**Order No. PAPVN230815CE**

# Service Manual



## Refrigerator

**NR-XY680LVSA**

**NR-XY680LVKA**

## Product Color

**Black Hairlines**

**Matt Silver Hairlines**

## Destination

**Australia/New Zealand**

100% CFC FREE

CFCs have been used in refrigerants as refrigerator and the insulation materials for many years. But it is now known that these compounds which one seemed so ideal for use as cleaning agents and in refrigeration systems, destroy the earth's ozone layer as a result, an international body decided on a total wordwide ban of harmful CFCs by the end of 1995.

This unit uses totally NON-CFC MATERIALS both for refrigerant (R600a) and for

## ⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempoing to service a product. Products powered by electricity should be serviced or repaired only by experienced proffessional technicians.Any attempt to service or repair the product or produces dealt within this service information by anyone else could result in serious injury or death.

## IMPORTANT SAFETY NOTICE

These are special components used in this equipment which are important for safety. These parts are marked by "S" in Replacement Part List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. do not modify the original design without permission of manufacturer.

Panasonic®

©Panasonic Appliances Vietnam Co., Ltd 2023.
All rights reserved. Unauthorized copying and distribution is a violation of law.

# CONTENT


| | Page |
|---|---|
| 1. Safety caution for repairing | 3-5 |
| - Warning | |
| - Caution | |
| 2. Specification and components | 6-9 |
| 3. Schematic diagram | 10 |
| 4. Performance data | 11 |
| 5. Troubleshooting guide | 12-17 |
| 6. Disassembly instruction | 18-33 |
| 7. Instruction for service | 34-41 |
| 8. Parts exploded view and replacement parts list. | 42-54 |
| 8.1 Parts exploded view | |
| 8.2 Replacement part list | |
| 9. App Instruction | 55-88 |
| 10. Operating Instruction | 89-148 |

# 1. SAFETY CAUTIONS FOR REPAIRING

The following are instructions that you must follow in order to prevent accidents during work, and to ensure the safety repaired product.

**Hazard and damages that may result from ignoring instructions are classified and explained, below.**

| | | |
|---|---|---|
| ⚠ | Danger | This section warns of the urgent danger of death or serious injury. |
| ⚠ | Warning | This section warns of the risk of death or serious injury. |
| ⚠ | Caution | This section warns of the risk of injury or damage to property. |

**The following labels describe the types of rules that need to be followed.**

| | |
|---|---|
| ⚠ | This label shows a "reminder" action to be paid attention to. |
| ⊘ | This label shows a "prohibited" action. |
| ❗ | This label shows a "compulsory" action to be followed without fail. |

| ⚠ Danger | |
|---|---|
| ❗ | **Be sure to discharge remaining refrigerant from the refrigeration unit.** |
| ❗ | **Discharge refrigerant outdoors where there is no fire source.**<br>Be sure to instruct the customer not to approach the place of discharge, and not to use fire. |
| ❗ | **Always use a pipe cutter for removing pipes.**<br>If you use a welding machine, the refrigerant remaining in the pipe or the compressor could catch fire and explode. |
| ❗ | **Pipes must be blow out with nitrogen before welding, to discharge any remaining refrigerant.** |
| ❗ | **Always use the tube lock plug (swage lock) for sealing after filing with refrigerant.**<br>If you use a welding machine, the refrigerant could catch fire and explode. |
| ❗ | **Ventilation close to the floor surface is required, as the refrigerant(R600a) is heavier than air.**<br>In particular, the basement must be adequately ventilated. |
| ❗ | **"Measurement/adjustment of refrigerant ref ll quantity" in a service must be performed outdoors where there is no fire source.**<br>Otherwise, you could run the risk of fire/explosion. |
| ❗ | **Use always a gas alarm.**<br>If any refrigerant remains in work area, there will be a risk of fire/explosion. |
| ⊘ Prohibited | **Never use fire in a place where any refrigerant might remain.** |
| ⊘ Prohibited | **Do not leave the removed faulty compressor in doors.** |

# ⚠ Warning

| | |
|---|---|
|  Remove power plug | **Before repair**<br>Make sure to cut off the power line before disassembly, parts replacement and assembly. Otherwise, electrical shock or injury may occur. |
|  Electric shock hazard | **Be careful of electrical shocks**<br>Be careful of electric shock from live parts or electrical lead terminals when conducting voltage measurement and other electrical servicing.<br>Voltage of the control board is approximately 280V when power is ON.<br>Do not touch live parts.<br>When replacing parts, do not touch live parts for at least 3 minutes after disconnecting the plug the power supply.<br>(A little time is required for electrical discharge of the condenser) |
|  | **Use only fuses specified**<br>When replacing fuses, use only specified in the circuit diagram. The use of non specified fuses may cause fire or malfunction. |
|  | **Punch the pipes of the faulty compressor securely.**<br>Otherwise, the refrigerant remaining in the compressor oil might leak out during transportation and could catch fire and explode. |
|  | **Discharge refrigerant completely from the used service can for disposal in an outdoor place where there is no fire source.**<br>Otherwise, you could run the risk of fire/explosion. |
|  Prohibited | **Do not damage the refrigeration circuit (piping) of the refrigerator.**<br>As the refrigerant is f ammable, any damage could lead to fire/explosion. |
|  | **If the refrigeration circuit is damaged, do not touch the refrigerator or use fire. Open windows for Ventilation.**<br>As the refrigerant is f ammable, any damage could lead to fire/explosion. |
|  | **Disposal of faulty compressor must be performed outdoors where there is no fire source.** |
|  | **The quantity of refrigerant in a service can carried in the vehicle must be the least possible, and below the [regulation] [regulated] limit. Keep the service can upright and below 40°C. (Quantity on board: 1.5kg or below)** |
|  | **Use a designated part**<br>Make sure to use a designated part when the part is marked(⚠) in circuit diagrams and parts lists. Otherwise, smoke, fire or failure may occur. |
|  | **Conduct a safety inspection after completing service**<br>Check the part that became former detached screw, parts, and wirings, and was serviced surrounding whether deteriorated.<br>Always use a megohmmeter to measure the insulating resistance between both terminals of the power plug and the earth terminal, and plug the power supply in after f rst conf rming 1MΩ or above.<br>When setting, check that the power cord or power plug is not jammed or pushed against the rear of the refrigerator.<br>If the power cord or the power plug is damaged or loose, take appropriate measures such as replacing.<br>If the pins of the plug or the area the pins attach to are dirty, make sure they are cleaned thoroughly. |

| ⚠ Caution | |
|---|---|
|  | **Install and remove glass shelving securely**<br>Falling shelves may cause injury due to the direct blow or from breaking. |
|  | **When moving, raise the adjustable legs**<br>Dragging the refrigerator will damage the floor. For flooring easily damaged put a protective board in place. |
|  | **Do not scrape the metal rails** |
|  | **Take care of very hot parts**<br>The compressor, pipes etc. can be very hot during operation and directly after stopping. Also, the heater can be very hot during power supply and immediately after power supply is stopped. |
|  | **Take care of very hot parts after welding**<br>Pipes etc., are very hot after welding. |
|  | **Take care when f lling/discharging refrigerant**<br>Liquid refrigerant directly touching the skin may cause frostbite. |
|  | **Take care of burrs**<br>Be careful not to cut yourself on metal or plastic burrs. |
|  | **Take care of condenser/evaporator fins**<br>Be careful not to injure yourself on the fin edges. |

# 2. SPECIFICATION AND COMPONENTS

| Model | NR-XY680LVSA | NR-XY680LVKA |
|---|---|---|
| Destination | AUSTRALIA | |
| Power Source | 220V-240V / 50Hz | |
| Plug | K3P | |
| Color Model | SA | KA |
| System Spec. | Inverter | |
| Material Spec. | SA= Matt Silver Hairlines | KA - Black Hairlines |

## ■ NET VOLUME, DIMENSIONS AND WEIGHT

| | | |
|---|---|---|
| Net capacity (L) | Total Volume | 618 |
| | PC | 406 |
| | FC | 212 |
| Internal Dimension [ W x D x H ] (mm) | FC | (W) 770 mm x (D) 572 mm average x (H) 630 mm |
| | PC | (R) 820 mm x (D) 598 mm average x (H) 930 mm |
| External Dimension [ W x D x H ] (mm) | | (W) 900 mm x (D) 750 mm x (H) 1790 mm |
| Net Weight (kg) | | 107 |
| Installation Space | | SIDE：30mm MIN, BACK：50mm MIN、TOP：10mm MIN |
| Gross Weight (kg) | | 119 |

## ■ CONSTRUCTION, MATERIALS AND COLOR TONE

| | | |
|---|---|---|
| Panel side | | POLYESTER PAINTING STEEL/EMBOSS NAGLA BLACK/ JH-056 |
| Inner Liner/ Inner door | | HI-PS RESYCLE 20% |
| Insulation (Cabinet /door) | | CYCLOPENTANE (DSD545.01) |
| Door | | PET LAMINATED STEEL |
| Door shelves part (PC) | EGG SHELF | PS |
| | EGG TRAY 8 | PS |
| | FREE RACK | PS RESIN |
| | SHELF BOTTLE | PS RESIN |
| Pan water eva | | PP |
| Adjuster bolt | | PP RECYCLE |
| Cover hinge top R/L | | PP |

