



**SPLIT TYPE
AIR CONDITIONER**

CASSETTE type (50Hz)

SERVICE MANUAL

Models	Indoor unit	Outdoor unit
	RC-36EA	RO-36EP
	RC-45EA	RO-45EP
	RC-54EA	RO-54EA



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S P E C I F I C A T I O N S

MODEL				RC-36EA		RC-45EA		RC-54EA		
				RO-36EP		RO-45EP		RO-54EA		
COOLING CAPACITY		kW		10.3-10.5		12.4-12.7		13.9 - 14.1		
POWER SOURCE				3N~380-415V 50Hz						
TOTAL INPUT WATTS		kW		4.05-4.05		4.76-4.80		5.65 - 5.65		
TOTAL AMPACITY		A		7.0-6.9		8.6-8.8		9.60 - 9.30		
EER		kW/kW		2.54-2.59		2.61-2.65		2.46 - 2.50		
STARTING CURRENT		A		49		66		74		
INDOOR UNIT	FAN SPEED	HI	r.p.m.	580		620		680		
		MED		500		550		580		
		LOW		420		470		500		
	AIR CIRCULATION	HI	m³/h	1,500		1,650		1,780		
		MED		1,300		1,450		1,550		
		LOW		1,100		1,200		1,300		
	NOISE LEVEL (SOUND PRESSURE)	HI	dB	48.0		49.0		52.0		
		MED		44.0		47.0		48.5		
		LOW		41.0		43.0		45.0		
	HEAT EXCHANGER			Plate fin coil						
	FAN TYPE x Q'TY			Turbo fan x 1						
	FAN MOTOR OUTPUT		kW	0.090						
	OPERATION CONTROL			L.C.D. wired remote controller						
	DIMENSIONS	H	mm	296						
		W		830						
		D		830						
WEIGHTS		kg	40				47			
GRILLE	DIMENSIONS	H	mm	35						
		W		940						
		D		940						
OUT-DOOR UNIT	FAN SPEED		HI	r.p.m.	790					
	AIR CIRCULATION		HI	m³/h	5,900		5,500		5,500	
	NOISE LEVEL			dB	58.0		59.0		62.0	
	HEAT EXCHANGER			Plate fin coil						
	FAN TYPE x Q'TY			Propeller fan x 2						
	FAN MOTOR OUTPUT			kW	0.063 x 2					
	COMPRESSOR	TYPE		ZR48K3E-TFD		ZR61KCE-TFD		ZR72KCE-TFD		
		PROTECTION		Internal protector(OCR), High pressure relief valve						
	COMPRESSOR MOTOR OUTPUT			kW	3.4		4.22		4.96	
	DIMENSIONS	H	mm	1,152						
		W		940						
		D		370						
	WEIGHTS			kg	94		102		108	

MODEL				RC-36EA		RC-45EA		RC-54EA		
				RO-36EP		RO-45EP		RO-54EA		
REFRI- GERANT CIRCU- IT	DISCHARGE PRESSURE		kg/cm ² G	21.5		21.5		22.5		
	SUCT. PRESSURE			5.0		4.8		4.7		
	DISCHARGE TEMP.		°C	85		80		80		
	REFRG.PIPE LENGTH		m	7.5						
	DISCHARGE AIR TEMP.		°C	12		12		10		
CONDI- TION	INDOOR ENTERING AIR TEMP.		DB/WB °C	27.0/19.0						
	OUTDOOR ENTERING AIR TEMP.			35.0/24.0						
PIPING	PIPE DIA.SIZE	LIQUID	mm	9.53						
		GAS		19.05						
	CONNECTION METHOD			Flare						
	BETWEEN	HEIGHT		m	Max.30					
		PIPE LENGTH			Max.50					

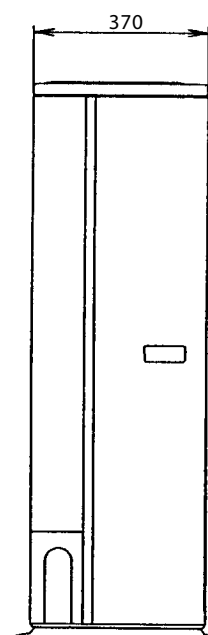
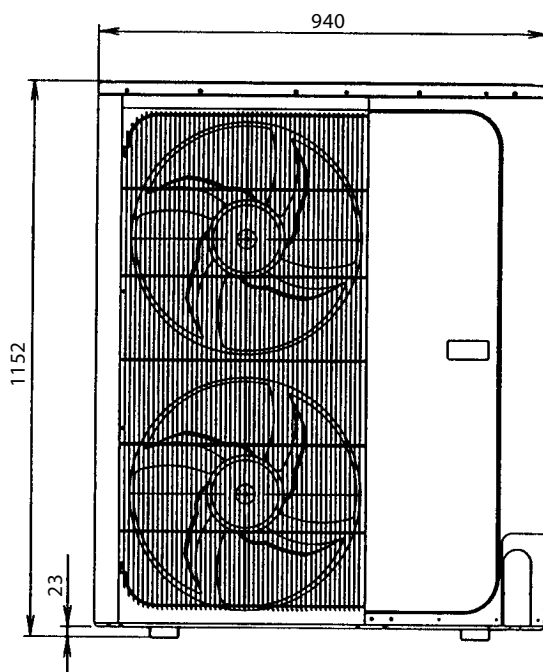
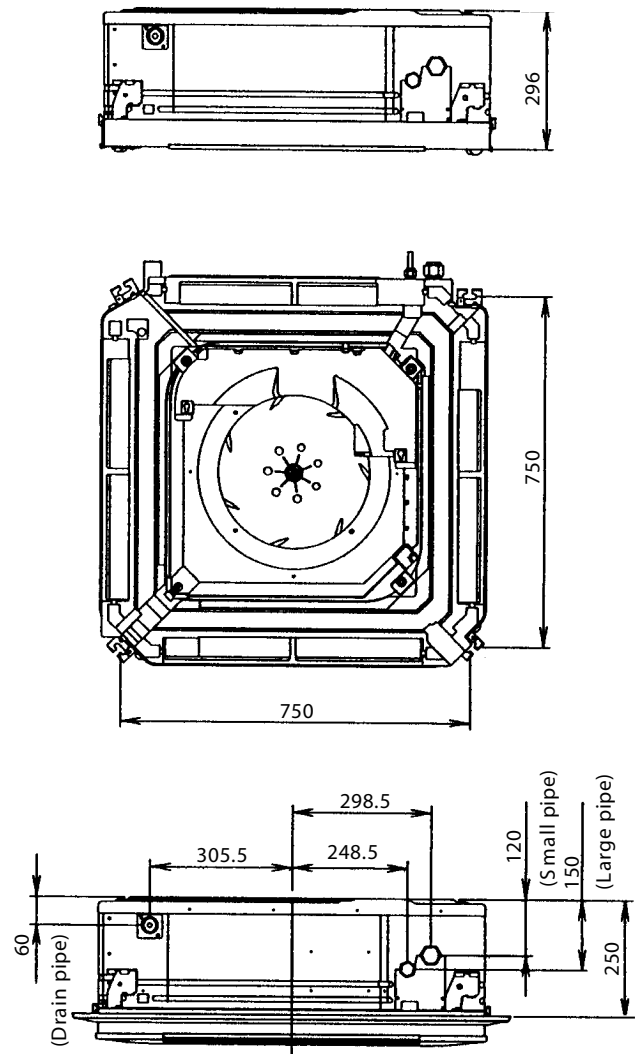
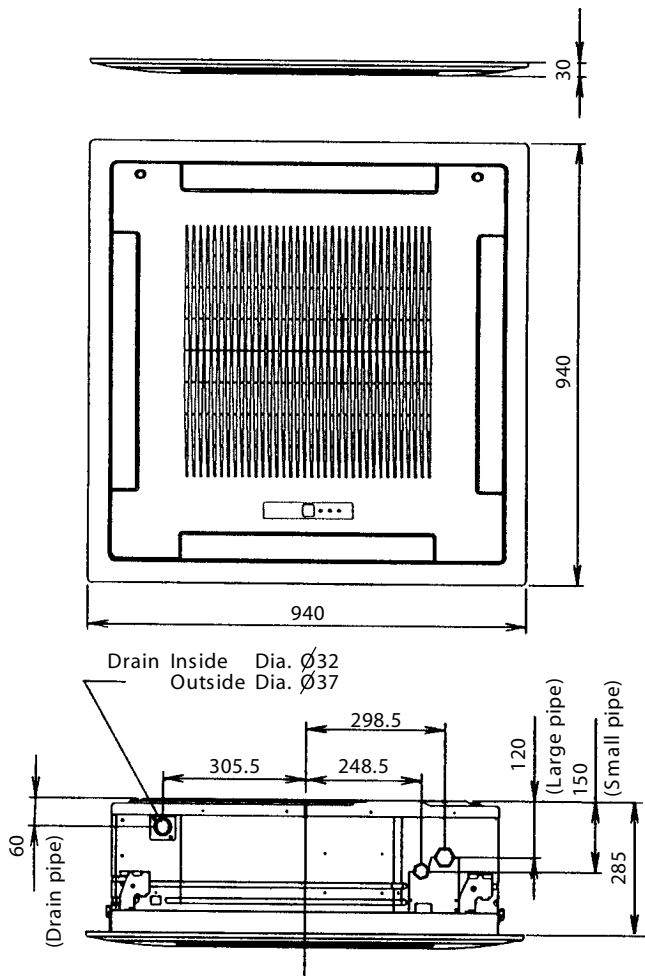
REFRIGERANT CHARGE

