



Turbo Air Speed up the Pace of Innovation

CAUTION!
PLEASE KEEP POWER
SWITCH ON BEFORE
OPERATING THIS EQUIPMENT

Underbar Equipment Service Manual

Please read this manual completely before attempting to install or operate this equipment!

BOTTLE COOLERS

TBC-24SD / TBC-36SD / TBC-50SD / TBC-65SD / TBC-80SD / TBC-95SD

TBC-24SB / TBC-36SB / TBC-50SB / TBC-65SB / TBC-80SB / TBC-95SB

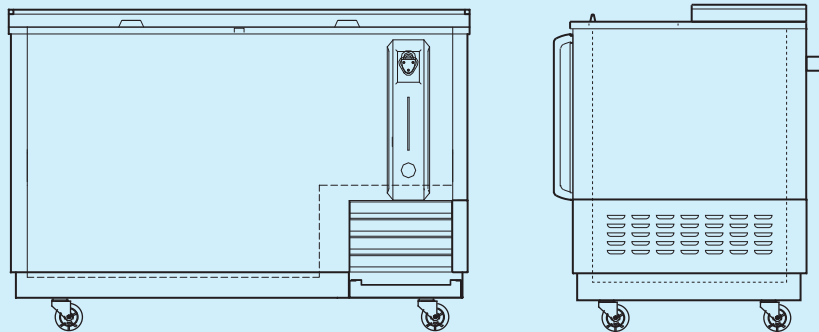
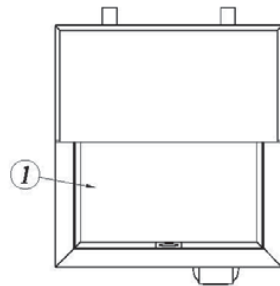


TABLE OF CONTENTS

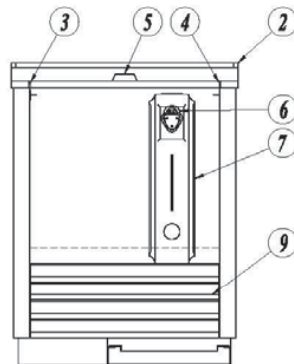
1. FEATURE CHART
2. WIRING DIAGRAM
3. PART DETAILS
4. MAIN COMPONENTS
5. TEMPERATURE CONTROL INSTRUCTION
6. PARTS LIST
7. REPLACEMENT OF MAIN COMPONENTS

1. FEATURE CHART

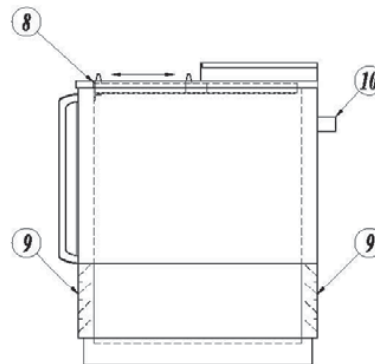
1-1. TBC-24SD/SB



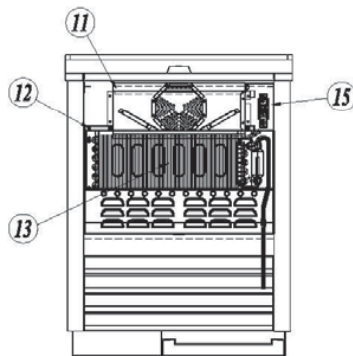
PLAN VIEW



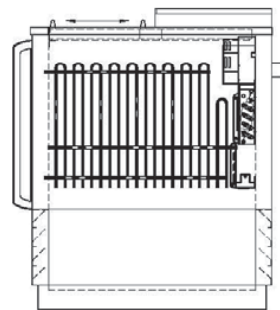
FRONT VIEW



SIDE VIEW



FRONT INSIDE VIEW



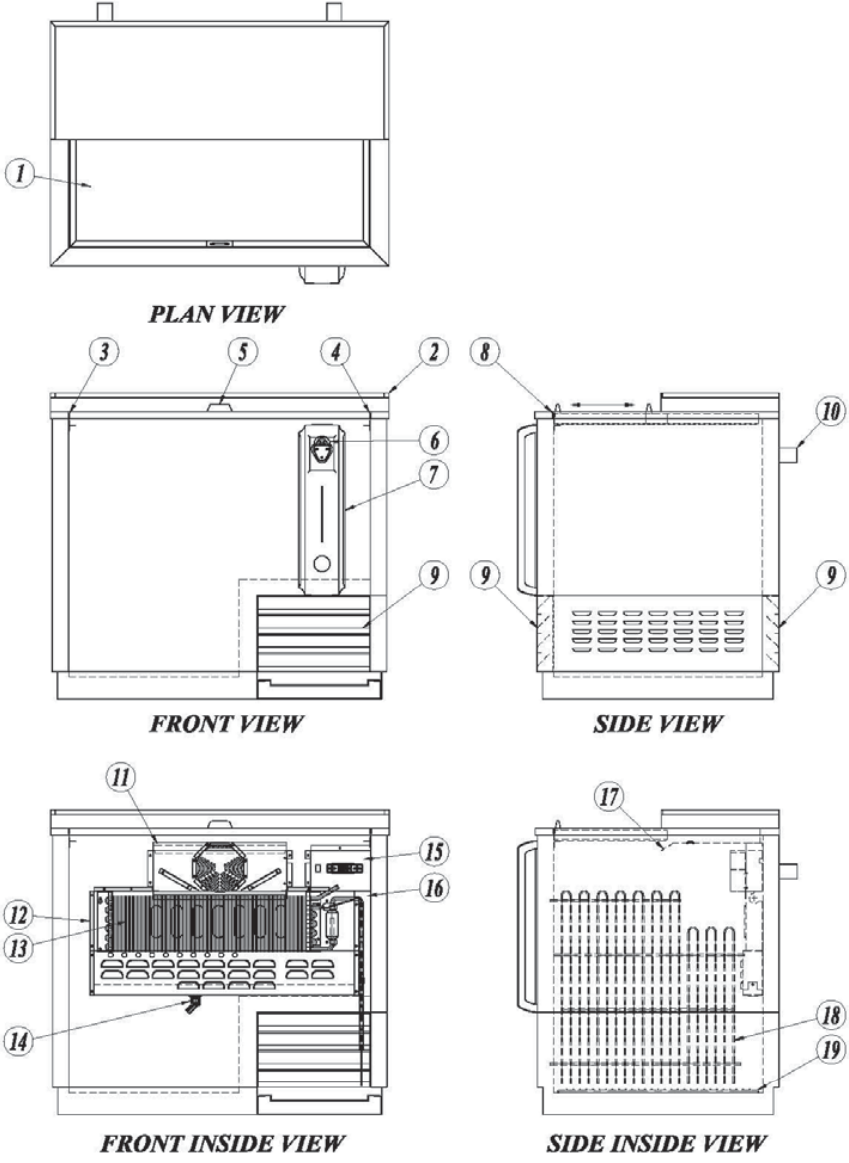
SIDE INSIDE VIEW

- 1 LID
- 2 COUNTERTOP
- 3 LID RAIL LEFT
- 4 LID RAIL RIGHT
- 5 LID HANDLE
- 6 CAP OPENER
- 7 CAP CATCHER
- 8 LID RAIL FRONT
- 9 GRILLE ASSEMBLY(FRONT=REAR)
- 10 CUSHION SPACER

- 11 DUCT(A)
- 12 DUCT(B) (LOUVERED)
- 13 EVAPORATOR COIL
- 14 EVAPORATOR DRAIN ELBOW &
- 15 TEMPERATURE CONTROL BOX
- 16 SUCTION LINE COVER
- 17 AIR GUIDE
- 18 DIVIDER
- 19 SHELF BOTTOM

