



# Refrigerator Service Manual

**MODEL : FR - 4502N**

## **✓ Caution**

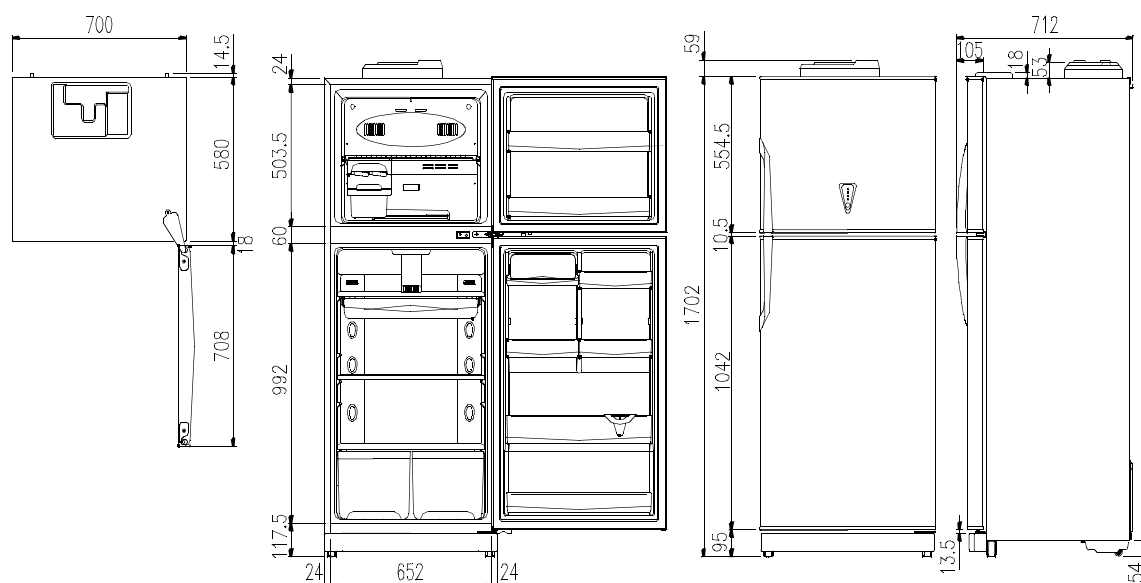
: In this Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List) in Service Information Center(<http://svc.dwe.co.kr>).

**DAEWOO ELECTRONICS CO., LTD.**

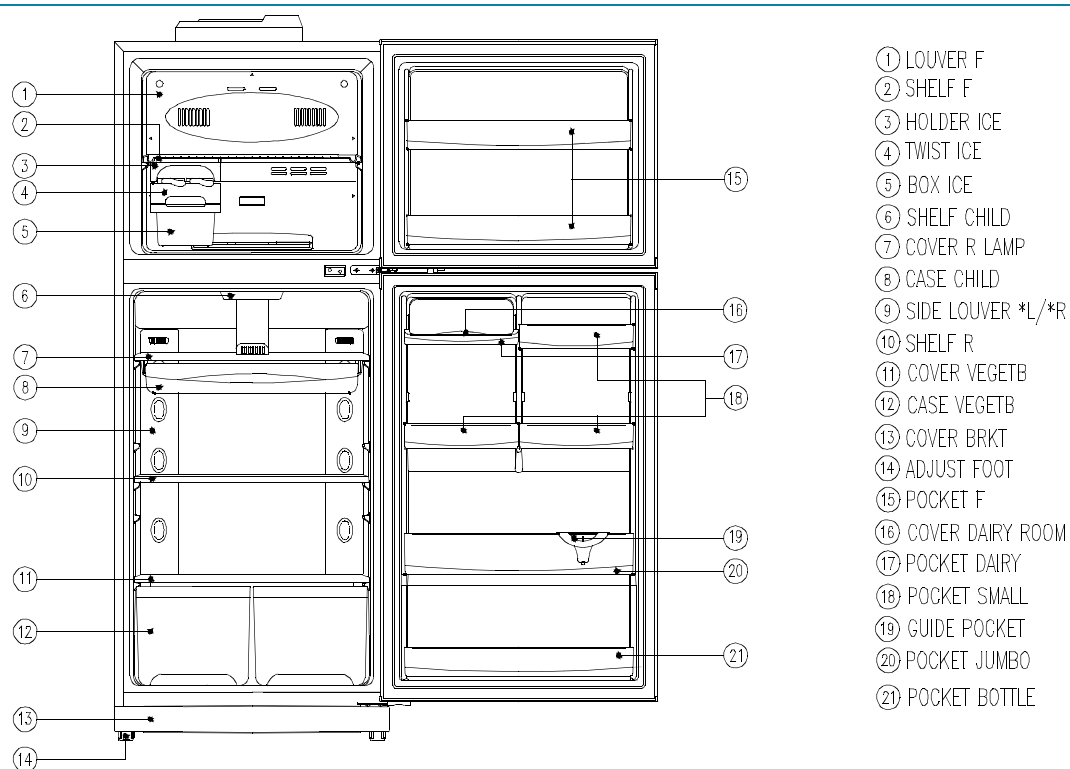
*[http : //svc.dwe.co.kr](http://svc.dwe.co.kr)*

Sep 2002

## 1) EXTERNAL SIZE



## 2) NAME OF PARTS



# SPECIFICATIONS

## 1. OUTLINE

| DIVISION                 |                 | CONTENTS               |  |  |
|--------------------------|-----------------|------------------------|--|--|
| MODEL NAME               |                 | FR-4502N               |  |  |
| USABLE CAPACITY          | FREEZER         | 101℔§                  |  |  |
|                          | REFRIGERATOR    | 273℔§                  |  |  |
|                          | TOTAL           | 374℔§                  |  |  |
| EXTERNAL DIMENSION       | WIDHT           | 710.5mm                |  |  |
|                          | DEPTH           | 671mm                  |  |  |
|                          | HEIGHT          | 1759mm                 |  |  |
| REFRIGERANT              | R134a           | 90g                    |  |  |
| COOLING & CONTROL SYSTEM | COOLING SYSTEM  | Fan Cooling System     |  |  |
|                          | DEFROST SYSTEM  | Fin Evaporator Forced  |  |  |
|                          | DEFROST CONTROL | Automatic Start & Stop |  |  |
| NET WEIGHT (kg)          |                 |                        |  |  |

# SPECIFICATIONS

## 2. ELECTRIC PARTS

### 1) COMPRESSOR

| REFRIGERANT   | R-12   |            |            |            |            |        |        |
|---------------|--------|------------|------------|------------|------------|--------|--------|
| VOLTAGE(V/Hz) | 110/60 | 115,120/60 | 127/60     | 220/60     | 220/50     | 230/50 | 240/50 |
| COMP MODEL    | X      | X          | CL23YE-2   | PL21YE-4   | SL27YE-5   | ←      | ←      |
| PART CODE     | X      | X          | 3957123A20 | 3956121A40 | 3954127A50 | ←      | ←      |
| STARTING TYPE | X      | X          | CSIR       | RSCR       | RSIR       | ←      | ←      |

| REFRIGERANT   | R-134a     |            |            |        |            |        |        |
|---------------|------------|------------|------------|--------|------------|--------|--------|
| VOLTAGE(V/Hz) | 110/60     | 115,120/60 | 127/60     | 220/60 | 220/50     | 230/50 | 240/50 |
| COMP MODEL    | HEL18YH-1  | ←          | HEL21YH-1  | X      | HPL23YH-5  | ←      | ←      |
| PART CODE     | 3953118S10 | ←          | 3953121S10 | X      | 3956123S50 | ←      | ←      |
| STARTING TYPE | RSCR       | ←          | RSCR       | X      | RSCR       | ←      | ←      |

### 2) RELAY

| REFRIGERANT   |            | R-12   |            |             |             |             |        |        |
|---------------|------------|--------|------------|-------------|-------------|-------------|--------|--------|
| VOLTAGE(V/Hz) |            | 110/60 | 115,120/60 | 127/60      | 220/60      | 220/50      | 230/50 | 240/50 |
| ASSY          | TYPE NAME  | X      | X          | 414THBYY-52 | 197SHBYY-52 | 232THBYY-52 | ←      | ←      |
|               | PART CODE  | X      | X          | 3018120700  | 3018118130  | 3018119970  | ←      | ←      |
| PTC           | RESISTANCE | X      | X          | S068        | S330        | S220        | ←      | ←      |
| OVER LOAD     | PART NAME  | X      | X          | 414THB      | 197SHB      | 232THB      | ←      | ←      |

| REFRIGERANT   |            | R-134a      |            |             |        |             |        |        |
|---------------|------------|-------------|------------|-------------|--------|-------------|--------|--------|
| VOLTAGE(V/Hz) |            | 110/60      | 115,120/60 | 127/60      | 220/60 | 220/50      | 230/50 | 240/50 |
| ASSY          | TYPE NAME  | 308NHBYY-52 | ←          | 317NHBYY-52 | X      | 181SHBYY-52 | ←      | ←      |
|               | PART CODE  | 3018118110  | ←          | 3018119950  | X      | 3018116610  | ←      | ←      |
| PTC           | RESISTANCE | S068        | ←          | S068        | X      | S330        | ←      | ←      |
| OVER LOAD     | PART NAME  | 308NHB      | ←          | 317NHB      | X      | 181SHB      | ←      | ←      |

### 3) STARTING CAPACITOR

| REFRIGERANT       | R-12   |            |            |        |        |        |        |
|-------------------|--------|------------|------------|--------|--------|--------|--------|
| VOLTAGE(V/Hz)     | 110/60 | 115,120/60 | 127/60     | 220/60 | 220/50 | 230/50 | 240/50 |
| PART CODE         | X      | X          | 3016400100 | X      | X      | X      | X      |
| RATED VOLTAGE     | X      | X          | 200V       | X      | X      | X      | X      |
| RATED CAPACITANCE | X      | X          | 100mF      | X      | X      | X      | X      |

