

**REFRIGERATOR MANUFACTURER**  
***Turbo air***

1250 Victoria street  
Carson, CA 90746  
U.S.A. & Canada Toll Free 1-800-627-0032  
Fox Service 1-800-381-7770  
TEL: 310-900-1000  
FAX: 310-900-1077  
[www.turboairinc.com](http://www.turboairinc.com)

**REFRIGERATOR MANUFACTURER**  
***Turbo air***

**Commercial  
Refrigerator  
Service Manual**

**Chef Base Equipment  
Model No.: TCBE-52SDR  
TCBE-82SDR  
TCBE-96SDR**

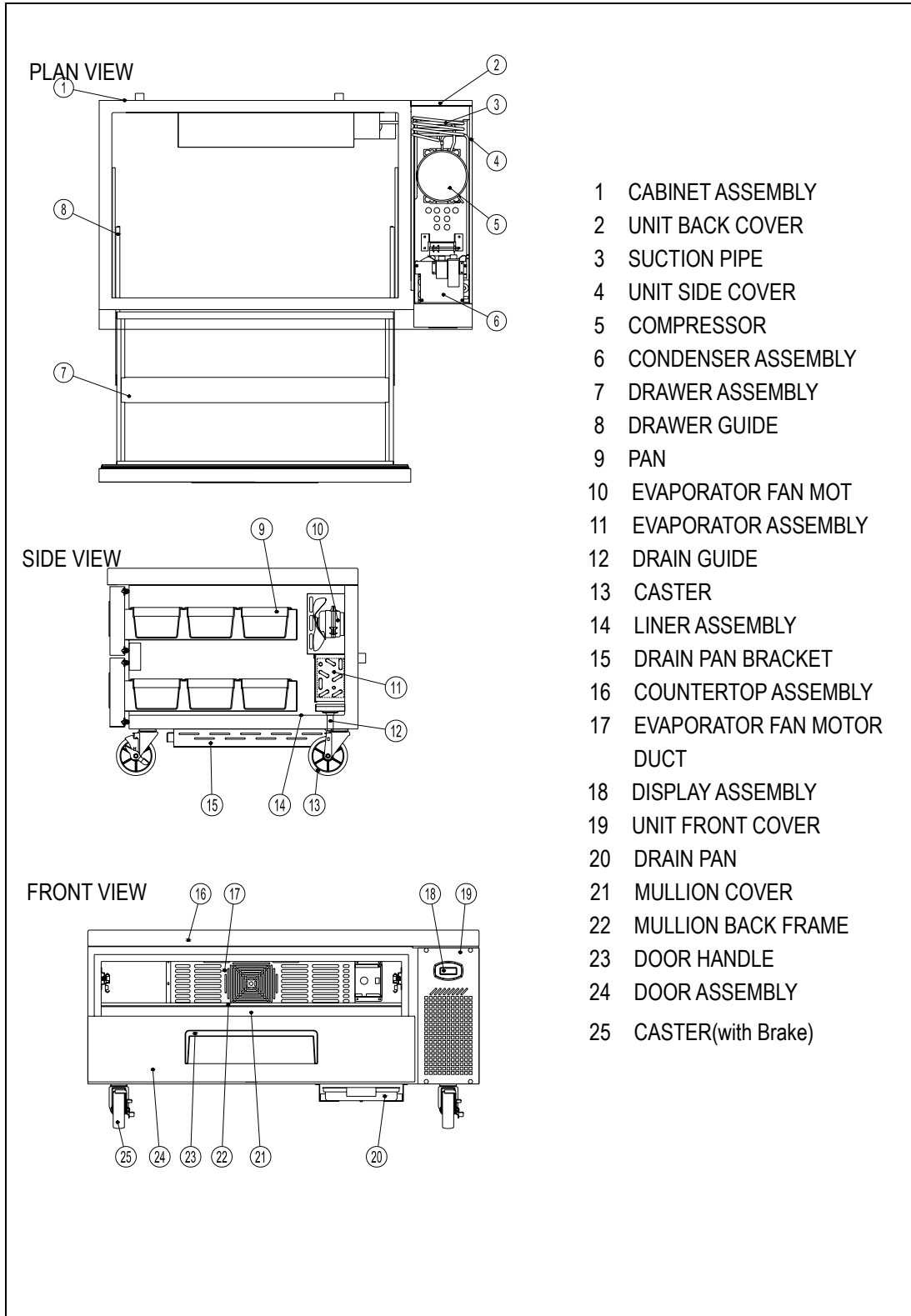
# ***TABLE OF CONTENTS***

---

- 1. FEATURE CHART**
  - 1-1.PLAN VIEW/SIDE VIEW/FRONTVIEW(TCBE-52SDR)
  - 1-2.PLAN VIEW/SIDE VIEW/FRONT VIEW(TCBE-82SDR)
  - 1-3.PLAN VIEW/SIDE VIEW/FRONT VIEW(TCBE-96SDR)
  