## ■ PIPE INNER CONDENSER PARTS FOR COOLING SYSTEM

| | | |
|---|---|---|
| Coil | Type | FIN AND TUBE |
| | Material-Fin | A1060 |
| | Material-Tube | A1060 |
| | Net Volume | 412 cm3 ± 5 % (include ACCUM. 66 cm3) |
| Condenser | SIDE MULLION L | -Material: Steel Tube(Zine Coat)<br>-O/D x Length: ϕ3.60mm×2754mm, t0.5mm |
| | SIDE MULLION R | -Material: Steel Tube(Zine Coat)<br>-O/D x Length: ϕ3.60mm×2754mm, t0.5mm |
| | FRONT MULLION | -Material: Steel Tube(Zine Coat)<br>-O/D x Length: ϕ4.20mm×9069mm, t0.5mm |
| | BOTTOM MULLION | -Material: C1220T-1/2H-SOFT OR C1220T-OL<br>-O/D x Length: ϕ3.60mm×2426mm, t0.3mm |
| | BACK RIGHT MULLION | -Material: C1220T-1/2H-SOFT OR C1220T-OL<br>-O/D x Length: ϕ3.60mm×2380mm, t0.3mm |
| | BACK LEFT MULLION | -Material: C1220T-1/2H-SOFT OR C1220T-OL<br>-O/D x Length: ϕ3.60mm×2380mm, t0.3mm |

| | | |
|---|---|---|
| Compressor (27 r/s) | Model Name | TKD100E23DAH-C0ECS |
| | Cylinder capa | 10.17 cm³/ rev. |
| | Ref. capacity | 77W ± 5% |
| | COP(W/W) | 2.11±5% |
| | Power input | 36.5 W |
| | Evaporating Temp | -30.0 ℃ (-22°F) |
| | Condensing Temp | 40.0 ℃ (104°F) |
| Suction pipe | -Material<br>-O/D × LENGTH | C1220TS-OL<br>ϕ6.35mm×3000mm, t0.40mm |
| Second capilary | -Material<br>-O/D × LENGTH | C1220TS-OL<br>ϕ3.2mm×325mm, t0.60mm |
| Pressure Reducing device | TYPE | CAPILLARY |
| | MATERIAL | C1220TS |
| | I/D × LENGTH | ϕ0.75mm×4000mm |
| | 2ND PRESSURE | 0.6937 Mpa |
| 10 Dryer W | TYPE | MOLECULAR SIEVES(XH-9) |
| | CHARGING Q'TY | 10g |
| Lubricating oil | TYPE | FREOL S3 |
| | CHARGING AMT. | 200± 5cm3 |
| Refrigerant | TYPE | (CH3)2CHCH3 (R600a ) |
| | CHARGING AMT. | 99 ± 3.0g |

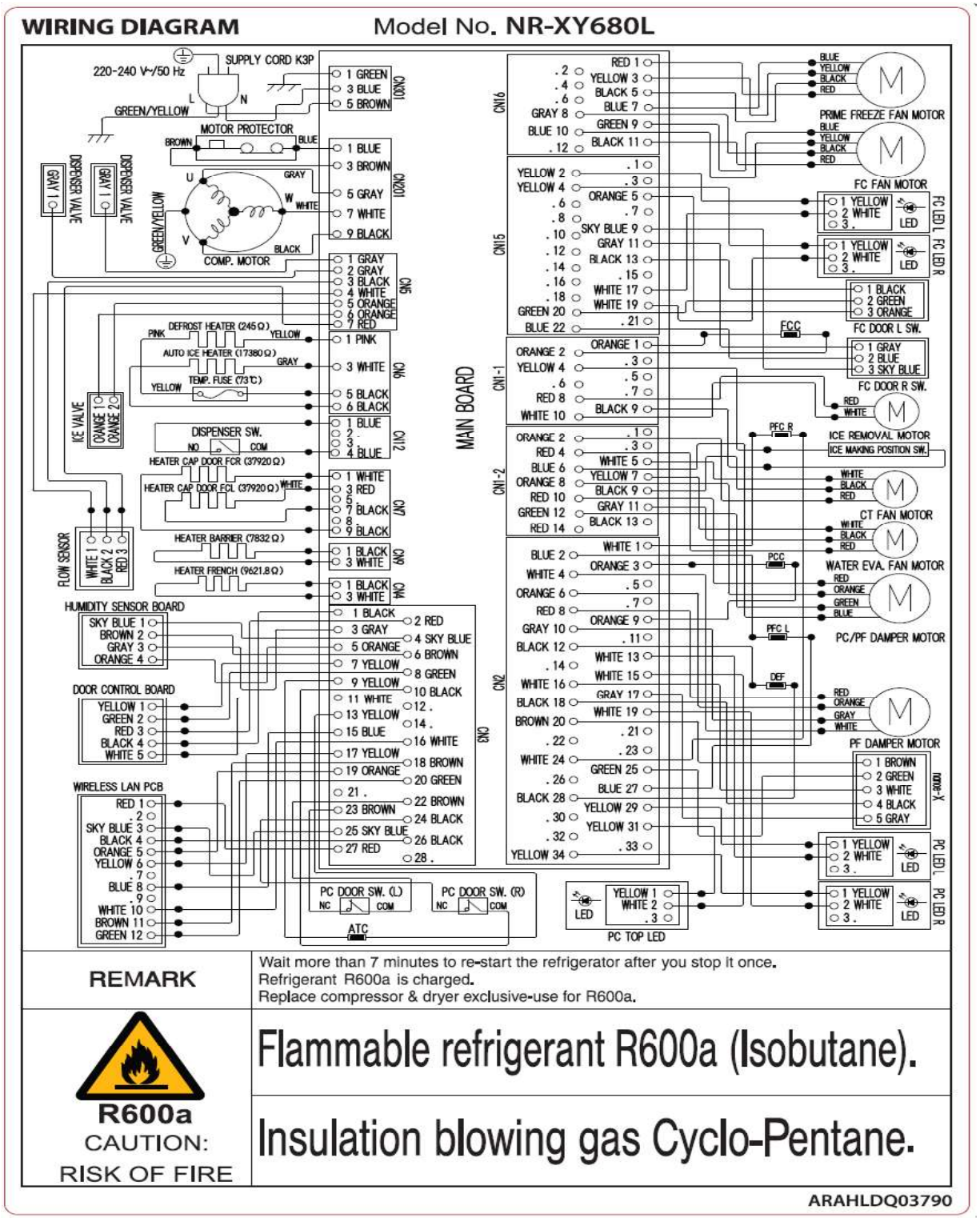
## ■ Electric devices and parts

| | | | |
|---|---|---|---|
| Supply cord | Plug | WT-100 | 250V 7A |
| | Power supply cord | VTCFK | 2C 0.75mm² |
| Door switch PC | | D3D-123 | 250V_AC. 0.5A, 125V_AC. 1A |
| Door switch FC | | ARATANB0011 | 5VDC |
| DEFROST HEATER | Type | ARAGHD101670 | |
| | Rating | 220V 198W 245Ω±5% | |
| HEATER AUTO ICE | Type | SOLID WIRE | |
| | Rating | 3.31W/240V, 3W/m, 17380 Ω + 7% (Effect length: 1100mm | |
| HEATER FRENCH | Type | SOLID WIRE | |
| | Rating | 4.30W/220V, 11260Ω±7% (Effect length: 1353mm) | |
| HEATER BARRIER | Type | SOLID WIRE | |
| | Rating | 6.18W/220V, 4.5W/m, 7832 Ω + 7% (Effect length: 1374mm) | |
| HEATER CAP DOOR FC | Type | SOLID WIRE | |
| | Rating | 1.28W/220V, 0.53W/m, 37920 Ω + 7% (Effect length: 2400mm) | |
| TWIN ELECTRIC DAMPER | Type | NSBD060 | |
| | Rating | DC13 V±1.5 V, 0.5 W, Class E | |
| SINGLE ELECTRIC DAMPER | Type | NSBC001 | |
| | Rating | DC12 V±1.0 V, 0.5 W, Class E | |