## SPECIFICATIONS

| REFRIGERANT       | R134a  |            |        |        |        |        |        |
|-------------------|--------|------------|--------|--------|--------|--------|--------|
| VOLTAGE(V/Hz)     | 110/60 | 115,120/60 | 127/60 | 220/60 | 220/50 | 230/50 | 240/50 |
| PART CODE         | X      | X          | X      | X      | X      | X      | X      |
| RATED VOLTAGE     | X      | X          | X      | X      | X      | X      | X      |
| RATED CAPACITANCE | X      | X          | X      | X      | X      | X      | X      |

### 4) RUNNING CAPACITOR

| REFRIGERANT       | R-12   |            |        |            |        |        |        |
|-------------------|--------|------------|--------|------------|--------|--------|--------|
| VOLTAGE(V/Hz)     | 110/60 | 115,120/60 | 127/60 | 220/60     | 220/50 | 230/50 | 240/50 |
| PART CODE         | X      | X          | X      | 400EL15110 | X      | ←      | ←      |
| RATED VOLTAGE     | X      | X          | X      | 350V       | X      | ←      | ←      |
| RATED CAPACITANCE | X      | X          | X      | 5mF        | X      | ←      | ←      |

| REFRIGERANT       | R134a      |            |            |        |            |        |        |
|-------------------|------------|------------|------------|--------|------------|--------|--------|
| VOLTAGE(V/Hz)     | 110/60     | 115,120/60 | 127/60     | 220/60 | 220/50     | 230/50 | 240/50 |
| PART CODE         | 3016801910 | ←          | 400EL15130 | X      | 3016401010 | ←      | ←      |
| RATED VOLTAGE     | 200V       | ←          | 230V       | X      | 350V       | ←      | ←      |
| RATED CAPACITANCE | 12mF       | ←          | 10mF       | X      | 5mF        | ←      | ←      |

### 5) F-FAN MOTOR

| REFRIGERANT   | R-12, R-134a |            |            |            |            |        |        |
|---------------|--------------|------------|------------|------------|------------|--------|--------|
| VOLTAGE(V/Hz) | 110/60       | 115,120/60 | 127/60     | 220/60     | 220/50     | 230/50 | 240/50 |
| TYPE NAME     | S6111EDF01   | ←          | S6111EDF01 | S6111EDF01 | S6111WDF01 | ←      | ←      |
| PART CODE     | 3015900741   | ←          | 3015900750 | 3015900701 | 3015900731 | ←      | ←      |
| REVOLUTION    | 2200 RPM     | ←          | ←          | ←          | ←          | ←      | ←      |

### 6) C-FAN MOTOR

| REFRIGERANT   | R-12, R-134a |            |            |            |            |        |        |
|---------------|--------------|------------|------------|------------|------------|--------|--------|
| VOLTAGE(V/Hz) | 110/60       | 115,120/60 | 127/60     | 220/60     | 220/50     | 230/50 | 240/50 |
| TYPE NAME     | RF111EAC03   | ←          |            |            | S6111CEC05 | ←      | ←      |
| PART CODE     | 3015903921   | ←          | 3015910100 | 3015910010 | 3015909800 | ←      | ←      |
| REVOLUTION    | 2100 RPM     | ←          | ←          | ←          | ←          | ←      | ←      |

### 7) DEFROST HEATER

| REFRIGERANT   | R-12, R-134a |            |        |            |        |        |        |
|---------------|--------------|------------|--------|------------|--------|--------|--------|
| VOLTAGE(V/Hz) | 110/60       | 115,120/60 | 127/60 | 220/60     | 220/50 | 230/50 | 240/50 |
| SPEC (W)      | 148W         | ←          | ←      | 148W       | ←      | ←      | ←      |
| PART CODE     | 3012807200   | ←          | ←      | 3012807100 | ←      | ←      | ←      |

8) LAMP ASSEMBLY

| REFRIGERANT   | R-12, R-134a |            |        |            |        |        |        |
|---------------|--------------|------------|--------|------------|--------|--------|--------|
| VOLTAGE(V/Hz) | 110/60       | 115,120/60 | 127/60 | 220/60     | 220/50 | 230/50 | 240/50 |
| SPEC (W)      | 15W          | ←          | ←      | 15W        | ←      | ←      | ←      |
| PART CODE     | 3013600050   | ←          | ←      | 3013600020 | ←      | ←      | ←      |

9) TEMPERATURE FUSE

| REFRIGERANT    | R-12, R-134a |            |        |        |        |        |        |
|----------------|--------------|------------|--------|--------|--------|--------|--------|
| VOLTAGE(V/Hz)  | 110/60       | 115,120/60 | 127/60 | 220/60 | 220/50 | 230/50 | 240/50 |
| OPERATING TEMP | 778C         | ←          | ←      | ←      | ←      | ←      | ←      |
| PART CODE      | 3017201200   | ←          | ←      | ←      | ←      | ←      | ←      |

10) DOOR S/W

| REFRIGERANT   | R-12, R-134a |            |        |        |        |        |        |
|---------------|--------------|------------|--------|--------|--------|--------|--------|
| VOLTAGE(V/Hz) | 110/60       | 115,120/60 | 127/60 | 220/60 | 220/50 | 230/50 | 240/50 |
| TYPE NAME     | DSD-5        | ←          | ←      | ←      | ←      | ←      | ←      |
| PART CODE     | 3018100050   | ←          | ←      | ←      | ←      | ←      | ←      |

11) DRYER

| REFRIGERANT   | R-12       |            |        |        |        |        |        |
|---------------|------------|------------|--------|--------|--------|--------|--------|
| VOLTAGE(V/Hz) | 110/60     | 115,120/60 | 127/60 | 220/60 | 220/50 | 230/50 | 240/50 |
| SPEC (gr)     | 10         | ←          | ←      | ←      | ←      | ←      | ←      |
| PART CODE     | 3016805600 | ←          | ←      | ←      | ←      | ←      | ←      |

| REFRIGERANT   | R-134a     |            |        |        |        |        |        |
|---------------|------------|------------|--------|--------|--------|--------|--------|
| VOLTAGE(V/Hz) | 110/60     | 115,120/60 | 127/60 | 220/60 | 220/50 | 230/50 | 240/50 |
| SPEC (gr)     | 15         | ←          | ←      | ←      | ←      | ←      | ←      |
| PART CODE     | 3016805500 | ←          | ←      | ←      | ←      | ←      | ←      |

## 15) PCB TRANSFORMER

| REFRIGERANT   | R-12, R-134a |            |        |            |        |        |        |
|---------------|--------------|------------|--------|------------|--------|--------|--------|
| VOLTAGE(V/Hz) | 110/60       | 115,120/60 | 127/60 | 220/60     | 220/50 | 230/50 | 240/50 |
| TYPE NAME     | S-ETP        | ←          | ←      | S-ETP      | ←      | ←      | ←      |
| PART CODE     | 5EPK048091   | ←          | ←      | 5EPK048090 | ←      | ←      | ←      |

## 16) MAIN PCB ASSY

| REFRIGERANT   | R-12, R-134a |            |        |            |        |        |        |
|---------------|--------------|------------|--------|------------|--------|--------|--------|
| VOLTAGE(V/Hz) | 110/60       | 115,120/60 | 127/60 | 220/60     | 220/50 | 230/50 | 240/50 |
| TYPE NAME     | S-ETP        | ←          | ←      | S-ETP      | ←      | ←      | ←      |
| PART CODE     | 3014302060   | ←          | ←      | 3014301060 | ←      | ←      | ←      |

## 17) FUSE (PCB)

| REFRIGERANT   | R-12, R-134a |            |        |        |        |        |        |
|---------------|--------------|------------|--------|--------|--------|--------|--------|
| VOLTAGE(V/Hz) | 110/60       | 115,120/60 | 127/60 | 220/60 | 220/50 | 230/50 | 240/50 |
| RATED CURRENT | 1.6A         | ←          | ←      | ←      | ←      | ←      | ←      |
| PART CODE     | 5F3GB1682R   | ←          | ←      | ←      | ←      | ←      | ←      |

## 2-1. DOOR COLOR

### 1) ASSEMBLY URETHAN FREEZER DOOR

#### 1. NON-KEY TYPE & KEY TYPE

| Refrigerant |                         | R-12       |            |              |        | Remark |
|-------------|-------------------------|------------|------------|--------------|--------|--------|
|             |                         | White      | Light Gray | Bright Beige | Silver |        |
| COLOR TYPE  | Embo PCM                | 3010015100 | X          | 3010015100   | X      |        |
|             | High-glossy Laminasheet |            |            |              |        |        |
|             | Normal PCM              |            | X          |              | X      |        |

| Refrigerant |                         | R-134a     |            |              |            | Remark |
|-------------|-------------------------|------------|------------|--------------|------------|--------|
|             |                         | White      | Light Gray | Bright Beige | Silver     |        |
| COLOR TYPE  | Embo PCM                |            | X          |              | X          |        |
|             | High-glossy Laminasheet | 3010015100 | 3010015100 | 3010015100   | 3010015100 |        |
|             | Normal PCM              |            | X          |              | X          |        |