FEATURE CHART

1-2. TBC-36SD/SB

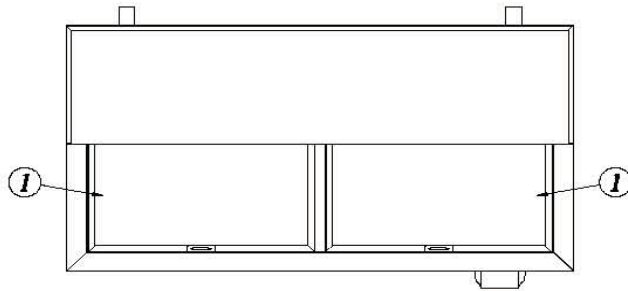


1-15 PART : Refer to the TBC-24SD/SB List

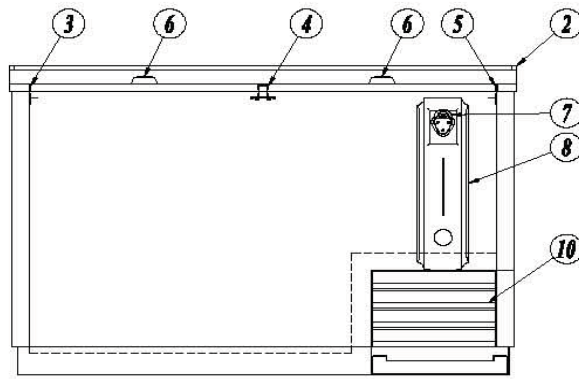
- 16 SUCTION LINE COVER**
- 17 AIR GUIDE**
- 18 DIVIDER**
- 19 SHELF BOTTOM**

FEATURE CHART

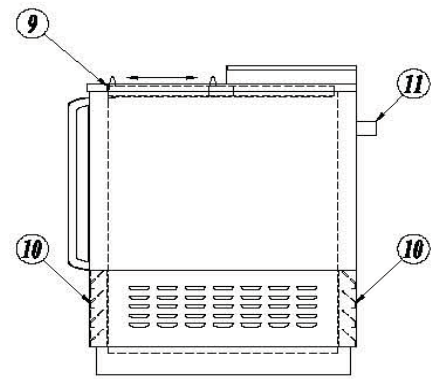
1-3. TBC-50SD/SB, TBC-65SD/SB



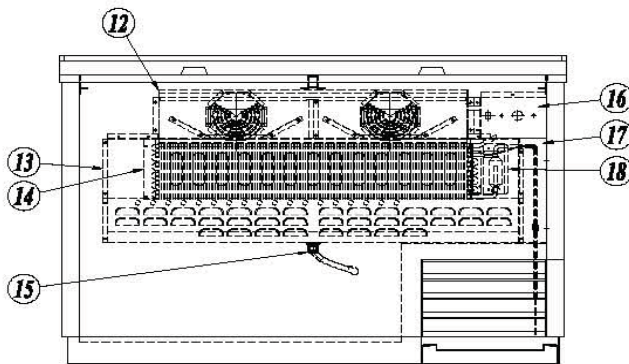
TOP VIEW



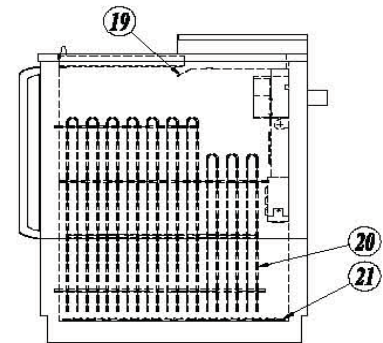
FRONT VIEW



SIDE VIEW



FRONT INSIDE VIEW

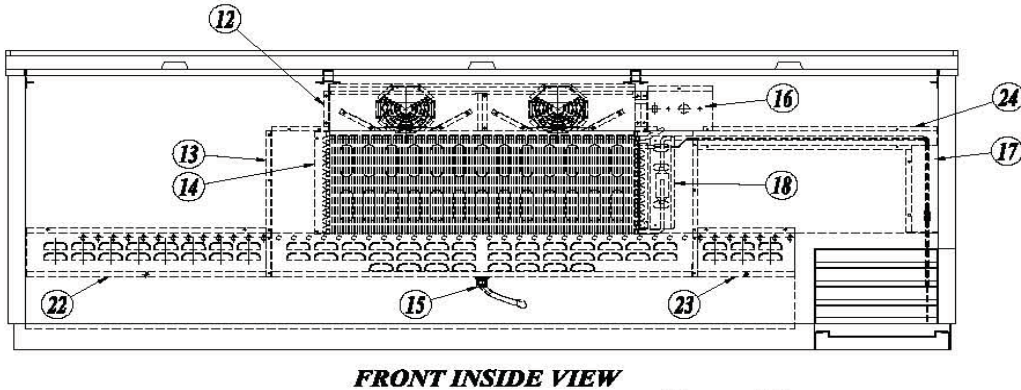
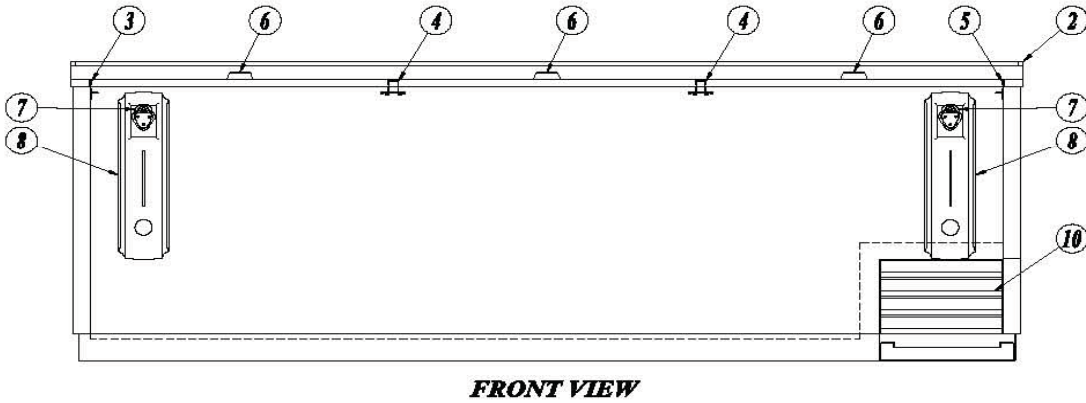
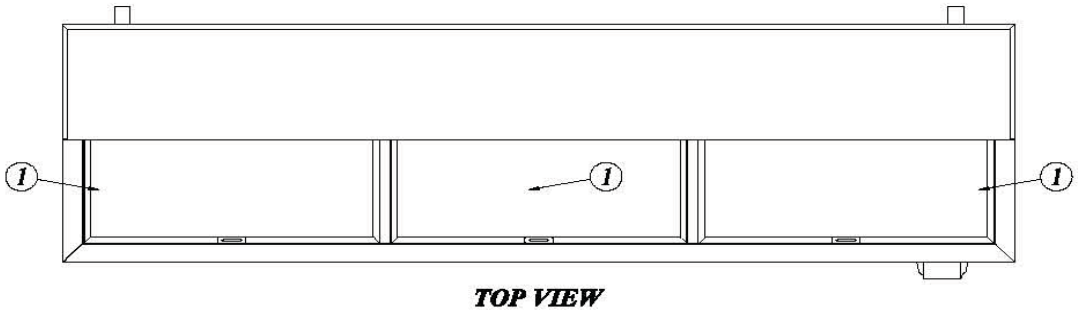


SIDE INSIDE VIEW

- | | |
|----------------------------------|-----------------------------------|
| 2. COUNTER TOP | 12. DUCT(A) |
| 3. LID RAIL LEFT | 13. DUCT(B) (LOUVERED) |
| 4. LID RAIL MIDDLE | 14. EVAPORATOR COIL |
| 5. LID RAIL RIGHT | 15. EVAPORATOR DRAIN ELBOW & HOSE |
| 6. LID HANDLE | 16. TEMPERATURE CONTROL BOX |
| 7. CAP OPENER | 17. SUCTION LINE COVER |
| 9. LID RAIL FRONT | 19. AIR GUIDE |
| 10. GILLE ASSEMBLY(FRONT = REAR) | 20. DIVIDER |
| | 21. SHELF BOTTOM |