| | | |
|---|---|---|
| Overload protector | TYPE | MRA99991_9310 |
| | OPENING TEMP. | 100±5°C |
| | CLOSING TEMP. | 61±8°C |
| | TRIP CURRENT | 7.1A |
| Fan motor | TYPE | T92T09MS1AA7-53J651AB |
| | RATING | DC9V, 0.09A/0.81W /Ø83±0.5 |
| | FC FAN | 12522JEJE-12N-BU-F |
| | | DC12V, 0.16A/1.92W /Ø111±0.5 |
| | SC FAN | U66R12MS4AB-57J65 |
| | | DC12V, 0.36A/4.32W /Ø56.5+0.1-0.4 |
| Control equiptment | PCB PANEL (MAINBOARD) | ARATB2L0033 |
| | | 220-240V_AC |
| | PAS-COMMUNICATION PCB(WIFI) | 20MHz BANDWIDTH, 72.2 Mbps FOR WLAN |
| | | BLUETOOTH v5.0 |
| | | MAIN INTERFACE: UART |
| NANOE X BOARD | TYPE | ENE12E1197 |
| | RATING | DC12V ± 1.2V, 5.0 ± 0.5μA, 100MΩ or less, 1.5W or less |
| FC SENSOR (FCC) | TYPE | EP2C192AR-16B041 |
| | RATING | B=3850K±2% |
| | | R-20 = 18.9 k Ω±1.8% |
| ALTERNATER FC SENSOR (FCC) | TYPE | DTN-V192H3T-MSR395V |
| | RATING | B=3850K±1% |
| | | R-20 = 18.9 k Ω±3.0% |
| ALTERNATER FC SENSOR (FCC) | TYPE | NTCDP3SG193XABFAAB5J |
| | RATING | B=3850K±2% |
| | | R-20 = 18.9 k Ω±1.8% |
| PC SENSOR (PCC) | TYPE | NTCDP3SG642FBB |
| | RATING | B=3808K±2% |
| | | R0 = 6.409kΩ ±1% |
| ALTERNATER PC SENSOR (PCC) | TYPE | EP2C192AR-08A009 |
| | RATING | B=3808K±2% |
| | | R0 = 6.409kΩ ±1% |
| ALTERNATER PC SENSOR (PCC) | TYPE | 150-202-9 |
| | RATING | B=3808K±2% |
| | | R0 = 6.409kΩ ±1% |
| ALTERNATER PC SENSOR (PCC) | TYPE | DTN-V192H3T-MSR396V |
| | RATING | B=3808K±2% |
| | | R0=6.409 k Ω±1% |
| DEFROST SENSOR (DFC) | TYPE | NTCDP3SG392HX |
| | RATING | B=3819K±2% |
| | | R10=3.899 k Ω±3% |

| | | |
|---|---|---|
| ALTERNATER DEFROST SENSOR (DFC) | TYPE | EP2D202C4-16B038 |
| | RATING | B=3819K±2% |
| | | R10=3.899 k Ω±3% |
| ALTERNATER DEFROST SENSOR (DFC) | TYPE | DTN-G202H9Y-MSR425H |
| | RATING | B=3819K±2% |
| | | R10 = 3.899kΩ ± 3% |
| PF SENSOR(PFC) | TYPE | NTCDP3SG642FBB |
| | RATING | B=3808K±2% |
| | | R0=6.409 k Ω±1% |
| ALTERNATER PF SENSOR(PFC) | TYPE | EP2C192AR-08A009 |
| | RATING | B=3808K±2% |
| | | R0=6.409 k Ω±1% |
| ALTERNATER PF SENSOR(PFC) | TYPE | DTN-V192H3T-MSR397V |
| | RATING | B=3808K±2% |
| | | R0=6.409 k Ω±1% |
| ALTERNATER PF SENSOR(PFC) | TYPE | 150-202-9 |
| | RATING | B=3808K±2% |
| | | R0=6.409 k Ω±1% |
| AMBIENT TEMPERATURE SENSOR (ATC) | TYPE | NTC |
| | RATING | B=3400K±1% |
| | | R25=10.0 k Ω±2% |

## 3. Schematic Diagram



# 4. Performance data

SPECIFICATIONS

TEST METHOD & CONDITIONS

COOLING PERFORMANCE ON CONTINUOUS RUNNING

| | |
|---|---|
| AMBIENT TEMP. (℃) | 32.0 ± 1.0 |
| MEAN FRESH FOOD COMPARTMENT TEMP.t3(℃) | -16.0±2.5 |
| MEAN FREEZER LOAD TEMP.(℃) | -30.0±2.5 |

*TEMP.CONTROL DEVICE SETTING

| | |
|---|---|
| FC | CONTINUOUS |
| PC | FULL OPEN |
| PF | FULL OPEN |

COOLING PERFORMANCE BY TEMPERATURE CONTROL

①AT32±1℃

| | COLDEST | MEDIUM | WARMEST |
|---|---|---|---|
| MEAN FRESH FOOD COMPARTMENT TEMP.t3(℃) | 1.5 ± 2.5 | 4.0 ± 2.5 | 7.0 ± 2.5 |
| MEAN FREEZER LOAD TEMP.(℃) | -23.0 ± 2.5 | -20.0 ± 2.5 | -15.0 ± 2.5 |
| VEGETABLE CRISPER TEMP.(℃) | - | 4.0 ± 2.5 | - |
| PC DOOR SHELF UPPER TEMP.(℃) | - | 5.5 ± 2.5 | - |
| PC DOOR BOTTOM.(℃) | - | 4.5 ± 2.5 | - |
| PF CASE TEMP.(℃) | -5.0 ± 2.5 | -3.0 ± 2.5 | 4.0 ± 2.5 |
| RUNNING RATIO (%) | 80 ± 15 | 70 ± 15 | 55 ± 15 |

*TEMP.CONTROL DEVICE SETTING

| COLDEST | |
|---|---|
| FC | -23 |
| PC | 1 |
| PF | -5 |

| MEDIUM | |
|---|---|
| FC | -20 |
| PC | 4 |
| PF | -3 |

②AT43±1℃

| | COLDEST | MEDIUM | WARMEST |
|---|---|---|---|
| MEAN FRESH FOOD COMPARTMENT TEMP. t3(℃) | 1.5 ± 2.5 | 4.0 ± 2.5 | 7.0 ± 2.5 |
| MEAN FREEZER LOAD TEMP.(℃) | -23.0 ± 2.5 | -20.0 ± 2.5 | -15.0 ± 2.5 |
| PF CASE TEMP. (℃) | -5.0 ± 2.5 | -3.0 ± 2.5 | 4.0 ± 2.5 |
| RUNNING RATIO (%) | 85 ± 15 | 85 ± 15 | 70 ± 15 |

| WARMEST | |
|---|---|
| FC | -15 |
| PC | 7 |
| PF | 4 |

③AT16±1℃

| | COLDEST | MEDIUM | WARMEST |
|---|---|---|---|
| MEAN FRESH FOOD COMPARTMENT TEMP. t3(℃) | 1.5 ± 2.5 | 4.0 ± 2.5 | 7.0 ± 2.5 |
| MEAN FREEZER LOAD TEMP.(℃) | -23.0 ± 2.5 | -20.0 ± 2.5 | -15.0 ± 2.5 |
| PF CASE TEMP ( ℃ ) | -5.0 ± 2.5 | -3.0 ± 2.5 | 4.0 ± 2.5 |
| RUNNING RATIO (%) | 60 ± 15 | 50 ± 15 | 30 ± 15 |