### 2) ASSEMBLY URETHAN REFRIGERATOR DOOR

#### 1. NON-KEY TYPE

| Refrigerant |                         | R-12  |            |              |        | Remark |
|-------------|-------------------------|-------|------------|--------------|--------|--------|
|             |                         | White | Light Gray | Bright Beige | Silver |        |
| COLOR TYPE  | Embo PCM                |       | X          |              | X      |        |
|             | High-glossy Laminasheet |       |            |              |        |        |
|             | Normal PCM              |       | X          |              | X      |        |

| Refrigerant |                         | R-134a |            |              |        | Remark |
|-------------|-------------------------|--------|------------|--------------|--------|--------|
|             |                         | White  | Light Gray | Bright Beige | Silver |        |
| COLOR TYPE  | Embo PCM                |        | X          |              | X      |        |
|             | High-glossy Laminasheet |        |            |              |        |        |
|             | Normal PCM              |        | X          |              | X      |        |

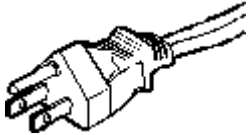
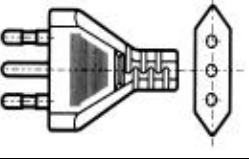
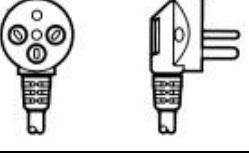
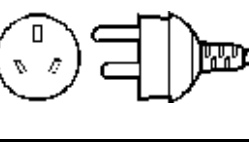
#### 2. KEY TYPE

| Refrigerant |                         | R-12  |            |              |        | Remark |
|-------------|-------------------------|-------|------------|--------------|--------|--------|
|             |                         | White | Light Gray | Bright Beige | Silver |        |
| COLOR TYPE  | Embo PCM                |       | X          |              | X      |        |
|             | High-glossy Laminasheet |       |            |              |        |        |
|             | Normal PCM              |       | X          |              | X      |        |

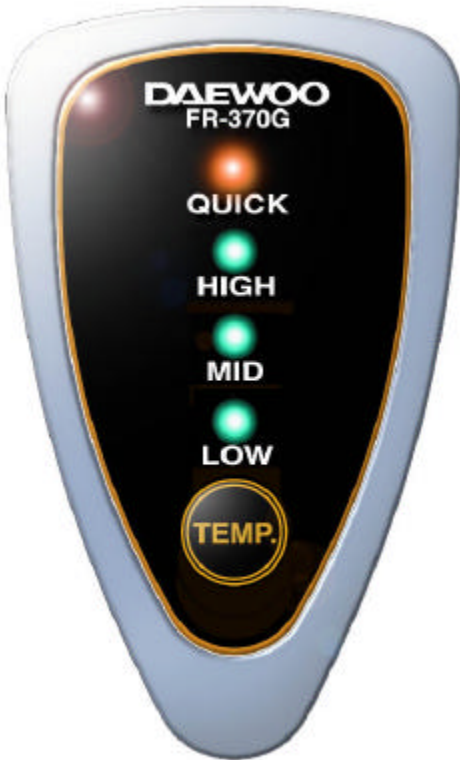
| Refrigerant |                         | R-134a |            |              |        | Remark |
|-------------|-------------------------|--------|------------|--------------|--------|--------|
|             |                         | White  | Light Gray | Bright Beige | Silver |        |
| COLOR TYPE  | Embo PCM                |        | X          |              | X      |        |
|             | High-glossy Laminasheet |        |            |              |        |        |
|             | Normal PCM              |        | X          |              | X      |        |



### 3. POWER CORD

| NO | SHAPE OF POWER CORD                                                                 | PART CODE  | DESCRIPTION | REMARK                                      |
|----|-------------------------------------------------------------------------------------|------------|-------------|---------------------------------------------|
| 1  |    | 3011315000 | CP-2PIN     | For european country                        |
| 2  |    | 3010097000 | CP-2PIN     | For other country                           |
| 3  |    | 4006D17101 | KP-30       | For America & El Salvador                   |
| 4  |   | 3010096800 | KP-211      | For Japan & Taiwan                          |
| 5  |  | 3011300801 | BP-3PIN     |                                             |
| 6  |  | 3011303010 | # 267       | For Chile                                   |
| 7  |  | 3011315310 |             | For Israel                                  |
| 8  |  | 3011303050 | BS-1363A    | "For U.K, Middle Asia Singapore & Malaysia" |
| 9  |  | 3011301200 | KP-551/550  | For China & Australia                       |

# OPERATION AND FUNCTIONS

| NO | CONTROL FUNCTION | CONTROL OBJECTS | CONTENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | REMARK |
|----|------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1  | Display          | LED             |  <p>1. TEMP BUTTON</p> <ol style="list-style-type: none"> <li>1) Temperature of Refrigerator can be controlled as changin control mode according to customer's desire.</li> <li>2) Initial mode is "Mid" and whenever pressing TEMP buton, control mode proceeds as follows.<br/>Low -&gt; Mid -&gt; High -&gt; Quick -&gt; Low</li> <li>3) If TEMP.button is pressed, control mode is set in 3 Sec.</li> </ol> <p>2. QUICK MODE</p> <ol style="list-style-type: none"> <li>1) If QUICK mode is set by TEMP.button, QUICK LED is on.</li> <li>2) Maximum time of QUICK mode is 40 min.</li> <li>3) If Refrigerator sensor (R-S) is below -3.0°C in QUICK mode, QUICK mode can be finished immediately within 40min.</li> <li>4) If QUICK mode is finished, it returns to the dial mode before QUICK mode.</li> </ol> |        |

| NO           | CONTROL FUNCTION | CONTROL OBJECTS | CONTENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | REMARK         |        |     |      |       |        |          |     |     |   |  |  |           |     |     |      |                |  |  |
|--------------|------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------|-----|------|-------|--------|----------|-----|-----|---|--|--|-----------|-----|-----|------|----------------|--|--|
| 2            | Control of Temp  | COMP<br>F-FAN   | <div>1. How to control Temperature of Refrigerator</div> <div>1) Whenever TEMP.button is pressed, control mode is circulated as follows:<br/>LOW -&gt; MID -&gt; HIGH -&gt; QUICK -&gt; LOW</div> <div>2) LEDs will indicate control mode according to TEMP.button.</div> <div>3) Comp and F-fan are controlled by R-Sensor.</div> <div>2. ON/OFF point of each control mode</div> <div>1) Comp and F-fan are controlled ON/OFF point of each control mode.<br/>( ON/OFF point of R-SENSOR )</div> <div>2) F-FAN is delayed for 1 min. after COMP is ON/OFF.</div> <div>3) ON/OFF DIFF. Of Refrigerator = 2.0 deg.</div> <div>4) STEP DIFF. Of Refrigerator = 2.5 deg.</div> <div><table><tr><th>구분 \ CONTROL</th><th>LOW</th><th>MID</th><th>HIGH</th><th>QUICK</th><th>REMARK</th></tr><tr><td>ON (°C )</td><td>5.0</td><td>2.5</td><td>0</td><td></td><td></td></tr><tr><td>OFF (°C )</td><td>3.0</td><td>0.5</td><td>-2.0</td><td>-3.0 / 40 min.</td><td></td></tr></table></div> | 구분 \ CONTROL   | LOW    | MID | HIGH | QUICK | REMARK | ON (°C ) | 5.0 | 2.5 | 0 |  |  | OFF (°C ) | 3.0 | 0.5 | -2.0 | -3.0 / 40 min. |  |  |
| 구분 \ CONTROL | LOW              | MID             | HIGH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | QUICK          | REMARK |     |      |       |        |          |     |     |   |  |  |           |     |     |      |                |  |  |
| ON (°C )     | 5.0              | 2.5             | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                |        |     |      |       |        |          |     |     |   |  |  |           |     |     |      |                |  |  |
| OFF (°C )    | 3.0              | 0.5             | -2.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | -3.0 / 40 min. |        |     |      |       |        |          |     |     |   |  |  |           |     |     |      |                |  |  |

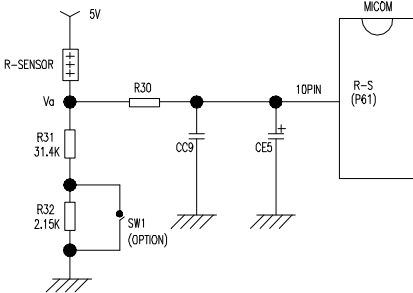
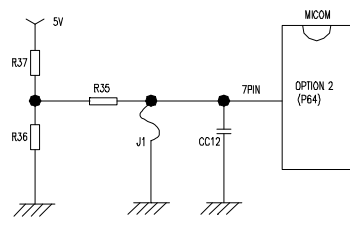
## OPERATION AND FUNCTIONS

| NO | CONTROL FUNCTION | CONTROL OBJECTS | CONTENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | REMARK |
|----|------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 3  | Defrost Period   | Defrost mode    | <p>1. Determination of Defrosting Period</p> <p>1) Total Run-tim of Comp : 10,11,12,13,14,15 hours</p> <p>2) Run-ratio of Comp : over 80%</p> <p>3) Total times of Door opening : over 3 times</p> <p>4) Total time (Comp On + Comp Off): 60 hours</p> <p>2. Explanation</p> <p>1) Derosting starts with the following conditions, in case total comp-run time passes 9 hours</p> <ul style="list-style-type: none"> <li>- when an Error occurs</li> <li>- when running-rate of Comp is more than 80%</li> <li>- when total Door-opening times is more than 3 times</li> </ul> <p>2) Defrosting starts unconditionally at each hour after total Comp-run time passes 9 hours if terms of 1) is occurred.</p> <p>3) Defrosting starts immediately when Total run-time is more than 15hours under the condition of 1),2) is not satisfied.</p> <p>4) Defrosting starts immediately when Total time is more than 15 hours under the condition of 1),2),3) is not satisfied.</p>                                                                                                                   |        |
| 4  | Defrosting Mode  | Comp Fan Heater | <p>1. Normal Defrosting</p> <p>1) Starting by Defrosting Period</p> <p>2) How to proceed : using heater</p> <p>3) Defrosting mode and procedure</p> <p>Proceeding time: 40min</p> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 100px;">             PRE-COOL           </div> <div style="margin: 0 10px; text-align: center;">             ↓           </div> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 100px;">             HEATER<br/>Defrosting           </div> </div> <p>Control Object: Comp On<br/>FAN ON,Heater Off</p> <p>Terminating Condition:<br/>if R-sensor temp. is below<br/>-4°C even though<br/>it passes 40 min.</p> <p>Limit Proceeding time</p> <ul style="list-style-type: none"> <li>- 30 min.: D1 ERROR<br/>D-Sensor disconnection/<br/>short-curcuit</li> <li>- 80 min.: F3 ERROR<br/>Normal Control state</li> </ul> <p>Control Object: Comp Off,<br/>FAN OFF,Heater On</p> <p>Terminating Condition:<br/>if D-sensor temp. is over 10°C</p> |        |

