

REFRIGERATOR MANUFACTURER  
***Turbo air***

Commercial  
Refrigerator  
Service Manual

**Direct Draw Beer Dispensers**

Model No. : TBD-1SD/SB-N6  
TBD-2SD/SB-N6  
TBD-3SD/SB-N  
TBD-4SD/SB-N

**Back-Bar Coolers**

Model No. : TBB-1SB-N6  
TBB-2SB-N6  
TBB-3SB-N6  
TBB-4SB-N  
TBB-2SG-N  
TBB-3SG-N  
TBB-4SG-N

**Club-Top & Direct Draw Beer Dispensers**

Model No. : TCB-2SD/SB  
TCB-3SD/SB  
TCB-4SD/SB

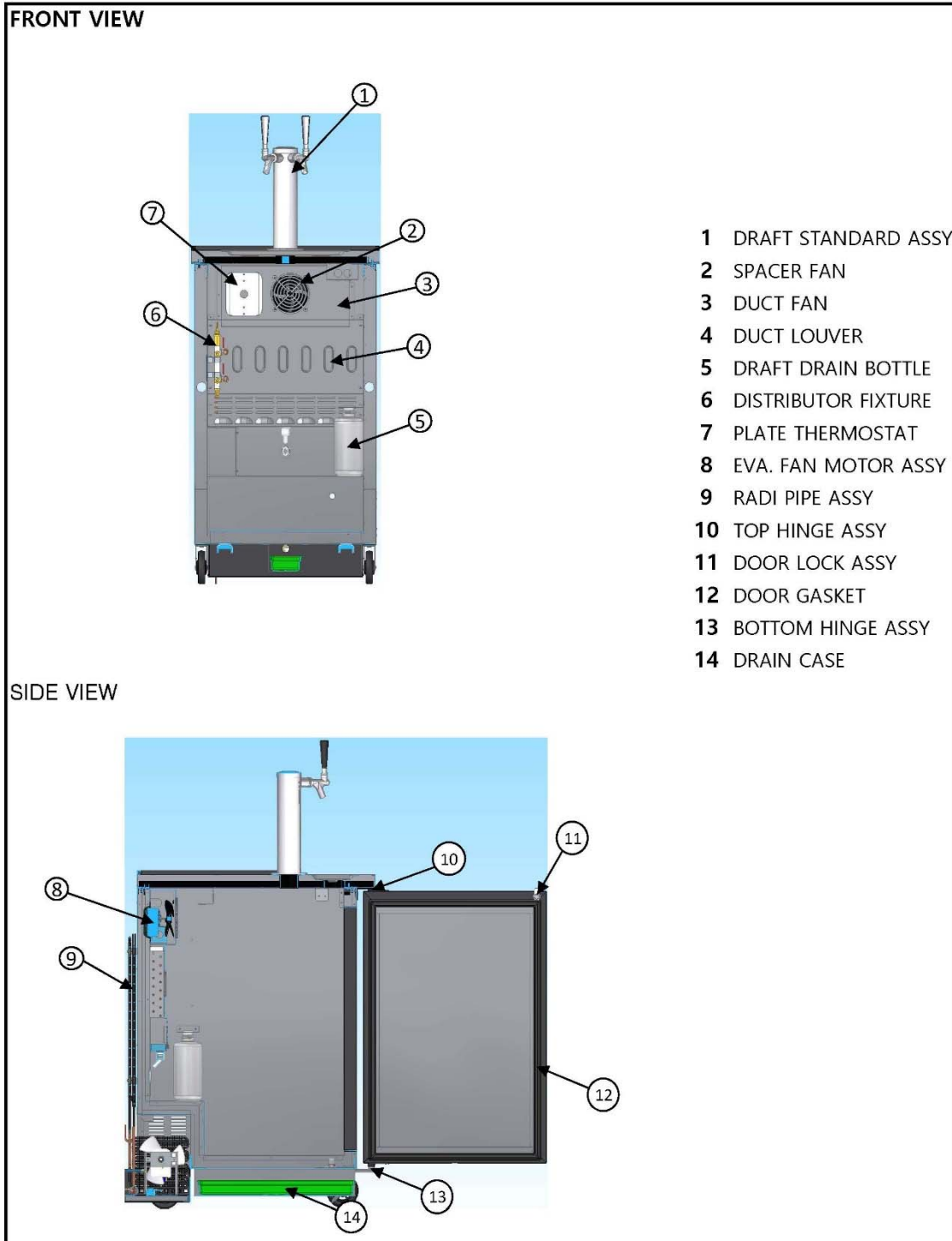
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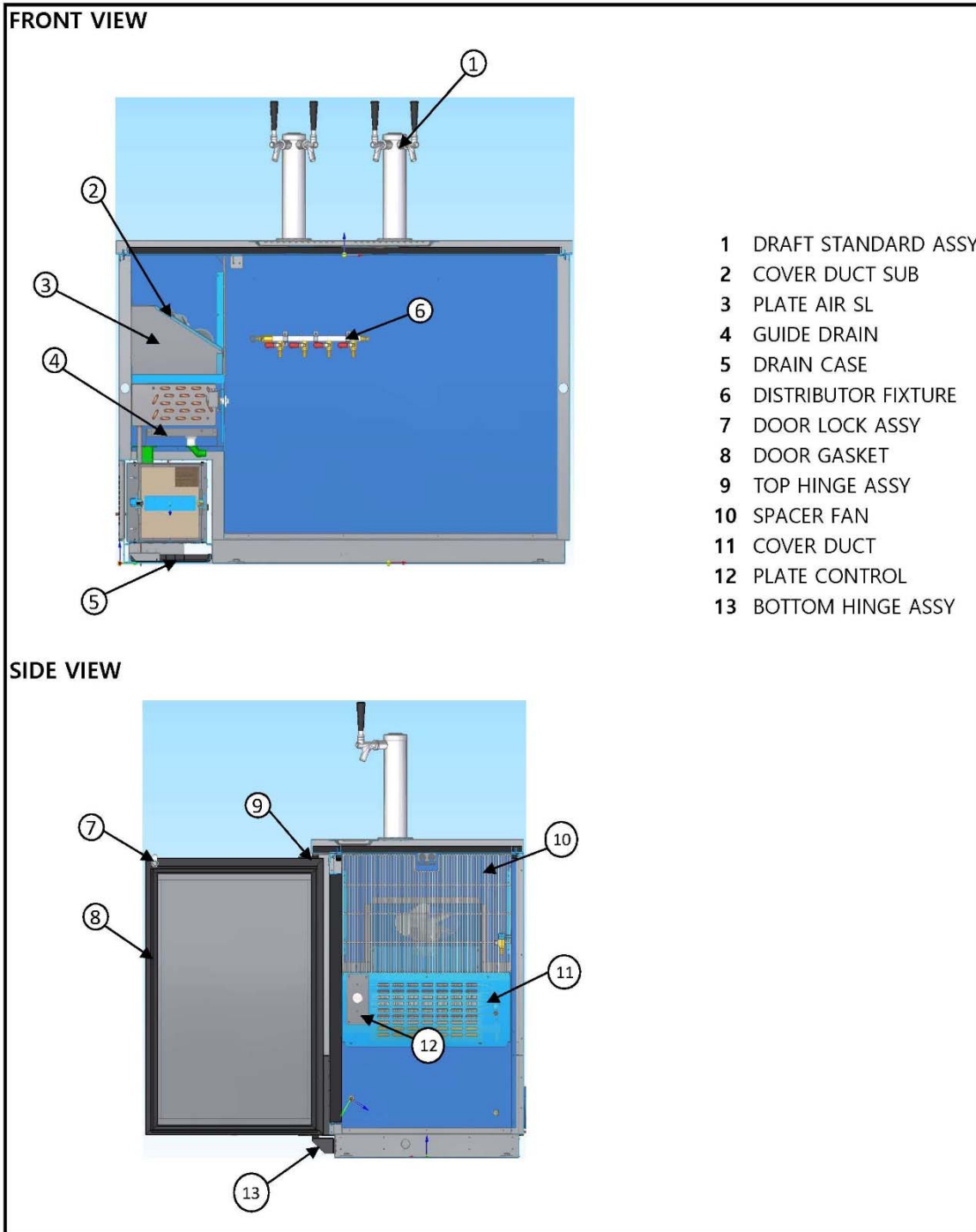
# 1. FEATURE CHART