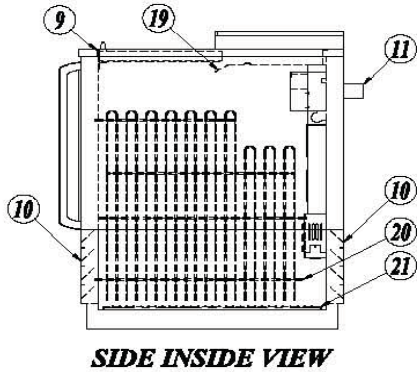
FEATURE CHART

1-4. TBC-80SD/SB, TBC-95SD/SB



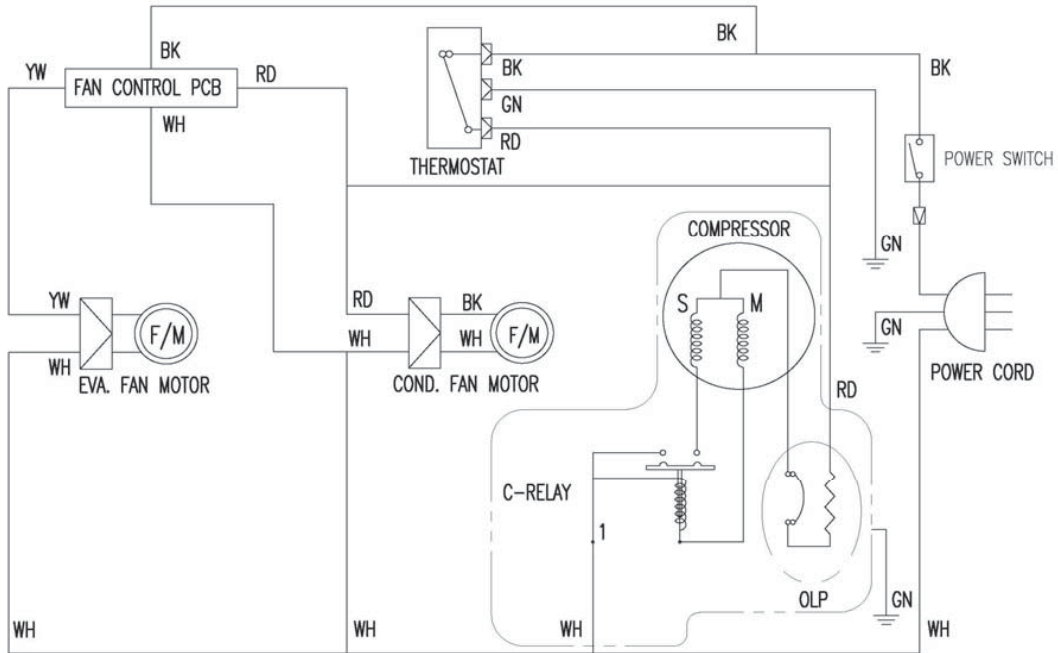
1~21 PART : Refer to the TBC-50SD/SB LIST

- 22. DUCT(C)
- 23. DUCT(D)
- 24. SUCTION LINE COVER(HORIZONTAL)

