

AIR CONDITIONER

Duct type

SERVICE MANUAL

INDOOR



RDG09KLLAP
RDG12KLLAP
RDG14KLLAP



RDG18KLLAP

OUTDOOR



ROG09KATA
ROG12KATA



ROG14KATA
ROG18KATA

Notices:

- Product specifications and design are subject to change without notice for future improvement.
- For further details, please check with our authorized dealer.

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1. GENERAL INFORMATION

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1. GENERAL INFORMATION

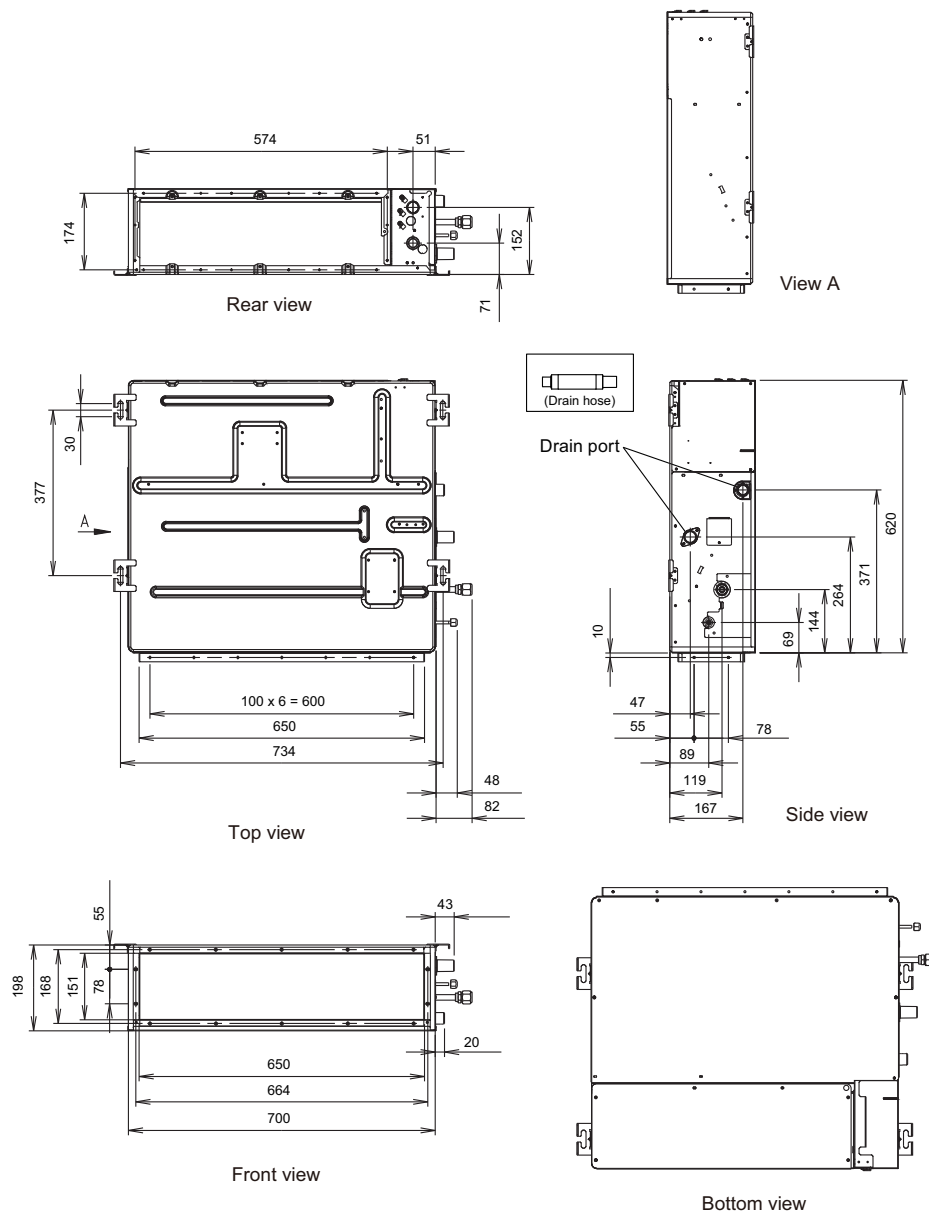
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2. Dimensions

2-1. Indoor unit

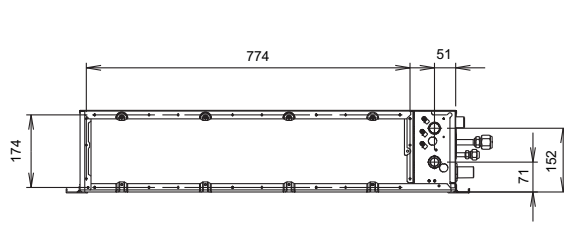
■ Models: RDG09KLLAP, RDG12KLLAP, and RDG14KLLAP

Unit: mm



Model: RDG18KLLAP

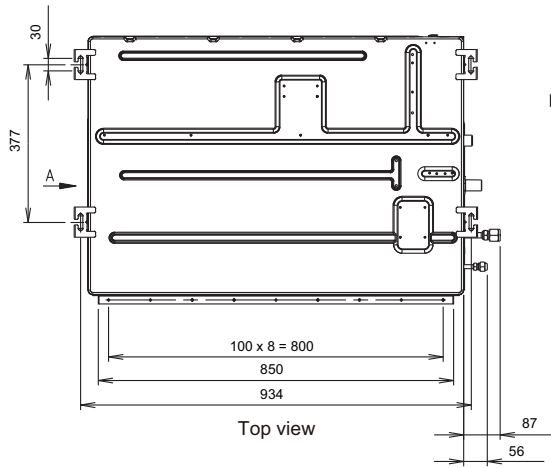
Unit: mm



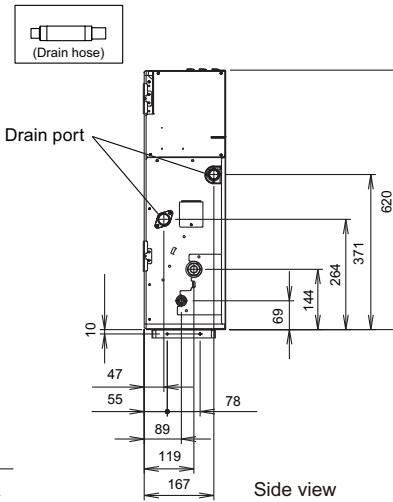
Rear view



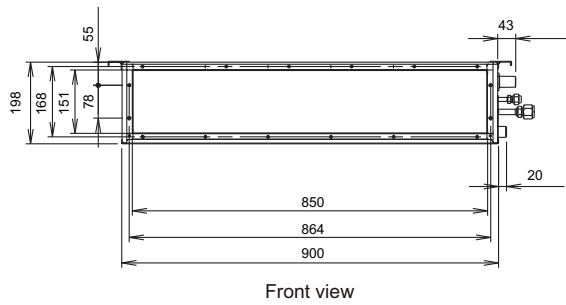
View A



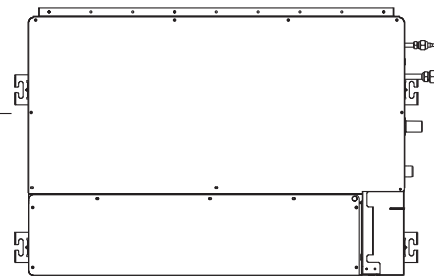
Top view



Side view



Front view

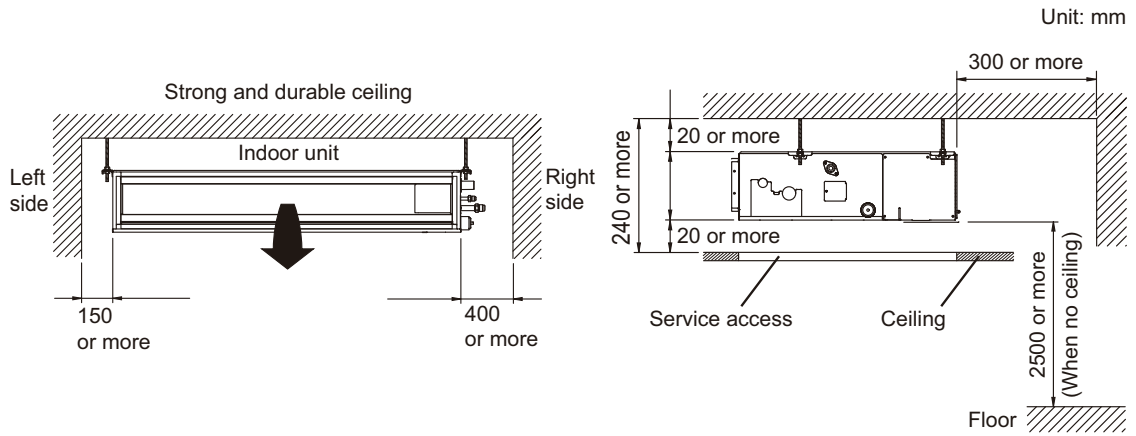


Bottom view

■ Installation space requirement

Provide sufficient installation space for product safety.

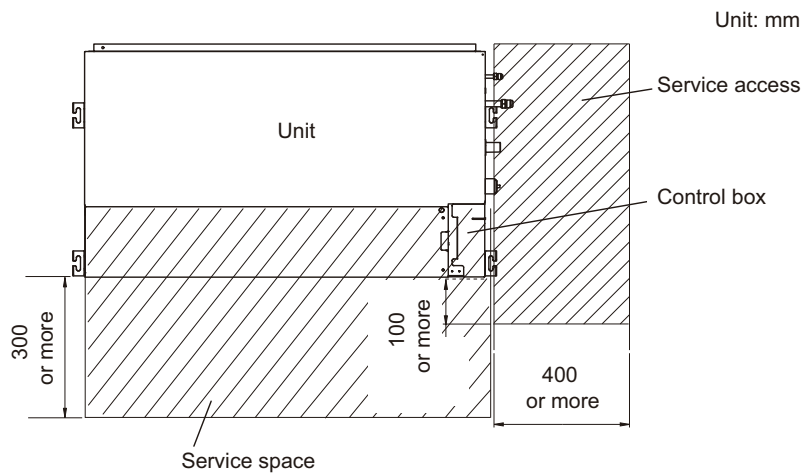
In ceiling-concealed installations:



■ Maintenance space requirement

For future maintenance and service access, provide sufficient maintenance space.

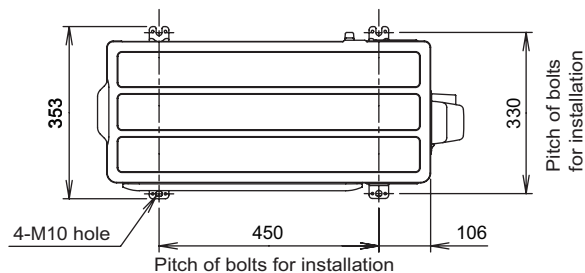
NOTE: Do not place any wiring or illumination in the maintenance space, as they will impede service.