1-1. FRONT VIEW and SIDE VIEW(TBD-1SD/SB-N6)



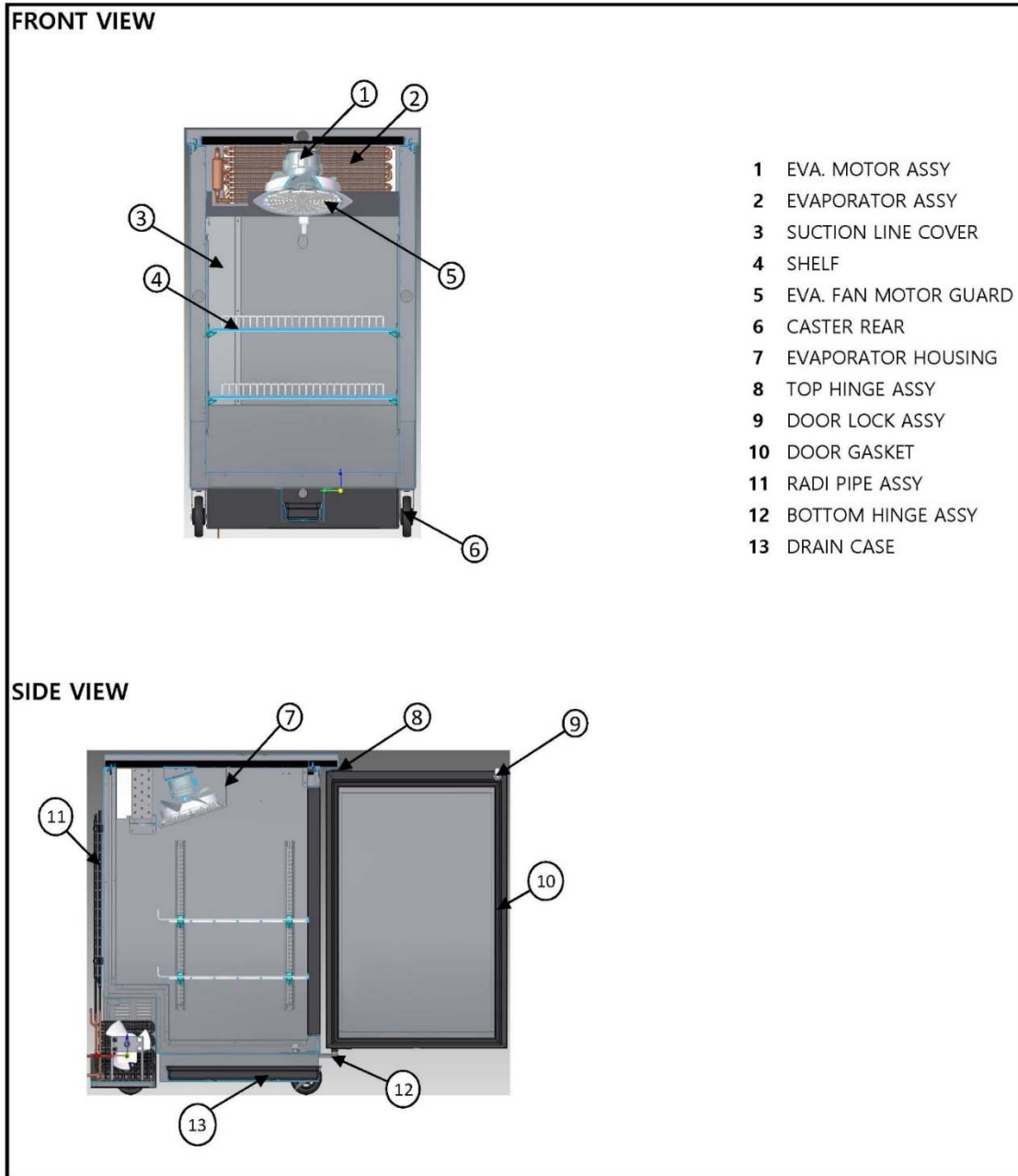
# FEATURE CHART

1-2. FRONT VIEW and SIDE VIEW(TBD-2SD/SB-N6, TBD-3SD/SB-N, TBD-4SD/SB-N)



