

SPLIT TYPE  
ROOM AIR CONDITIONER  
WALL MOUNTED TYPE



# SERVICE MANUAL



Indoor unit	Outdoor unit
ASHG09KXCA	AOHG09KXCA
ASHG12KXCA	AOHG12KXCA

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# SPECIFICATIONS

## ELECTRICAL DATA

INDOOR UNIT		ASHG09KXCA	ASHG12KXCA
OUTDOOR UNIT		AOHG09KXCA	AOHG12KXCA
POWER SUPPLY		Single phase, 230 V, 50 Hz	
COOLING	Capacity	2.50 kW	3.40 kW
	Power consumption	0.460 kW	0.670 kW
	EER	5.45 kW/kW	5.09 kW/kW
	Operating current	2.1 A	3.0 A
	Max operating current	8.5 A	9.0 A
	Dehumidification	1.1 L/h	1.2 L/h
HEATING	Capacity	3.60 kW	5.00 kW
	Power consumption	0.630 kW	1.020 kW
	COP	5.72 kW/kW	4.90 kW/kW
	Operating current	2.8 A	4.5 A
	Max operating current	14.0 A	16.0 A

## DIMENSIONS

INDOOR UNIT	H x W x D	293 x 786 x 378 mm
OUTDOOR UNIT	H x W x D	704 x 820 x 315 mm

## WEIGHT

INDOOR UNIT	Net / Shipping	20 kg / 24 kg
OUTDOOR UNIT	Net / Shipping	41 kg / 46 kg

## FAN MOTOR AND REVOLUTION

INDOOR UNIT Discrimination		MFD-W65XA2F	
INDOOR UNIT Cooling	High	1,310 rpm	
	Medium	1,160 rpm	
	Low	1,050 rpm	
	Quiet	780 rpm	
INDOOR UNIT Heating	High	1,490 rpm	
	Medium	1,300 rpm	
	Low	1,130 rpm	
	Quiet	830 rpm	
OUTDOOR UNIT Discrimination		MFE-80DVL	
OUTDOOR UNIT Cooling		660 rpm	740 rpm
OUTDOOR UNIT Heating		610 rpm	660 rpm

## AIR CIRCULATION

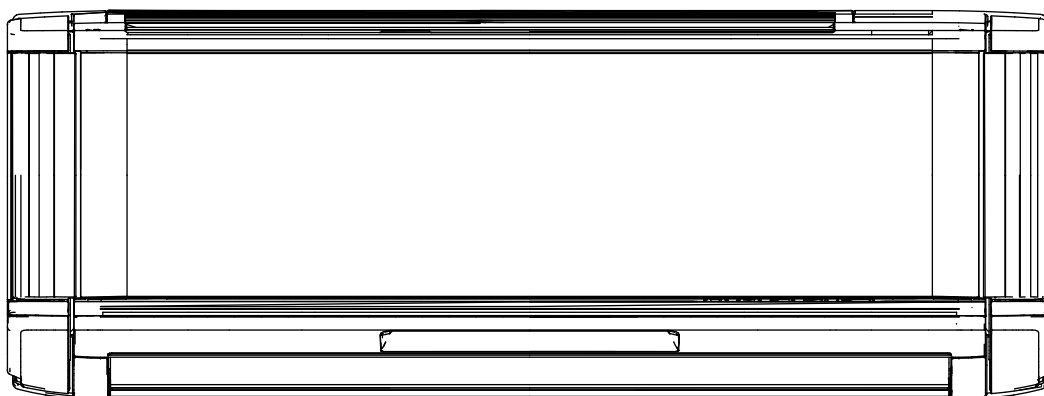
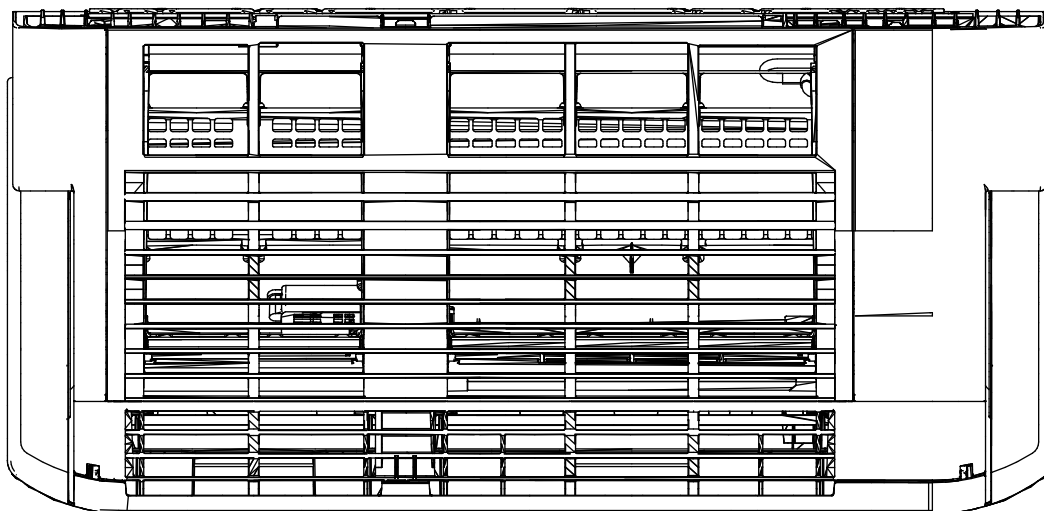
INDOOR UNIT	High	670 m3/h	
	Medium	590 m3/h	
	Low	520 m3/h	
	Quiet	350 m3/h	
OUTDOOR UNIT Cooling		1,975 m3/h	2,230 m3/h
OUTDOOR UNIT Heating		1,820 m3/h	1,975 m3/h

## NOISE LEVEL

INDOOR UNIT Cooling	High	46 dB	
	Medium	42 dB	
	Low	38 dB	
	Quiet	28 dB	
INDOOR UNIT Heating	High	48 dB	
	Medium	43 dB	
	Low	39 dB	
	Quiet	30 dB	
OUTDOOR UNIT Cooling		40 dB	44 dB
OUTDOOR UNIT Heating		41 dB	43 dB

## COMPRESSOR AND REFRIGERANT

TYPE	Hermetic type, 6 pole, 2-cylinder rotary, DC brushless motor
DISCRIMINATION	9RD138ZCA21
WEIGHT (with oil)	10.0 kg
REFRIGERANT TYPE	R32
PRECHARGED REFRIGERANT	1,300 g
MAXIMUM PIPING LENGTH	15 m
MAXIMUM PIPING HEIGHT DIFFERENCE	10 m

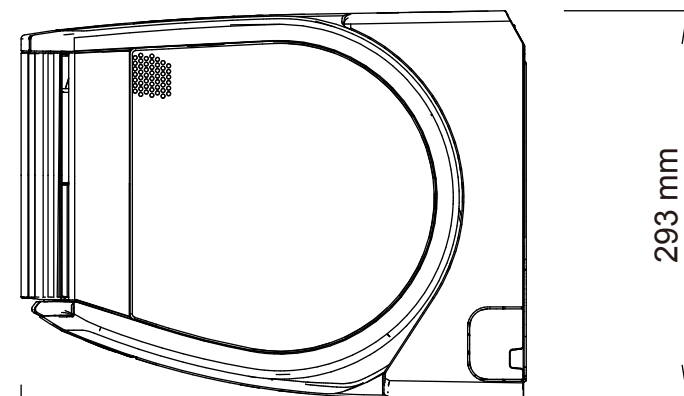
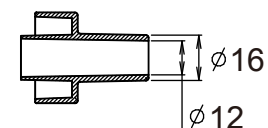
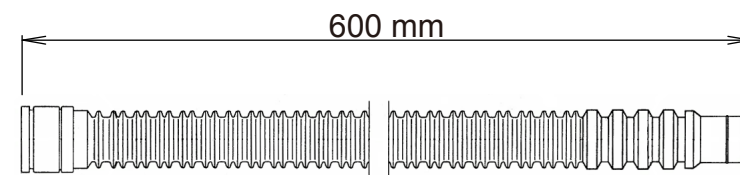


786 mm

## DIMENSIONS

### INDOOR UNIT

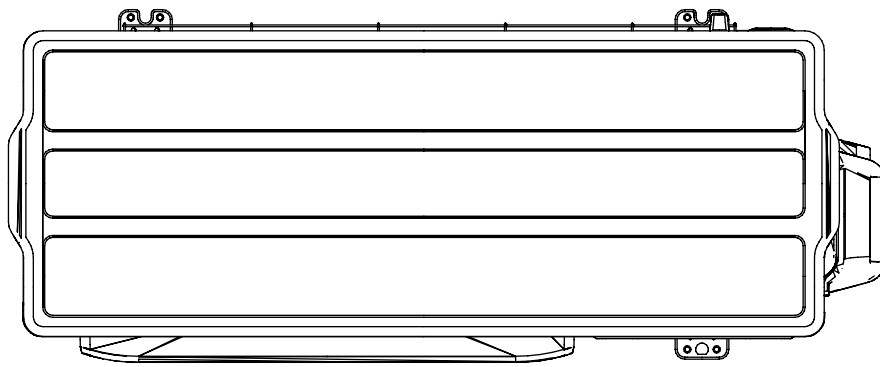
Drain hose length : 600 mm  
 Drain hose diameter  
 Inside : 12 mm  
 Outside : 16 mm