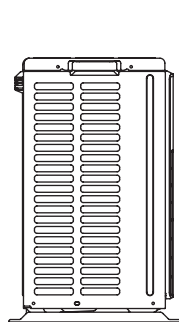
2-2. Outdoor unit

■ ROG09KATA and ROG12KATA

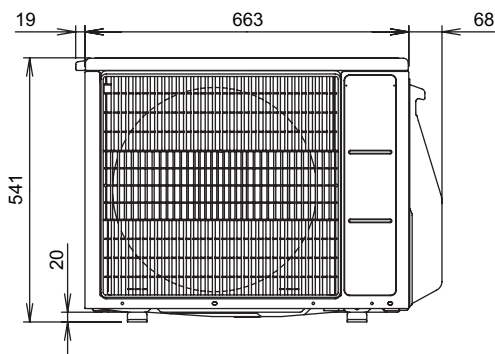
Unit: mm



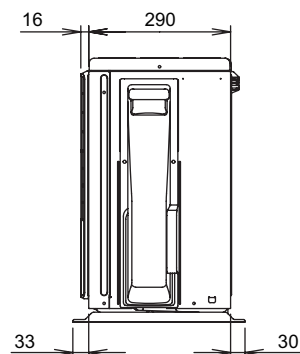
Top view



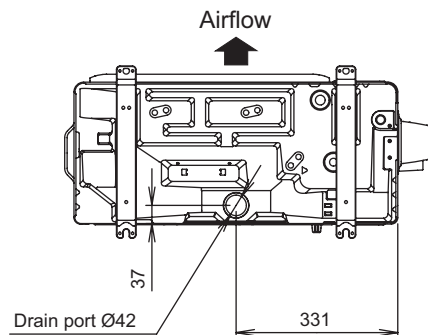
Side view



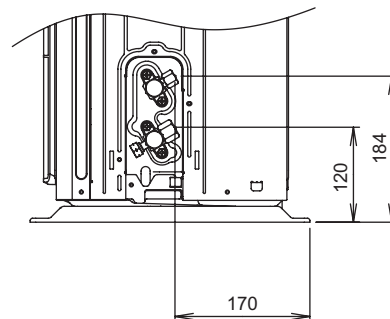
Front view



Side view



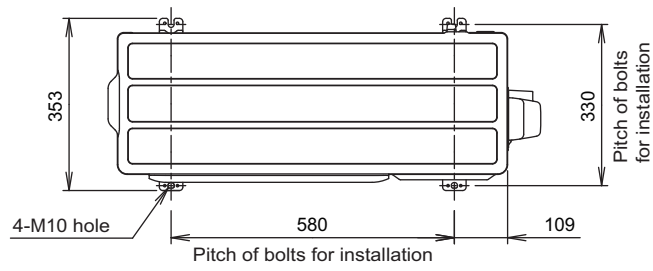
Bottom view



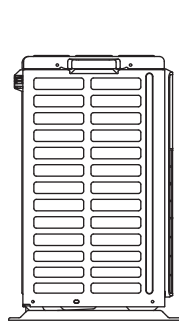
Side view (Valve part)

■ ROG14KATA and ROG18KATA

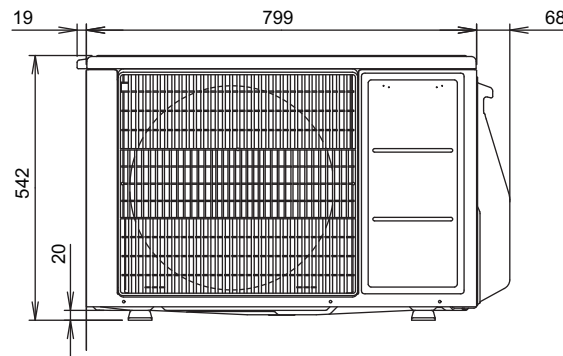
Unit: mm



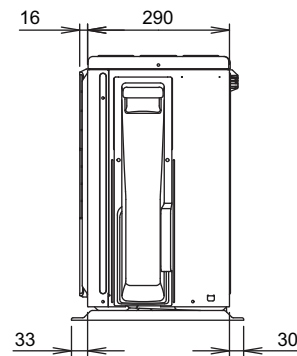
Top view



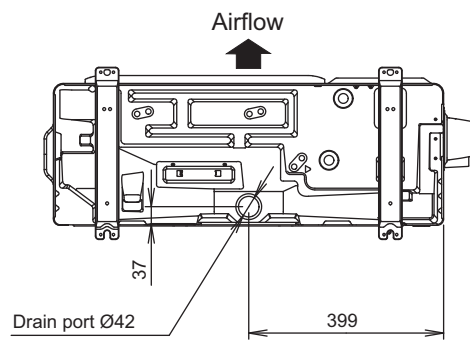
Side view



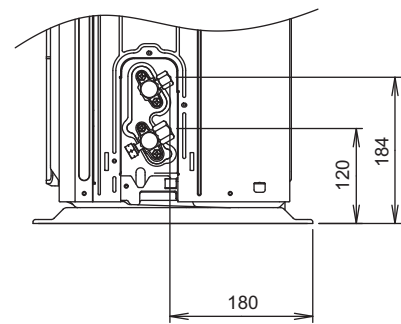
Front view



Side view



Bottom view



Side view (Valve part)

2. TECHNICAL DATA AND PARTS LIST

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2. TECHNICAL DATA AND PARTS LIST

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1. Precautions

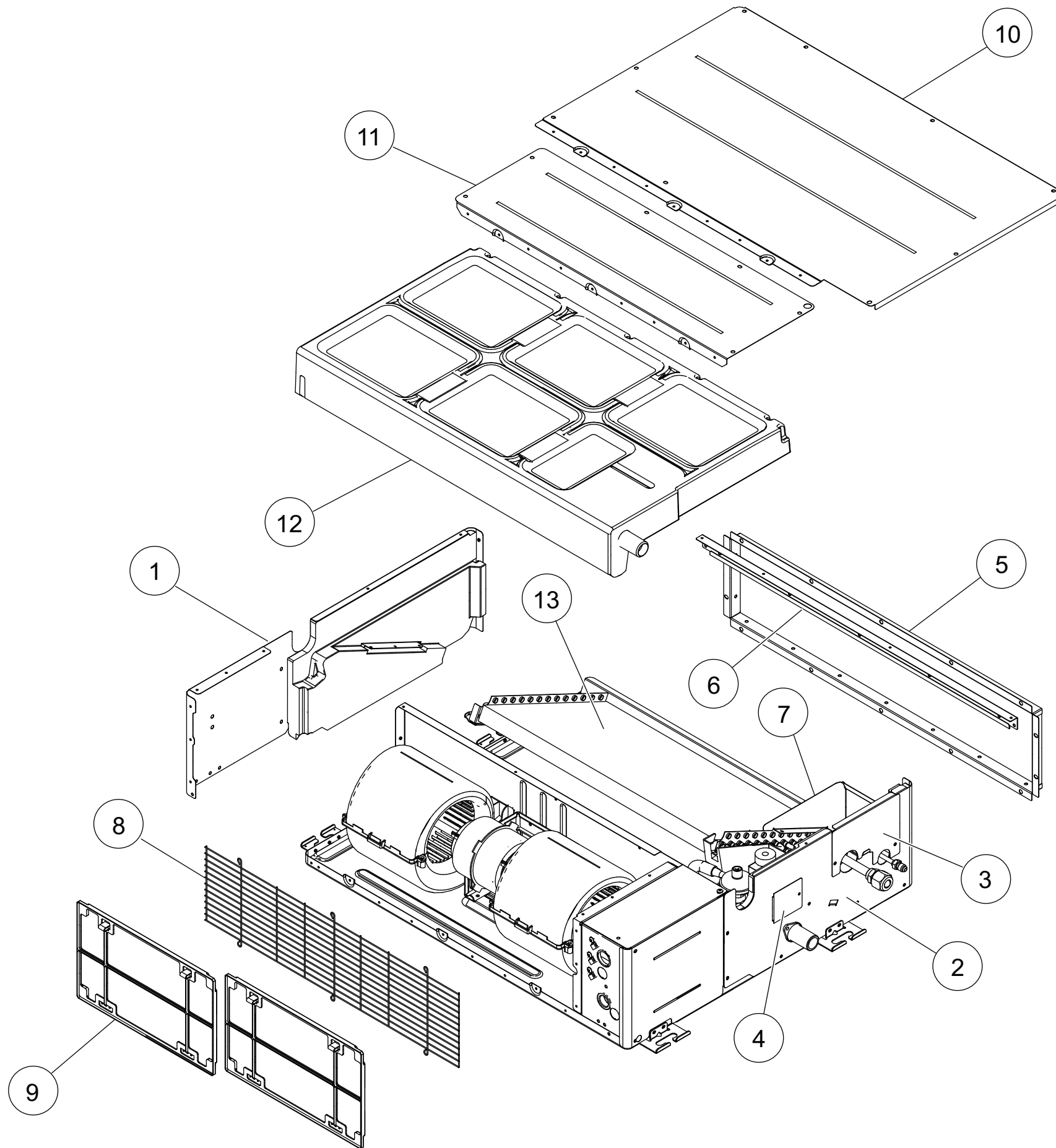
When you start servicing, pay attention to the following points. For detailed precautions, refer to the installation manual of the products.

⚠ CAUTION

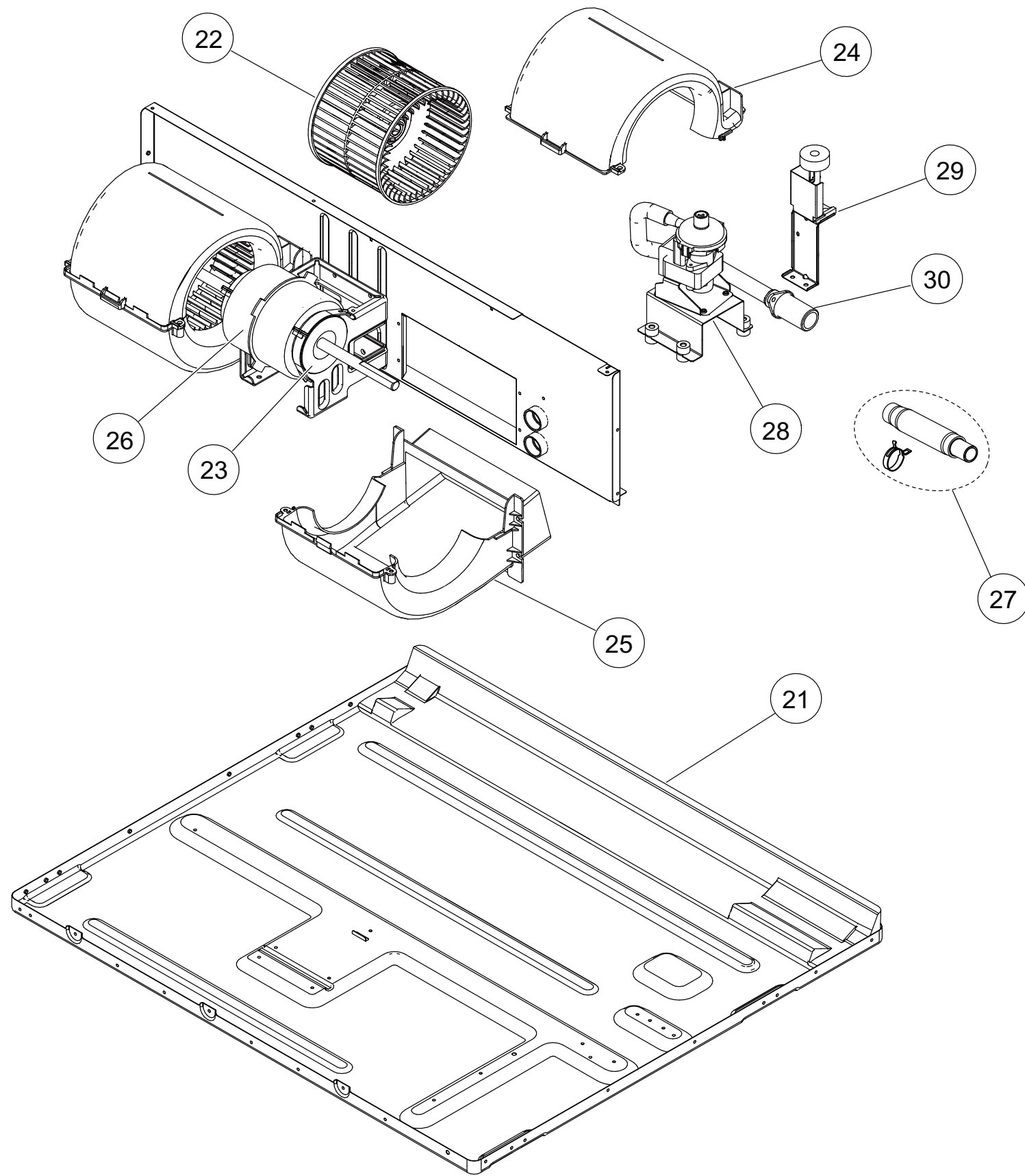
- Service personnel
 - Any person who is involved with working on or breaking into a refrigerant circuit should hold a current valid certificate from an industry-accredited assessment authority, which authorizes their competence to handle refrigerants safely in accordance with an industry recognized assessment specification.
 - Servicing shall only be performed as recommended by the equipment manufacturer. Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.
 - Servicing shall be performed only as recommended by the manufacturer.
 - Work
 - Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimized. When repairing the refrigerant system, refer to the precautions written in the installation manual of the products before you start servicing.
 - Work shall be undertaken under a controlled procedure so as to minimize the risk of a flammable gas or vapor being present while the work is being performed.
 - All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out.
 - Work in confined spaces shall be avoided.
 - The area around the workspace shall be sectioned off.
 - Ensure that the conditions within the area have been made safe by control of flammable material.
 - Checking for presence of refrigerant
 - The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially flammable atmospheres.
 - Ensure that the leak detection equipment being used is suitable for use with flammable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.
-
- Service parts information and design are subject to change without notice for product improvement.
 - For the latest information of the service parts, refer to our Service Portal.
<https://fujitsu-general.force.com/portal/>
 - Precise figure of the service parts listed in this manual may differ from the actual service parts.