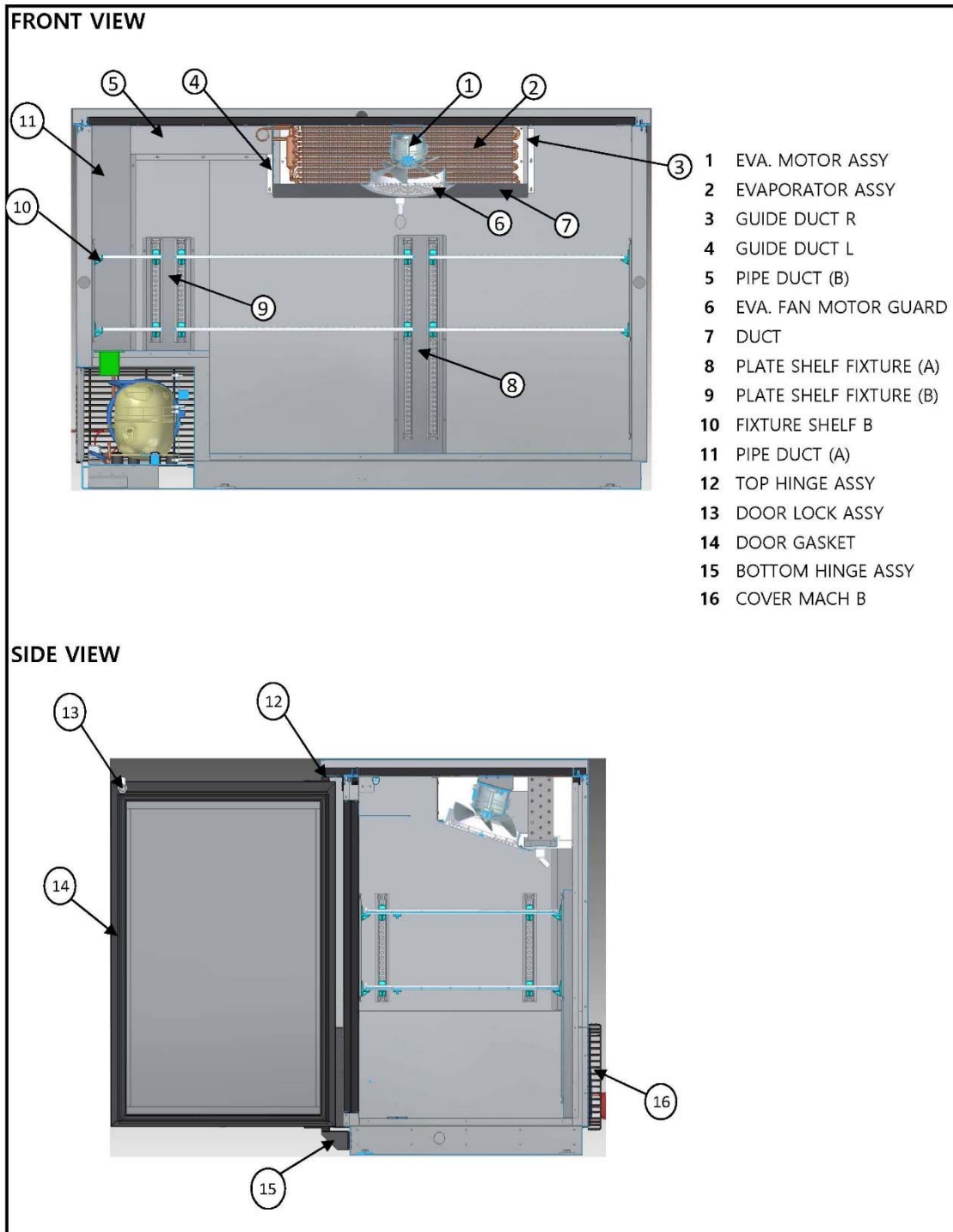
## FEATURE CHART

### 1-3. FRONT VIEW and SIDE VIEW(TBB-1SD/SB-N6)



# FEATURE CHART

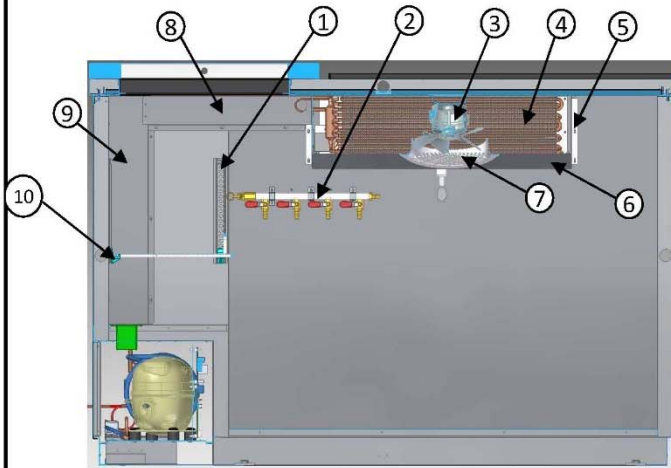
1-4. FRONT VIEW and SIDE VIEW(TBB-2SD/SB-N6, TBB-3SD/SB-N, TBB-4SD/SB-N)  
(TBB-2SG-N, TBB-3SG-N, TBB-4SG-N)



## FEATURE CHART

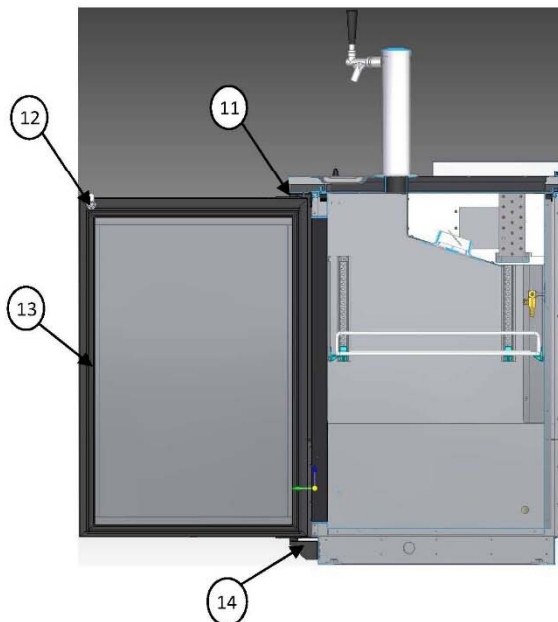
1-5. FRONT VIEW and SIDE VIEW(TCB-2SD/SB-N6, TCB-3SD/SB-N, TCB-4SD/SB-N)

### FRONT VIEW



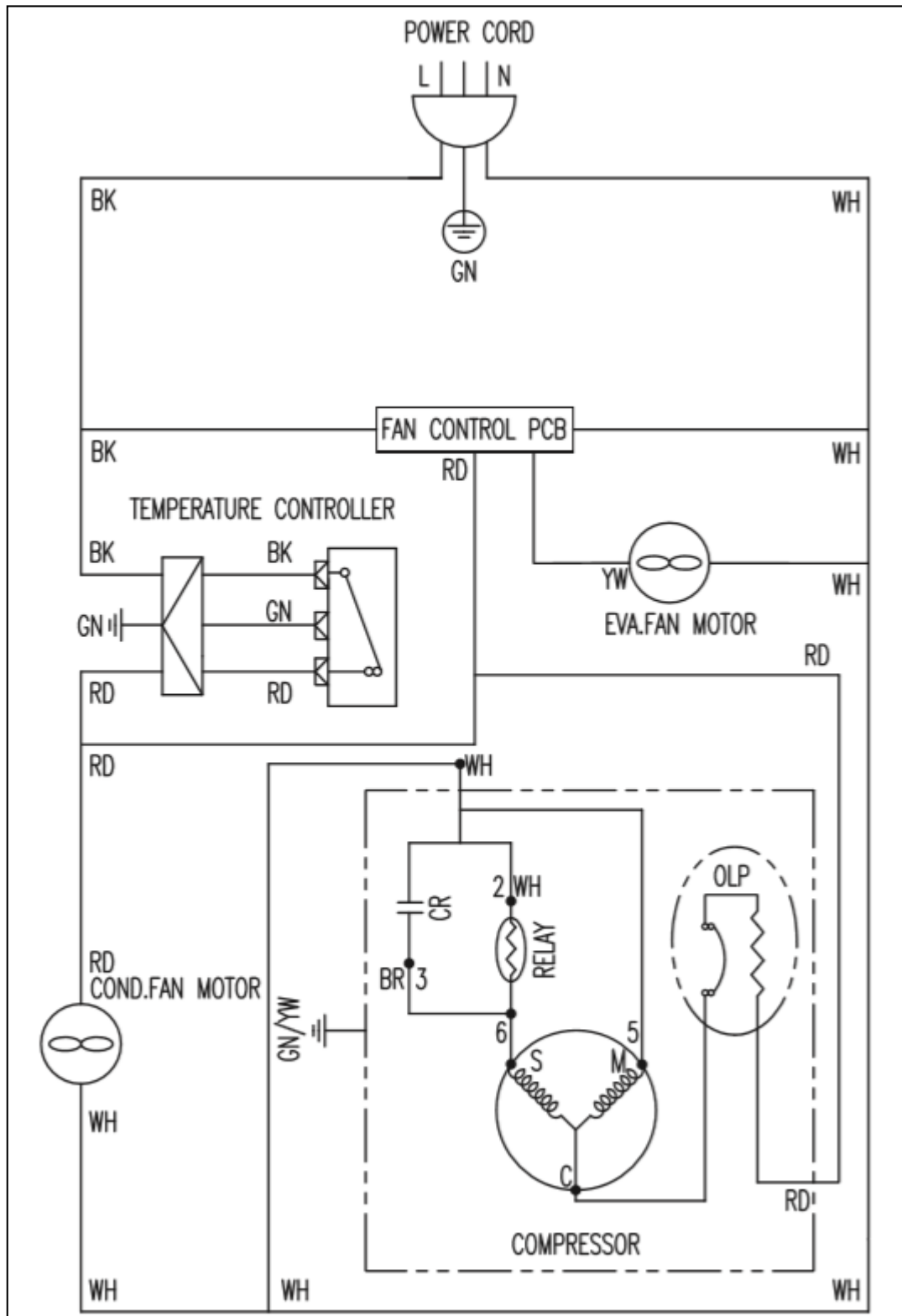
- 1 FIXTURE SHELF A
- 2 DISTRIBUTOR FIXTURE
- 3 EVA. MOTOR ASSY
- 4 EVAPORATOR ASSY
- 5 GUIDE DUCT R
- 6 DUCT
- 7 EVA. FAN MOTOR GUARD
- 8 PIPE DUCT (B)
- 9 PIPE DUCT (A)
- 10 FIXTURE SHELF B
- 11 TOP HINGE ASSY
- 12 DOOR LOCK ASSY
- 13 DOOR GASKET
- 14 BOTTOM HINGE ASSY

