

Split type room air conditioner
Cassette type (50Hz)



SERVICE MANUAL



Indoor unit	Outdoor unit
AUHG45LRLA	AOHG45LBTC
UTG-UGGA-W	

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SPECIFICATIONS

ELECTRICAL DATA

INDOOR UNIT		AUHG45LRLA
DECORATION PANEL		UTG-UGGA-W
OUTDOOR UNIT		AOHG45LBTC
TYPE		Cooling & Heating
POWER SUPPLY		230V, 50Hz, Single phase
Cooling	CAPACITY	12.1 kW
	POWER CONSUMPTION	3.89 kW
	EER	3.11 kW/kW
	OPERATING CURRENT	17.0 A
	MAXIMUM CURRENT	23.5 A
	DEHUMIDIFICATION	4.5 L/h
Heating	CAPACITY	13.5 kW
	POWER CONSUMPTION	3.85 kW
	COP	3.51 kW/kW
	OPERATING CURRENT	17.2 A
	MAXIMUM CURRENT	23.5 A

DIMENSIONS

H x W x D

INDOOR UNIT	288 x 840 x 840 mm
DECORATION PANEL	50 x 950 x 950 mm
OUTDOOR UNIT	914 x 970 x 370 mm

WEIGHT

Net / Shipping

INDOOR UNIT	26 kg / 31 kg
DECORATION PANEL	5.5 kg / 8.5 kg
OUTDOOR UNIT	75 kg / 84 kg

FAN MOTOR

INDOOR UNIT	MFF-54CVL
OUTDOOR UNIT	MFE-45WVN

FAN REVOLUTION

INDOOR UNIT	High	690 rpm
	Medium	610 rpm
	Low	550 rpm
	Quiet	470 rpm
OUTDOOR UNIT	Cooling	890 rpm
	Heating	890 rpm

AIR CIRCULATION

INDOOR UNIT	High	1,900 m3/h
	Medium	1,640 m3/h
	Low	1,460 m3/h
	Quiet	1,250 m3/h
OUTDOOR UNIT	Cooling	4,650 m3/h
	Heating	4,650 m3/h

NOISE LEVEL

INDOOR UNIT	High	46 dB
	Medium	42 dB
	Low	40 dB
	Quiet	36 dB
OUTDOOR UNIT	Cooling	58 dB
	Heating	58 dB

COMPRESSOR

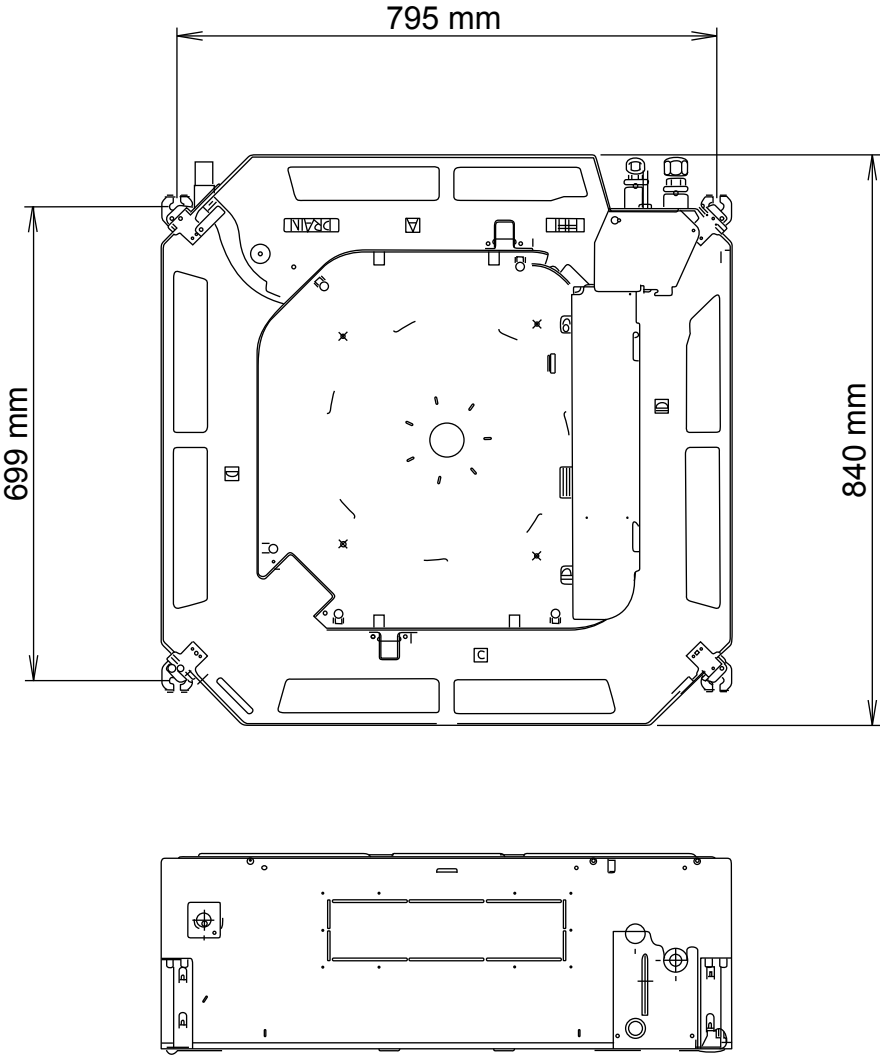
COMPRESSOR TYPE	Hermetic motor compressor, 6 poles, Brushless DC motor, 2 cylinder rotary compressor
DISCRIMINATION	N-TF30HD1A
WEIGHT (with oil)	15.4 kg

REFRIGERANT

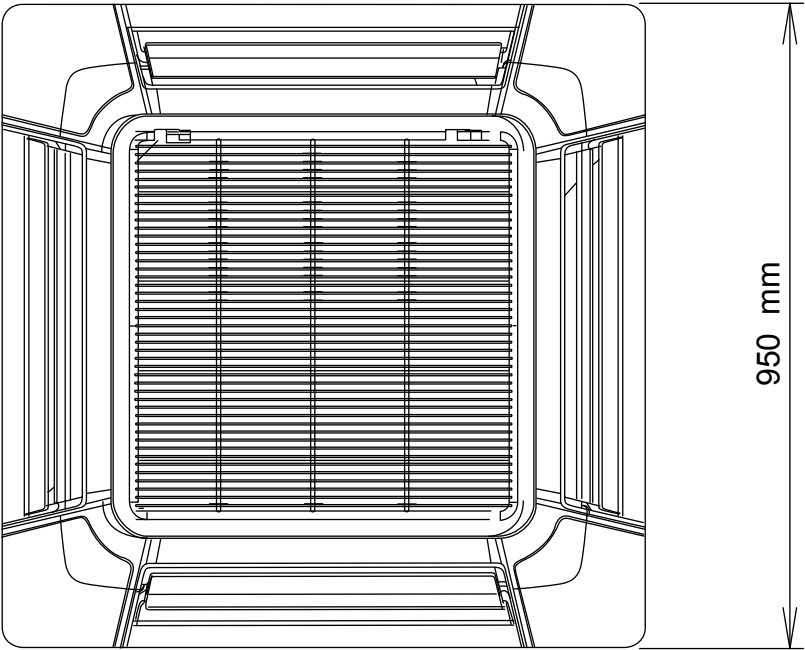
PRECHARGED REFRIGERANT		2,900 g
REFRIGERANT TYPE		R410A
FULL CHARGE	Piping length 20 m	2,900 g
	30 m	3,300 g
	40 m	3,700 g
	50 m	4,100 g
ADDITIONAL CHARGE		40 g/m
MAXIMUM PIPING HEIGHT DIFFERENCE		30 m

DIMENSIONS

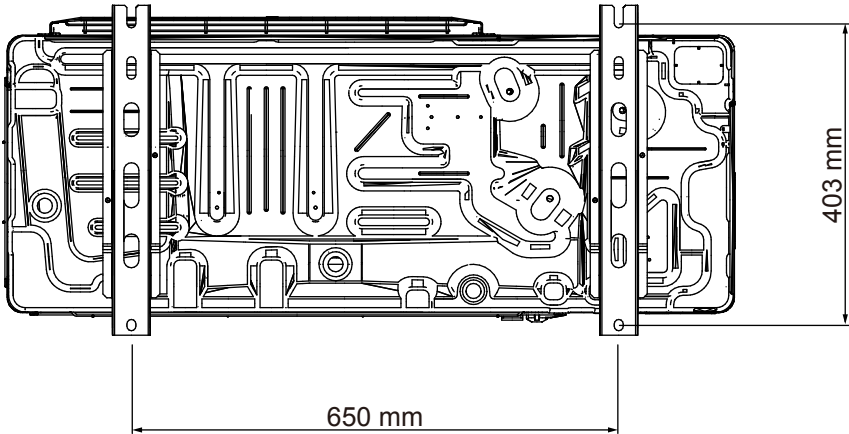
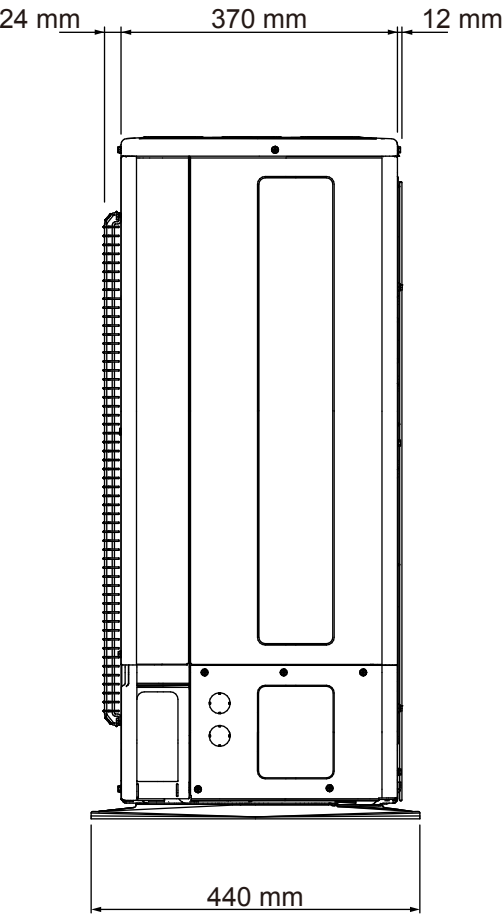
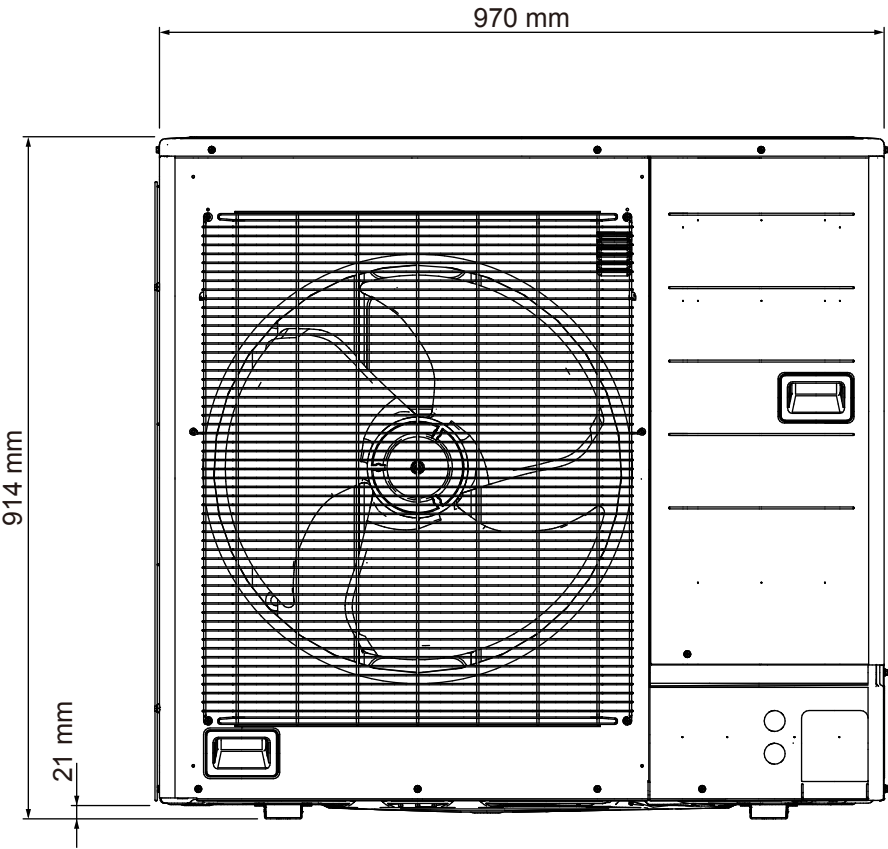
INDOOR UNIT
AUHG45LRLA