2. Indoor unit parts list

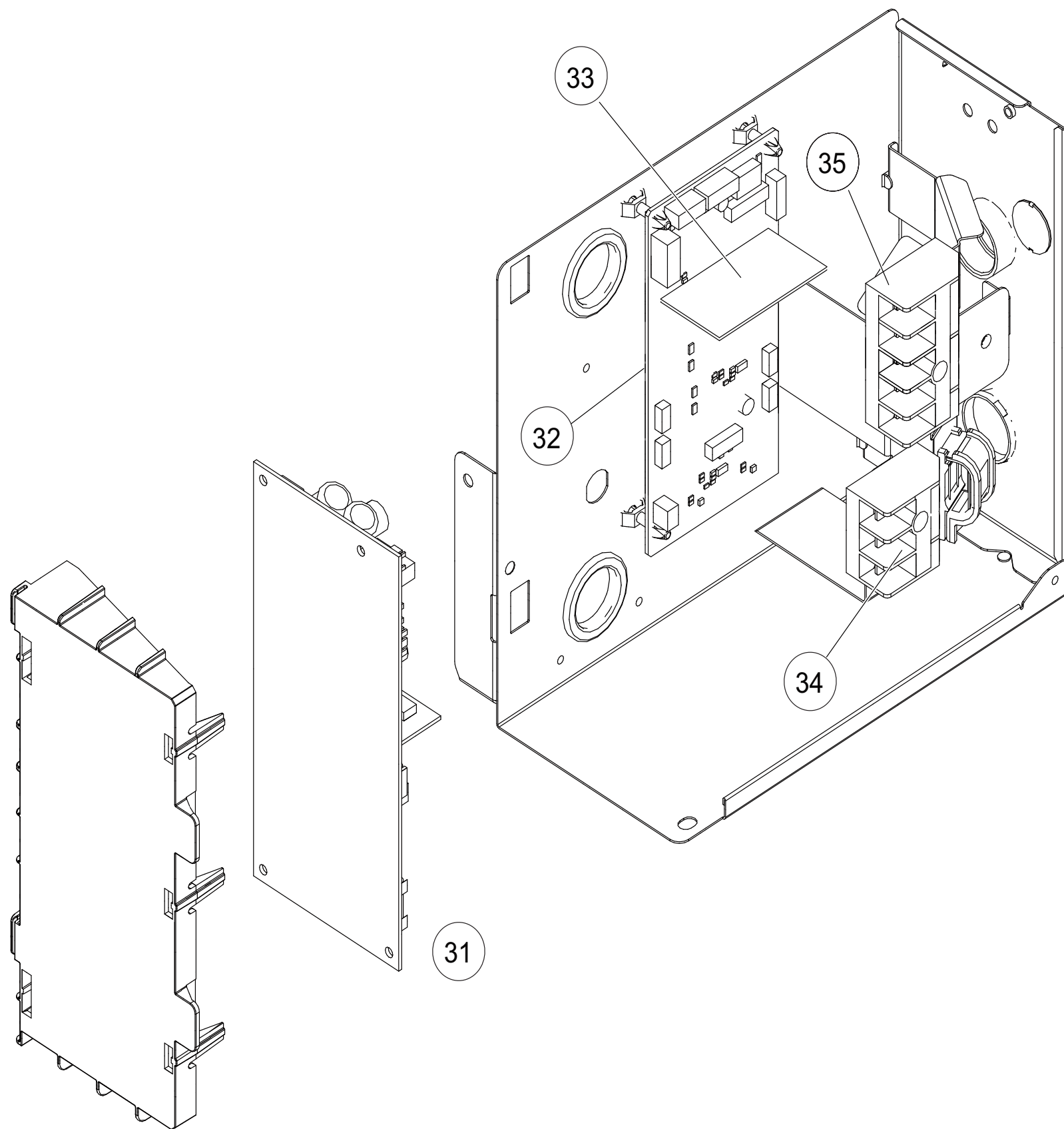
2-1. Models: RDG09KLLAP, RDG12KLLAP, and RDG14KLLAP



Ref	Description	Parts number
1	Side Panel R Sub Assy	9379906012
2	Side Panel L Sub Assy	9379907019
3	Pipe Panel Sub Assy	9379900003
4	Panel (Window) Sub Assy	9379915007
5	Outlet Frame Assy	9380042006
6	Front Panel (2 Fan)	9380594000
7	Valve Cover Sub Assy	9379576017
8	Fan Guard (2 Fan)	9380589006
9	Air Filter	9379574006
10	Main Panel (2 Fan)	9380602019
11	Cabinet Panel (2 Fan)	9380597001
12	Drain Pan Sub Assy	9381209002
13	Evaporator Total Assy (07)	9380682509
13	Evaporator Total Assy (09, 12, 14)	9380682486



Ref	Description	Parts number
21	Top Panel Sub Assy	9379908030
22	Sirroco Fan Assy	9379570015
23	Rubber (Vibration Proof)	9379644006
24	Casing B	9379572019
25	Casing U	9379571012
26	Fan Motor Assy (07)	9379047166
26	Fan Motor Assy (09, 12, 14)	9379047159
27	Hose Sub Assy	9378450097
28	Drain Pump Sub Assy	9379914062
29	Float Switch Sub Assy	9378593039
30	Drain Hose Assy	9379913003

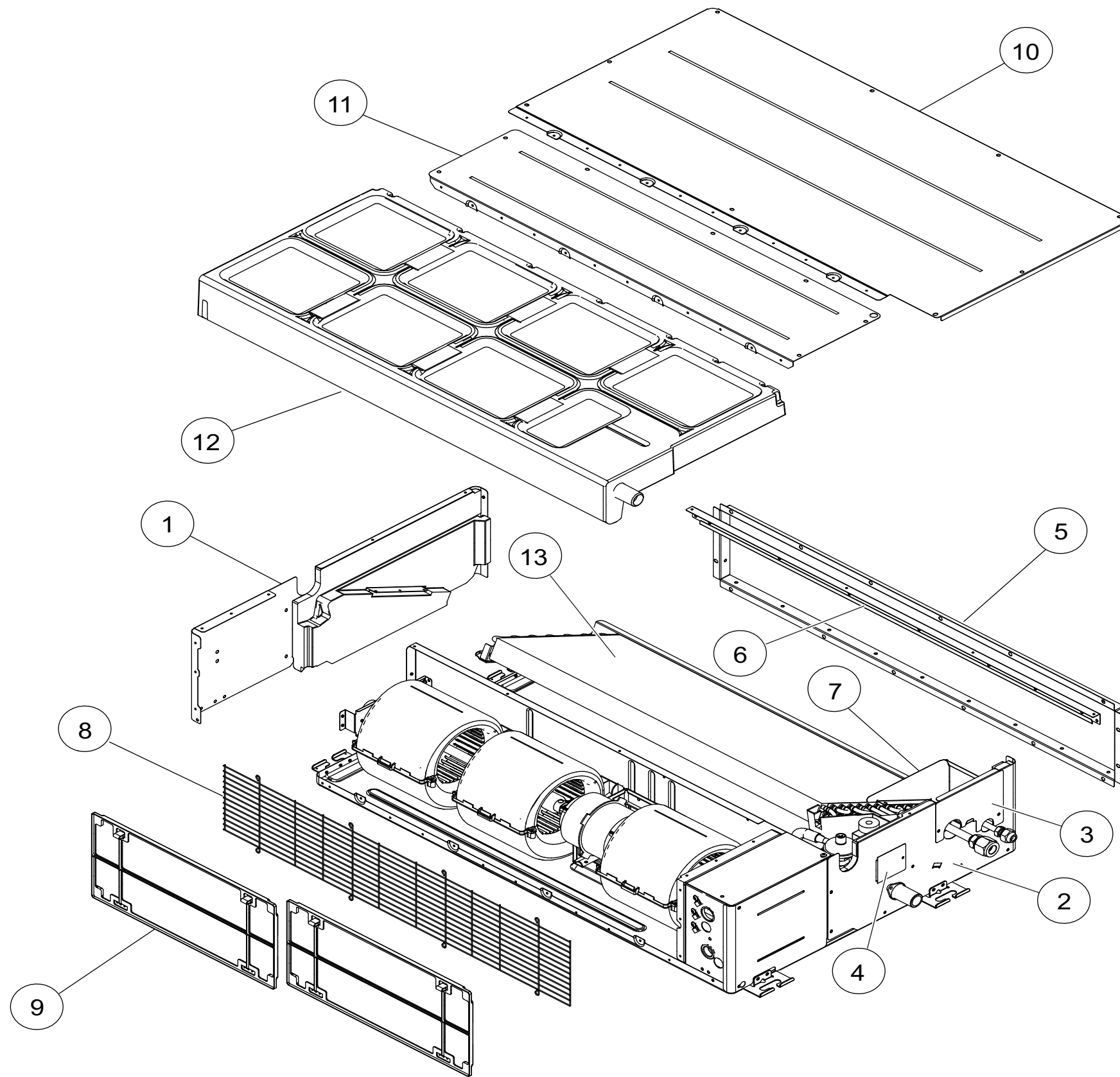


Ref	Description	Parts number
31	Power Supply PCB	9710661006
32	Main PCB (ARXG07KLLAP)	9710624308
32	Main PCB (ARXG09KLLAP)	9710624209
32	Main PCB (ARXG12KLLAP)	9710624216
32	Main PCB (ARXG14KLLAP)	9710624148
33	2 way Remote PCB	9710019005
34	Terminal 3P	9900568009
35	Terminal 3P (Wired Remote)	9900896003
--	Room Thermistor	9900653019
--	Pipe Thermistor	9900942045