PIPE LENGTH		10 m (33 ft)	20 m (66 ft)	30 m (99 ft)	40 m (132 ft)	50 m (164 ft)
FULL CHARGE AMOUNT (R407C)	RC-36EA	2,300 g (81.1 oz)		2,600 g (91.7 oz)	2,900 g (102.3 oz)	3,200 g (112.9 oz)
	RC-45EA	3,400 g (119.9 oz)		3,700 g (130.5 oz)	4,000 g (141.1 oz)	4,300 g (151.7 oz)
	RC-54EA	3,700 g (130.5 oz)		4,000 g (141.1 oz)	4,300 g (151.7 oz)	4,600 g (162.3 oz)

Note : Between 20 m and 50 m, when using a connection pipe other than that in the table, charge additional refrigerant with 30 g(1.06 oz) /1 m(3.3 ft) as the criteria.

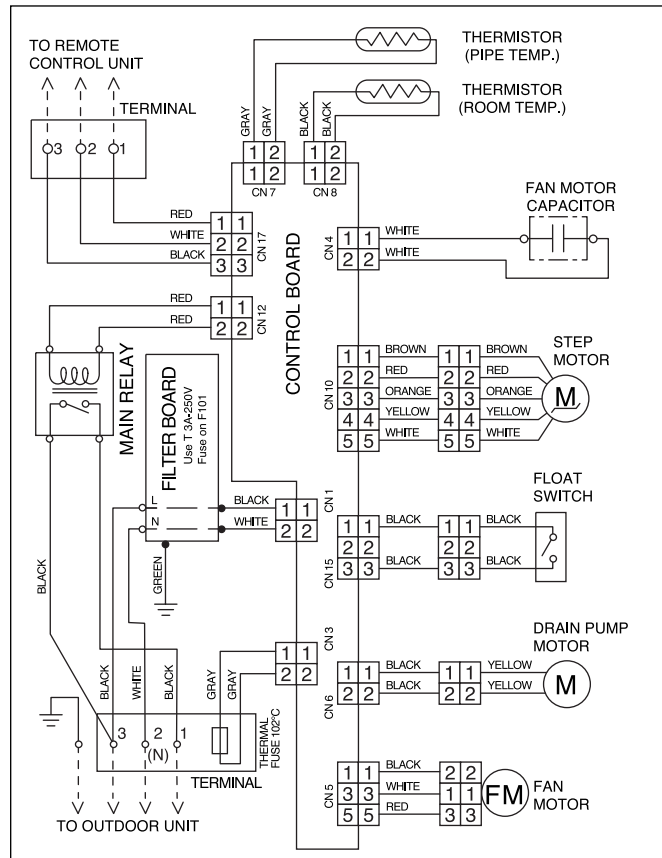
DIMENSIONS

Unit : mm

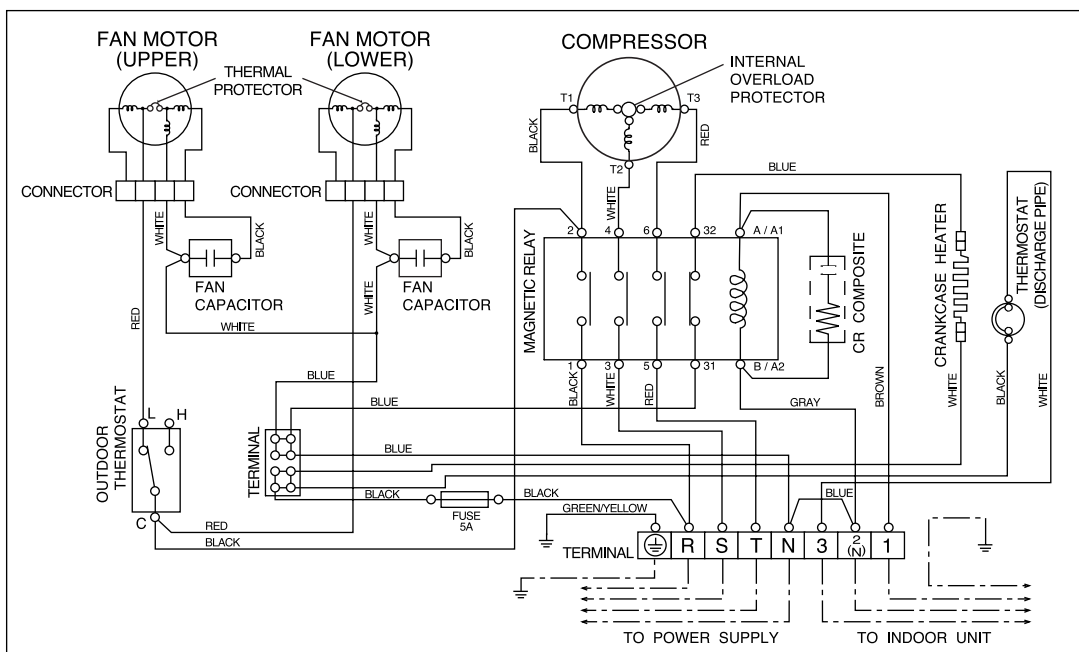


CIRCUIT DIAGRAM

Models : RC-36EA
RC-45EA
RC-54EA

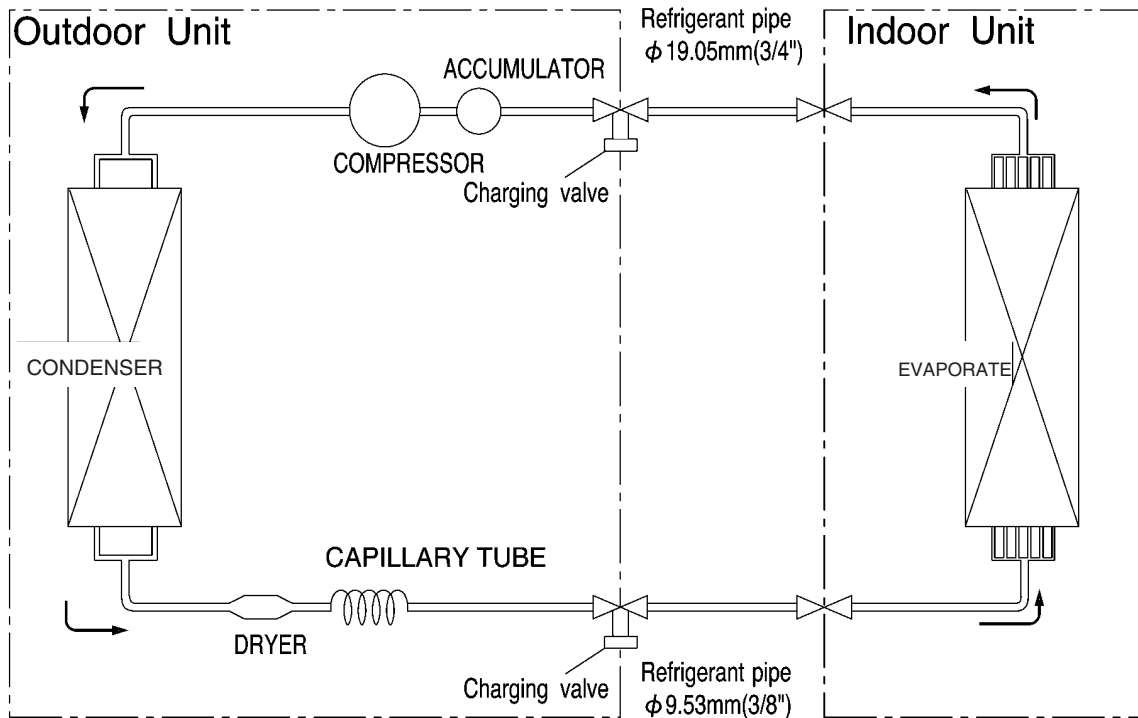


Models : RO-36EP
RO-45EP
RO-54EA

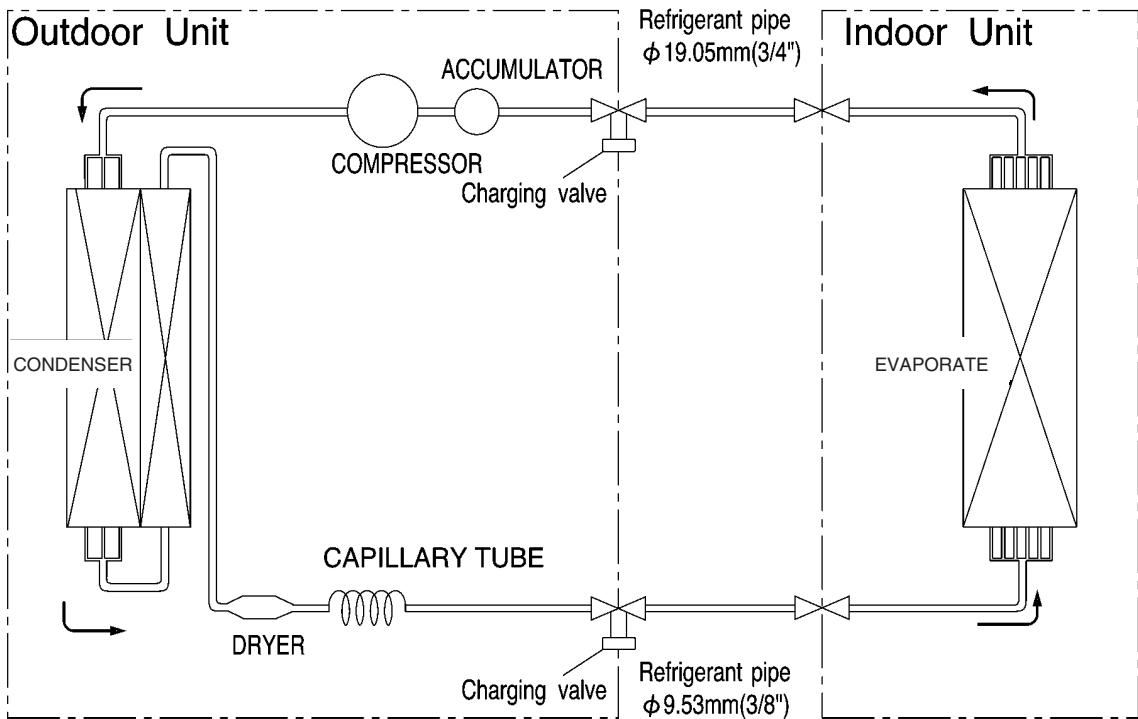


REFRIGERANT SYSTEM DIAGRAM

Models : RC-36EA / RO-36EP



Models : RC-45EA / RO-45EP
RO-54EA / RO-54EA



→ : COOL

ERROR CONTENTS

Models : RC-36EA / RO-36EP, RC-45EA / RO-45EP, RC-54EA / RO-54EA

1. REMOTE CONTROLLER

- When EE : EE blinks at the current time display, there is an error inside the air conditioner. If the SET TIME button (▼) and TEMP./DAY button (▼) are pressed simultaneously for more than three seconds, the self diagnosis check will start and the error contents will be displayed at the current time display. When the operation lamp lights, press the START/STOP button and after operation lamp goes off, perform the same operation. Process the error contents by referring to (Table 1).