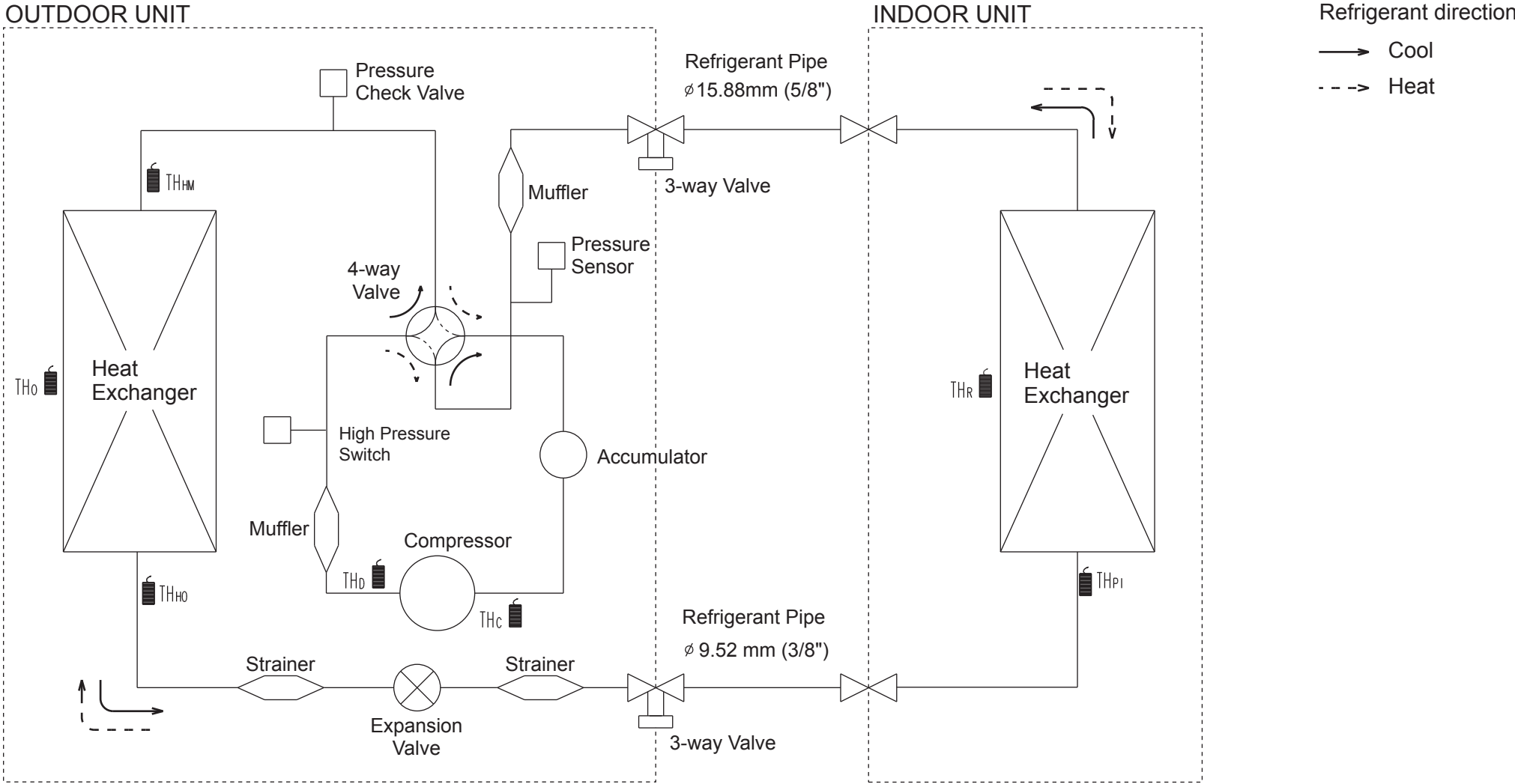
DECORATION PANEL
UTG-UGGA-W



OUTDOOR UNIT
AOYG45LBTC



REFRIGERANT CIRCUIT DIAGRAM

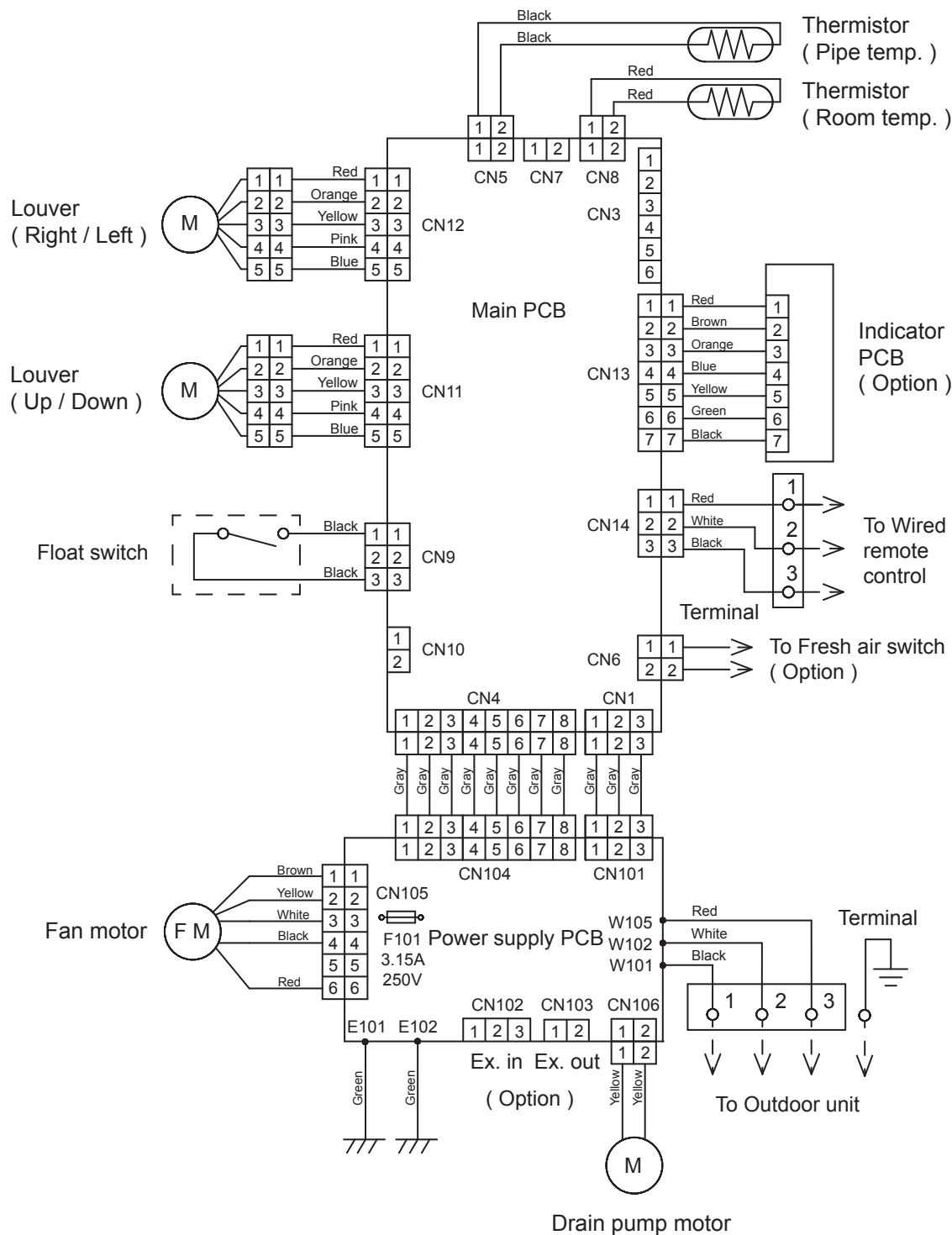


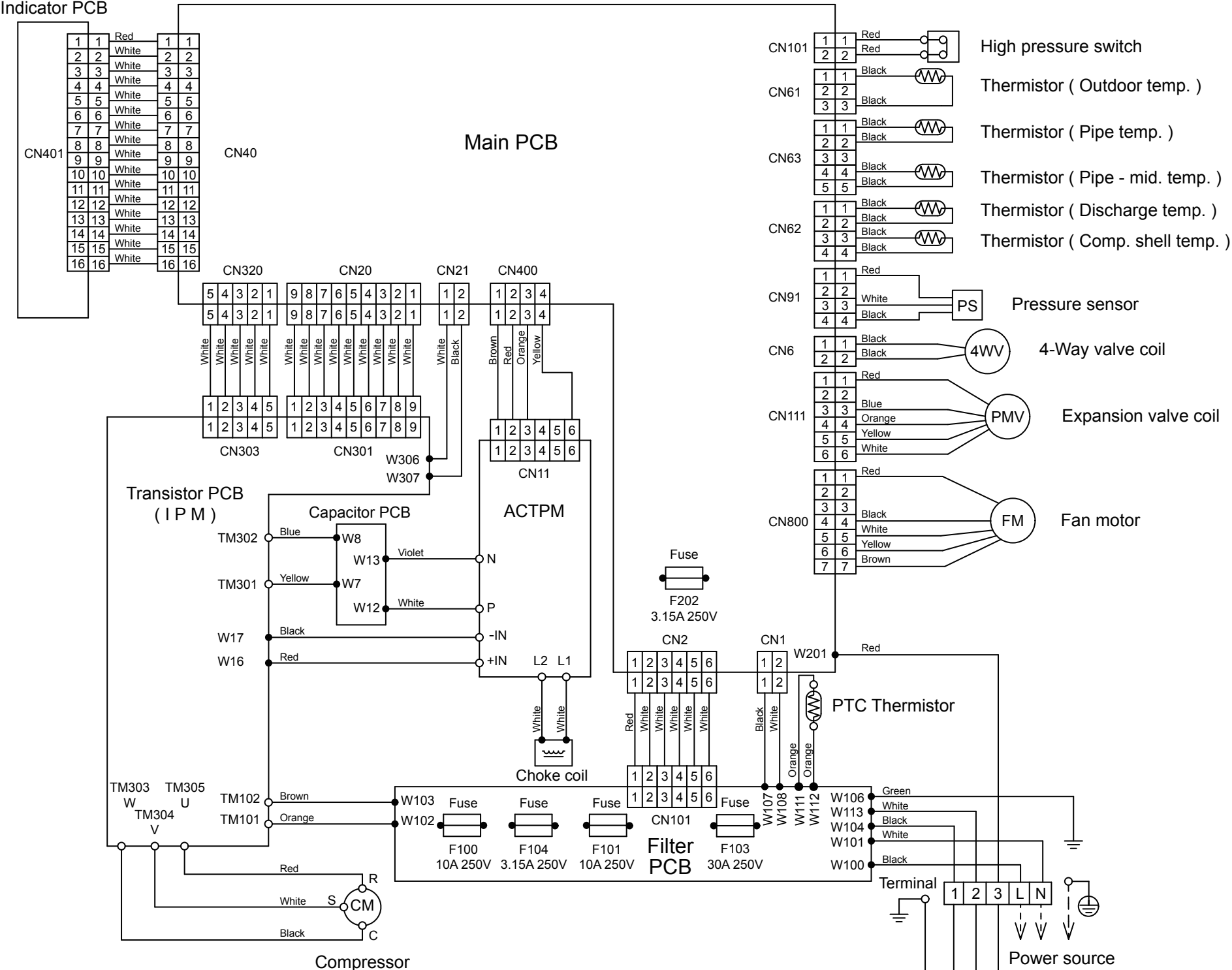
TH_c : Thermistor (Compressor)
 TH_D : Thermistor (Discharge)
 TH_{HM} : Thermistor (Heat Exchanger Med)
 TH_{HO} : Thermistor (Heat Exchanger Out)
 TH_o : Thermistor (Outdoor)

TH_R : Thermistor (Room)
 TH_{PI} : Thermistor (Pipe)

CIRCUIT DIAGRAM

INDOOR UNIT
AUHG45LRLA
UTG-UGYA-W (Option)