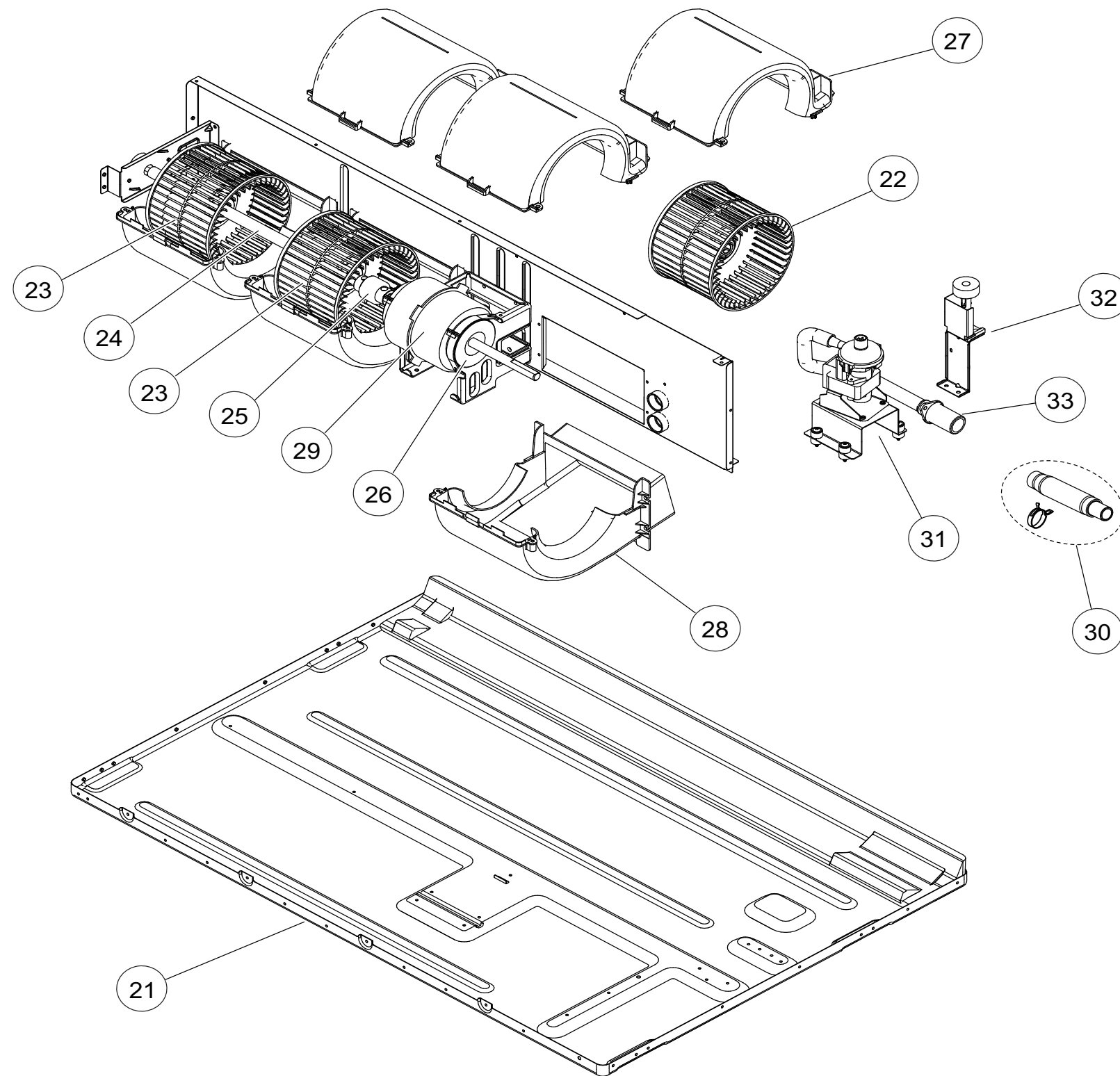
2-2. Model: RDG18KLLAP

TECHNICAL DATA
AND PARTS LIST

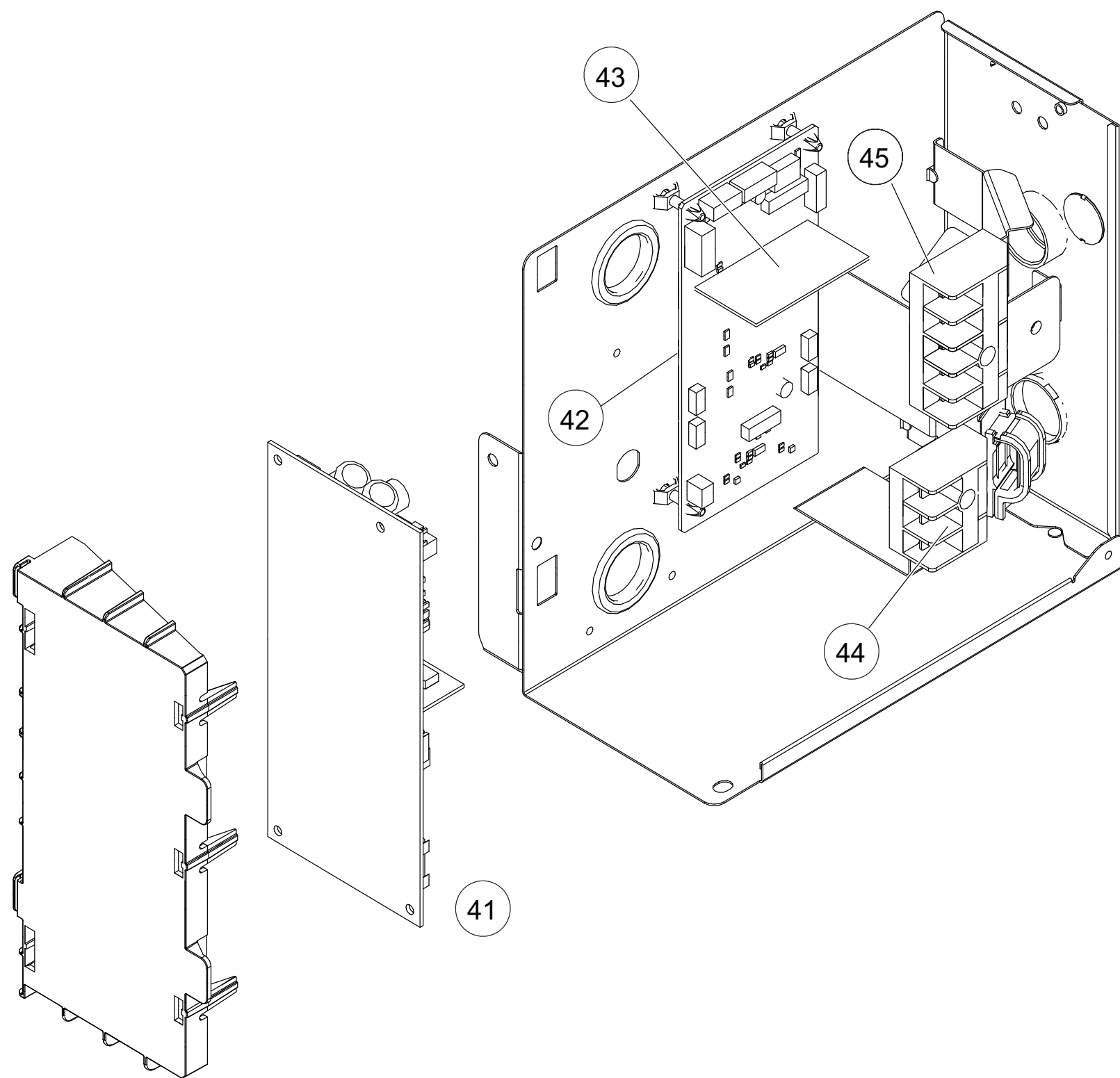
TECHNICAL DATA
AND PARTS LIST



Ref	Description	Parts number
1	Side Panel R Sub Assy	9379906012
2	Side Panel L Sub Assy	9379907019
3	Pipe Panel Sub Assy	9379900003
4	Panel (Window) Sub Assy	9379915007
5	Outlet Frame Assy	9380042013
6	Front Panel (3 Fan)	9380595007
7	Valve Cover Sub Assy	9379576017
8	Fan Guard (3 Fan)	9380590002
9	Air Filter	9379575003
10	Main Panel (3 Fan)	9380603016
11	Cabinet Panel (3 Fan)	9380598008
12	Drain Pan Sub Assy	9379901178
13	Evaporator Total Assy (18)	9380682493



Ref	Description	Parts number
21	Top Panel Sub Assy	9379908047
22	Sirroco Fan Assy	9379570022
23	Sirroco Fan Assy	9379570039
24	Shaft assy	9381052004
25	Joint Assy	9378038011
26	Rubber (Vibration Proof)	9379644006
27	Casing B	9379572019
28	Casing U	9379571012
29	Fan Motor Assy	9379047142
30	Hose Sub Assy	9378450097
31	Drain Pump Sub Assy	9379914062
32	Float Switch Sub Assy	9378593039
33	Drain Hose Assy	9379913003

