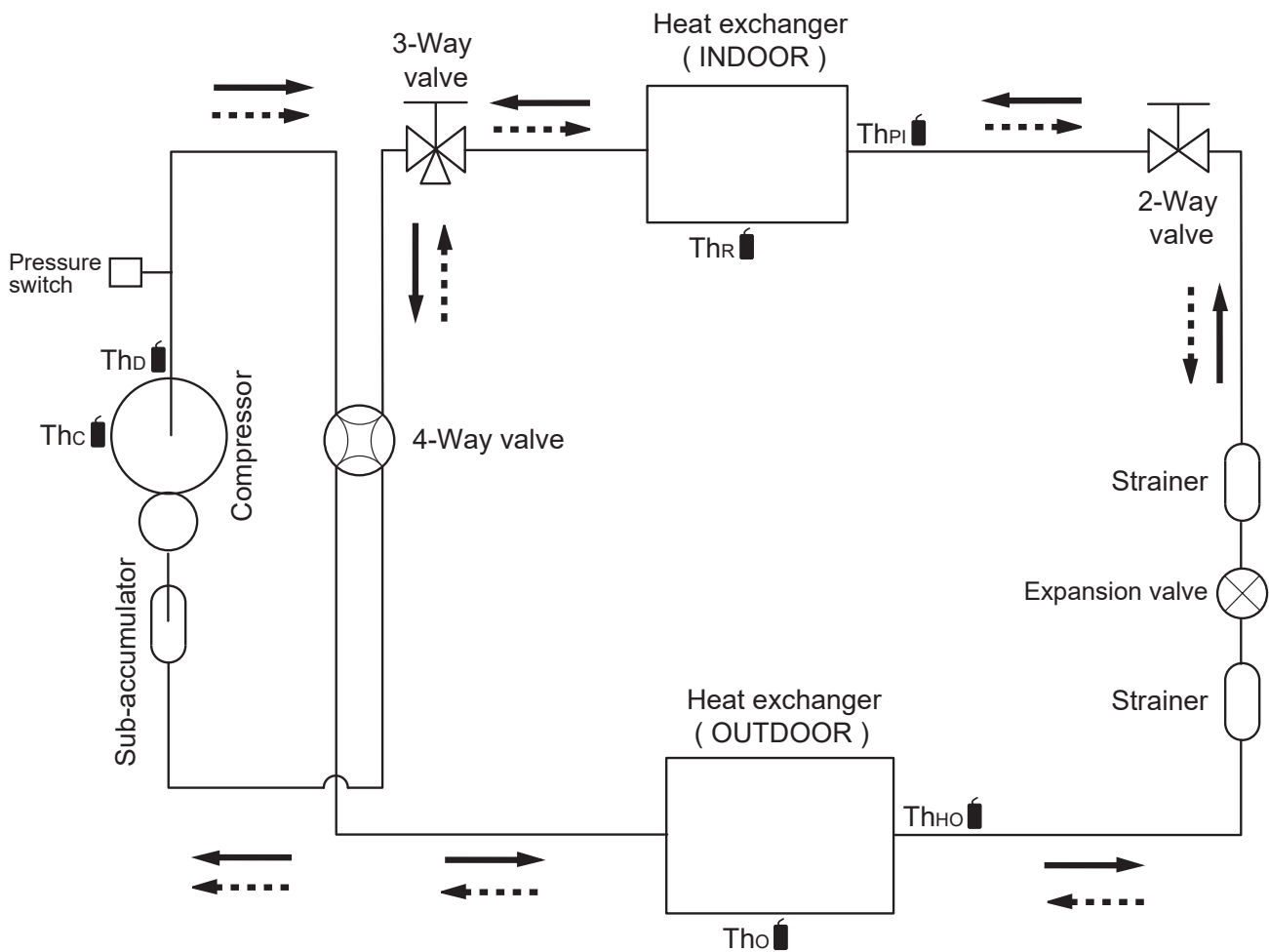


Bottom view



# Refrigerant circuit

## Models: AOHG24KBTB and AOHG30KBTB



—→ : Cooling  
 - - - -> : Heating

$Th_C$  : Thermistor (Compressor temperature)

$Th_D$  : Thermistor (Discharge temperature)

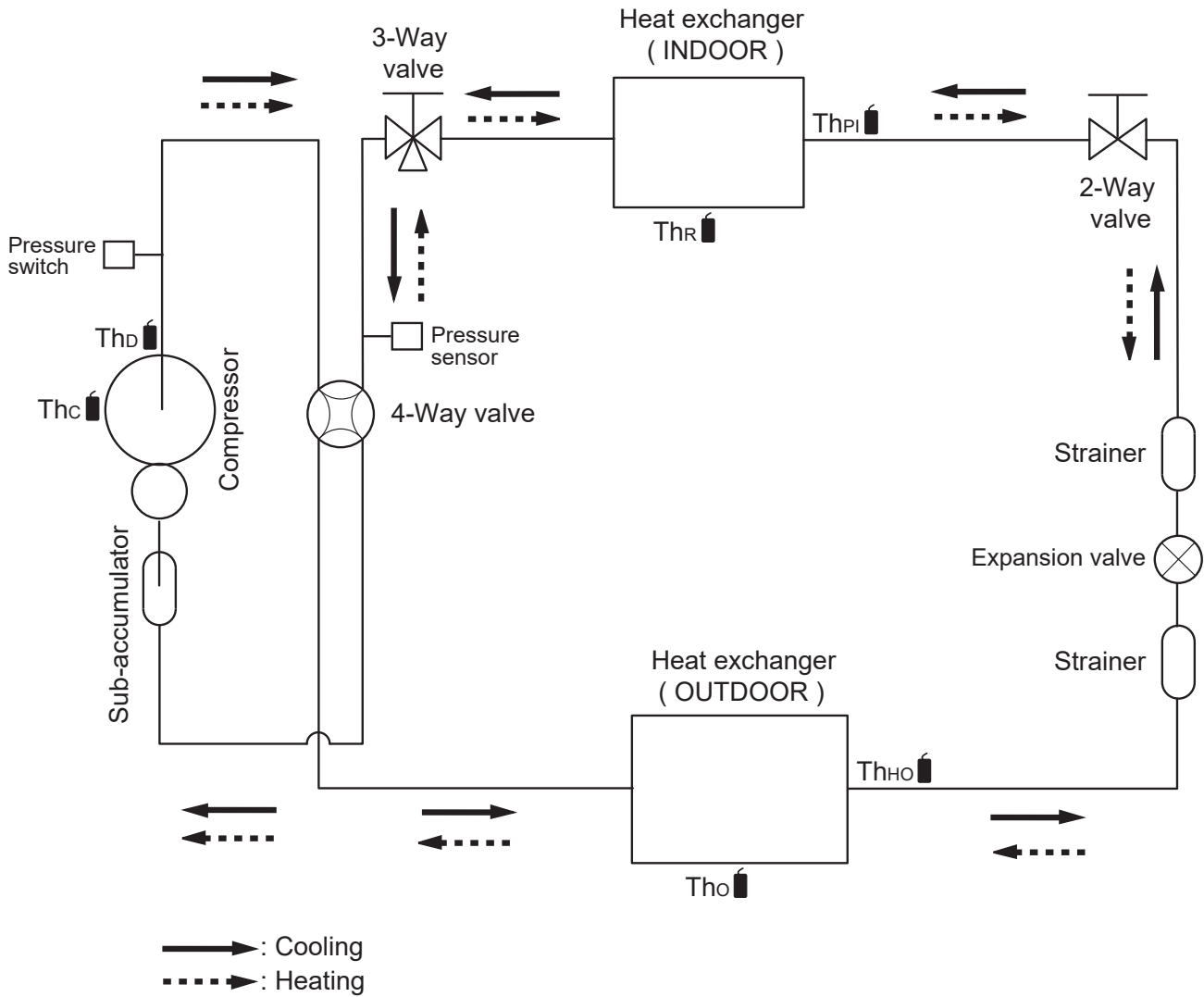
$Th_O$  : Thermistor (Outdoor temperature)

$Th_{HO}$  : Thermistor (Heat Exchanger Out temperature)

$Th_R$  : Thermistor (Room temperature)

$Th_{PI}$  : Thermistor (Pipe temperature)

# Models: AOHG36KBTB, AOHG45KBTB, and AOHG54KBTB



Th<sub>c</sub>: Thermistor (Compressor temperature)

Th<sub>D</sub>: Thermistor (Discharge temperature)

Th<sub>o</sub>: Thermistor (Outdoor temperature)

Th<sub>HO</sub>: Thermistor (Heat Exchanger Out temperature)

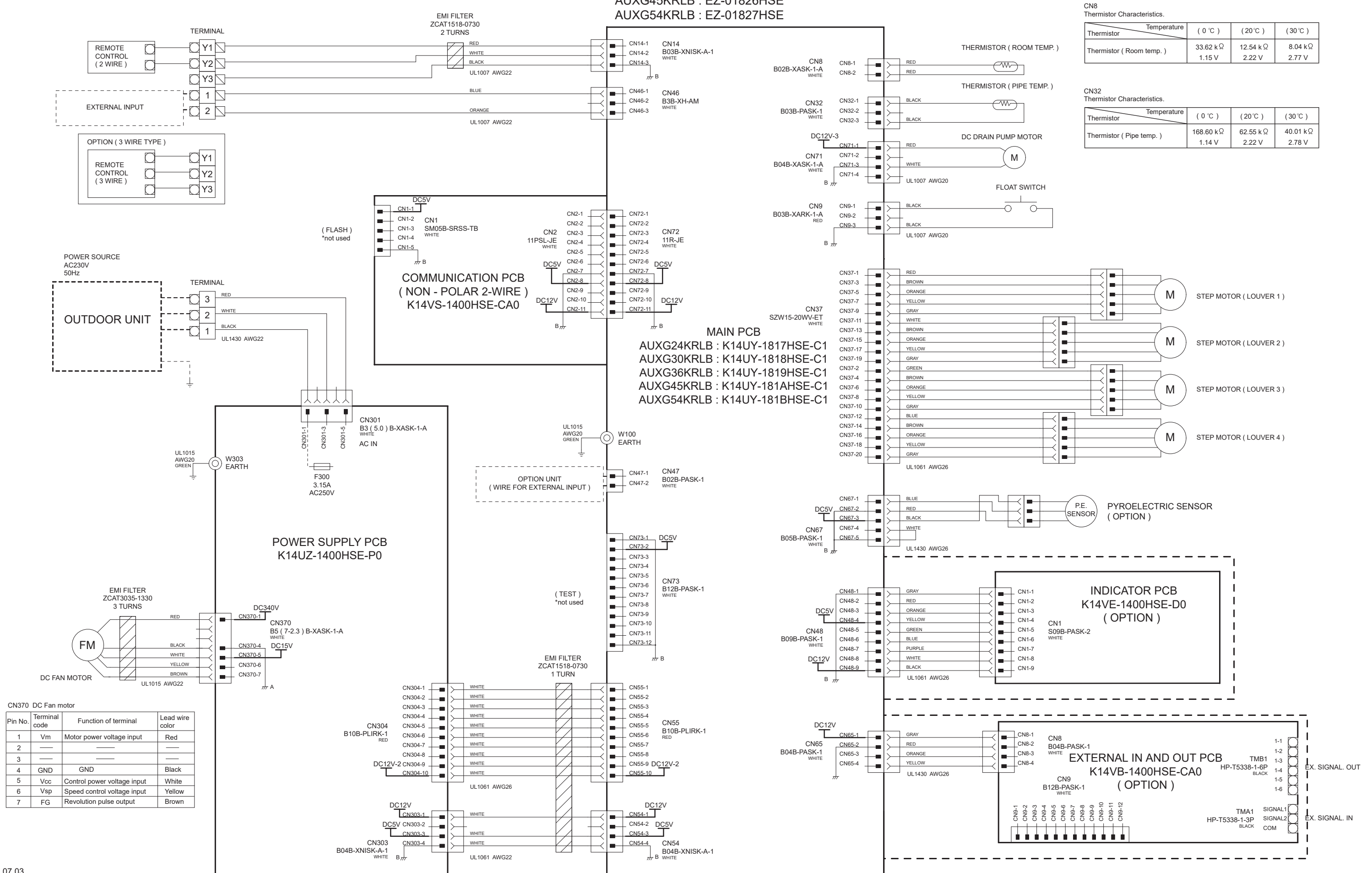
Th<sub>R</sub>: Thermistor (Room temperature)

Th<sub>PI</sub>: Thermistor (Pipe temperature)

# INDOOR PRINTED CIRCUIT BOARD CIRCUIT DIAGRAM

Models : AUXG24KRLB  
AUXG30KRLB  
AUXG36KRLB  
AUXG45KRLB  
AUXG54KRLB  
UTG-UKGC-W

CONTROL UNIT  
AUXG24KRLB : EZ-01823HSE  
AUXG30KRLB : EZ-01824HSE  
AUXG36KRLB : EZ-01825HSE  
AUXG45KRLB : EZ-01826HSE  
AUXG54KRLB : EZ-01827HSE



## 2019.07.02

15

TO INDOOR UNIT

POWER SOURCE  
AC230V  
50Hz

EARTH

EMI FILTER  
KRFC-13  
2 TURNS

EMI FILTER  
KRFC-13  
1 TURN

UL1015 AWG20  
BLACK

UL1015 AWG20  
WHITE

UL1015 AWG20  
RED

UL1015 AWG14  
BLACK

UL1015 AWG14  
WHITE

UL1015 AWG16  
GREEN

W103  
W104  
W70  
W100  
W101  
W102

WIRE w/TERMINAL ( CORE )  
1015#22  
GREEN  
TRCB-25-15-12  
3 TURNS

TERMINAL  
JXO-SXC-6P-A-2

THERMISTOR ( PIPE TEMP. )

THERMISTOR ( DISCHARGE TEMP. )

THERMISTOR ( OUTDOOR TEMP. )

THERMISTOR ( PIPE-MID. TEMP. )

THERMISTOR ( COMPRESSOR TEMP. )

PRESSURE SWITCH

MAIN PCB  
K16JG-1807HUE-C1

W400 U  
W401 V  
W402 W

UL3271 AWG16  
RED

UL3271 AWG16  
WHITE

UL3271 AWG16  
BLACK

EMI FILTER  
KRFC-13  
2 TURNS

CM

COMPRESSOR  
Compressor  
Winding Resistance

U-V  
V-W  
U-W

1.916 Ω (20℃)

DC

P60  
B2P3-VH-B-E  
BLUE

1  
2

BLUE  
RED

4-WAY VALVE COIL  
DC Resistance 2780 Ω (20℃)

DC340V

DC15V-1

P650  
B5 ( 7-2.3 ) B-XASK-1-A  
WHITE

1  
4  
5  
6  
7

RED  
BLACK  
WHITE  
YELLOW  
BROWN

FM

DC FAN MOTOR

DC12V

P30  
B05B-PLISK-1  
WHITE

1  
2  
3  
4  
5

RED  
BLUE  
ORANGE  
YELLOW  
WHITE

M

EXPANSION VALVE COIL

P1 Thermistor Characteristics.

Thermistor	Temperature	0 °C	20 °C	30 °C
Thermistor ( Pipe temp. )		16.1 k Ω 1.1 V	6.0 k Ω 2.2 V	3.8 k Ω 2.8 V
Thermistor ( Discharge temp. )		168.6 k Ω 0.4 V	62.6 k Ω 0.9 V	40.0 k Ω 1.2 V

P5 Thermistor Characteristics.

Thermistor	Temperature	0 °C	20 °C	30 °C
Thermistor ( Outdoor temp. )		35.2 k Ω 2.6 V	12.6 k Ω 3.8 V	8.0 k Ω 4.1 V

P10 Thermistor Characteristics.

Thermistor	Temperature	0 °C	20 °C	30 °C
Thermistor ( Pipe-mid. temp. )		16.1 k Ω 1.1 V	6.0 k Ω 2.2 V	3.8 k Ω 2.8 V

P15 Thermistor Characteristics.

Thermistor	Temperature	0 °C	20 °C	30 °C
Thermistor ( Compressor temp. )		168.6 k Ω 0.4 V	62.6 k Ω 0.9 V	40.0 k Ω 1.2 V

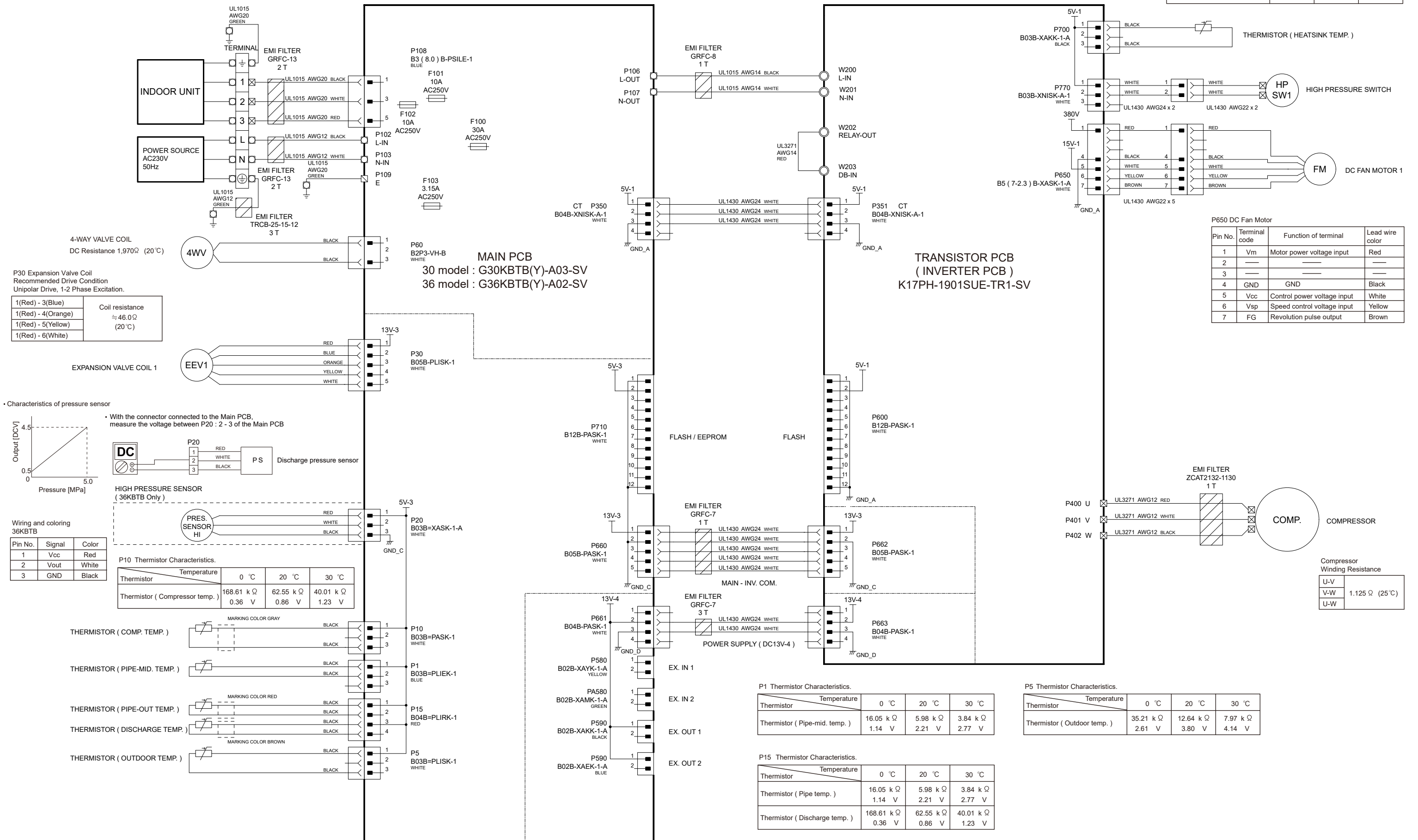
P650 DC Fan Motor

Pin No.	Terminal code	Function of terminal	Lead wire color
1	Vm	Motor power voltage input	Red
2	—	—	—
3	—	—	—
4	GND	GND	Black
5	Vcc	Control power voltage input	White
6	Vsp	Speed control voltage input	Yellow
7	FG	Revolution pulse output	Brown