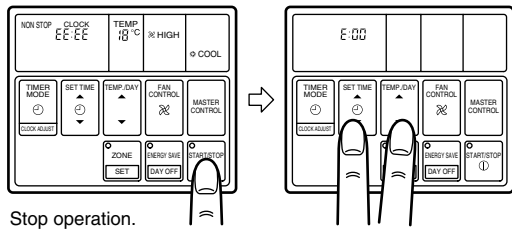


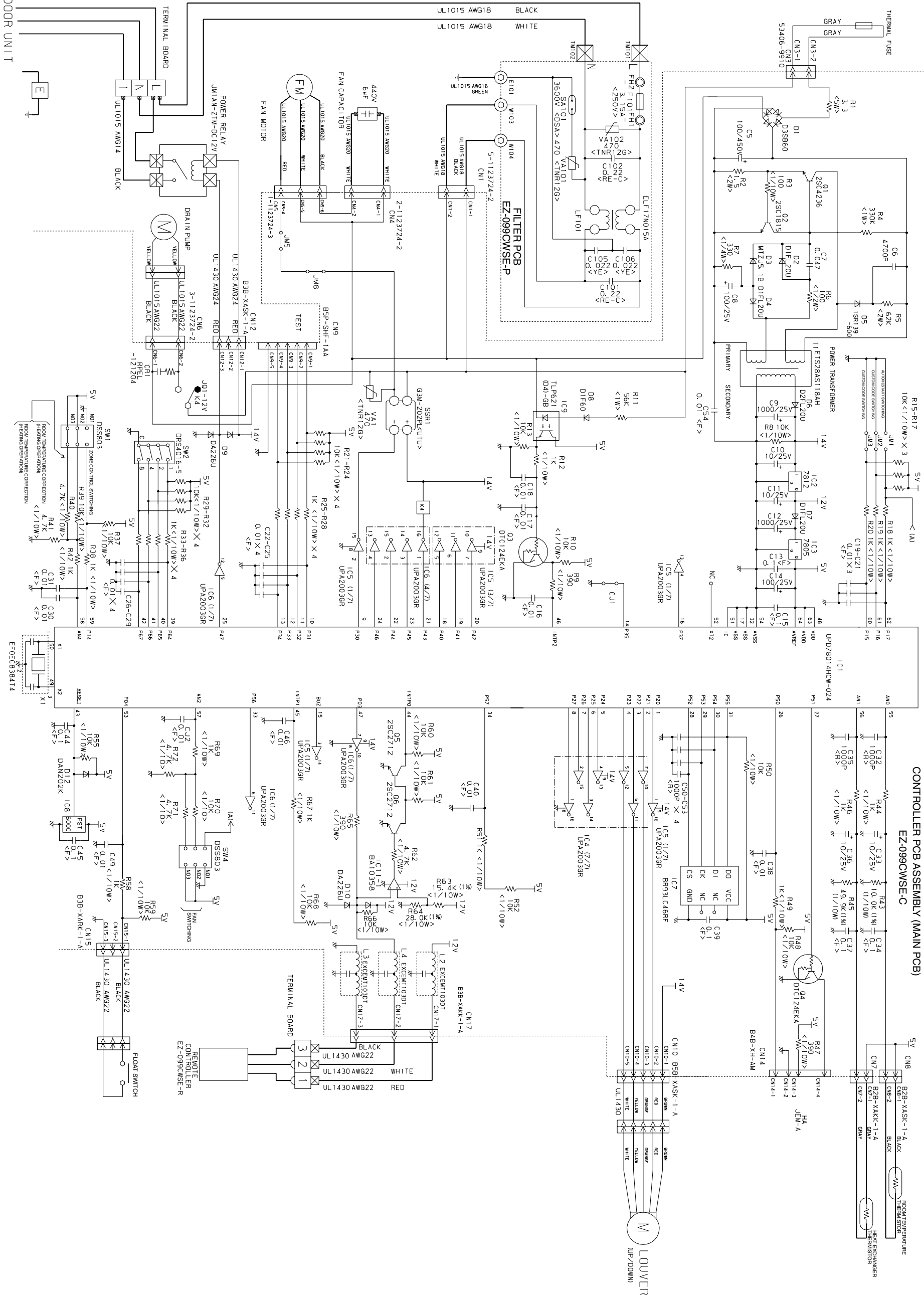
Table 1

Error cord	Error contents
E:00	Communication error (indoor unit ↔ remote controller)
E:01	Communication error (indoor unit ↔ outdoor unit)
E:02	Room temperature sensor open
E:03	Room temperature sensor shortcircuited
E:04	Indoor heat exchanger temperature sensor open
E:05	Indoor heat exchanger temperature sensor shortcircuited
E:06	Outdoor heat exchanger temperature sensor open
E:07	Outdoor heat exchanger temperature sensor shortcircuited
E:08	Power source connection error
E:09	Float switch operated
E:0A	Outdoor temperature sensor open
E:0b	Outdoor temperature sensor shortcircuited
E:0C	Discharge pipe temperature sensor open
E:0d	Discharge pipe temperature sensor shortcircuited
E:0E	Outdoor high pressure abnormal
E:0F	Discharge pipe temperature abnormal
E:11	Model abnormal
E:12	Indoor fan abnormal
E:13	Outdoor signal abnormal
E:14	Outdoor EEPROM abnormal

- To stop test running, press the START/STOP button.
- For the operation method, refer to the operating manual and perform operation check.
- Check that there are no abnormal sounds or vibration sounds during test running.