### SIDE VIEW



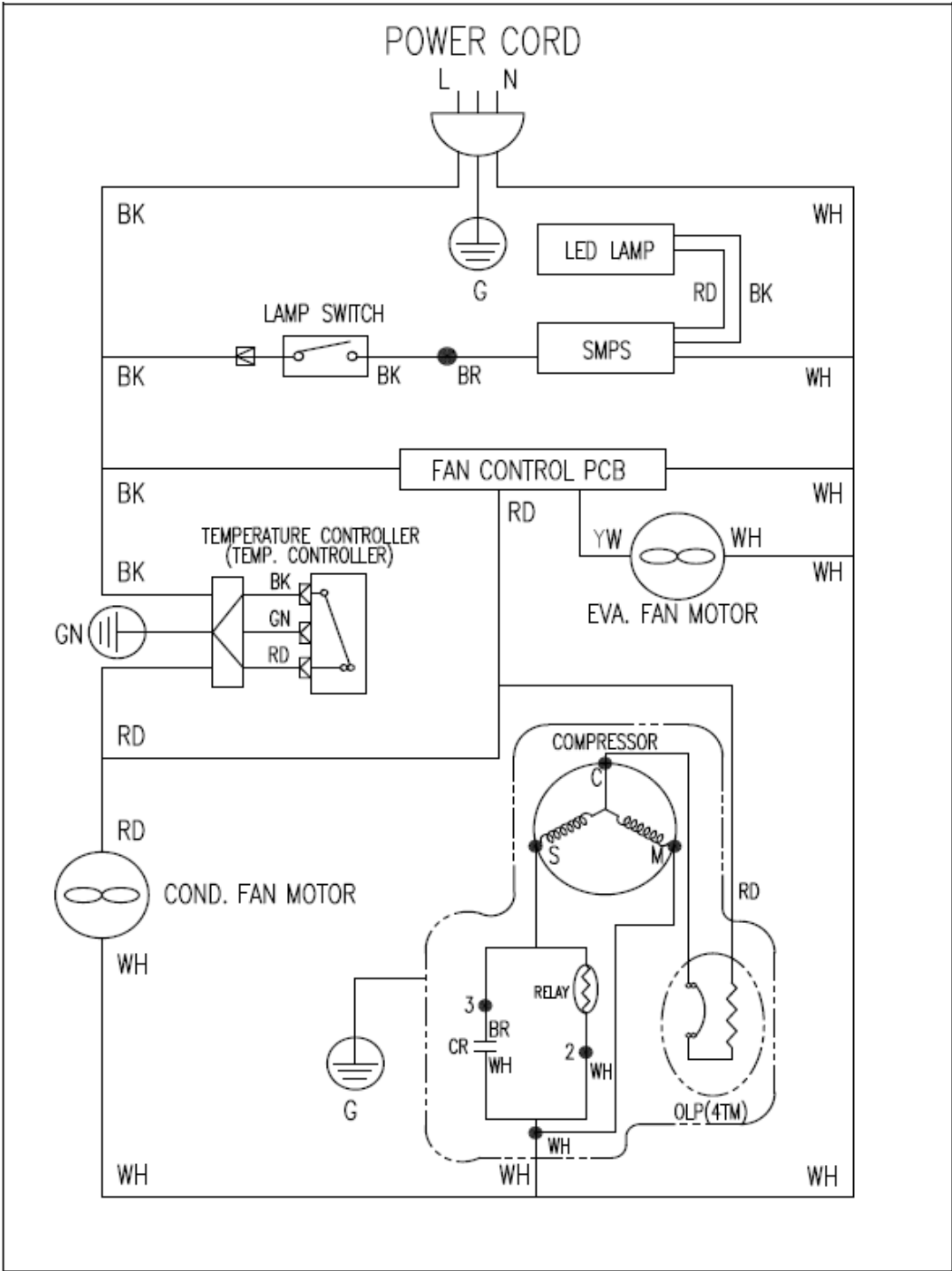
## 2. WIRING DIAGRAM

2-1. TBD-1SD/SB-N6



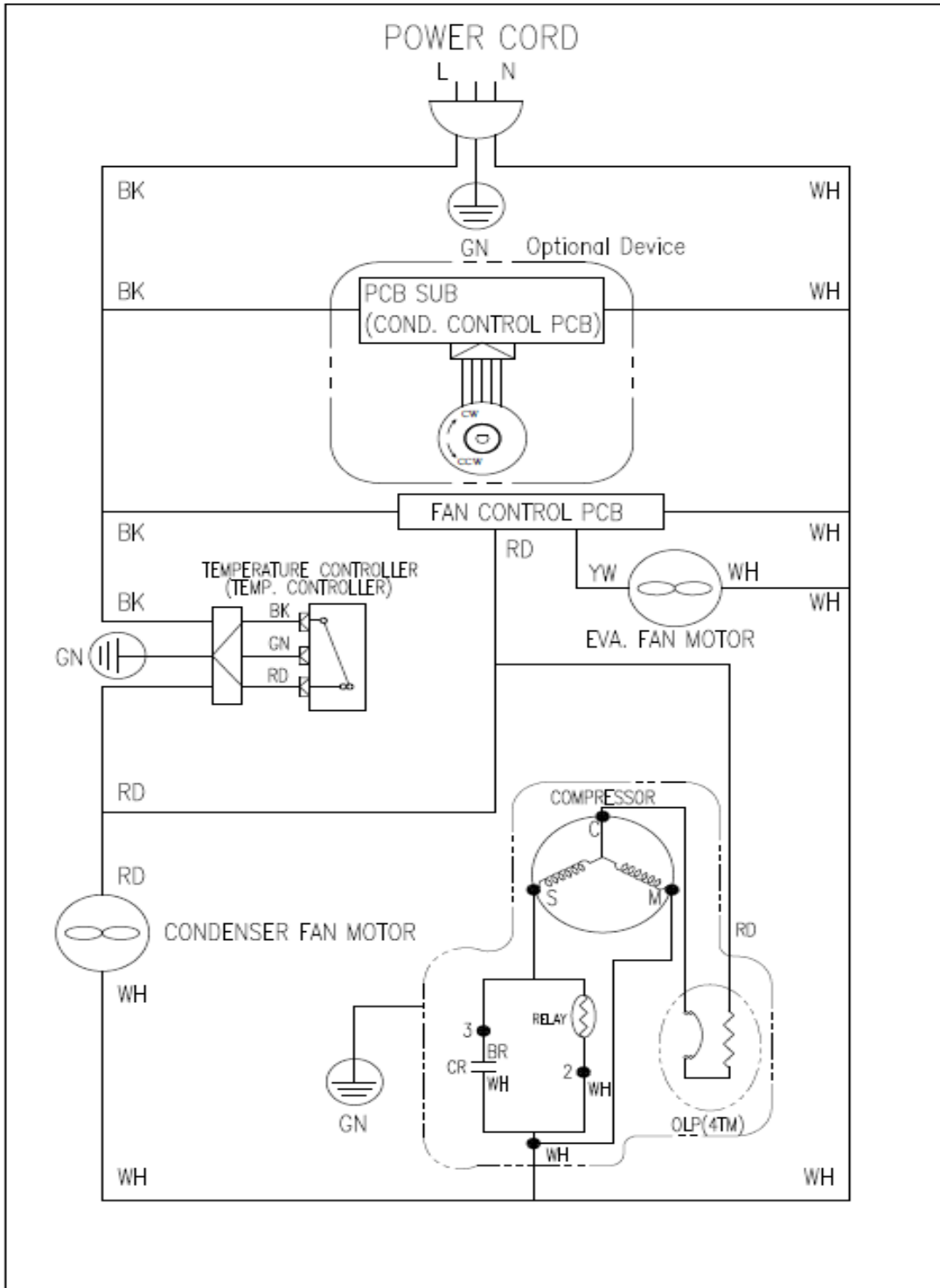
# WIRING DIAGRAM

2-2. TBB-1SB-N6



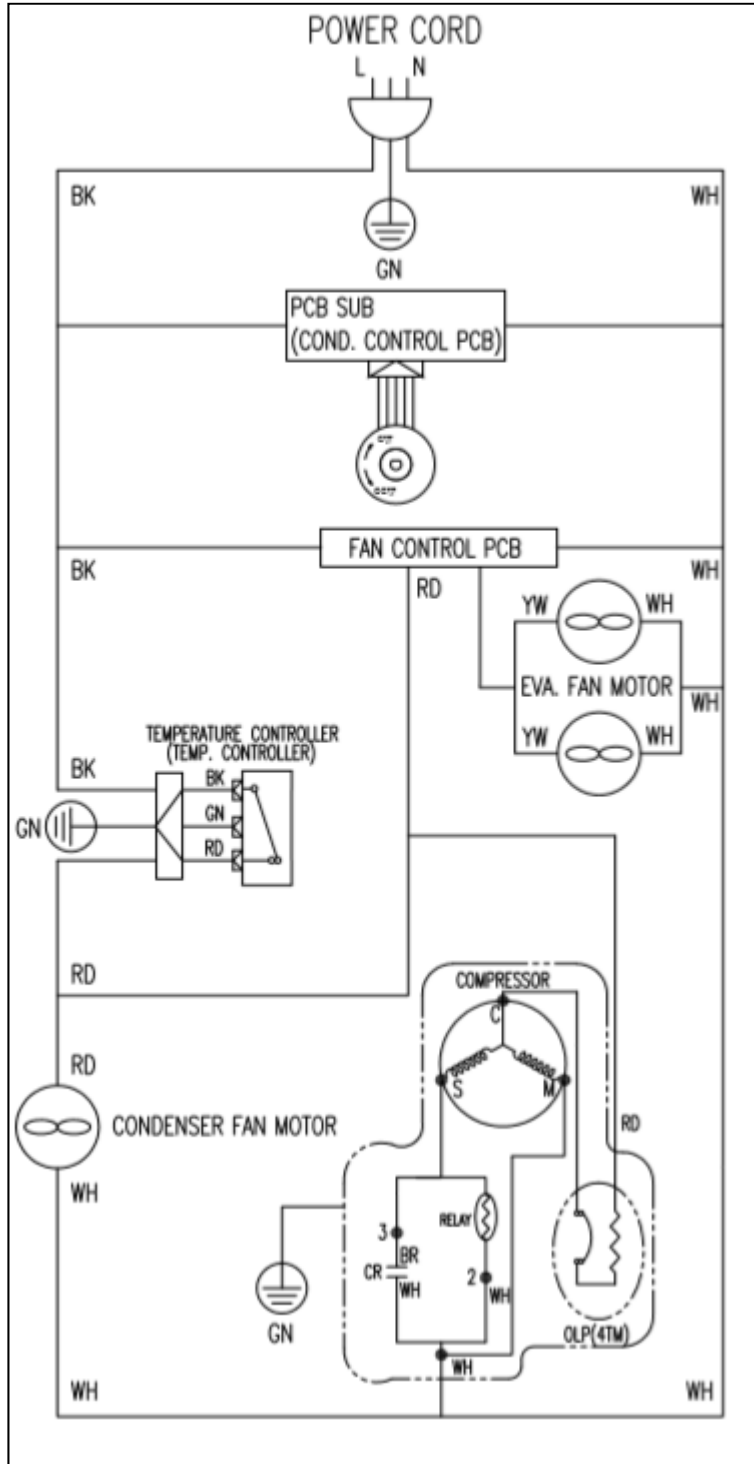
# WIRING DIAGRAM

2-3. TBD-2SD/SB-N6, TBD-3SD/SB-N, TBD-4SD/SB-N  
TCB-2SD/SB-N6, TCB-3SD/SB-N6



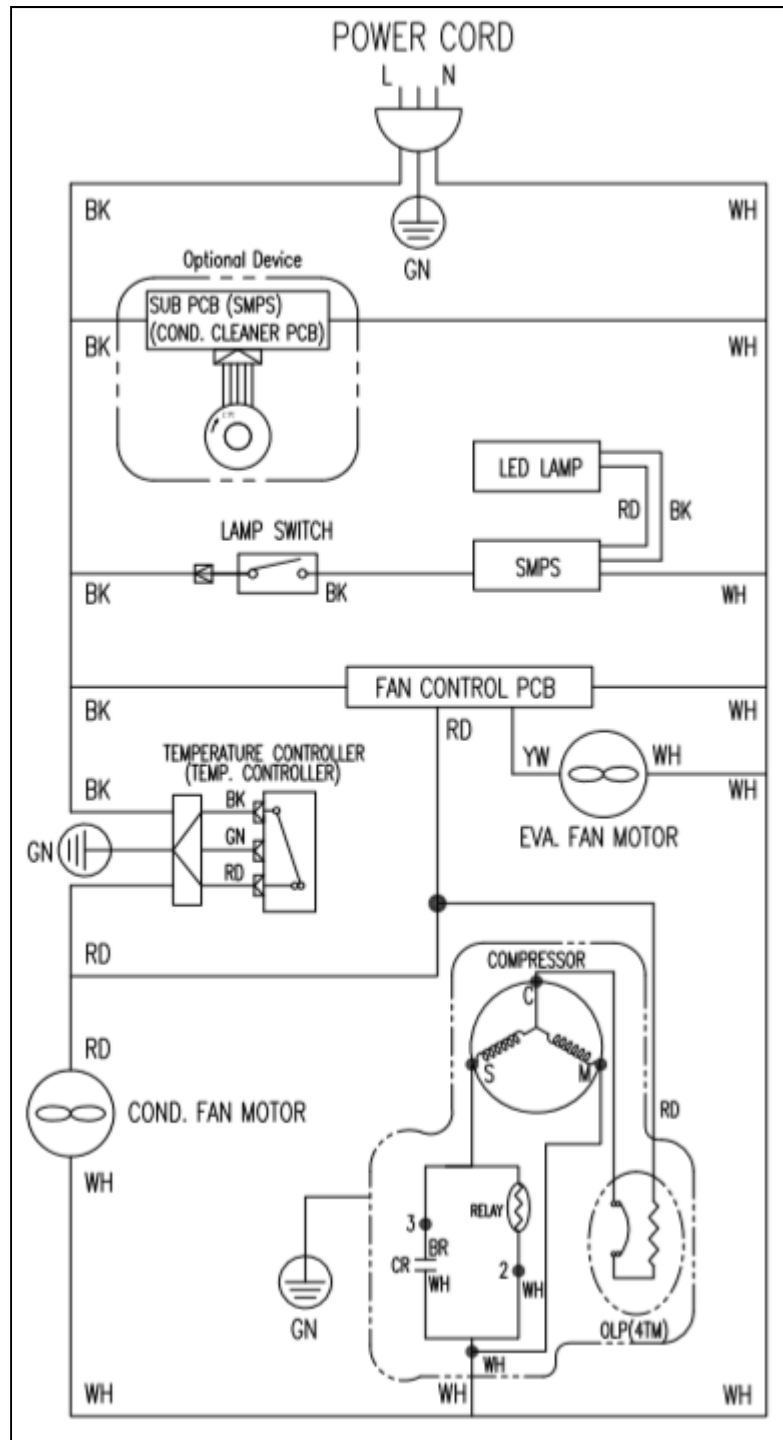
WIRING DIAGRAM

2-4. TCB-4SD/SB-N



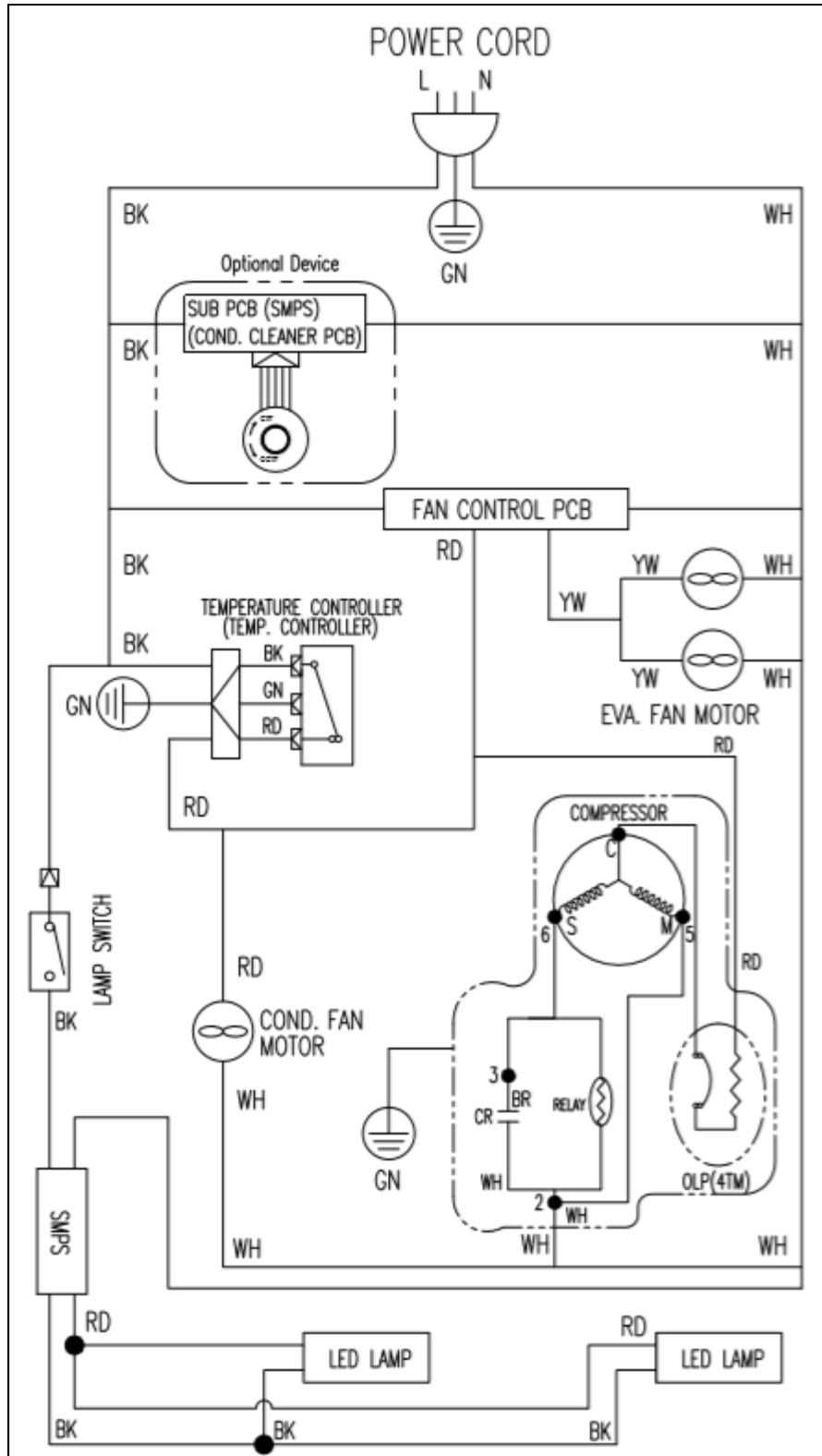
# WIRING DIAGRAM

2-5. TBB-2SB-N6, TBB-3SB-N6, TBB-2SG-N, TBB-3SG-N



# WIRING DIAGRAM

2-6. TBB-4SB-N, TBB-4SG-N