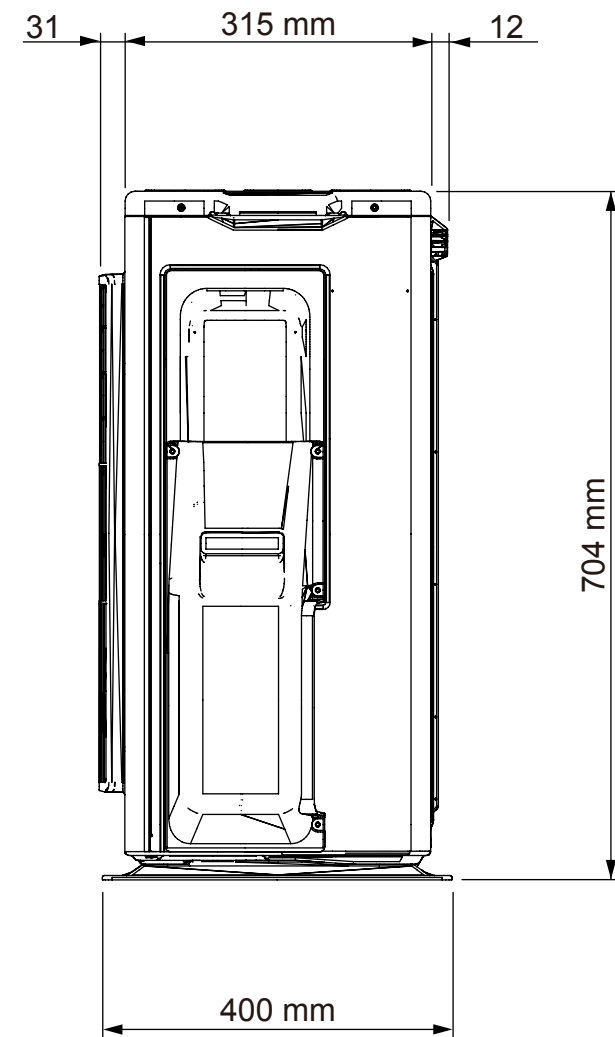
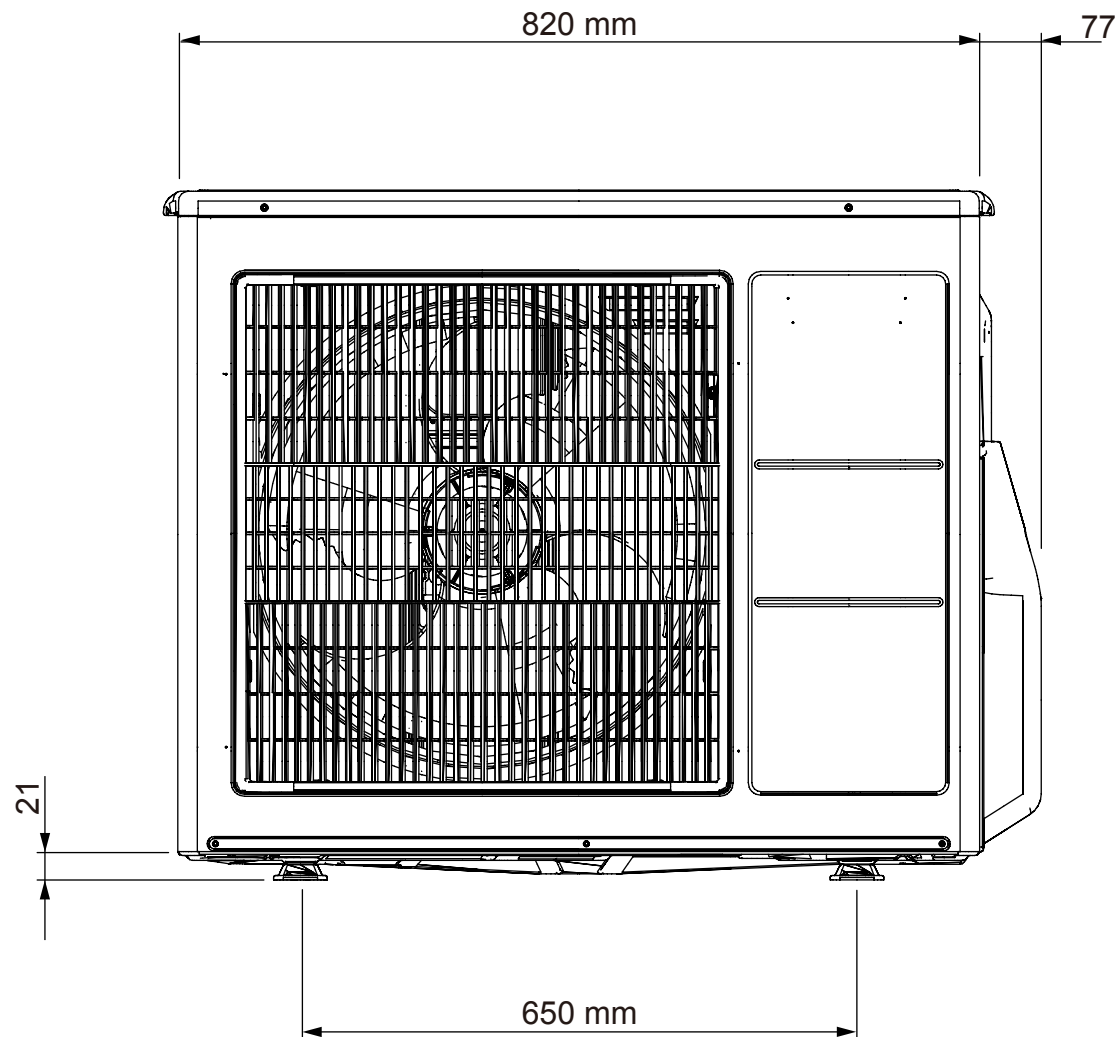
378 mm



293 mm

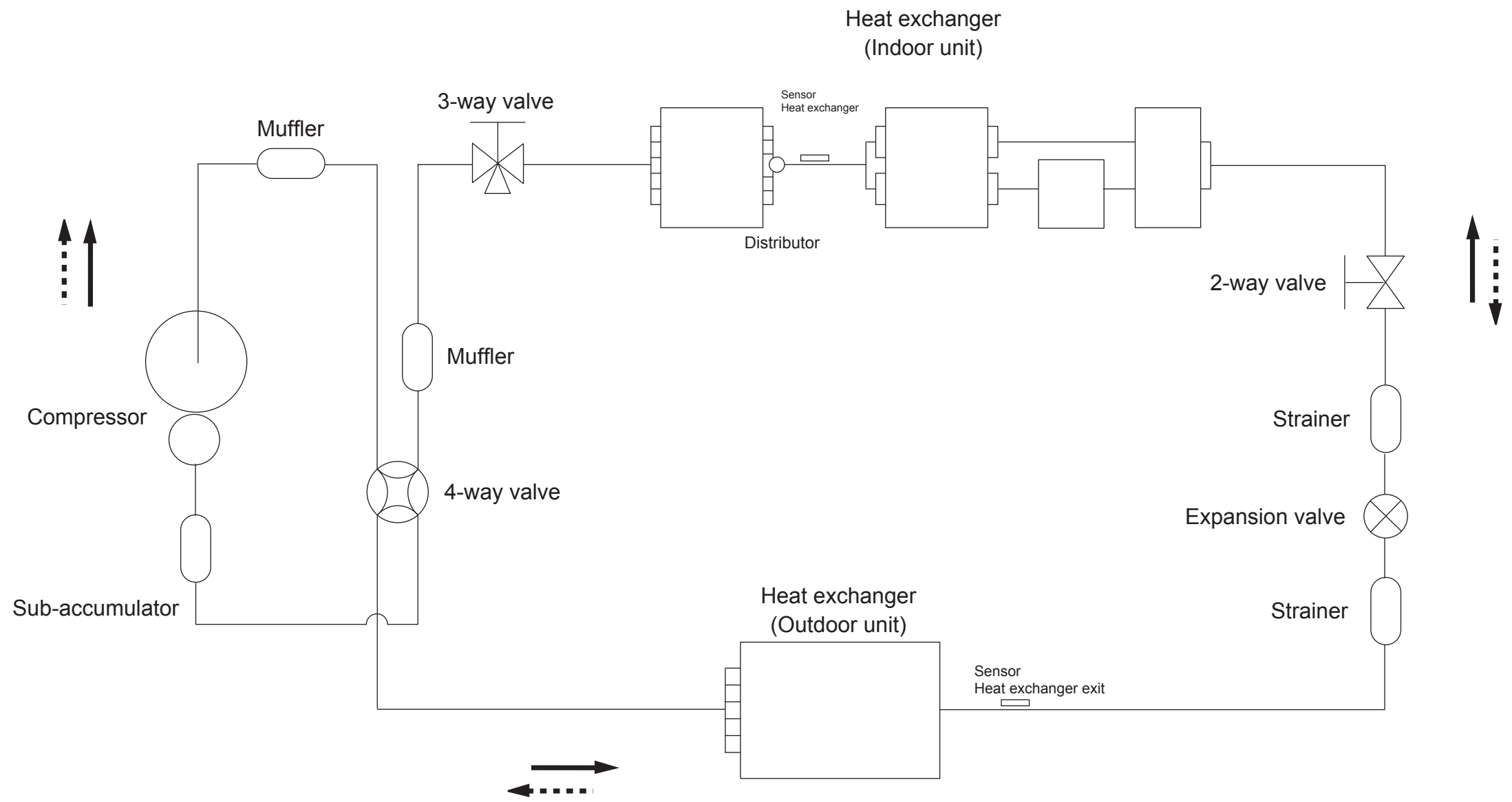


OUTDOOR UNIT





# REFRIGERANT SYSTEM DIAGRAM



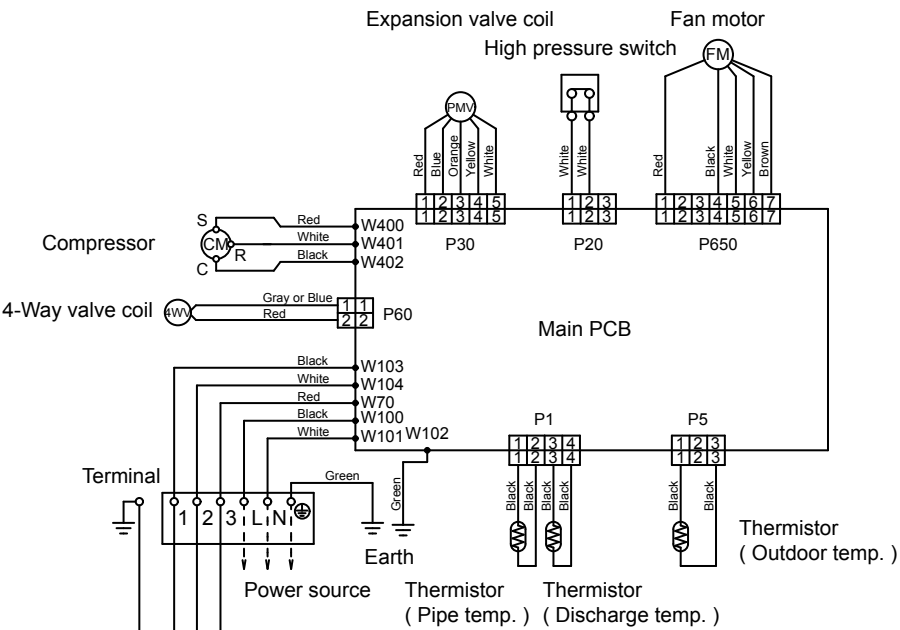
Cooling flow

Heating flow

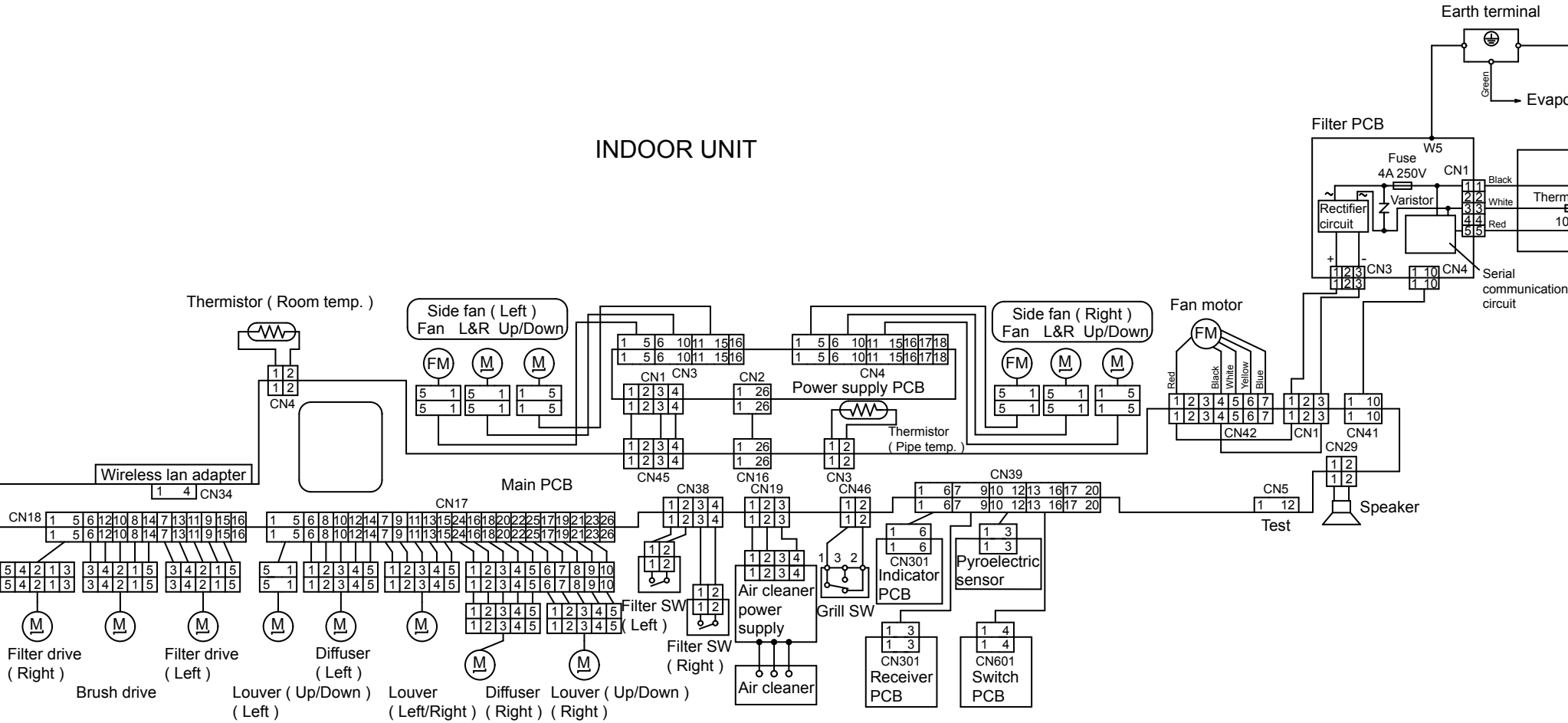
Refrigerant pipe diameter  
 Liquid : 1/4" (6.35 mm)  
 Gas : 3/8" (9.52 mm)