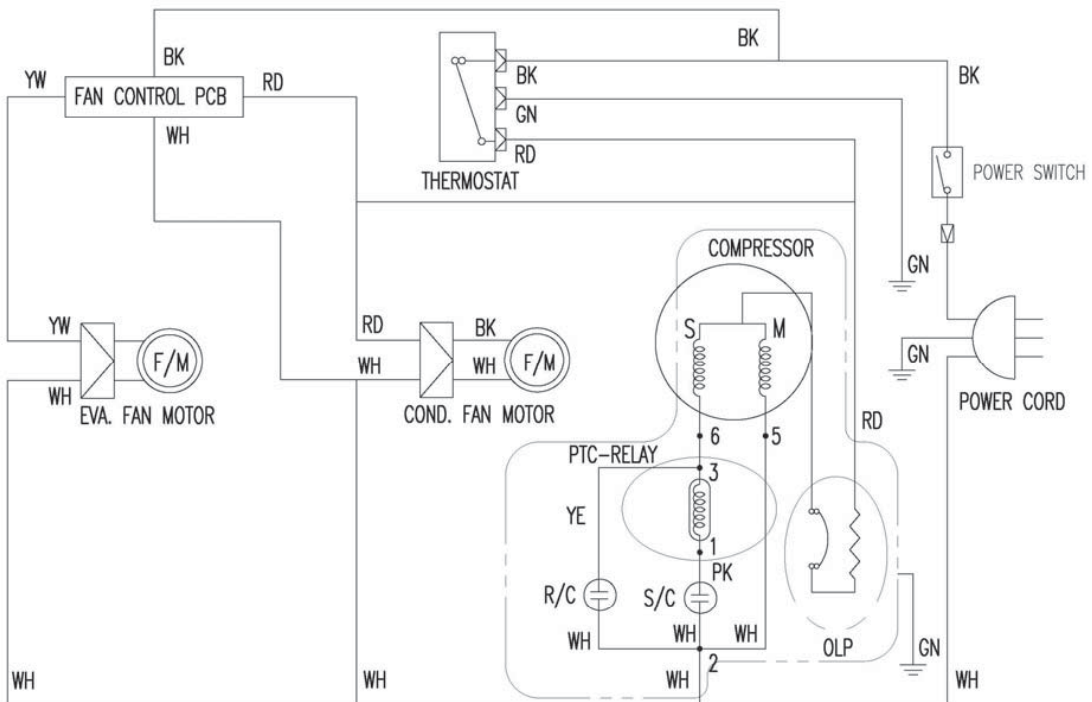


2. WIRING DIAGRAM

2-1. TBC-24SD/SB

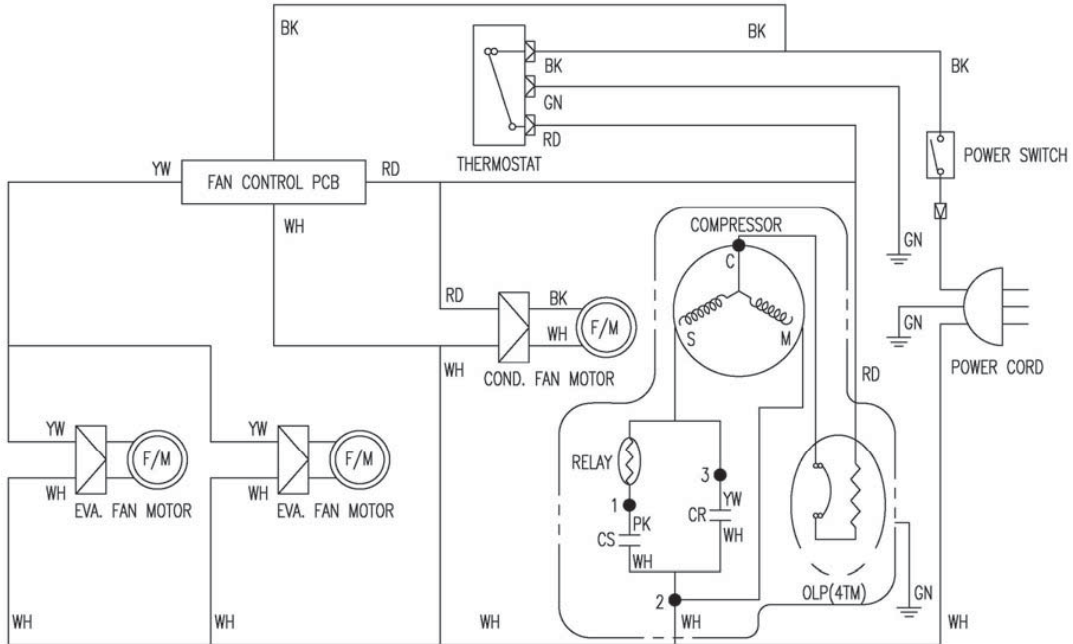


2-2. TBC-36SD/SB

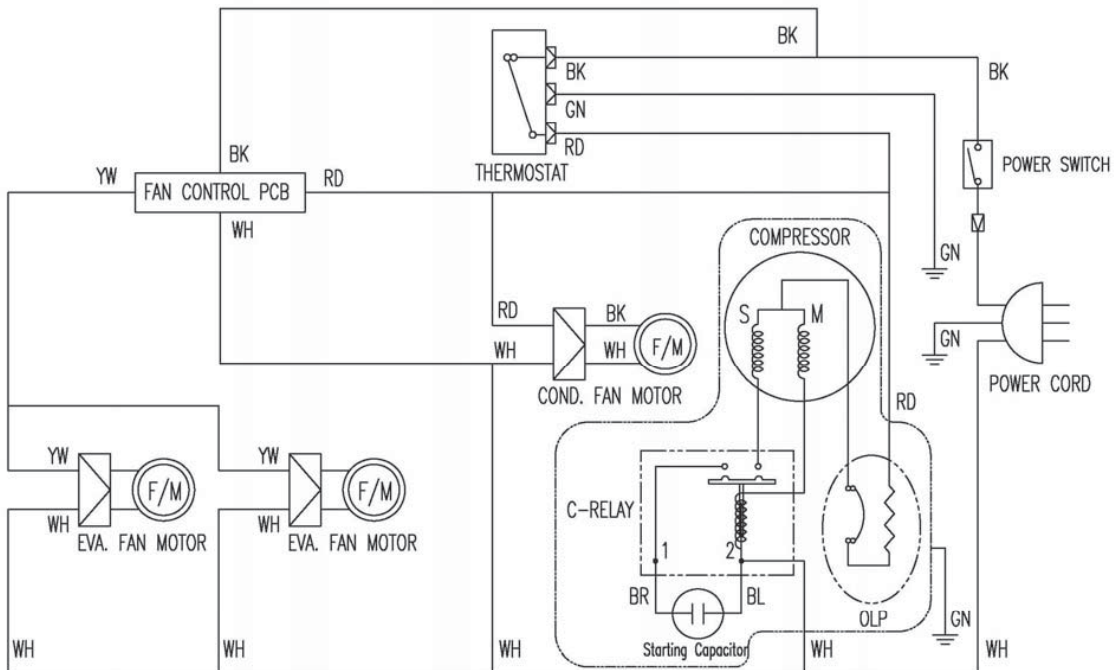


WIRING DIAGRAM

2-3. TBC-50SD/SB, TBC-65SD/SB



2-4. TBC-80SD/SB, TBC-95SD/SB



3. PART DETAILS



Evaporator Fan Blade

Motor Bracket

Evaporator Fan Motor

3-2. CONDENSER FAN MOTOR

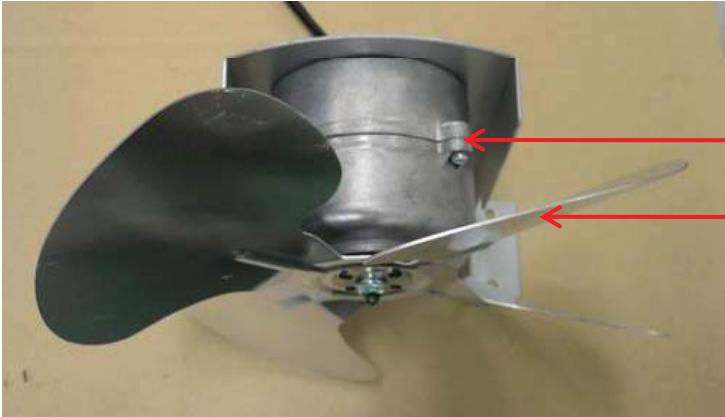


Condenser Fan Blade

Motor Bracket

Condenser Fan Motor

TBC-24SD/SB
TBC-36SD/SB



o or rac e

Condenser Fan Motor

Condenser Fan Blade

-
TBC-65SD/SB
TBC-80SD/SB
TBC-95SD/SB

PART DETAILS

3-3. DUCT(A) : EVAPORATOR FAN MOTOR DUCT



3-4. DUCT(B) , (C) , (D)



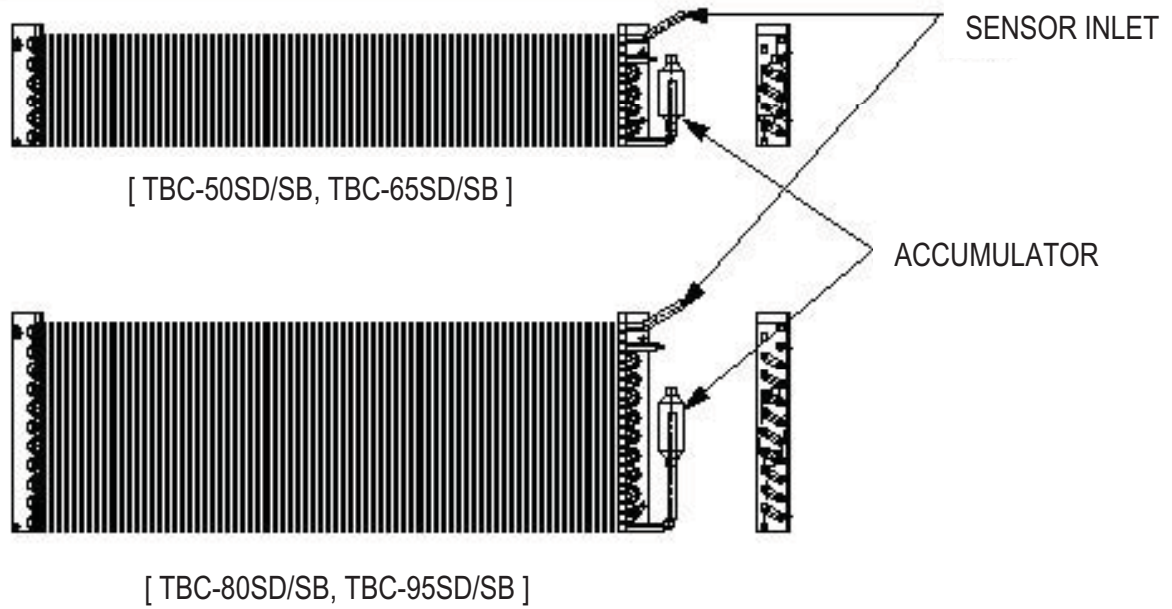
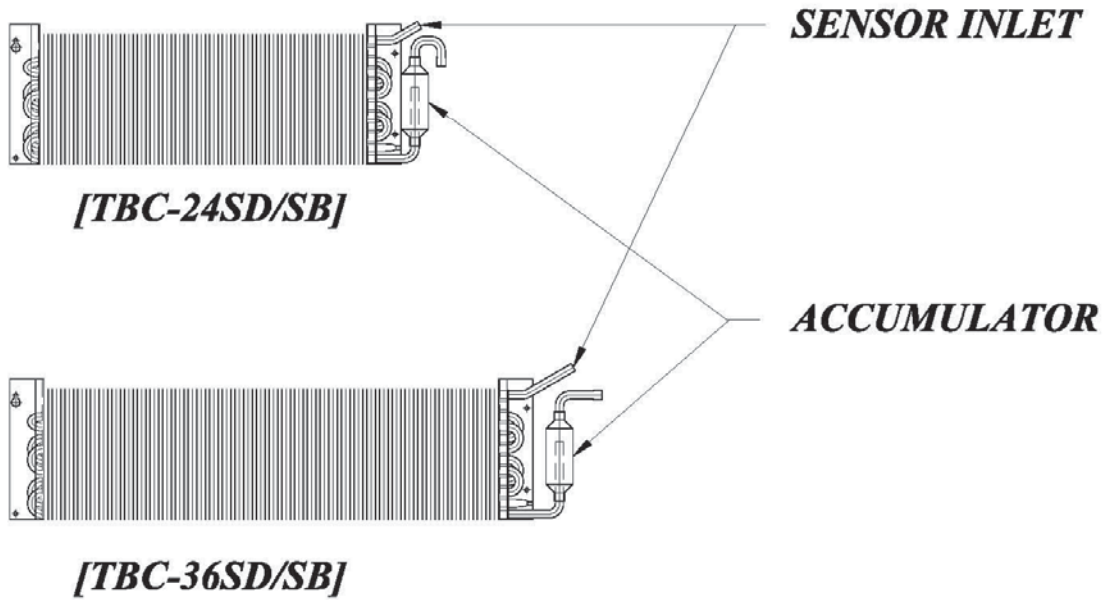
DUCT(C)

DUCT(B)

DUCT(D)