# 3. PART DETAILS

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## 3-1. DOOR

► **SOLID DOOR**

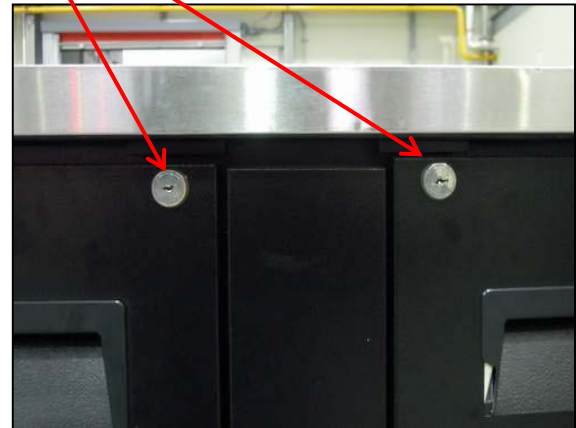
TBD-1SD/SB-N6, TBD-2SD/SB-N6, TBD-3SD/SB-N  
TBD-4SD/SB-N, TBB-1SB-N6, TBB-2SB-N6,  
TBB-3SB-N6, TBB-4SB-N, TCB-2SD/SB-N6,  
TCB-3SD/SB-N6, TCB-4SD/SB-N

► **GLASS DOOR**

TBB-2SG-N, TBB-3SG-N,  
TBB-4SG-N



### Door Lock Assembly

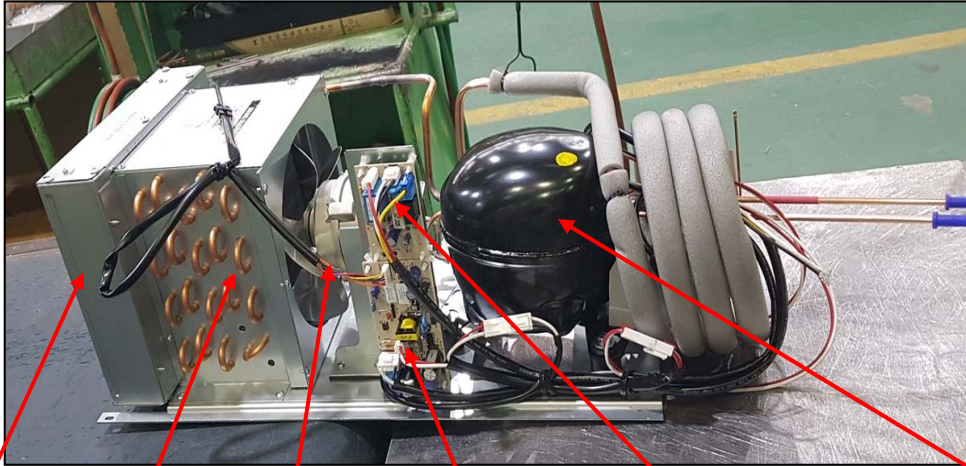


## PART DETAILS

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### 3-2. Refrigeration Compartment

#### ▶ TBD SERIES



Condenser Cleaner