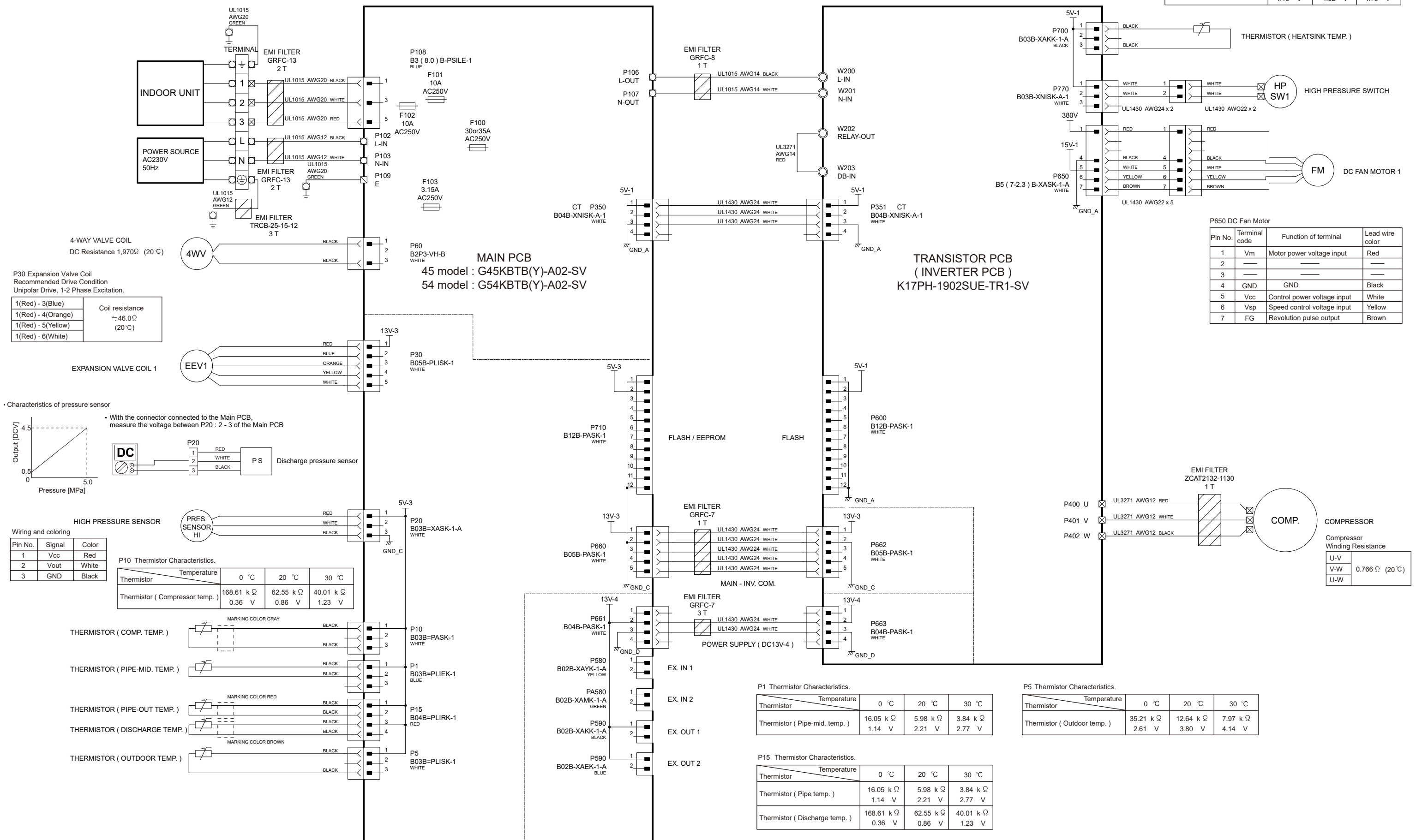
P30 Expansion Valve Coil  
Recommended Drive Condition  
Unipolar Drive, 1-2 Phase Excitation.

1(Red) - 3(Blue)	Coil resistance ≈ 46.0 Ω (20℃)
1(Red) - 4(Orange)	
1(Red) - 5(Yellow)	
1(Red) - 6(White)	

# INVERTER ASSEMBLY EZ-0190DHUE



# INVERTER ASSEMBLY EZ-0193KHUE





# Error codes ( Indoor unit )

If you use a wired type remote controller, error codes will appear on the remote controller display. For more information, refer to the installation manual of the remote controller. If you use a wireless remote controller, the lamps on the IR receiver unit will output error codes by way of blinking patterns. See the lamp blinking patterns and error codes in the table below. An error display is displayed only during operation.

Error display			Wired remote controller Error code	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
●(1)	●(1)	◇	11	Serial communication error
●(1)	●(2)	◇	12	Wired remote controller communication error
●(1)	●(5)	◇	15	Check run unfinished
●(1)	●(6)	◇	16	Peripheral unit transmission PCB connection error
●(1)	●(8)	◇	18	External communication error
●(2)	●(1)	◇	21	Unit number or Refrigerant circuit address setting error [Simultaneous Multi]
●(2)	●(2)	◇	22	Indoor unit capacity error
●(2)	●(3)	◇	23	Combination error
●(2)	●(4)	◇	24	• Connection unit number error (indoor secondary unit) [Simultaneous Multi] • Connection unit number error (indoor unit or branch unit) [Flexible Multi]
●(2)	●(6)	◇	26	Indoor unit address setting error
●(2)	●(7)	◇	27	Primary unit, secondary unit setup error [Simultaneous Multi]
●(2)	●(9)	◇	29	Connection unit number error in wired remote controller system
●(3)	●(1)	◇	31	Power supply interruption error
●(3)	●(2)	◇	32	Indoor unit PCB model information error
●(3)	●(5)	◇	35	Manual auto switch error
●(3)	●(9)	◇	39	Indoor unit power supply error for fan motor
●(3)	●(10)	◇	3A	Indoor unit communication circuit (wired remote controller) error
●(4)	●(1)	◇	41	Room temp. sensor error
●(4)	●(2)	◇	42	Indoor unit Heat Ex. Middle temp. sensor error
●(4)	●(4)	◇	44	Human sensor error
●(5)	●(1)	◇	51	Indoor unit fan motor error
●(5)	●(3)	◇	53	Drain pump error
●(5)	●(7)	◇	57	Damper error
●(5)	●(15)	◇	5U	Indoor unit error
●(6)	●(1)	◇	61	Outdoor unit reverse/missing phase and wiring error
●(6)	●(2)	◇	62	Outdoor unit main PCB model information error or communication error
●(6)	●(3)	◇	63	Inverter error
●(6)	●(4)	◇	64	Active filter error, PFC circuit error
●(6)	●(5)	◇	65	Trip terminal L error
●(6)	●(8)	◇	68	Outdoor unit rush current limiting resistor temp. rise error
●(6)	●(10)	◇	6A	Display PCB microcomputers communication error

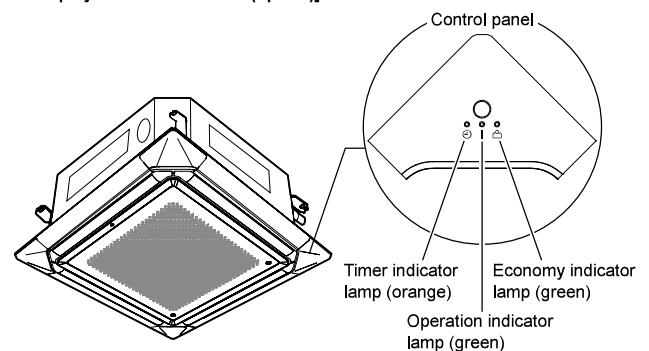
Error display			Wired remote controller Error code	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
●(7)	●(1)	◇	71	Discharge temp. sensor error
●(7)	●(2)	◇	72	Compressor temp. sensor error
●(7)	●(3)	◇	73	Outdoor unit Heat Ex. liquid temp. sensor error
●(7)	●(4)	◇	74	Outdoor temp. sensor error
●(7)	●(5)	◇	75	Suction Gas temp. sensor error
●(7)	●(6)	◇	76	• 2-way valve temp. sensor error • 3-way valve temp. sensor error
●(7)	●(7)	◇	77	Heat sink temp. sensor error
●(8)	●(2)	◇	82	• Sub-cool Heat Ex. gas inlet temp. sensor error • Sub-cool Heat Ex. gas outlet temp. sensor error
●(8)	●(3)	◇	83	Liquid pipe temp. sensor error
●(8)	●(4)	◇	84	Current sensor error
●(8)	●(6)	◇	86	• Discharge pressure sensor error • Suction pressure sensor error • High pressure switch error
●(9)	●(4)	◇	94	Trip detection
●(9)	●(5)	◇	95	Compressor rotor position detection error (permanent stop)
●(9)	●(7)	◇	97	Outdoor unit fan motor 1 error
●(9)	●(8)	◇	98	Outdoor unit fan motor 2 error
●(9)	●(9)	◇	99	4-way valve error
●(9)	●(10)	◇	9A	Coil (expansion valve) error
●(10)	●(1)	◇	A1	Discharge temp. error
●(10)	●(3)	◇	A3	Compressor temp. error
●(10)	●(4)	◇	A4	High pressure error
●(10)	●(5)	◇	A5	Low pressure error
●(13)	●(2)	◇	J2	Branch boxes error [Flexible Multi]

Display mode ● : 0.5s ON / 0.5s OFF

◇ : 0.1s ON / 0.1s OFF

( ) : Number of flashing

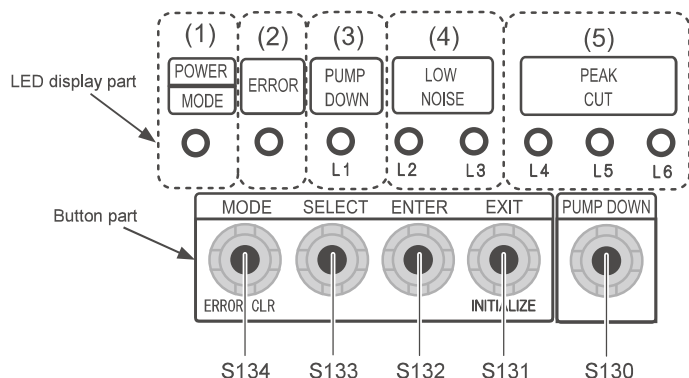
[Error display on the indoor unit (option)]



# Error codes ( Outdoor unit )

## AOHG30,36,45,54KBTB

You can determine the operating status by the lighting on and blinking of the LED display.



## Error display mode

Display when an error occurs.

POWER/ MODE	ERROR	PUMP DOWN (L1)	LOW NOISE (L2) (L3)		PEAK CUT (L4) (L5) (L6)		
●	Blink (Hi speed)	○	○	○	○	○	○

Sign "○": Lights off, "●": Lights on

- Check that the "ERROR" LED blinks, then press the [ENTER] button (S132) once.

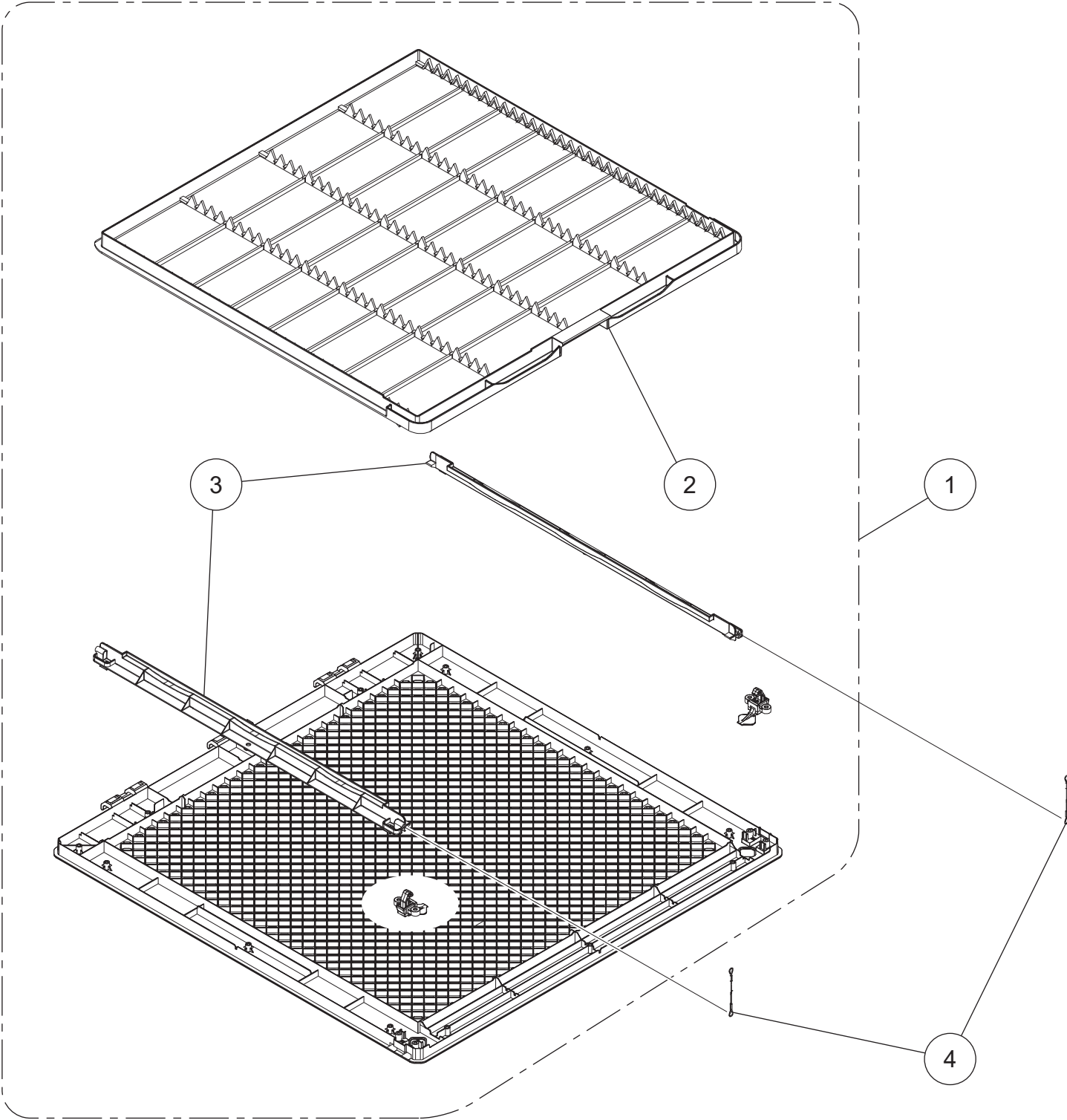
## 10.2. Error code check table

DESCRIPTION	REMARK	LED display							
		POWER/ MODE	ERROR	PUMP DOWN (L1)	LOW NOISE (L2) (L3)		PEAK CUT (L4) (L5) (L6)		
Serial communication error	Serial forward transmission error immediately after operation	Blink (2 times)	●	Blink (1 time)	Blink (1 time)	○	○	●	●
	Serial forward transmission error during operation	Blink (2 times)	●	Blink (1 time)	Blink (1 time)	○	●	○	○
Indoor unit capacity error	Indoor unit capacity error	Blink (2 times)	●	Blink (2 times)	Blink (2 times)	○	○	○	●
Indoor unit error	Indoor unit error	Blink (2 times)	●	Blink (5 times)	Blink (15 times)	○	○	○	●
Outdoor unit main PCB error	Outdoor unit PCB model information error	Blink (2 times)	●	Blink (6 times)	Blink (2 times)	○	○	○	●
Inverter PCB error	Inverter error	Blink (2 times)	●	Blink (6 times)	Blink (3 times)	○	○	○	●
IPM error	Trip terminal L error	Blink (2 times)	●	Blink (6 times)	Blink (5 times)	○	○	●	●
Discharge temp. sensor error	Discharge temp. sensor 1 error	Blink (2 times)	●	Blink (7 times)	Blink (1 time)	○	○	○	●
Compressor temp. sensor error	Compressor temp. sensor 1 error	Blink (2 times)	●	Blink (7 times)	Blink (2 times)	○	○	○	●
Outdoor unit Heat Ex. sensor error	Heat Ex. center temp. sensor error	Blink (2 times)	●	Blink (7 times)	Blink (3 times)	○	○	●	○
	Outdoor unit Heat Ex. liquid temp. sensor error	Blink (2 times)	●	Blink (7 times)	Blink (3 times)	○	○	●	●
Outdoor temp. sensor error	Outdoor temp. sensor error	Blink (2 times)	●	Blink (7 times)	Blink (4 times)	○	○	○	●
Heat sink temp. sensor error	Heat sink temp. sensor error	Blink (2 times)	●	Blink (7 times)	Blink (7 times)	○	○	○	●
Current sensor error	Current sensor 1 error (stoppage permanently)	Blink (2 times)	●	Blink (8 times)	Blink (4 times)	○	○	○	●
Pressure sensor error	High pressure switch 1 error	Blink (2 times)	●	Blink (8 times)	Blink (6 times)	○	●	○	○
	Pressure sensor error	Blink (2 times)	●	Blink (8 times)	Blink (6 times)	○	●	●	○
Trip detection	Trip detection	Blink (2 times)	●	Blink (9 times)	Blink (4 times)	○	○	○	●
Compressor motor control error	Rotor position detection error (stoppage permanently)	Blink (2 times)	●	Blink (9 times)	Blink (5 times)	○	○	○	●
Outdoor unit fan motor 1 error	Duty abnormal	Blink (2 times)	●	Blink (9 times)	Blink (7 times)	○	○	●	●
Outdoor unit fan motor 2 error	Duty abnormal	Blink (2 times)	●	Blink (9 times)	Blink (8 times)	○	○	●	●
4-way valve error	4-way valve error	Blink (2 times)	●	Blink (9 times)	Blink (9 times)	○	○	○	●
Discharge temp. 1 error	Discharge temp. 1 error	Blink (2 times)	●	Blink (10 times)	Blink (1 time)	○	○	○	●
Compressor temp. error	Compressor 1 temp. error	Blink (2 times)	●	Blink (10 times)	Blink (3 times)	○	○	○	●
Pressure error 2	Low pressure error	Blink (2 times)	●	Blink (10 times)	Blink (5 times)	○	○	○	●
IPM error	Temp. error	Blink (2 times)	●	Blink (6 times)	Blink (5 times)	○	○	○	●
Heat sink temp. error	Heat sink temp. error	Blink (2 times)	●	Blink (10 times)	Blink (12 times)	○	○	●	●