CIRCUIT DIAGRAM

OUTDOOR UNIT

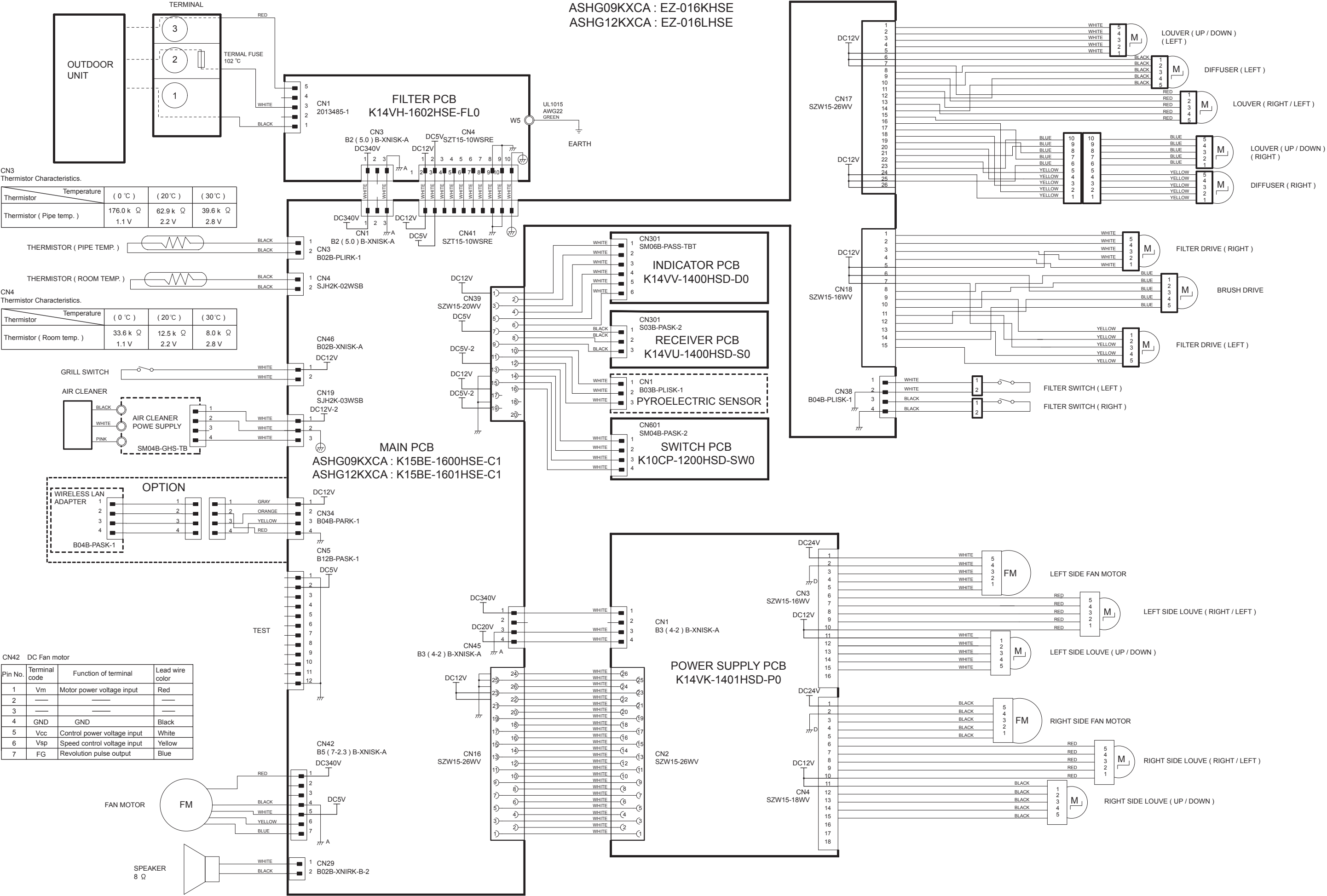


INDOOR UNIT

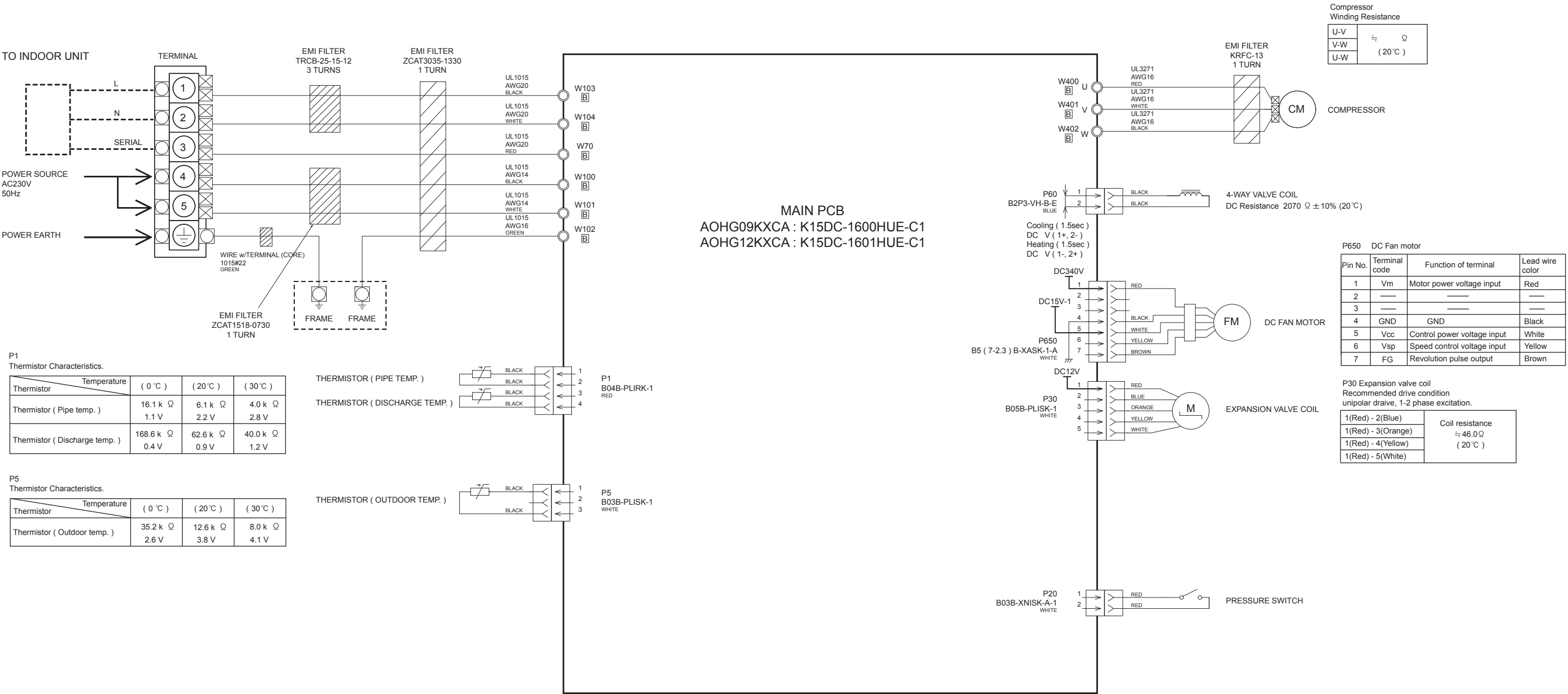


PCB CIRCUIT DIAGRAM

CONTROL UNIT  
ASHG09KXCA : EZ-016KHSE  
ASHG12KXCA : EZ-016LHSE



INVERTER ASSEMBLY  
AOHG09KXCA : EZ-0169HUE  
AOHG12KXCA : EZ-016AHUE



## ERROR DETECTION

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 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 operation.

Display mode ● : 0.5s ON / 0.5s OFF  
 ◇ : 0.1s ON / 0.1s OFF  
 ( ) : Number of flashing

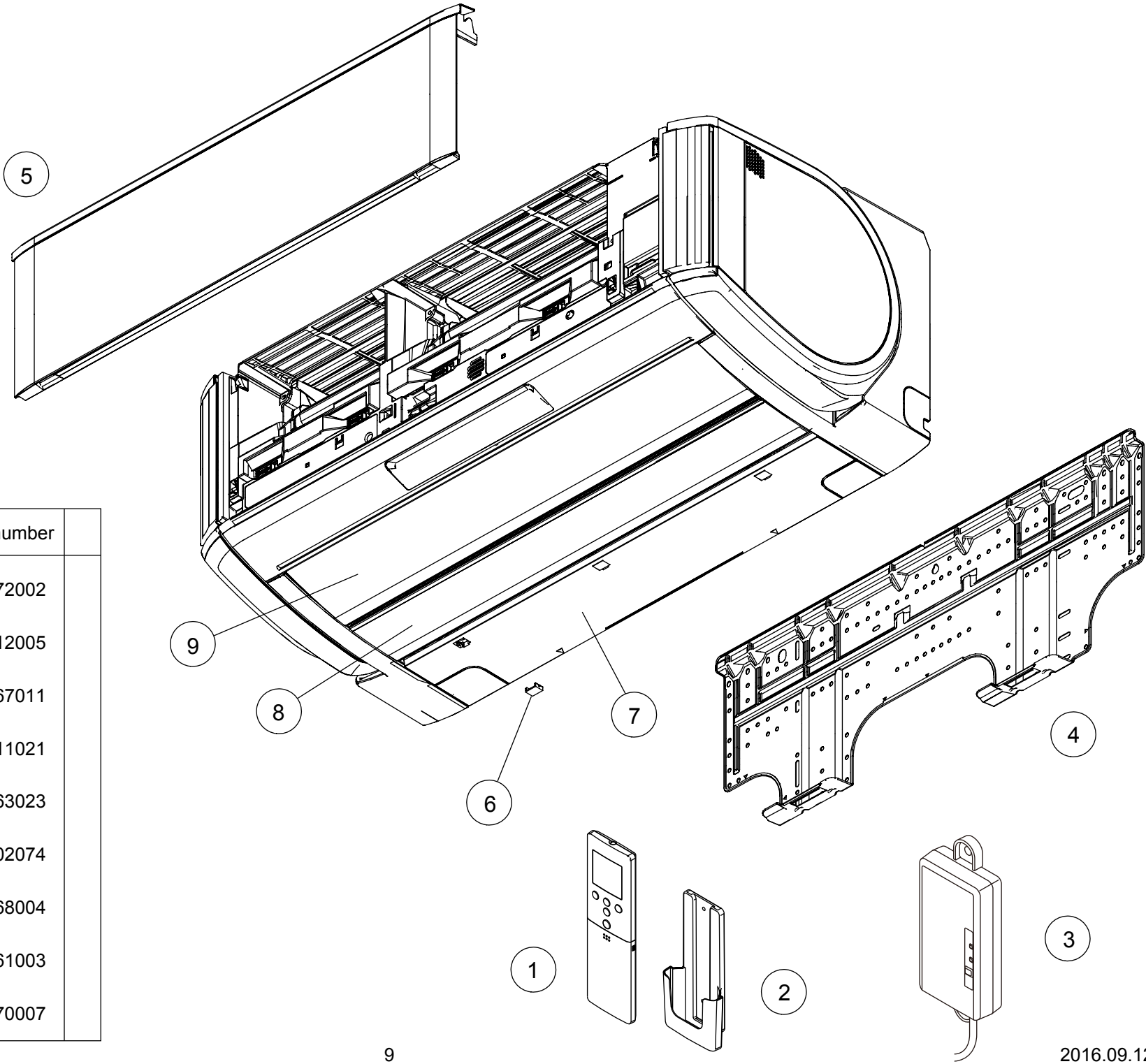
Error display			Error code	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
●(1)	●(1)	◇	11	Serial communication error
●(1)	●(2)	◇	12	• Wired remote controller communication error • Server room control communication error
●(1)	●(5)	◇	15	Check run unfinished
●(1)	●(6)	◇	16	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 slave unit) [Simultaneous Multi] • Connection unit number error (indoor unit or branch unit) [Flexible Multi]
●(2)	●(6)	◇	26	Address setting error in wired remote controller system
●(2)	●(7)	◇	27	Master unit, slave unit set-up error [Simultaneous Multi]
●(3)	●(2)	◇	32	Indoor unit PCB model information error
●(3)	●(5)	◇	35	Manual auto switch error
●(4)	●(1)	◇	41	Room temp. sensor error
●(4)	●(2)	◇	42	Indoor unit Heat Ex. Middle temp. sensor error
●(5)	●(1)	◇	51	Indoor unit fan motor 1 error (Main fan)
●(5)	●(3)	◇	53	Drain pump error
●(5)	●(4)	◇	54	Electric air cleaner reverse VDD error
●(5)	●(5)	◇	55	Filter set error
●(5)	●(7)	◇	57	Damper error
●(5)	●(8)	◇	58	Intake grille error
●(5)	●(9)	◇	59	Indoor unit fan motor 2 error (Left side fan)
●(5)	●(10)	◇	5A	Indoor unit fan motor 3 error (Right side fan)