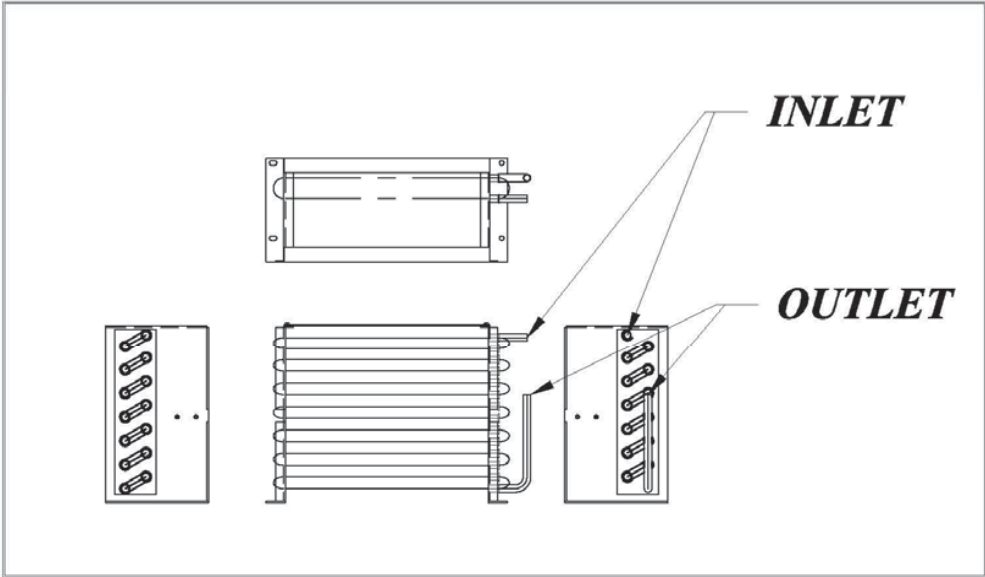
PART DETAILS

3-5. EVAPORATOR COIL

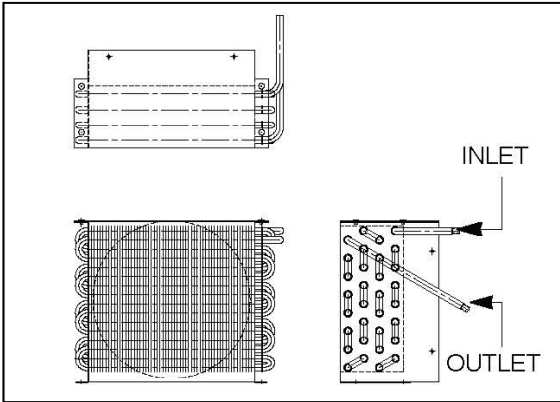


PART DETAILS

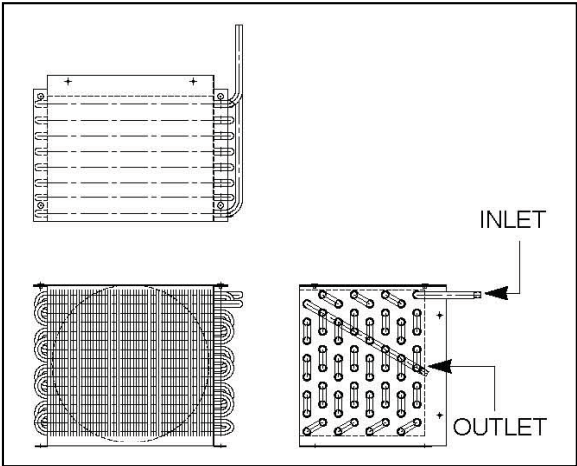
3-6. CONDENSER COIL



[TBC-24SD/SB, TBC-36SD/SB]



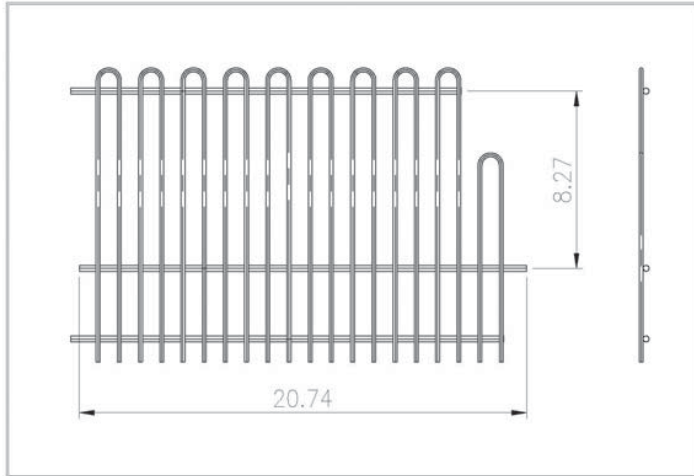
[TBC-50SD/SB, TBC-65SD/SB]



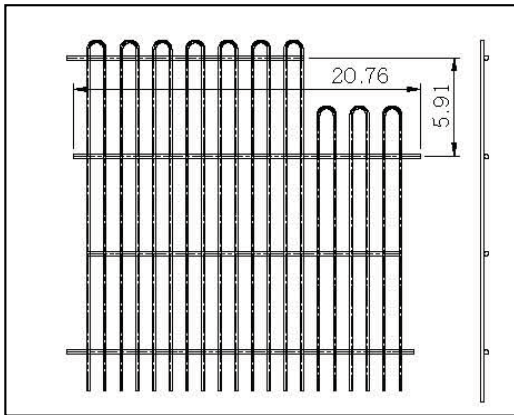
[TBC-80SD/SB, TBC-95SD/SB]

PART DETAILS

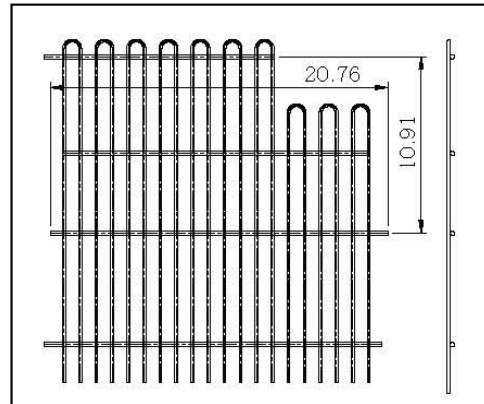
3-7. DIVIDER



[TBC-24SD/SB]

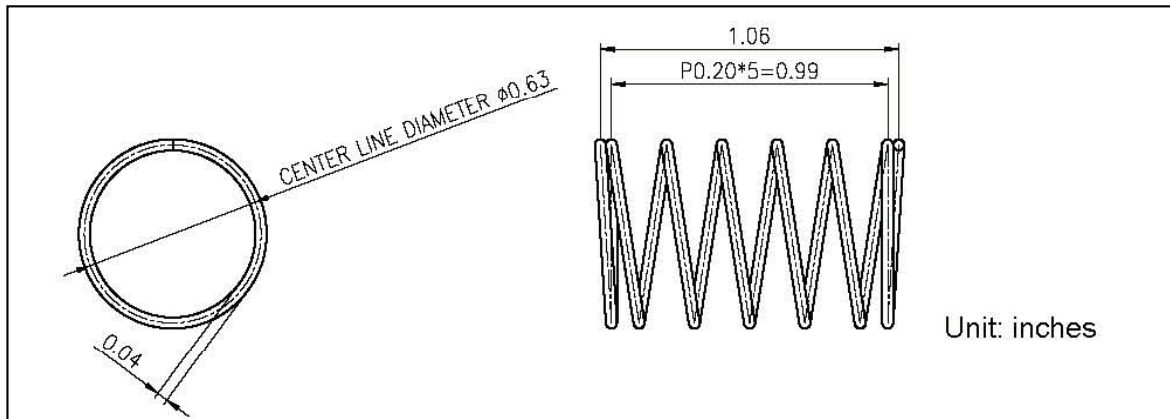


[TBC-36SD/SB, TBC-50SD/SB, TBC-65SD/SB]