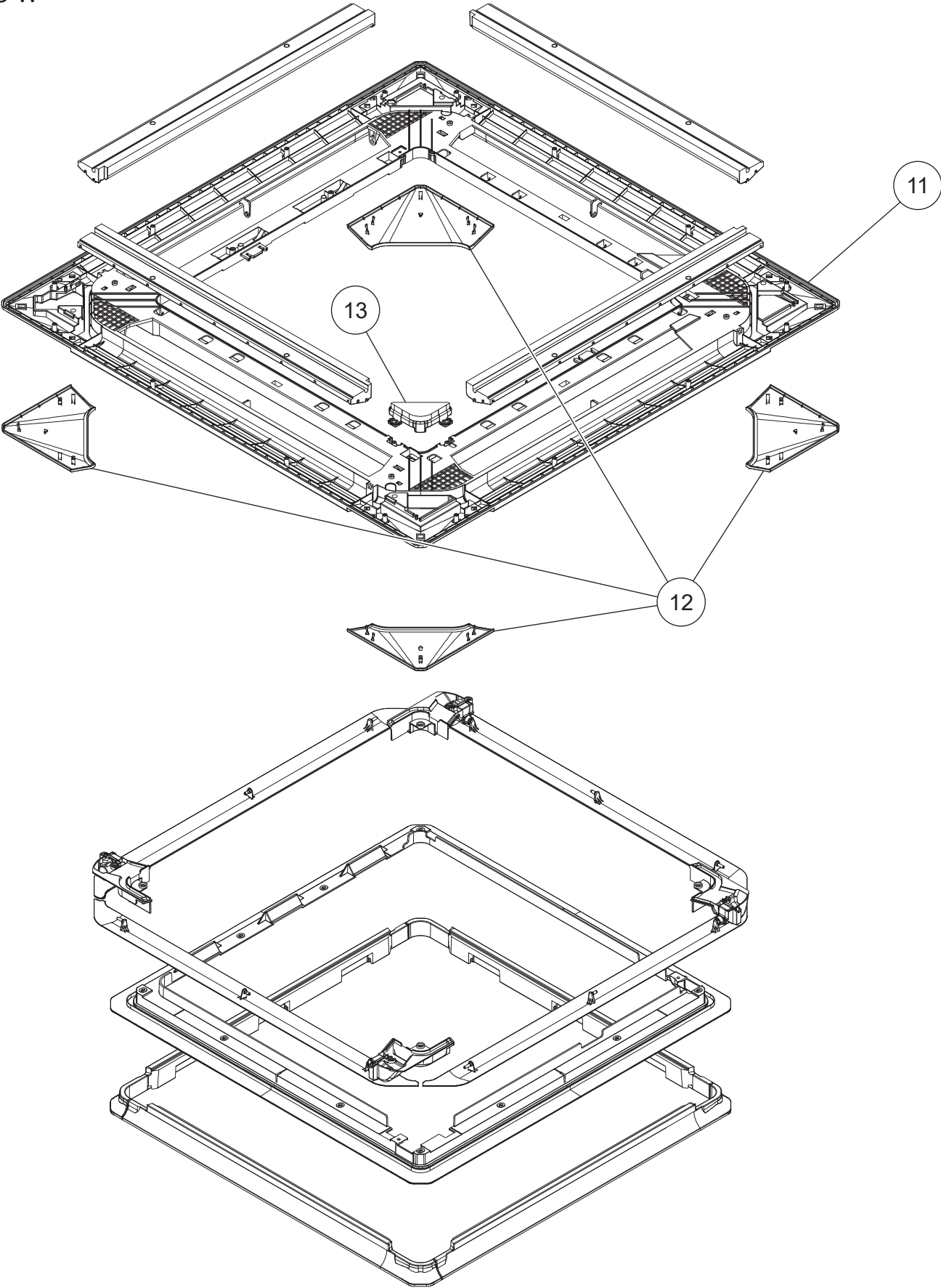


# Parts

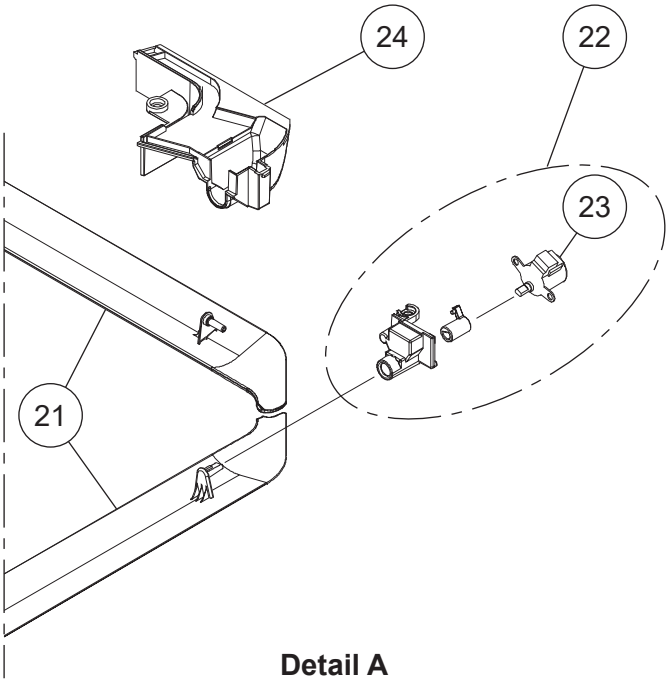
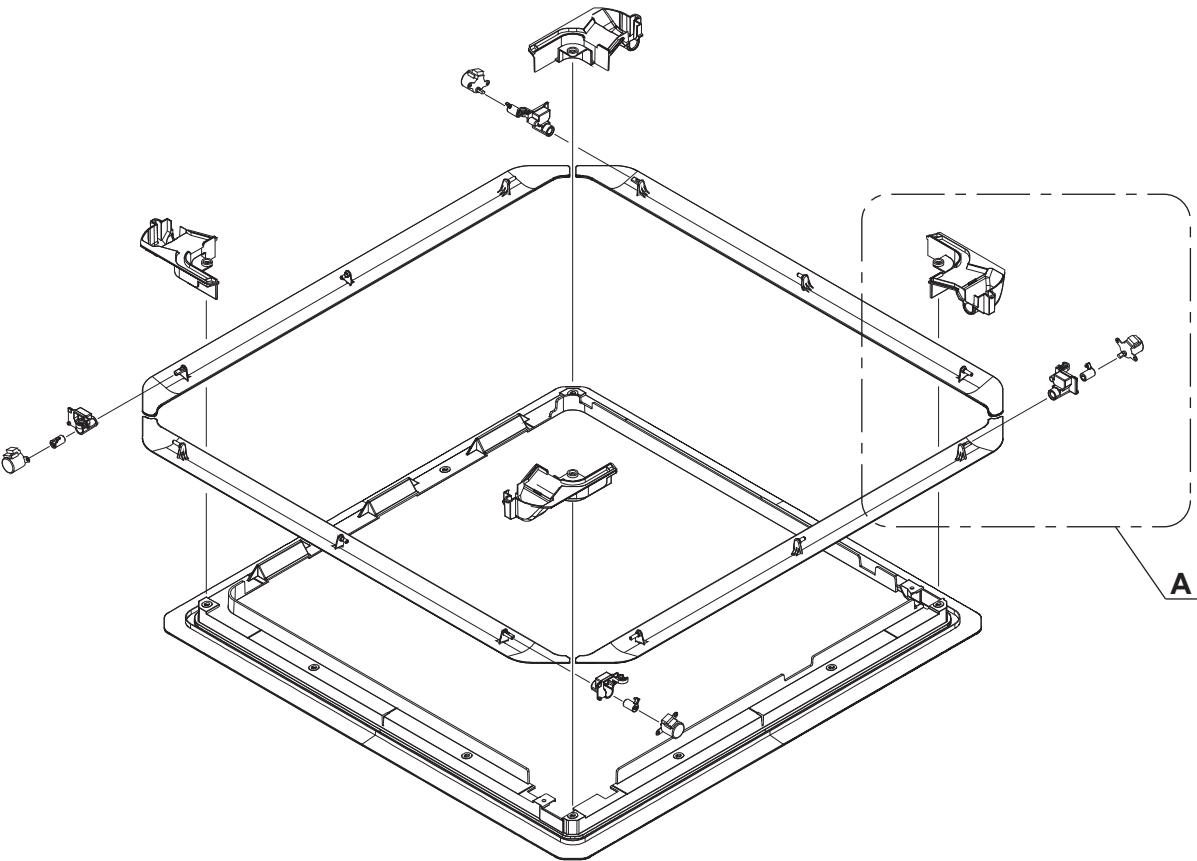
UTG-UKGC-W



Ref No.	Description	Parts No.
1	Intake Grille Assy (GENERAL)	9381691012
2	Long Life Filter	9378252028
3	Filter Guide	9378253018
4	Hook Wire	9378597020

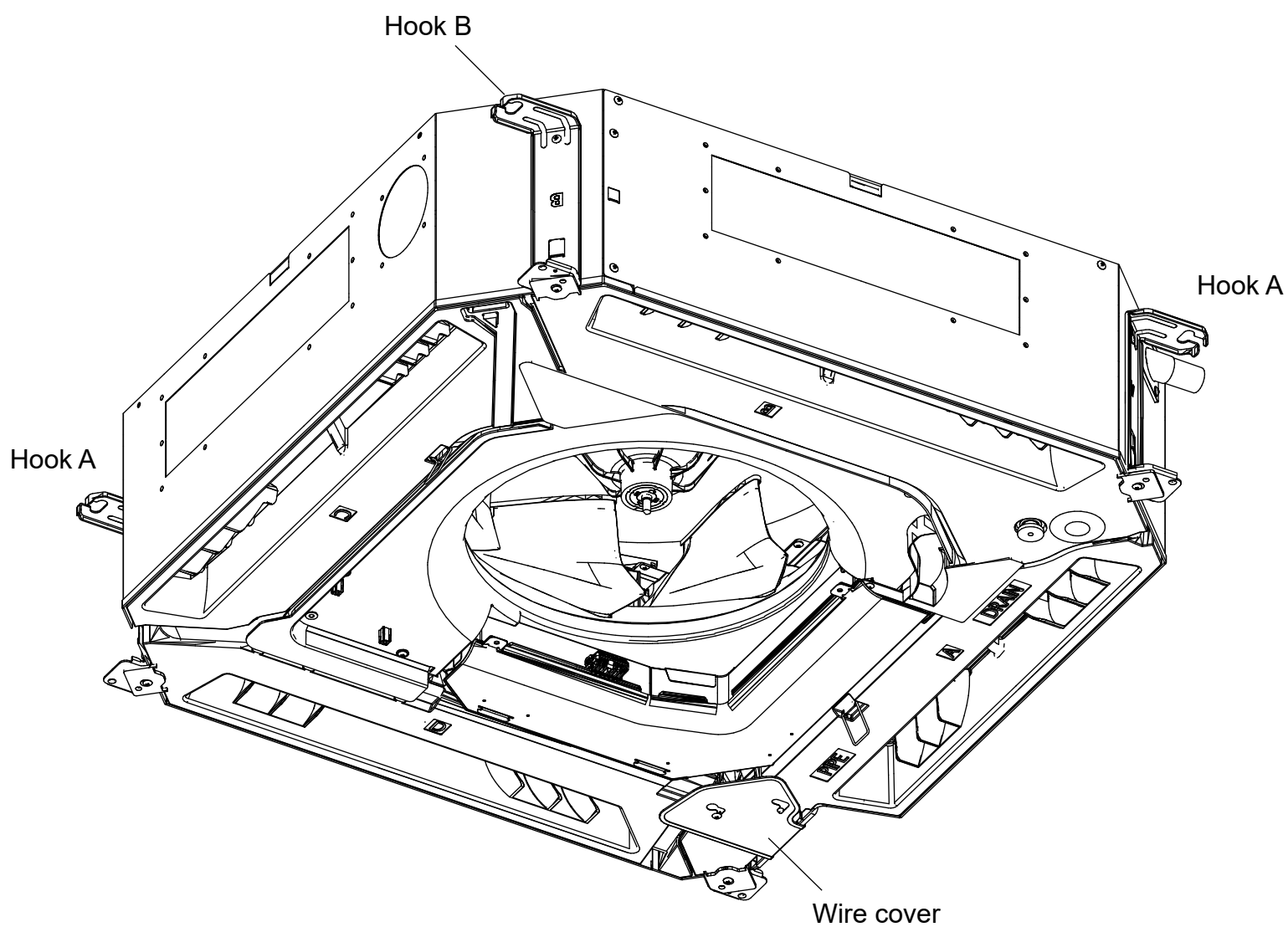


Ref No.	Description	Parts No.
11	Decoration Panel	9381352005
12	Corner Panel Assy	9381711000
13	Drain Cover Assy	9381713004

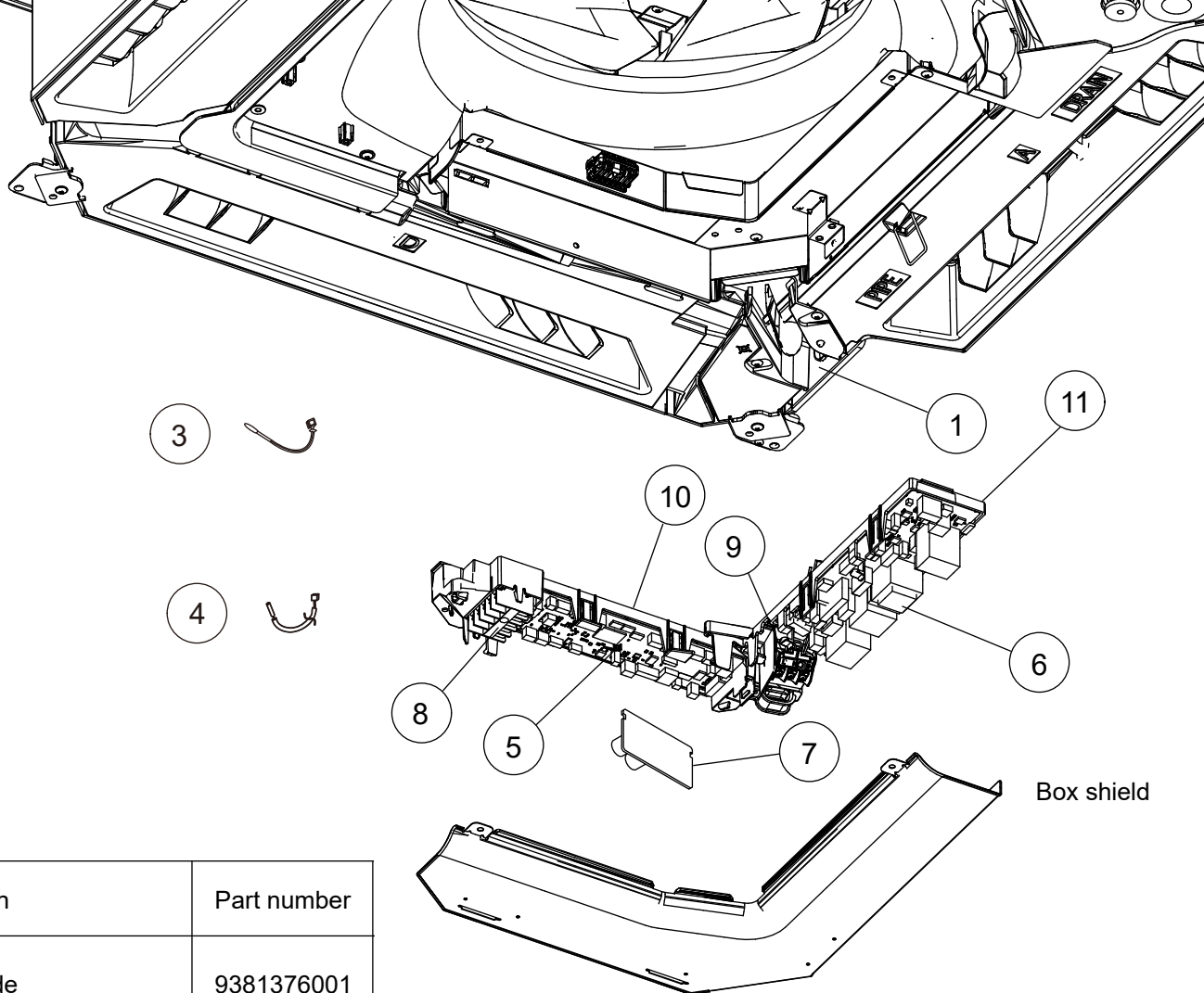


Ref No.	Description	Parts No.
21	Louver Assy	9381693009
22	Motor Case Assy	9381712007
23	Step Motor	9900885007
24	Motor Cover	9381354009
	Wire (Step Motor)	9710175008