Condenser Coil

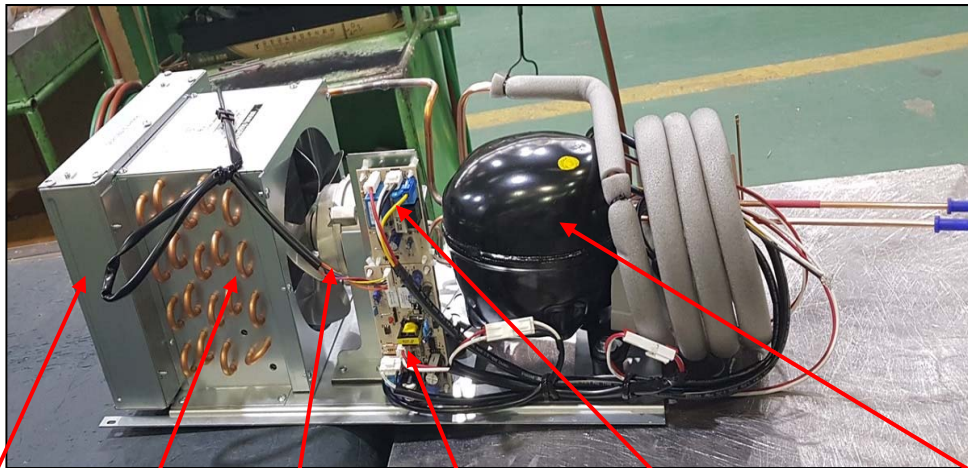
Fan Motor Assy

Cleaner PCB

Fan Control PCB

Compressor

#### ▶ TBB, TCB SERIES



Condenser Cleaner

Condenser Coil

Fan Motor Assy

Cleaner PCB

Fan Control PCB

Compressor

## PART DETAILS

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### Condensate drain pan

TBD-1SD/SB-N6, TBB-1SB-N6

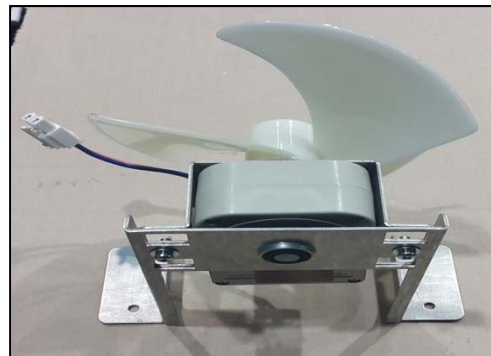


TBD-2SD/SB-N6, TBB-2SB-N6, TBB-2SG-N  
TBD-3SD/SB-N, TBB-3SB-N6, TBB-3SG-N  
TBB-4SD/SB-N, TBB-4SB-N, TBB-4SG-N  
TCB-2SD/SB-N6, TCB-3SD/SB-N6,  
TCB-4SD/SB-N