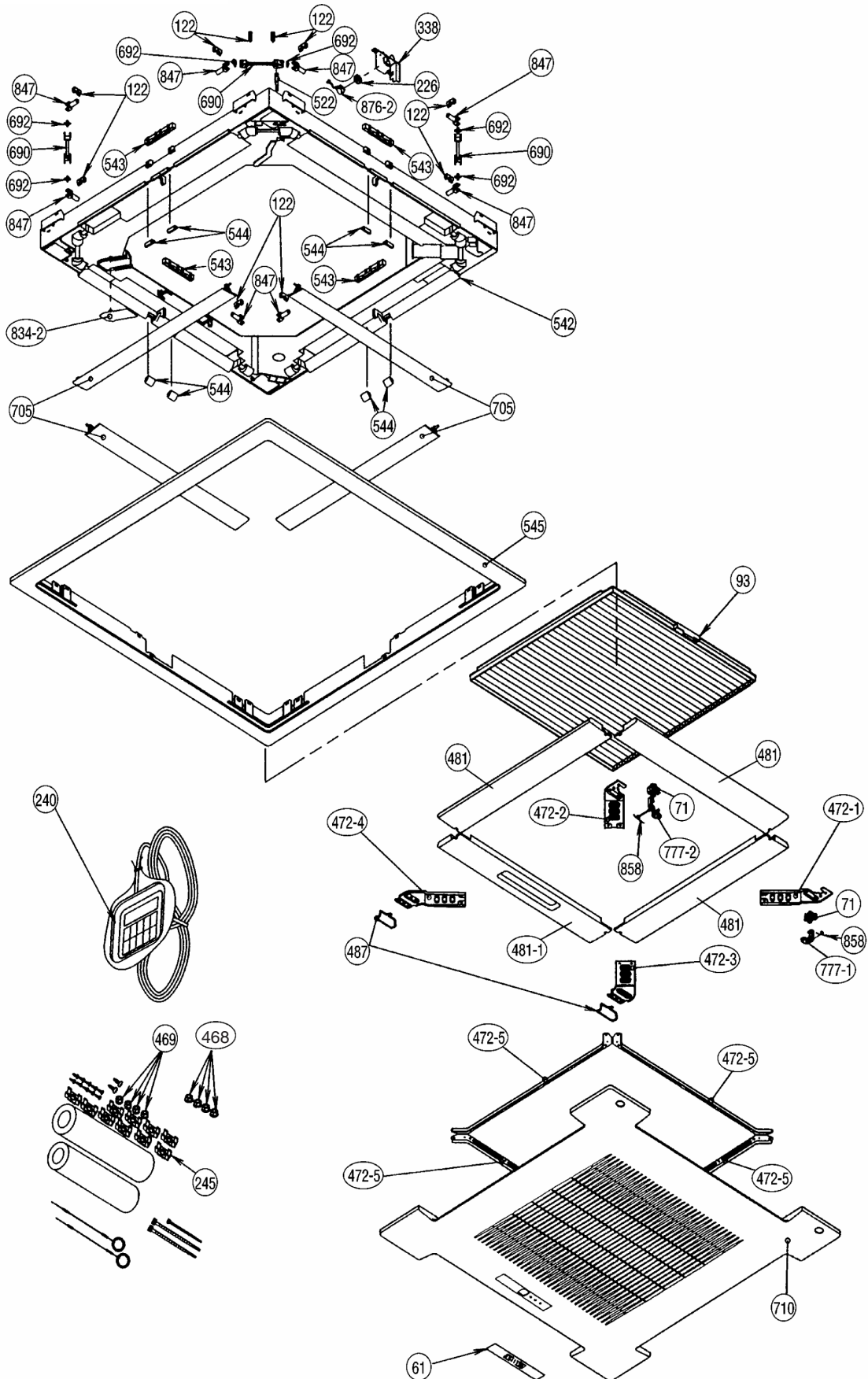
INDOOR PRINTED CIRCUIT BOARD
CIRCUIT DIAGRAM