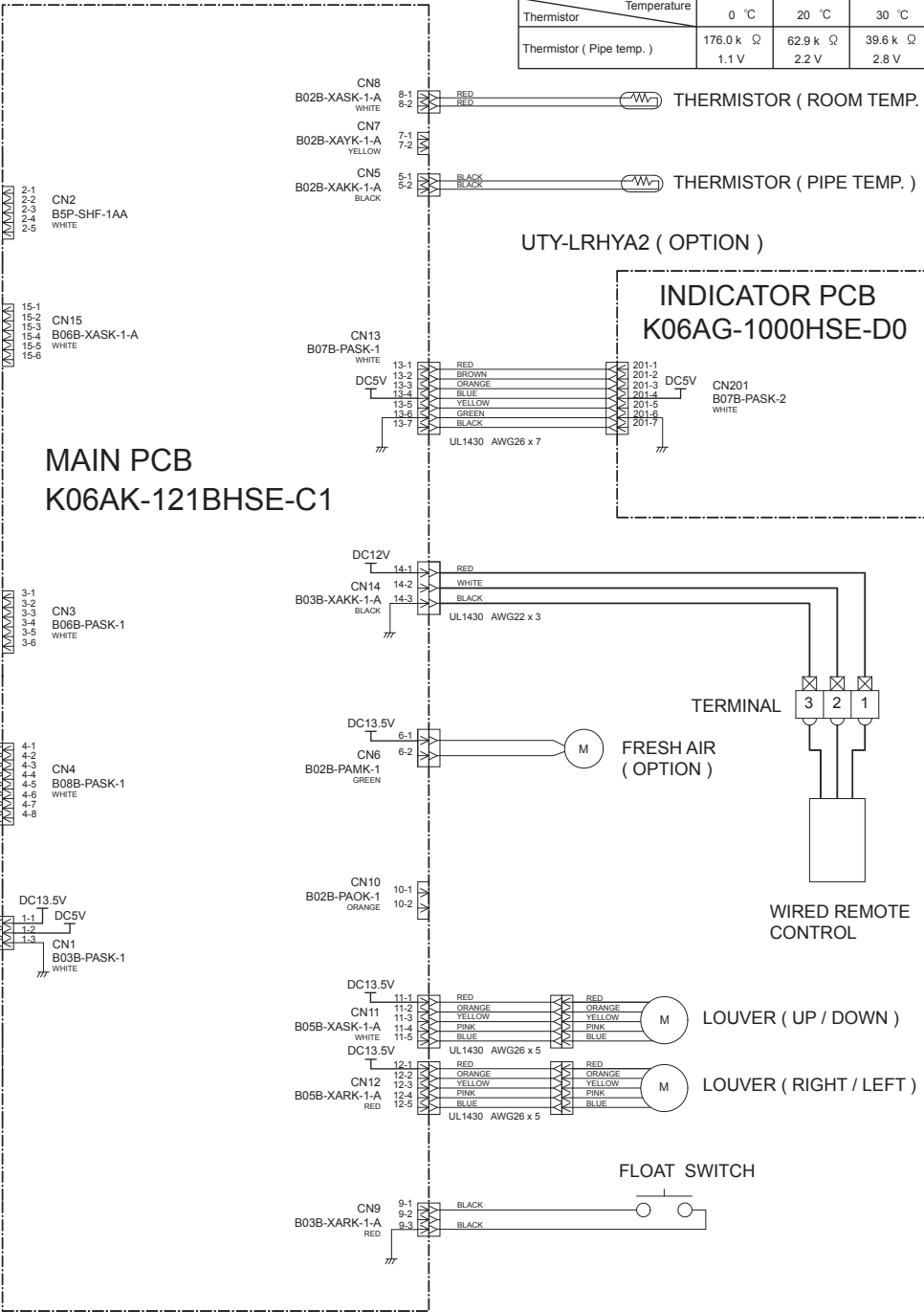
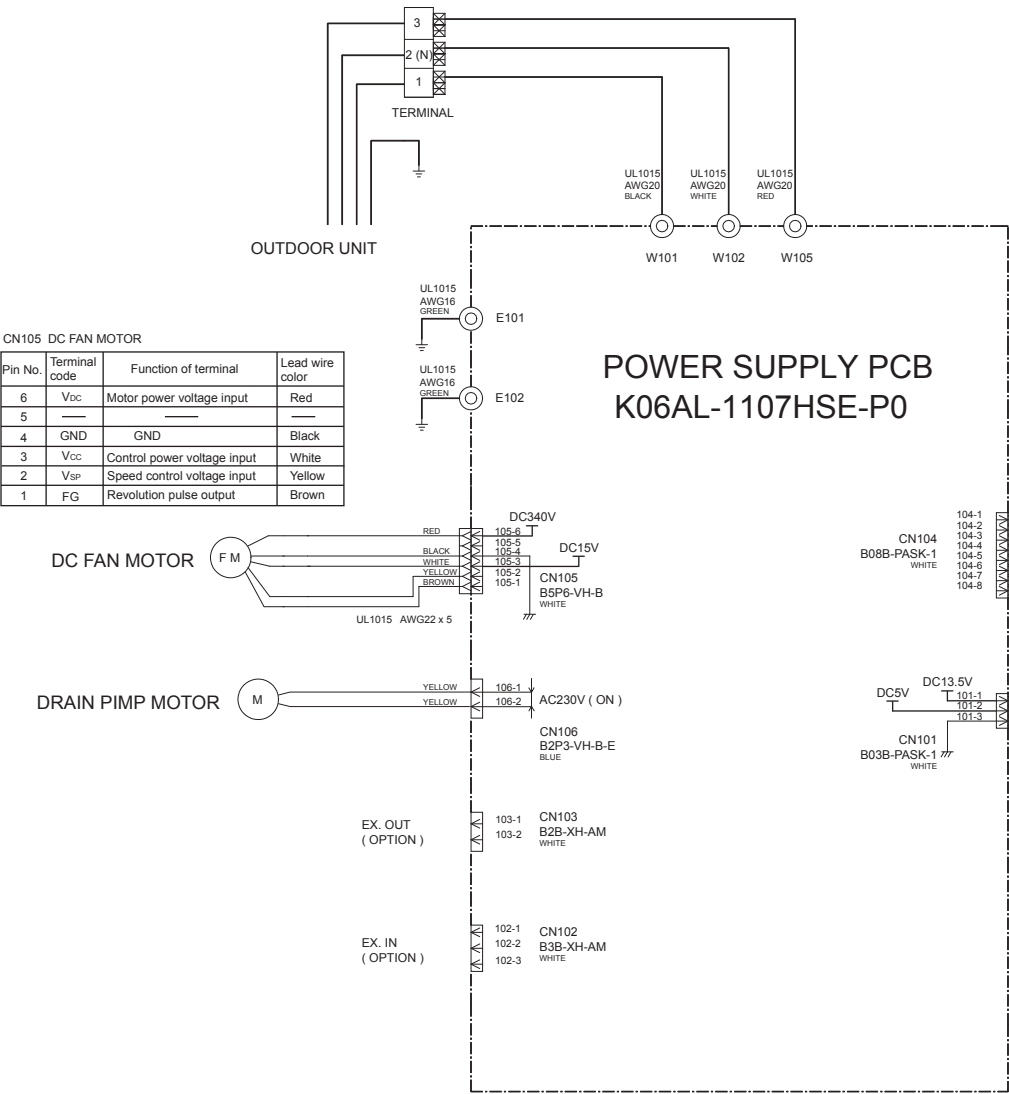




PCB CIRCUIT DIAGRAM

INDOOR UNIT
AUHG45LRLA
UTG-UGGA-W (OPTION)

CONTROL UNIT
EZ-0122RHSE



INVERTER ASSEMBLY

EZ-0170HHUE



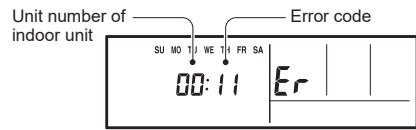
ERROR DETECTION

INDOOR UNIT and WIRED REMOTE CONTROL

If you use a wireless remote control, the lamp on the photo detector unit will output error codes by way of blinking patterns.
If you use a wired type remote control, error codes will appear on the remote control display. See the lamp blinking patterns and error codes in the table. An error display is displayed only during running.

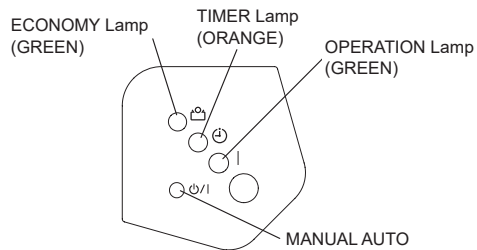
Remote control

This is possible only on a wired remote control.
If an error occurs, the following display will be shown.
("Er" will appear in the set room temperature display.)



EX. Self-diagnosis

Indoor unit display (option)

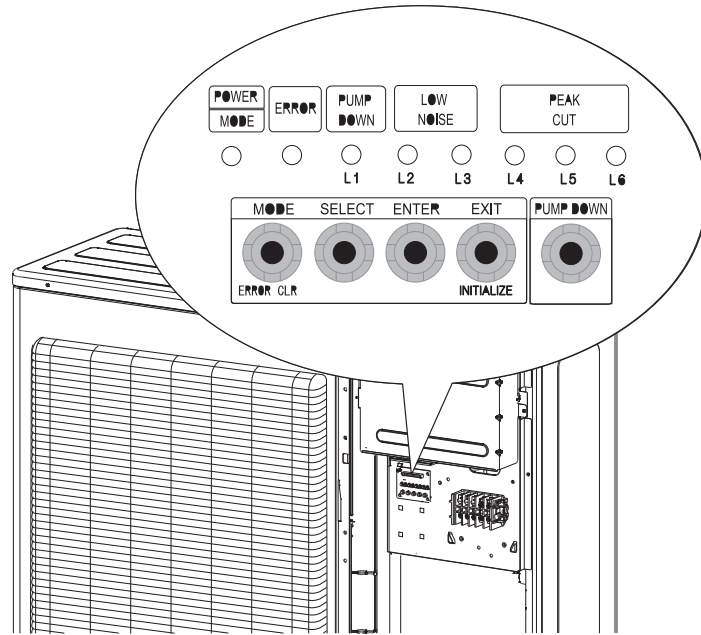


- : 0.5s on / 0.5s off
- ◇ : 0.1s on / 0.1s off
- () : Number of flashing

Indoor unit lamps			Wired remote control	Description
OPERATION (green)	TIMER (orange)	ECONOMY (green)		
● (1)	● (1)	◇	11	Serial communication error
● (1)	● (2)	◇	12	Wired remote control communication error
● (2)	● (3)	◇	23	Combination error
● (3)	● (2)	◇	32	Indoor unit PCB model information error
● (3)	● (5)	◇	35	Manual auto switch error
● (4)	● (1)	◇	41	Inlet air temp. sensor error
● (4)	● (2)	◇	42	Indoor unit Heat Ex. Middle temp. sensor error
● (5)	● (1)	◇	51	Indoor unit fan motor error
● (5)	● (3)	◇	53	Drain pump error
● (6)	● (2)	◇	62	Outdoor unit main PCB model information error or communication error
● (6)	● (3)	◇	63	Inverter error
● (6)	● (4)	◇	64	PFC circuit error
● (6)	● (5)	◇	65	Trip terminal L error
● (7)	● (1)	◇	71	Discharge temp. sensor error
● (7)	● (2)	◇	72	Compressor temp. sensor error

Indoor unit lamps			Wired remote control	Description
OPERATION (green)	TIMER (orange)	ECONOMY (green)		
● (7)	● (3)	◇	73	Outdoor unit Heat Ex. liquid temp. sensor error
● (7)	● (4)	◇	74	Outdoor temp. sensor error
● (7)	● (7)	◇	77	Heat sink temp. sensor error
● (8)	● (4)	◇	84	Current sensor error
● (8)	● (6)	◇	86	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 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)	● (5)	◇	A5	Low pressure error

OUTDOOR UNIT



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 once.

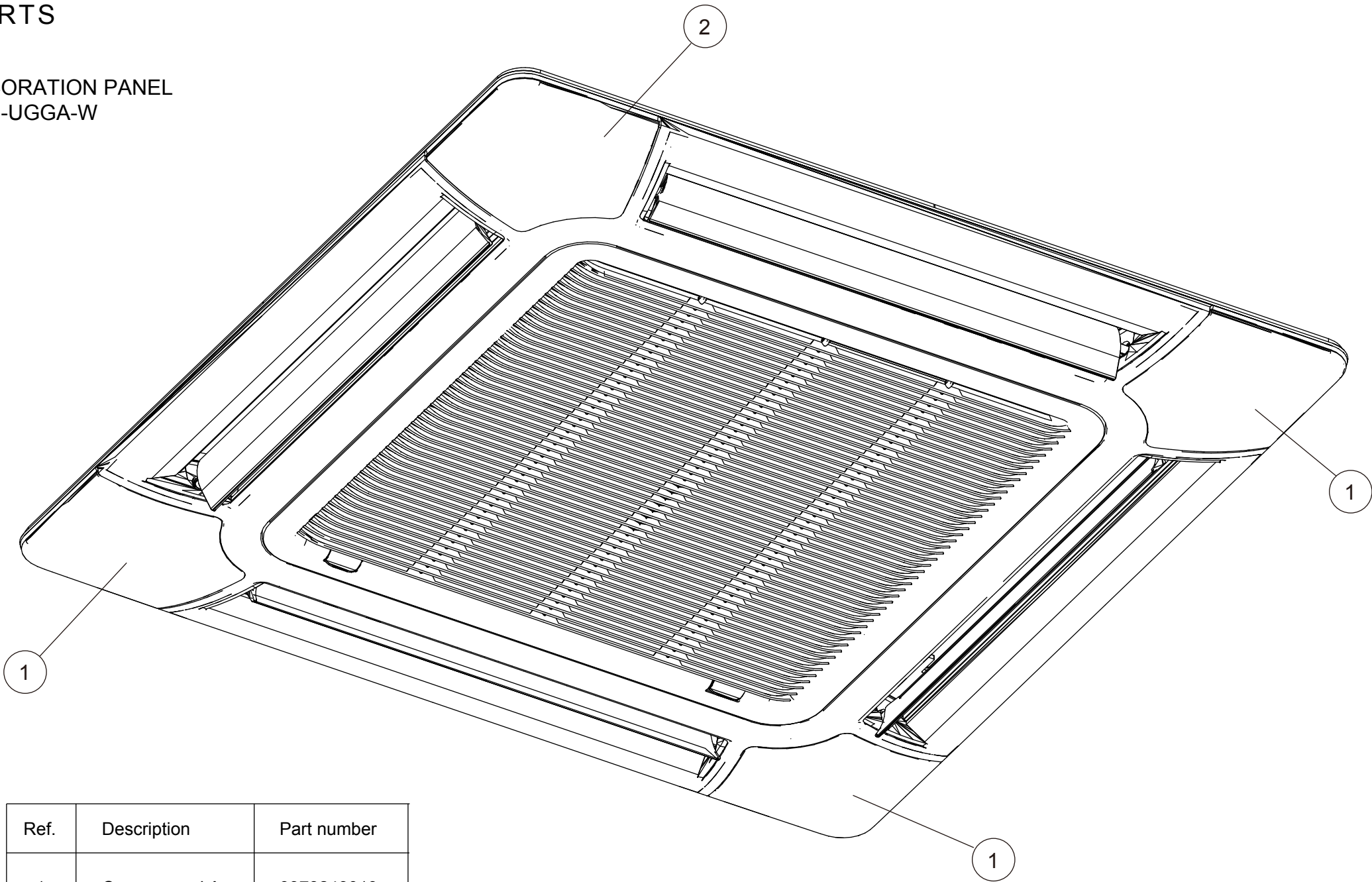
For details, refer to the table.