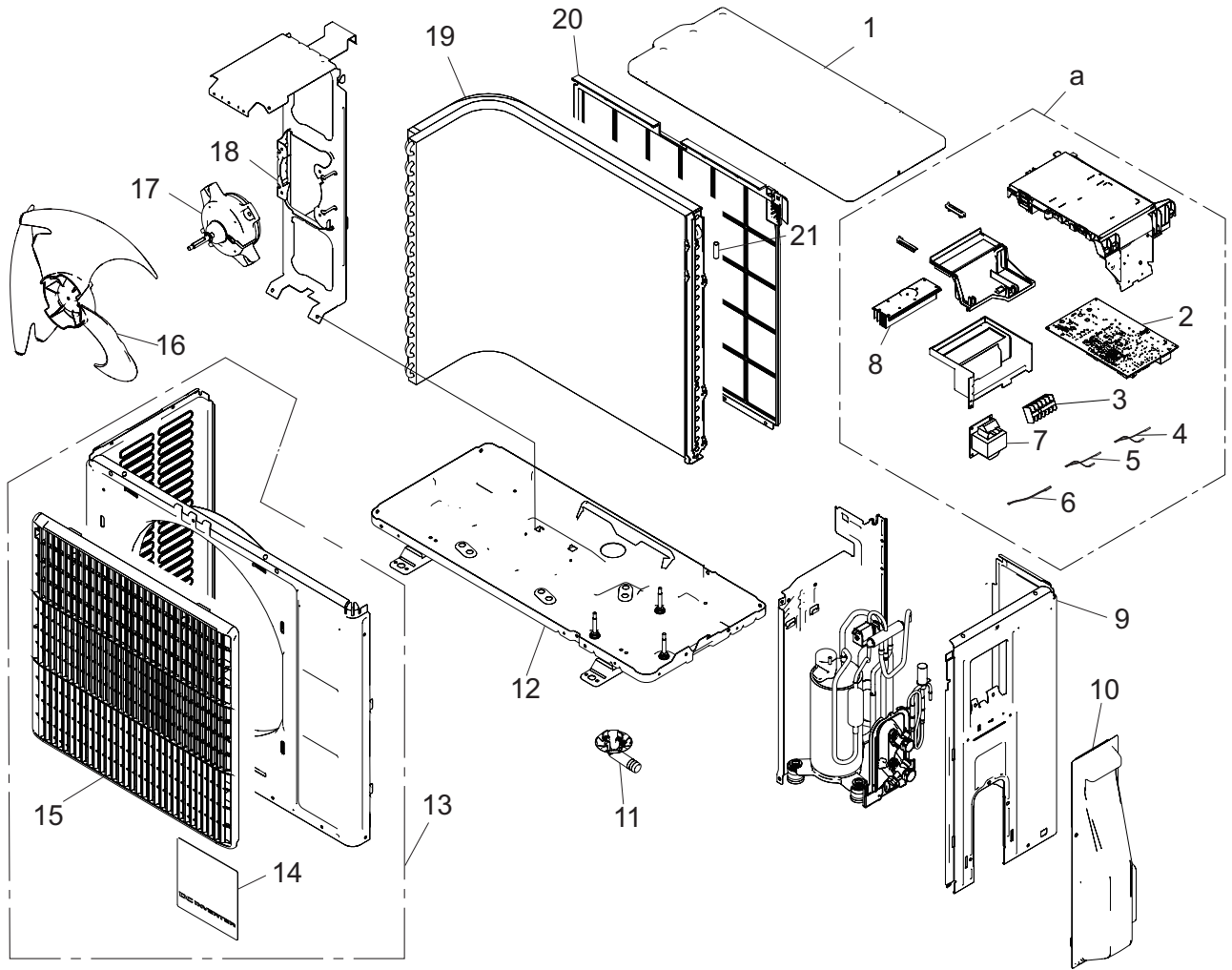


Ref	Description	Parts number
41	Power Supply PCB	9710661006
42	Main PCB	9710624131
43	2 way Remote PCB	9710019005
44	Terminal 3P	9900568009
45	Terminal 3P (Wired Remote)	9900896003
--	Room Thermistor	9900653019
--	Pipe Thermistor	9900942045

3. Outdoor unit parts list

3-1. Models: ROG09KATA and ROG12KATA

■ Exterior parts and chassis

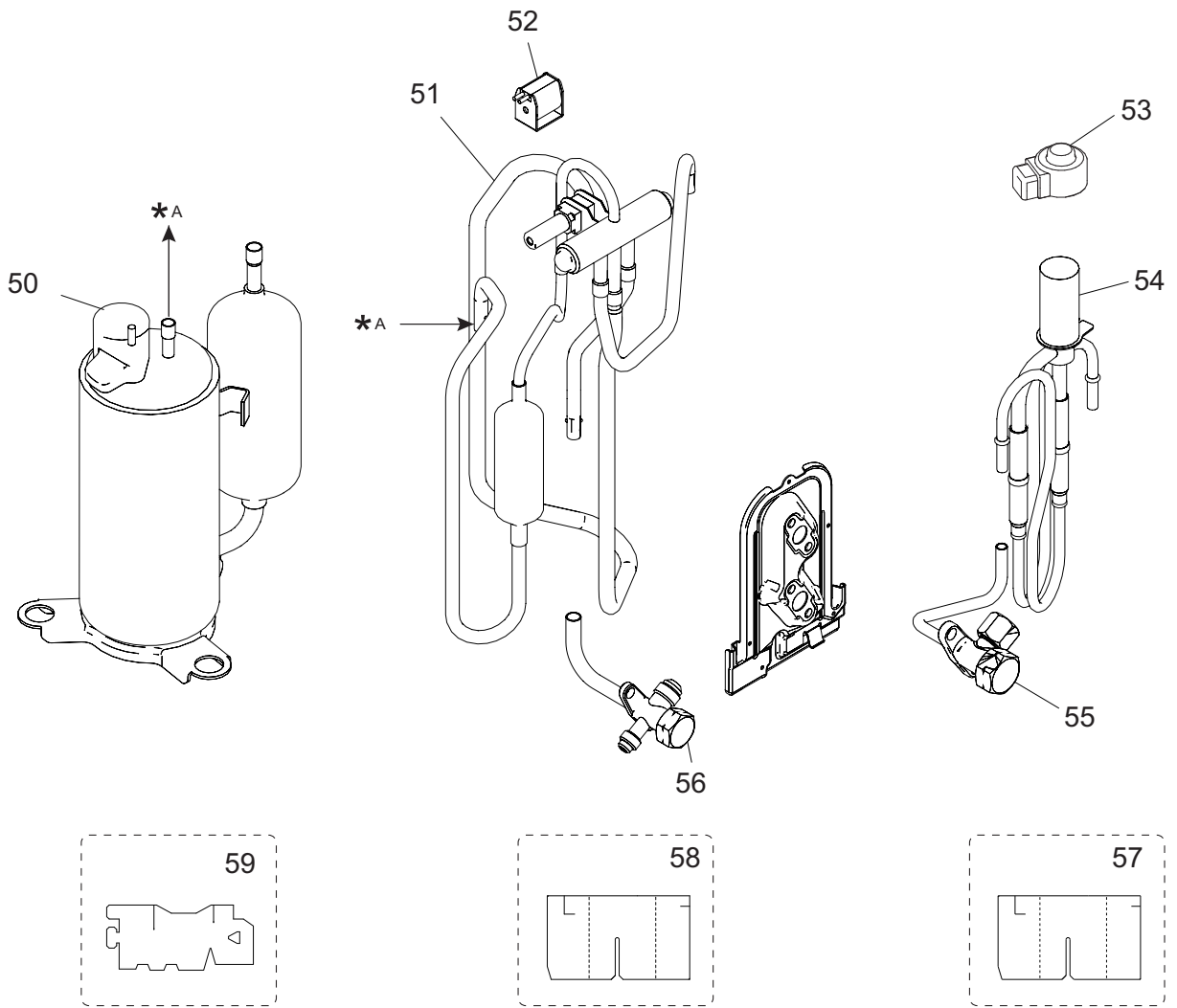


Item no.	Part no.	Part name	Service part
1	9322556080	Top panel assy	◆
2	9709685273	Main PCB (Service) (for 09 model)	◆
	9709685365	Main PCB (Service) (for 12 model)	◆
3	9900435028	Terminal	◆
4	9900727062	Thermistor assy	◆
5	9900565060	Thermistor assy (outdoor temp)	◆
6	9900984014	Heat exchanger thermistor	◆
7	9900583019	Reactor assy	◆
8	9322418005	Heat sink	◆
9	9322552112	Cabinet right assy	◆
10	9322570000	Switch cover assy	◆
11	9322144003	Drain pipe	◆
12	9322308023	Base assy	◆
13	9322555106	Front panel assy	◆
14	9387859003	Emblem	◆
15	9322135001	Blow grille	◆
16	9322136008	Propeller fan	◆
17	9603657017	Brushless motor	◆
18	9322553003	Motor bracket assy	◆
19	9322272010	Condenser total assy (for 09 model)	◆
	9322273000	Condenser total assy (for 12 model)	◆
20	9322811004	Protective net	◆
21	9331404006	Thermistor holder	◆
a	—	Inverter assy	—

■ Compressor

TECHNICAL DATA
AND PARTS LIST

TECHNICAL DATA
AND PARTS LIST



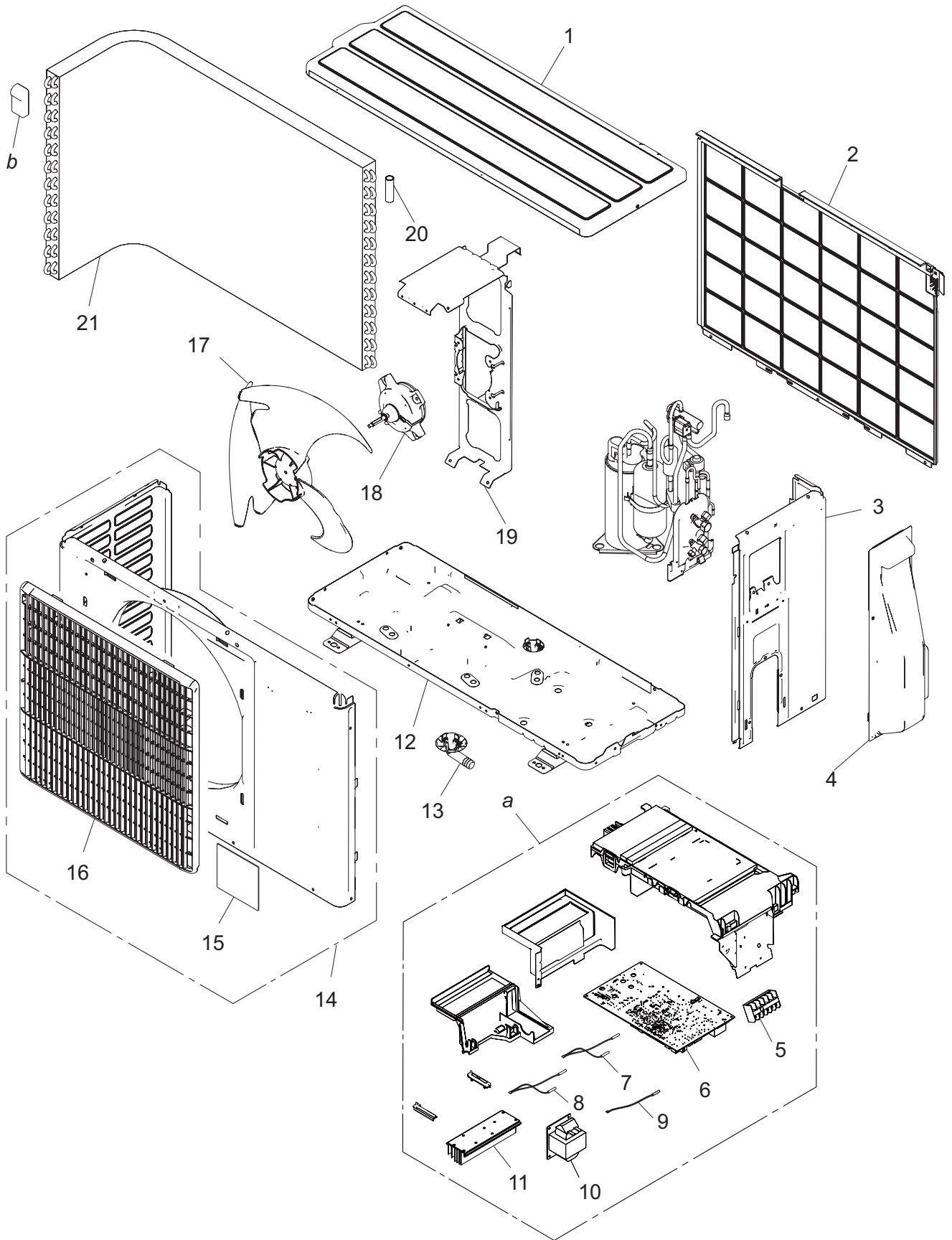
Item no.	Part no.	Part name	Service part
50	9322423009	Compressor assy (for 09 model)	◆
	9322425003	Compressor assy (for 12 model)	◆
51	9322392008	4 way valve assy	◆
52	9970110153	Solenoid	◆
53	9970173011	Expansion valve coil	◆
54	9322403001	Pulse motor valve	◆
55	9322474025	2 way valve assy	◆
56	9318254051	3 way valve assy	◆
57	9322389008	S insurator H	◆
58	9322388001	S insurator F	◆
59	9322387004	S insurator B	◆