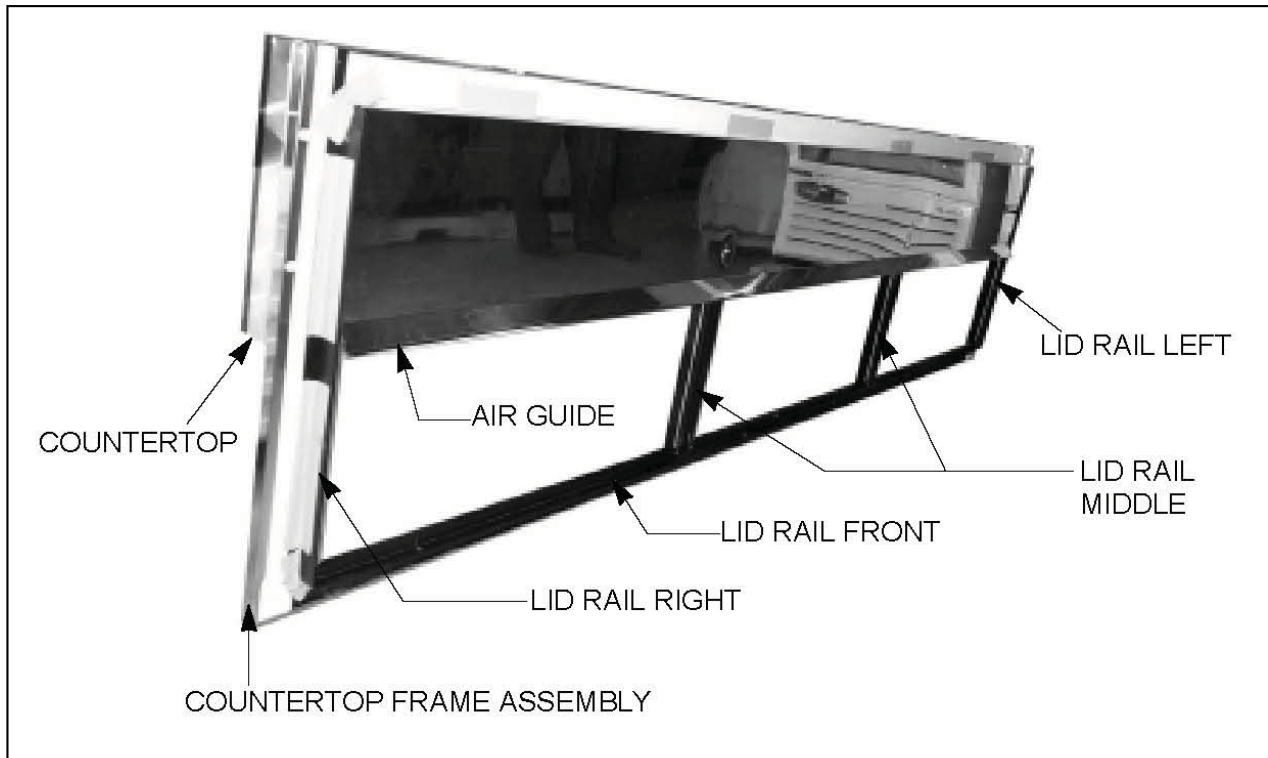
[TBC-80SD/SB, TBC-95SD/SB]

3-8. DIVIDER SPRING

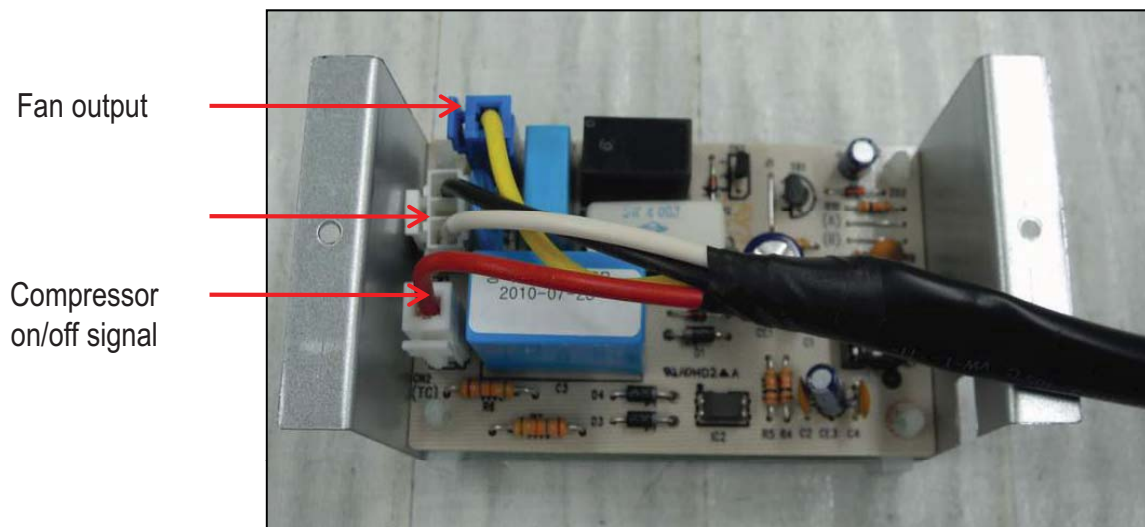


PART DETAILS

3-9. COUNTER TOP



3-10. Fan Control PCB



4. MAIN COMPONENTS

MODEL	PART NAME	PART NO.	HORSE POWER	CAPACITY	TYPE OF MOTOR	Current (RLA)	MAKER
TBC-24SD/SB	HFL11Y-1	30289A0400	1/10 HP	373 BTU/h (94 Kcal/h)	LBP RSIR	1.9A	DAEWOO
TBC-36SD/SB	HBL27YE-1	3952127G10	1/4 HP	(226 Kcal/h)	CSR	3.7A	DAEWOO
TBC-50SD/SB TBC-65SD/SB	SK1A1C-L2W	30200Q1200	1/3 HP	1,202 BTU/h (303 Kcal/h)	LBP CSR	4.0A	SAMSUNG
TBC-80SD/SB TB - D B	CAE4456Y	30200B4500	1/2 HP	5,592BTU/h (1,410 Kcal/h)	HBP CSIR	9.0A	TECUMSEH

2. COMPRESSOR RELAY, OVERLOAD

MODEL	RELAY	OVERLOAD PROTECTOR	MAKER
TBC-24SD/SB	S068 (PTC-RSIR)	4TM-293THBYY-52	DAEWOO
TBC-36SD/SB	S068 (PTC-CSR)	4TM 783SHBZZ-52	DAEWOO
TBC-50SD/SB TBC-65SD/SB	J531Q34E22OM3503	4TM 795TFBZZ-53	SAMSUNG
TBC-80SD/SB -	KPF498*****	T0889	TECUMSEH

3. COMPRESSOR CAPACITOR

MODEL	STARTING	PART NO.	RUNNING	PART NO.
TBC-24SD/SB	-	-	-	-
TBC-36SD/SB	220V/100 μ F	3017906900	230V/10 μ F	381791600
TBC-50SD/SB TBC-65SD/SB	125V / 125 μ F	-	250V / 12 μ F	-
- TBC-95SD/SB	160V / 315 μ F	-	-	-

MAIN COMPONENTS

4. EVAPORATOR FAN MOTOR

MODEL	PART NAME	PART NO.	POLE	BLADE	SIZE	MAKER
ALL	DAI-6202DEUA	3963339930	2P	ZITEL	110mm	DAE-YOUNG

5. CONDENSER FAN MOTOR

MODEL	PART NAME	PART NO.	POLE	BLADE	SIZE	MAKER
TBD-1SD TBB-1SB	IS-3225DWSQ-2	3963326710	2P	ZITEL	150mm	SUNG-SHIN
TBC-50SD/SB TBC-65SD/SB TBC-80SD/SB TBC-95SD/SB	IS-4420DWSG-1	3963320410	4P	Aluminum	200mm	SUNG-SHIN

6. THERMOSTAT

MODEL	PART NAME	PART NO.	MAKER
ALL	GNA-242L	30283F1000	SHIN-HAN

► THERMOSTAT ON/OFF SPEC.

MODEL	WARM		NORMAL		COLD	
	On	Off	On	Off	On	Off
GNA-242L	8.0	-5.0	5.0	-9.0	2.8	-12.5

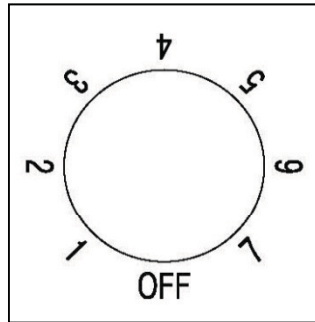
7. FAN-CONTROL PCB

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

5. TEMPERATUR CONTROL INSTRUCTION

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

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.