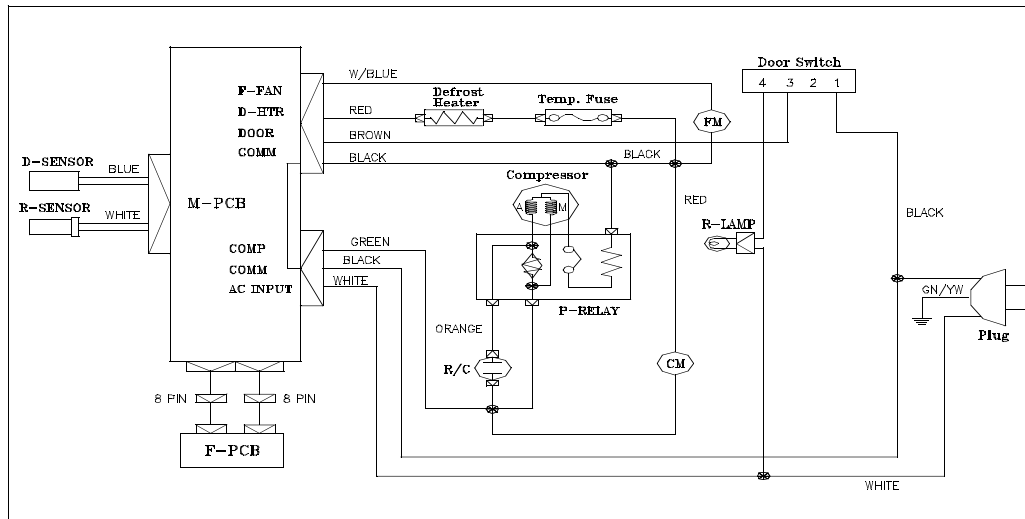
| NO         | CONTROL FUNCTION   | CONTROL OBJECTS                                 | CONTENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | REMARK    |          |                   |       |           |        |      |    |     |     |    |  |       |    |     |     |     |  |     |     |     |     |     |  |            |         |                                                 |        |        |  |  |
|------------|--------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------|-------------------|-------|-----------|--------|------|----|-----|-----|----|--|-------|----|-----|-----|-----|--|-----|-----|-----|-----|-----|--|------------|---------|-------------------------------------------------|--------|--------|--|--|
|            |                    |                                                 | <div><div><div><div></div><div>PAUSE</div><div></div></div><div><div></div><div>Fan Delay</div><div></div></div><div><div></div><div>Normal Run</div><div></div></div></div><div><div>Proceeding time: 4min<br/>Control Object: Comp Off,<br/>FAN Off,Heater Off</div><div>Proceeding time: 4min<br/>Control Object: Comp On,<br/>FAN Off, Heater Off</div></div><div>4) Output Control and Limit Time of each Defrosting mode</div><table><tr><th>MODE</th><th>PRE-COOL</th><th>Heater Defrosting</th><th>Pause</th><th>Fan Delay</th><th>REMARK</th></tr><tr><td>COMP</td><td>ON</td><td>OFF</td><td>OFF</td><td>ON</td><td></td></tr><tr><td>F-FAN</td><td>ON</td><td>OFF</td><td>OFF</td><td>OFF</td><td></td></tr><tr><td>HTR</td><td>OFF</td><td>OFF</td><td>OFF</td><td>OFF</td><td></td></tr><tr><td>Limit Time</td><td>40 min.</td><td>1) 30 SECONDS<br/>2) 30 MINUTES<br/>3) 80 MINUTES</td><td>4 min.</td><td>4 min.</td><td></td></tr></table><div>2.Forced Defrosting<br/>1) Start: Defrosting starts by pressing Temp.control s/w five times in a row when door is open.<br/>2) End : No function<br/>3) Process: using Heater<br/>4) Defrosting mode and procedure:<br/>same as Normal Defrosting( Skip pre-cool mode )<br/>5) Heater is On during initial 30 seconds without concerning D-sensor Temp.</div></div> | MODE      | PRE-COOL | Heater Defrosting | Pause | Fan Delay | REMARK | COMP | ON | OFF | OFF | ON |  | F-FAN | ON | OFF | OFF | OFF |  | HTR | OFF | OFF | OFF | OFF |  | Limit Time | 40 min. | 1) 30 SECONDS<br>2) 30 MINUTES<br>3) 80 MINUTES | 4 min. | 4 min. |  |  |
| MODE       | PRE-COOL           | Heater Defrosting                               | Pause                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Fan Delay | REMARK   |                   |       |           |        |      |    |     |     |    |  |       |    |     |     |     |  |     |     |     |     |     |  |            |         |                                                 |        |        |  |  |
| COMP       | ON                 | OFF                                             | OFF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ON        |          |                   |       |           |        |      |    |     |     |    |  |       |    |     |     |     |  |     |     |     |     |     |  |            |         |                                                 |        |        |  |  |
| F-FAN      | ON                 | OFF                                             | OFF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | OFF       |          |                   |       |           |        |      |    |     |     |    |  |       |    |     |     |     |  |     |     |     |     |     |  |            |         |                                                 |        |        |  |  |
| HTR        | OFF                | OFF                                             | OFF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | OFF       |          |                   |       |           |        |      |    |     |     |    |  |       |    |     |     |     |  |     |     |     |     |     |  |            |         |                                                 |        |        |  |  |
| Limit Time | 40 min.            | 1) 30 SECONDS<br>2) 30 MINUTES<br>3) 80 MINUTES | 4 min.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 4 min.    |          |                   |       |           |        |      |    |     |     |    |  |       |    |     |     |     |  |     |     |     |     |     |  |            |         |                                                 |        |        |  |  |
| 5          | Initial Defrosting | COMP<br>F-FAN HTR                               | <div>1. If D-sensor temp. <math>\leq 3.5^{\circ}\text{C}</math> in the initial power input, normal defrosting mode begins without concerning Comp run-time ( include Pre-cool mode )</div> <div>2. Defrosting begins after doing Comp restart prevention function with dealy for six min. in initial defrosting mode.</div> <div>3. Comp will be On imme<br/>diately if D-sensor temp. <math>\geq 3.5^{\circ}\text{C}</math> in initial power input.<br/>( No dealy for six min. )</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |          |                   |       |           |        |      |    |     |     |    |  |       |    |     |     |     |  |     |     |     |     |     |  |            |         |                                                 |        |        |  |  |
| 6          | Prevention of Comp | COMP<br>F-FAN                                   | <div>1. In order to protect Comp after Comp ioff, it won t re-start for six min. though R-sensor becomes On.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |          |                   |       |           |        |      |    |     |     |    |  |       |    |     |     |     |  |     |     |     |     |     |  |            |         |                                                 |        |        |  |  |

## OPERATION AND FUNCTIONS

| NO | CONTROL FUNCTION               | CONTROL OBJECTS | CONTENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | REMARK |
|----|--------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 7  | Error Display                  | LED             | <p>1. ERROR DISPLAY</p> <p>1) How to start: Push Temp. control s/w for five secs. In Continuous-run mode.</p> <p>2) How to end: It returns automatically after 20 secs in Error mode without concerning Error.</p> <p>2. DISPLAY AND HOW TO CONTROL</p> <p>1) D1 ERROR</p> <ul style="list-style-type: none"> <li>- Starting Condition: D-Sensor Disconnection/Shortcircuit</li> <li>- Display: Flickering "LOW" LED</li> <li>- How to control: return to limit time (30min.)</li> </ul> <p>2) R1 ERROR- Starting Condition: R-Sensor Disconnection/Shortcircuit</p> <ul style="list-style-type: none"> <li>- Display: Flickering "MID" LED</li> <li>- How to control: control continuously Comp, F-fan to be On(30min.) and Off(30min.)</li> </ul> <p>3) F3 ERROR - Starting Condition: Heater 80min. ends</p> <ul style="list-style-type: none"> <li>- Display: Flickering "HIGH" LED</li> <li>- How to control: impossible to control in case of Heater Defrosting, Temp. Fuse problem, HTR Disconnection</li> </ul> <p>4) C1 ERROR- Starting Condition: Even if Comp has run for 120min. continuously, when D-sensor is -5°C</p> <ul style="list-style-type: none"> <li>- Display: Flickering "QUICK" LED</li> <li>- How to control: impossible to control in case of Cycle error</li> </ul> <p>5) If there's no error when it enters Error mode, All LEDs will be OFF. HTR disconnection.</p> |        |
| 8  | Time Delay of Electric Devices |                 | <p>1. F-FAN time delay in Comp On/Off</p> <p>1) During normal running: F-fan will be On/Off 1 min. after Comp On/Off</p> <p>2) When initial power input: F-Fan will be ON 4 mins. After Comp On</p> <p>2. F-FAN TIME DELAY BY DOOR S/W</p> <p>1) After 6 mins. of initial power input<br/>OPEN DR S/W -&gt; CLOSE : F-fan work delay for 20 secs.</p> <p>2) Before 6 mins. of initial power input<br/>OPEN DR S/W -&gt; CLOSE : F-fan work for 20 secs. immediately.</p> <p>3) when it has nothing to do with Initial power input.<br/>OPEN DR S/W -&gt; CLOSE: F-fan changes into be Off. immediately.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        |