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

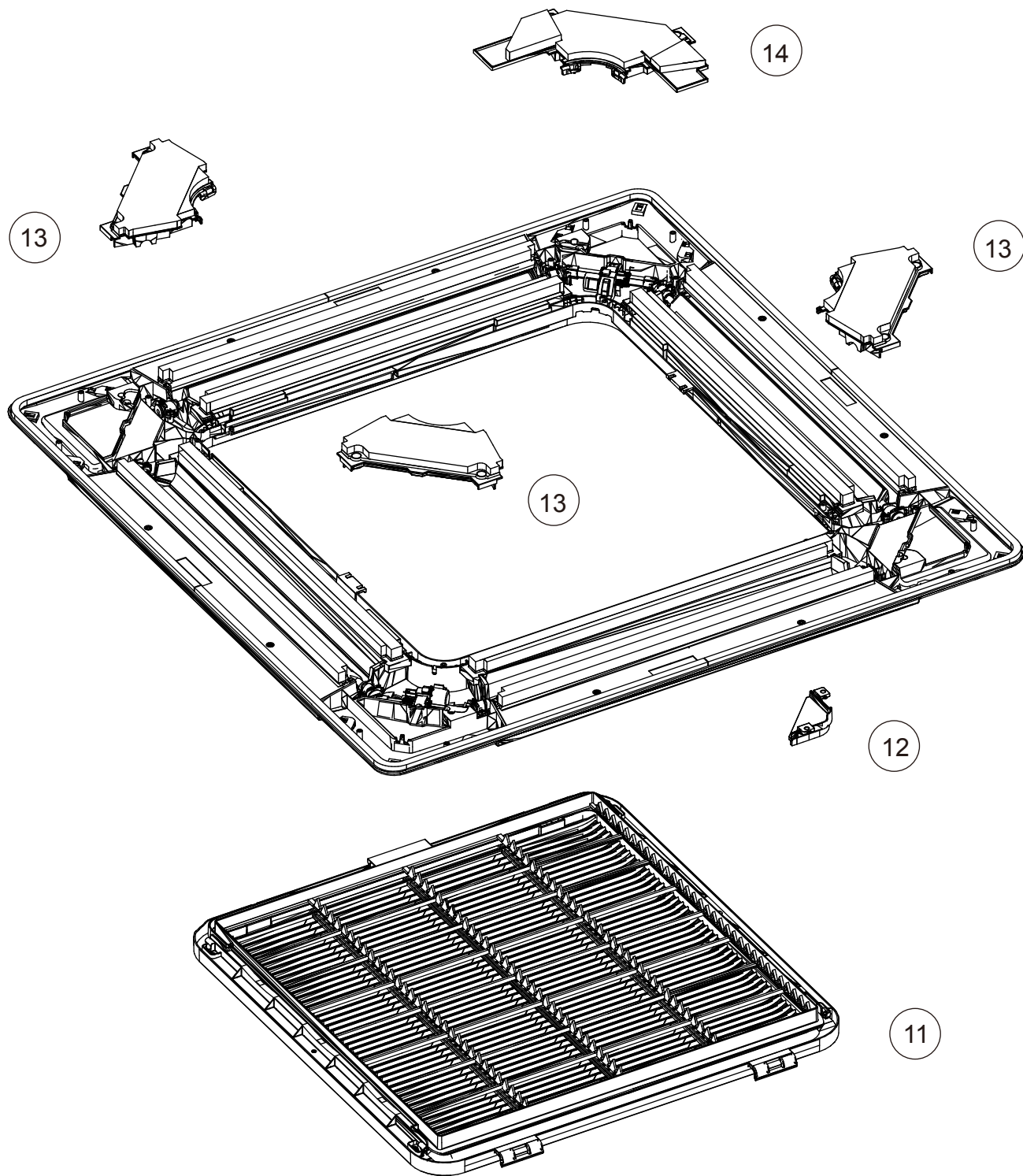
Display mode ● : Lights on
○ : Lights off
◆ : Blink (0.5s Lights on / 0.5s Lights off)
() : Number of flashing

PARTS

DECORATION PANEL
UTG-UGGA-W



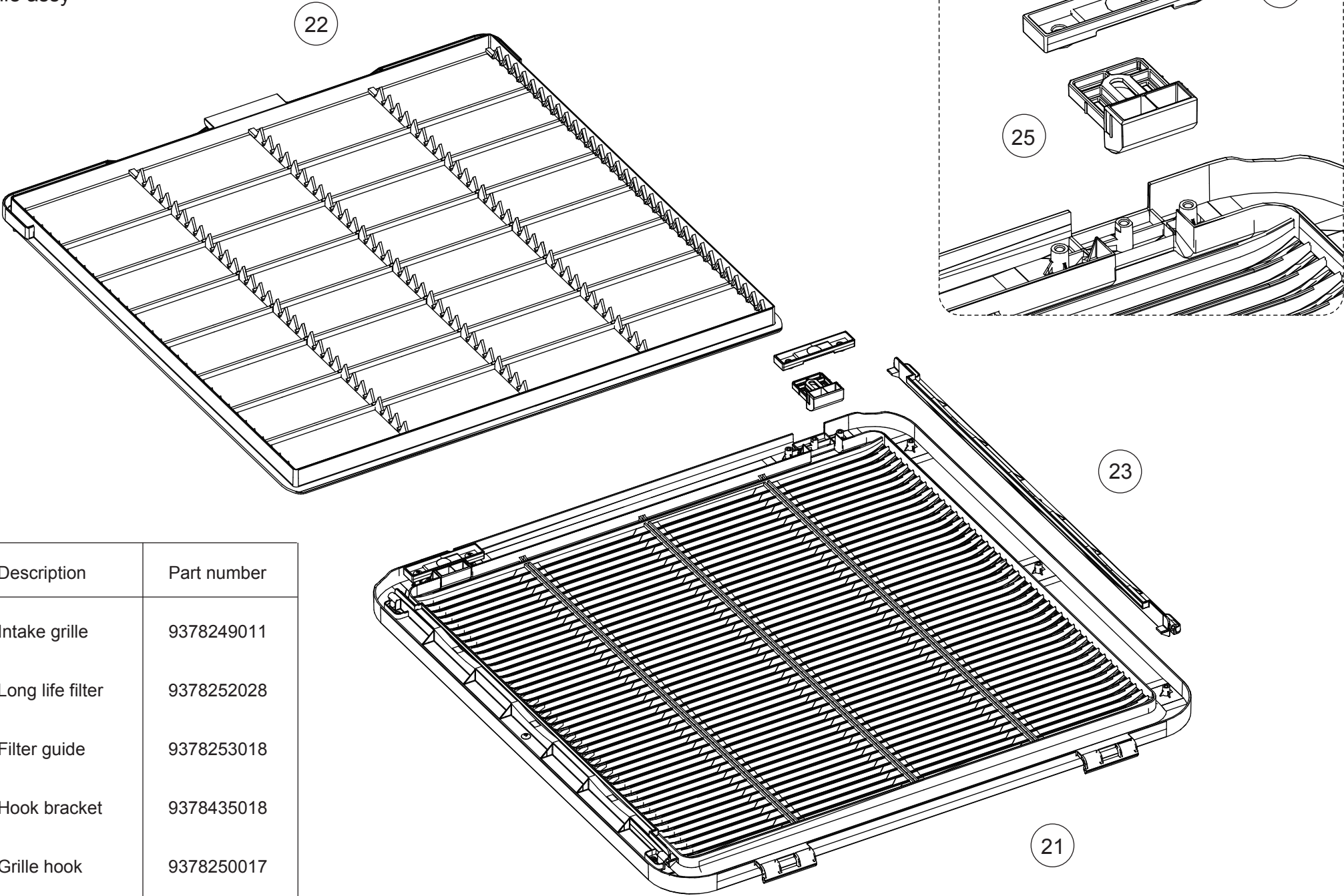
Ref.	Description	Part number
1	Corner panel A	9378243019
2	Corner panel A (GENERAL)	9378243033



DECORATION PANEL UTG-UGGA-W

Ref.	Description	Part number
11	Intake grille assy	9378565012
12	Drain cover	9378359017
13	Panel cover A	9378261013
14	Panel cover B	9378262010

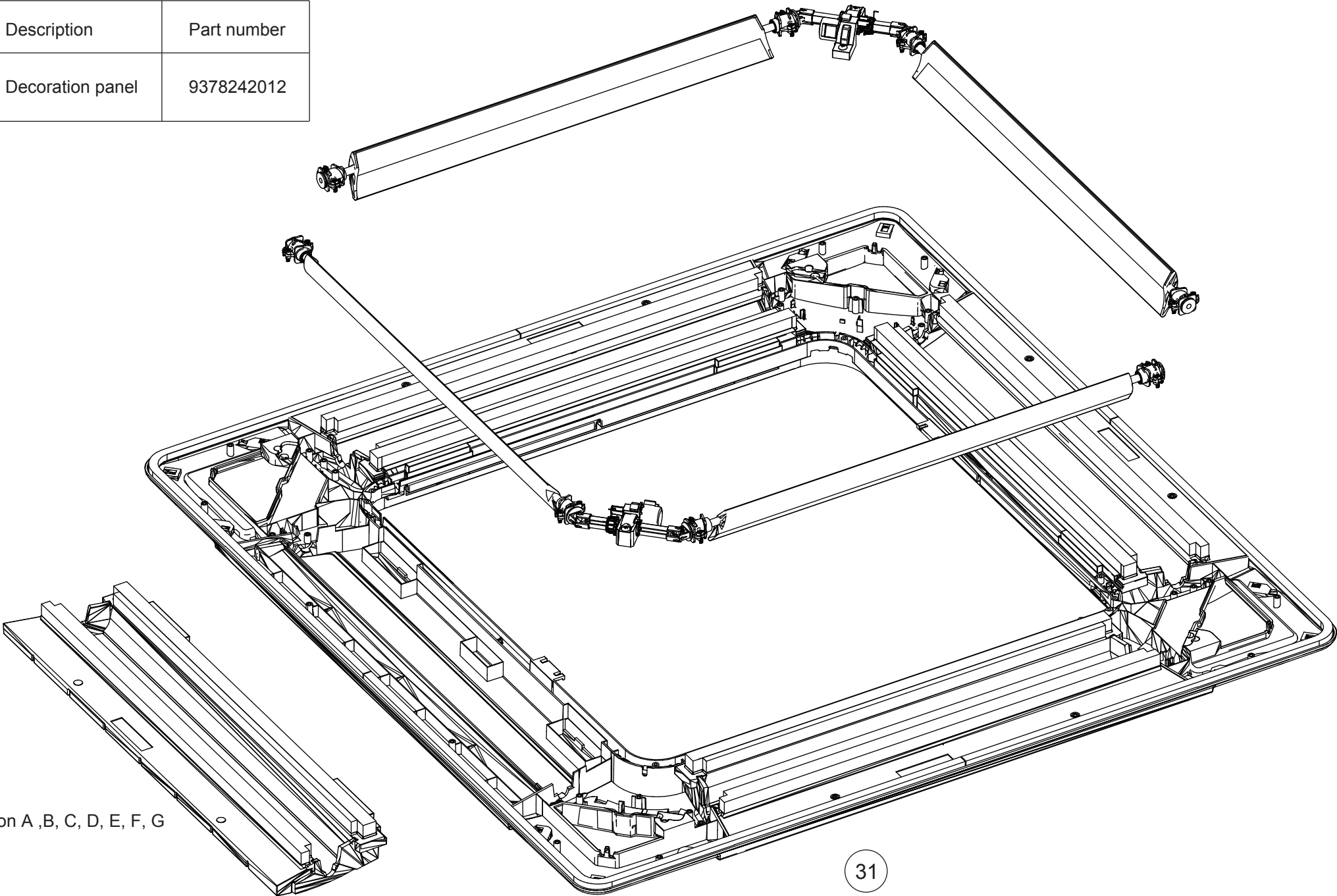
DECORATION PANEL
UTG-UGGA-W
Intake grille assy



Ref.	Description	Part number
21	Intake grille	9378249011
22	Long life filter	9378252028
23	Filter guide	9378253018
24	Hook bracket	9378435018
25	Grille hook	9378250017