### Condensate Fan Motor Assembly

TBD-1SD/SB-N6, TBB-1SB-N6



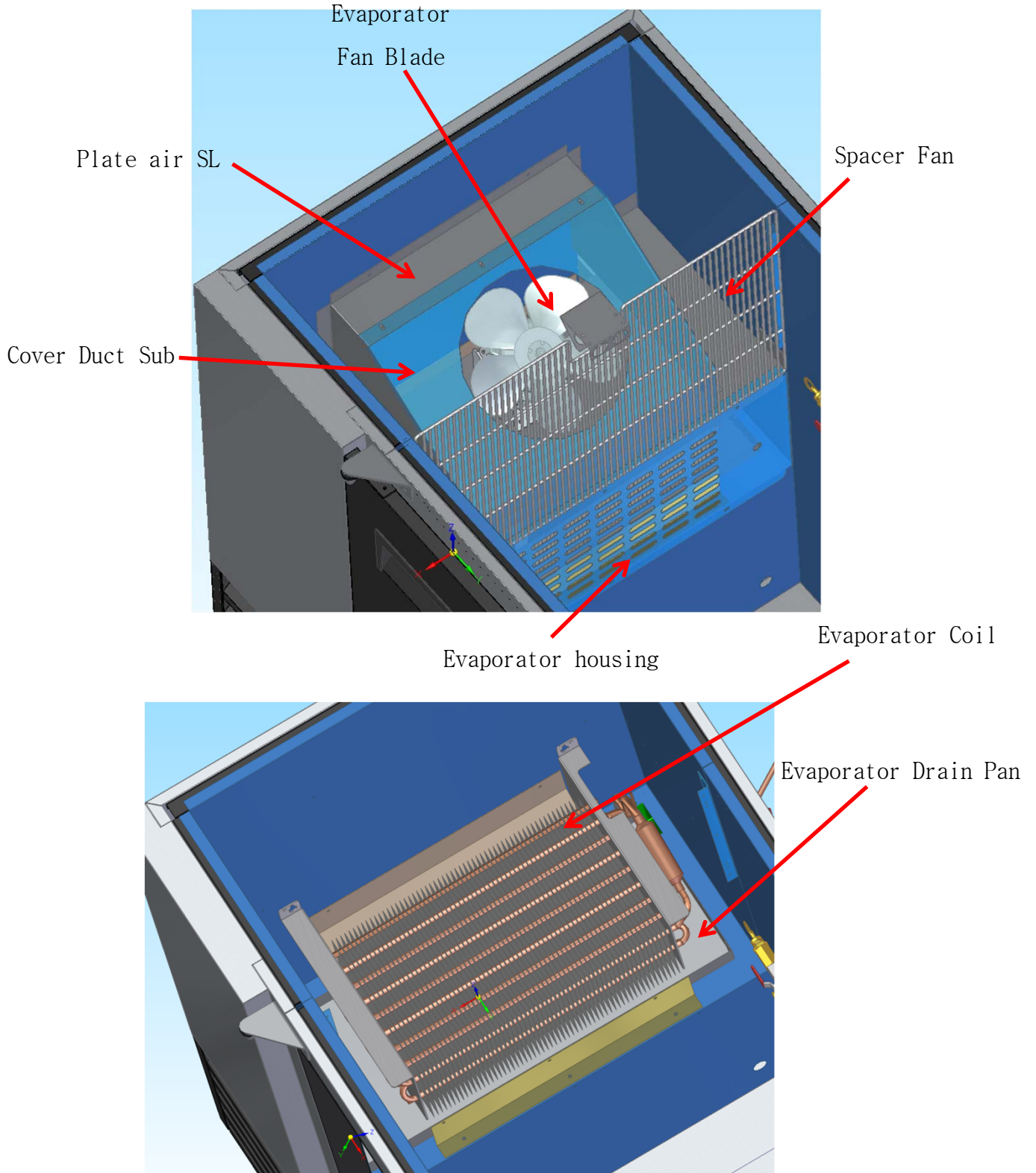
TBD-2SD/SB-N6, TBB-2SB-N6, TBB-2SG-N  
TBD-3SD/SB-N, TBB-3SB-N6, TBB-3SG-N  
TBB-4SD/SB-N, TBB-4SB-N, TBB-4SG-N  
TCB-2SD/SB-N6, TCB-3SD/SB-N6,  
TCB-4SD/SB-N



*PART DETAILS*

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3-3. Cooling Compartment



*PART DETAILS*

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3-4. LED

TBB Series Models.



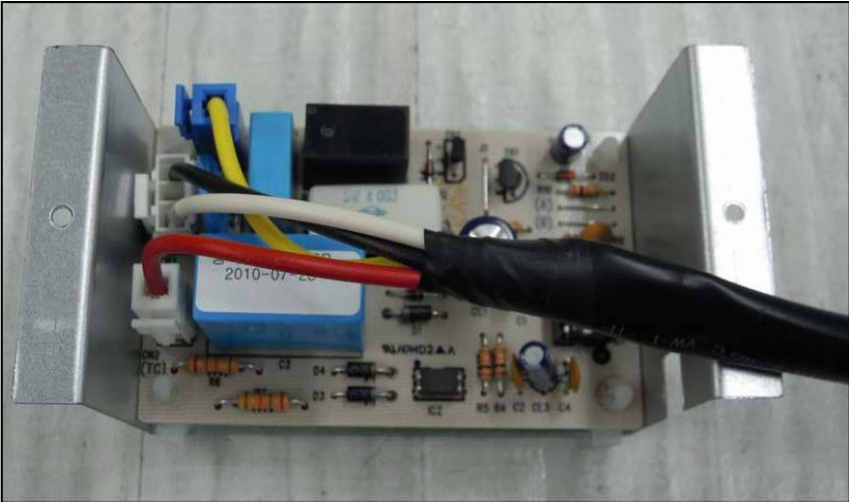
LED

*PART DETAILS*

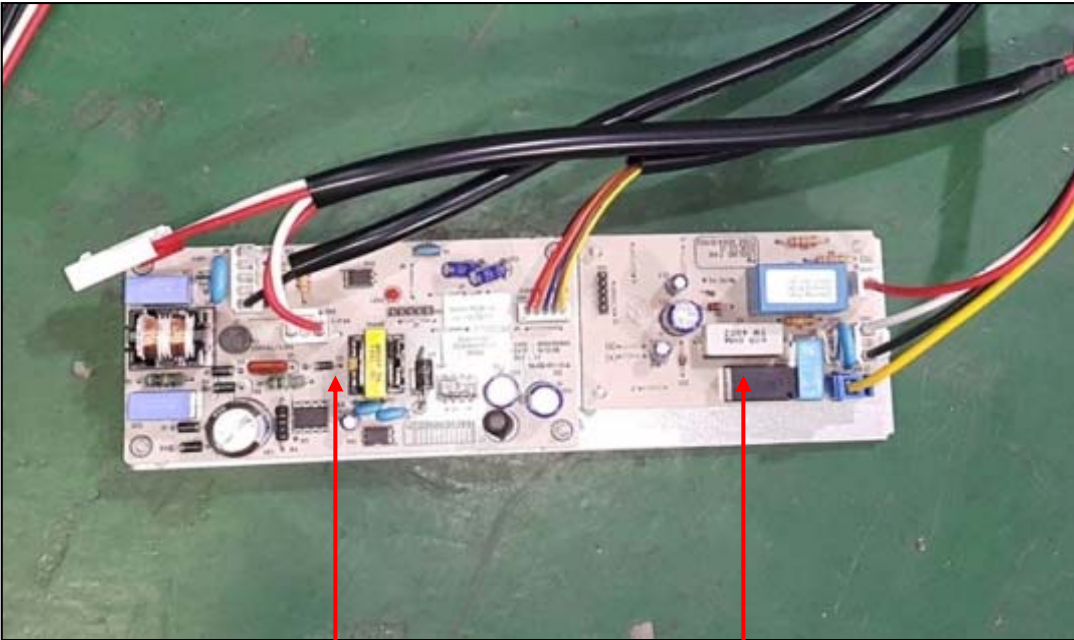
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3-5. Fan Control PCB or Cleaner PCB

TBB-1SB-N6, TBD-1SD/SB-N6



TBB, TBD, TCB Series Models.