●(5)	●(15)	◇	5U	Indoor unit 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)	●(10)	◇	6A	Display PCB microcomputers communication error
●(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
●(9)	●(7)	◇	97	Outdoor unit fan motor error
●(9)	●(9)	◇	99	4-way 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)	◇	12	Branch boxes error [Flexible Multi]

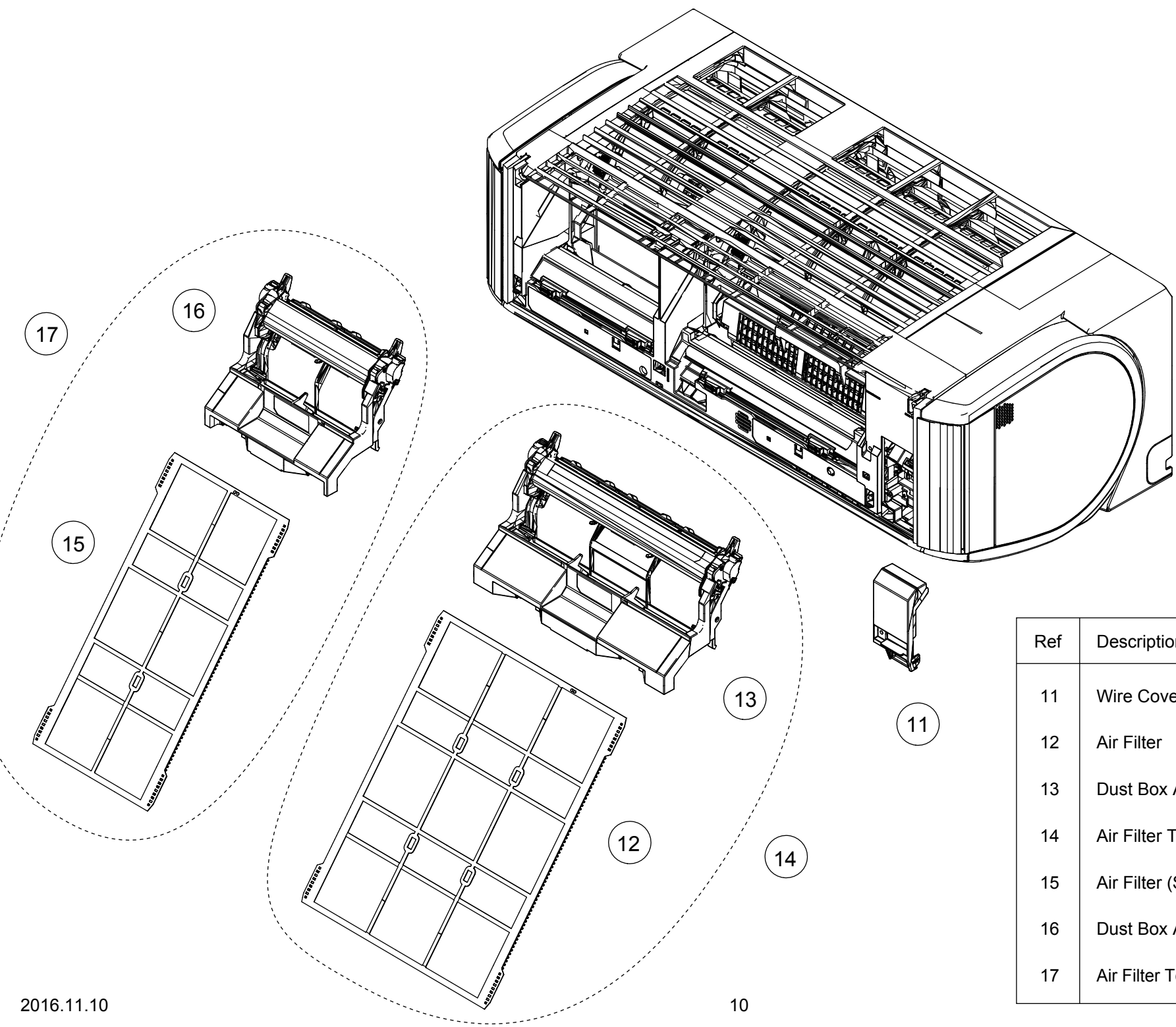
PARTS

INDOOR UNIT  
ASHG09KXCA  
ASHG12KXCA

Ref	Description	Parts number	
1	Remote Control	9382372002	
2	Remote Control Holder	9318912005	
3	Wireless LAN Control	9382167011	
4	Bracket Panel	9321411021	
5	Intake Grille	9321363023	
6	Screw Cap	9309002074	
7	Under Cover	9321368004	
8	Diffuser Assy	9321761003	
9	Louver	9321370007	

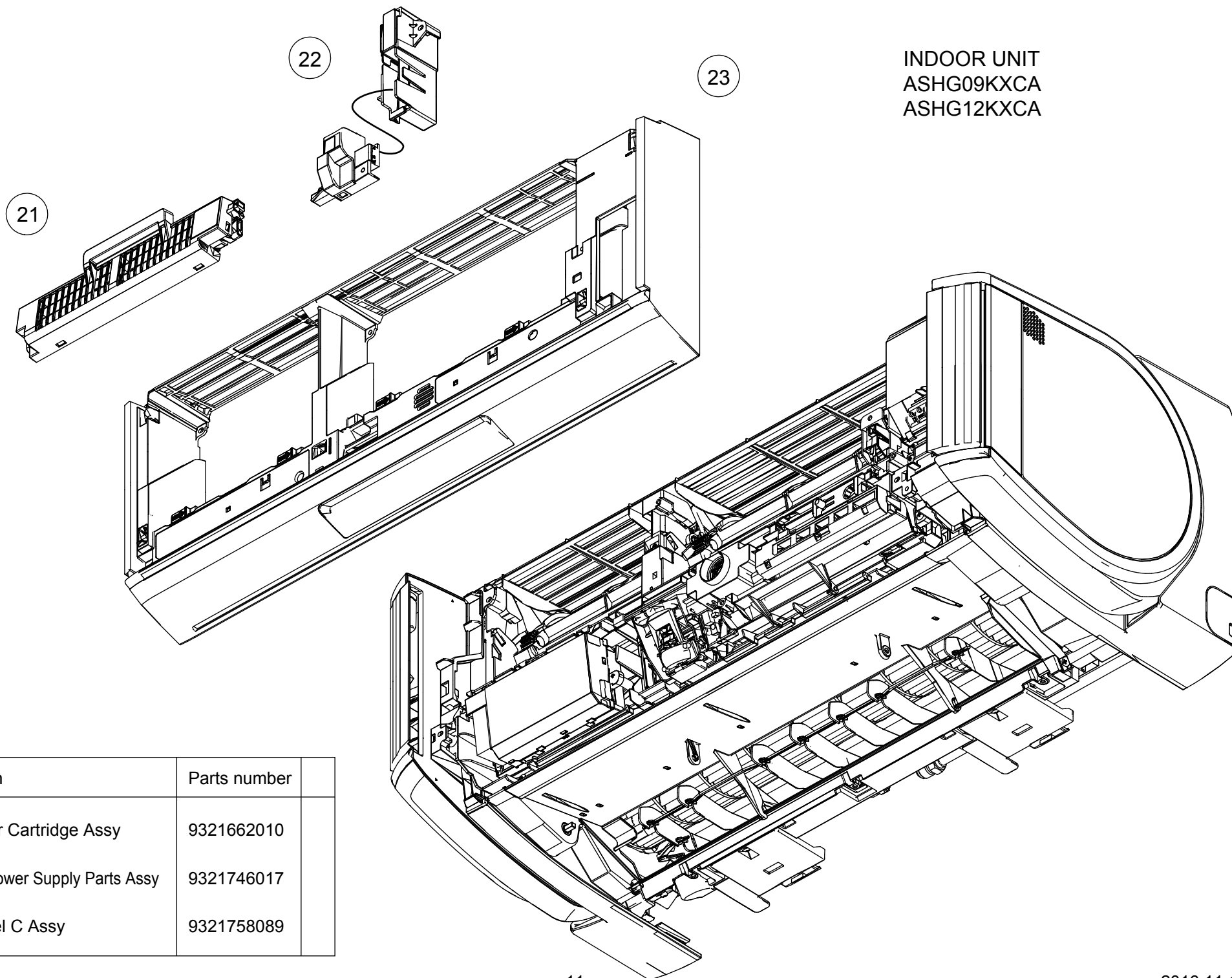


INDOOR UNIT  
ASHG09KXCA  
ASHG12KXCA



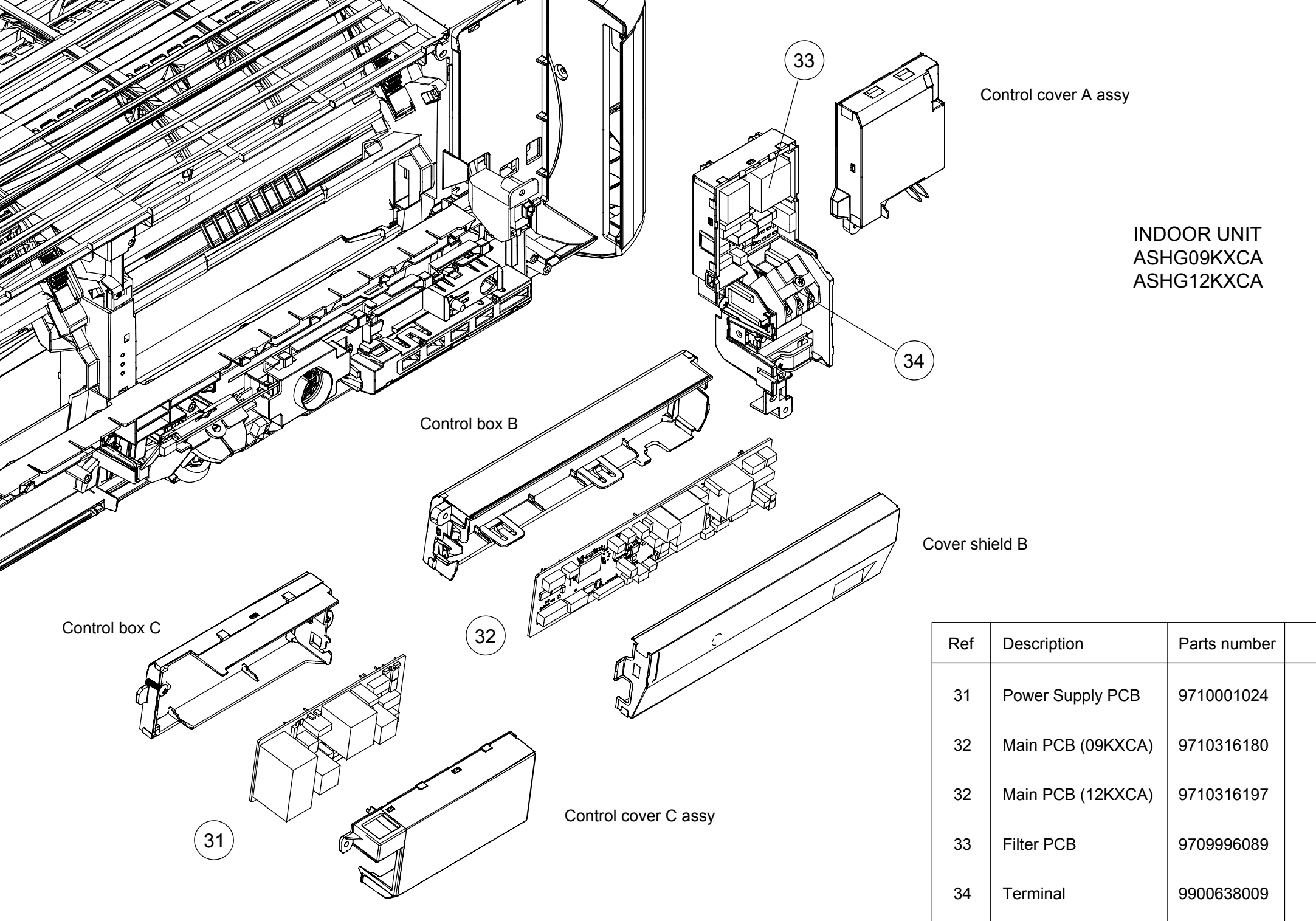
Ref	Description	Parts number	
11	Wire Cover Assy	9321791024	
12	Air Filter	9321412004	
13	Dust Box Assy	9321778049	
14	Air Filter Total Assy	9321777066	
15	Air Filter (S)	9321427008	
16	Dust Box Assy (S)	9321778056	
17	Air Filter Total Assy (S)	9321777073	