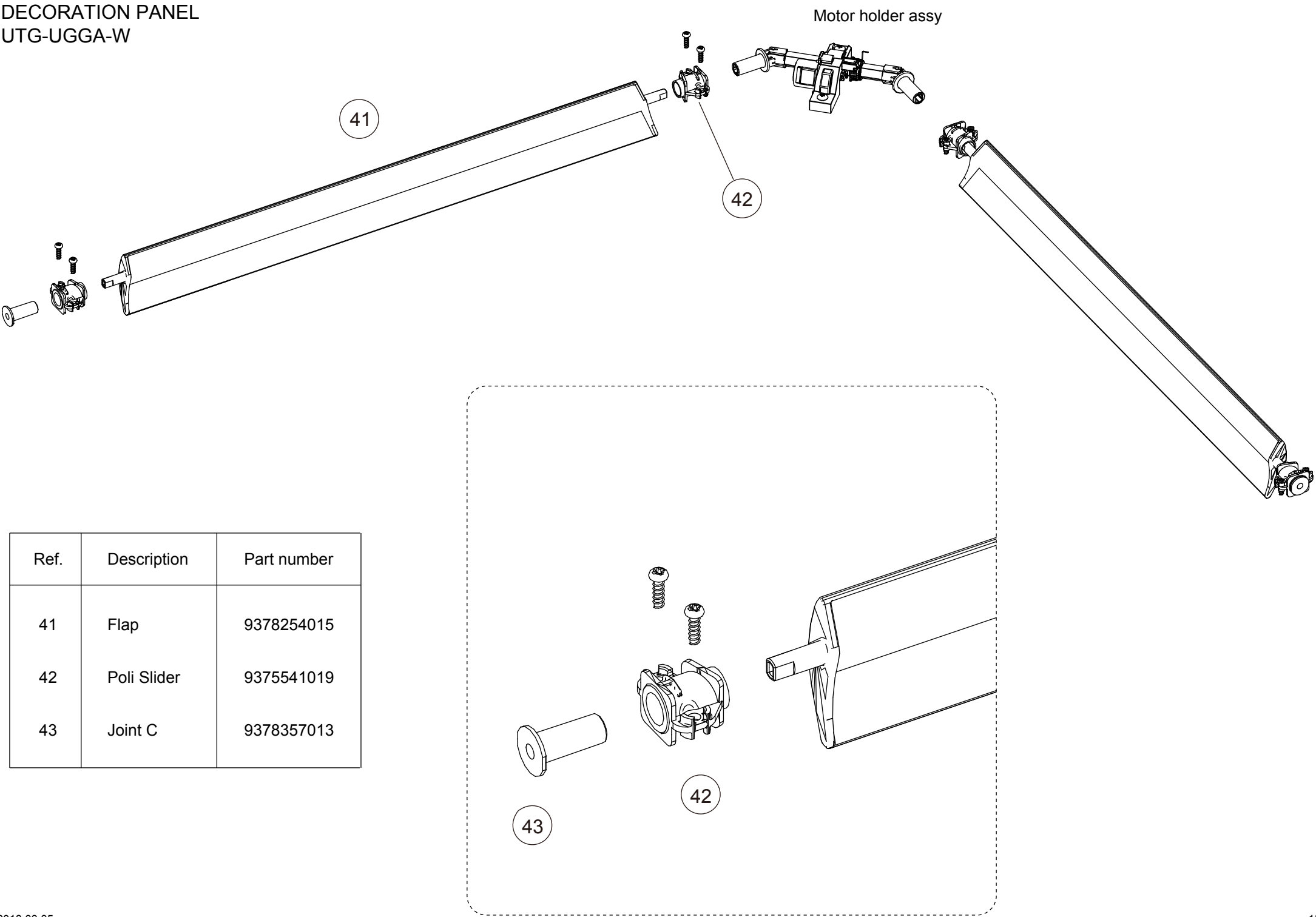
DECORATION PANEL
UTG-UGGA-W

Ref.	Description	Part number
31	Decoration panel	9378242012



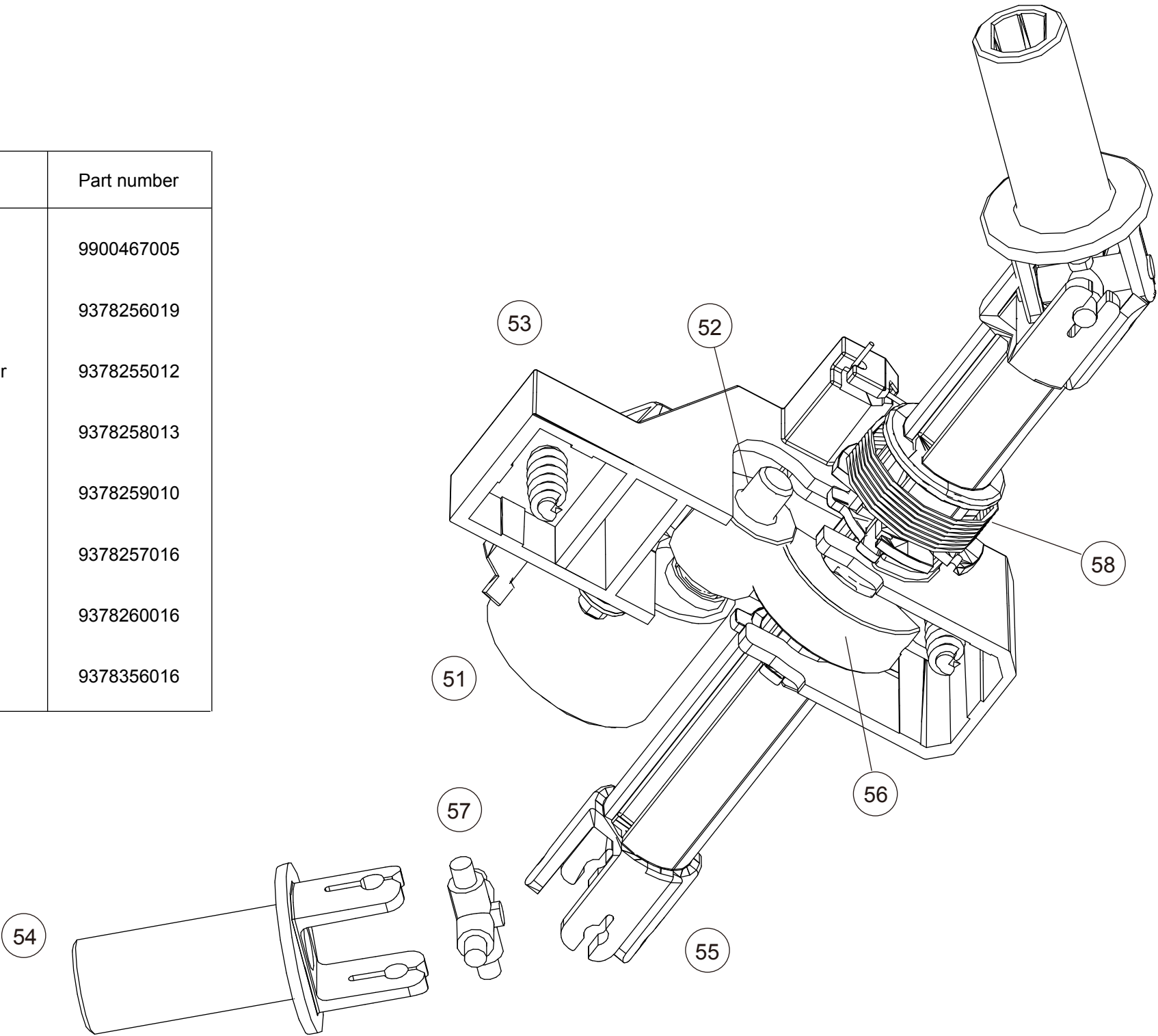
Insulation A ,B, C, D, E, F, G

DECORATION PANEL
UTG-UGGA-W



DECORATION PANEL
UTG-UGGA-W
Motor holder assy

Ref.	Description	Part number
51	Step motor	9900467005
52	Gear A	9378256019
53	Motor holder	9378255012
54	Joint A	9378258013
55	Joint B	9378259010
56	Gear B	9378257016
57	Joint shaft	9378260016
58	Flap spring	9378356016

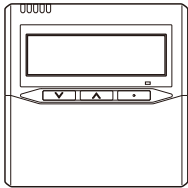


PARTS

INDOOR UNIT
AUHG45LRLA

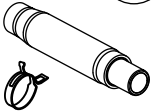
Hook L

Cabinet window



1

2



3

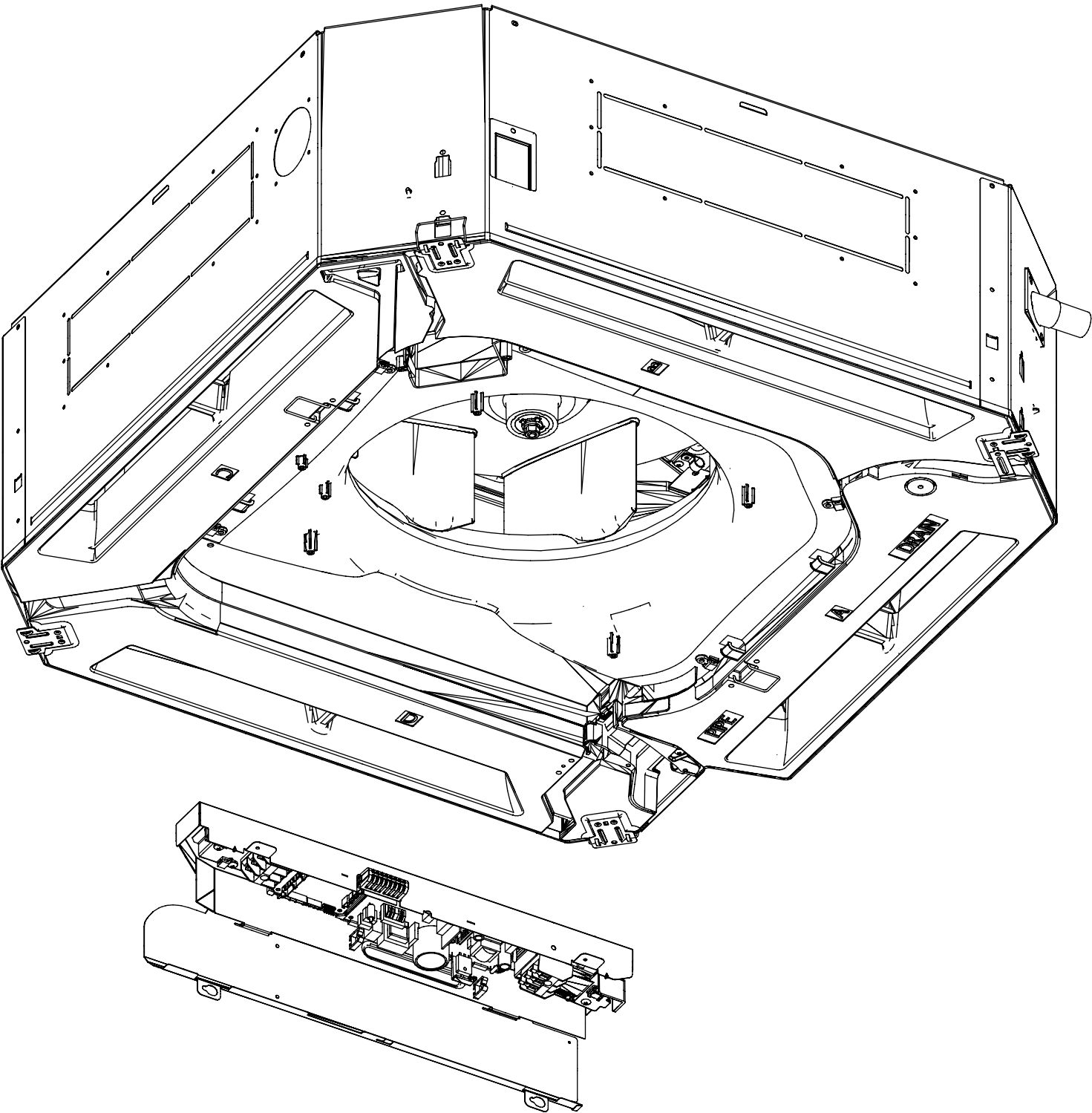
Hook R

Wire holder

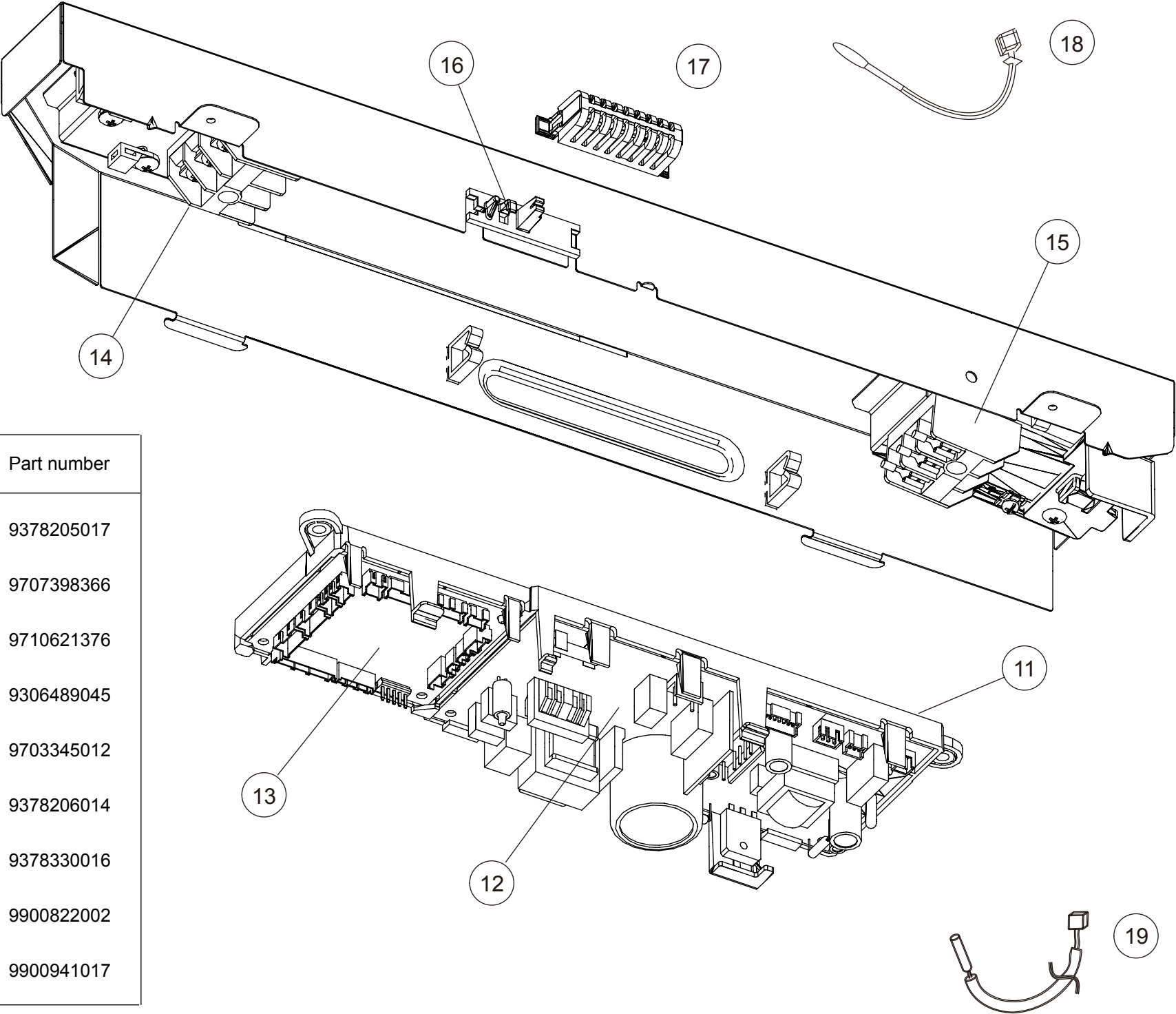
Wire cover

Ref.	Description	Part number
1	Remote control (No brand)	9318593013
2	Drain hose	9379665001
3	Hose band	9379757010