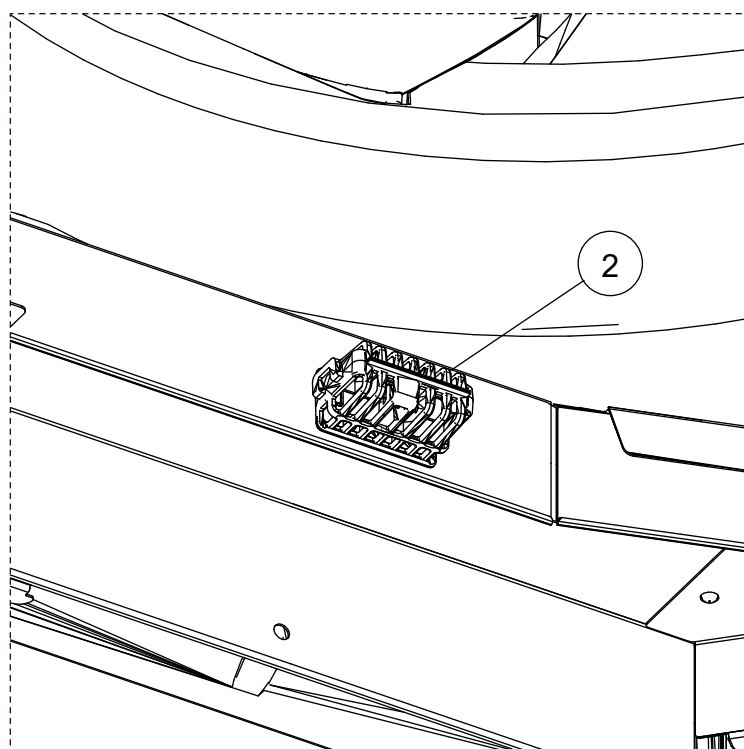
INDOOR UNIT  
AUXG24KRLB  
AUXG30KRLB  
AUXG36KRLB  
AUXG45KRLB  
AUXG54KRLB



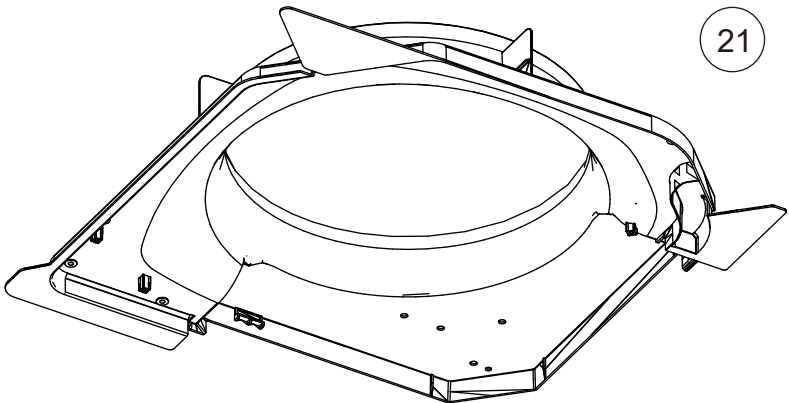
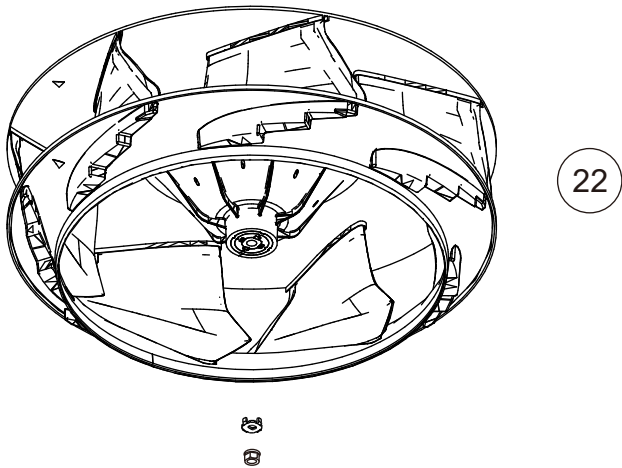
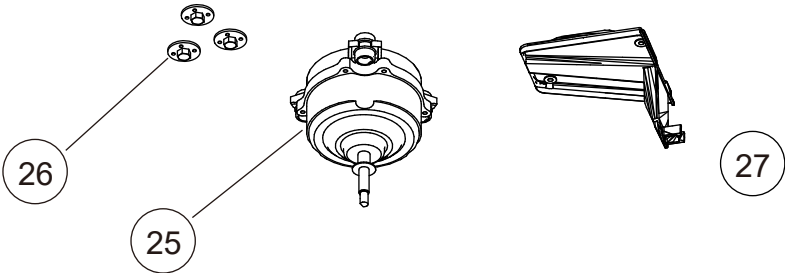
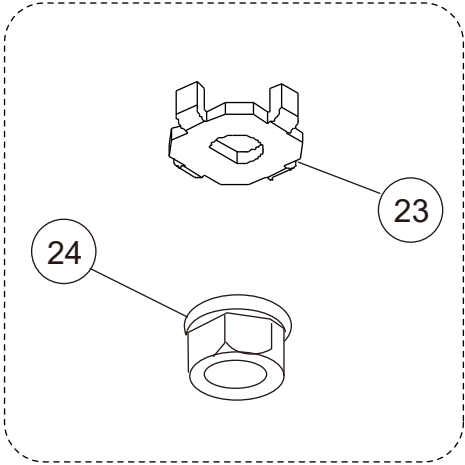
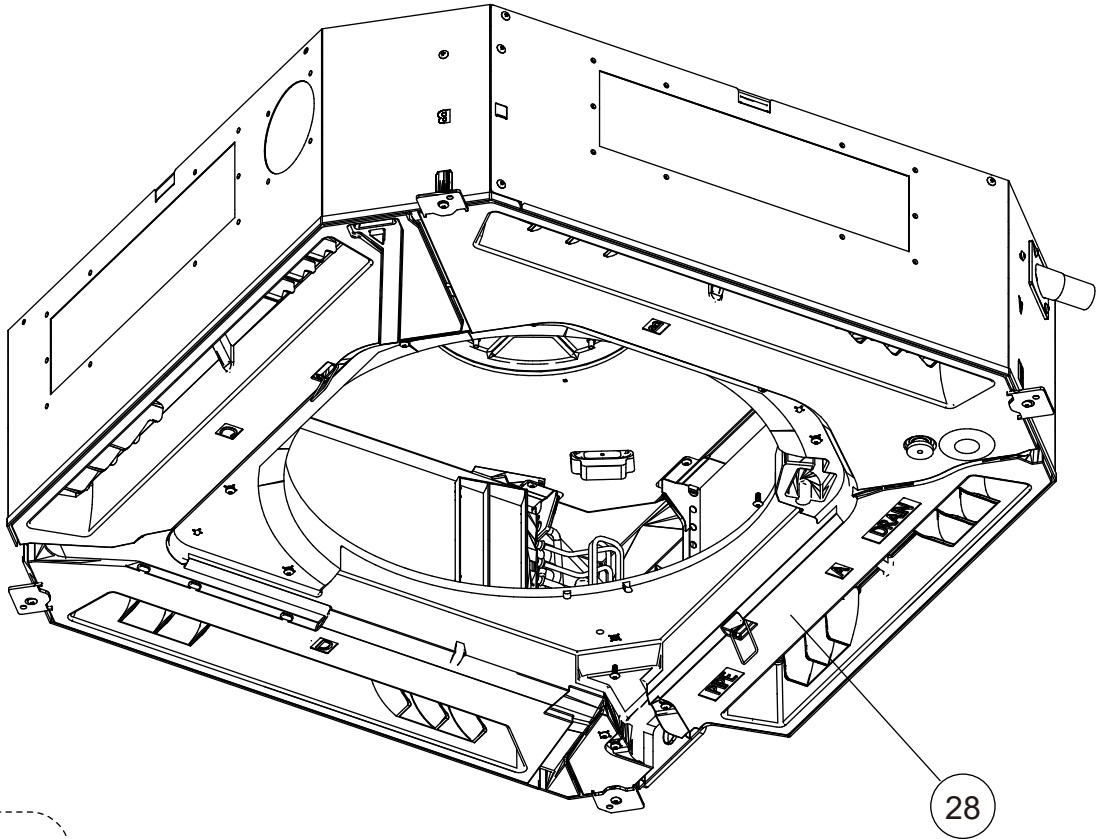
INDOOR UNIT  
AUXG24KRLB  
AUXG30KRLB  
AUXG36KRLB  
AUXG45KRLB  
AUXG54KRLB



Ref.	Description	Part number
1	Cable guide	9381376001
2	Room thermistor Holder	9381348008
3	Room thermistor	9900822002
4	Pipe Thermistor	9900942014
5	Main PCB (AUXG24KRLB)	9710995873
5	Main PCB (AUXG30KRLB)	9710995880
5	Main PCB (AUXG36KRLB)	9710995897
5	Main PCB (AUXG45KRLB)	9710995903
5	Main PCB (AUXG54KRLB)	9710995910
6	Power PCB	9710022005
7	PCB (Non-polar 2-wire)	9710019005
8	Remote terminal 5P	9900896003
9	Power Terminal 3P	9900720032
10	Main PCB holder	9381350001
11	Power PCB Holder	9381349005

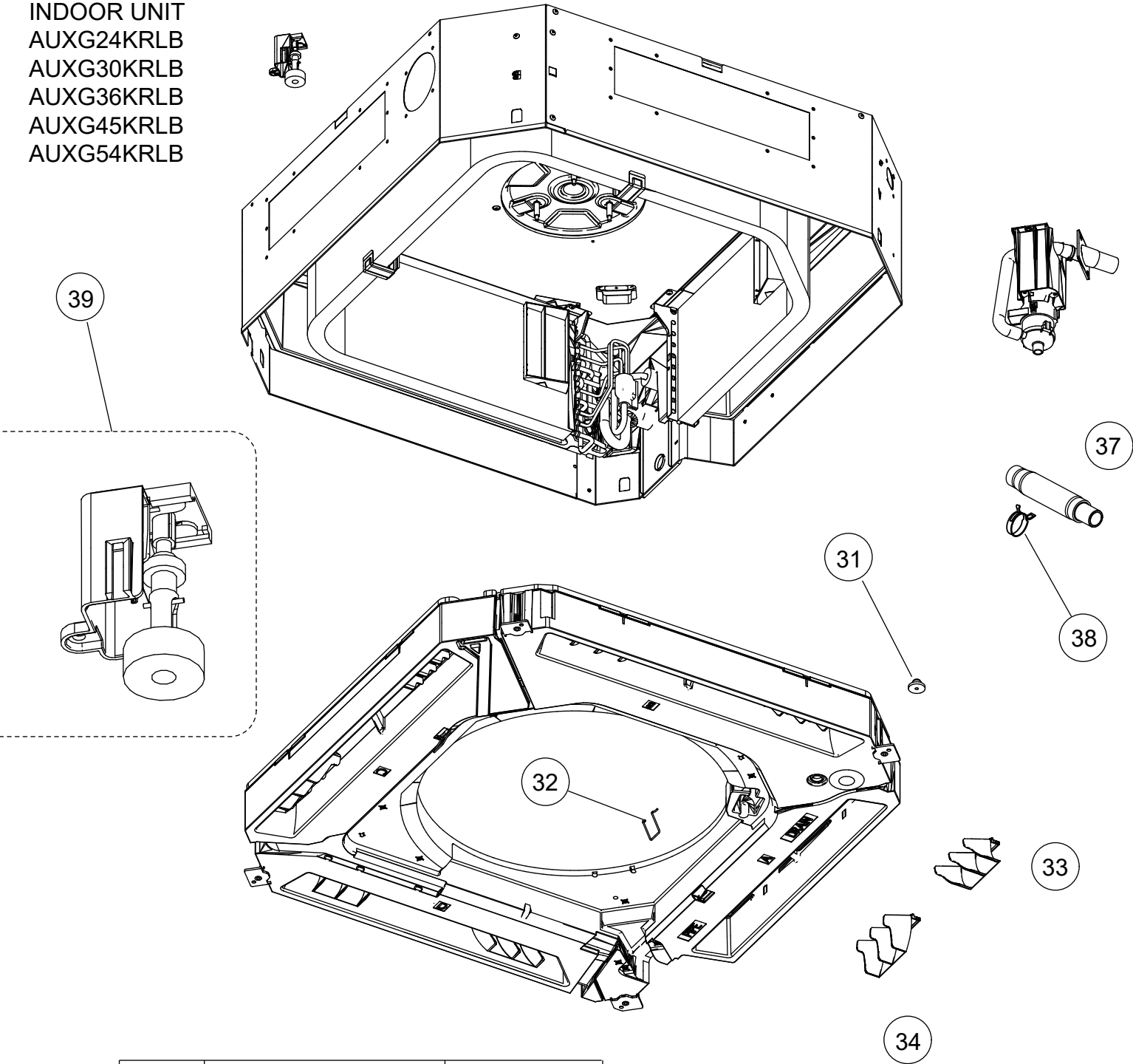


INDOOR UNIT  
AUXG24KRLB  
AUXG30KRLB  
AUXG36KRLB  
AUXG45KRLB  
AUXG54KRLB

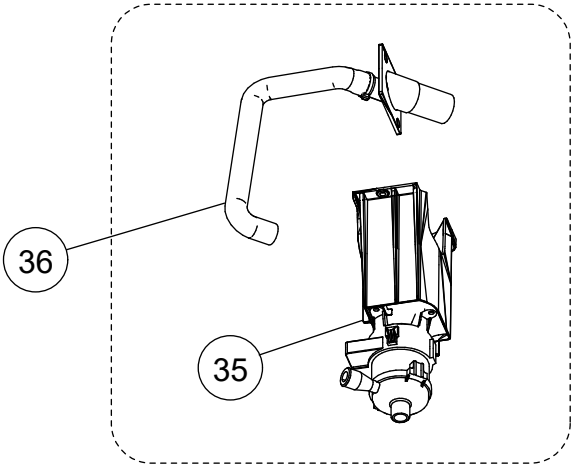


Ref.	Description	Part number
21	Bellmouth (24)	9381484003
21	Bellmouth (30,36,45,54)	9381345007
22	Turbo fan assy	9381303007
23	Turbo Fan Washer	9378394018
24	Nut	9356998009
25	Brushless motor	9603443009
26	Special Nut	9378388017
27	Motor Wire Holder	9381351008
28	Drain pan sub assy	9381789009

INDOOR UNIT  
AUXG24KRLB  
AUXG30KRLB  
AUXG36KRLB  
AUXG45KRLB  
AUXG54KRLB



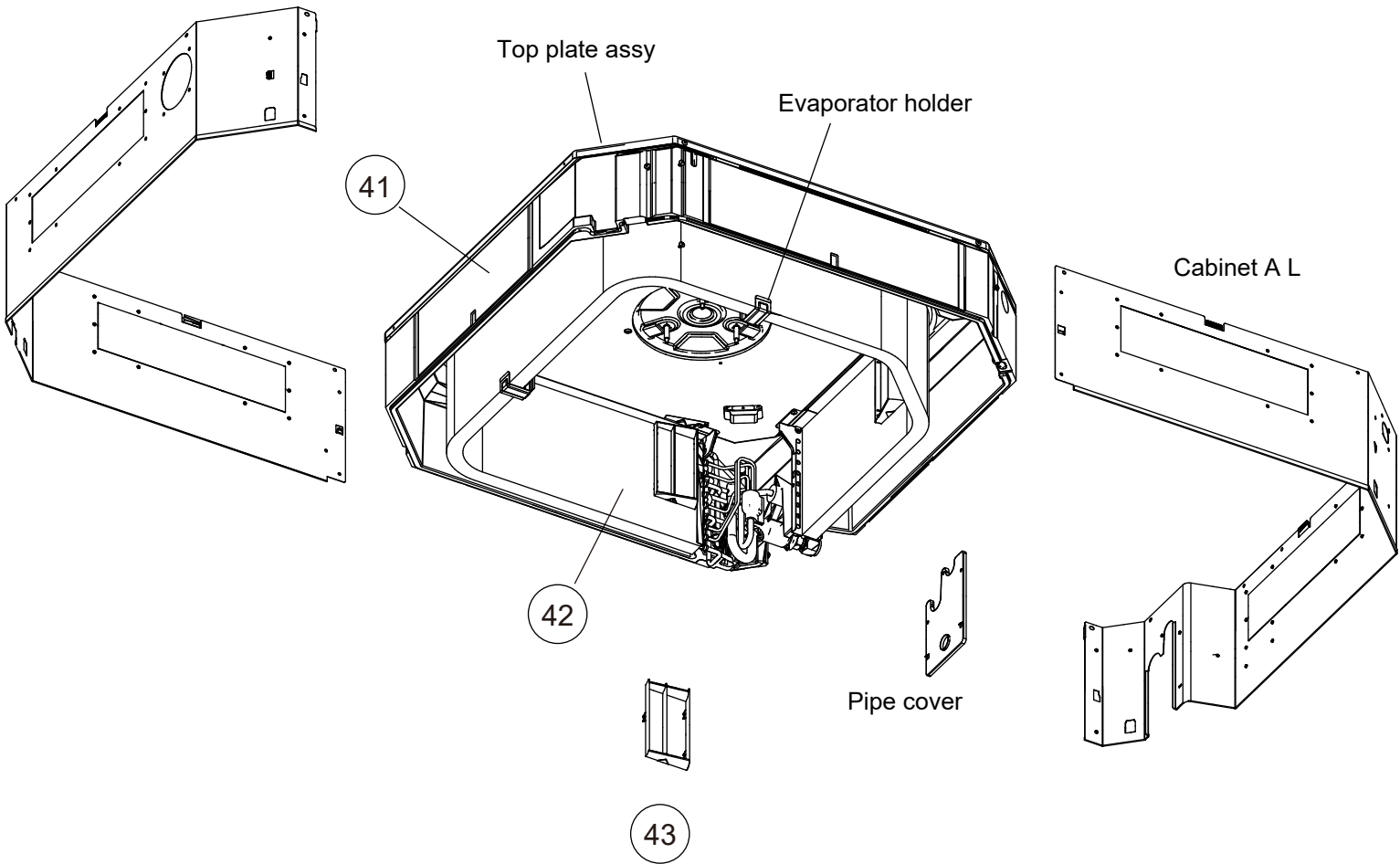
Ref.	Description	Part number
31	Drain Cap	9375502010
32	Panel Hook	9375671013
33	Vane L	9381745012
34	Vane R	9381744008
35	Drain Pump Sub Assy	9381793006
36	Drain Port Sub Assy	9381788002
37	Drain Hose	9379665001
38	Hose Band	9379757010
39	Float Switch Sub Assy	9381794003