INDOOR UNIT  
ASHG09KXCA  
ASHG12KXCA



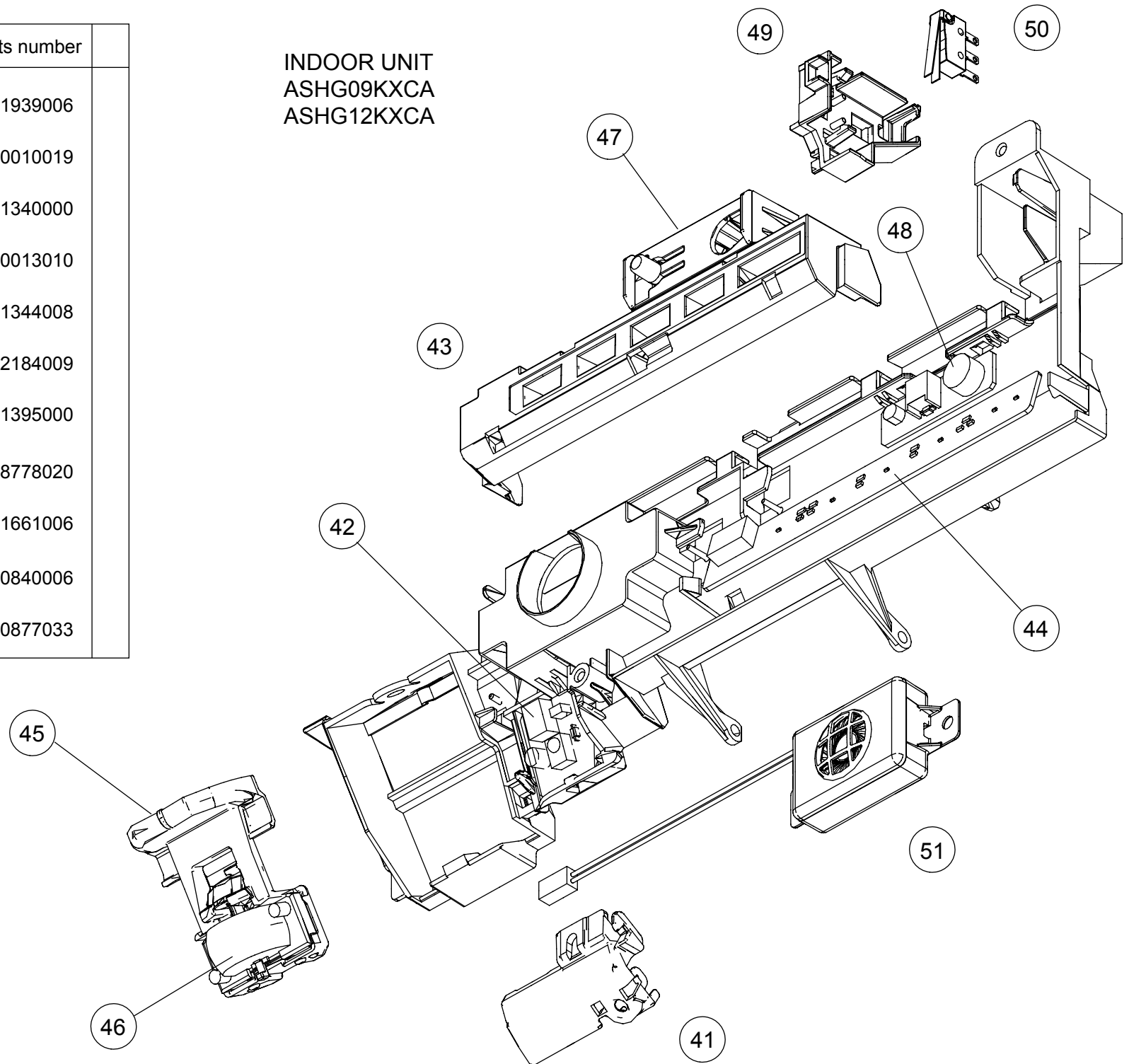
Ref	Description	Parts number	
21	Air Cleaner Cartridge Assy	9321662010	
22	Air Clean Power Supply Parts Assy	9321746017	
23	Front Panel C Assy	9321758089	

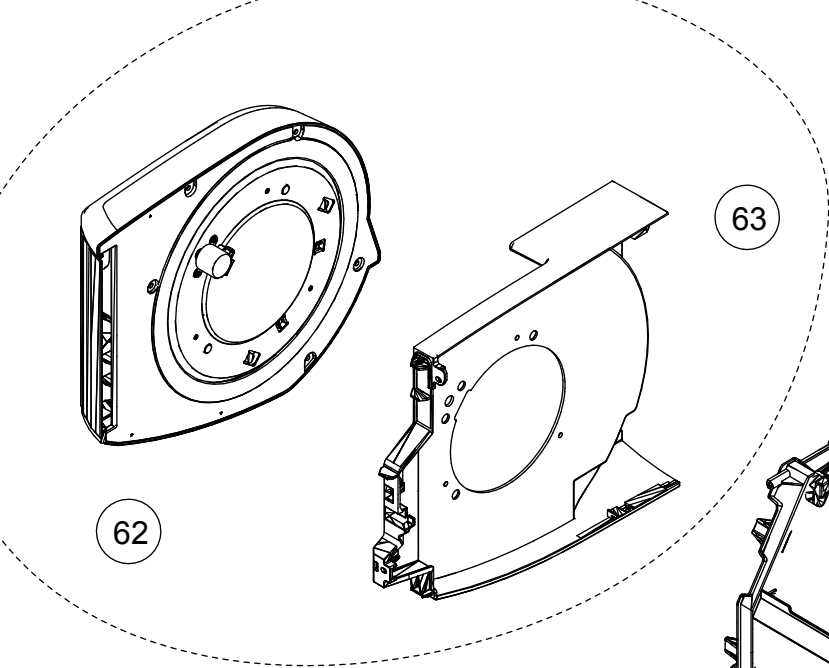




Ref	Description	Parts number	
41	Thermopile Case	9321939006	
42	Receiver PCB	9710010019	
43	Display Case	9321340000	
44	Indicator PCB	9710013010	
45	Sensor Key Top	9321344008	
46	Pyroelectric Sensor	9322184009	
47	Button Cover	9321395000	
48	Switch PCB	9708778020	
49	Switch Case	9321661006	
50	Micro Switch	9900840006	
51	Speaker	9900877033	

INDOOR UNIT  
ASHG09KXCA  
ASHG12KXCA



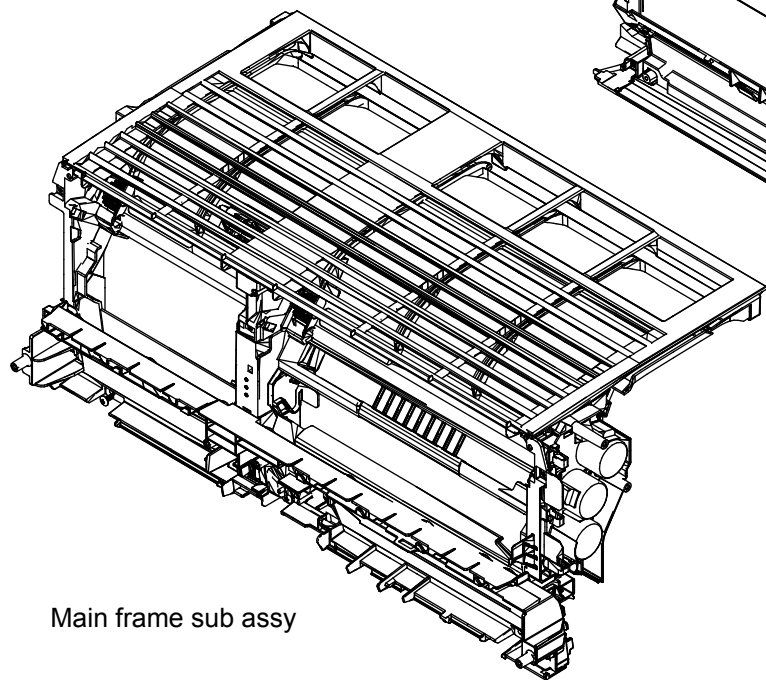


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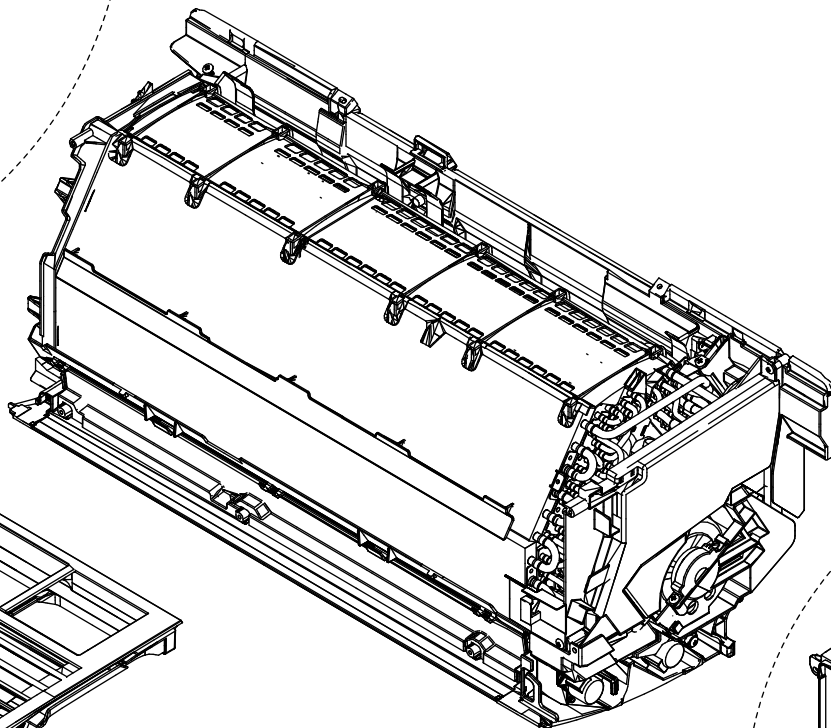
INDOOR UNIT  
ASHG09KXCA  
ASHG12KXCA

63

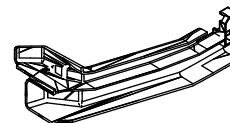
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Main frame sub assy