Models : RC-36EA
RC-45EA
RC-54EA

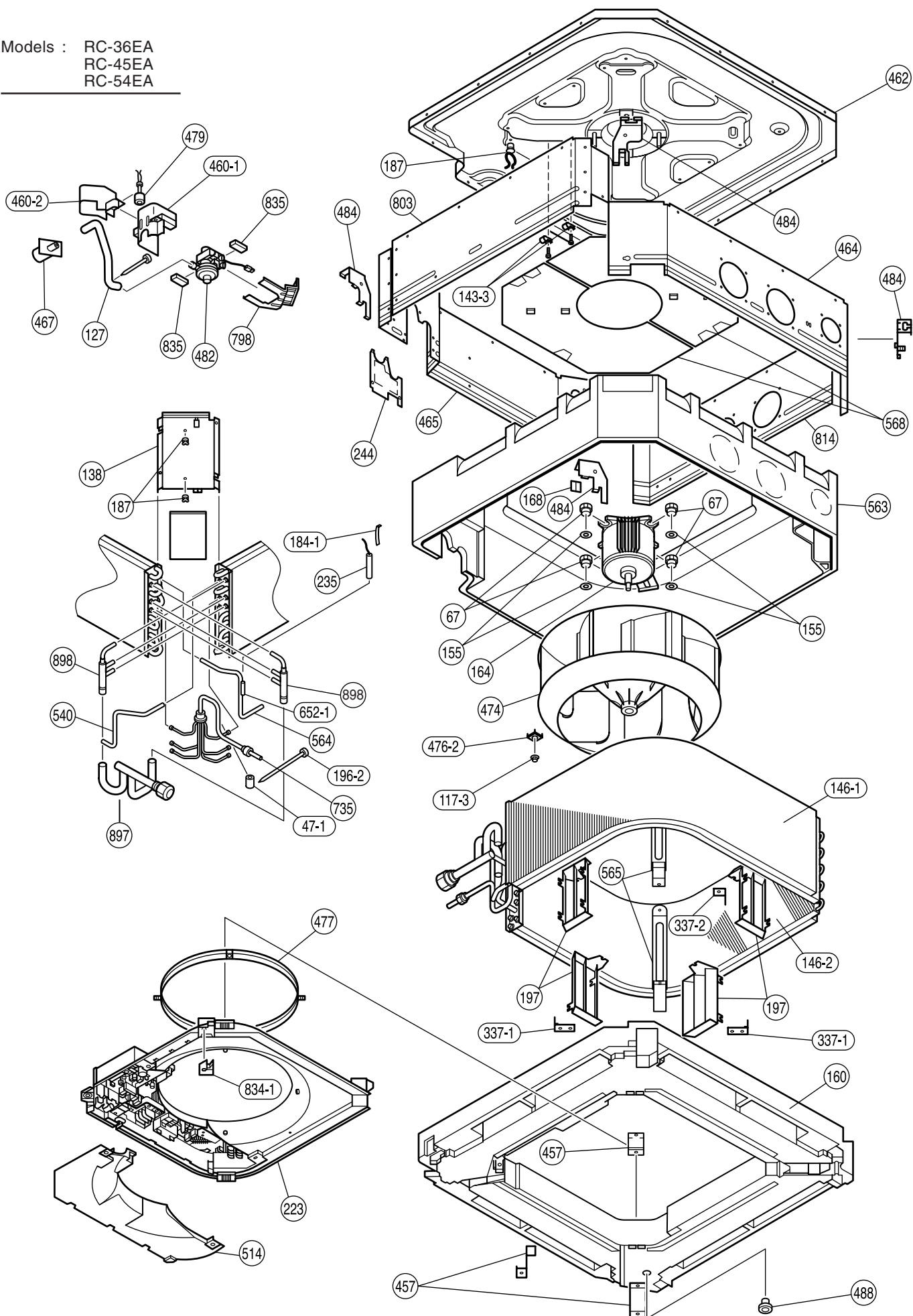


DISASSEMBLY ILLUSTRATION

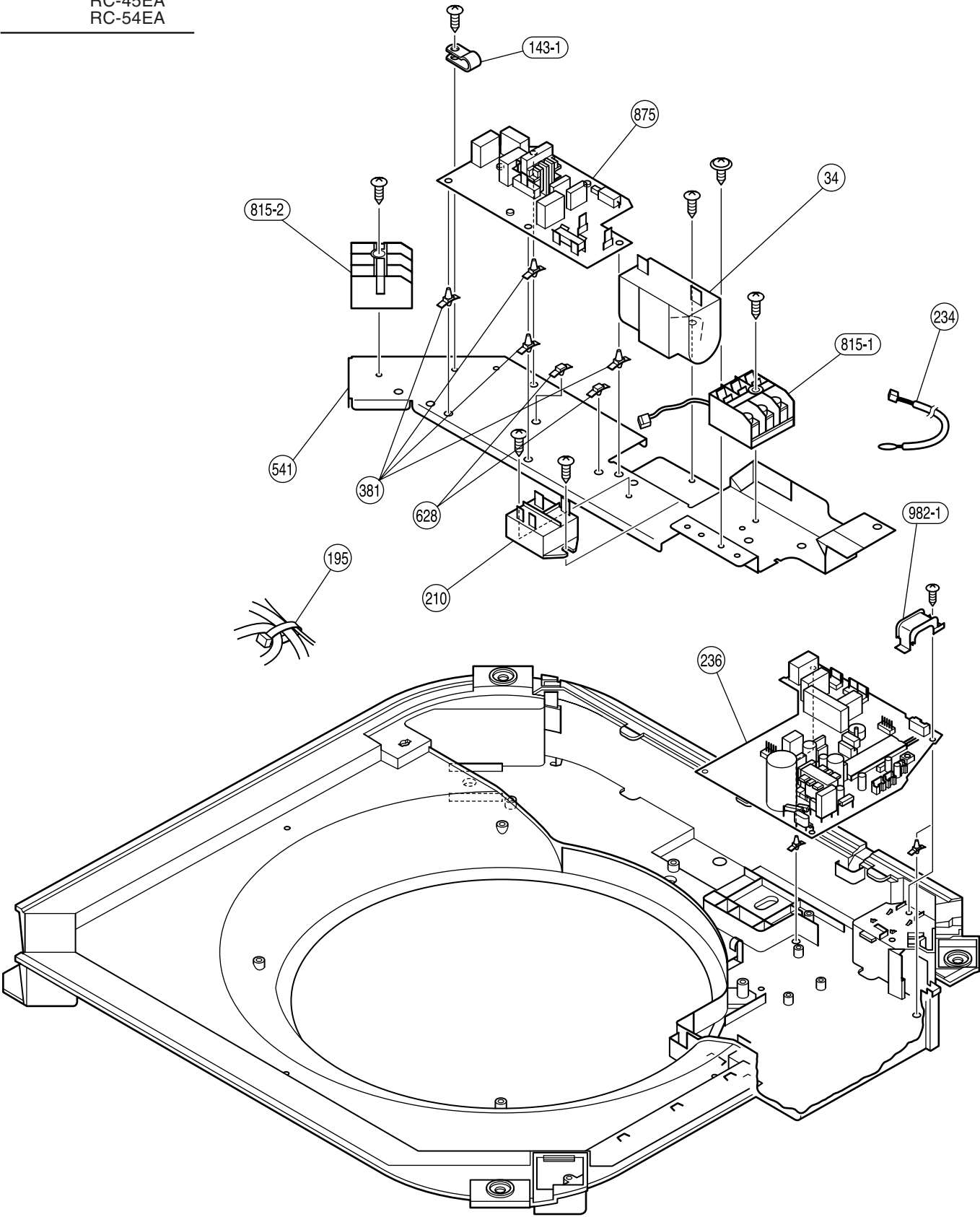
Model : RC-36EA, RC-45EA, RC-54EA



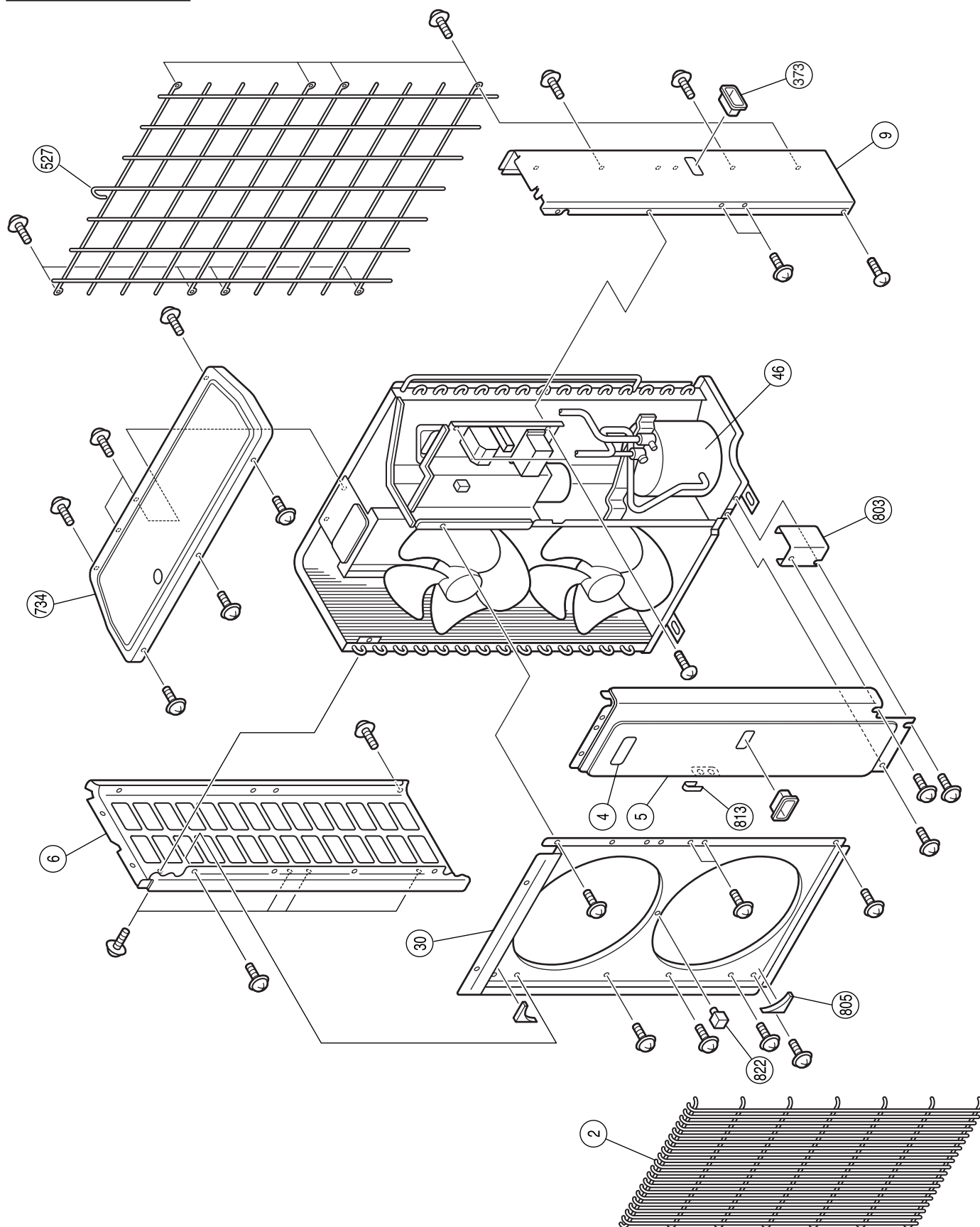
Models : RC-36EA
RC-45EA
RC-54EA

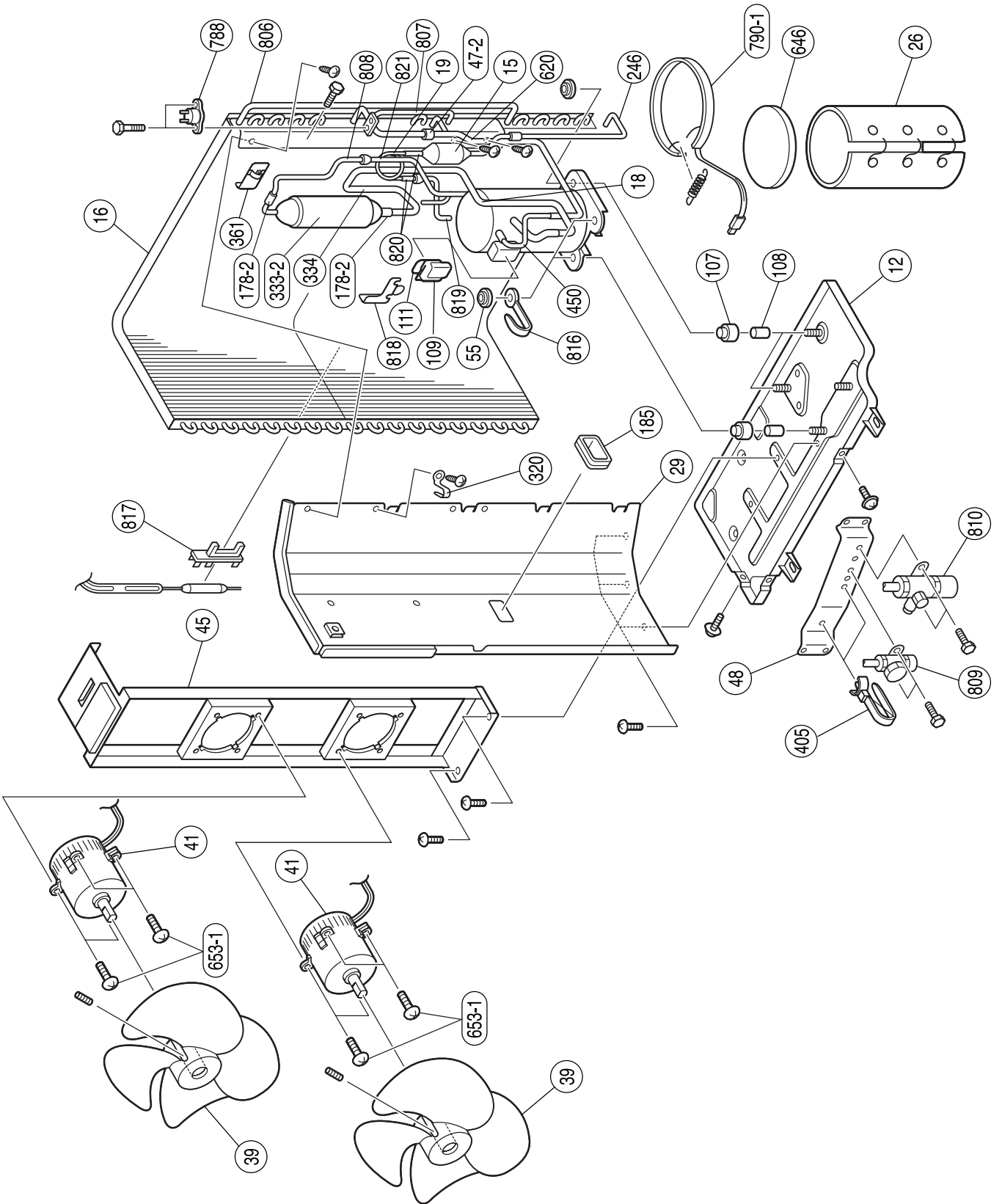


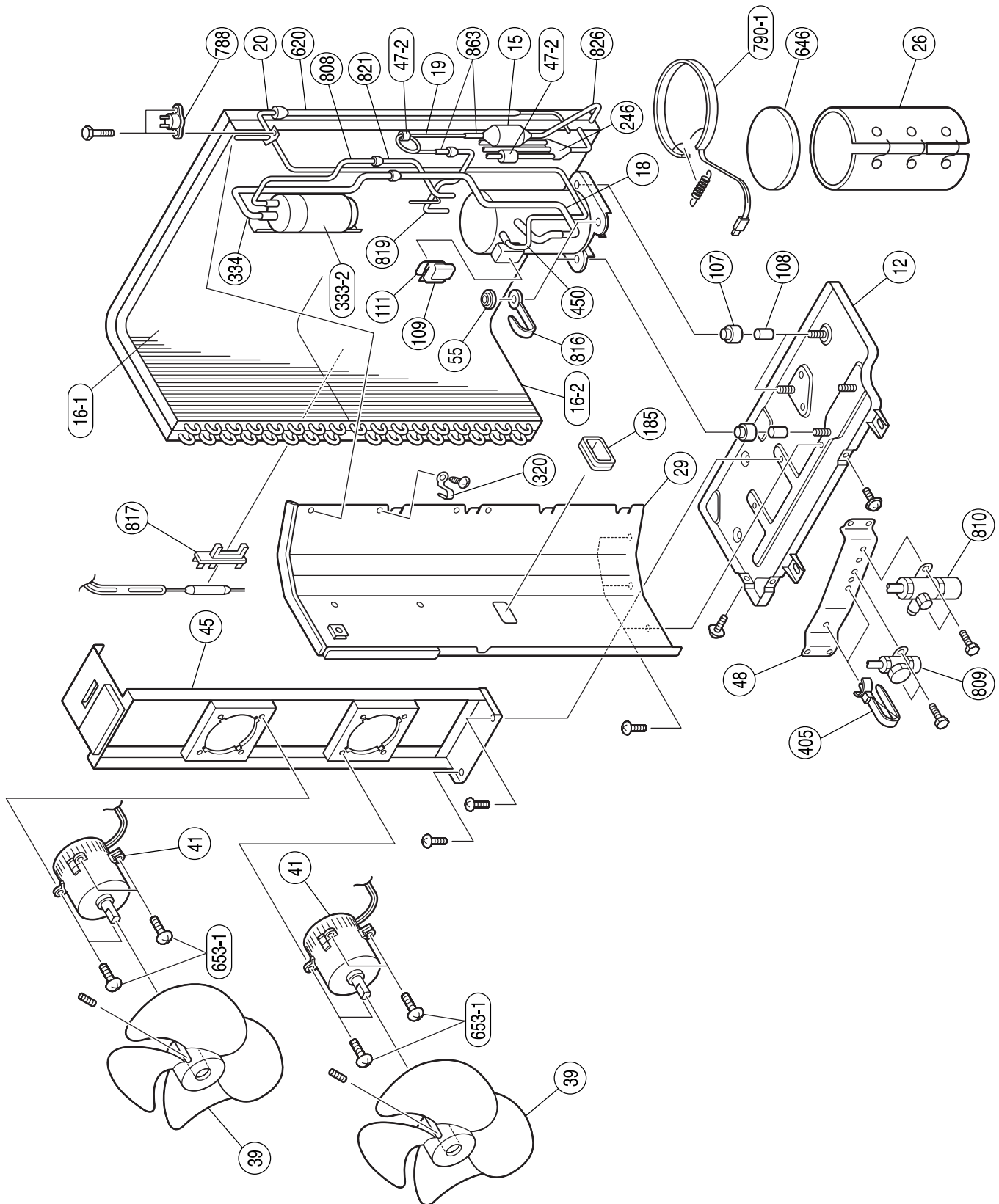
Models : RC-36EA
RC-45EA
RC-54EA

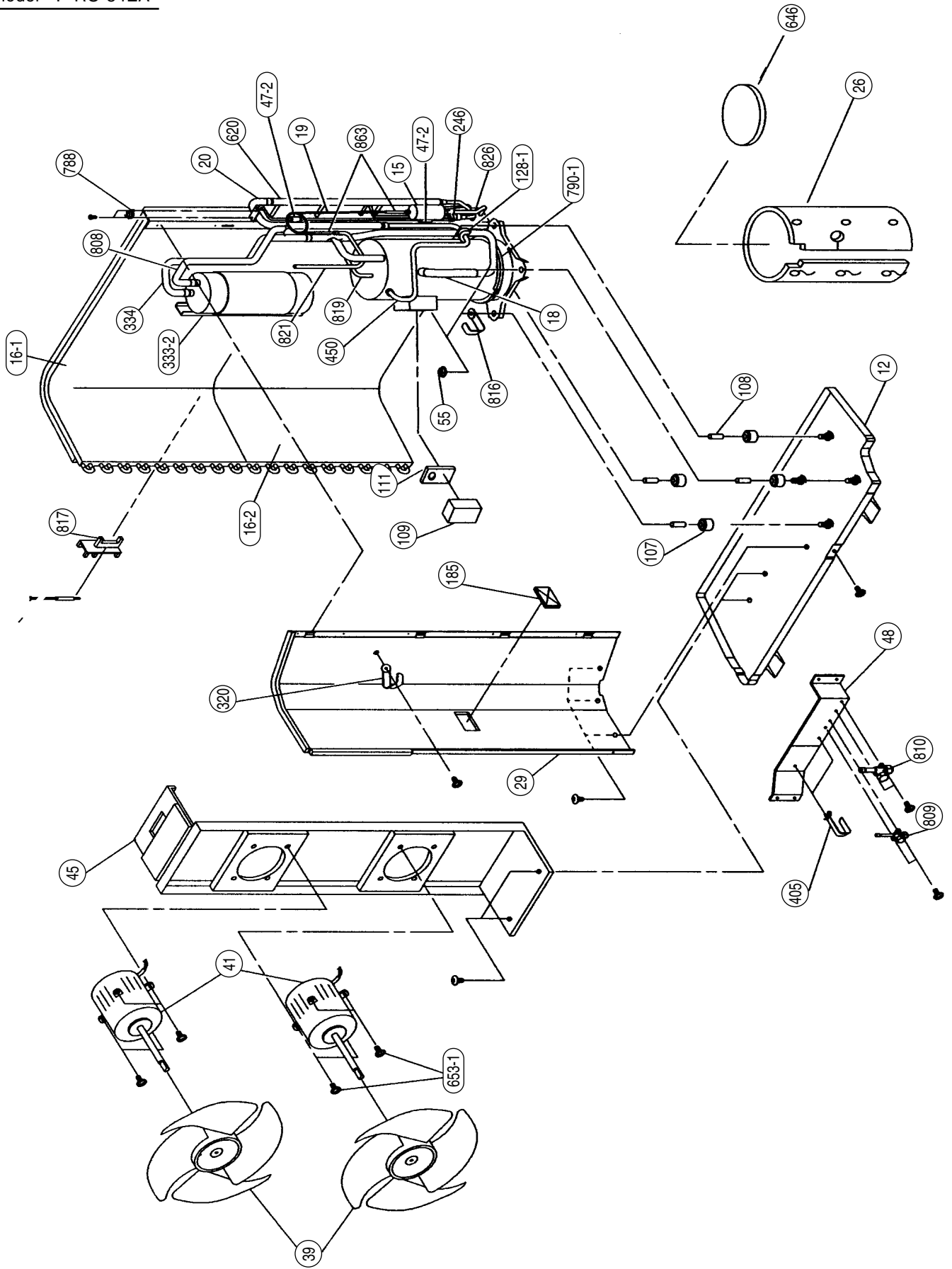


Models : RO-36EP
RO-45EP
RO-54EA

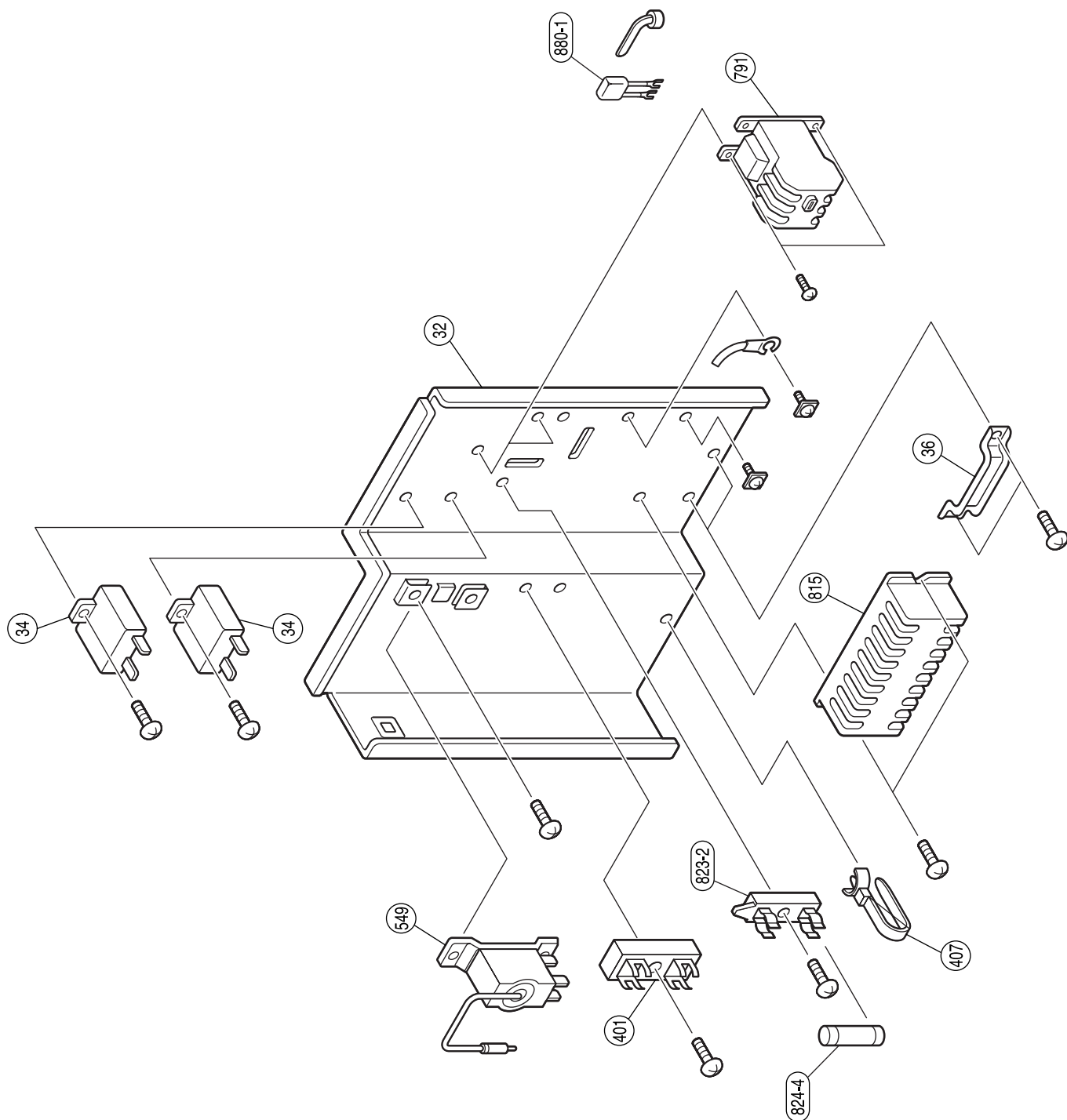








Models : RO-36EP
RO-45EP
RO-54EA



PARTS LIST

RC-36EA
RC-45EA
RC-54EA

INDOOR UNIT

When you order parts, please make a photocopy of this page and fill the number of the parts in the "Order" column.

Ref. No.	Description	Part No.			Ord. Q'ty	Ref. No.	Description	Part No.			Ord. Q'ty
		RC-36EA	RC-45EA	RC-54EA				RC-36EA	RC-45EA	RC-54EA	
34	Capacitor (Fan Motor)	9703306068	9703306068	9703306068		472-5	Grille Reinforcement-E	9362742009	9362742009	9362742009	
47-1	Rubber (Discha.Pipe)	313194159807	313194159807	313194159807		474	Turbo Fan Assy	9362803014	9362803014	9362803014	
61	Decoration Plate	9363133004	9363133004	9363133004		476-2	Special Washer	9362756006	9362756006	9362756006	
67	Rubber (Vibration-proof)	9362783002	9362783002	9362783002		477	Bellmouth (B)	9362774000	9362774000	9362774000	
71	Grille Hook Holder	9362782005	9362782005	9362782005		479	Float Switch	9703285004	9703285004	9703285004	
93	Filter	9362766005	9362766005	9362766005		481	Insulation (Grill) A	9362780001	9362780001	9362780001	
117-3	Hex.Nut w/Spring Washer	301721180114	301721180114	301721180114		481-1	Insulation (Grill) B	9362781008	9362781008	9362781008	
122	Louver Support Holder	9362799003	9362799003	9362799003		482	Pump Unit	9703125010	9703125010	9703125010	
127	Drain Hose	9362784009	9362784009	9362784009		484	Hook	9362736008	9362736008	9362736008	
138	Separate Wall	9362737005	9362737005	9362737005		487	Grille Hinge Wire	9362754002	9362754002	9362754002	
143-1	Clamp NK-3N	313361274700	313361274700	313361274700		488	Drain Pan Plug	313005174654	313005174654	313005174654	