3-2. Models: ROG14KATA and ROG18KATA

■ Exterior parts and Chassis

TECHNICAL DATA
AND PARTS LIST

TECHNICAL DATA
AND PARTS LIST

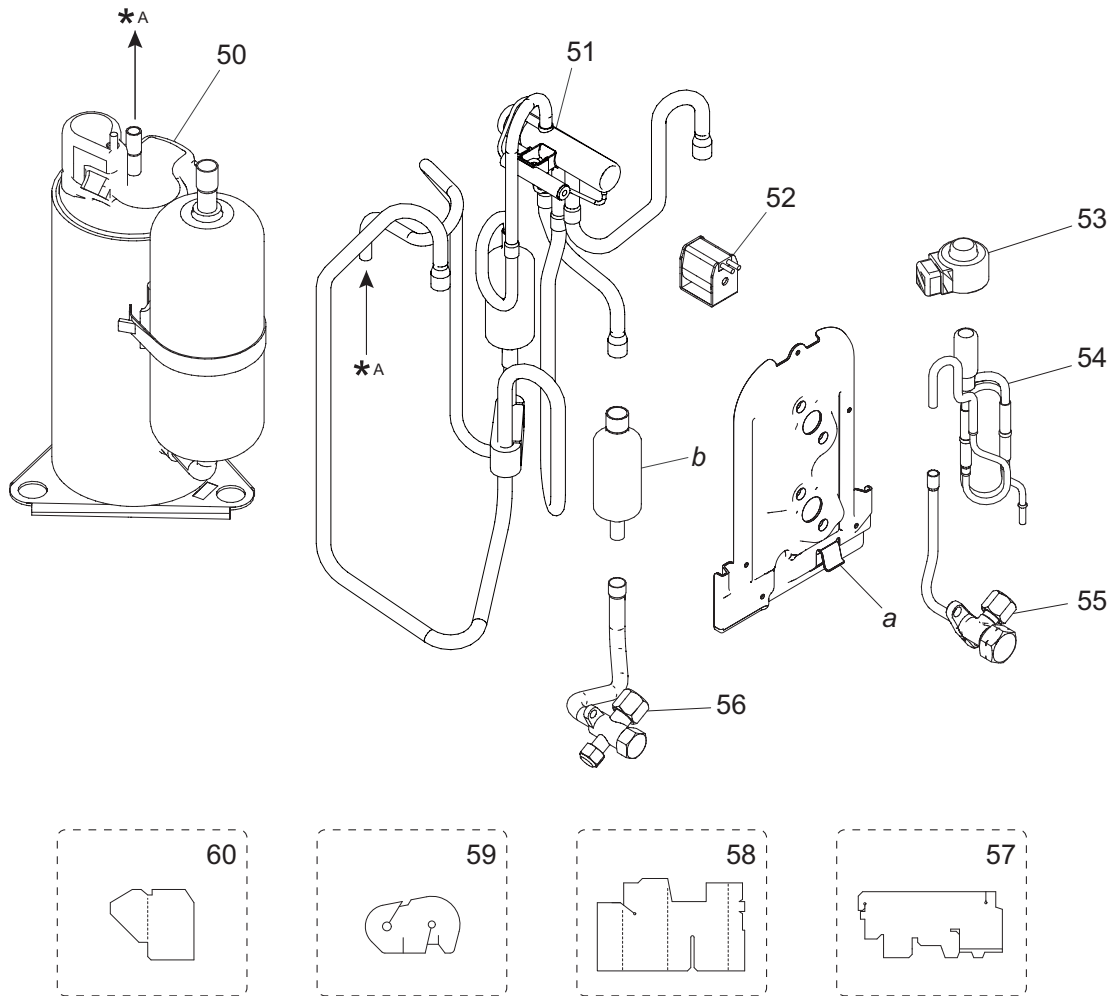


Item no.	Part no.	Part name	Service part
1	9322556028	Top panel assy	◆
2	9322811011	Protective net	◆
3	9322552020	Cabinet right assy	◆
4	9322570000	Switch cover assy	◆
5	9900435028	Terminal	◆
6	9709685280	Main PCB (Service) (for 14 model)	◆
	9709685372	Main PCB (Service) (for 18 model)	◆
7	9900727062	Thermistor assy	◆
8	9900565060	Thermistor (Outdoor temp.)	◆
9	9900984014	Heat exchanger thermistor	◆
10	9900583019	Reactor assy (for 14 model)	◆
	9900963019	Reactor assy (for 18 model)	◆
11	9322418005	Heat sink	◆
12	9322314024	Base assy	◆
13	9322144003	Drain pipe	◆
14	9322555014	Front panel assy	◆
15	9319151007	Emblem	◆
16	9322135001	Blow grille	◆
17	9322136008	Propeller fan	◆
18	9603657017	Brushless motor	◆
19	9322553010	Motor bracket assy	◆
20	9331404006	Thermistor holder	◆
21	9322275004	Condenser total assy	◆
<i>a</i>	—	Inverter assy	—
<i>b</i>	—	Hair pin cushion	—

Compressor

TECHNICAL DATA
AND PARTS LIST

TECHNICAL DATA
AND PARTS LIST


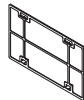
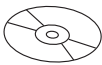
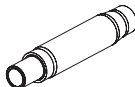


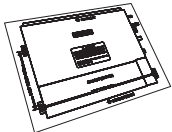




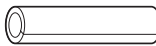

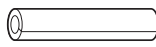


Item no.	Part no.	Part name	Service part
50	9322427007	Compressor assy (for 14 model)	◆
	9322429001	Compressor assy (for 18 model)	◆
51	9322444011	4-way valve assy	◆
52	9970110160	Solenoid	◆
53	9970173011	Expansion valve coil	◆
54	9322463029	Pulse motor valve assy	◆
55	9322474001	2-way valve assy	◆
56	9322475008	3-way valve assy (for 14 model)	◆
	9387831016	3-way valve assy (for 18 model)	◆
57	9322535009	S-insulator B	◆
58	9322536006	S-insulator F	◆
59	9322537003	S-insulator H	◆
60	9323045002	S-insulator V	◆
a	—	Valve bracket	—
b	—	Muffler	—


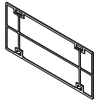
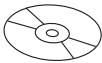
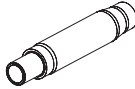


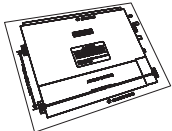






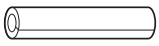
4. Accessories

4-1. Indoor unit

■ Models: RDG09KLLAP, RDG12KLLAP, and RDG14KLLAP


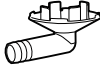
Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Filter (small)		2
Operating manual (CD-ROM)		1	Drain hose		1
Installation manual		1	Hose band		1
Installation template		1	Drain hose insulation B		1
Washer		8	Insulation (for electrical wiring)		2
Cable tie (large)		4	Coupler heat insulation (large)		1
Cable tie (medium)		3	Coupler heat insulation (small)		1

■ Model: RDG18KLLAP

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Filter (large)		2
Operating manual (CD-ROM)		1	Drain hose		1
Installation manual		1	Hose band		1
Installation template		1	Drain hose insulation B		1
Washer		8	Insulation (for electrical wiring)		2
Cable tie (large)		4	Coupler heat insulation (large)		1
Cable tie (medium)		3	Coupler heat insulation (small)		1

4-2. Outdoor unit

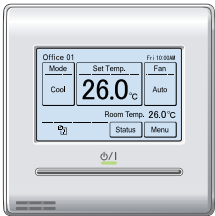
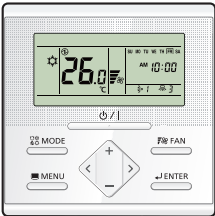
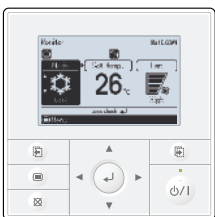
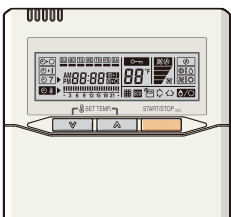
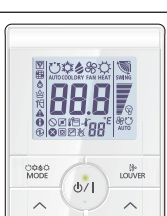
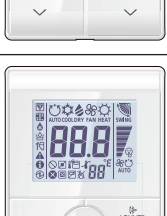
■ Models: ROG09KATA, ROG12KATA, ROG14KATA, and ROG18KATA



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

5. Optional parts

5-1. Indoor unit









■ Controllers

Exterior	Part name	Model name	Summary
	Wired remote controller	UTY-RNRYZ*	Easy finger touch operation with LCD panel. Backlit LCD enables easy operation in a dark room. Wire type: Non-polar 2-wire
	Wired remote controller	UTY-RLRY	High visibility and easy operation. Room temperature can be accurately controlled using the built-in thermo sensor. Wire type: Non-polar 2-wire
	Wired remote controller	UTY-RVNYM	Large and full-dot liquid crystal screen, wide and large keys easy to press, user-intuitive arrow key. Wire type: Polar 3-wire
	Wired remote controller	UTY-RNNYM	Room temperature can be controlled by detecting the temperature accurately with built-in thermo sensor. Wire type: Polar 3-wire
	Simple remote controller	UTY-RSRY	Compact remote controller concentrates on the basic functions such as Start/Stop, fan control, temperature setting, and operation mode. Wire type: Non-polar 2-wire
	Simple remote controller	UTY-RHRY	Compact remote controller concentrates on the basic functions such as Start/Stop, fan control, and temperature setting. Wire type: Non-polar 2-wire

Exterior	Part name	Model name	Summary
	Simple remote controller	UTY-RSNYM	Compact remote controller concentrates on the basic functions such as Start/Stop, fan control, temperature setting, and operation mode. Wire type: Polar 3-wire
	IR receiver kit with wireless remote controller	UTY-LBTYM	Unit control is performed by wireless remote controller.

NOTE: Available functions may differ by the remote controller. For details, refer to the operation manual.