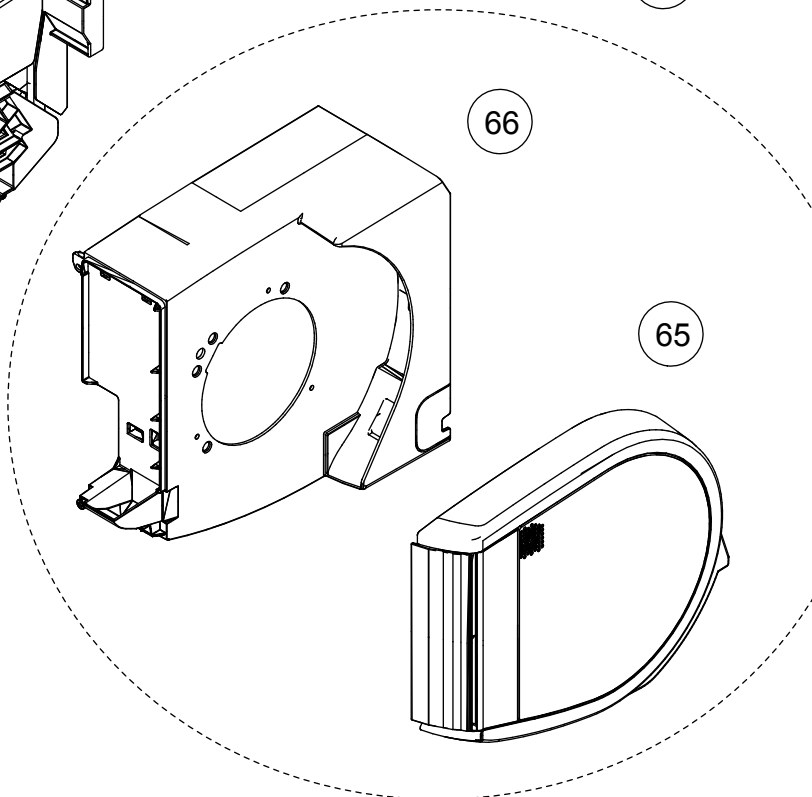


67



Ref	Description	Parts number	
61	Front Panel L Assy	9321754005	
62	Side Fan L Assy	9321755002	
63	Front Panel L	9321346002	
64	Front Panel R Sub Assy	9321749001	
65	Side Fan R Assy	9321750021	
66	Front Panel R	9321345005	
67	Cable Guide	9321367007	

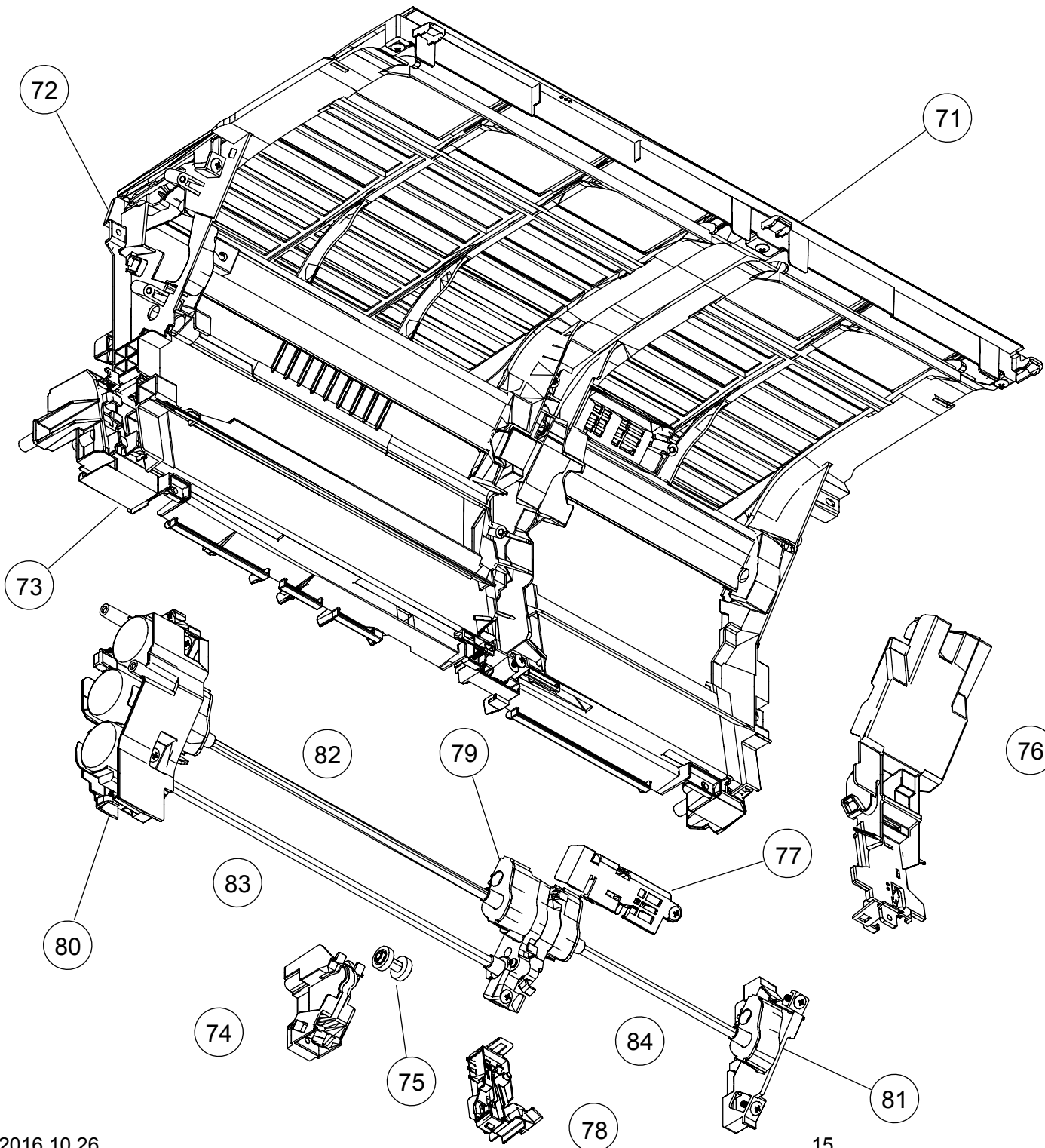
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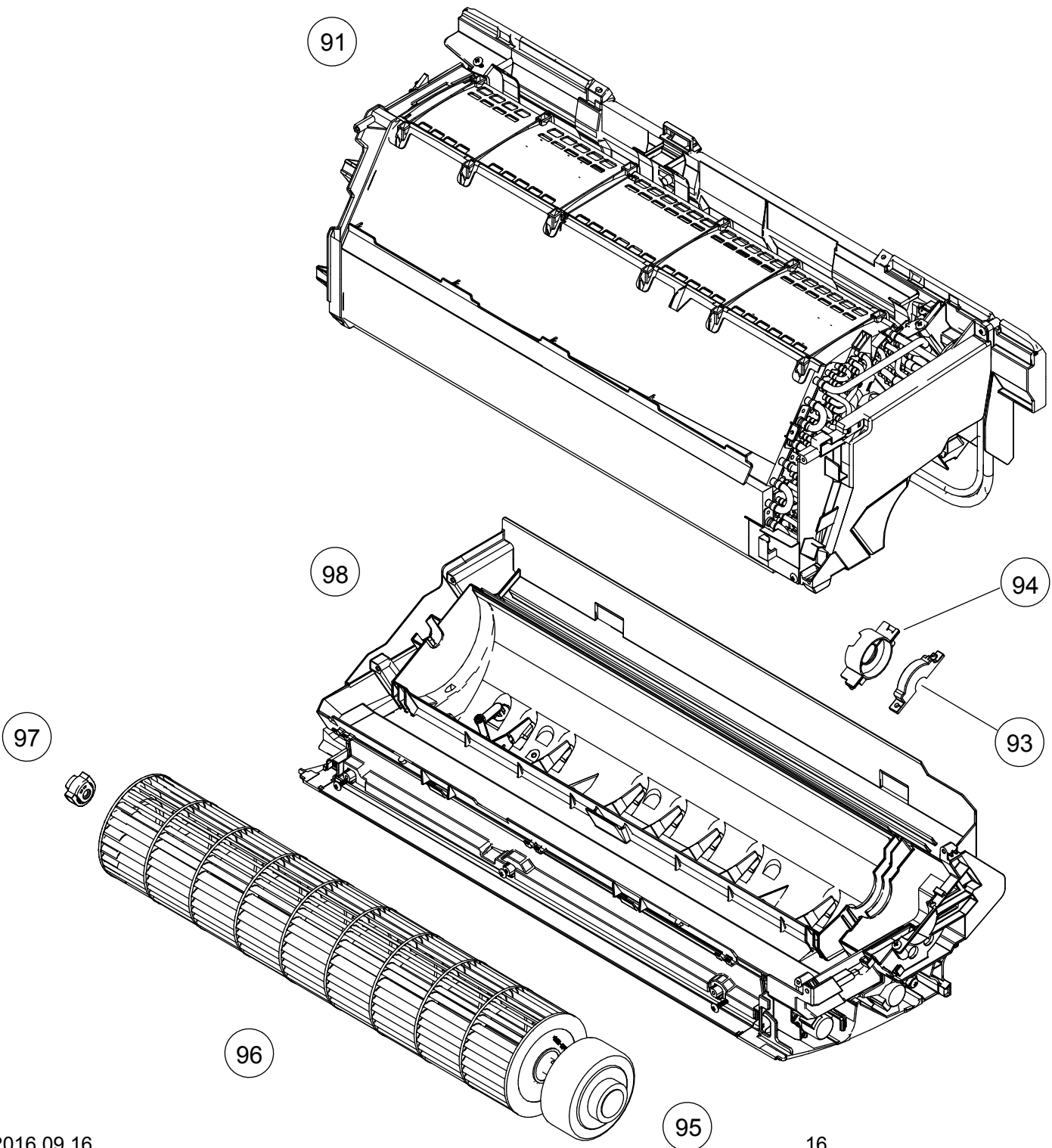
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65

INDOOR UNIT  
ASHG09KXCA  
ASHG12KXCA  
Main frame sub assy



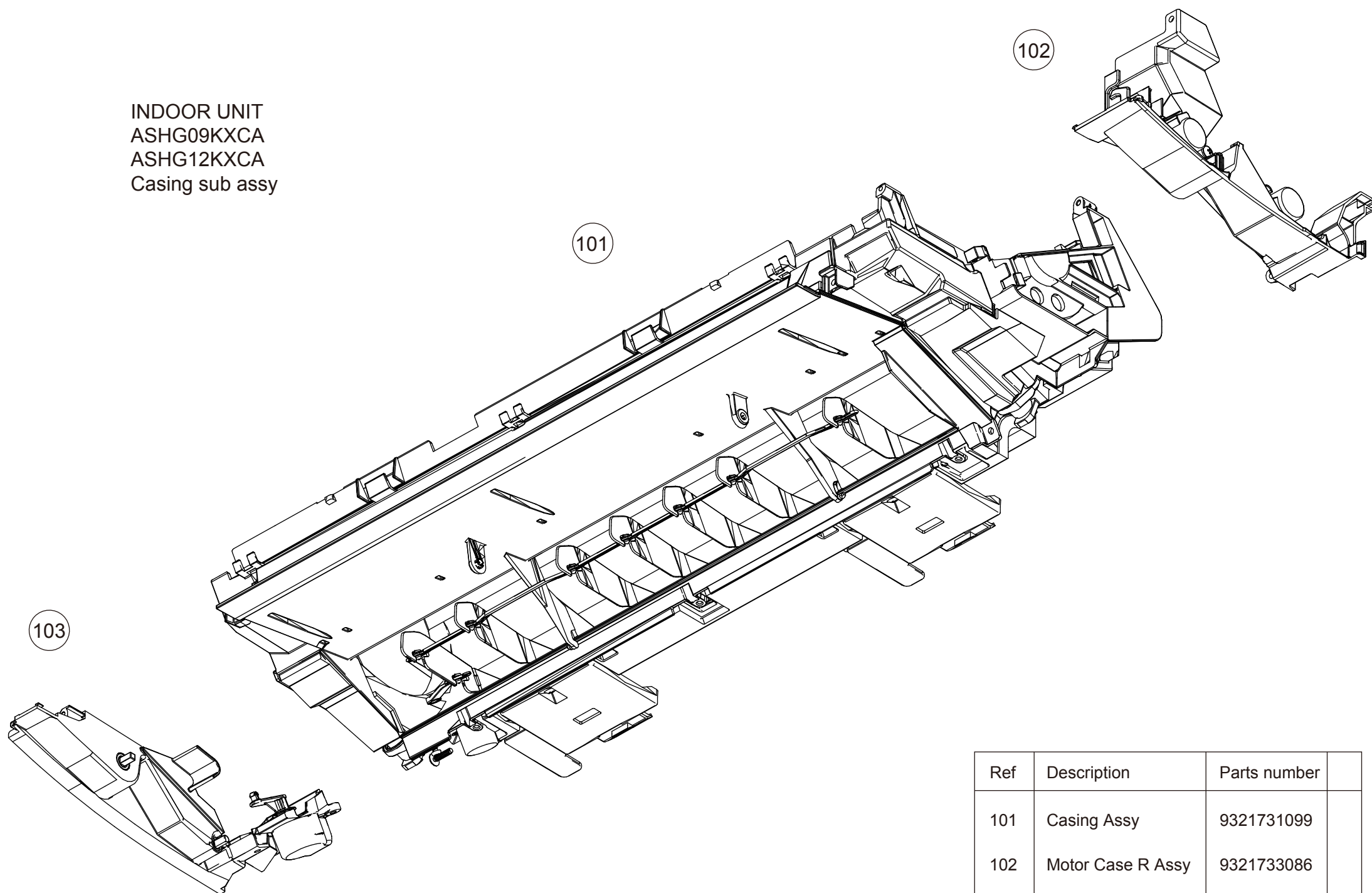
Ref	Description	Parts number	
71	Top Rail	9321423017	
72	Main Frame F	9321425028	
73	Panel Case	9321343001	
74	Rail Cover A	9321392009	
75	Joint Gear A	9316680005	
76	Rail Cover B	9321398001	
77	Sensor Case	9321396007	
78	Switch Assy	9321776007	
79	Gear Assy C	9321774003	
80	Gear Assy R	9321773006	
81	Gear Assy L	9321775000	
82	Shaft	9317574051	
83	Shaft	9317574068	
84	Shaft	9317574075	
-	Room Thermistor	9900895006	