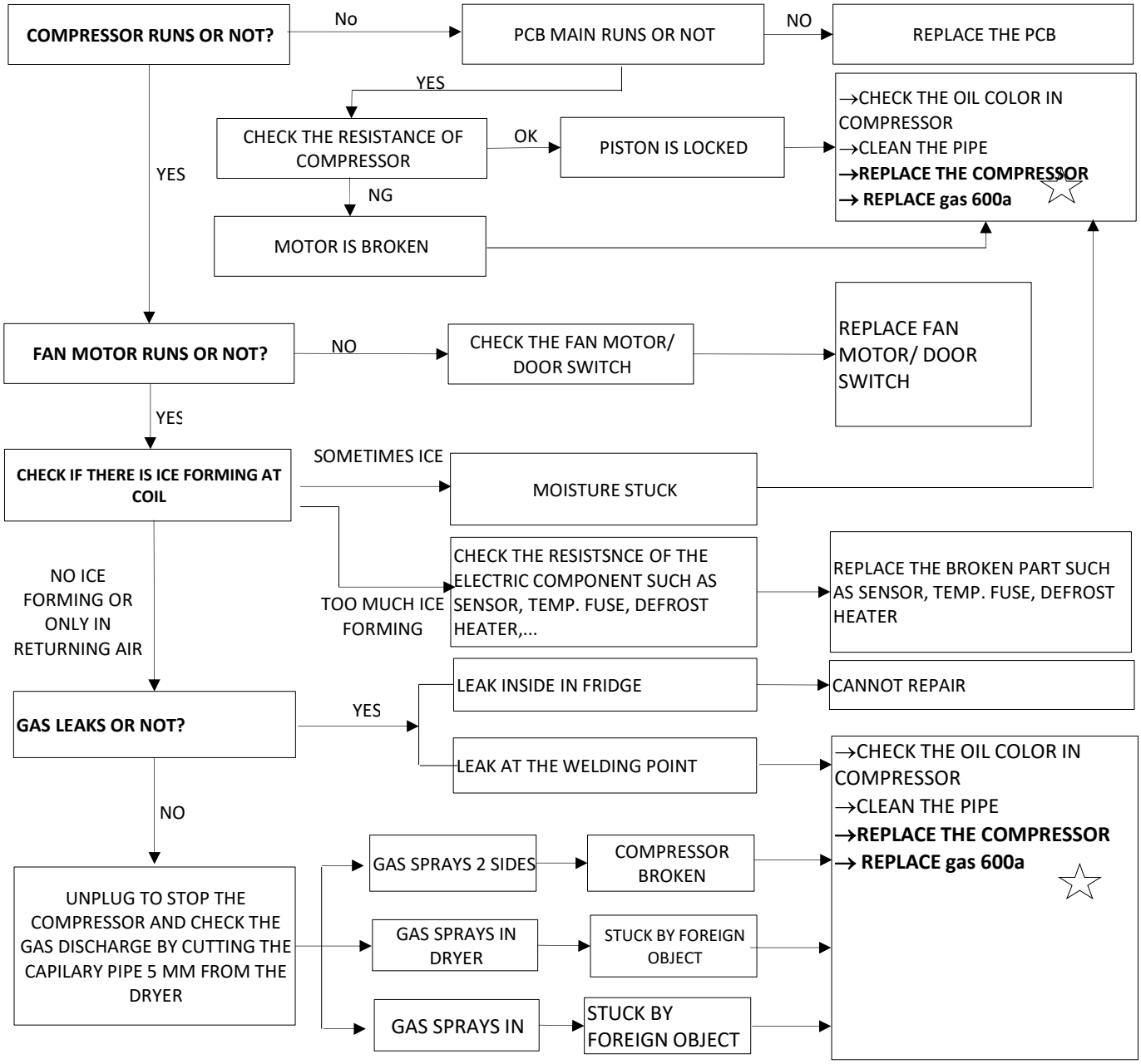
# 5. Troubleshooting guide

## 5.1. Troubleshooting

**Before you call for sevice, please check the following items:**

| | | |
|---|---|---|
| **The refrigerator does not operate** | | ●Check that the plug and its socket are in good condition.<br>●Check if there is any problem an main fuse and electrical system of the house.<br>●Check by unplug and wait for 5 minutes before plugging it back in. |
| **The refrigerator does not cool enough.** | | ●Check to be sure that light in control panel is displayed at proper position.<br>●Check to see if the refrigerator is overloaded with stuff or there is any hot foodstuff refrigerator inside.<br>●Is the refrigerator exposed directly to sunlight or heat source?<br>●Is the refrigerator door complete closed?<br>●Is the refrigerator door opened frequently? |
| **Dew snow appear** | **Outside** | ●When the ambient humidity is too high,the door gasket may have dew.This situation will be stopped if the air humidity decreases. Please wipe it up with dry cloth. |
| | **Inside** | ●Is the door closed firmly?<br>●Is the dooe being opened and closed too frequently?<br>●When too high weather humidity,long opening time or making too much ice,inside the freezer copartment may appear frozen snow. This is normal.Please wipe with dry and soft cloth. |
| **The refrigerator make noise.** | | ●Check if the refrigerator is located on a stable floor or installed properly.<br>●Check if there is any object in contact with the refrigerator.<br>●Check if evap pipe in contact with pan water evap. |
| **Food becomes frozen.** | | ●Do you put the food near cold air holes?<br>●Do you adjust the temperature control at "Max" ? Adjust to "Min"?<br>●Do you put food in prime fresh room? |
| **The inside is smelling.** | | ●Do you store the odour food without wrapping it? |
| **The surfaces of the refrigerator is hot** | | ●Because the refrigerator is equipped with the dew prevention and heat radiation tubes,the surfaces of the refrigerator get warmer when operating.<br>●The back and side plates may get warmer especially when starting up or if the door is frequently opened & closed. |

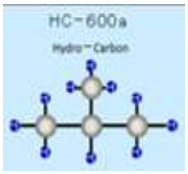
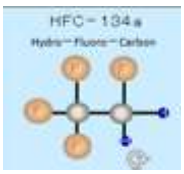
# 5.2 Cooling troubleshooting guide



## 5.3. GAS R600a - Repair operation

### 5.3.1. Gas 600a (isobutane) - characteristics

Refrigerators fully use CFC-Free materials for both refrigerant (R 600a) and insulation (Cyclo-Pentane). Therefore, this refrigerator does not affect the earth's ozone layer.

| No | Characters | R600a | R134a |
|---|---|---|---|
| | | Isobutane | HFC134a |
| 1 | Molecular | $C_4H_{10}$   | $CH_2FCF_3$   |
| 2 | Boiling point (under atmospheric pressure) | -11.72 ° C | -26.2 ° C |
| 3 | Global warming coefficient | 3 | 1300 |
| 4 | Ignition temperature | 494 ° C | Non-flammable |
| 5 | Saturation pressure (40/-30°C) | 0.53/0.047MPa | 1.02/0.085MPa |
| 6 | Explosive concentration | 1.8-8.4% | - |
| 7 | Latent heat of vaporization (-30 ° C) | 377kJkg-1 (173) | 218kJkg-1 (100) |
| 8 | Specific volume (25 ° C solution) | 0.0018m3kg-1(225) | 0.0008m3kg-1(100) |
| 9 | COP ratio | 2.61(100) | 2.77 (106) |

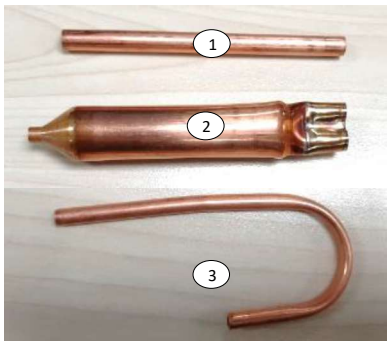
**● 1 kJ =238.9 kcal**

### 5.3. 2. Spare part for gas R600a repair

### a. Gas charge tool kit R600A

| No | Part No. | Part Name | Detail Part | Số lượng |
|---|---|---|---|---|
| 1 | Gas charge tool R600A | Gas charge tool R600A | COPPER TUBE C1220TS-OL 6.35*0.50 MM LWC | 1 |
| 2 | | | 5 DRYER W | 1 |
| 3 | | | COPPER TUBE C1220TS-OL 4.76*0.50 MM LWC | 1 |
| 4 | | | SWAGELOK TUBE (1 x 6.35 mm) | 1 |
| 5 | | | HEAT-SHRINKBLE TUBE 30 mm | 1 |

### b. Pictures for gas charge tool kit R600A

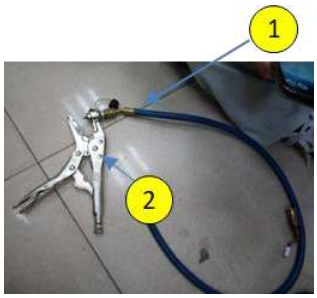
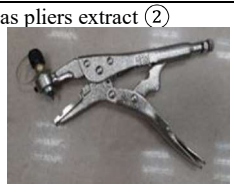
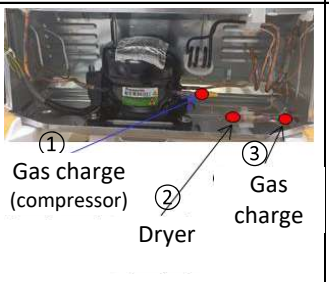
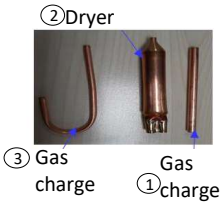
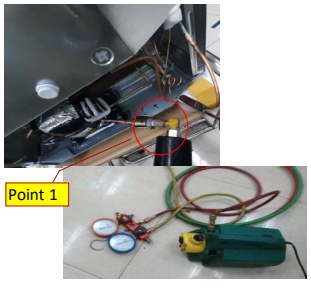


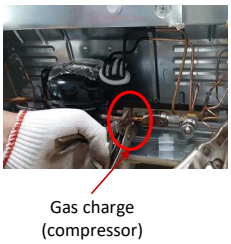
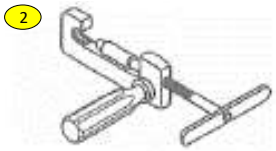
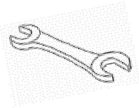
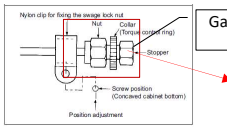
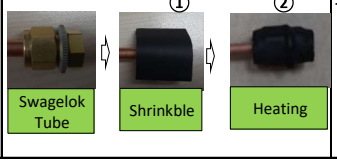




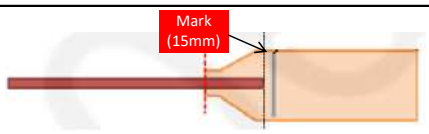
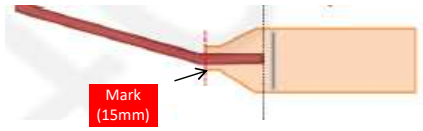