- 2. WIRING DIAGRAMS**
  - 2-1.TCBE-52SDR
  - 2-2.TCBE-82SDR
  - 2-3.TCBE-96SDR
  
- 3. PART DETAIL**
  - 3-1.COMPRESSOR COMPARTMENT
  - 3-2.DOOR
  - 3-3.DRAWER
  - 3-4.REFRIGERATION COMPARTMENT
  
- 4. MAIN COMPONENTS**
  
- 5. TEMPERATURE CONTROL INSTRUCTION**
  - 5-1.HOW TO USE THE TEMPERATURE CONTROL
  - 5-2.FUNCTION TABLE
  
- 6. PARTS LIST**
  
- 7. REPLACEMENT OF MAIN COMPONENTS**
  - 7-1.REPLACE DRAWER
  - 7-2.REFRIGERATION COMPARTMENT PARTS
  - 7-3.COMPRESSOR COMPARTMENT PARTS
  - 7-4.REPLACING THE DISPLAY ASSEMBLY
  - 7-5.REPLACING THE CABINET HEATER
  - 7-6.REPLACING THE MULLION COVER
  - 7-7.REPLACE THE PANS

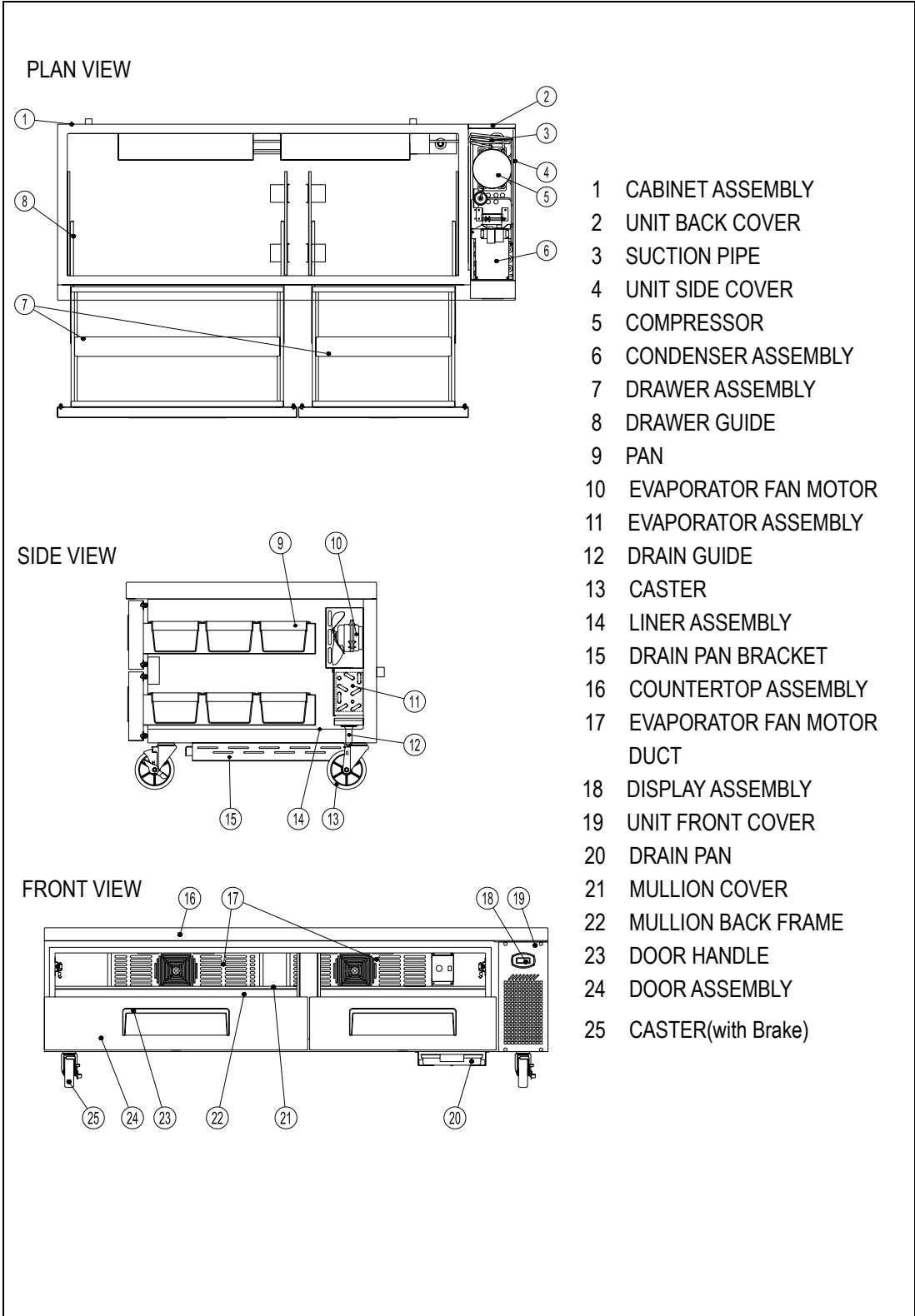