INDOOR UNIT  
AUXG24KRLB  
AUXG30KRLB  
AUXG36KRLB  
AUXG45KRLB  
AUXG54KRLB

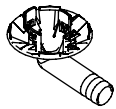
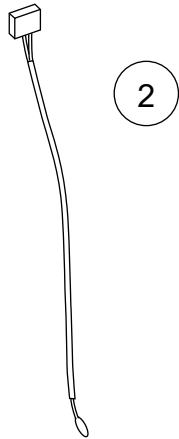
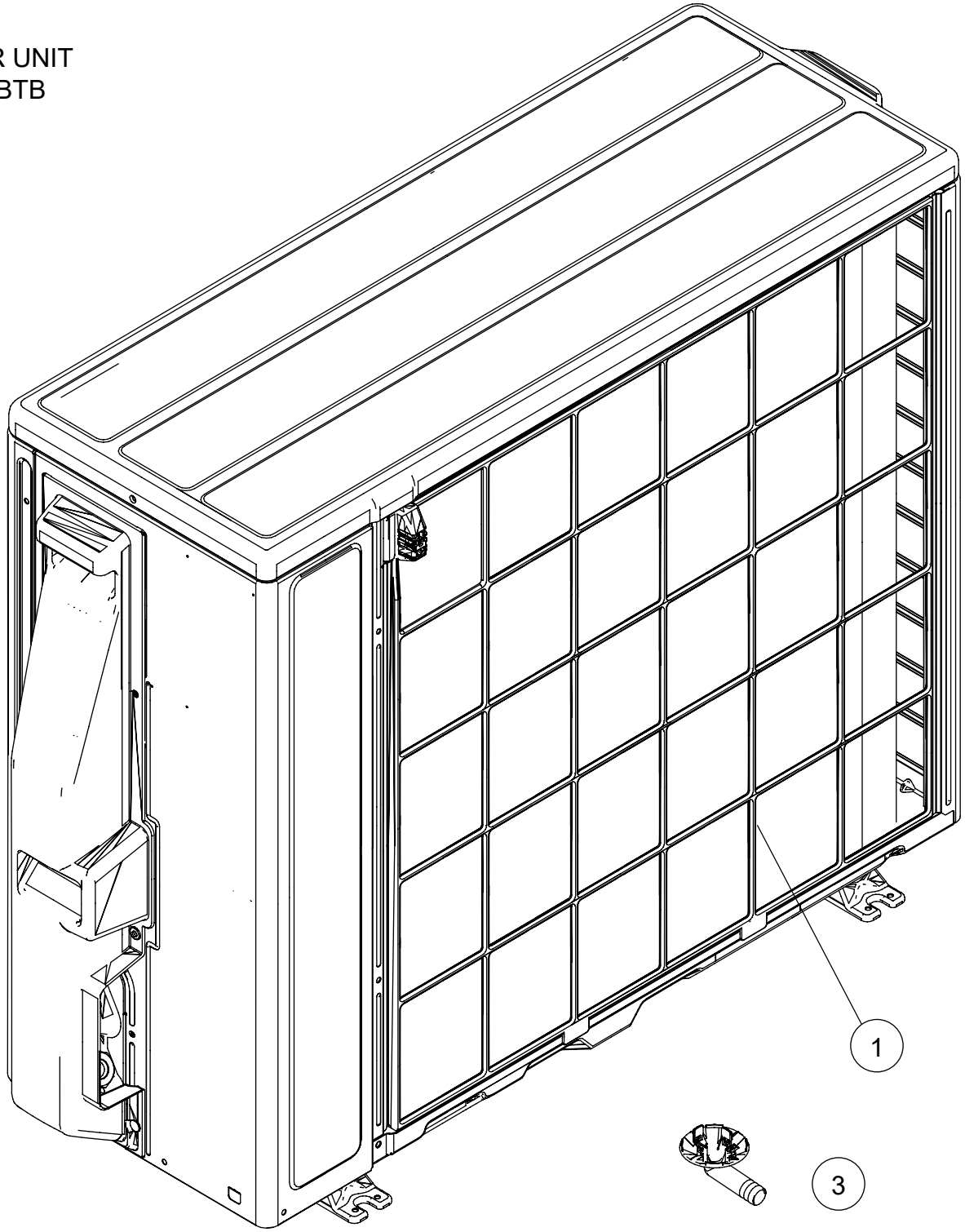
Cabinet B sub assy



Ref.	Description	Part number
41	Insulation Box Sub Assy (24)	9381787012
41	Insulation Box Sub Assy (30,36,45,54)	9381787005
42	Evaporator Total Assy (24)	9378580664
42	Evaporator Total Assy (30)	9378580671
42	Evaporator Total Assy (36,45,54)	9378580688
43	Wind Guide Board	9382125004

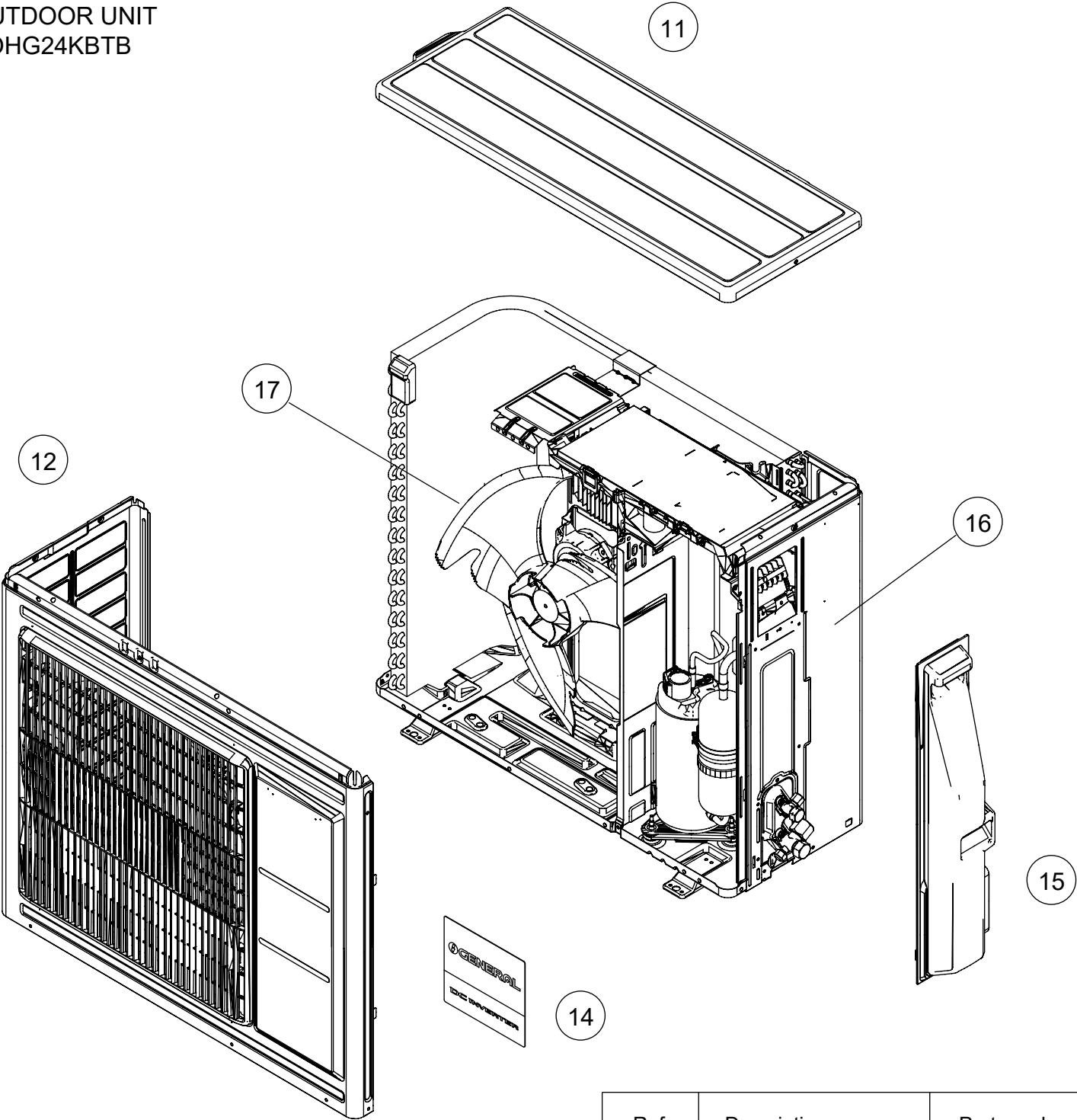


OUTDOOR UNIT  
AOHG24KBTB



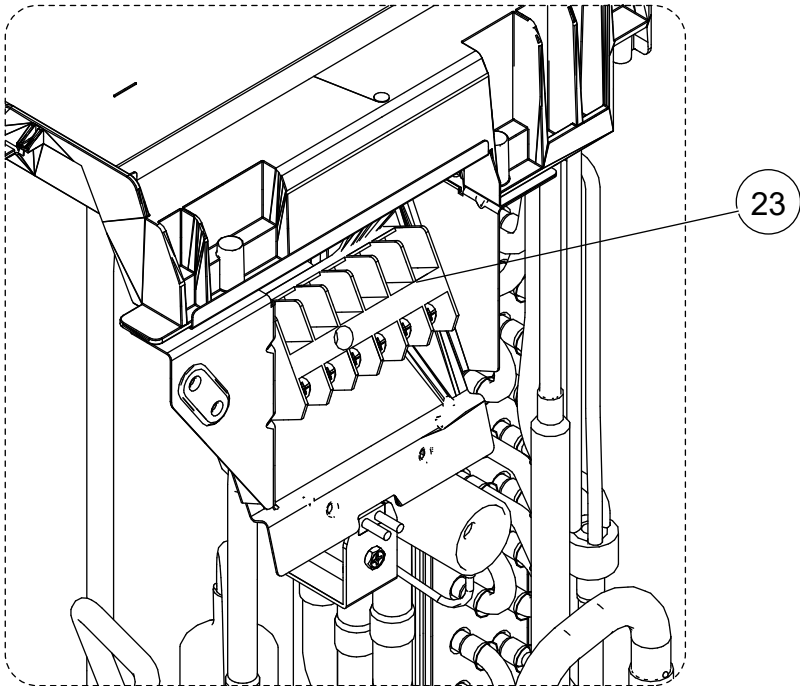
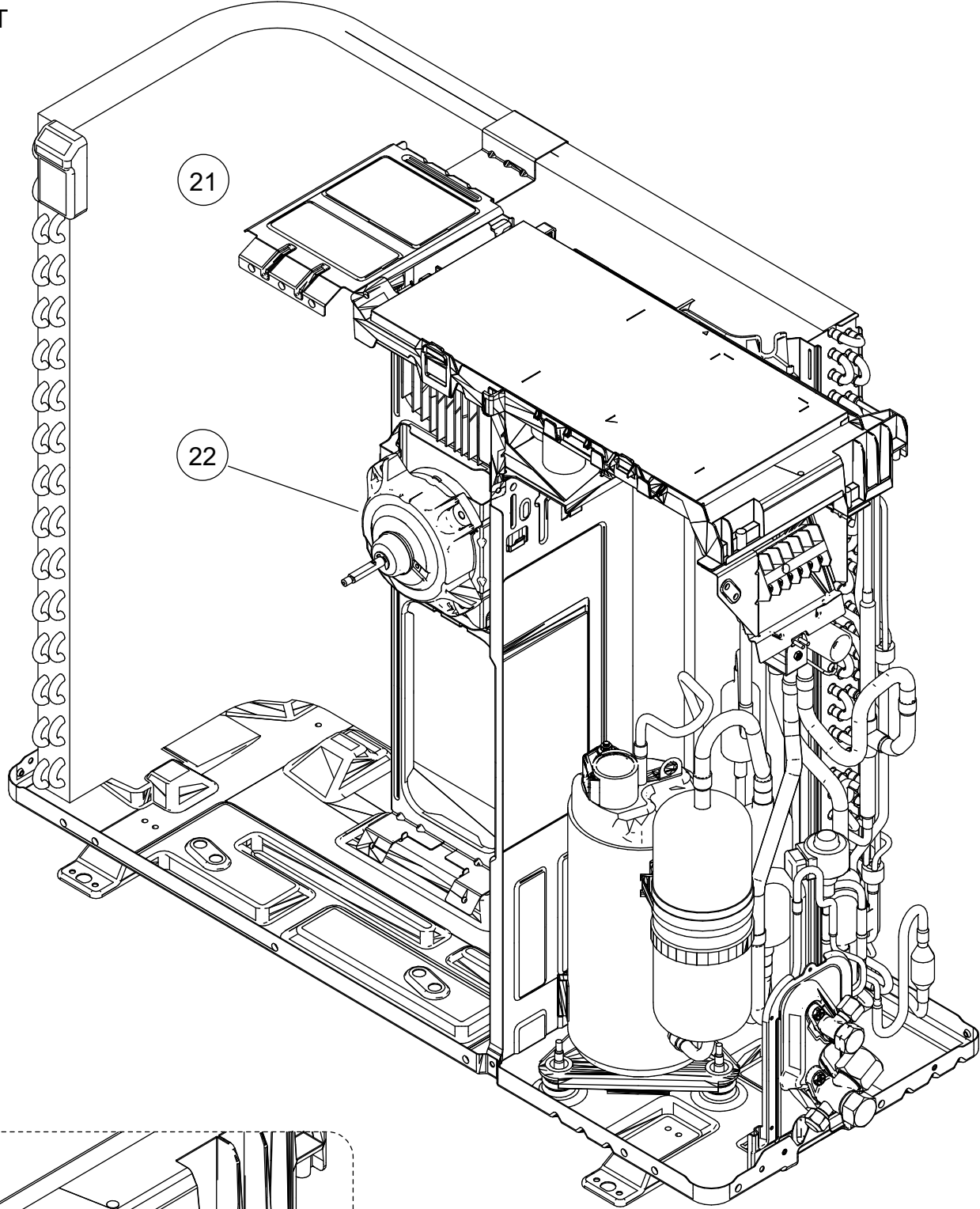
Ref.	Description	Part number
1	Protective net assy	9322811042
2	Outdoor thermistor	9900585060
3	Drain pipe	9322144003

OUTDOOR UNIT  
AOHG24KBTB



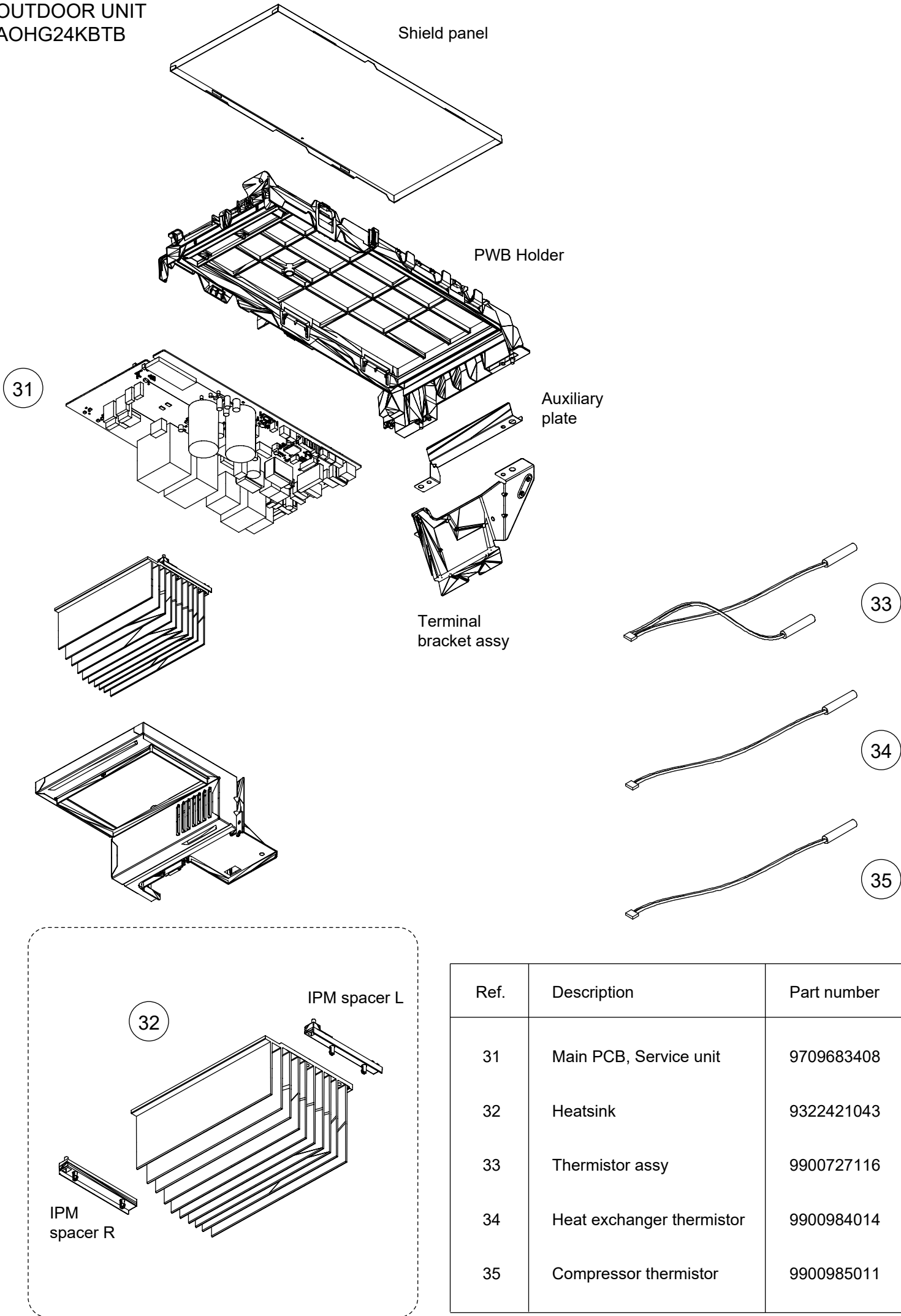
Ref.	Description	Part number
11	Top panel assy	9322556073
12	Front panel assy	9322555038
13	Blow grille	9322149008
14	Emblem	9319157009
15	Switch cover assy	9322570031
16	Cabinet right Assy	9322552150
17	Propeller fan	9322150004