INDOOR UNIT  
ASHG09KXCA  
ASHG12KXCA

Ref	Description	Parts number	
91	Evaporator Total Assy	9319254630	
92	Pipe Thermistor	9900894030	
93	Motor Cover	9316601000	
94	Motor Cover	9316568006	
95	Fan Motor	9603349011	
96	Crossflow Fan Assy	9315024077	
97	Bearing C Assy	9306628017	
98	Casing Total Assy	9321730177	

INDOOR UNIT  
ASHG09KXCA  
ASHG12KXCA  
Casing sub assy

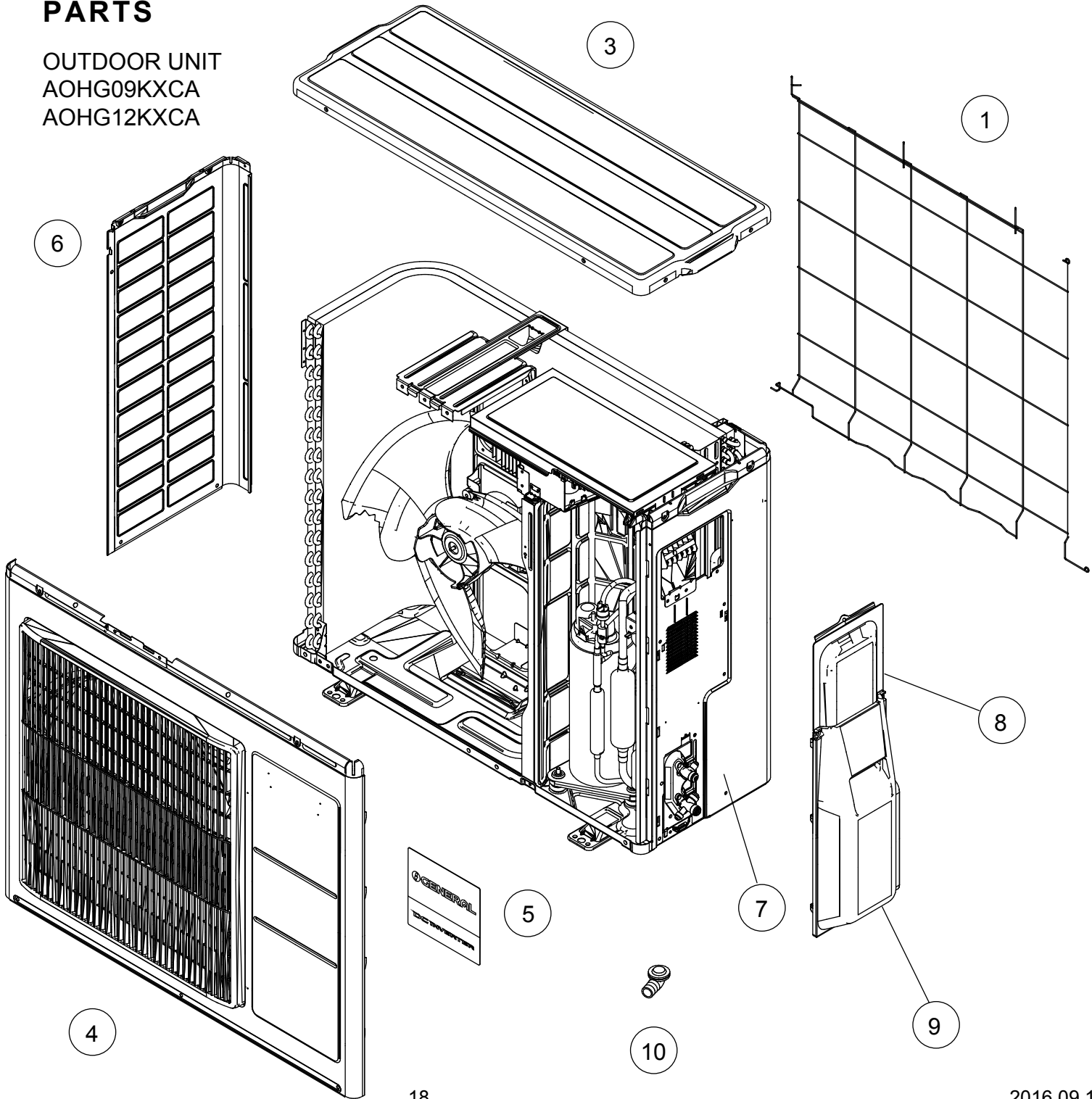
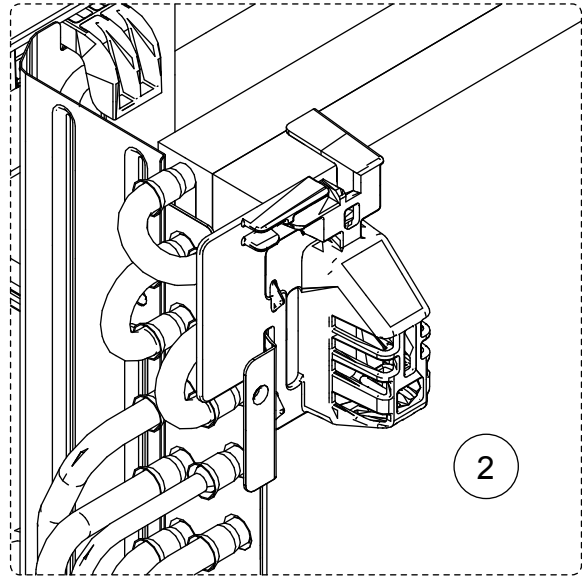


Ref	Description	Parts number	
101	Casing Assy	9321731099	
102	Motor Case R Assy	9321733086	
103	Motor Case L Assy	9321734052	

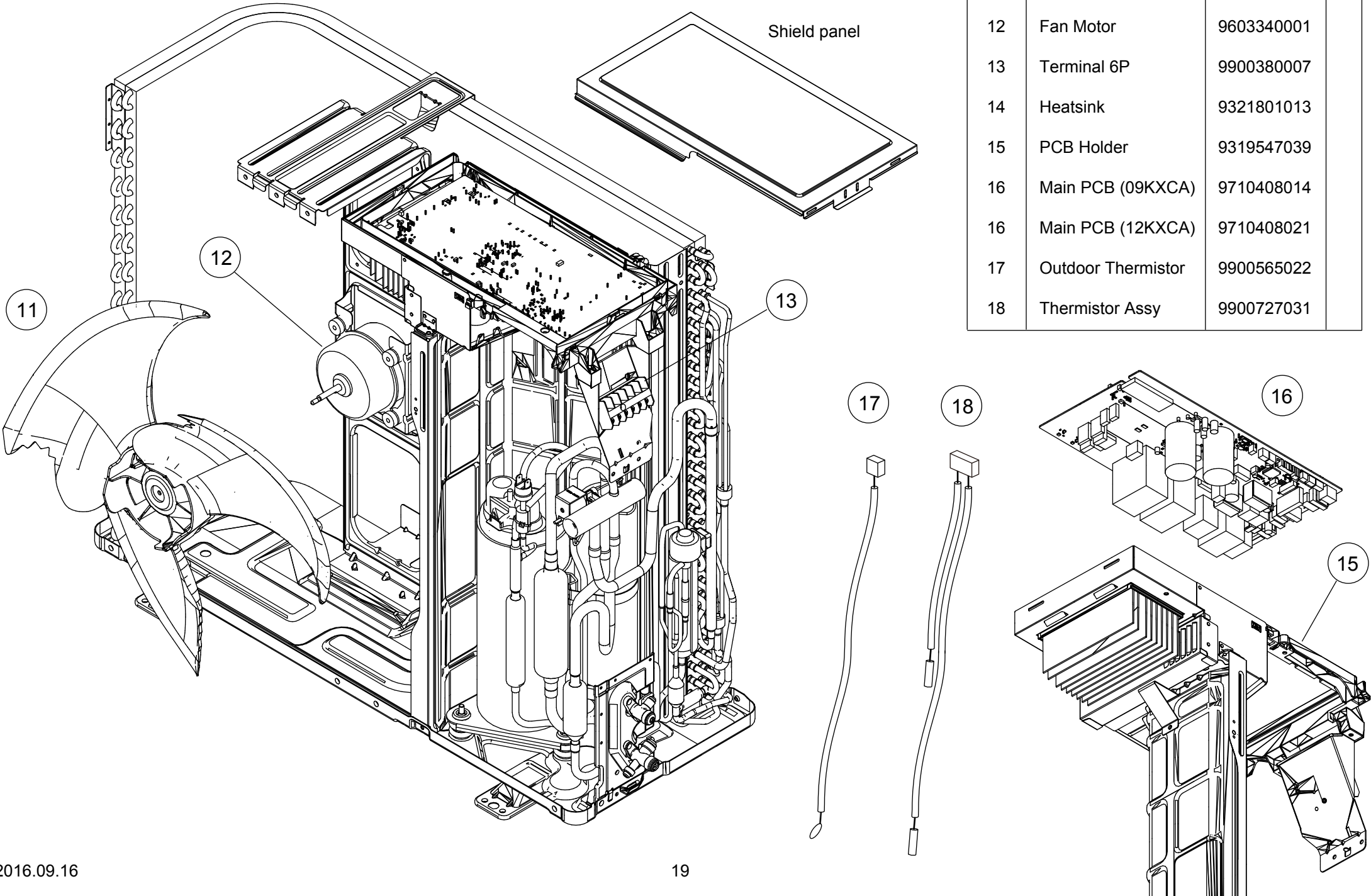
Ref.	Description	Part number	
1	Protective Net	9382395001	
2	Thermistor Holder	9332505009	
3	Top Panel Assy	9320774059	
4	Front Panel Assy	9320773007	
5	Emblem	9319157009	
6	Cabinet Left Assy	9320770006	
7	Cabinet Right Assy	9320771003	
8	Switch Cover A Assy	9320772000	
9	Switch Cover B	9320505011	
10	Drain Assy	9332574005	