# 1.FEATURE CHART

## 1-1. PLAN VIEW/SIDE VIEW/FRONT VIEW(TCBE-52SDR)



- 1 CABINET ASSEMBLY
- 2 UNIT BACK COVER
- 3 SUCTION PIPE
- 4 UNIT SIDE COVER
- 5 COMPRESSOR
- 6 CONDENSER ASSEMBLY
- 7 DRAWER ASSEMBLY
- 8 DRAWER GUIDE
- 9 PAN
- 10 EVAPORATOR FAN MOT
- 11 EVAPORATOR ASSEMBLY
- 12 DRAIN GUIDE
- 13 CASTER
- 14 LINER ASSEMBLY
- 15 DRAIN PAN BRACKET
- 16 COUNTERTOP ASSEMBLY
- 17 EVAPORATOR FAN MOTOR DUCT
- 18 DISPLAY ASSEMBLY
- 19 UNIT FRONT COVER
- 20 DRAIN PAN
- 21 MULLION COVER
- 22 MULLION BACK FRAME
- 23 DOOR HANDLE
- 24 DOOR ASSEMBLY
- 25 CASTER(with Brake)

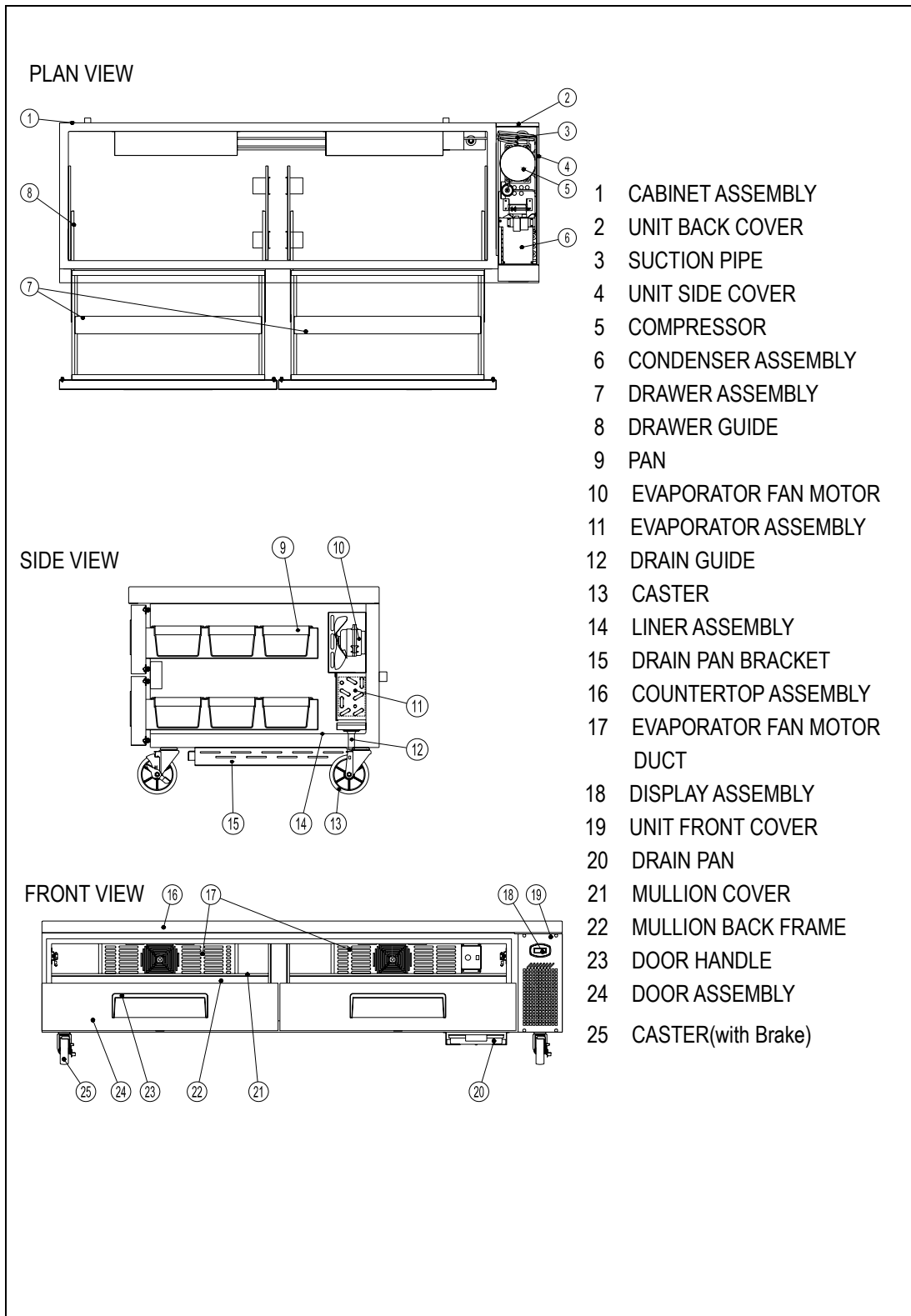
1-2. PLAN VIEW/SIDE VIEW/FRONT VIEW(TCBE-82SDR)