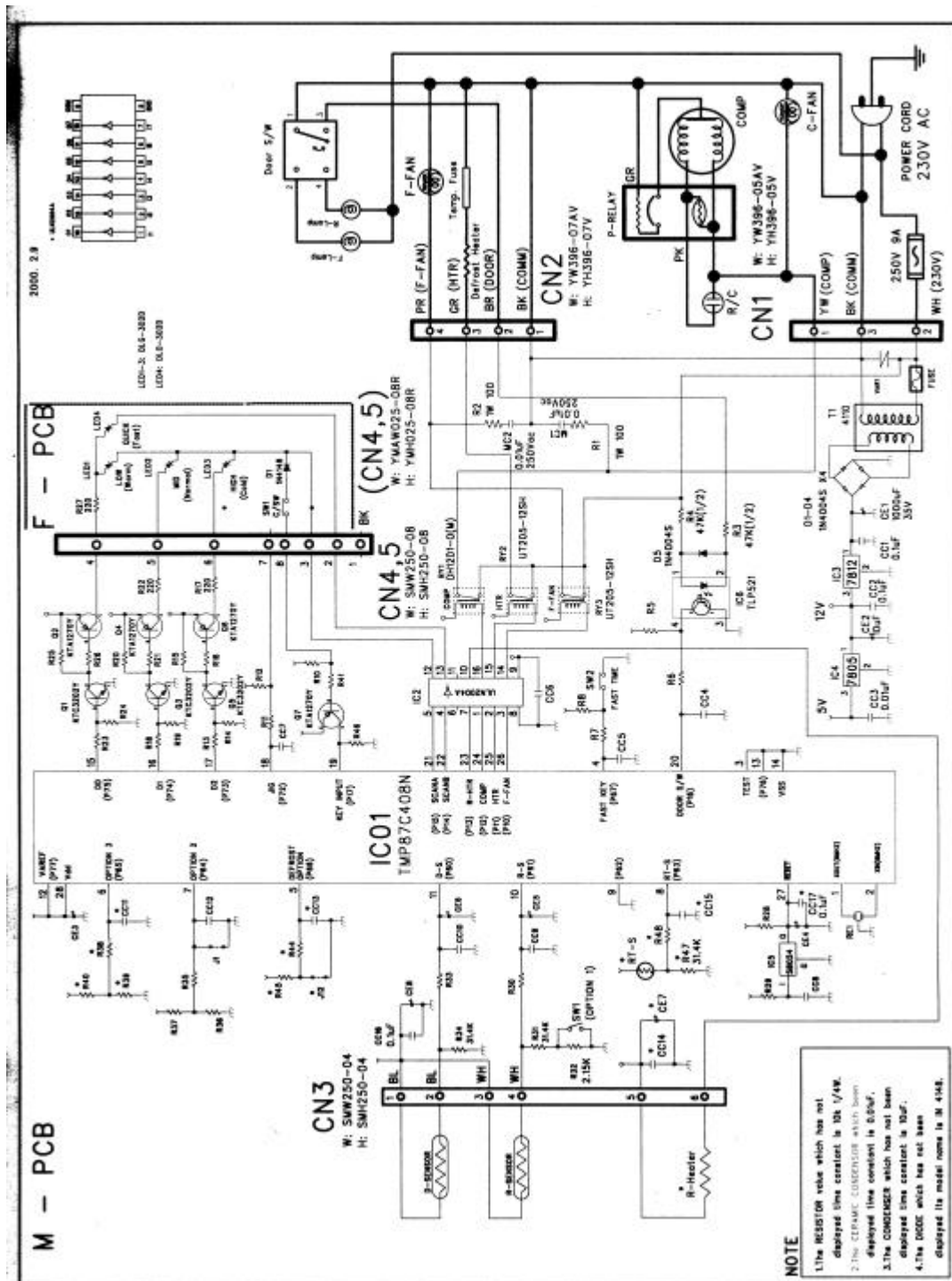
| NO | CONTROL FUNCTION                                   | CONTROL OBJECTS   | CONTENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | REMARK |                        |        |                             |                        |        |                 |                  |   |       |       |   |     |  |   |       |       |           |       |  |   |       |       |               |     |  |  |
|----|----------------------------------------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------------------|--------|-----------------------------|------------------------|--------|-----------------|------------------|---|-------|-------|---|-----|--|---|-------|-------|-----------|-------|--|---|-------|-------|---------------|-----|--|--|
| 9  | Option Circuit 1(Weak Refrigeration)               |                   | <p>1. Option for Weak Refrigeration, Service Reference</p> <p>1) When Weak Refrigeration occur, it's easy to find solution by this.</p> <p>2) Regulation of R-Sensor Off point ( -1.5 deg Down)</p> <p>2. In case of Weak Refrigeration, take action as followings.</p> <div></div> <p>1) Resistance(R31) :Standard Resistance of R-Sensor middle-off point in case of Normal Run<br/>(31.4kΩ = -10°C) (25.2kΩ = 4.0°C)<br/>When change resistance 31.4kΩ into 25.2kΩ R-sensor middle-off point will be 5.0 deg</p> <p>2) Resistance (R32): Standard resistance to make R-Sensor Off Point in case of Weak Refrigeration.</p> <ul style="list-style-type: none"><li>- R32 2.15kΩ : R-Sensor Off Point will be down by 1.5deg</li><li>- R32 6.19kΩ : R-Sensor Off Point will be down by 4.0deg</li></ul> <p>3) SW 1: If SW1 is off in Service, R Sensor Off Point will be down by 1.5deg.</p> <p>R31 + SW 1 ON: Middle Off Point: 0.5 ( In Normal Run )<br/>R31 + SW 1 OFF: Middle Off Point:-1.0( In Weak Refrigeration )</p> |        |                        |        |                             |                        |        |                 |                  |   |       |       |   |     |  |   |       |       |           |       |  |   |       |       |               |     |  |  |
| 10 | Option Circuit 2 (Prevention Strong Refrigeration) |                   | <p>1. Prevention of Strong Refrigeration Option (change Middle - off point)</p> <div></div> <table><tr><th rowspan="2">NO</th><th colspan="2">CONTROL</th><th rowspan="2">Application<br/>( MAIN PCB )</th><th rowspan="2">MICOM<br/>Input Voltage</th><th rowspan="2">REMARK</th></tr><tr><th>Middle-On Point</th><th>Middle-Off Point</th></tr><tr><td>1</td><td>2.5°C</td><td>0.5°C</td><td>—</td><td>0 V</td><td></td></tr><tr><td>2</td><td>4.0°C</td><td>2.0°C</td><td>Remove J1</td><td>2.5 V</td><td></td></tr><tr><td>3</td><td>5.5°C</td><td>3.5°C</td><td>Remove J1,R36</td><td>5 V</td><td></td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                   | NO     | CONTROL                |        | Application<br>( MAIN PCB ) | MICOM<br>Input Voltage | REMARK | Middle-On Point | Middle-Off Point | 1 | 2.5°C | 0.5°C | — | 0 V |  | 2 | 4.0°C | 2.0°C | Remove J1 | 2.5 V |  | 3 | 5.5°C | 3.5°C | Remove J1,R36 | 5 V |  |  |
| NO | CONTROL                                            |                   | Application<br>( MAIN PCB )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |        | MICOM<br>Input Voltage | REMARK |                             |                        |        |                 |                  |   |       |       |   |     |  |   |       |       |           |       |  |   |       |       |               |     |  |  |
|    | Middle-On Point                                    | Middle-Off Point  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |                        |        |                             |                        |        |                 |                  |   |       |       |   |     |  |   |       |       |           |       |  |   |       |       |               |     |  |  |
| 1  | 2.5°C                                              | 0.5°C             | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0 V    |                        |        |                             |                        |        |                 |                  |   |       |       |   |     |  |   |       |       |           |       |  |   |       |       |               |     |  |  |
| 2  | 4.0°C                                              | 2.0°C             | Remove J1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2.5 V  |                        |        |                             |                        |        |                 |                  |   |       |       |   |     |  |   |       |       |           |       |  |   |       |       |               |     |  |  |
| 3  | 5.5°C                                              | 3.5°C             | Remove J1,R36                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5 V    |                        |        |                             |                        |        |                 |                  |   |       |       |   |     |  |   |       |       |           |       |  |   |       |       |               |     |  |  |
| 11 | Continuous Run                                     | Comp F-FAN Heater | <p>1) How to start: If push the Temp. control s/w 30 times,it will start.</p> <p>2) How to add one more run: Push Temp. control s/w 30 times in Continuous-run mode.</p> <p>3) How to end: It will end automatically after 21 hours( Limit time: 21hour)<br/>If it is added one more run and you you'd like to finish it , push Temp. control s/w 30 times.</p> <p>4) Display : Let all the LEDs ON.</p> <p>5) How to control: Comp/F-fan/C-fan ON,HTR OFF</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |        |                        |        |                             |                        |        |                 |                  |   |       |       |   |     |  |   |       |       |           |       |  |   |       |       |               |     |  |  |