**c. Repairing instruction gas R600a**

| Step | Operation | Picture | Tool | Remark |
|---|---|---|---|---|
| 1. GAS DISCHARGE | Using about (10-15 m) charging hose ① to connect with discharge point of gas plier extract ② to discharge the remain gas R600a in refrigerator. |  | - Charging hose ①<br><br>- Gas pliers extract ②<br> | Keep far away flammable sources when reparing gas issues |
| | Make a hole on the gas charge (compressor) to discharge the remaining gas in the pipe by gas pliers extract tool. |  | - Gas pliers extract<br> | |
| 2. CHECK REMAINING GAS | Check remaining gas R600a amount in the pipe by Gas detector |  | - Gas detector<br> | Gas R600a must be exhausted before repairing for safety reason |
| 3.PART REPLACEMENT | Replace and re-weld parts in machine room.<br>① Gas charge (compressor)<br>② Dryer<br>③ Gas charge (dryer) |  | - Parts<br> | Refer item (d): connect capillary to dryer |
| 4. VACUUM PUMPING | Connect vacuum pump to gas charge point then conduct vacuum pumping to ensure that : no air inside compressor & copper. |  | - Vacuum pump<br> | Connect at only 1 gas charge point at compressor.<br>Spec of vacuum level : ≤67 Pa<br>**Note:*<br>*1. Do welding gas charge point at Dryer before conduct vacuum pumping*<br>***2: Minimum vacuum pumping time: 30'*** |

| Step | Operation | Picture | Tool | Remark |
|---|---|---|---|---|
| 5. GAS CHARGING | Charge gas amount to gas charging point (compressor). | - Gas charge amount: 55 ± 3 g  | -Gas R600a  | |
| 6. GAS CHARGE SEALING | Use Pinch-off tool to clamp gas charge point at compressor to ensure that there is no gas leaking when taking out coupler. |   | -Pinch off tool: can use 1 of 2 types as below. 1  2  | Thickness at clamp position: 1.0~1.2 mm |
| | Assemble Swagelok Tube to gas charge point (use wrench) |  | - Swagelok tube size 6.35 mm  - Wrench  | Be sure that the part is tightened enough |
| 7. GAS LEAKAGE CHECKING | Check gas leaking at Swagelok Tube assembly point using gas detector |   | - Gas detector  | |
| 8. CHỤP LỚP BẢO VỆ ĐẦU TÁN | ① Cover Swagelok Tube by Shrinkble Tube then ② heat Shrinkble Tube by hair dryer/heater to assure that Shrinkble Tube stick tightly to Swagelok Tube |     | -Shrinkble Tubes.  - Hair Dryer/ Heater  | Assure that Shrinkble Tube is not torn or loosened |

**d. Connect capillary to dryer**

| Step | Operation | Illustration |
|---|---|---|
| 1 | Mark the position 15 mm at capilary tube. (Pic.1) |  Pic. 1 |
| 2 | Insert the capilary tube into dryer until marking position<br>( L=15 mm) |  |
| 3 | Bend capilary at marking position |  |
| 4 | Re-weld |  |

# 6. DISASSEMBLY INSTRUCTION

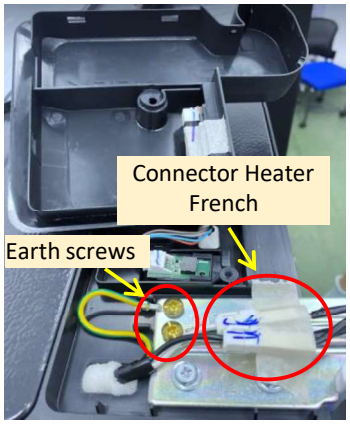
## 6.1. Disassemble  PC door




### 6.1.1. Door PCL, Humidity Sensor, Door Switch, French

*** Door PCL**





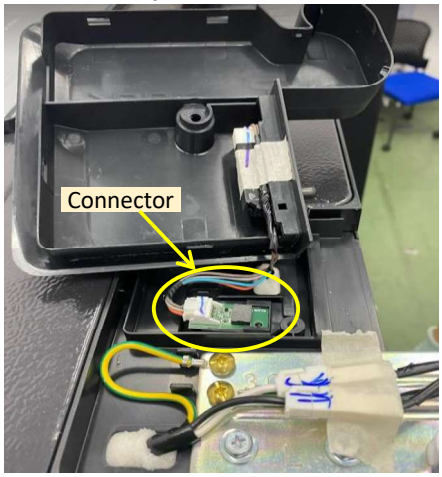




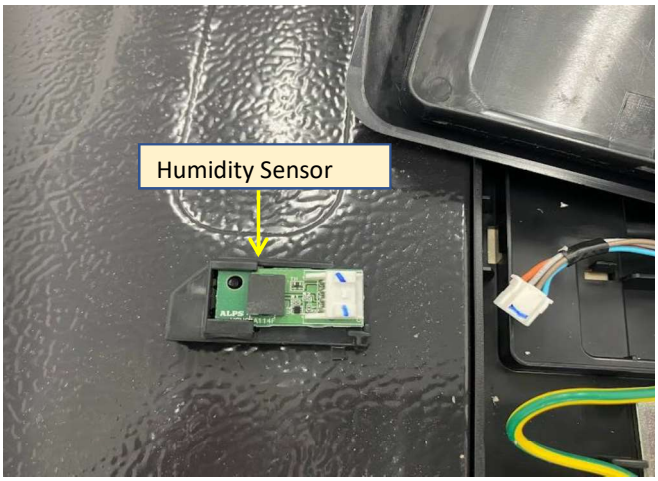
① Unscrew then take out Cover Hinge Top L. Disconnect connector Heater French. Uncrew 2 earth screws.

② Unscrew 3 screws at Hinge Top & take out PC Door.

*** Humidity Sensor**

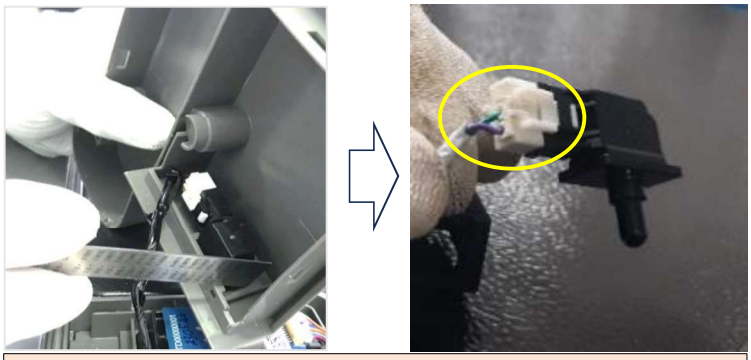



① Unscrew & disassemble Cover Hinge Top.



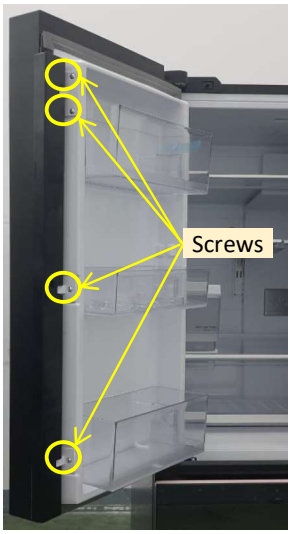

② Take Humidity Sensor out of the hook then disconnect the connector.

## * Door Switch

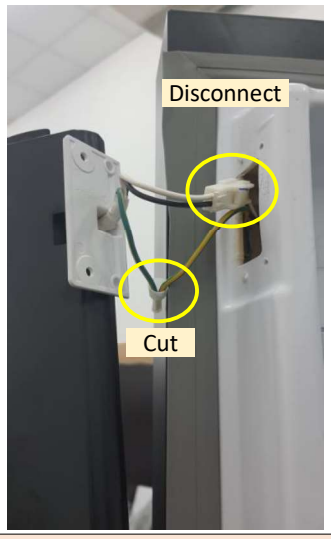


Use a flat tool to push the hook (as above photo) to make Door Switch out of Cover Hinge Top. Disconnect connector of Door Switch

## * French



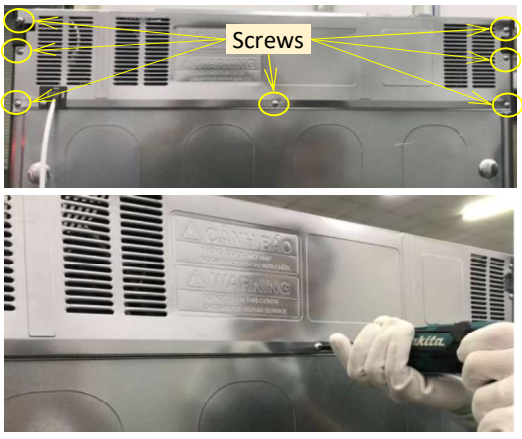

① Unscrew 4 positions as above photo



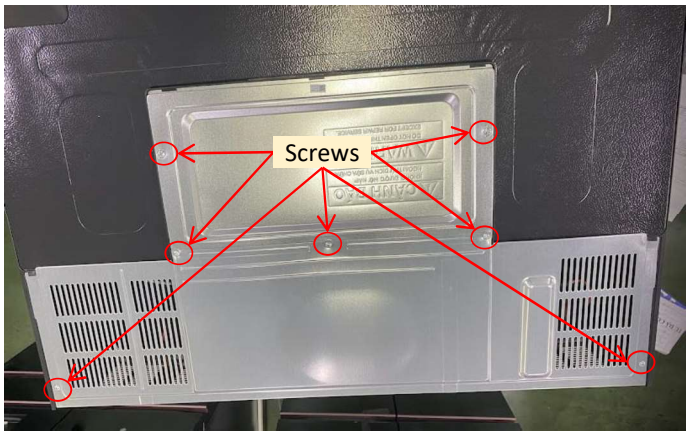

② Take out the connectors, disconnect/ cut the wire to take out French

## 6.1.2. Door PCR, WIFI Module, Door Switch, Cover Control, Water Tank

## * Door PCR




① Use screwdriver to unscrew 7 positions as Cover Panel Comp.