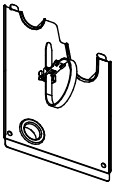
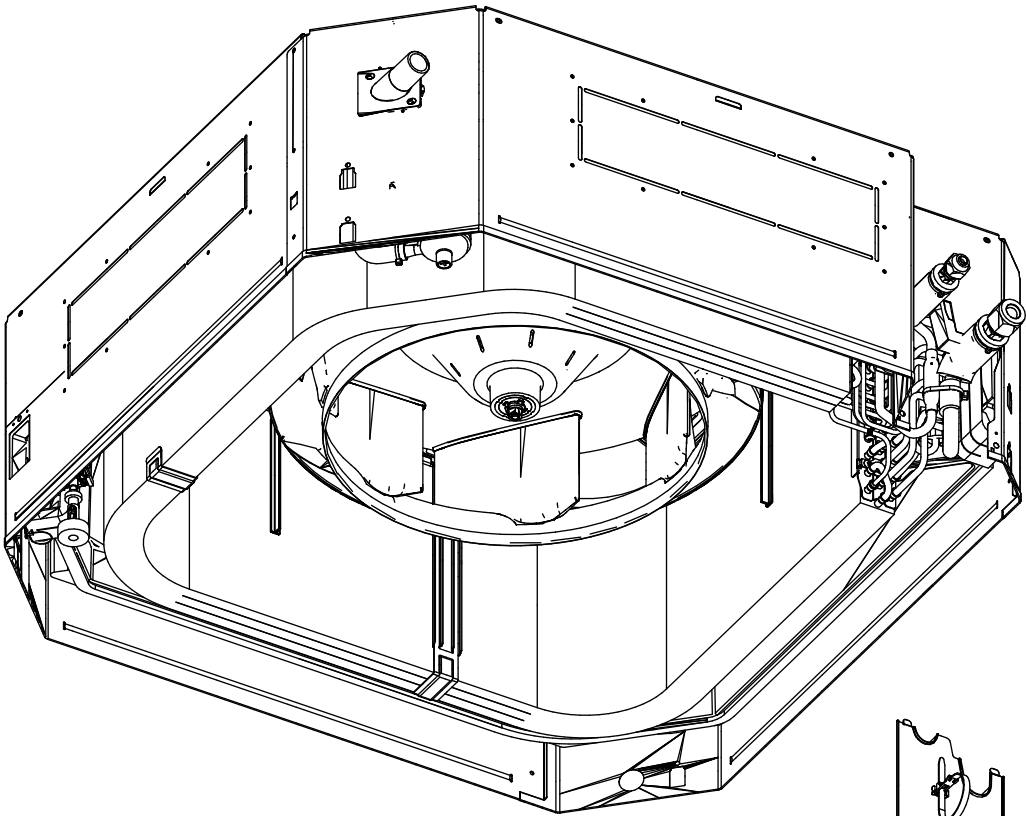
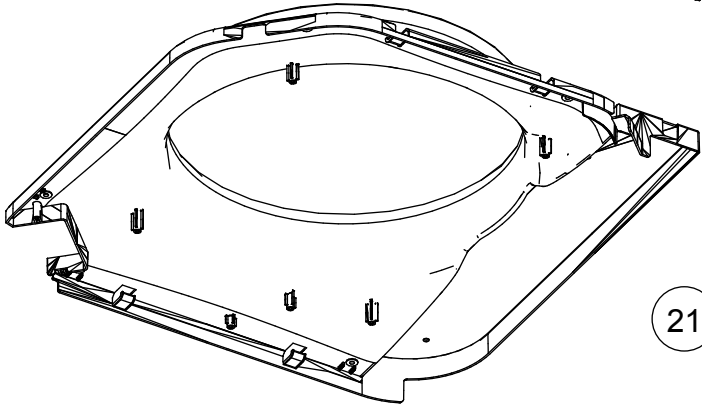
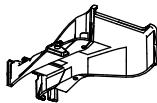
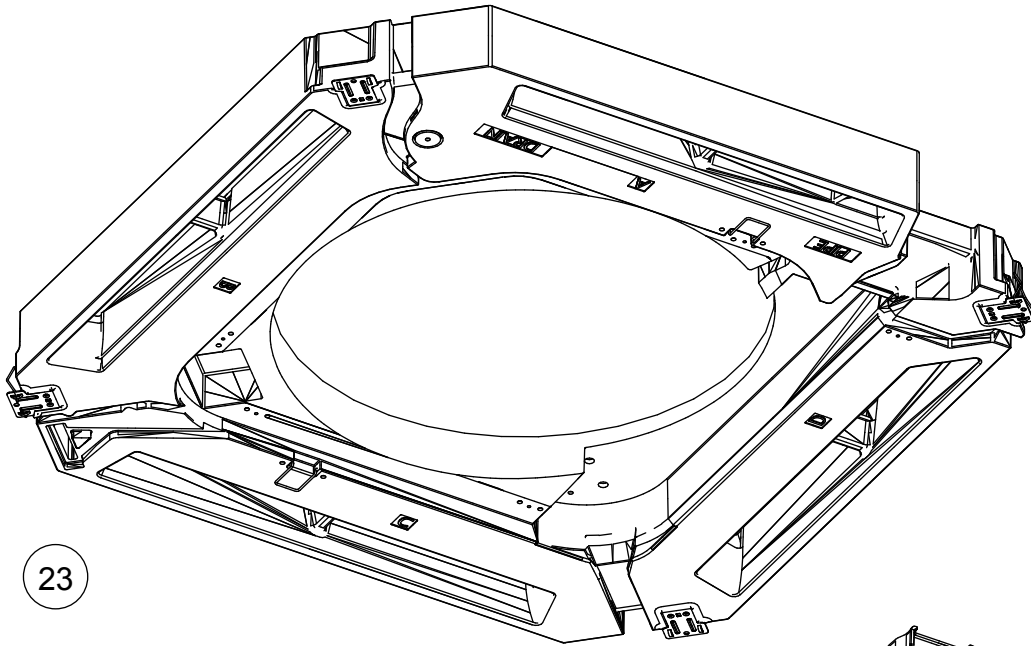
INDOOR UNIT
AUHG45LRLA



INDOOR UNIT
AUHG45LRLA



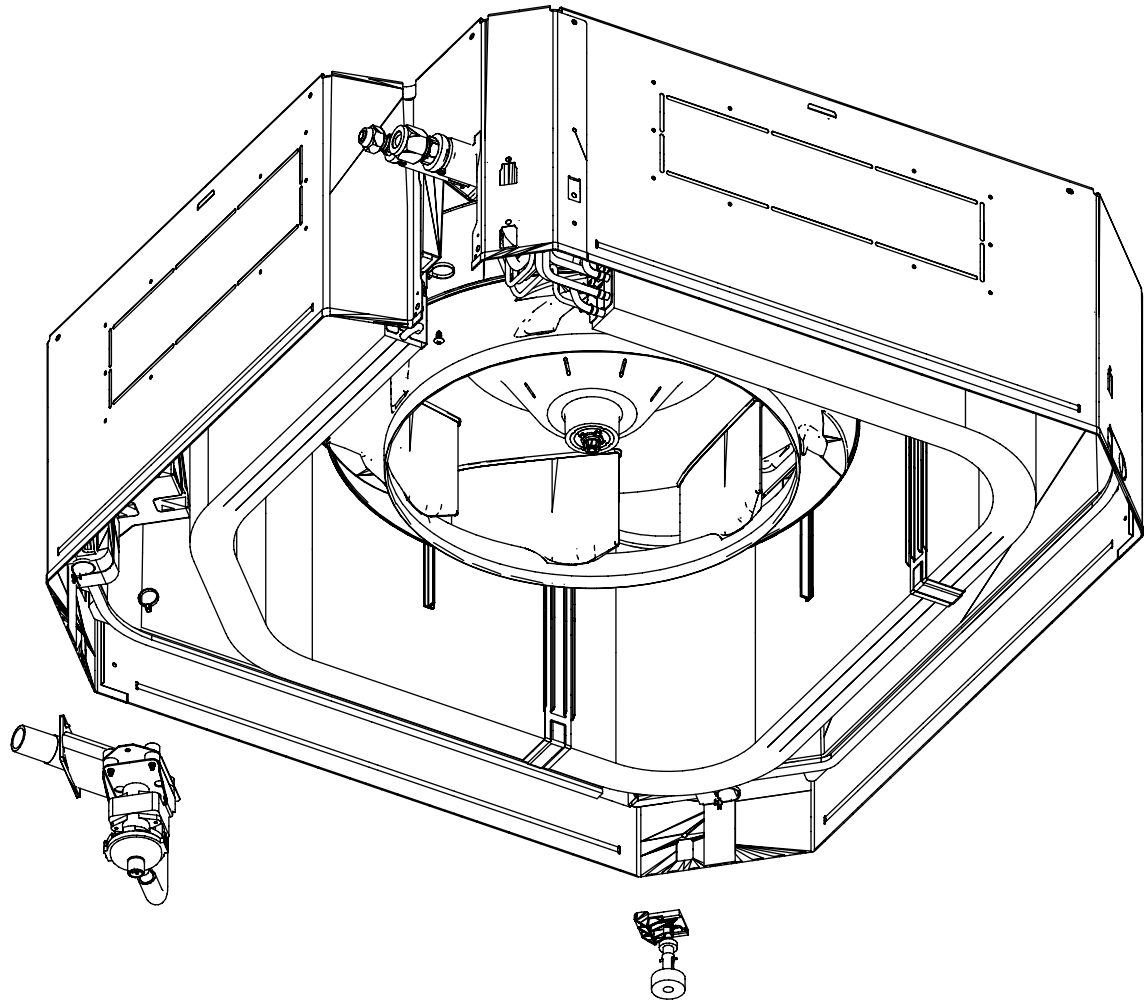
Ref.	Description	Part number
11	PCB holder	9378205017
12	Power supply PCB	9707398366
13	Main PCB	9710621376
14	Terminal 3P	9306489045
15	Terminal 3P	9703345012
16	Thermistor holder A	9378206014
17	Thermistor holder B	9378330016
18	Room thermistor	9900822002
19	Pipe thermistor	9900941017



Pipe cover

Ref.	Description	Part number
21	Bell mouth	9378227019
22	Terminal wire cover	9378548015
23	Drain pan sub assy	9378583016

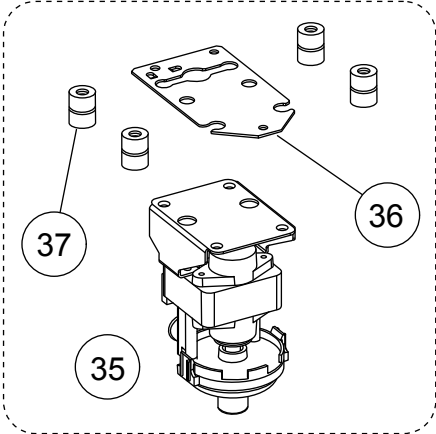
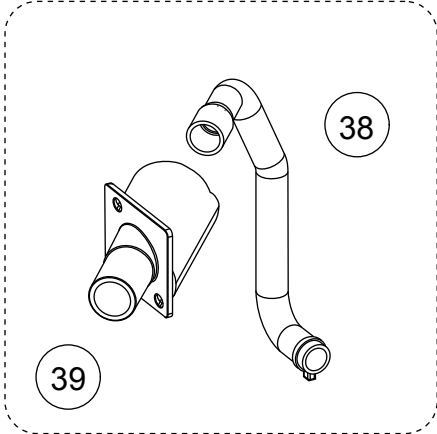
INDOOR UNIT
AUHG45LRLA