# WIRING DIAGRAM





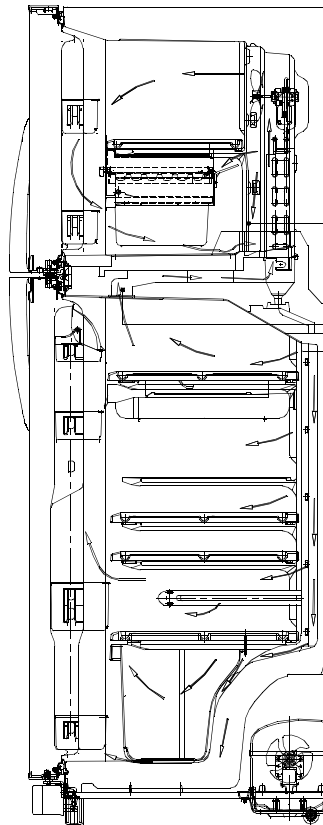
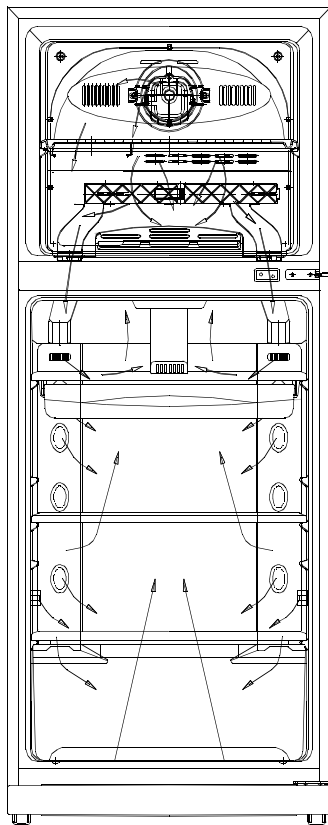
## 2. CIRCUIT WIRING DIAGRAM



### 3. AIR FLOW DIAGRAM

#### FREZER

Please don't put bottles  
such as beer beverage etc.  
It might be blown out because of freezing.



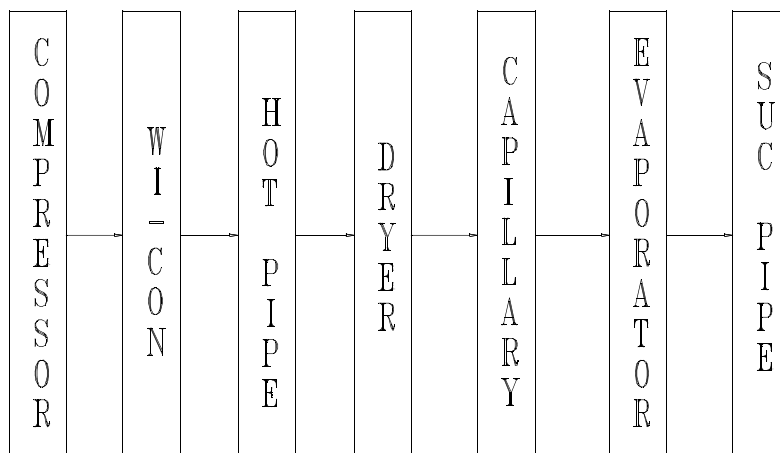
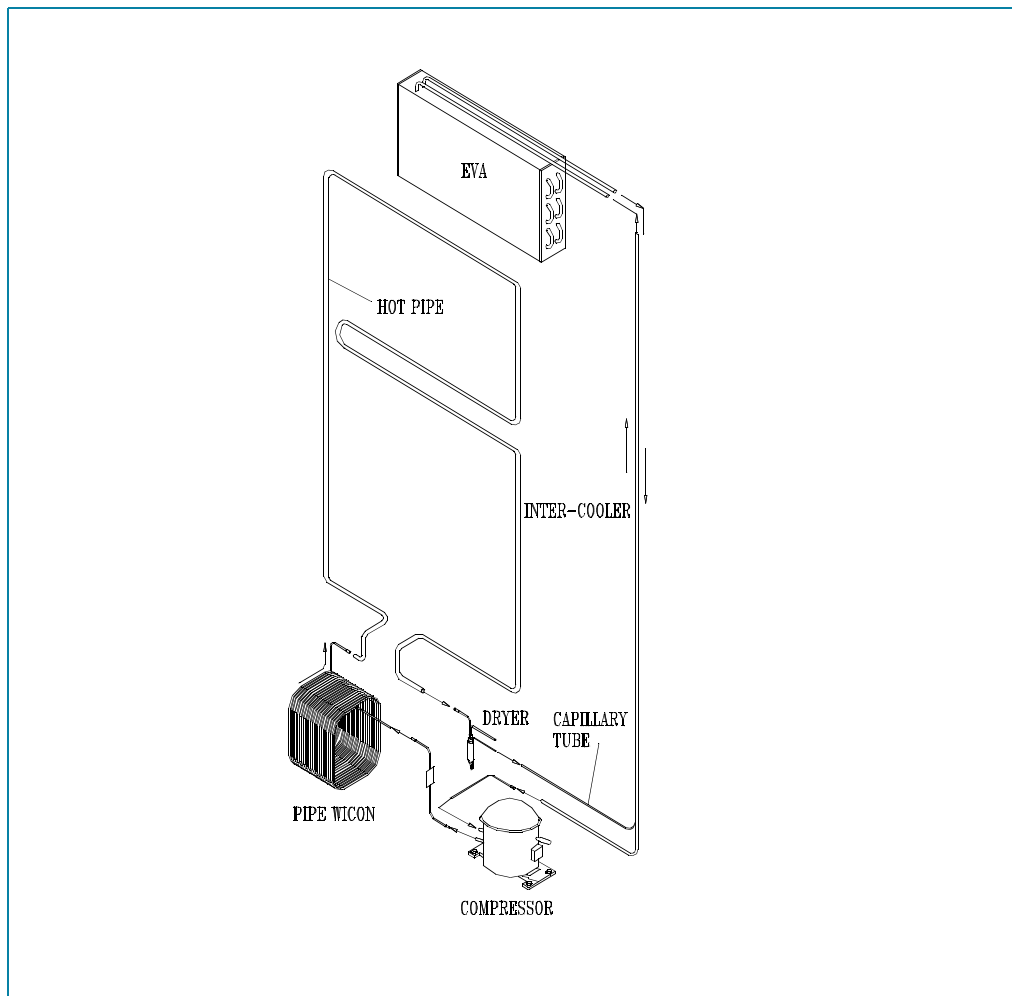
#### Inlet of cooling air

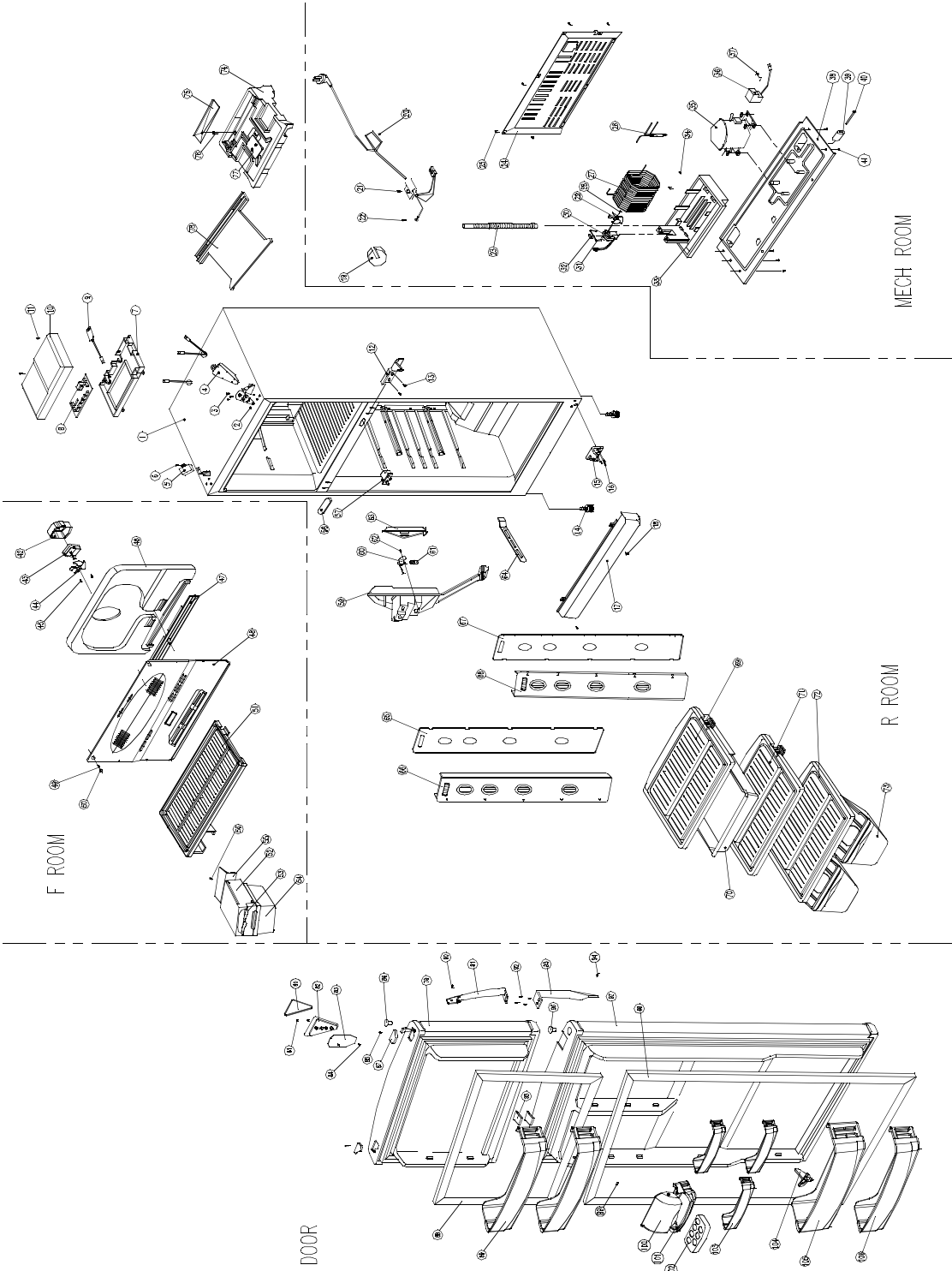
It should not be blocked with food etc.  
as it is the inlet where cooling air returns.