- 1 CABINET ASSEMBLY
- 2 UNIT BACK COVER
- 3 SUCTION PIPE
- 4 UNIT SIDE COVER
- 5 COMPRESSOR
- 6 CONDENSER ASSEMBLY
- 7 DRAWER ASSEMBLY
- 8 DRAWER GUIDE
- 9 PAN
- 10 EVAPORATOR FAN MOTOR
- 11 EVAPORATOR ASSEMBLY
- 12 DRAIN GUIDE
- 13 CASTER
- 14 LINER ASSEMBLY
- 15 DRAIN PAN BRACKET
- 16 COUNTERTOP ASSEMBLY
- 17 EVAPORATOR FAN MOTOR DUCT
- 18 DISPLAY ASSEMBLY
- 19 UNIT FRONT COVER
- 20 DRAIN PAN
- 21 MULLION COVER
- 22 MULLION BACK FRAME
- 23 DOOR HANDLE
- 24 DOOR ASSEMBLY
- 25 CASTER(with Brake)

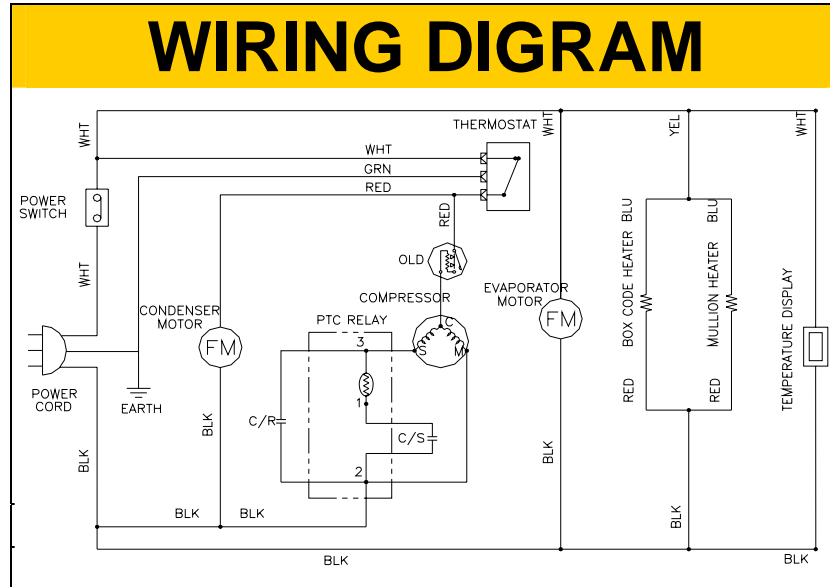
## FEATURE CHART

### 1-3. PLAN VIEW/SIDE VIEW/FRONT VIEW(TCBE-96SDR)

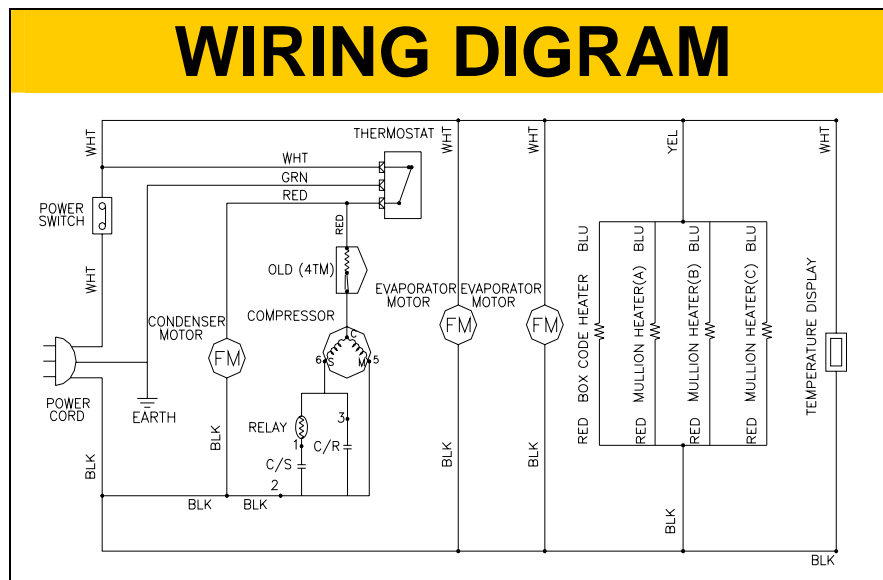


# 2. WIRING DIAGRAMS

## 2-1.TCBE-52SDR



## 2-1.TCBE-82/96SDR



## ***3.PART DETAIL***

---

### **3-1. COMPRESSOR COMPARTMENT**

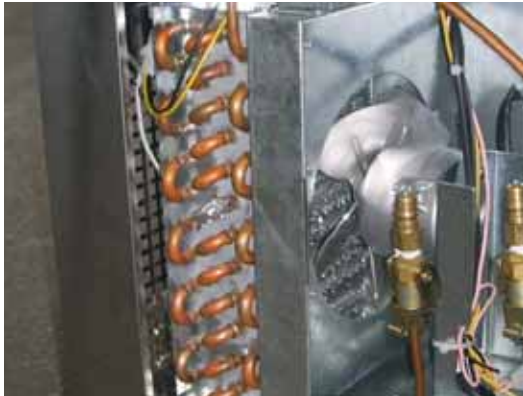


**CONDENSING UNIT ASSEMBLY  
TCBE-52SDR**



**CONDENSING UNIT ASSEMBLY  
TCBE-82SDR/TCBE-96SDR**





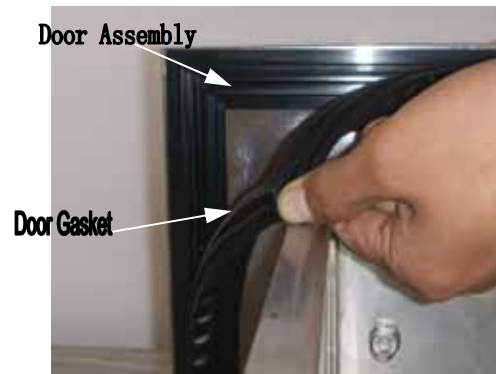
**CONDENSER FAN MOTOR ASSEMBLY  
TCBE-52SDR**