31

32

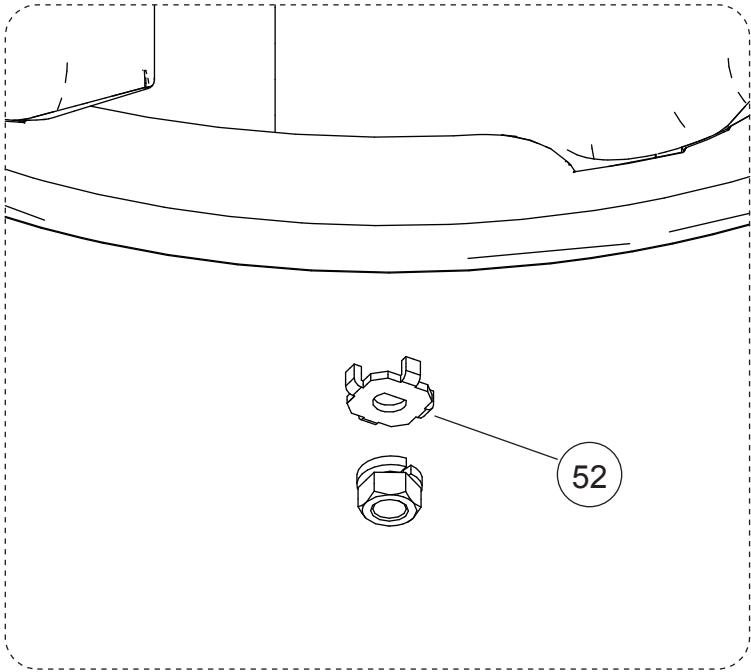
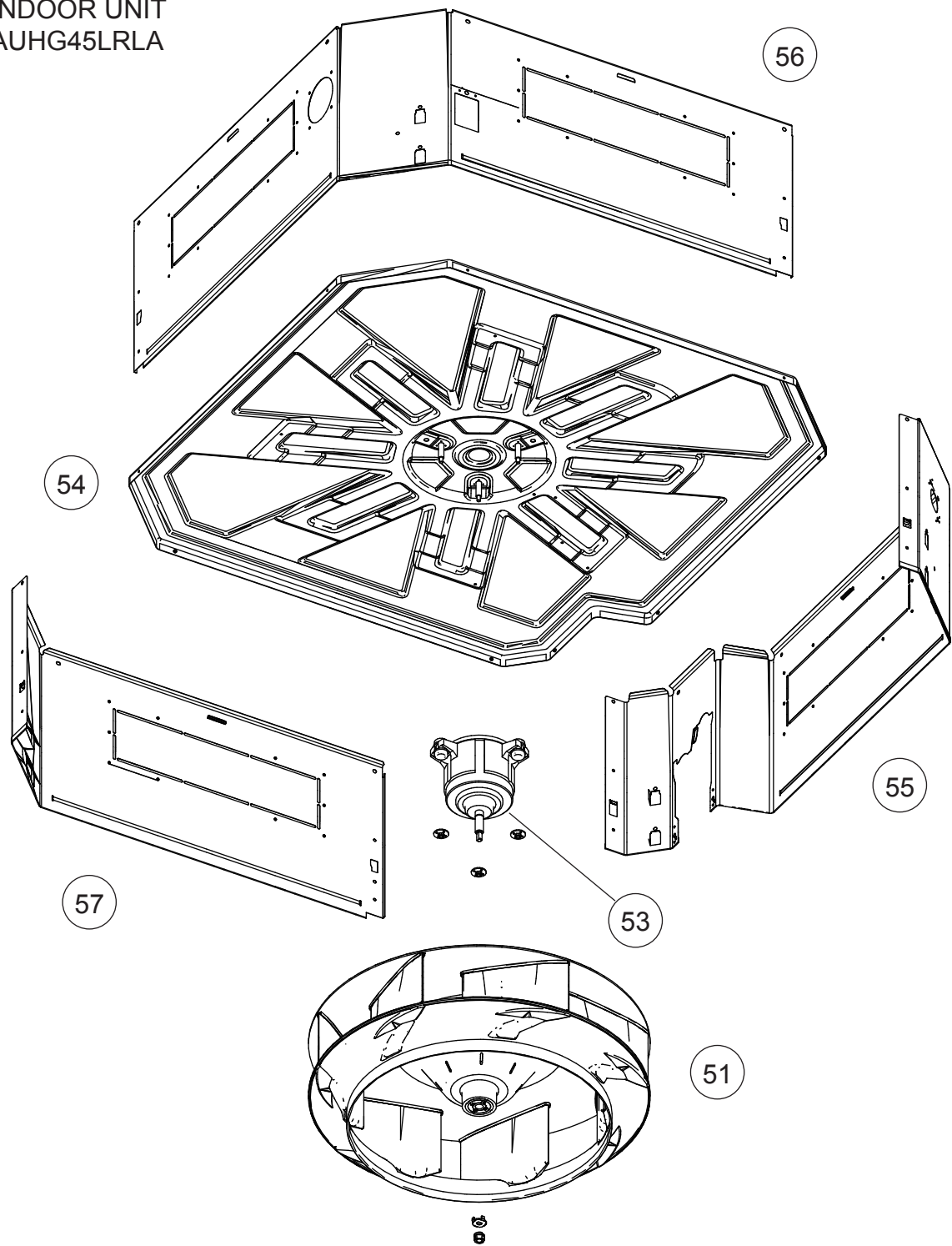
33



34

Ref.	Description	Part number
31	Float switch sub assy	9378593015
32	Sensor holder	9378329010
33	Float switch	9900465018
34	Drain pump sub assy	9378592018
35	Pump assy	9900464011
36	Drain pump holder B	9375518011
37	Pump rubber	9378426016
38	Drain hose	9378212015
39	Drain port	9378213012

INDOOR UNIT
AUHG45LRLA

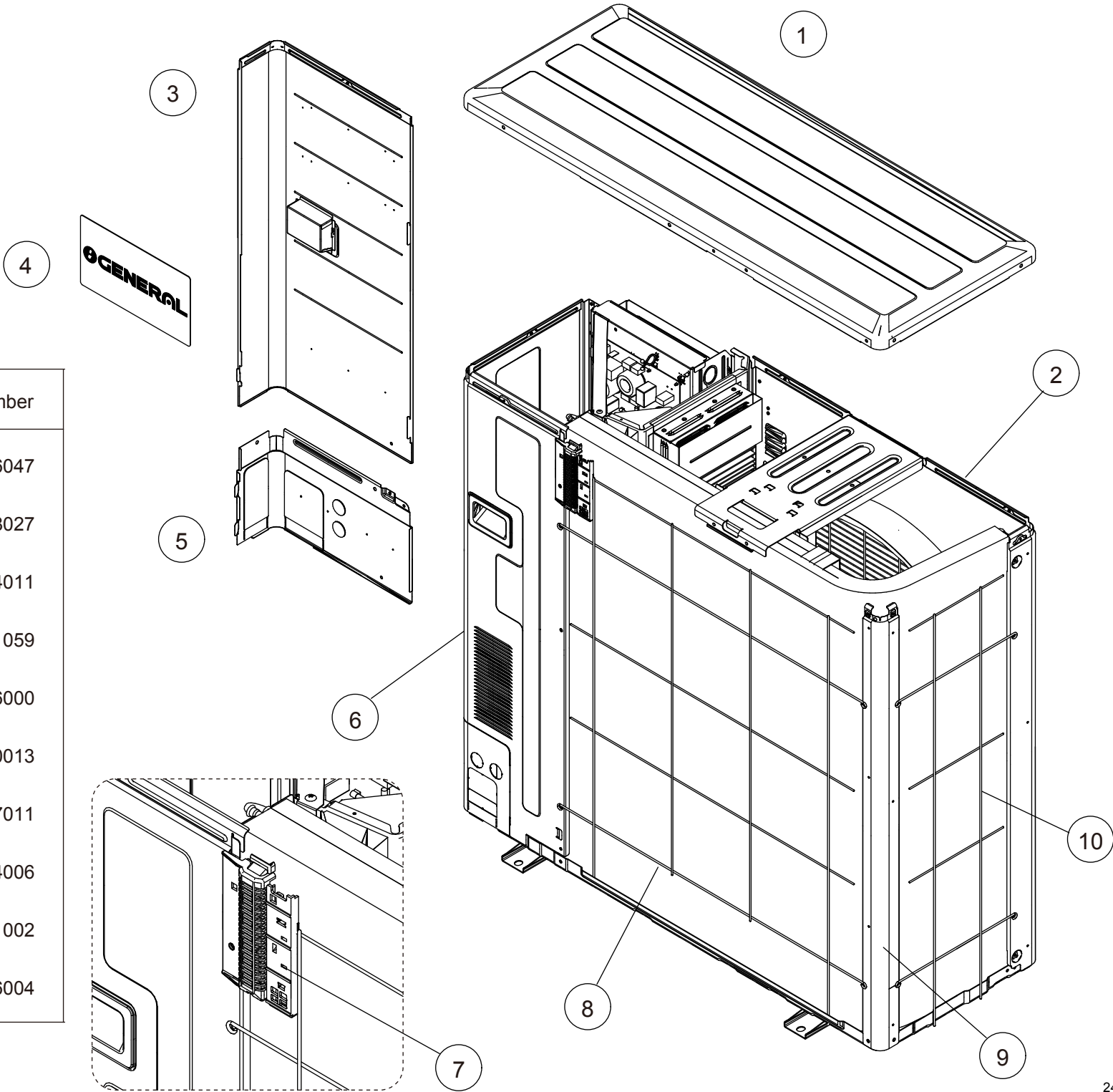


Ref.	Description	Part number
51	Turbo fan assy	9378228016
52	Turbo fan washer	9378394018
53	Motor, DC brushless	9603373009
54	Top plate assy	9378395015
55	Cabinet A sub assy	9378594012
56	Cabinet B sub assy	9378595019
57	Cabinet C sub assy	9378570016

PARTS

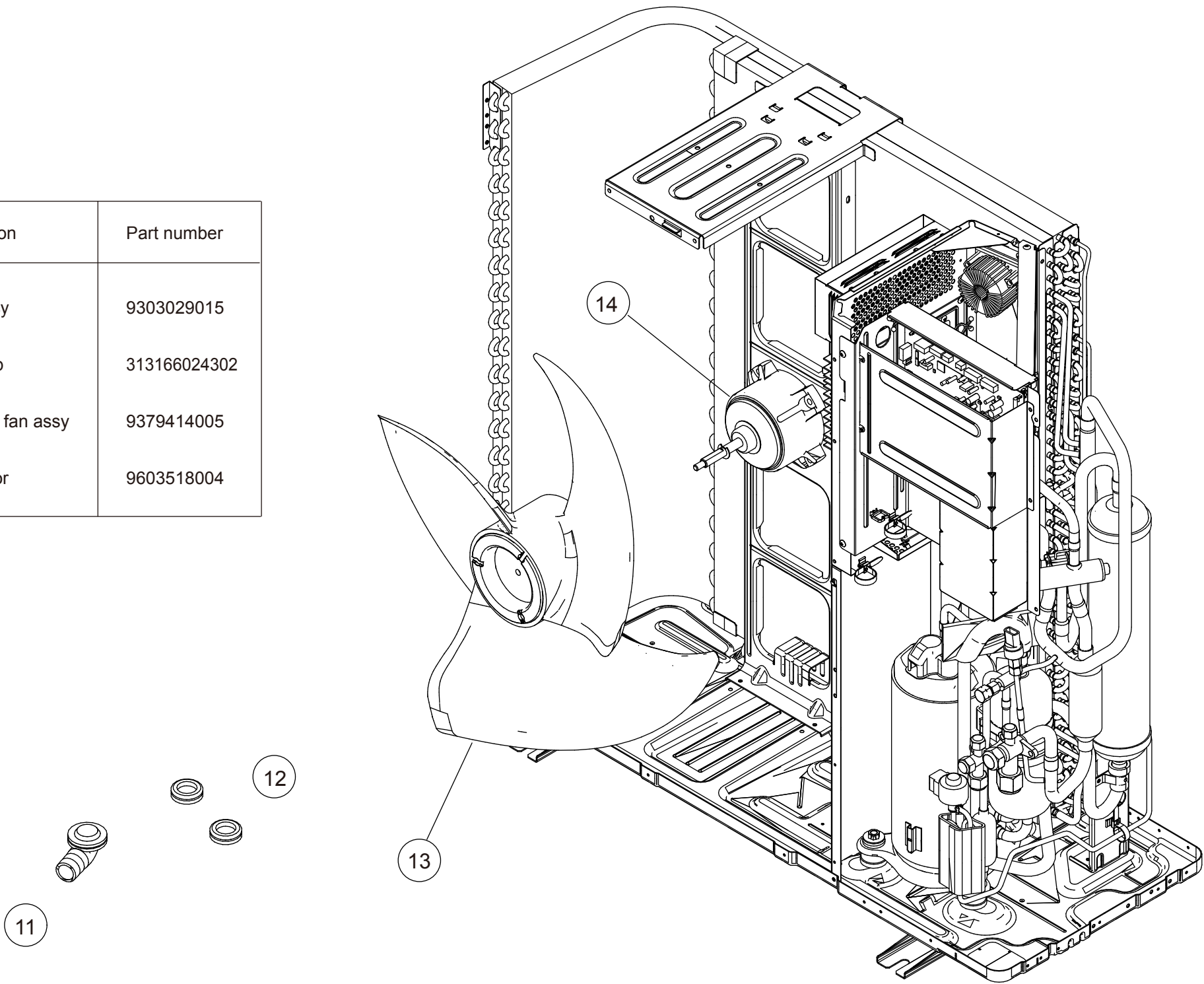
OUTDOOR UNIT
AOHG45LBTC

Ref.	Description	Part number
1	Top panel sub assy	9379416047
2	Front panel sub assy	9379418027
3	Service panel sub assy	9379424011
4	Rear emblem	9372171059
5	Pipe cover front sub assy	9381906000
6	Right panel sub assy	9379420013
7	Thermo holder	9374177011
8	Rear net	9379404006
9	Left panel	9379431002
10	Left net	9379396004