#### Multiple outlet of cooling air

Please don't put in vegetable etc.  
which contain moisture.  
It might be frozen because of low temperature.

#### 4. REFRIGERANT CYCLE DIAGRAM





## EXEPLoded VIEW AND PARTS LIST

| NO | PART CODE  | PART NAME          | PART DESCRIPTION       | Q'TY | REMARK   |
|----|------------|--------------------|------------------------|------|----------|
| 1  | 3010031200 | ASSY CAB URT       | FRM(P)-371             | 1    |          |
| 2  | 3012911500 | HINGE*T            | SPCC T2                | 1    |          |
| 3  | 3012905400 | SPECIAL BOLT T/U   | 6X22 SWCH22A(WH)       | 3    |          |
| 4  | 3011449800 | COVER *T HI        | HIPS                   | 1    |          |
| 5  | 3011449500 | COVER GUIDE L/WIRE | PP                     | 1    |          |
| 6  | 7112401211 | SCREW TAPPING      | T1TRS 4X12 MFZN        | 1    |          |
| 7  | 3010519800 | BOX MAIN POWER     | PP                     | 1    |          |
| 8  |            | PCB MAIN AS        | PP                     | 1    |          |
| 9  |            | HARNESS RUN CON    |                        | 1    |          |
| 10 |            | COVER M-PCB BOX    | PP                     | 1    |          |
| 11 | 7112401211 | SCREW TAPPING      | T1TRS 4X12 MFZN        | 2    |          |
| 12 | 3012911400 | HINGE *M AS        | DC-2 ZN                | 1    |          |
| 13 | 3016001220 | SPECIAL BOLT M     | 6X20 SWCH22A(WH)       | 2    |          |
| 14 | 3012101300 | FOOT ADJUST AS     | PP                     | 2    |          |
| 15 | 3012911300 | HINGE *U AS        | SPHC-H T4              | 1    |          |
| 16 | 3012905400 | SPECIAL BOLT T/U   | 6X22 SWCH22A(WH)       | 3    |          |
| 17 | 3011450200 | COVER CAB BRKT     | PP                     | 1    |          |
| 18 | 7112401211 | SCREW TAPPING      | T1TRS 4X12 MFZN        | 2    |          |
| 19 | 3010103700 | ABSORBER SUC P     | NR                     | 1    |          |
| 20 | 3011302012 | CORD POWER AS      |                        | 1    | 250V/16A |
| 21 | 7112401211 | SCREW TAPPING      | T1TRS 4X12 MFZN        | 1    |          |
| 22 | 7001400865 | SCREW MACHINE      | PAN 4X8 BSNI           | 1    |          |
| 23 | 3013202700 | HOSE DRN B         | PP                     | 1    |          |
| 24 | 3012405800 | GRILLE             | SBHG1                  | 1    |          |
| 25 | 7112401211 | SCREW TAPPING      | T1TRS 4X12 MFZN        | 5    |          |
| 26 | 3016805500 | DRYER AS           |                        | 1    |          |
| 27 | 3014433500 | PIPE WICON         | TSW OD4.76XT0.7XL14560 | 1    |          |
| 28 | 3011200400 | CLAMP FAN          | SUS304                 | 1    |          |
| 29 | 3011800400 | FAN                |                        | 1    |          |
| 30 |            | MOTOR C            |                        | 1    |          |
| 31 | 3012004400 | FIXTURE C MOTR     | SUS                    | 1    |          |
| 32 | 3010102100 | ABSORBER C MOTR    | "NR,FRB-5350NT"        | 1    |          |
| 33 | 3011161900 | CASE VAPORI        | PP                     | 1    |          |
| 34 | 7112401211 | SCREW TAPPING      | T1TRS 4X12 MFZN        | 2    |          |
| 35 |            | COMPRESSOR         |                        | 1    |          |
| 36 | 3018116610 | SWITCH P-RELAY AS  |                        | 1    |          |
| 37 | 3012610000 | CLAMP BRAND RELAY  | SK-5 T0.7              | 1    |          |
| 38 | 3010318400 | BASE COMP          | SBHG1                  | 1    |          |

## EXPLODED VIEW AND PARTS LIST

| NO | PART CODE  | PART NAME            | PART DESCRIPTION   | Q'TY | REMARK |
|----|------------|----------------------|--------------------|------|--------|
| 39 | 3016500000 | CASTER *B            | PP OD36XL37        | 2    |        |
| 40 | 3014902900 | SHAFT CASTER *B      | "SPH, T1, OD6XL51" | 2    |        |
| 41 | 3016003300 | SPECIAL BOLT         | T2 M6.5X20         | 4    |        |
| 42 | 3012007900 | FIXTURE MOTR B       | PP                 | 1    |        |
| 43 |            | MOTOR F              |                    | 1    |        |
| 44 | 3011802200 | FAN                  | ABS(OD110)         | 1    |        |
| 45 | 7112401211 | SCREW TAPPING        | T1TRS 4X12 MFZN    | 2    |        |
| 46 | 3013336310 | INSU F LUVR          | EPS                | 1    |        |
| 47 | 3013402600 | KNOB F CONTL         | PP                 | 1    |        |
| 48 | 3018910400 | LOUVER F             | HIPS               | 1    |        |
| 49 | 7112401611 | SCREW TAPPING        | T1TRS 4X16 MFZN    | 2    |        |
| 50 | 3010924600 | CAP F-LUVR           | HIPS T2.3          | 2    |        |
| 51 | 3017821600 | SHELF F              | HIPS T3.0          | 1    |        |
| 52 | 3013002300 | HOLDER ICE SAS       | HIPS               | 1    |        |
| 53 | 3012201900 | FRAME ICE CASE SAS   |                    | 1    |        |
| 54 | 3010518900 | BOX ICE              | GPPS               | 1    |        |
| 55 | 3012509800 | GUIDE TWIST ICE      | HIPS               | 1    |        |
| 56 | 7112401208 | SCREW TAPPING        | T1 TRS 4X10 SUS    | 1    |        |
| 57 | 3018100050 | SWITCH DR            | DSD-5(220V)        | 1    |        |
| 58 | 3010936100 | CAP DV *M HI HOLE    | ABS                | 1    |        |
| 59 | 3011450100 | COVER R LAMP         | HIPS               | 1    |        |
| 60 | 3017903610 | SOCKET R LAMP AS     |                    | 1    |        |
| 61 | 3013600080 | LAMP AS              | 240V/15W           | 1    |        |
| 62 | 7121300811 | SCREW TAPPING        | T2 PAN 3X8 MFZN    | 1    |        |
| 63 | 3015505200 | WINDOW LAMP          | PP                 | 1    |        |
| 64 | 3011439500 | COVER CUBIC          | HIPS               | 2    |        |
| 65 | 3017460900 | INSU R *S *L         | F-PS               | 1    |        |
| 66 | 3018910200 | LOUVER R *S *L       | PP                 | 1    |        |
| 67 | 3017461000 | INSU R *S *R         | F-PS               | 1    |        |
| 68 | 3018910300 | LOUVER R *S *R       | PP                 | 1    |        |
| 69 | 3017821800 | SHELF CHILD          | GPPS               | 1    |        |
| 70 | 3011162300 | CASE CHILD           | GPPS               | 1    |        |
| 71 | 3017822000 | SHELF R              | GPPS               | 1    |        |
| 72 | 3011451400 | COVER VEGETB         | GPPS               | 1    |        |
| 73 | 3011162500 | CASE VEGETB          | GPPS               | 2    |        |
| 74 | 3013336000 | INSULATOR F A        | EPS                | 1    |        |
| 75 | 3012509900 | GUIDE DRN            | AL 0.4T            | 1    |        |
| 76 | 3014433400 | PIPE DRN             | AL 1.0T            | 1    |        |
| 77 | 3012009400 | FIXTURE R CONTL COVR | PP                 | 1    |        |