**CONDENSER FAN MOTOR ASSEMBLY  
TCBE-82SDR/TCBE-96SDR**

*PART DETAILS*

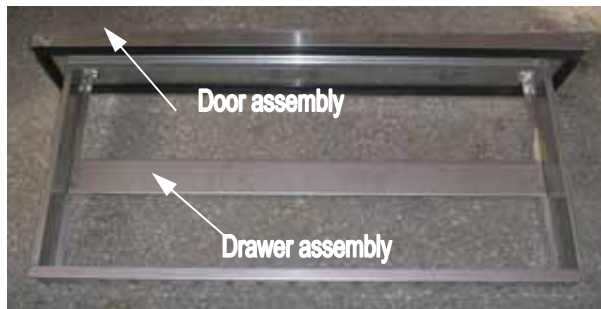
---

**3-2. DOOR**

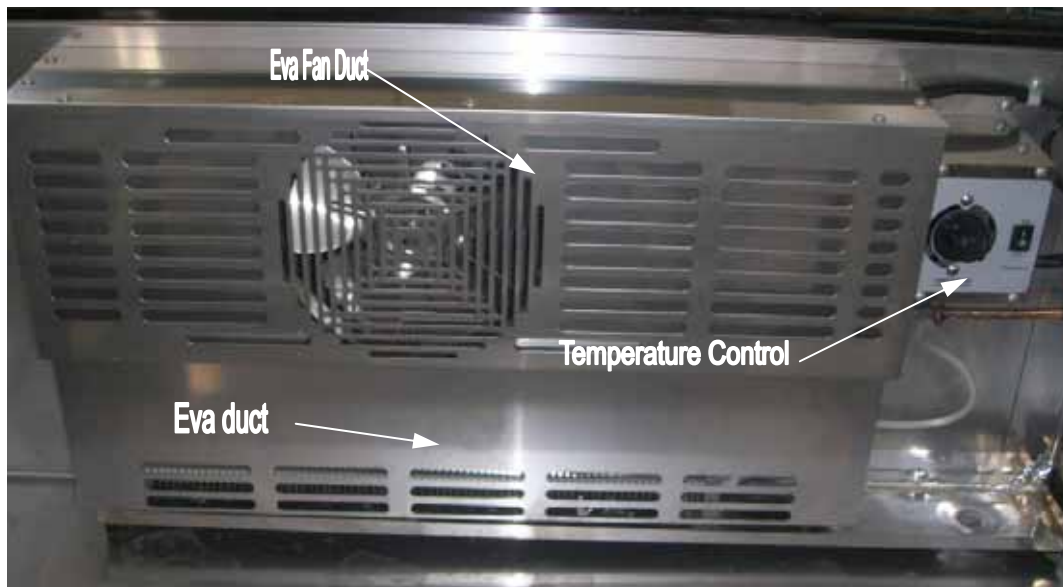


**DOOR GASKET**

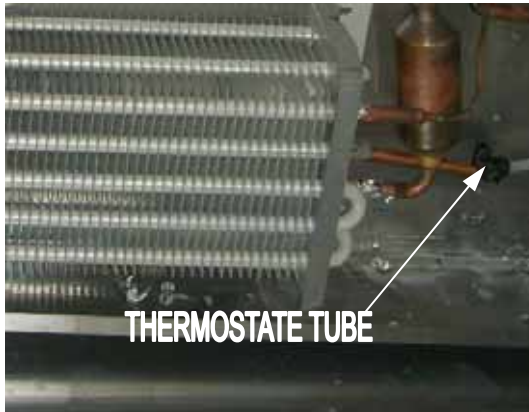
**3-3. DRAWER**



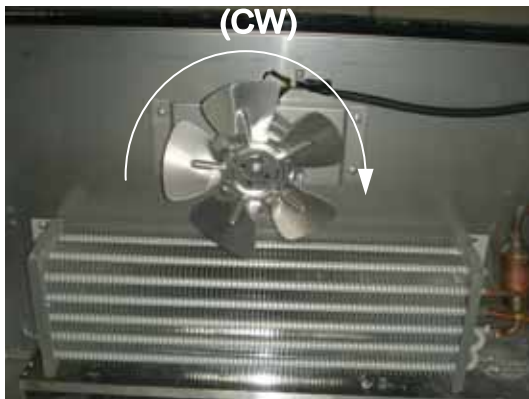
**3-4. REFRIGERATION COMPARTMENT**



**EVA FAN DUCT**



**EVAPORATOR COIL**



**EVAPORATOR FAN MOTOR  
(TCBE-52SDR)**



**THERMOSTATE**

# 4.MAIN COMPONENTS

## 1.COMPRESSOR

MODEL	PART NAME	PART NO.	HORSE POWER	CAPACITY	TYPE OF MOTOR	INPUT	MAKER
TCBE-52SDR	HBL27YE-1	M369700100	1/4HP	~	CSR	~	DAEWOO
TCBE-82SDR	SK1A1C-L2W	M609700100	1/3HP	~	CSR	~	SAMSUNG
TCBE-96SDR	SK1A1C-L2W	M609700100	1/3HP	~	CSR	~	SAMSUNG

## 2.COMPRESSOR RELAY,OVERLOAD

MODEL	RELAY	PART NO.	OVER LOAD	PART NO	MAKER	NOTE
TCBE-52SDR	GSR SO68 BO8 08	~	4TM795TFBZZ-52	~	DAEWOO	~