OUTDOOR UNIT  
AOHG24KBTB

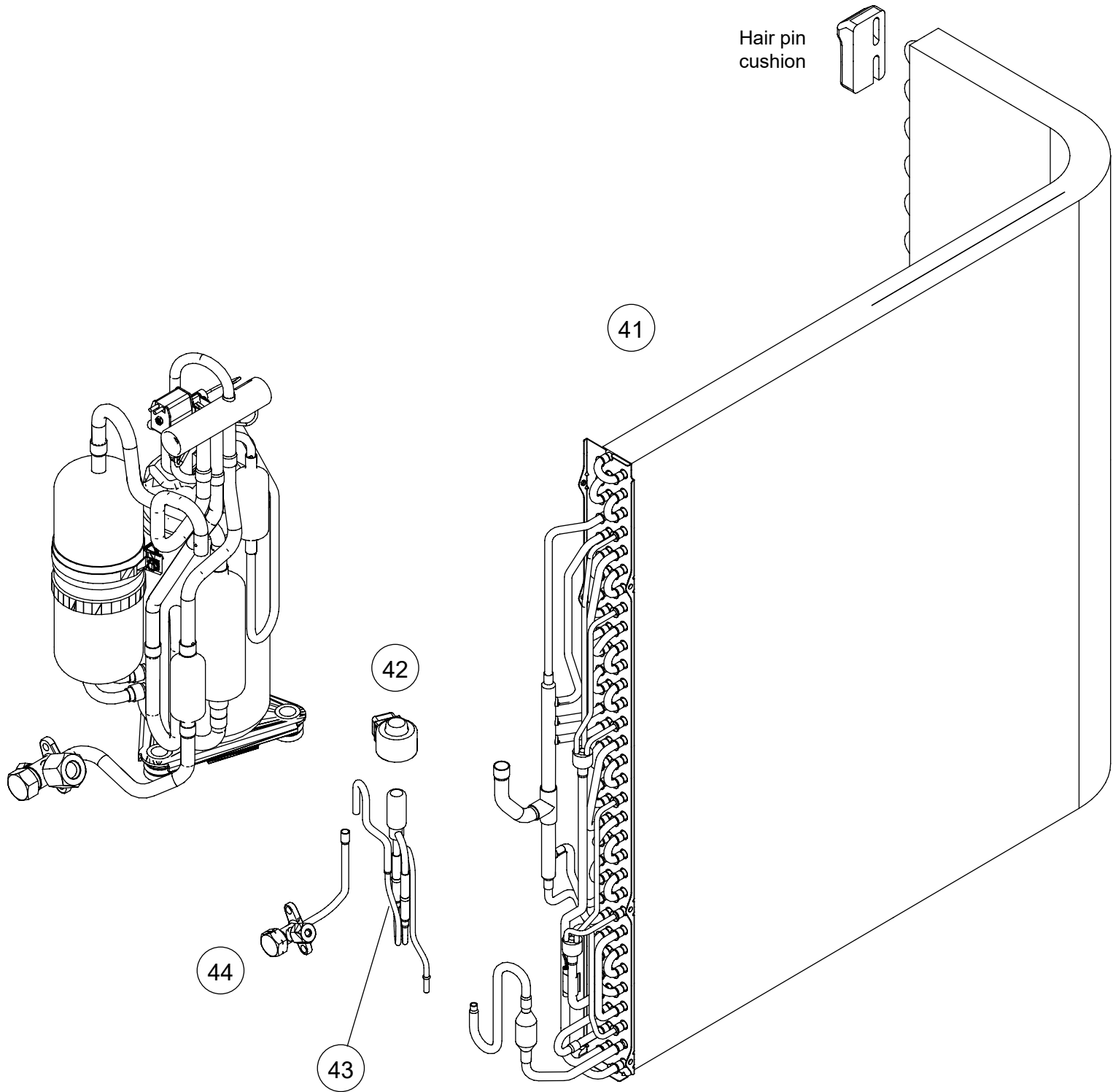


Ref.	Description	Part number
21	Motor bracket assy	9322553034
22	Brushless motor	9603601003
23	Terminal	9900435028

OUTDOOR UNIT  
AOHG24KBTB

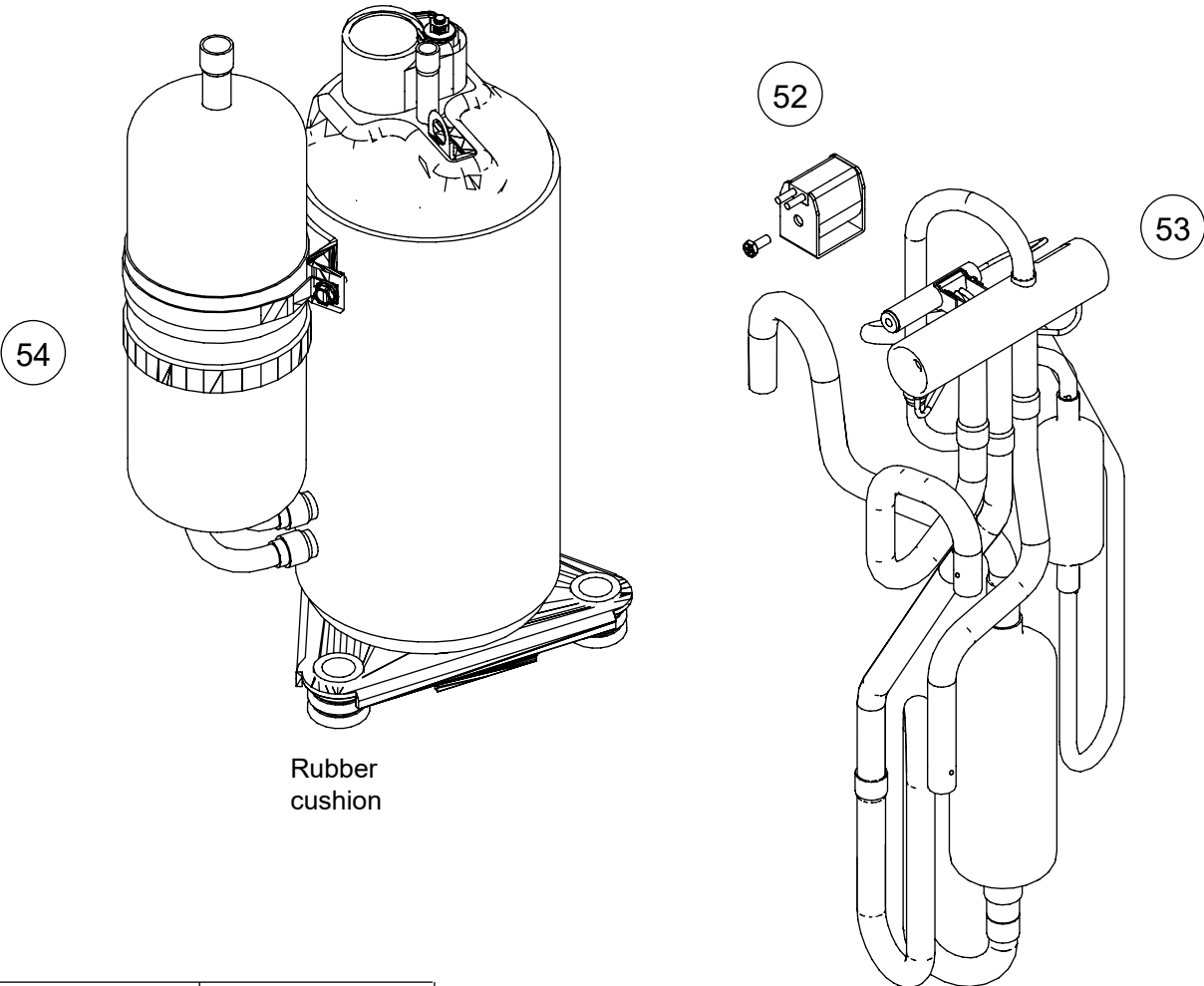


OUTDOOR UNIT  
AOHG24KBTB

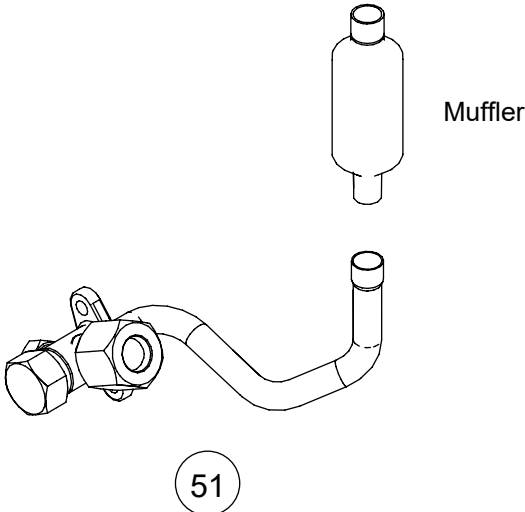


Ref.	Description	Part number
41	Condenser total assy	9317089630
42	Expansion valve coil	9970173028
43	Pulse motor valve assy	9322463029
44	2-way valve assy	9322474001

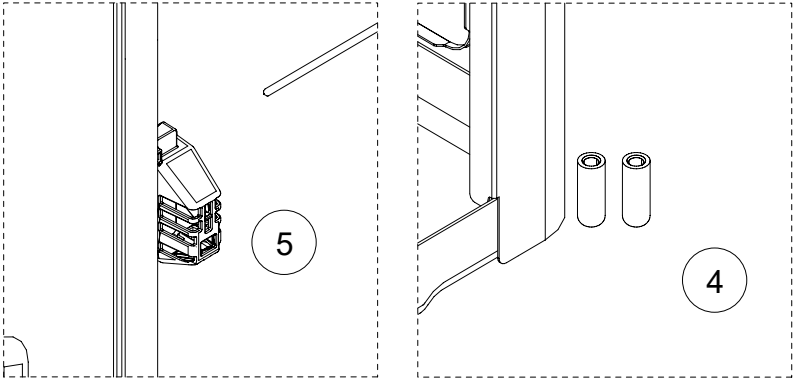
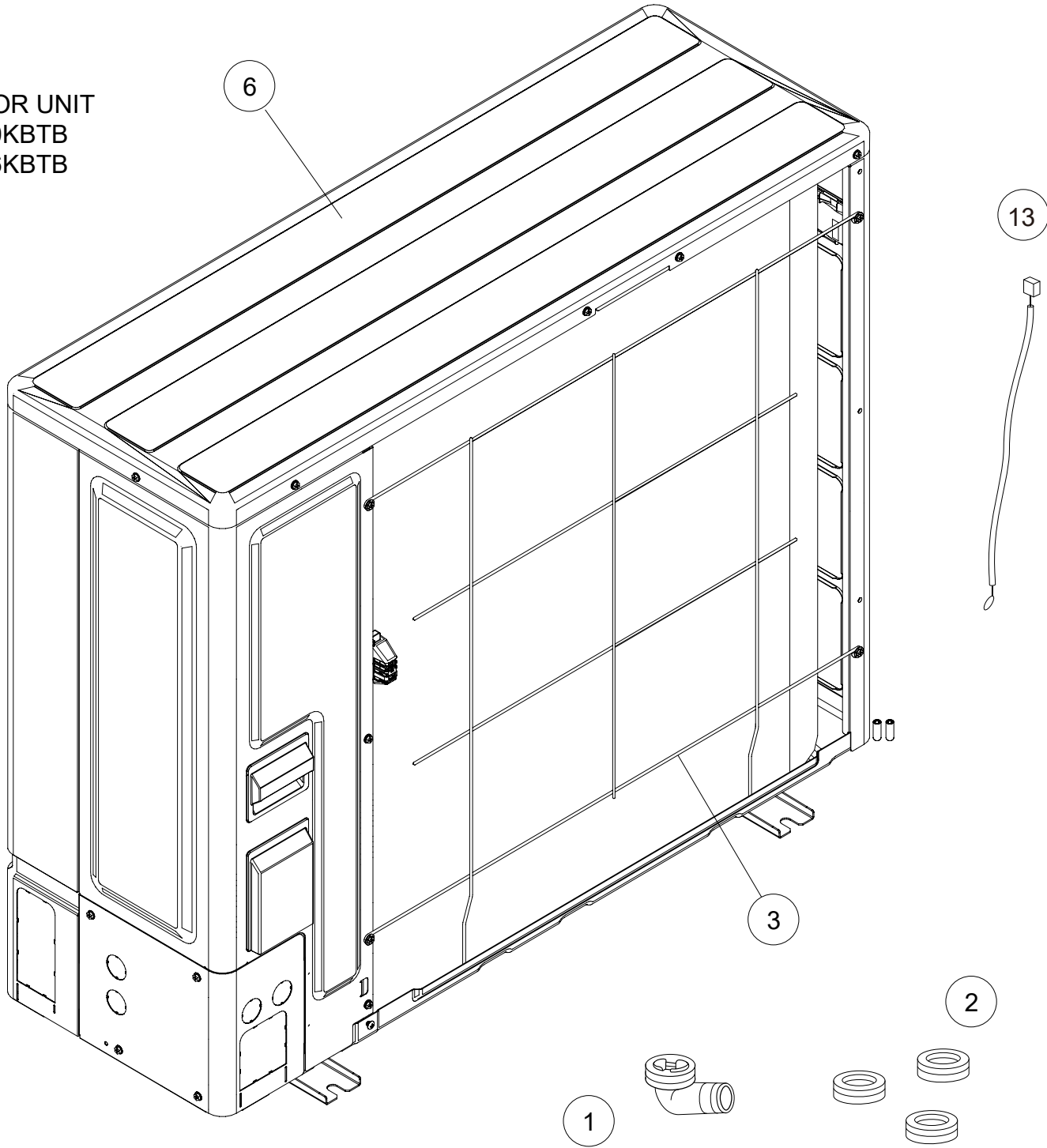
OUTDOOR UNIT  
AOHG24KBTB



Ref.	Description	Part number
51	3-way valve assy	9387831016
52	Solenoid	9970206009
53	4-way valve assy	9383129025
54	Compressor	9810521002
-	S-insulator B	9322503008
-	S-insulator F	9322529008
-	S-insulator H	9322501004
-	S-insulator V	9323045002
-	S-insulator K	9322824004

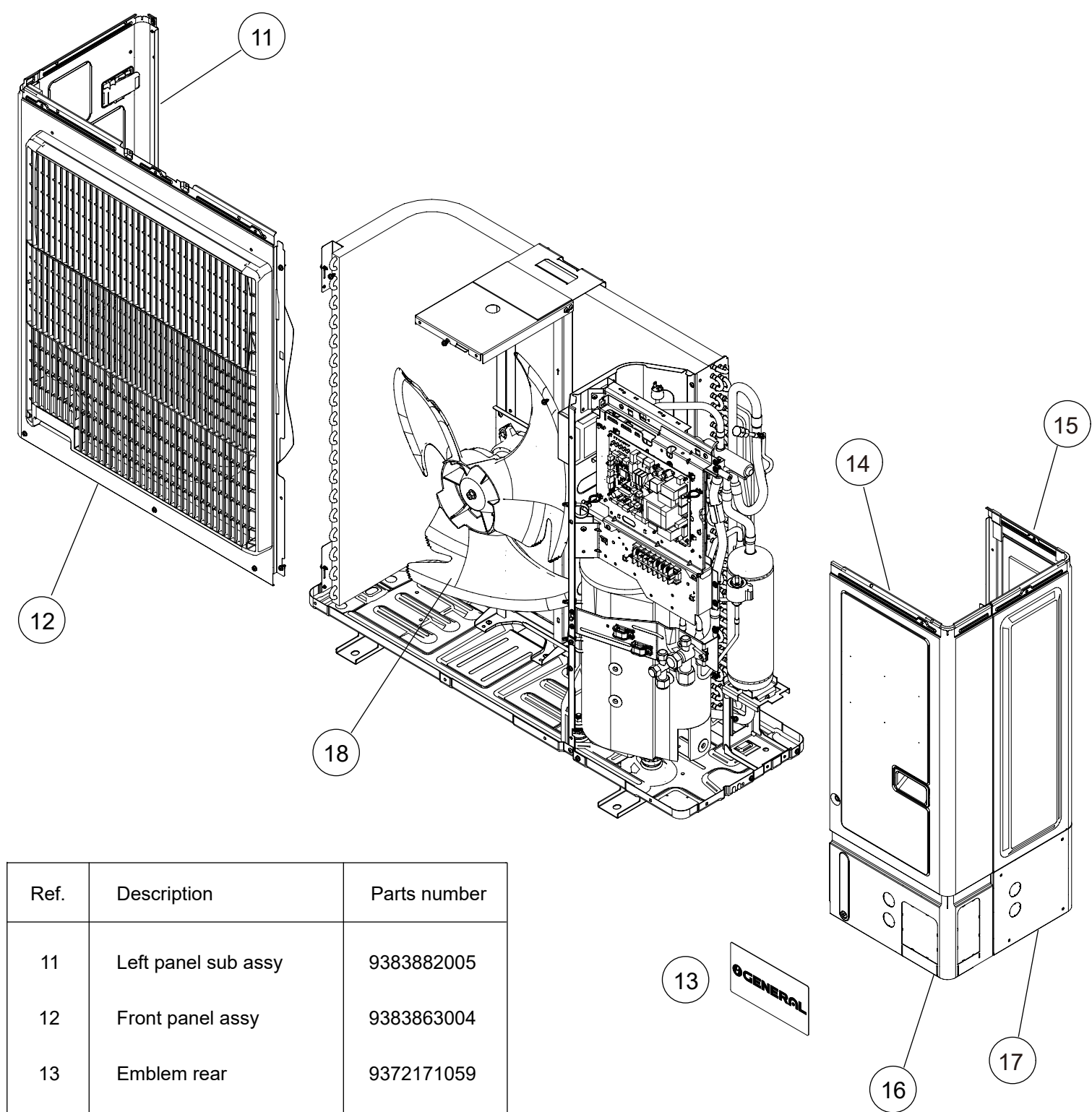


OUTDOOR UNIT  
AOHG30KBTB  
AOHG36KBTB



Ref.	Description	Parts number
1	Drain assy	9303029015
2	Drain cap	313166024302
3	Protective net rear	9383779008
4	Rubber (net)	9375361013
5	Thermo holder	9383607004
6	Top panel sub assy	9383880001
13	Outdoor Thermistor	9900565091