Others

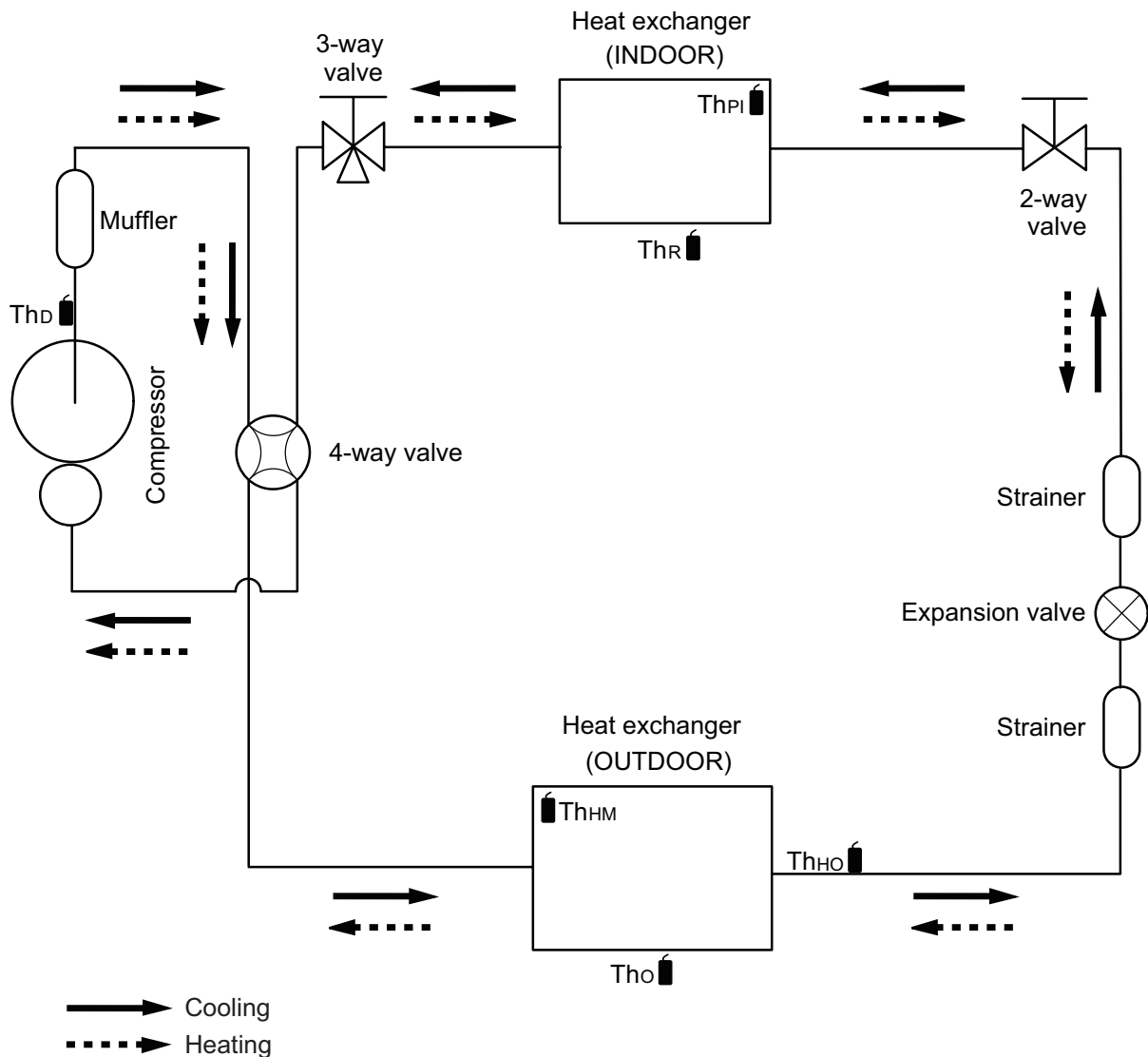
Exterior	Part name	Model name	Summary
	Remote sensor unit	UTY-XSZX	Thermo-sensor for sensing the temperature of arbitrary place in the room.
	Auto louver grille kit	UTD-GXTA-W	Width: 683 mm For 09, 12, and 14 models
	Auto louver grille kit	UTD-GXTB-W	Width: 883 mm For 18 model
	External connect kit	UTY-XWZXZG	Use to connect with various peripheral devices and air conditioner PCB. For control output port.
	Wireless LAN adapter	UTY-TFSXZ1	Remotely manage an air conditioning system using mobile devices such as smartphones and tablets. For connection indoor unit with UART interface.
	Modbus converter	UTY-VMSX	For connection between indoor unit with UART interface and a Modbus open network.
	KNX converter	UTY-VKSX	For connection between indoor unit with UART interface and a KNX open network.
	External switch controller	UTY-TERX	Air conditioner switching can be controlled by connecting other external sensor switches.

NOTE: Combined use of following optional parts and Wireless LAN adapter (UTY-TFSXZ1) is not allowed.

- Modbus converter
- KNX converter

6. Refrigerant system diagrams

6-1. Models: ROG09KATA and ROG12KATA



Th_D : Thermistor (Discharge temperature)

Th_O : Thermistor (Outdoor temperature)

Th_{HO} : Thermistor (Heat exchanger out temperature)

Th_{HM} : Thermistor (Heat exchanger middle temperature)

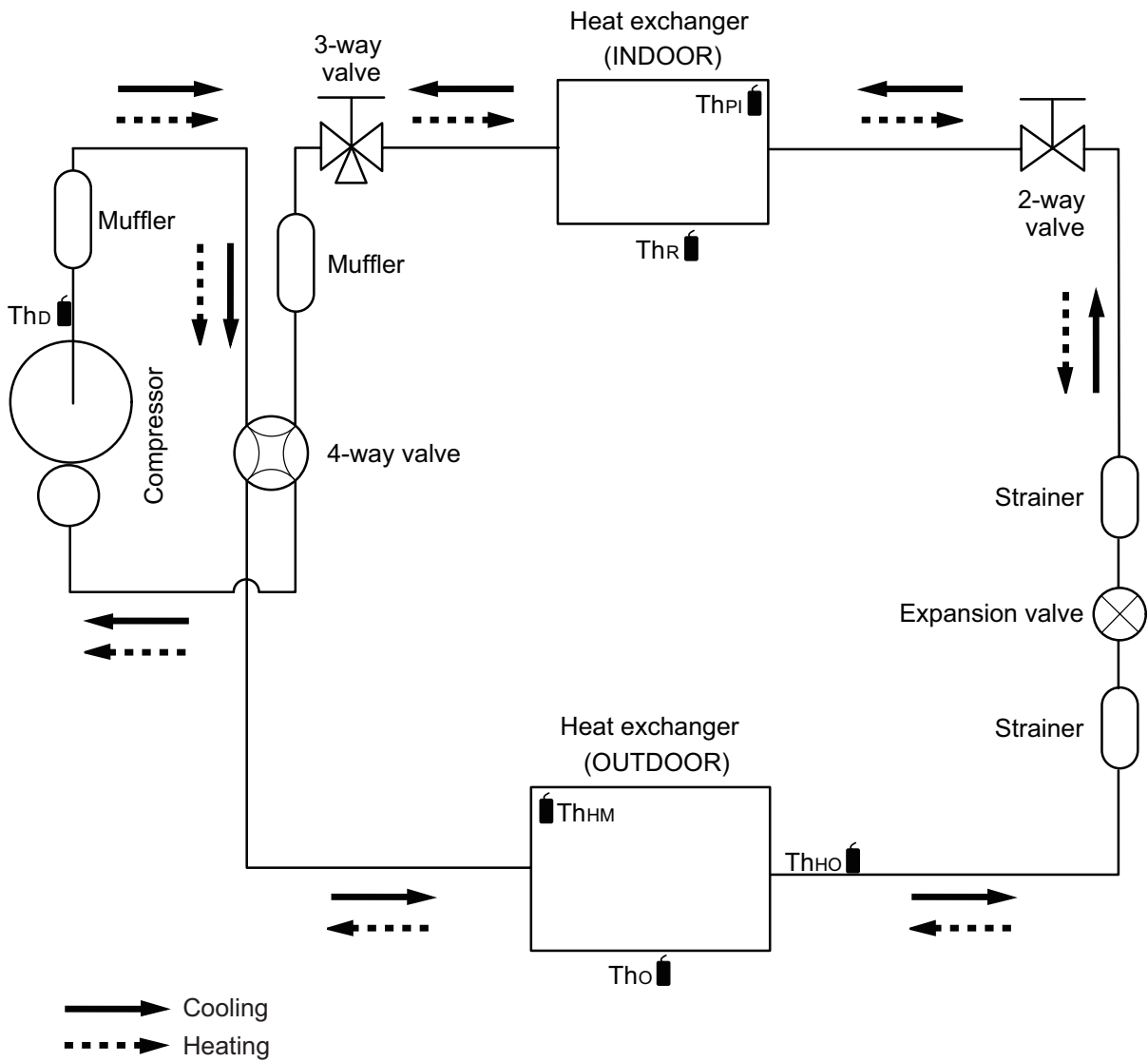
Th_R : Thermistor (Room temperature)

Th_{PI} : Thermistor (Pipe temperature)

6-2. Models: ROG14KATA and ROG18KATA

TECHNICAL DATA
AND PARTS LIST

TECHNICAL DATA
AND PARTS LIST

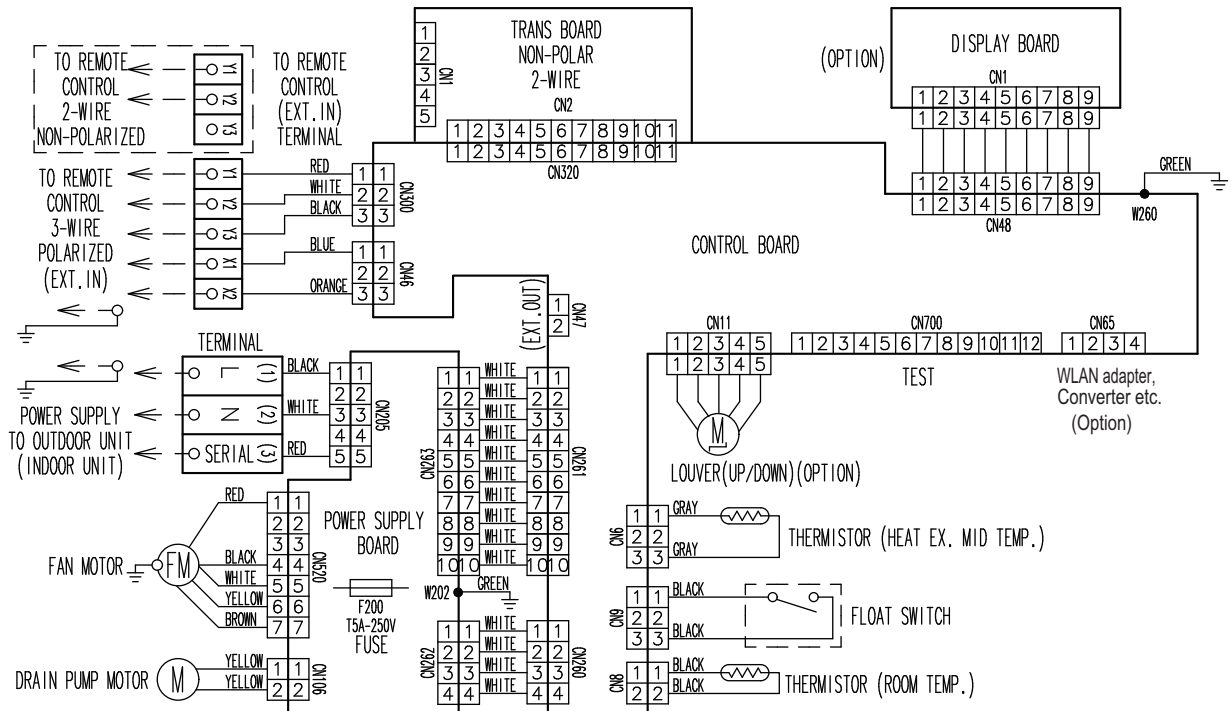


- Th_D : Thermistor (Discharge temperature)
- Th_O : Thermistor (Outdoor temperature)
- Th_{HO} : Thermistor (Heat exchanger out temperature)
- Th_{HM} : Thermistor (Heat exchanger middle temperature)
- Th_R : Thermistor (Room temperature)
- Th_{PI} : Thermistor (Pipe temperature)