TCBE-82SDR	J531Q34E220M3503	~	4TM795TFBZZ-53	~	SAMSUNG	~
TCBE-96SDR	J531Q34E220M3503	~	4TM795TFBZZ-53	~	SAMSUNG	~

## 3.COMPRESSOR CAPACITOR

MODEL	STARTING	PART NO.	RUNING	PART NO.	MAKER	NOTE
TCBE-52SDR	200V/100 $\mu$ F	~	230V/10 $\mu$ F	~	~	~
TCBE-82SDR	125V/125 $\mu$ F	~	250V/12 $\mu$ F	~	~	~
TCBE-96SDR	125V/125 $\mu$ F	~	250V/12 $\mu$ F	~	~	~

## 4.CONDENSER FAN MOTOR

MODEL	PART NAME	PART NO.	POLE	INPUT	TYPE	BLADE (NUMBER)	MAKER
TCBE-52SDR	IS-4420DWSN-2A	3963328120	4P	47W	Shaded Pole Induction	AL5	SUNGSHIN
TCBE-82SDR							
TCBE-96SDR							

## 5.EVAPORATOR FAN MOTOR

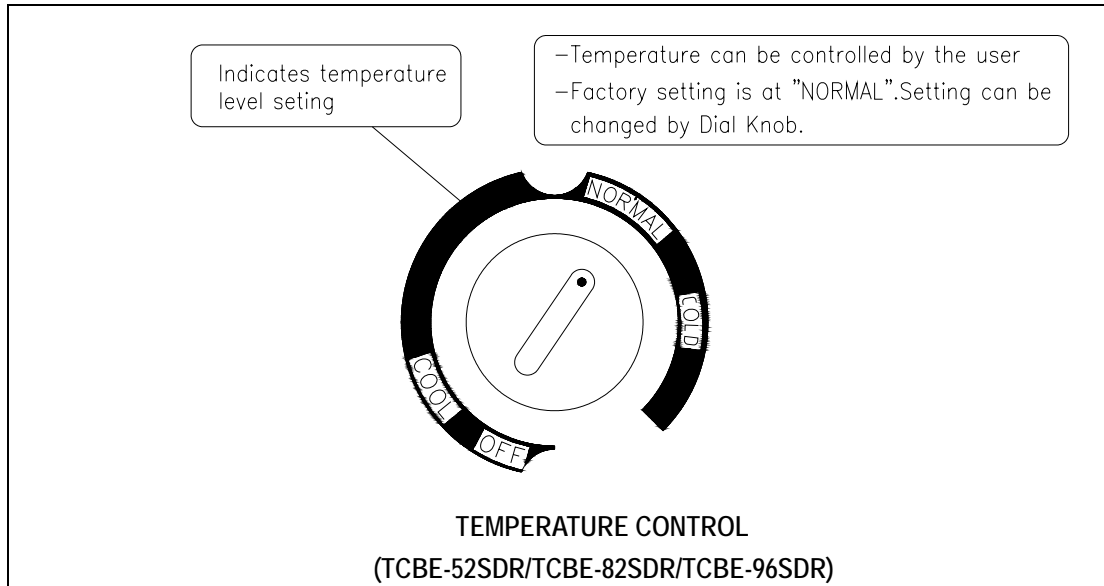
MODEL	PART NAME	PART NO.	POLE	INPUT	TYPE	BLADE (NUMBER)	MAKER
TCBE-52SDR	IS-4420DWSN-2A	3963328120	4P	47W	Shaded Pole Induction	AL5	SUNGSHIN
TCBE-82SDR							
TCBE-96SDR							