② Unscrew 7 screws at top

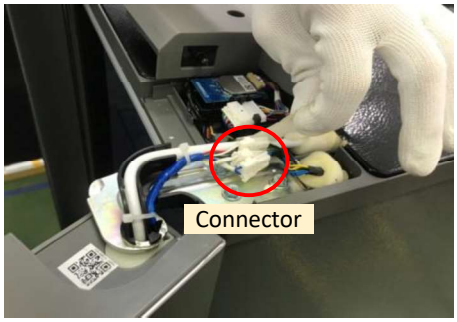




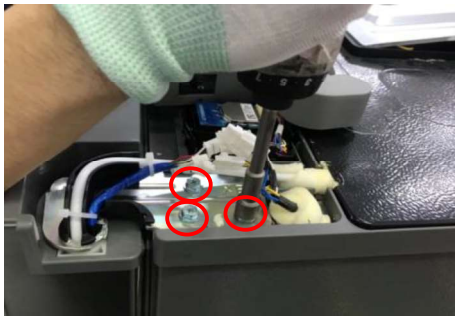
③ Take out Cover Panel Comp. Take out red part at connection point of Tube Water Dispenser. Disconnect Tube Water Dispenser.



④ Unscrew 1 screw at Cover Hinge Top R.

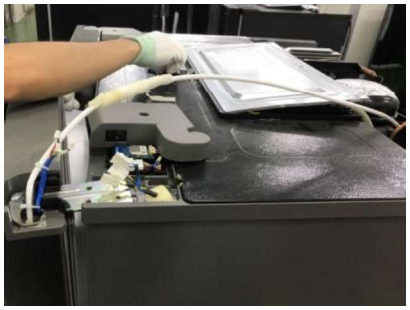



⑤ Open Cover Hinge Top. Remove the tape. Disconnect the connectors.



⑥ Unscrew 3 positions.





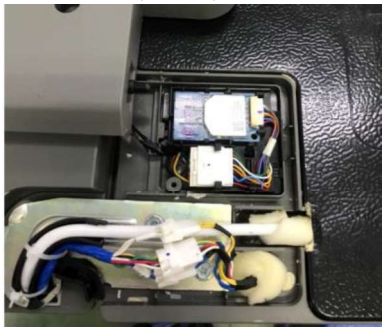
⑦ Hold the Tube Water Dispenser. Pull it out.

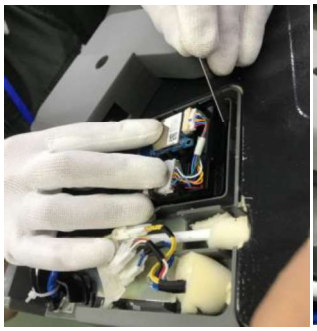


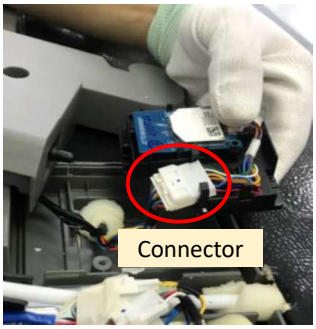
⑧ Hold & take the Door out.

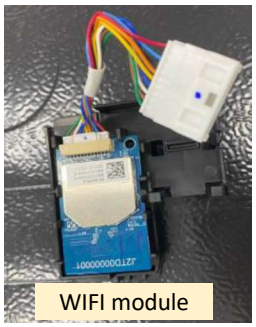
## * Door Switch: Same as PCL Door

## * WIFI (IOT) Module








① Unscrew, disassemble Cover Hinge Top R.

②Take IOT module out of the hook, disconnect connector.

## *Disassemble WATER TANK AS



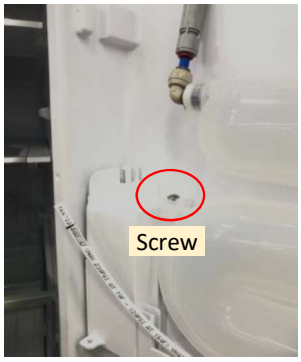







① Removing all SHELF BOTTLE, FREE RACK SMALL, then Unscrew screw (2pcs: left & right) as show and lift SHELF COVER WATER TANK out






② Unlock red lock. Disconnect the Tube. Unscrew 1 position.





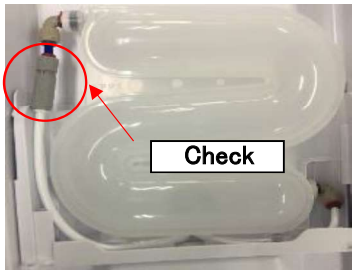
③ Lift Water Tank up. Find connection point. Take out the red lock. Disconnect the Tank with the Tube then take out Water Tank.





④ Uncrew 1 position to take out HOLDER TANK.

***NOTE: When you encounter a problem of clogging due to dirty water, it can be caused by one of three components: Dual Check Valve, Filter and Check Valve. So, you can check and clean or replace 3 components Dual Check Valve, Filter and Check Valve. The Filter should be replaced after every 6 months using.**

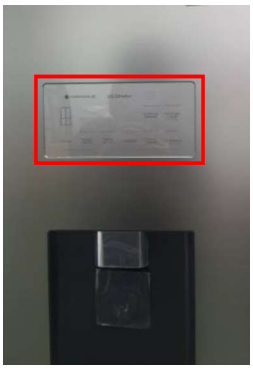








## * Door Control



Door Control





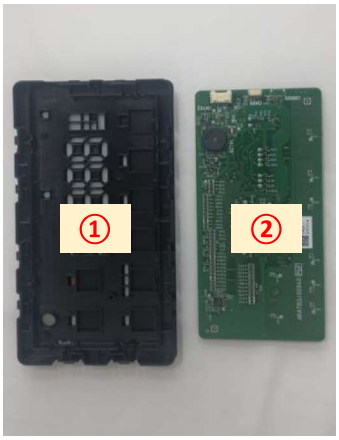
① Use a rubber vacuum suction cup to paste at 1 corner of Door Control.



② Hold the rubber vacuum suction cup & pull to take out Cover Control. Be careful to not make the wire broken.

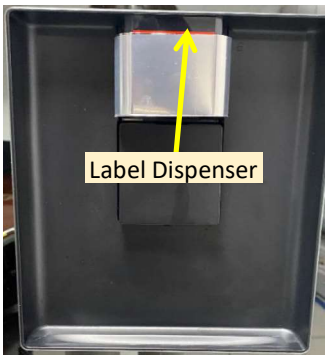


③ Disconnect the connector. Take out Door Control.

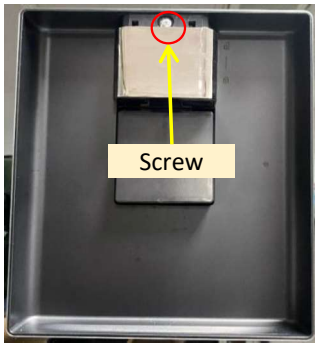



① **PAS-OPERATION PCB (DOOR)**
② **ESCUTCHEON CONTROL**

## * Cover Water Dispenser As



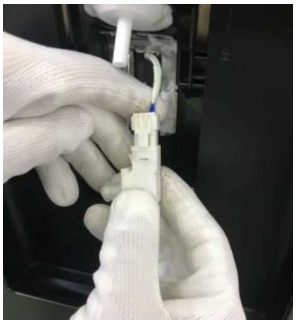

① Lock the Child Lock, remove Label Dispenser






②Uncrew, take out Cover Water Dispenser As



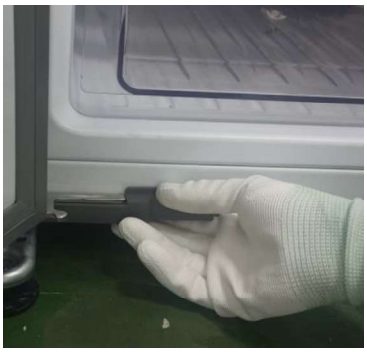


③ Remove the foam,use a flat tool to take out Door Switch As then disconnect the connector.