7. Wiring diagrams

7-1. Indoor unit

Models: RDG09KLLAP, RDG12KLLAP, RDG14KLLAP, and RDG18KLLAP

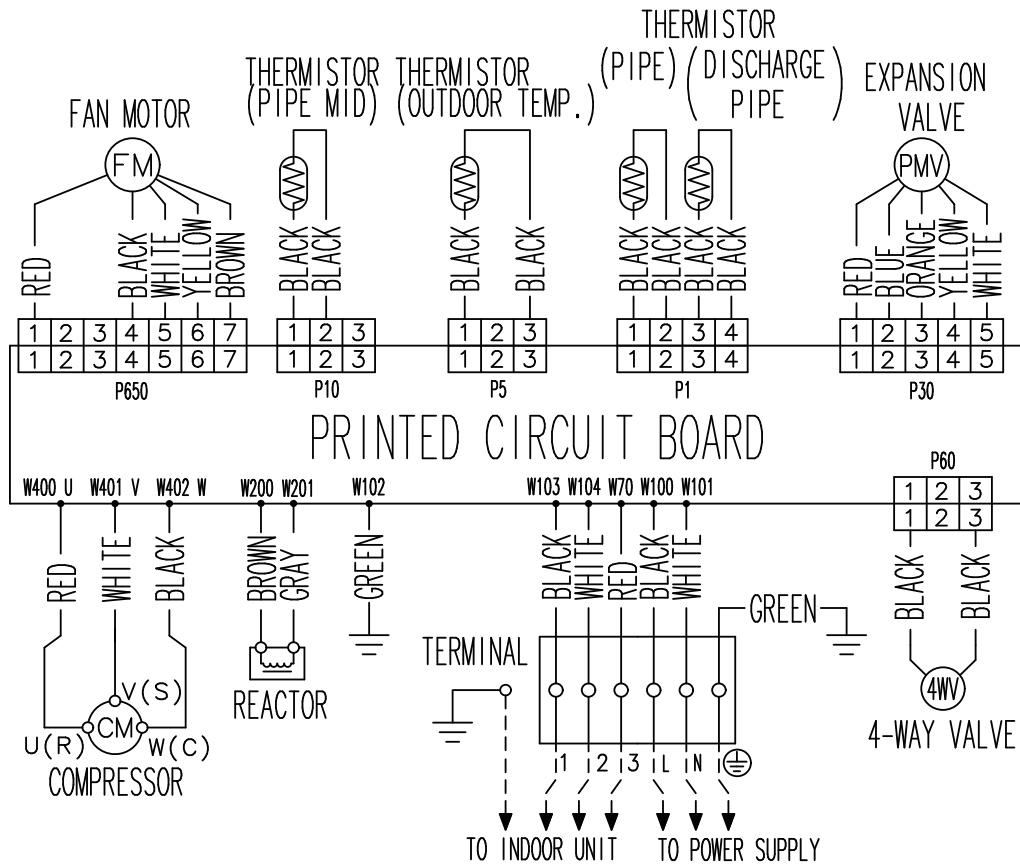


TECHNICAL DATA AND PARTS LIST

TECHNICAL DATA AND PARTS LIST

7-2. Outdoor unit

Models: ROG09KATA, ROG12KATA, ROG14KATA, and ROG18KATA

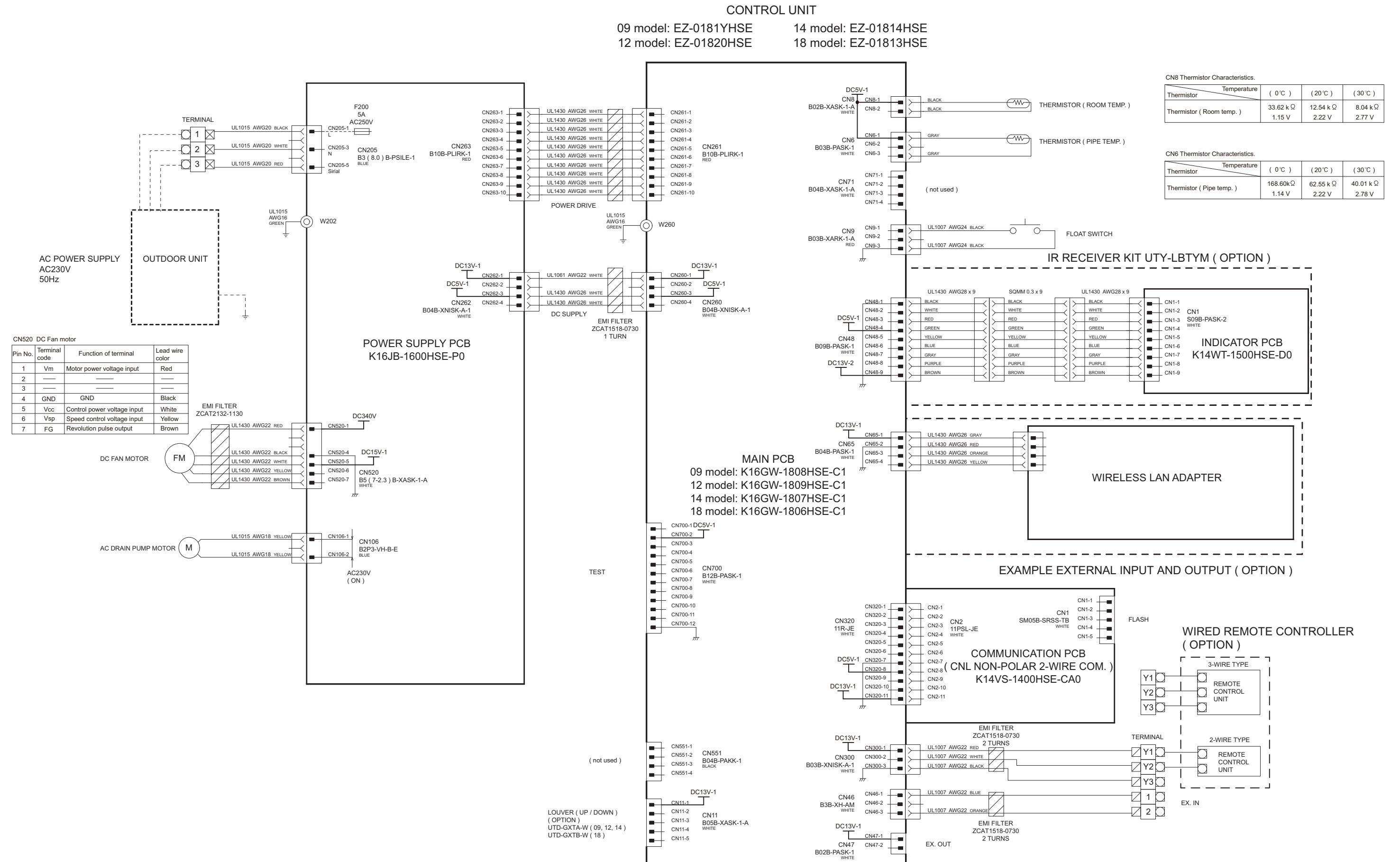


8. PC board diagrams

8-1. Models: RDG09KLLAP, RDG12KLLAP, RDG14KLLAP, and RDG18KLLAP

TECHNICAL DATA AND PARTS LIST

TECHNICAL DATA AND PARTS LIST

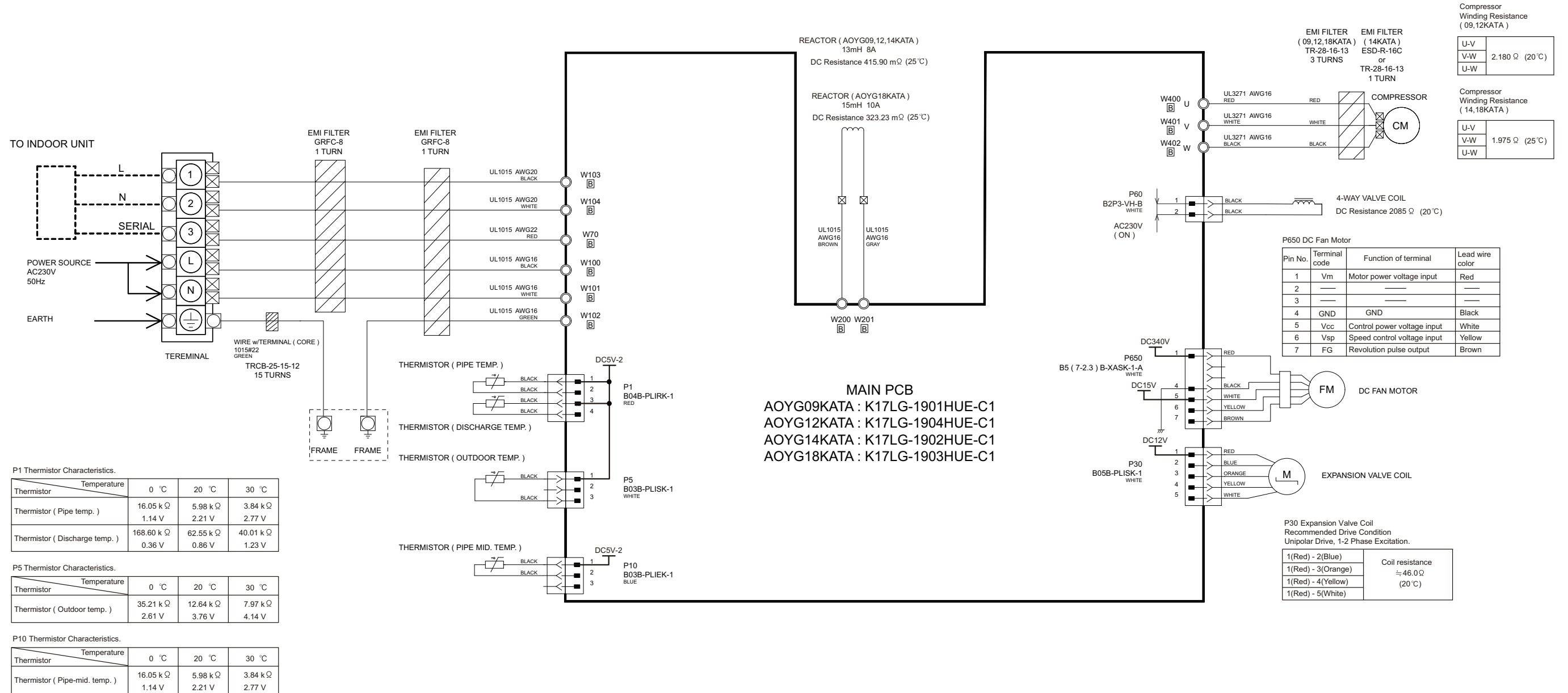


8-2. Models: ROG09KATA, ROG12KATA, ROG14KATA, and ROG18KATA

TECHNICAL DATA AND PARTS LIST

TECHNICAL DATA AND PARTS LIST

INVERTER ASSEMBLY
 AOYG09KATA : EZ-019AHUE
 AOYG12KATA : EZ-019BHUE
 AOYG14KATA : EZ-019CHUE
 AOYG18KATA : EZ-019DHUE



P1 Thermistor Characteristics.

Thermistor	Temperature	0 °C	20 °C	30 °C
Thermistor (Pipe temp.)	Resistance	16.05 k Ω	5.98 k Ω	3.84 k Ω
	Voltage	1.14 V	2.21 V	2.77 V
Thermistor (Discharge temp.)	Resistance	168.60 k Ω	62.55 k Ω	40.01 k Ω
	Voltage	0.36 V	0.86 V	1.23 V

P5 Thermistor Characteristics.

Thermistor	Temperature	0 °C	20 °C	30 °C
Thermistor (Outdoor temp.)	Resistance	35.21 k Ω	12.64 k Ω	7.97 k Ω
	Voltage	2.61 V	3.76 V	4.14 V

P10 Thermistor Characteristics.

Thermistor	Temperature	0 °C	20 °C	30 °C
Thermistor (Pipe-mid. temp.)	Resistance	16.05 k Ω	5.98 k Ω	3.84 k Ω
	Voltage	1.14 V	2.21 V	2.77 V