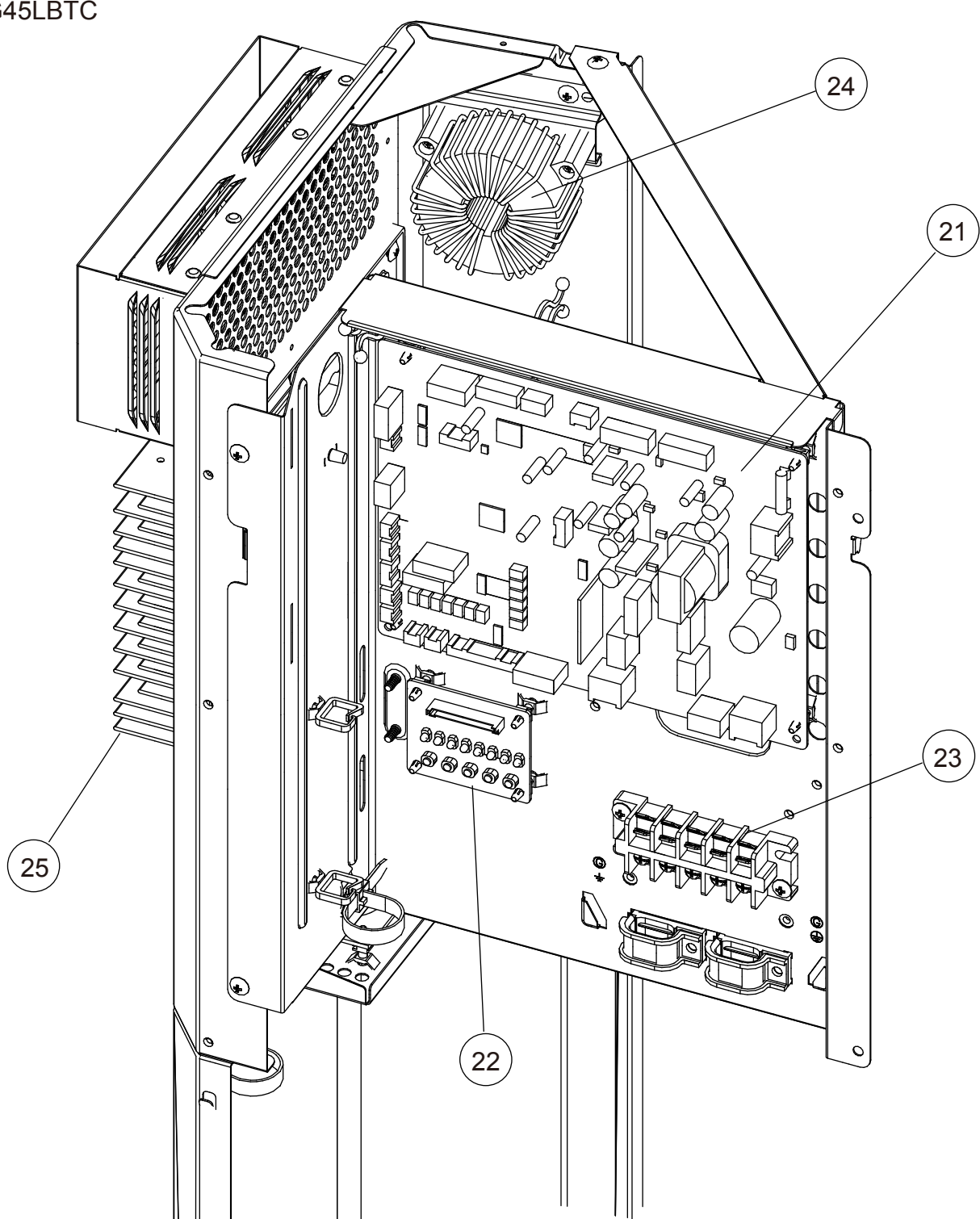


OUTDOOR UNIT
AOHG45LBTC

Ref.	Description	Part number
11	Drain assy	9303029015
12	Drain cap	313166024302
13	Propeller fan assy	9379414005
14	Fan motor	9603518004



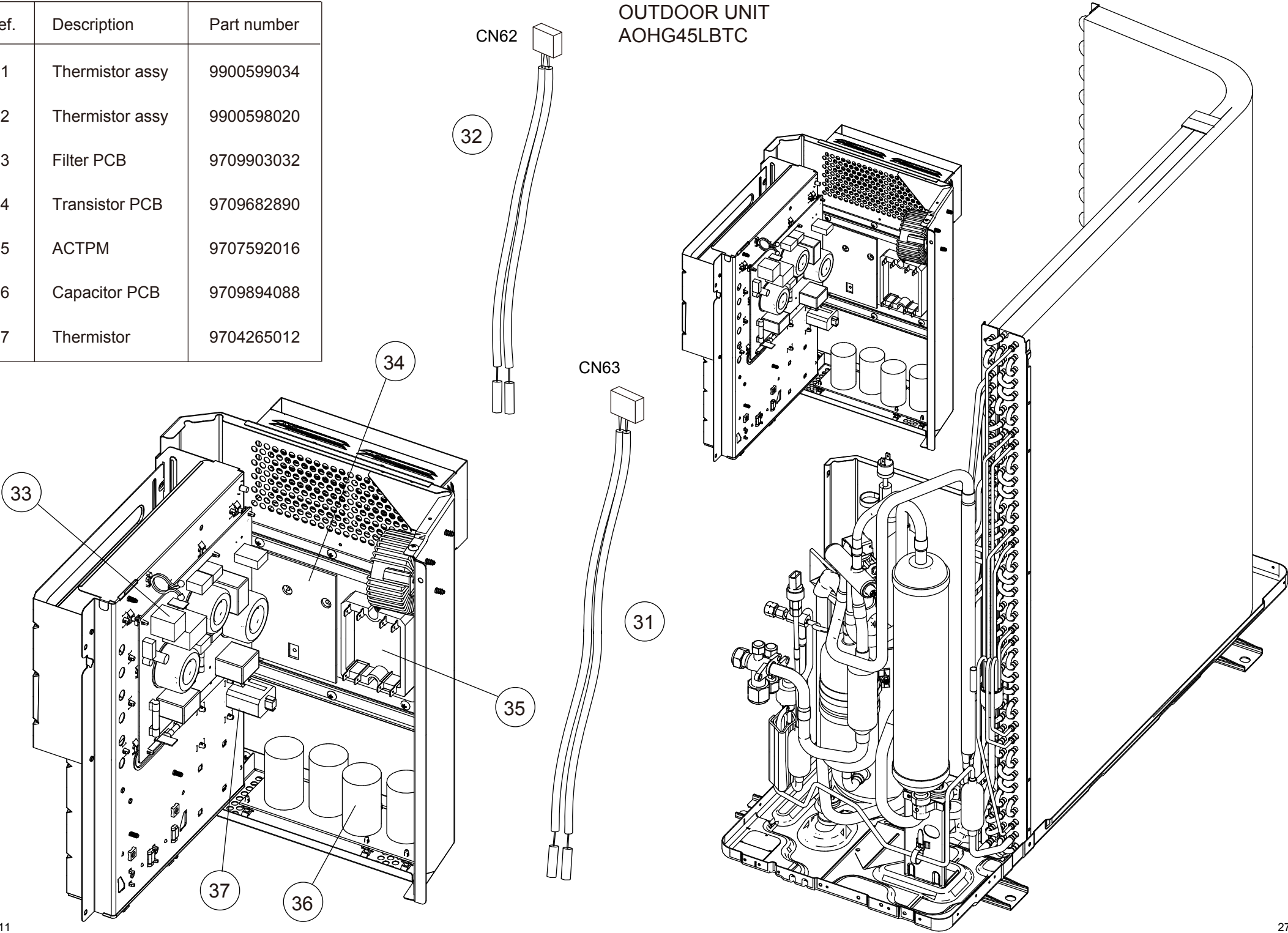
OUTDOOR UNIT
AOHG45LBTC



Ref.	Description	Part number
21	Main PCB	9709904527
22	Display PCB	9708678016
23	Terminal 5P	9900203023
24	Choke coil	9900624019
25	Heatsink	9380358008
26	Outdoor thermistor	9900820015

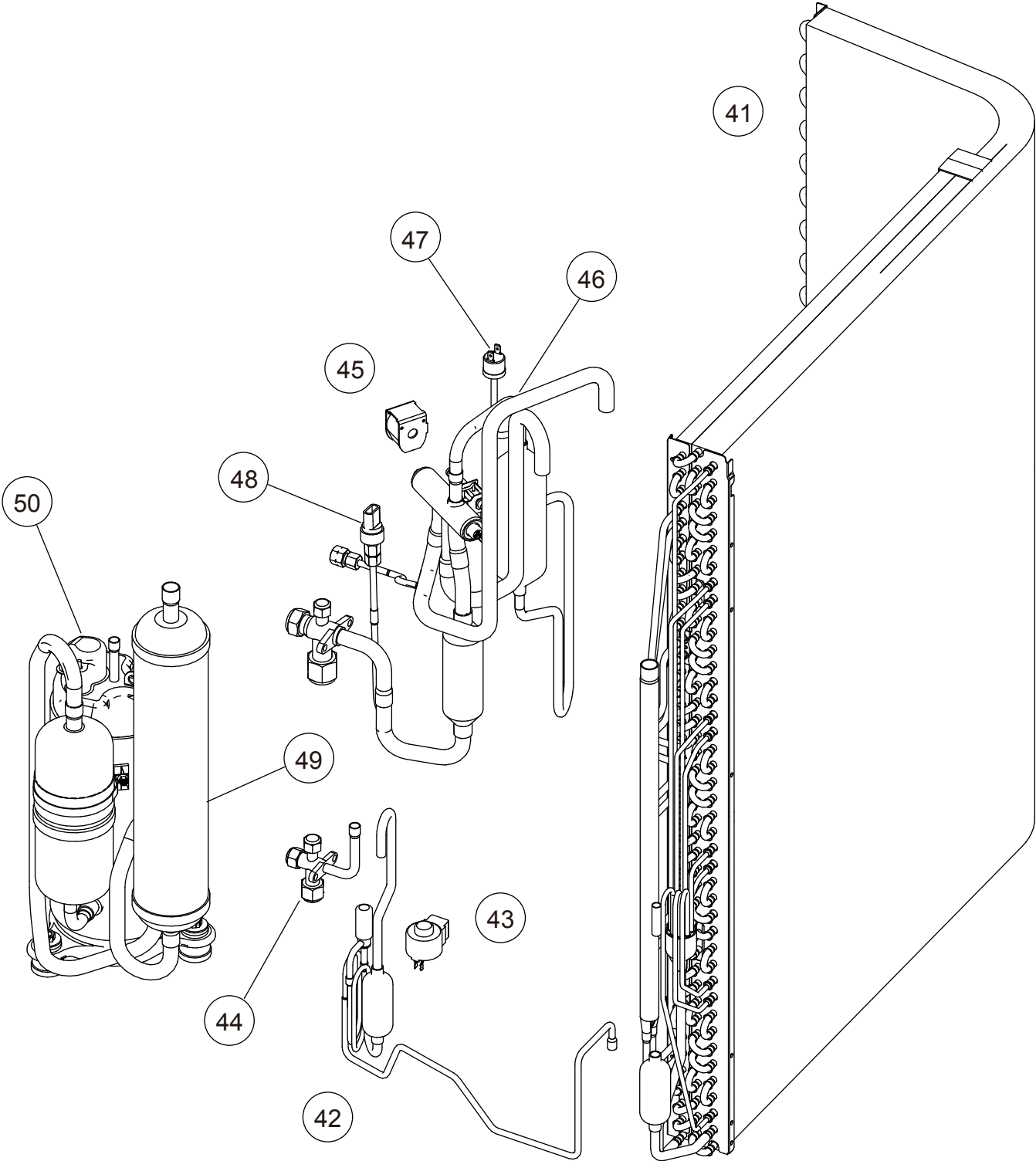
Ref.	Description	Part number
31	Thermistor assy	9900599034
32	Thermistor assy	9900598020
33	Filter PCB	9709903032
34	Transistor PCB	9709682890
35	ACTPM	9707592016
36	Capacitor PCB	9709894088
37	Thermistor	9704265012

OUTDOOR UNIT
AOHG45LBTC





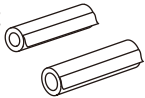
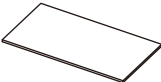
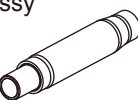

OUTDOOR UNIT
AOHG45LBTC



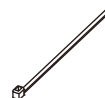



Ref.	Description	Part number
41	Condenser AB sub assy	9374420575
42	Expansion valve assy	9370947274
43	Coil (expansion valve)	9970096044
44	3-way valve assy	9379077019
45	Solenoid	9970055041
46	4-way valve assy	9374425495
47	Pressure switch	9900186012
48	Sensor	9970178023
49	Accumulator sub assy	9374426232
50	Compressor	9810153005
-	Compressor cover A	9378851276
-	Compressor cover B	9378612020
-	Compressor cover C	9380252016







ACCESSORIES

INDOOR UNIT AUHG45LRLA

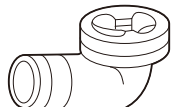


Name and Shape	Q'ty	Application
Template (Carton top) 	1	For installing indoor unit
Washer 	8	For installing indoor unit
Coupler heat insulation 	2	For indoor side pipe joint
Insulation 	1	For installing drain pipe
Drain hose assy 	1	For installing drain pipe
Hose band assy 	1	For installing drain pipe

Name and Shape	Q'ty	Application
Drain pipe insulation 	1	For installing drain pipe
Binder (Large) 	3	For electrical wiring
Binder (Small) 	1	For electrical wiring
Wired remote control 	1	
Remote Control Cord 	1	For connecting remote control
Tapping screw ($\phi 4 \times 16$) 	2	For installing remote control

DECORATION PANEL UTG-UGGA-W

Name and Shape	Q'ty	Application
Hexagon Screw 	4	For mounting decoration panel
Screw 	4	For installing grille holding wire
Strap 	4	For installing corner panel
Grille holding wire 	2	For installing intake grille

OUTDOOR UNIT AOHG45LBTC

Name and Shape	Q'ty	Application
Drain pipe 	1	For outdoor unit drain piping work
Drain cap 	2	For outdoor unit drain piping work
One-touch bush 	2	For power supply cable and connection cable installation

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