## EXPLODED VIEW AND PARTS LIST

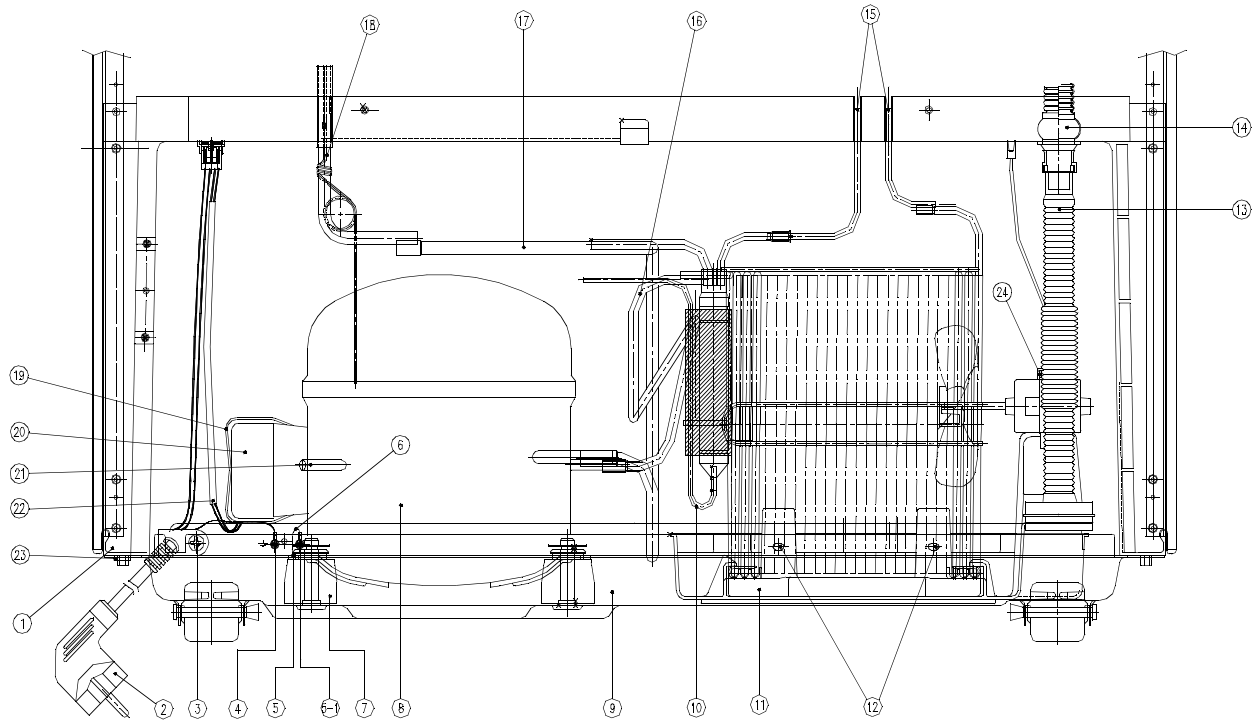
| NO  | PART CODE  | PART NAME          | PART DESCRIPTION | Q'TY | REMARK   |
|-----|------------|--------------------|------------------|------|----------|
| 78  | 3013336100 | INSULATOR F B      | EPS              | 1    |          |
| 79  |            | ASSY F DR          |                  | 1    |          |
| 80  | 301550530  | WINDOW FCP         | GPPS             | 1    |          |
| 81  | 7112401211 | SCREW TAPPING      | T1TRS 4X12 MFZN  | 1    | FR-4502N |
| 82  | 3014228600 | PANEL CONTROL F    | ABS              | 1    |          |
| 83  | 3014228600 | PCB FRONT AS       | T1.6             | 1    |          |
| 84  | 7121300811 | SCREW TAPPING      | T2 PAN 3X8 MFZN  | 1    |          |
| 85  | 7112401211 | SCREW TAPPING      | T1TRS 4X12 MFZN  | 1    |          |
| 86  | 3011450400 | COVER CAP HOLE B   | PP               | 1    |          |
| 87  | 3011450500 | COVER T HI HRNS *L | PP               | 1    |          |
| 88  | 3012301420 | GASKET F DR AS     | PVC              | 1    |          |
| 89  | 3019013500 | POCKET F           | HIPS             | 2    |          |
| 90  | 7112401211 | SCREW TAPPING      | T1 FLT 4X12 MFZN | 1    | FR-4502N |
| 91  |            | HANDLE F           | ABS              | 1    |          |
| 92  | 7112401211 | SCREW TAPPING      | T1 FLT 4X12 MFZN | 4    | FR-4502N |
| 93  |            | HANDLE R           | ABS              | 1    |          |
| 94  | 7112401211 | SCREW TAPPING      | T1 FLT 4X12 MFZN | 1    | FR-4502N |
| 95  | 3011450800 | COVER CAP HNDL *L  | ABS              | 1    |          |
| 96  | 3011450300 | COVER CAP HOLE A   | PP               | 1    |          |
| 97  |            | ASSY R DR          |                  | 1    |          |
| 98  | 3012301720 | GASKET R DR AS     | PVC              | 1    |          |
| 99  | 3010936600 | CAP DR SCREW HOLE  | PP               | 1    |          |
| 100 | 3011451300 | COVER DARIY ROOM   | GPPS             | 1    |          |
| 101 | 3019013000 | POCKET DAIRY       | HIPS             | 1    |          |
| 102 | 3011162100 | CASE EGG           | GPPS             | 1    |          |
| 103 | 3019013100 | POCKET SMALL       | HIPS             | 3    |          |
| 104 | 3012509600 | GUIDE POCKET       | HIPS             | 1    |          |
| 105 | 3019013300 | POCKET JUMBO       | HIPS             | 1    |          |
| 106 | 3019013400 | POCKET BOTTLE      | HIPS             | 1    |          |

## EXPLODED VIEW AND PARTS LIST

| NO | PART CODE  | PART NAME   | PART DESCRIPTION                   | QTY | REMARK        |
|----|------------|-------------|------------------------------------|-----|---------------|
| 79 | 30100897A0 | ASSY F DOOR | White PCM                          | 1   | CFC           |
|    | 30100897B0 |             | White High-glossy Laminasheet      | 1   | CFC           |
|    | 30100897C0 |             | Beige PCM                          | 1   | CFC           |
|    | 30100897D0 |             | Beige High-glossy Laminasheet      | 1   | CFC           |
|    | 30100897E0 |             | Light Gray High-glossy Laminasheet | 1   | CFC           |
|    | 30100897F0 |             | Daewoo Silver                      | 1   | CFC           |
|    | 30100897G0 |             | White Embo PCM                     | 1   | CFC           |
|    | 30100897H0 |             | Beige Embo PCM                     | 1   | CFC           |
|    | 30100897J0 |             | White PCM                          | 1   | HCFC          |
|    | 30100897K0 |             | White High-glossy Laminasheet      | 1   | HCFC          |
|    | 30100897L0 |             | Beige PCM                          | 1   | HCFC          |
|    | 30100897M0 |             | Beige High-glossy Laminasheet      | 1   | HCFC          |
|    | 30100897N0 |             | Light Gray High-glossy Laminasheet | 1   | HCFC          |
|    | 30100897P0 |             | Daewoo Silver                      | 1   | HCFC          |
|    | 30100897Q0 |             | White Embo PCM                     | 1   | HCFC          |
|    | 30100897R0 |             | Beige Embo PCM                     | 1   | HCFC          |
| 97 | 30100335A0 | ASSY R DOOR | White PCM                          | 1   | CFC           |
|    | 30100335B0 |             | White High-glossy Laminasheet      | 1   | CFC           |
|    | 30100335C0 |             | Beige PCM                          | 1   | CFC           |
|    | 30100335D0 |             | Beige High-glossy Laminasheet      | 1   | CFC           |
|    | 30100335E0 |             | Light Gray High-glossy Laminasheet | 1   | CFC           |
|    | 30100335H0 |             | Daewoo Silver                      | 1   | CFC           |
|    | 30100335J0 |             | White Embo PCM                     | 1   | CFC           |
|    | 30100335K0 |             | Beige Embo PCM                     | 1   | CFC           |
|    | 30100335L0 |             | White PCM                          | 1   | HCFC          |
|    | 30100335M0 |             | White High-glossy Laminasheet      | 1   | HCFC          |
|    | 30100335N0 |             | Beige PCM                          | 1   | HCFC          |
|    | 30100335P0 |             | Beige High-glossy Laminasheet      | 1   | HCFC          |
|    | 30100335Q0 |             | Light Gray High-glossy Laminasheet | 1   | HCFC          |
|    | 30100335R0 |             | Daewoo Silver                      | 1   | HCFC          |
|    | 30100335S0 |             | White Embo PCM                     | 1   | HCFC          |
|    | 30100335T0 |             | Beige Embo PCM                     | 1   | HCFC          |
|    | 30100335AK |             | White PCM                          | 1   | Key type CFC  |
|    | 30100335BK |             | White High-glossy Laminasheet      | 1   | Key type CFC  |
|    | 30100335CK |             | Beige PCM                          | 1   | Key type CFC  |
|    | 30100335DK |             | Beige High-glossy Laminasheet      | 1   | Key type CFC  |
|    | 30100335EK |             | Light Gray High-glossy Laminasheet | 1   | Key type CFC  |
|    | 30100335HK |             | Daewoo Silver                      | 1   | Key type CFC  |
|    | 30100335JK |             | White Embo PCM                     | 1   | Key type CFC  |
|    | 30100335KK |             | Beige Embo PCM                     | 1   | Key type CFC  |
|    | 30100335LK |             | White PCM                          | 1   | Key type HCFC |
|    | 30100335MK |             | White High-glossy Laminasheet      | 1   | Key type HCFC |
|    | 30100335NK |             | Beige PCM                          | 1   | Key type HCFC |
|    | 30100335PK |             | Beige High-glossy Laminasheet      | 1   | Key type HCFC |
|    | 30100335QK |             | Light Gray High-glossy Laminasheet | 1   | Key type HCFC |
|    | 30100335RK |             | Daewoo Silver                      | 1   | Key type HCFC |
|    | 30100335SK |             | White Embo PCM                     | 1   | Key type HCFC |
|    | 30100335TK |             | Beige Embo PCM                     | 1   | Key type HCFC |



# EXPLODED VIEW AND PARTS LIST



| NO  | PART NAME     | NO | PART NAME       | NO | PART NAME        |
|-----|---------------|----|-----------------|----|------------------|
| 1   | BASE CAB      | 10 | DRYER AS        | 20 | COVER RELAY      |
| 2   | CORD POWER    | 11 | CASE VAPORI AS  | 21 | PIPE SERVICE     |
| 3   | SCREW TAPPING | 12 | SCREW TAPPING   | 22 | SWITH P-RELAY AS |
| 4   | SCREW MACHINE | 13 | HOSE DRN A      | 23 | ABSORBER C MOTOR |
| 5   | WASHER TOOTH  | 14 | HOSE DRN B      |    |                  |
| 5-1 | SCREW MACHINE | 15 | PIPE HOT        |    |                  |
| 6   | HARNESS EARTH | 16 | PIPE CONN A     |    |                  |
| 7   | ABSORBER COMP | 17 | PIPE SUC CONN   |    |                  |
| 8   | COMPRESSOR    | 18 | PIPE SUCTION AS |    |                  |
| 9   | BASE COMP     | 19 | BAND RELAY      |    |                  |