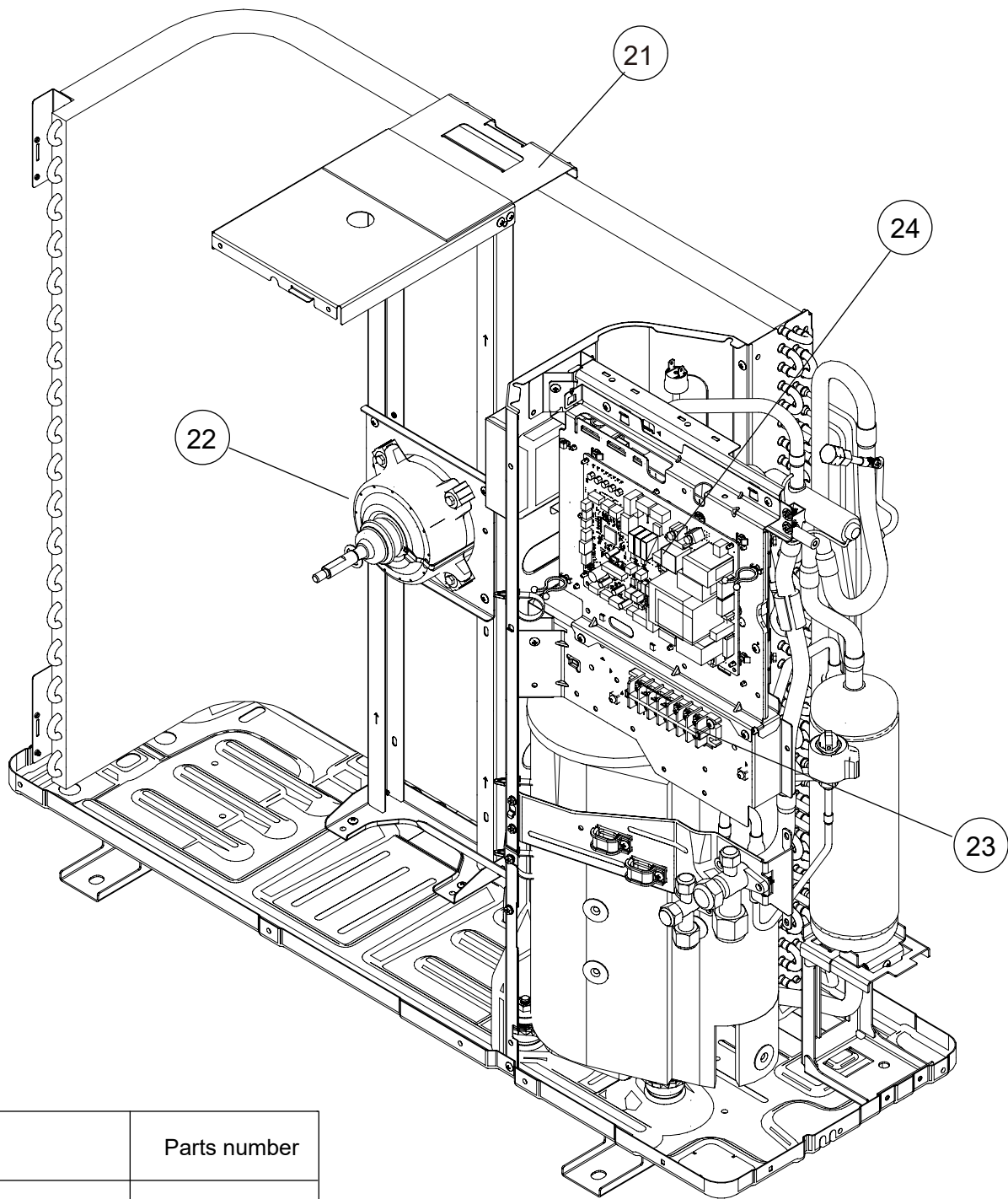
OUTDOOR UNIT  
AOHG30KBTB  
AOHG36KBTB



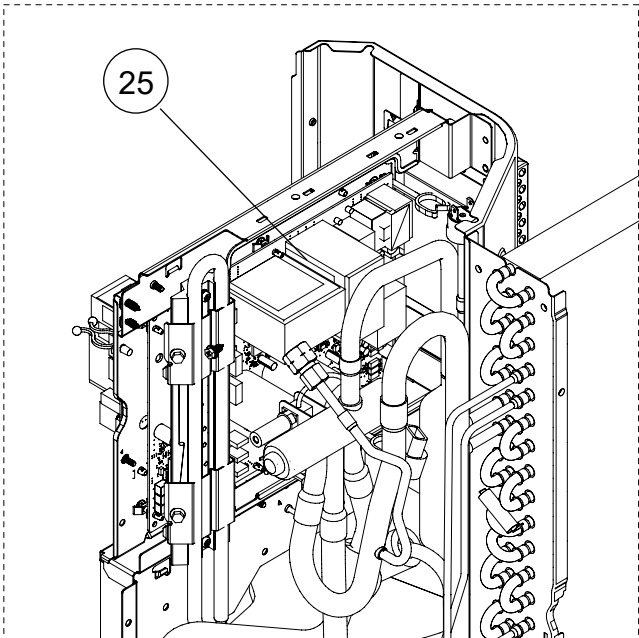
Ref.	Description	Parts number
11	Left panel sub assy	9383882005
12	Front panel assy	9383863004
13	Emblem rear	9372171059
14	Sevice panel sub assy	9383876004
15	Right panel sub assy	9383874000
16	Pipe cover front	9383878008
17	Pipe cover rear	9383879005
18	Propeller fan	9383336003



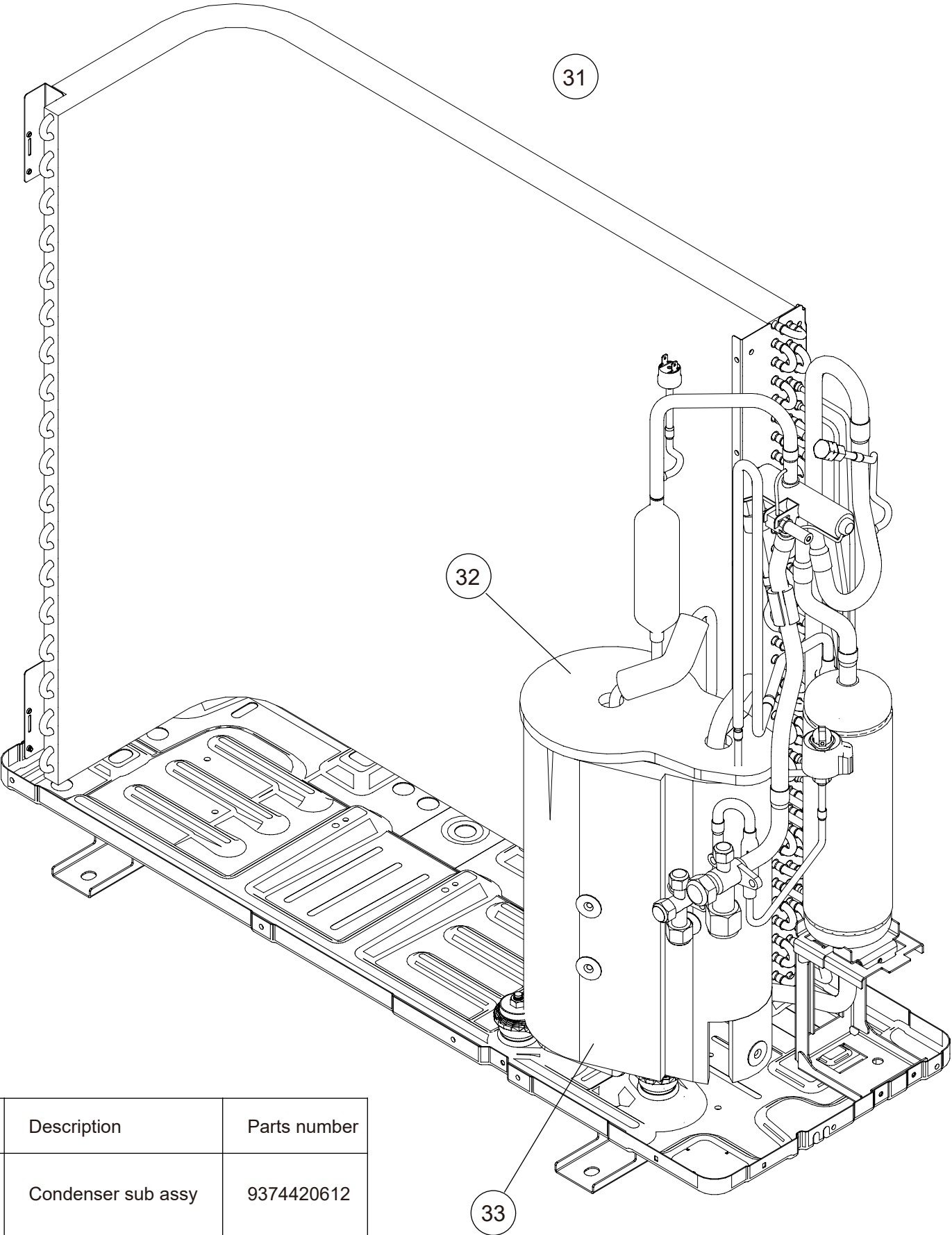
OUTDOOR UNIT  
 AOHG30KBTB  
 AOHG36KBTB



Ref.	Description	Parts number
21	Motor bracket assy	9383862007
22	Motor, DC Brushless	9603732011
23	Terminal 7P	9900203061
24	Main PCB (Service) (30)	9711431271
24	Main PCB (Service) (36)	9711431240
25	Inverter PCB (Service)	9709684108
--	Heat ex. thermistor	9900984038
--	Thermistor assy	9900727154
--	Compressor thermistor	9900985035



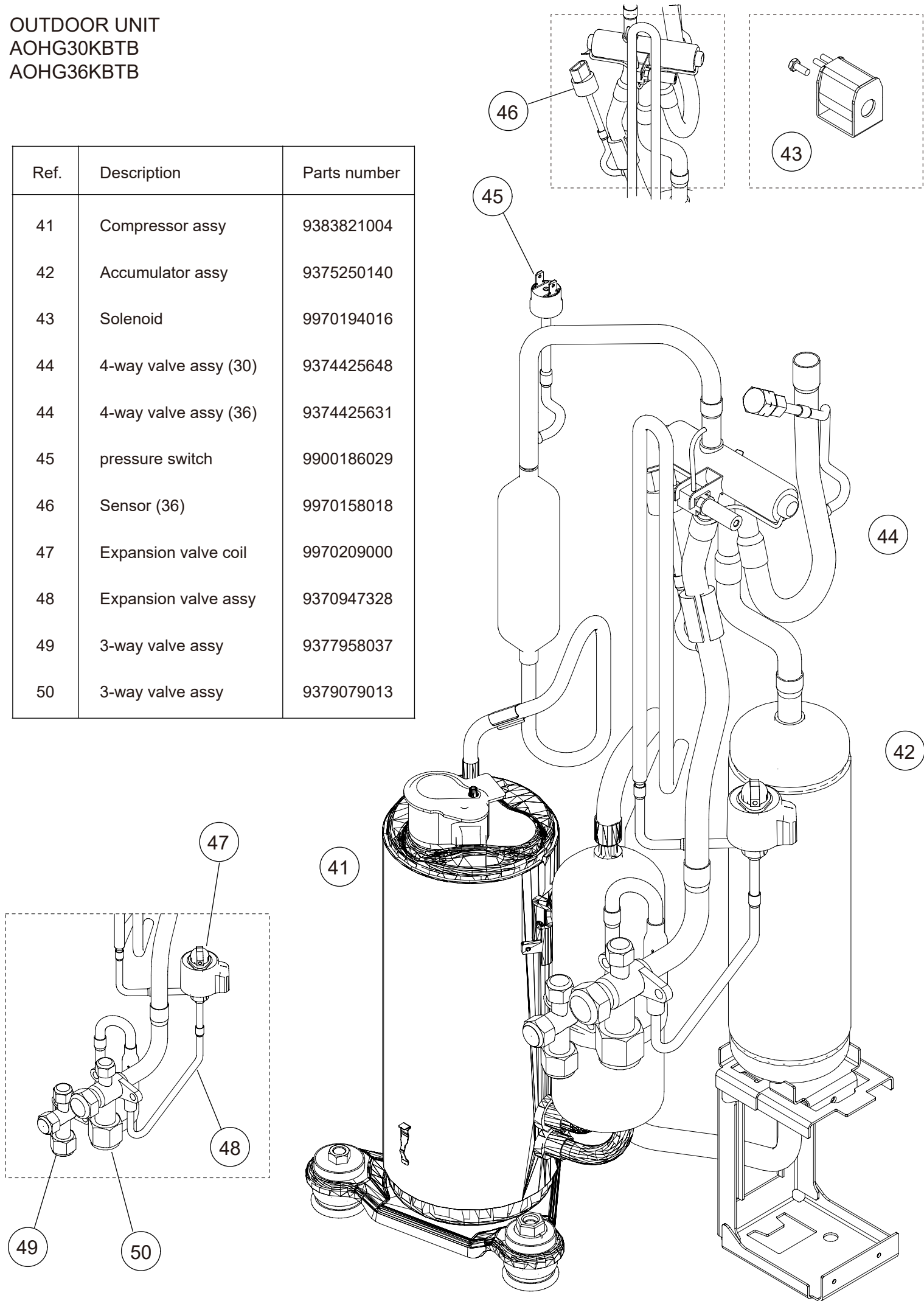
OUTDOOR UNIT  
AOHG30KBTB  
AOHG36KBTB



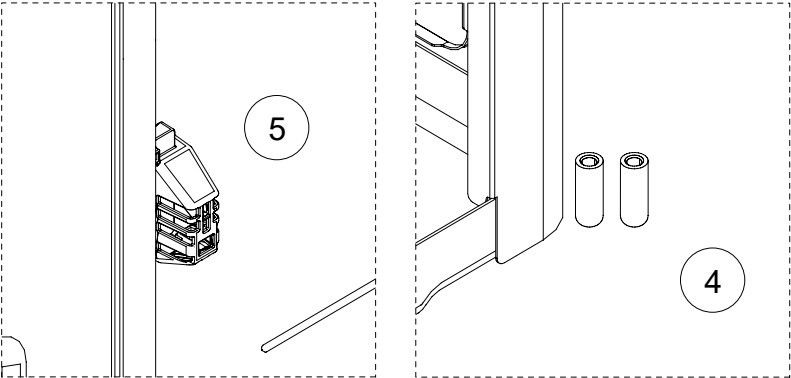
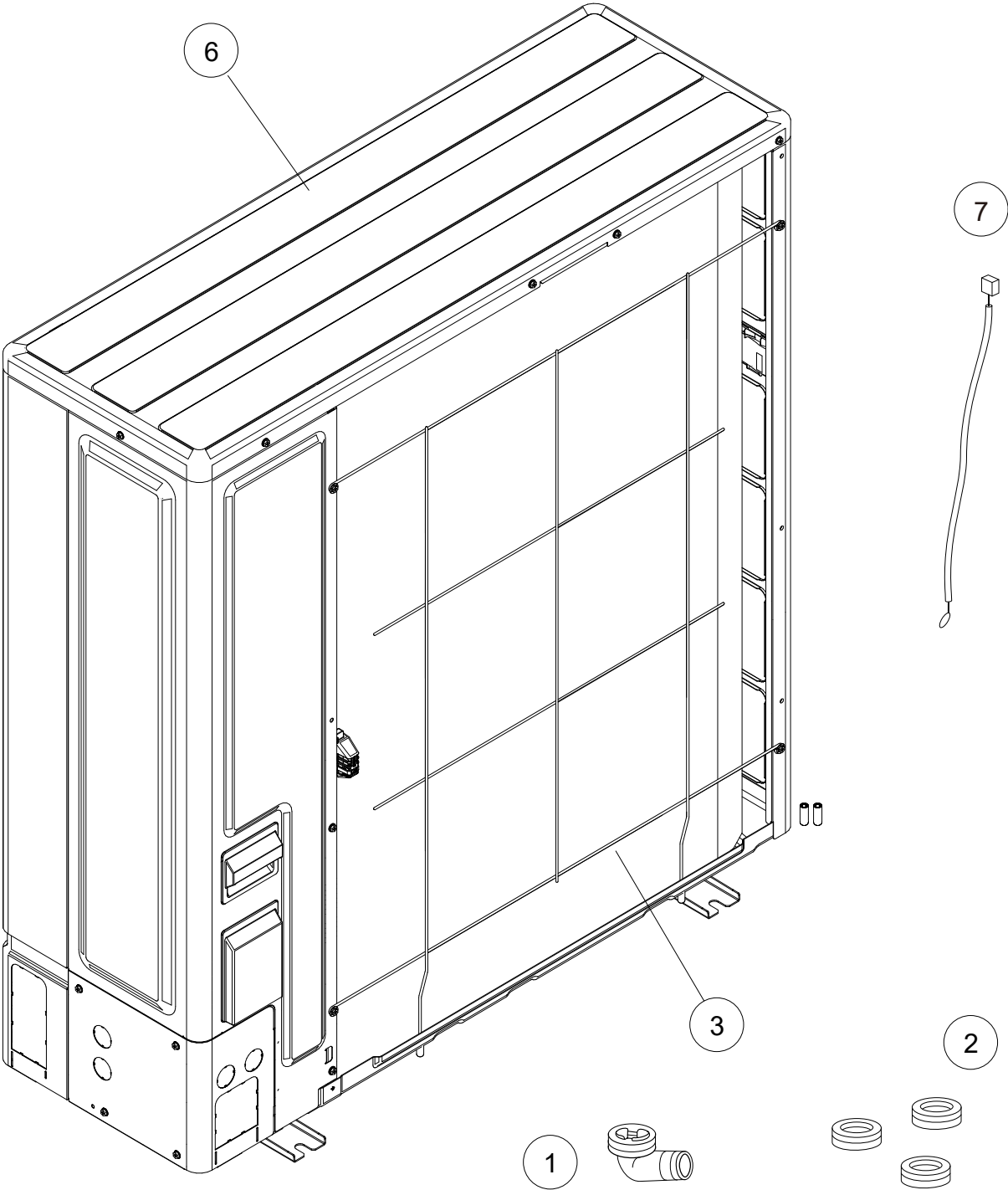
Ref.	Description	Parts number
31	Condenser sub assy	9374420612
32	S-ABS (top)	9380516064
33	S-ABS (body)	9379647168

OUTDOOR UNIT  
AOHG30KBTB  
AOHG36KBTB

Ref.	Description	Parts number
41	Compressor assy	9383821004
42	Accumulator assy	9375250140
43	Solenoid	9970194016
44	4-way valve assy (30)	9374425648
44	4-way valve assy (36)	9374425631
45	pressure switch	9900186029
46	Sensor (36)	9970158018
47	Expansion valve coil	9970209000
48	Expansion valve assy	9370947328
49	3-way valve assy	9377958037
50	3-way valve assy	9379079013