143-3	Clamp NK-6N	9305657001	9305657001	9305657001		514	Control Box Cover	9362763004	9362763004	9362763004	
146-1	Evaporator-A Assy	9364804002	9364804002	9364804002		522	Joint Gear	9362772006	9362772006	9362772006	
146-2	Evaporator-B Assy	9364805009	9364805009	9364805009		540	Bypass Pipe-B	9363152005	9363152005	9363152005	
155	Special Nut M6	9307615016	9307615016	9307615016		541	Terminal Plate	9363642001	9363642001	9363642001	
160	Drain Pan Assy	9362804004	9362804004	9362804004		542	Panel Base	9362759014	9362759014	9362759014	
164	Fan Motor Assy-IN	9600878019	9600878019	9600878019		543	Panel Frame Holder	9362761017	9362761017	9362761017	
168	Cabinet-E	9362735001	9362735001	9362735001		544	Panel Base Holder	9362760010	9362760010	9362760010	
184-1	Thermo.Spring-A	313728262708	313728262708	313728262708		545	Panel Frame	9362758017	9362758017	9362758017	
187	Clamp No.1219	313361271706	313361271706	313361271706		563	Insulation (Inner Box)	9362768009	9362768009	9362768009	
195	Clamp SKB-100	313361275805	313361275805	313361275805		564	Bypass Pipe-A Assy	9363151008	9363151008	9363151008	
196-2	Clamp SKB-150	313035356905	313035356905	313035356905		565	Evaporator Holder Assy	9362802017	9362802017	9362802017	
197	Wind Guide Board	9363117004	9363117004	9363117004		568	Noise Insulation	9363143003	9363143003	9363143003	
210	Main Relay	9356781007	9356781007	9356781007		628	Locking Spacer-B	313005446558	313005446558	313005446558	
223	Control Box	9362762007	9362762007	9362762007		652-1	Thermistor Holder Pipe	313806262805	313806262805	313806262805	
226	Motor Gear	9362764001	9362764001	9362764001		690	Joint-A	9362773003	9362773003	9362773003	
234	Thermistor Assy-Room	9703299025	9703299025	9703299025		692	Joint Shaft	9362771009	9362771009	9362771009	
235	Thermistor Assy-Pipe	9703297014	9703297014	9703297014		705	Louver	9362769013	9362769013	9362769013	
236	Controller PCB Assy	9700637011	9700637011	9700637011		710	Intake Grille	9362767019	9362767019	9362767019	
240	Remote Control Unit	9703173028	9703173028	9703173028		735	Distributor Assy	9364795003	9364795003	9364795003	