**PARTS**

OUTDOOR UNIT  
AOHG09KXCA  
AOHG12KXCA



OUTDOOR UNIT  
AOHG09KXCA  
AOHG12KXCA

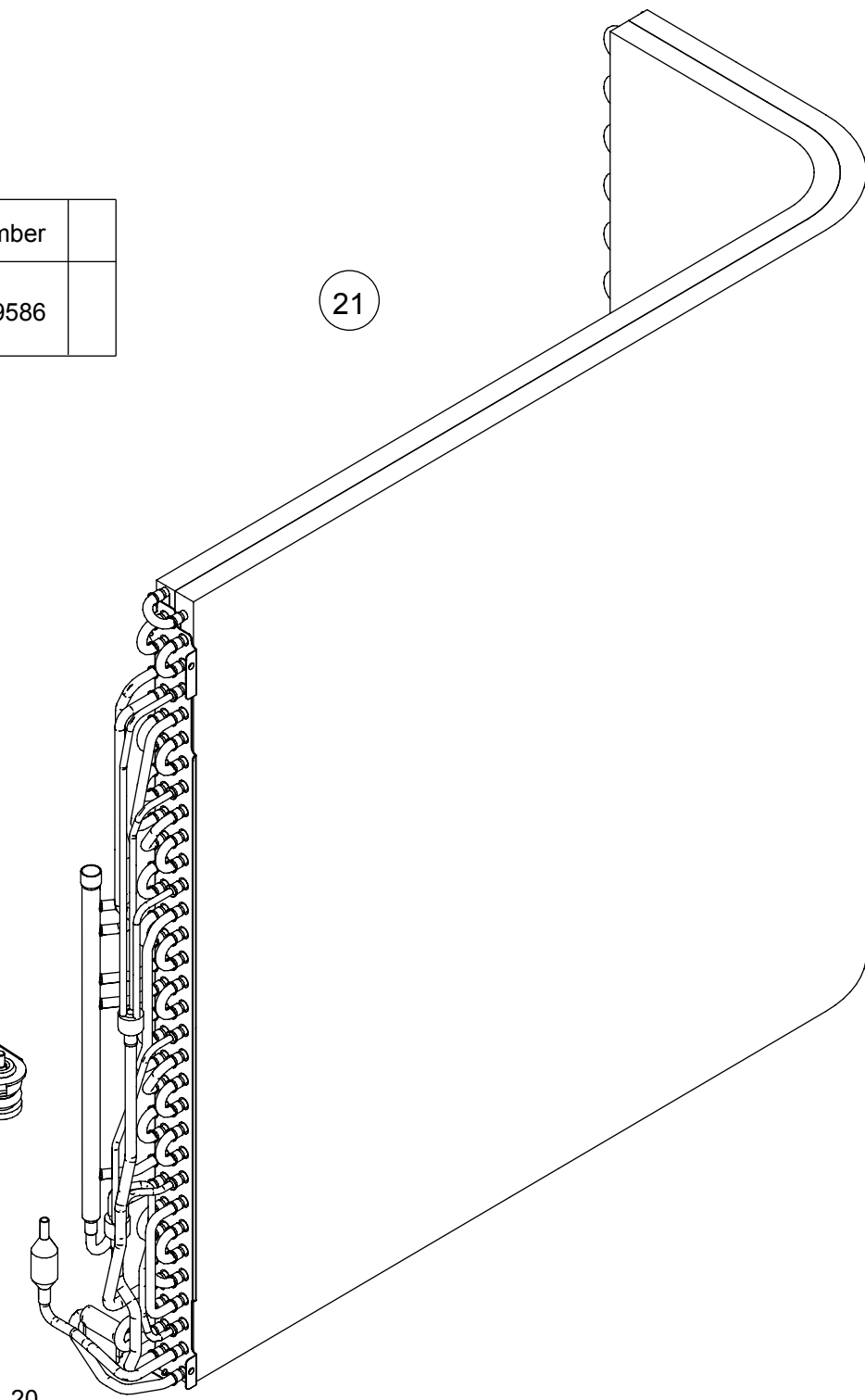
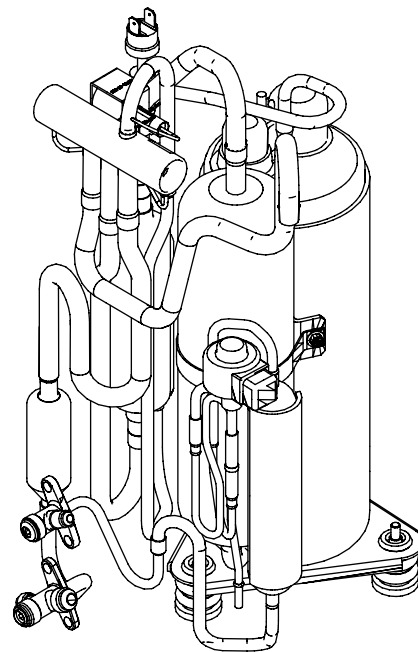


Ref.	Description	Part number
11	Propeller Fan	9320027001
12	Fan Motor	9603340001
13	Terminal 6P	9900380007
14	Heatsink	9321801013
15	PCB Holder	9319547039
16	Main PCB (09KXCA)	9710408014
16	Main PCB (12KXCA)	9710408021
17	Outdoor Thermistor	9900565022
18	Thermistor Assy	9900727031

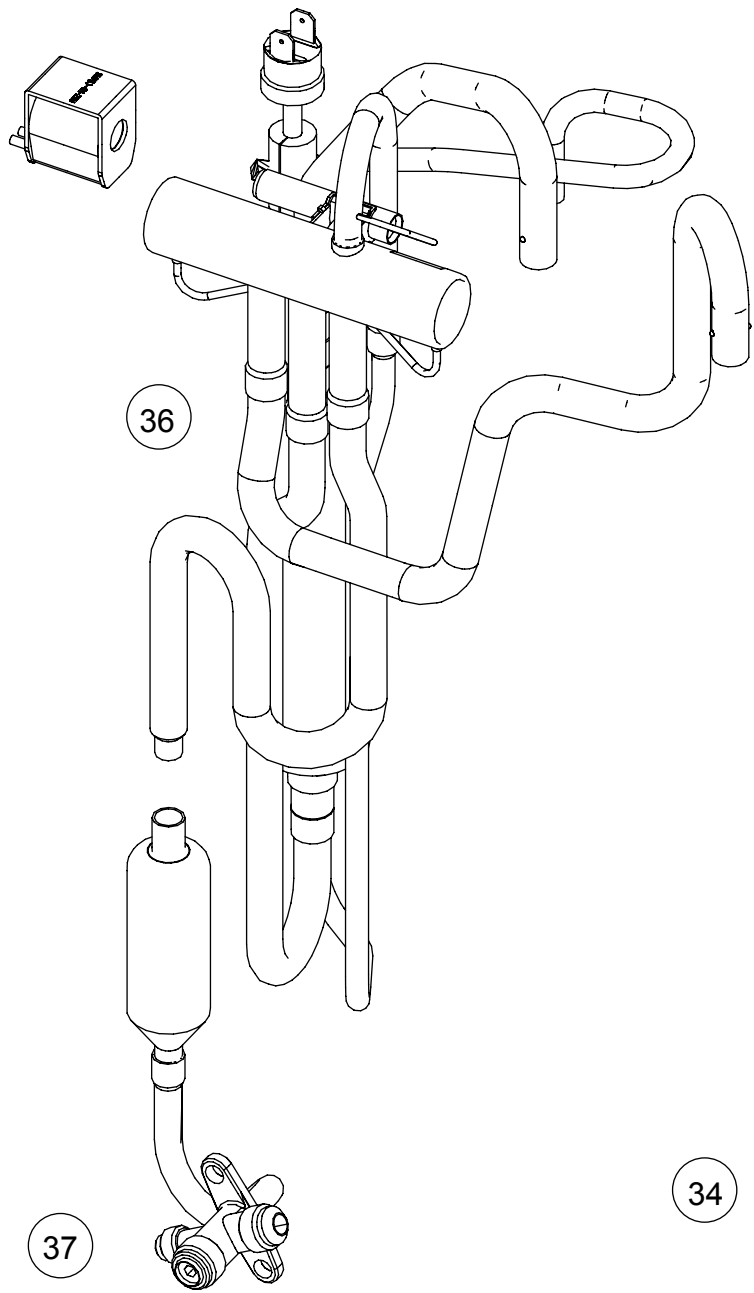


OUTDOOR UNIT  
AOHG09KXCA  
AOHG12KXCA

Ref.	Description	Part number	
21	Condenser Total Assy	9317089586	



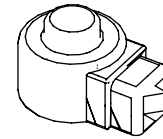
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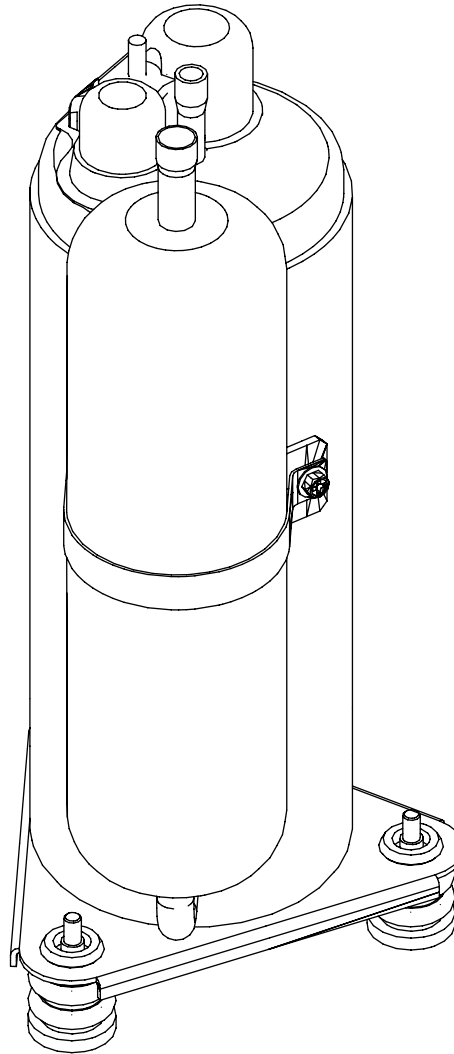
OUTDOOR UNIT  
AOHG09KXCA  
AOHG12KXCA

Ref.	Description	Part number
31	Expansion Valve Coil	9970095092
32	Pulse Motor Valve Sub Assy	9320152048
33	2-way Valve Assy	9318252026
34	Compressor Assy	9321799020
35	Solenoid	9970195006
36	4-way Valve Assy	9382407001
37	3-way Valve Sub Assy	9320411008

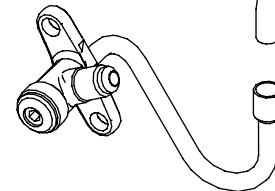
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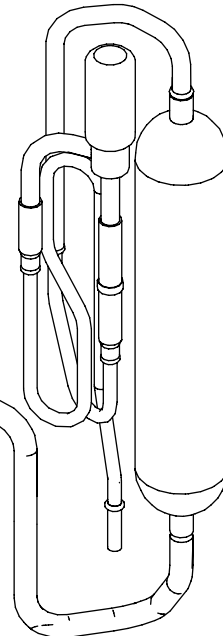
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33



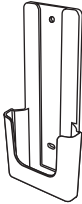

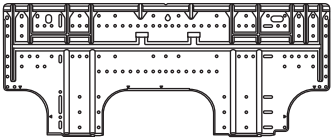
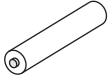
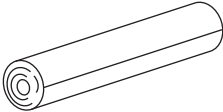



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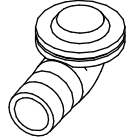


## ACCESSORIES

### INDOOR UNIT

Name and Shape	Q'ty	Name and Shape	Q'ty
Remote control 	1	Tapping screws (Large) 	11
Remote control holder 	1	Tapping screws (Small) 	2
Wall hook bracket 	1	Battery 	2
Cloth tape 	1	Wireless LAN adapter with cable (with attached wireless LAN label*) 	1

### OUTDOOR UNIT

Name and Shape	Q'ty
Drain assy 	1

\* This product has a wireless LAN adapter as accessory.

Be sure to keep the wireless LAN label attached to the adapter by writing the details down or pasting it on the list in the last section of the setting manual for wireless LAN adapter.

1610G4551