## 6.2. Disassemble FC door

### 6.2.1. FCL Door

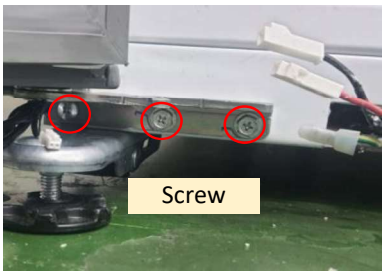


① Unscrew 1 position. Disassemble Cover Leg.

② Use Wrench Adjuster Bolt to adjust leg's height as high as possible.

③ Open Cover Case Switch FC.



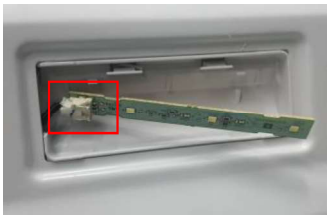
④ Take out & disconnect all the connectors.

⑤ Unscrew 3 positions.

⑥ Take out PC Door.

* Disassemble Cover LED As



① Use a flat tool to disassemble Cover LD by inserting it in the gap between Cover & Inner Door.

② Take PAS-LED PCB (FC DOOR) out of the ribs.

③ Disconnect the connector. Take out PAS-LED PCB (FC DOOR).

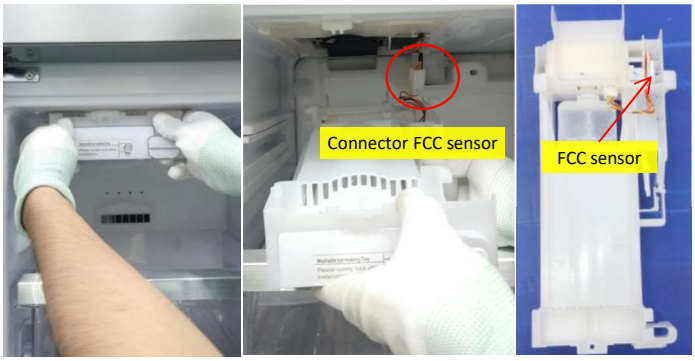
## 6.2.2. FCR Door: all steps are same with FCL Door

## 6.3. Disassemble FC room

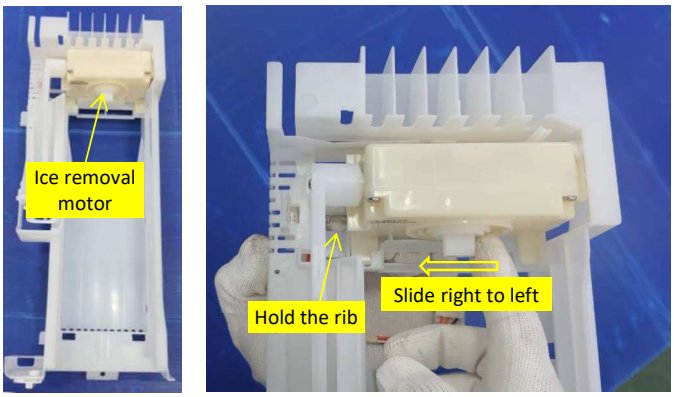
### 6.3.1. Auto ice unit, Sensor FCC




① Take out Box Ice Tray, diassemble Cover Ice Tray. Unscrew.

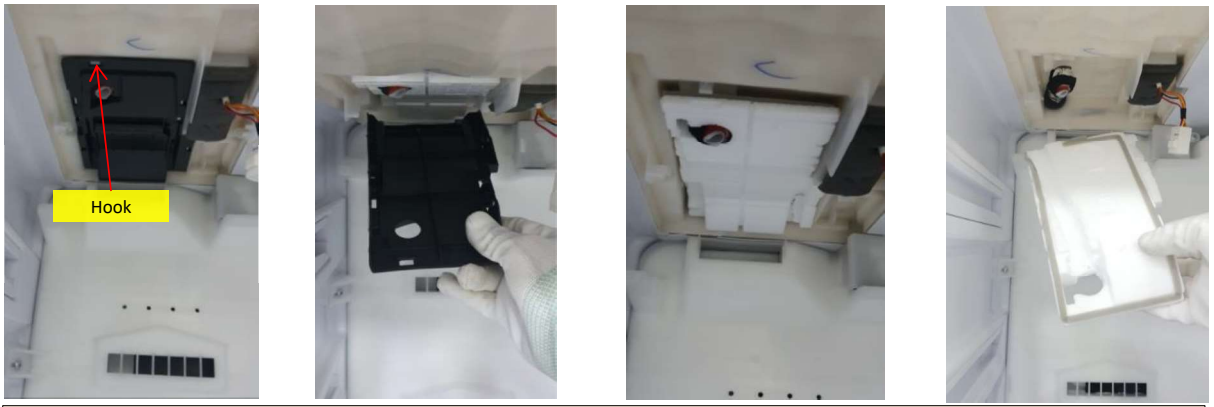



② Take out Ice Tray, disassemble connector of FCC sensor.



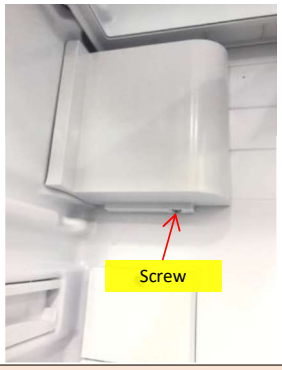

③ To take out Ice Remove Motor, one hand hold the hook, one hand slide the Motor from right to left.

### 6.3.2. Injection Tube




① Take Cover Pipe Inject Tube As out of the hook. Take our Ins Holder Inject Tube





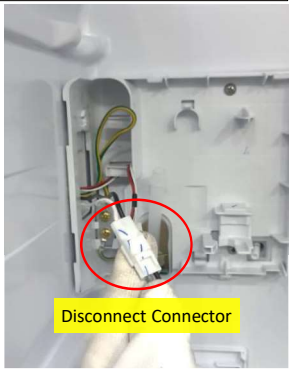



② Unscrew, disassemble the Cover Pipe Inject Tube



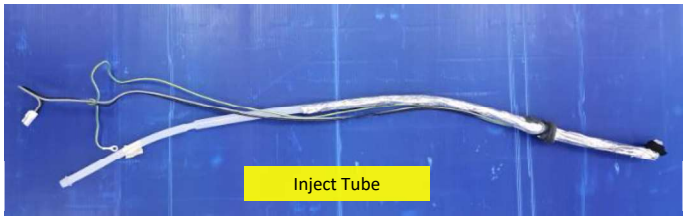





③ Unscrew, disassemble the Cover Pipe Inject Tube. Disconnect Inject Tube & Cover Pipe Inject Tube. Disconnect connector.






④ Back to FC room, hold & pull out Inject Tube.

## 6.3.3. Prime Freeze Fan



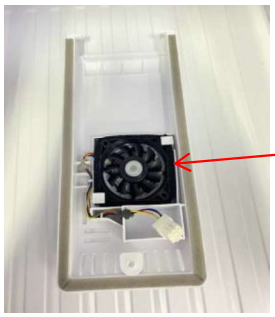
① Take out Case Prime Freezer




② Unscrew 1 position



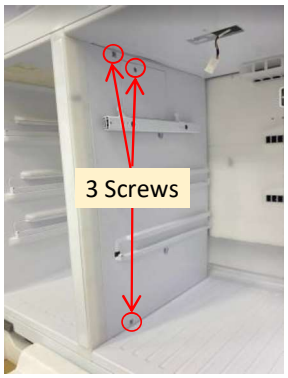

③ Disassemble Cover.
Disconnect the connector.




## 6.3.4. Barrier FC



① Take out all the Cases in FC room, Auto ice unit.




② Unscrew 3 positions



③ Use a flat tool to insert to the gap between Cover and Barrier. Take out the Cover.



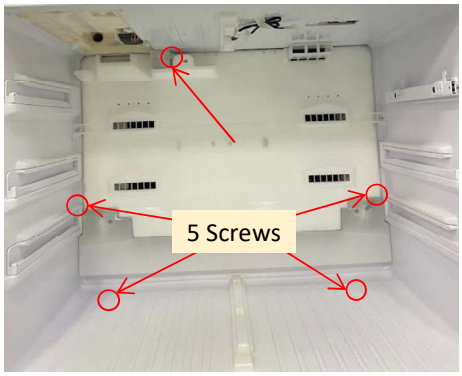


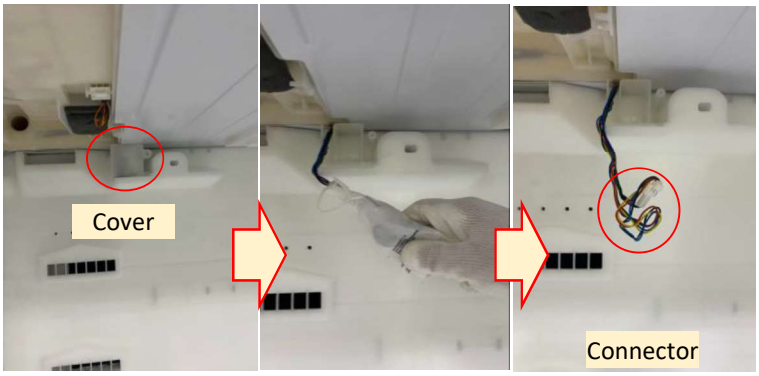
④ Remove plastic bag. Disconnect/cut the connector.