244	Pipe Cover	9362748001	9362748001	9362748001		777-1	Grille Hook-A	9362779012	9362779012	9362779012	
245	Cable Clamp	313714181904	313714181904	313714181904		777-2	Grille Hook-B	9362778015	9362778015	9362778015	
337-1	Reinforcement (Eva.)-A	9362749008	9362749008	9362749008		798	Pump Hook Bracket	9362753005	9362753005	9362753005	
337-2	Reinforcement (Eva.)-B	9362750004	9362750004	9362750004		803	Cabinet-D	9362734004	9362734004	9362734004	
338	Motor Holder	9362765008	9362765008	9362765008		814	Cabinet-C	9362733007	9362733007	9362733007	
381	Locking Spacer	313209391506	313209391506	313209391506		815-1	Terminal 3P	9306489052	9306489052	9306489052	
457	Reinforcement (Drain Pan)	9362757003	9362757003	9362757003		815-2	Terminal 3P	9703345012	9703345012	9703345012	
460-1	Pump Cover-A	9362775007	9362775007	9362775007		834-1	Wire Cover-A	9362789004	9362789004	9362789004	
460-2	Pump Cover-B	9362776004	9362776004	9362776004		834-2	Wire Cover-B	9362788007	9362788007	9362788007	
462	Top Cover Plate	9362806015	9362806015	9362806015		835	Cushion Rubber (Pump)	9362777001	9362777001	9362777001	
464	Cabinet-A	9362800013	9362800013	9362800013		847	Louver Supporter	9362770019	9362770019	9362770019	
465	Cabinet-B	9362801010	9362801010	9362801010		858	Grille Spring	9362755009	9362755009	9362755009	
467	Drain Port	9362786003	9362786003	9362786003		875	Filter PCB Assy	9703292019	9703292019	9703292019	
468	Special Nut-A (Large)	313005446653	313005446653	313005446653		876-2	Step Motor	9360307019	9360307019	9360307019	
469	Special Nut-B (Small)	313005446759	313005446759	313005446759		897	Coupling Pipe-A Assy	9363153002	9363153002	9363153002	
472-1	Grille Reinforcement-A	9362738002	9362738002	9362738002		898	Coupling Pipe-B Assy	9364806006	9364806006	9364806006	
472-2	Grille Reinforcement-B	9362739009	9362739009	9362739009		982-1	Cord Clamp	9356857009	9356857009	9356857009	
472-3	Grille Reinforcement-C	9362740005	9362740005	9362740005							
472-4	Grille Reinforcement-D	9362741002	9362741002	9362741002							