## 6.SWITCH

PART NAME	PART NO.	RATING	MAKER	NOTE
POWER SWITCH(ROCKER SWITCH)	30281Q0100	125V/15A	SKT	
THERMOSTATE		K55-Q5608		

# 5. TEMPERATURE CONTROL INSTRUCTION

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



## 5-2. FUNCTION TABLE

Function	Controlled Part	Description												
Temperature Control (K55-Q5607) Model: TCBE-52SDR TCBE-82SDR TCBE-96SDR	Compressor Evap. Fan Motor Cond. Fan Motor	1 . The temperature can be changed by turning the dial knob 2 . Compressor is automatically turned on and off by thermostat ■ Cut in and out temperature chart. <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>No</th> <th>Cool</th> <th>Normal</th> <th>cold</th> </tr> </thead> <tbody> <tr> <td><i>Cut in</i></td> <td>40.1±2.7</td> <td>40.1±2.7</td> <td>40.1±2.7</td> </tr> <tr> <td><i>Cut out</i></td> <td></td> <td>21.2</td> <td>17.1</td> </tr> </tbody> </table>	No	Cool	Normal	cold	<i>Cut in</i>	40.1±2.7	40.1±2.7	40.1±2.7	<i>Cut out</i>		21.2	17.1
No	Cool	Normal	cold											
<i>Cut in</i>	40.1±2.7	40.1±2.7	40.1±2.7											
<i>Cut out</i>		21.2	17.1											

## ***6.PARTS LIST FOR CHEF BASE EQUIPMENT***

Part name	Part code	Description	Model			Maker
			TCBE-52SDR	TCBE-82SDR	TCBE-96SDR	
<b>Cabinet</b>						
CABINET ASSEMBLY	C520000100	STS430-#4	1			
CABINET ASSEMBLY	C820000100	STS430-#4		1		
CABINET ASSEMBLY	C960000100	STS430-#4			1	
CASTOR	M726500200	WITH BRAKE(5inch)	2	2	2	Same as mega top
CASTOR	M726500100	5inch	2	2	2	Same as mega top
<b>Drawer</b>						
DRAWER ASSEMBLY	C520000200	STS304-2B/0.059"(Thickness)	2	2	4	
DRAWER ASSEMBLY(S)	C960000200	STS304-2B/0.059"(Thickness)		2		
DOOR ASSEMBLY	C960000300	STS304-#4	2	2	4	
DOOR ASSEMBLY(S)	C820000200	STS304-#4		2		
DOOR GASKET	C962300100	PVC-S1000	2	2	4	
DOOR GASKET(S)	C822300100	PVC-S1000		2		
ROLLER ASSEMBLY	C966500100	STS304	16	32	32	
ROLLER SCREW	C960100100	STS316	16	32	32	
ROLLER NUT		STS304/M6	16	32	32	
ROLLER CUSHION	C961500100	STS304	16	32	32	
<b>Compressor compartment</b>						
CONDENSER ASSEMBLY	C965900101	CU		1	1	
CONDENSER ASSEMBLY	C525900101	CU	1			
COMPRESSOR BASE	C960300200	GL,T2		1	1	
COMPRESSOR BASE	C520300200	GL,T2	1			
COMPRESSOR	M369700100	HBL27YE-1	1			Same as mega top
COMPRESSOR	M609700100	SK6A1C-H2Y		1	1	Same as mega top
POWER CORD	30232M0210	PVC	1	1	1	Same as mega top
DRYER ASSEMBLY	M726800100					Same as mega top
CONDENSER FAN MOTOR	3966328120	IS-4420DWSV-2A	1	1	1	Same as mega top
CONDENSER FAN BLADE	M729800100	Alφ175	1	1	1	Same as mega top
UNIT FRONT COVER	C962400100	STS304-2B/0.024"(Thickness)	1	1	1	

***PARTS LIST FOR CHEF BASE EQUIPMENT***

Part name	Part code	Description	Model			maker
			TCBE-52SDR	TCBE-82SDR	TCBE-96SDR	
SUCTION PIPE	C524400200	CU	1			
SUCTION PIPE	C964400400	CU		1	1	
CAPILLARY TUBE	C524400200	CU	1			
CAPILLARY TUBE	C964400400	CU		1	1	
CONNECT PIPE	C964400600	CU	1			
COMPRESSOR AND						
CONDENSER						
CONNECT PIPE	C964400500	CU		1	1	
COMPRESSOR AND						
CONDENSER						
CONNECT PIPE	C964400200	CU	1			
COMPRESSOR AND						
DRYER						
CONNECT PIPE	C964401200	CU		1	1	
COMPRESSOR AND						
DRYER						
COMPRESSOR HARNESS		PVC	1	1	1	
ASSEMBLY						
HARNESS RELAY	C962700200	18AWG/PVC	1	1	1	
THERMOSTAT DISPLAY AS	C968200100	SF-100T	1	1	1	
Refrigeration compartment						
CABINET HEATER	C522800100	PVC	1			
CABINET HEATER	C822800200	PVC		1		
CABINET HEATER	C962800300	PVC			1	
MULLION HEATER(A)	C962800100	PVC		1	1	
MULLION HEATER(B)	C822800100	PVC		1		
MULLION HEATER(C)	C962800200	PVC	1	1	2	
MULLION PAD(A)	C964100100	EPS/0.016g/cm <sup>3</sup>		1	1	
MULLION PAD(B)	C824100100	EPS/0.016g/cm <sup>3</sup>		1		