Cleaner PCB

Fan Control PCB

## 4. MAIN COMPONENTS

### 1. COMPRESSOR

MODEL	PART NAME	PART NO.	REFRIGERANT	HORSE POWER	CAPACITY	TYPE MOTOR	Current	MAKER
TBD-1SD/SB-N6 TBB-1SB-N6	MSE482C-S1H	P0189E0100	R-600a	1/8 HP	596 BTU/h (150 kcal/h)	LBP RSCR	0.81A	SAMSUNG
TBD-2SD/SB-N6 TBB-2SB-N6 TBB-3SB-N6 TCB-2SD/SB-N6, TCB-3SD/SB-N6	MSE4A0C-S1H	P0189E0200	R-600a	1/5 HP	738 BTU/h (186 kcal/h)	LBP RSCR	1.08A	SAMSUNG
TBD-3SD/SB-N TBB-4SD/SB-N TBB-4SB-N TBB-2SG-N TBB-3SG-N TBB-4SG-N TCB-4SD/SB-N	EM2X3125U	P0189E0300	R-290	1/3 HP	1217 BTU/h (307 kcal/h)	LBP RSCR	1.89A	EMBRACO

### 2. COMPRESSOR RELAY, OVERLOAD

MODEL	RELAY	OVERLOAD PROTECTOR	MAKER
TBD-1SD/SB-N6 TBB-1SB-N6	100MD2 (PTC-RSCR)	4TM232PHBYY-53	SAMSUNG
TBD-2SD/SB-N6 TBB-2SB-N6, TBB-3SB-N6 TCB-2SD/SB-N6, TCB-3SD/SB-N6	100MD2 (PTC-RSCR)	4TM308RHBYY-53	SAMSUNG
TBD-3SD/SB-N, TBB-4SD/SB-N TBB-4SB-N TBB-2SG-N, TBB-3SG-N, TBB-4SG-N TCB-4SD/SB-N	CP4TMC460N61 (PTC-RSCR)	7M4R7MD3	EMBRACO

### 3. COMPRESSOR CAPACITOR

MODEL	STARTING CAPACITOR	RUNNING CAPACITOR
TBD-1SD/SB-N6 TBB-1SB-N6	-	250VAC / 12 $\mu$ F
TBD-2SD/SB-N6 TBB-2SB-N6, TBB-3SB-N6 TCB-2SD/SB-N6, TCB-3SD/SB-N6	-	250VAC / 12 $\mu$ F
TBD-3SD/SB-N, TBB-4SD/SB-N TBB-4SB-N TBB-2SG-N, TBB-3SG-N, TBB-4SG-N TCB-4SD/SB-N	-	180VAC / 20 $\mu$ F

## *MAIN COMPONENTS*

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### 4. EVAPORATOR FAN MOTOR

MODEL	PART NAME	PART NO.	VOLTAGE	BLADE	SIZE	MAKER
TBD-1SD/SB-N6	ADL-5846PMEA	P0189E0100	115V	PA66 + GF(14%)	110mm	SPG (SUNG-SHIN)
TBB-1SB-N6 TBD-2SD/SB-N6 TBB-2SB-N6, TBB-3SB-N6 TCB-2SD/SB-N6, TCB-3SD/SB-N6 TBD-3SD/SB-N, TBB-4SD/SB-N TBB-4SB-N TBB-2SG-N, TBB-3SG-N, TBB-4SG-N TCB-4SD/SB-N	KD083010	P0191A0800	115V	Aluminum	175mm	KOH-A JUNG GONG

### 5. CONDENSER FAN MOTOR

MODEL	PART NAME	PART NO.	VOLTAGE	BLADE	SIZE	MAKER
TBD-1SD/SB-N6 TBB-1SB-N6	ADL-5846PMCA	P0193S0600	115V	ABS	150mm	SPG (SUNG-SHIN)
TBD-2SD/SB-N6 TBB-2SB-N6, TBB-3SB-N6 TCB-2SD/SB-N6, TCB-3SD/SB-N6 TBD-3SD/SB-N, TBB-4SD/SB-N TBB-4SB-N TBB-2SG-N, TBB-3SG-N, TBB-4SG-N TCB-4SD/SB-N	KD08301A	P0191A0810	115V	Aluminum	175mm	KOH-A JUNG GONG

### 6. LED

MODEL	SPEC	LENGTH	PART NO.	AMOUNT
TBB-1SB-N6	6.5W	320mm	P0136L0600	1
TBB-2SB-N6, TBB-2G-N	12.5W	910mm	P0136L0301	1
TBB-3SB-N6, TBB-3SG-N	16.5W	1200mm	P0136L0401	1
TBB-4SB-N, TBB-4SG-N	12.5W	910mm	P0136L0301	2

## MAIN COMPONENTS

### 7. THERMOSTAT

MODEL	PART NAME	PART NO.	MAKER
TBD-1SD/SB-N6 TBD-2SD/SB-N6 TBD-3SD/SB-N TBB-1SB-N6 TBB-2SB-N6, TBB-2G-N TBB-3SB-N6, TBB-3SG-N TBB-4SB-N, TBB-4SG-N TCB-2SD/SB-N6 TCB-3SD/SB-N6 TBB-4SD/SB-N	GNA-904	P0183E0500	SHIN-HAN
TBD-4SD/SB-N	GNA-905	P0183E0600	SHIN-HAN

#### ► THERMOSTAT ON/OFF SPEC.

MODEL	WARM		NORMAL		COLD	
	On	Off	On	Off	On	Off
GNA-904	10.0	-2.5	6.0±1.5	-7.0±1.5	4.0	-9.0
GNA-905	8.0	-5.0	5.0±1.5	-9.0±1.5	3.5	-10.5

### 8. FAN-CONTROL PCB

MODEL	PART NAME	PART NO.	MAKER
ALL	FAN CONTROL PCB	P0143A0100	NEUROSYS

### 9. CONDENSER CLEANER PCB

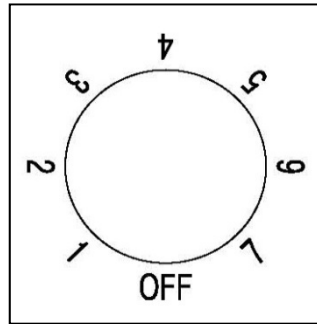
MODEL	PART NAME	PART NO.	MAKER
TBD-2SD/SB-N6 TBD-3SD/SB-N TBB-2SB-N6, TBB-2G-N TBB-3SB-N6, TBB-3SG-N TBB-4SB-N, TBB-4SG-N TCB-2SD/SB-N6 TCB-3SD/SB-N6 TBB-4SD/SB-N TBD-4SD/SB-N	CONDENSER CLEANER PCB	P0143B0300	NEUROSYS

## 5. TEMPERATUR CONTROL INSTRUCTION

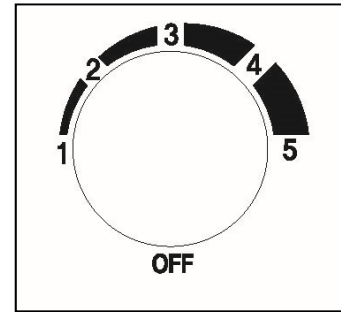
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### 5-1. HOW TO USE THE TEMPERATURE CONTROL

- ▶ Temperature can be controlled by the user.
- ▶ Settings can be changed by “Dial Knob”.
- ▶ Compressor is automatically turned on and off by thermostat.



**TEMPERATURE CONTROL**  
(TBD-1SD/SB-N6, TBD-3SD/SB-N,  
TBD-4SD/SB-N, TBB-2G-N, TBB-3SG-N)



**TEMPERATURE CONTROL**  
(TBD-2SD/SB-N6, TBB-1SB-N6, TBB-2SB-N6,  
TBB-3SB-N6, TBB-4SB-N, TBB-4SG-N, TCB-  
2SD/SB-N6, TCB-3SD/SB-N6, TBB-4SD/SB-N)

### 5-2. FAN CONTROL PCB

- ▶ Cooling Fan Motors are controlled by “Fan Control PCB”
- ▶ Cooling Fan Motors are continuously operating while compressor is operating
- ▶ It is repeated during compressor is not operating that Cooling Fan Motors are not operating 3 minutes and operating 1 minutes.