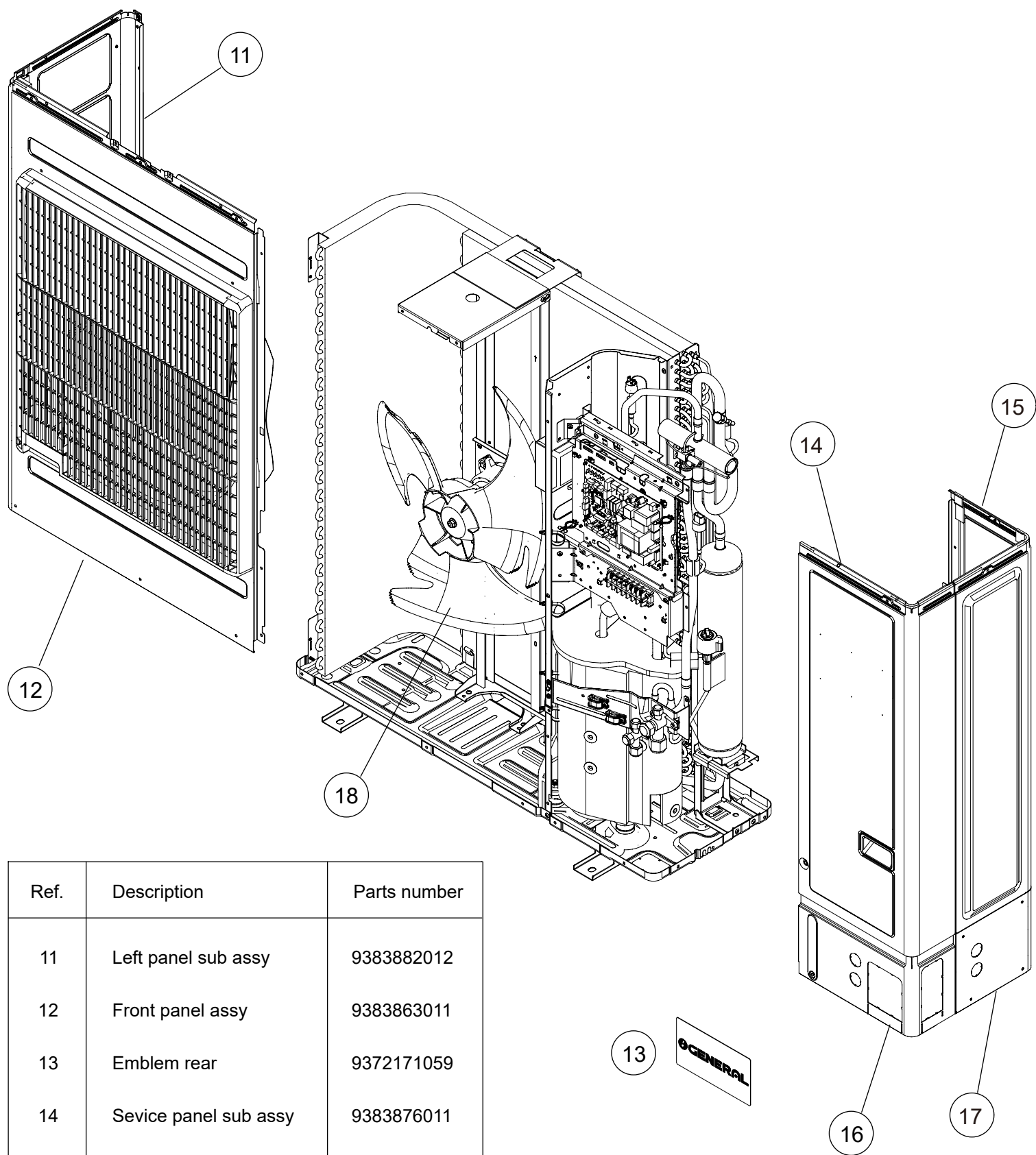


OUTDOOR UNIT  
AOHG45KBTB  
AOHG54KBTB



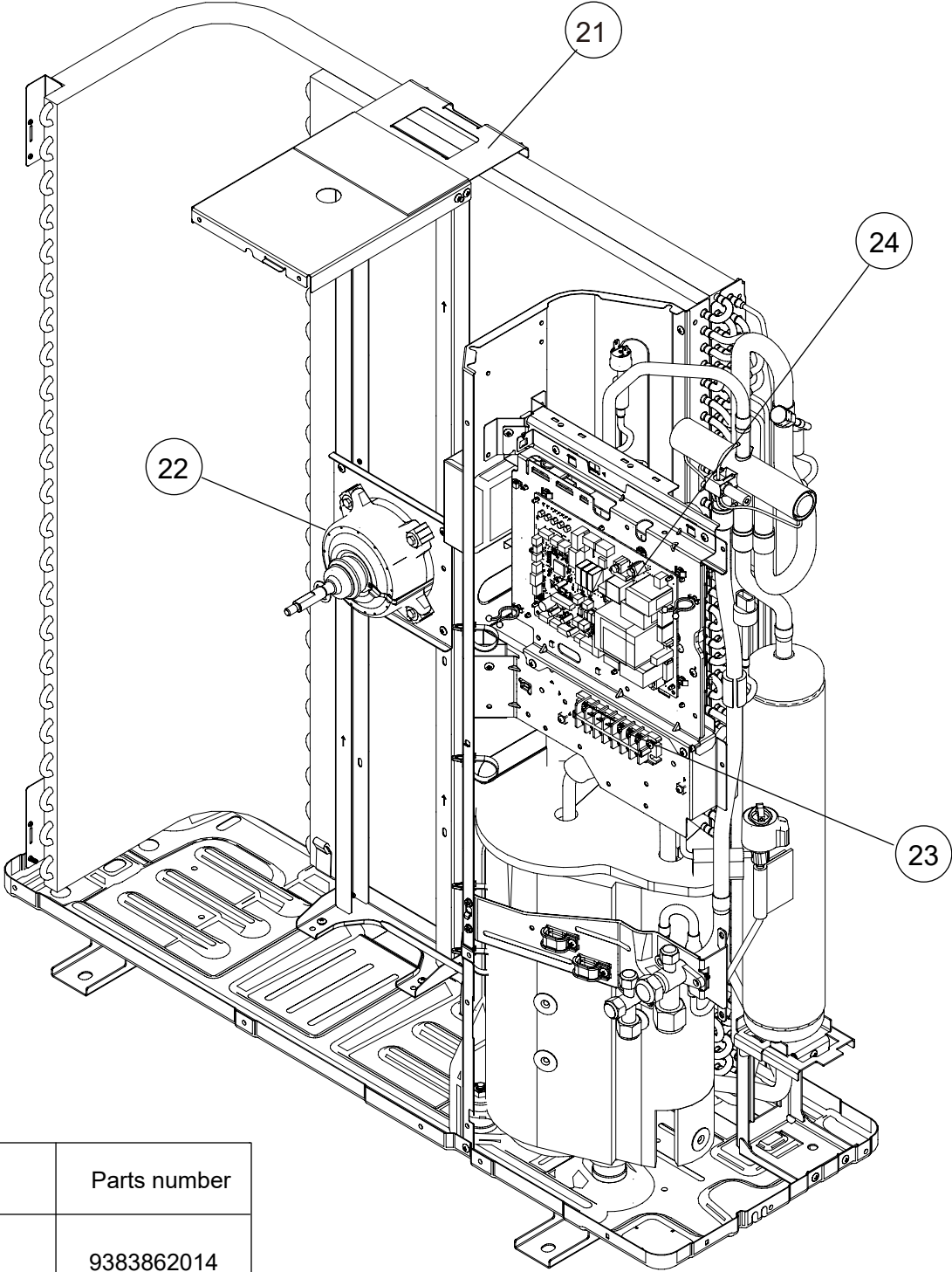
Ref.	Description	Parts number
1	Drain assy	9303029015
2	Drain cap	313166024302
3	Protective net rear	9381013005
4	Rubber (net)	9375361013
5	Thermo holder	9383607004
6	Top panel sub assy	9383880001
7	Outdoor Thermistor	9900565091

OUTDOOR UNIT  
AOHG45KBTB  
AOHG54KBTB

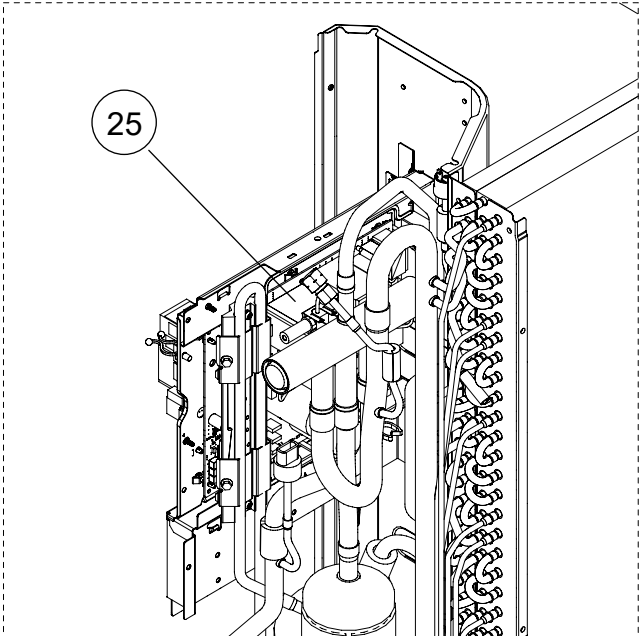


Ref.	Description	Parts number
11	Left panel sub assy	9383882012
12	Front panel assy	9383863011
13	Emblem rear	9372171059
14	Sevice panel sub assy	9383876011
15	Right panel sub assy	9383874017
16	Pipe cover front	9383878008
17	Pipe cover rear	9383879005
18	Propeller fan	9383336003

OUTDOOR UNIT  
 AOHG45KBTB  
 AOHG54KBTB

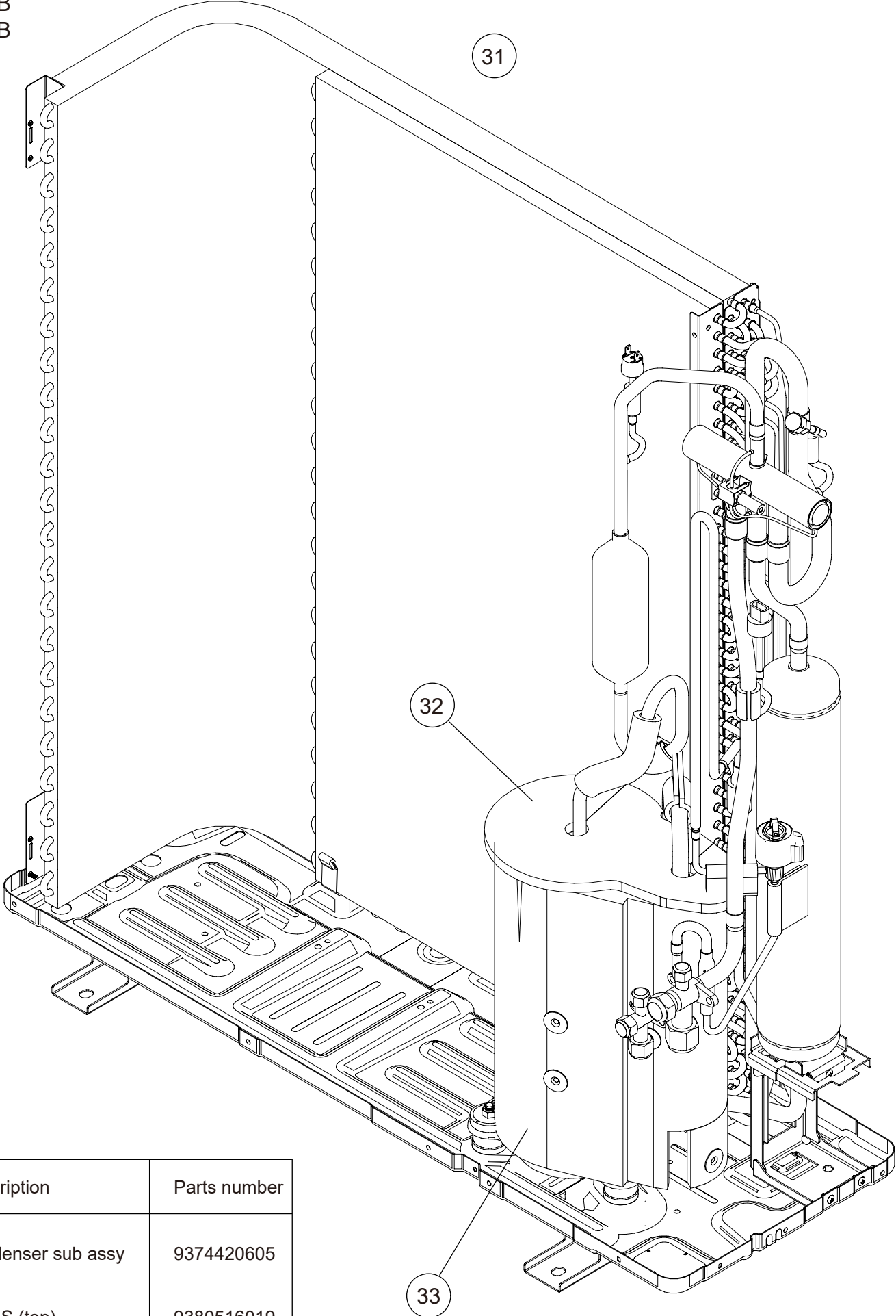


Ref.	Description	Parts number
21	Motor bracket assy	9383862014
22	Motor, DC Brushless	9603733018
23	Terminal 7P	9900203061
24	Main PCB (Service) (45)	9711431257
24	Main PCB (Service) (54)	9711431264
25	Inverter PCB (Service)	9709684115
--	Heat ex. thermistor	9900984038
--	Thermistor assy	9900727154
--	Compressor thermistor	9900985028





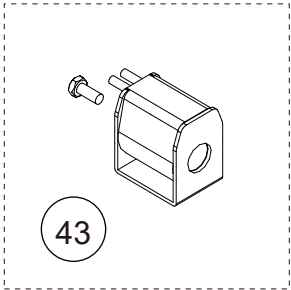
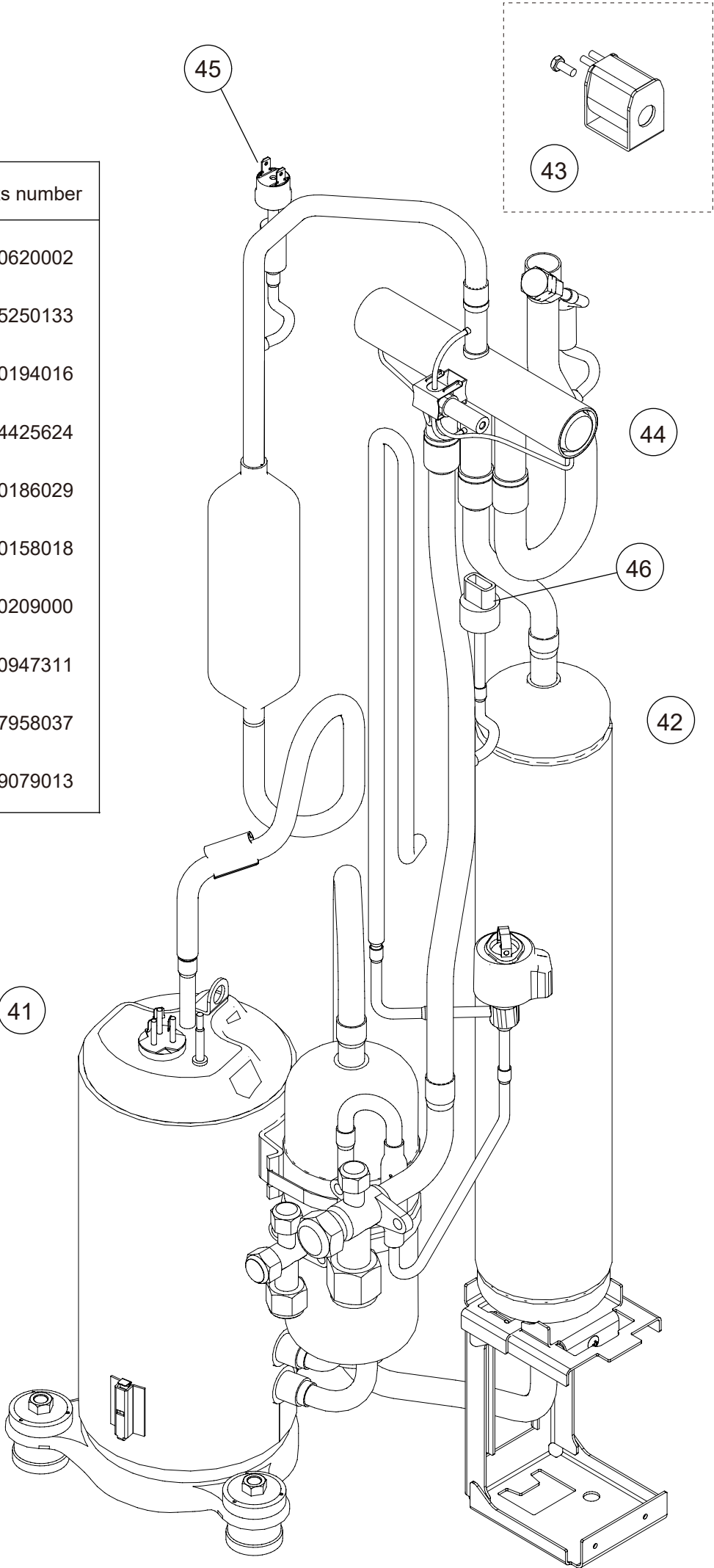
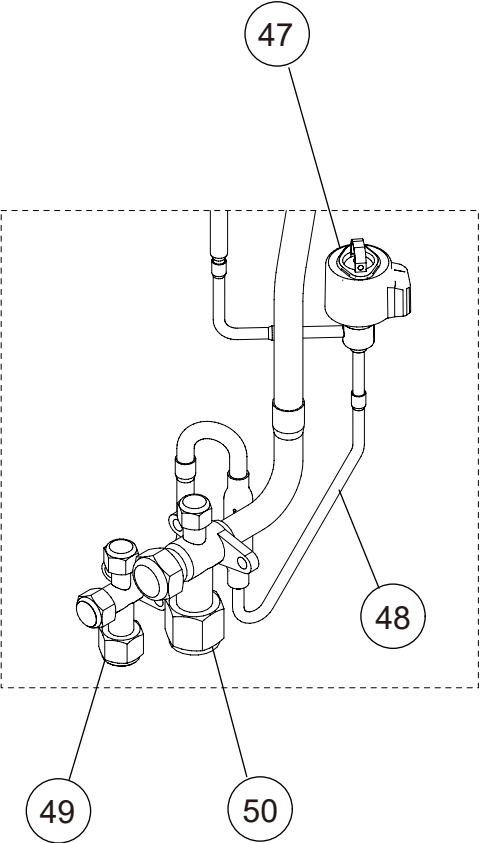
OUTDOOR UNIT  
AOHG45KBTB  
AOHG54KBTB



Ref.	Description	Parts number
31	Condenser sub assy	9374420605
32	S-ABS (top)	9380516019
33	S-ABS (body)	9379647168

OUTDOOR UNIT  
AOHG45KBTB  
AOHG54KBTB


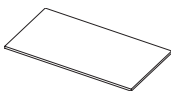
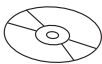
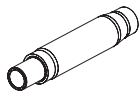


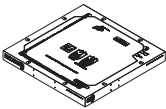





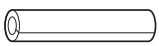
Ref.	Description	Parts number
41	Compressor	9810620002
42	Accumulator assy	9375250133
43	Solenoid	9970194016
44	4-way valve assy	9374425624
45	pressure switch	9900186029
46	Sensor	9970158018
47	Expansion valve coil	9970209000
48	Expansion valve assy	9370947311
49	3-way valve assy	9377958037
50	3-way valve assy	9379079013







## Accessories





**Models: AUXG24KRLB, AUXG30KRLB, AUXG36KRLB, AUXG45KRLB, and AUXG54KRLB**

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Insulation		1
Operating manual (CD-ROM)		1	Drain hose		1
Installation manual		1	Hose band		1
Template (Carton top)		1	Drain hose heat insulation		1
Washer		8	Cable tie (large)		4
Coupler heat insulation (large)		1	Cable tie (small)		2
Coupler heat insulation (small)		1			

## Model: AOHG24KBTB

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Installation manual		1	Drain pipe		1

## Models: AOHG30KBTB, AOHG36KBTB, AOHG45KBTB, and AOHG54KBTB

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Installation manual		1	Drain cap		3
Drain pipe		1	One-touch bush		2

1907G4849