***PARTS LIST FOR CHEF BASE EQUIPMENT***

Part name	Part code	Description	Model			Maker
			TCBE-52SDR	TCBE-82SDR	TCBE-96SDR	
MULLION COVER(C)	C961400200	STS430-#4/0.024"(Thickness)	1	1	2	
EVAPORATOR FAN MOTOR	3966328120	IS-4420DWSV-2A	1	2	2	
EVAPORATOR FAN BLADE	M729800100	Alφ175	1	2	2	Same as mega top
EVAPORATOR FAN MOTOR	C961800100	GL/T2	1	2	2	
BRACKET						
EVAPORATOR FAN DUCT(L)	C526900400	STS304-2B/0.024"(Thickness)	1	1	1	
EVAPORATOR FAN DUCT(R)	C966900500	STS304-2B/0.024"(Thickness)		1	1	
EVAPORATOR DUCT INNER	C966900800	STS304-2B/0.024"(Thickness)				
COVER(L)						
EVAPORATOR DUCT INNER	C966900700	STS304-2B/0.024"(Thickness)				
COVER(R)						
EVAPORATOR DUCT(L)	C526900600	STS304-2B/0.024"(Thickness)	1	1	1	
EVAPORATOR DUCT(R)	C966900600	STS304-2B/0.024"(Thickness)		1	1	
EVAPORATOR ASSEMBLY	C527000100	CU	1	2	2	
EVAPORATOR DRAIN GUIDE	C527500100	STS304-2B/0.024"(Thickness)	1			
EVAPORATOR DRAIN GUIDE	C827500100	STS304-2B/0.024"(Thickness)		1		
EVAPORATOR DRAIN GUIDE	C967500100	STS304-2B/0.024"(Thickness)			1	
THERMOSTAT		K55-Q5608	1	1	1	
THERMOSTAT COVER	C968300100	STS304-2B/0.024"(Thickness)	1	1	1	
HARNESS MOTOR	C522700300	PVC	1			
HARNESS MOTOR	C822700300	PVC		1		
HARNESS MOTOR	C962700300	PVC			1	
HARNESS MULLION	C522700400	PVC	1			
HARNESS MULLION	C822700400	PVC		1		
DRAWER GUIDE(SB)(L)	C968601300	STS304-2B/0.079"(Thickness)	2	4	4	
DRAWER GUIDE(SB)(R)	C968601400	STS304-2B/0.079"(Thickness)	2	4	4	
Counter top assembly						
COUNTER TOP ASSEMBLY	C520000300	STS304-2B/0.059"(Thickness)	1			
COUNTER TOP ASSEMBLY	C820000300	STS304-2B/0.059"(Thickness)		1		
COUNTER TOP ASSEMBLY	C960000400	STS304-2B/0.059"(Thickness)			1	



# ***7.REPLACEMENT OF MAIN COMPONENTS***

---

## **7-1.REPLACING DRAWER**

### **A. Pull out the drawer**



### **B. Lift the drawer**



### **C. Take out the draw guide**



## REPLACEMENT OF MAIN COMPONENTS

---

### 7-2. REFRIGERATION COMPARTMENT PARTS

#### A. Disassemble the temperature control cover



#### B. Disassemble the eva fan duct



#### C. Take out the eva fan duct



## REPLACEMENT OF MAIN COMPONENTS

### **D. Disassemble the eva duct**



### **E. Replace the thermostat & sensor**



### **F. Remove the evaporator coil**



## REPLACEMENT OF MAIN COMPONENTS

---

### **G. Disassemble the evaporator fan motor**



## REPLACEMENT OF MAIN COMPONENTS

### 7-3.COMPRESSOR COMPARTMENT PARTS

#### A. Disassemble the unit front cover



#### B. Disconnect the connectors



#### C. Disassemble the condensing unit



## ***REPLACEMENT OF MAIN COMPONENTS***

---

### **D. Disconnect the connectors**



### **E. Disassemble the condenser fan motor**



## REPLACEMENT OF MAIN COMPONENTS

### 7-4. Replacing the display assembly

#### A. Disassemble the display fixture



#### B. Take out the display



## REPLACEMENT OF MAIN COMPONENTS

---

### 7-5. Replacing the cabinet heater

#### A. Disassemble the line frame cover



#### B. Disassemble the cabinet heater





## REPLACEMENT OF MAIN COMPONENTS

### 7-6. Replacing the mullion heater

#### A. Disassemble the mullion cover



#### B. Disassemble the mullion heater



#### C. Disassemble the connectors



## ***REPLACEMENT OF MAIN COMPONENTS***

---

### **7-7. REPLACING THE PANS**