6. PARTS LIST

Part name	Code	Description	Model					
			24	36	50	65	80	95
LID PARTS								
LID	P0100B0100	EXCEPT LID HANDLE	1					
LID	P0100B0200	EXCEPT LID HANDLE		1				
LID	30200B6100	EXCEPT LID HANDLE			2			
LID	P0100B0300	EXCEPT LID HANDLE					3	
LID	30200B6110	EXCEPT LID HANDLE				2		3
LID HANDLE	30226B0100	ABS BLACK COLOR	1	1	2	2	3	3
COMPRESSOR COMPARTMENT								
COMPRESSOR BASE	P0100B5000	SPG T2.0	1	1				
COMPRESSOR BASE	30200B0900	SPG T2.0			1	1		
COMPRESSOR BASE	30200B4100	SPG T2.0					1	1
COMPRESSOR	30289A0400	HFL11Y-1	1					
COMPRESSOR	30289L0100	HBL27YE-1		1				
COMPRESSOR (FOR OLD 50SD/SB MODEL)	30200B4200	CAE4440Y(115V/60Hz)			1			
COMPRESSOR	30200Q1200	SK1A1C-L2W			1	1		
COMPRESSOR	30200B4500	CAE4456Y(115V/60Hz)					1	1
COMPRESSOR HARNESS ASSEMBLY(A) (FOR OLD 50SD/SB MODEL)	30227B1500	P-RELAY HARNESS	1		1		1	1
COMPRESSOR HARNESS ASSEMBLY(A)	30227M3430	P-RELAY HARNESS		1				
COMPRESSOR HARNESS ASSEMBLY(A)	30227L3110	P-RELAY HARNESS			1	1		
COMPRESSOR HARNESS ASSEMBLY(B)	30227B1600	CAPACITOR HARNESS	1	1	1	1		
CONDENSER FAN MOTOR	3963326710	IS-3225DWSQ-2	1	1				
CONDENSER FAN MOTOR	3963220410	IS-4420DWSG-1			1	1	1	1
CONDENSER FAN BLADE	30218F0110	ZITEL ϕ 150	1	1				
CONDENSER FAN BLADE	30218B0300	AL ϕ 200			1	1	1	1
CONDENSER FAN MOTOR BRACKET	30220G0300		1	1				
CONDENSER FAN MOTOR BRACKET	3020602202	SPG T2.0			1	1	1	1
CONDENSER COIL	30200F0816	CU	1	1				
CONDENSER COIL	30200B3500	CU			1	1		
CONDENSER COIL	30200B3600	CU					1	1
COMPRESSOR PULL-OUT	P0144B0100	ϕ 6.35	1	1				
COMPRESSOR PULL-OUT (FOR OLD 50SD/SB MODEL)	30244B3200	ϕ 6.35			1			
COMPRESSOR PULL-OUT	30244B3210	ϕ 6.35			1	1		
COMPRESSOR PULL-OUT	30244B3300	ϕ 6.35					1	1
CONNECTING PIPE (CONDENSER+DRYER)	P0144B0200	ϕ 7.94	1	1				
CONNECTING PIPE (CONDENSER+DRYER)	30244B3400	ϕ 7.94			1	1		
CONNECTING PIPE (CONDENSER+DRYER)	30244B3410	ϕ 7.94					1	1
COMPRESSOR DRYER	30268L0300	XH-9, 50g, ϕ 3.1	1	1	1	1		
COMPRESSOR DRYER	30268L0400	XH-9, 50g, ϕ 3.5					1	1
CAPILLARY TUBE	P0144B0400	OD2.8"ID1.6"1808	1	1				
CAPILLARY TUBE	30244B2910	ID1.6"L2375			1	1		
CAPILLARY TUBE	30244B2920	ID2.0"L2375					1	1
SUCTION LINE(A)	P0100B5100		1					
SUCTION LINE(A)	P0100B5200			1				
SUCTION LINE(A)	P0100B5300				1			
SUCTION LINE(A)	P0100B5400					1		
SUCTION LINE(A)	P0100B5500						1	
SUCTION LINE(A)	P0100B5600							1
POWER CORD	30213A1012	KKP-30	1	1	1	1	1	1
GRILLE ASSEMBLY (SD MODEL)	P0100B4900	STAINLESS STEEL	2					
GRILLE ASSEMBLY (SB MODEL)	P0100B4910	BLACK PAINTING	2					
GRILLE ASSEMBLY (SD MODEL)	30200B4400	STAINLESS STEEL		2	2	2	2	2

PARTS LIST

GRILLE ASSEMBLY (SB MODEL)	30200B4410	BLACK PAINTING		2	2	2	2	2
FAN CONTROL PCB	P0143A0100	PCB	1	1	1	1	1	1
FAN CONTROL PCB BRACKET	30206B1000	SPG T0.6	1	1	1	1	1	1
FAN CONTROL PCB HARNESS	30227B1700		1	1	1	1	1	1
REFRIGERATION COMPARTMENT								
EVAPORATOR COIL	P0100B4500	CU	1					
EVAPORATOR COIL	P0100B4600	CU		1				
EVAPORATOR COIL	30270B0210	CU			1	1		
EVAPORATOR COIL	P0100B4700	CU					1	
EVAPORATOR COIL	30270B0310	CU						1
DUCT(A) ASSEMBLY	P0100B4800	STAINLESS STEEL	1	1				
DUCT(A) (INCLUDES FAN SHROUD)(FOR OLD 50SD/SB MODEL)	30200B4300	STAINLESS STEEL			1			1
DUCT(A)	30269B1100	ABS BLACK COLOR			1	1	1	1
	30269B1200				1	1	1	1
DUCT(B) (LOUVERED)	P0169B0100	STAINLESS STEEL	1					
DUCT(B) (LOUVERED)	P0169B0200	STAINLESS STEEL		1				
DUCT(B) (LOUVERED)	30269B0500	STAINLESS STEEL			1			
DUCT(B) (LOUVERED)	30269B0510	STAINLESS STEEL				1		
DUCT(B) (LOUVERED)	P0100B0300	STAINLESS STEEL					1	
DUCT(B) (LOUVERED)	30269B0600	STAINLESS STEEL						1
DUCT(C)	P0120B0100						1	
DUCT(C)	30220B1000							1
DUCT(D)	30220B1100							1
EVAPORATOR DRAIN ELBOW	30225L0100	NA-6	1	1	1	1	1	1
EVAPORATOR DRAIN ELBOW CAP	30209L0200	NA-6	1	1	1	1	1	1
EVAPORATOR DRAIN HOSE	30232A0200	PVC	1	1	1	1	1	1
LEAK TEST COVER (OLD MODEL)	30214B2900	STAINLESS STEEL			1	1		
LEAK TEST COVER (OLD MODEL)	30214B3000	STAINLESS STEEL						1
EVAPORATOR FAN MOTOR	3963339930	DAI-6202DEUA(CCW)	1	1	2	2	2	2
EVAPORATOR FAN BLADE	3011802210	ABS Φ110	1	1	2	2	2	2
EVAPORATOR FAN MOTOR BRACKET (OLD)	30220T0300	STAINLESS STEEL			4			4
EVAPORATOR FAN MOTOR BRACKET	30206M3701	STAINLESS STEEL	1	1	2	2	2	2
EVAPORATOR FAN MOTOR HARNESS ASSEMBLY	30227B1100				1	1	1	1
POWER SWITCH	30281Q0100	125V/15A	1	1	1	1	1	1
TEMPERATURE CONTROL LER KNOB	30234A1000	HIPS WHITE COLOR	1	1	1	1	1	1
TEMPERATURE CONTROL LER HARNESS ASSEMBLY	30227B1200		1	1	1	1	1	1
MISCELLANEOUS								
DIVIDER	P0178B0200	PE COATING	2					
DIVIDER	30278B0600	PE COATING		2	3	4		
DIVIDER	30278B0700	PE COATING					5	6
DIVIDER SPRING	30251B0200	STAINLESS STEEL	2	2	3	4	5	6
SHELF BOTTOM	30278U0600	PE COATING		1	2	3	4	5
CAP CATCHER ASSEMBLY(HAVING CAP OPENER)	30200B6400	EMBLEM INCLUDED	1	1	1	1	2	2
EVAPORATOR DRAIN PAN	30211B0100	HIPS BLACK COLOR	1	1	1	1	1	1

7. REPLACEMENT OF MAIN COMPONENTS

▶ CAUTION : Unplug the unit before replacing any part.

7-1. REPLACING DOOR THE EVAPORATOR COIL

A. Remove all lids. Remove the dividers.



(Now, you can replace the evaporator fan motor or the temperature control(thermostat) if you unscrew the duct(A) or the temperature control box.)

B. Cut the silicone line around the countertop frame with a knife.
Remove all screws in back of the countertop frame.



C. Remove all the screws around the lid rail.
Lift the countertop from the rear first. Push countertop forward and top will come off.