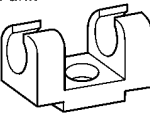
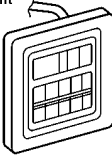
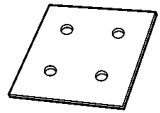
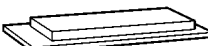
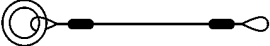
OUTDOOR UNIT

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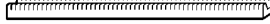
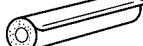
Ref. No.	Description	Part No.			Ord. Q'ty	Ref. No.	Description	Part No.			Ord. Q'ty
		RO-36EP	RO-45EP	RO-54EA				RO-36EP	RO-45EP	RO-54EA	
2	Fan Cover	9352159015	9352159015	9352159015		361	Accumulator Support Assy	9355351003	—	—	
4	Emblem-Rear	9361328006	9361328006	9361328006		373	Grip	9352157004	9352157004	9352157004	
5	Cabinet-A,Painted	9352146015	9352146015	9352146015		401	Terminal-2P	9701971015	9701971015	9701971015	
6	Cabinet-C,Painted	9352149016	9352149016	9352149016		405	Clamp No.1763	313816345304	313816345304	313816345304	
9	Cabinet-B,Painted	9352147012	9352147012	9352147012		407	Clip(Cable)No.1259	313739340109	313739340109	313739340109	
12	Base Assy,Painted	9352136016	9352136016	9352136016		450	Discharge Pipe-A	9364079004	9364079004	9366224006	
15	Dryer	9369978036	9369978036	9369978036		527	Protection Net	9352163012	9352163012	9352163012	
16	Condenser Assy	9364074009	—	—		549	Thermistor-Outdoor	9352426001	9352426001	9352426001	
16-1	Condenser-A Assy	—	9364064000	9364064000		620	Inlet Pipe(Cond.)Assy	9364068008	9364090009	9364090009	
16-2	Condenser-B Assy	—	9364061009	9364061009		646	Compressor Cover-B	9364089003	9364089003	9364089003	
18	Suction Pipe Assy	9364514000	9364514000	9364514000		653-1	Bolt(Fan Motor Fixing)	9385089020	9385089020	9385089020	
19	Capillary Tube	9364083001	9364053004	9364053004		734	Cabinet Top Plate	9352161018	9352161018	9352161018	
20	Discharge Pipe Assy	—	9364132006	9366223009		788	Thermistor-Overheat	9354061002	9354061002	9354061002	
26	Compressor Cover-A	9364088006	9364088006	9364088006		790-1	Belt Heater-A	9361140066	9361140042	9361140042	
29	Separate Wall	9355277013	9355277013	9355277013		791	Magnetic Relay	9363277005	9363277005	9363277005	
30	Blower Cover,Painted	9352151019	9352151019	9352151019		803	Cabinet-D,Painted	9352150012	9352150012	9352150012	
32	Control Box Metal	9352134012	9352134012	9352134012		805	Blower Cover Corner	9352160011	9352160011	9352160011	
34	Capacitor(Fan Motor)	9357965024	9357965024	9357965024		806	Cond.Pass Pipe-A	9364075006	—	—	
36	Cord Holder Metal	9356934007	9356934007	9356934007		807	Cond.Pass Pipe-B	9364076003	—	—	
39	Propeller Fan Assy	9300855013	9300855013	9300855013		808	Inlet Pipe(Accumulator)	9364066004	9362558006	9362558006	
41	Fan Motor Assy-Out	9600832028	9600832028	9600832028		809	Ball Valve-A	9362578004	9362578004	9362578004	
45	Bracket(Motor)Assy	9352141003	9352141003	9352141003		810	Ball Valve-B	9362579001	9362579001	9362579001	
46	Compressor Assy	9370772012	9367376001	9367377008		813	Cabinet Hook	9352148002	9352148002	9352148002	
47-2	Rubber(Discharge Pipe)	313185159802	313185159802	313185159802		815	Terminal-8P	9363276022	9363276022	9363276022	
48	Bracket(Coupler)Assy	9355281010	9355281010	9355281010		816	Wire Clamp Metal	313584219902	313584219902	313584219902	
55	Special Nut M8(For Comp.)	9355091008	9355091008	9355091008		817	Thermostat Fixture	9352164019	9352164019	9352164019	
107	Rubber Seat-A(For Comp.)	9364084008	9364084008	9364084008		818	Accumulator Support-B Assy	9355350006	—	—	
108	Sleeve-A(For Comp.)	9364085005	9364085005	9364085005		819	Valve-A Coupl.Pipe	9364081007	9364052007	9364052007	
109	Terminal Cover(For Comp.)	9364087009	9364087009	9364087009		820	Joint Pipe(Capillary)	9364082004	—	—	
111	Terminal Packing	9364086002	9364086002	9364086002		821	Joint Pipe Assy	9364080000	9362564007	9362564007	
128-1	Rubber (Discharge Pipe)	—	—	313155086308		822	Fan Cover Fixture-A	9352158018	9352158018	9352158018	
178-2	Capillary Holder Rubber	313394274808	—	—		823-2	Fuse Holder	0500063024	0500063024	0500063024	
185	Rubber Bushing	313005066051	313005066051	313005066051		824-4	Fuse	0600222529	0600222529	0600222529	
246	Outlet Pipe(Cond.)Assy	9364178004	9364060002	9364060002		826	Condensing Pipe-B	—	9364062006	9364062006	
320	Wire Clamp Metal	313483219905	313483219905	313483219905		863	Joint Pipe(Capillary)-B	—	9362563000	9362563000	
333-2	Accumulator(B)	9301942019	9368463007	9368463007		880-1	Network	9700987017	9700987017	9700987017	
334	Suction Pipe-B	9364065007	9362557009	9362557009							

STANDARD ACCESSORIES

INDOOR UNIT ACCESSORIES

Name and Shape	Part No.
Coupler heat insulation 	9350716029 } 1 each 9352766015 }
Remote control unit cord clamp 	313714181904
Binder 	313035356905 (Large) 313361275805 (Small)
Screw 	(A) 301141134166 For installing the mounting bracket (B) 301141153027 For installing the cord clamp
Special nut A (large flange) 	313005446653
Special nut B (small flange) 	313005446759
Remote control unit 	9703173028
Template 	9363173000
Blower cover insulation 	9363265002
Hook wire 	9363168006

OUTDOOR UNIT ACCESSORIES

Name and Shape	Part No.
Power cap 	9352173011
Auxiliary pipe assembly 	9355292016
Edge cover 	9352436000
Tapping screw 	301463040100
Binder 	313035356905
Putty 	303020200114
Coupler heat insulation 	313005074759



MANUFACTURER :

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