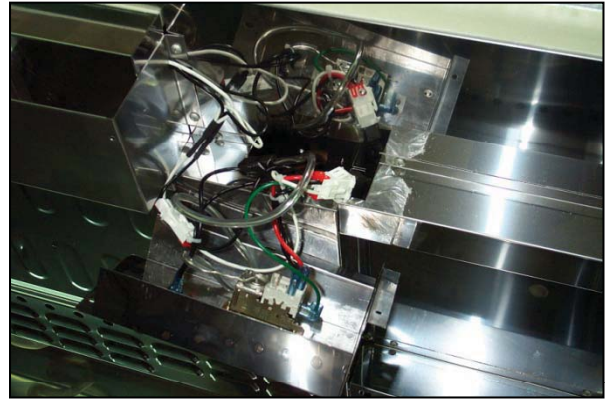


REPLACEMENT OF MAIN COMPONENTS

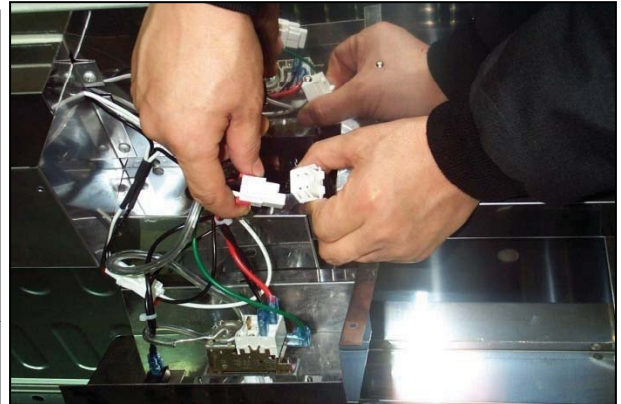
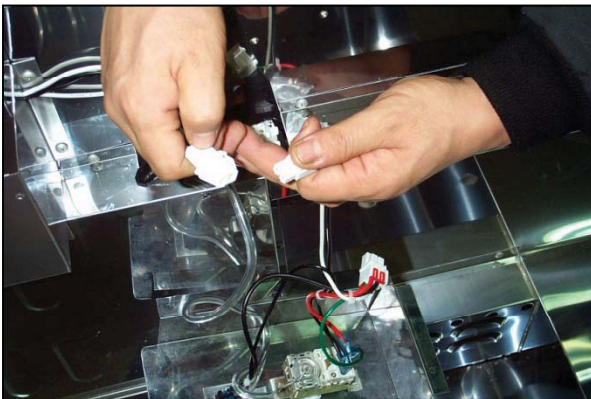
- D. Carefully move the countertop to a safe place.
See the join bracket and understand join system.



- E. This is the duct(A) and the temperature control box.
Unscrew the temperature control box if necessary.

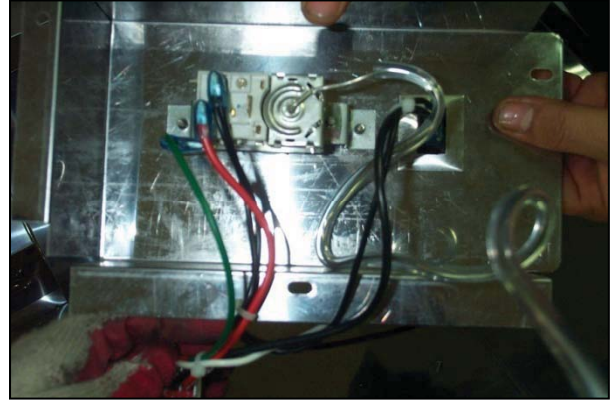
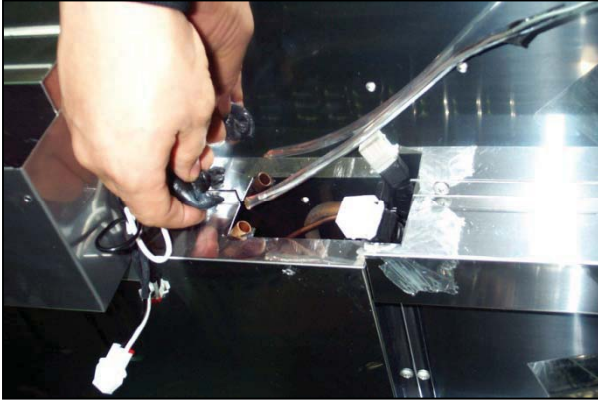


- E. Unplug the temperature control harness assembly.



REPLACEMENT OF MAIN COMPONENTS

- G. Pull the sensing tube of the temperature control.
Replace the temperature control if necessary.**



- H. Remove the screws on duct(A) and Remove.**

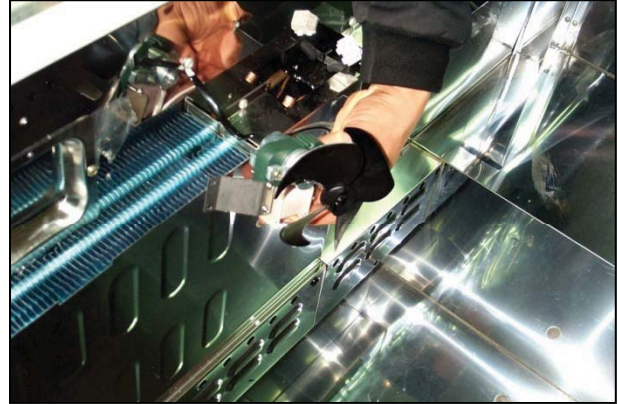


- I. Unplug the evaporator fan motor harness assembly if necessary.**

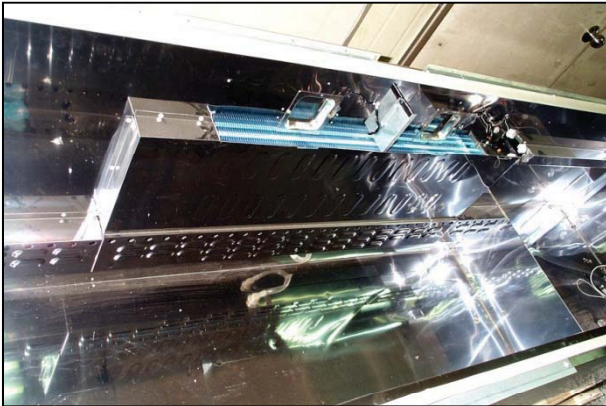


REPLACEMENT OF MAIN COMPONENTS

J. Remove screws to the evaporator fan motor if necessary and replace it with new one.



K. Remove the screws on duct(B) and Remove.



L. Remove the screws on the suction line cover(horizontal) if necessary.



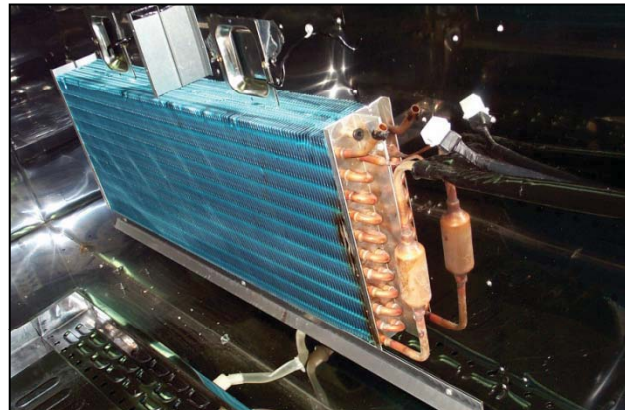
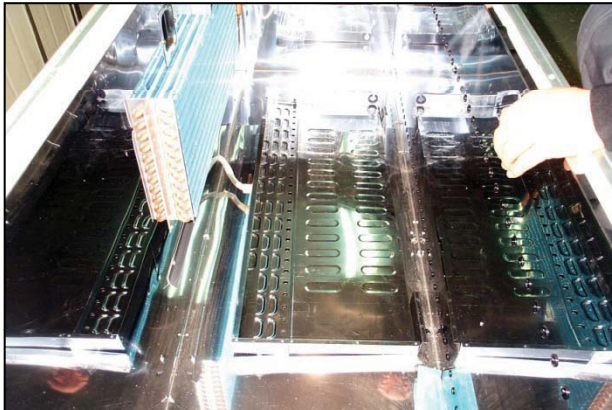
REPLACEMENT OF MAIN COMPONENTS

M. Remove screws to the duct(C) and the duct(D) if necessary.



N. Now evaporator coil is visible.

To replace it, cut out at the welding point between the accumulator and the suction line, and also of the end of the capillary tube.



REPLACEMENT OF MAIN COMPONENTS

O. Remove screws to the duct(C) and the duct(D) if necessary.



7-2. ACCESSING CONDENSER COMPARTMENT

- A. After removing the front grille assembly, unscrew the compressor base.
Pull the compressor compartment slowly.
Compressor, Condenser coil, Condenser fan motor, etc. can be replaced.



- In pushing the compressor compartment to the original position, please be careful so the capillary tube does not bend.