⑤ Hold & pull out the Barrier FC.

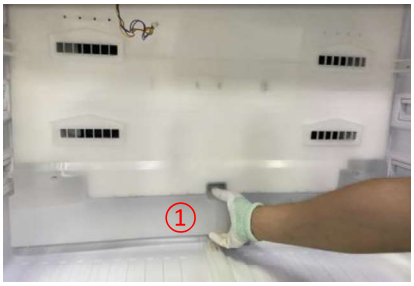
## 6.3.5. Cover Coil

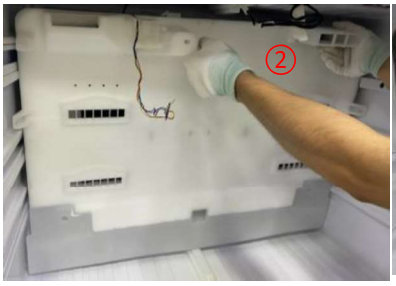


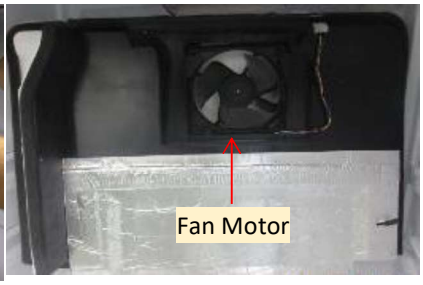




① Take out all the Cases in FC room, Auto ice unit, Barrier FC. Unscrew 5 positions.

② Open Cover. Take out & disconnect the connector.



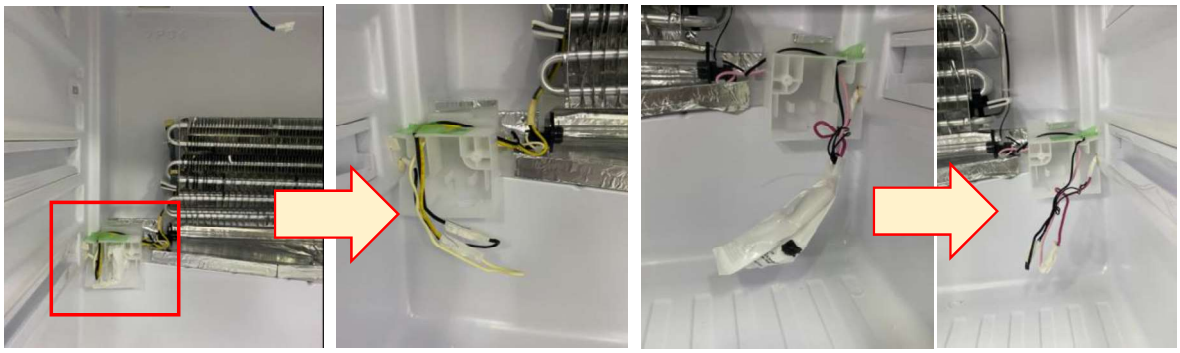




③ Take Cover Coil out of the rib at 2 positions as above photos then pull Cover Coil out.

Fan Motor FC is located on Cover Coil.

## 6.3.6. Defrost Heater



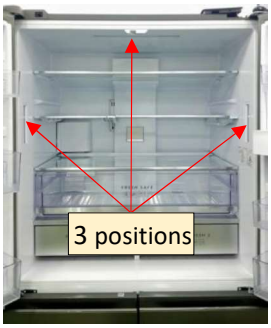
① Disassemble Cover Coil, take connector out of the hook, remove the bag & disconnect the connector at the left and right.



② Hold & pull the Defrost Heaer out of the rib.

## 6.4. Disassemble PC room

### 6.4.1. Disassemble Cover LED lamp and PAS-LED PCB (LIGHT)









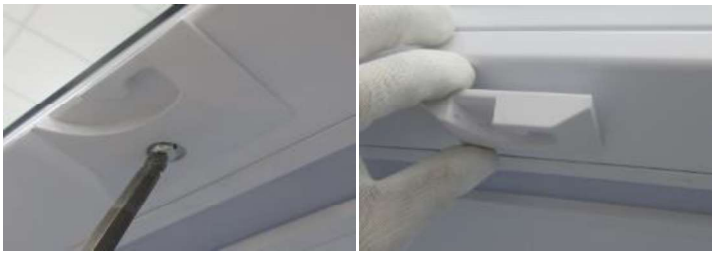

① Take off cover LED lamp by use screwdriver or a flat tool.

② Insert screwdriver or a thin flat tool to make PAS-LED PCB (LIGHT) out of the hook.
Be carefully to not make the PCB damaged.



③ Unplugging connector. Take out PCB.

### 6.4.2. Disassemble Guide French



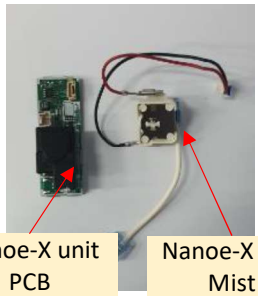
Unscrew (1 piece) by screwdriver at
guide french and remove it out of cabinet.

### 6.4.3. Disassembly Nanoe-X



① Unscrew the Screws ( 1 pieces) by screwdriver on Nanoe As.

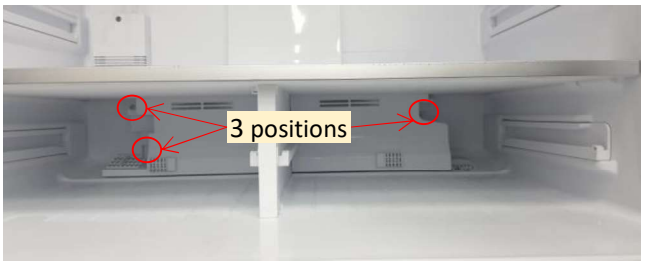





② Disconnect the Connector and take out Nanoe-X unit (PCB and Mist)

## 6.4.4. Barrier PF, Plate PF, Cover Duct PC As






① Open PC Door, take out all trays, shelfs, cases. Unscrew the 3 screws Cover Duct.



② Take out Barrier PF



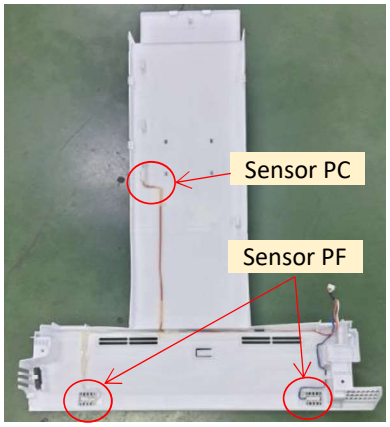
③ One hand pushes the hook, the other hand takes out plate PF.



④ Take out and open plastic bag and disconnect connector.



⑤ Take out cover duct PC AS



## 6.4.5. Disassembly Damper Electric Single As, Damper Electric Twin As



① Disassemble Barrier PF, Plate PF, Cover Duct PC As



② Hold & pull Damper Electric Single As partly out of the hole



③Remove the tape, disconect the conector



④ Take the Single Electric Damper As out of the hole



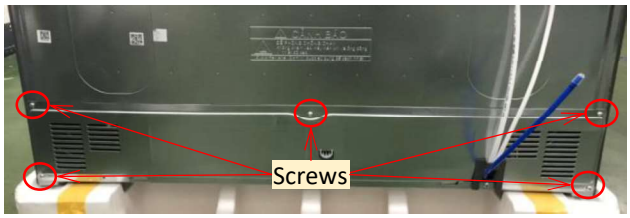
⑤ Pull the Damper Electric Twin As out of the hole

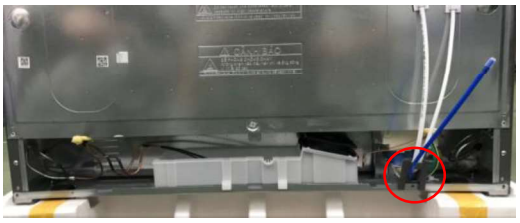


⑥ Remove the tape. Disconnect the connector.

## 6.5. Disassemble Panel Water Eva area

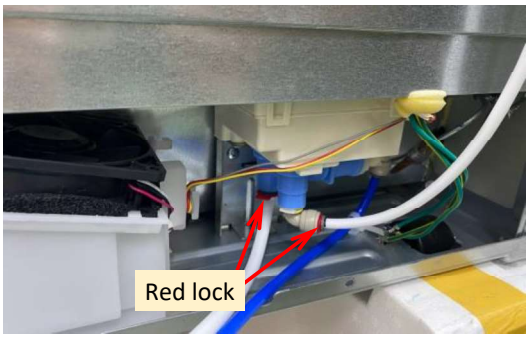
### 6.5.1. Disassemble Cover Panel Water Eva

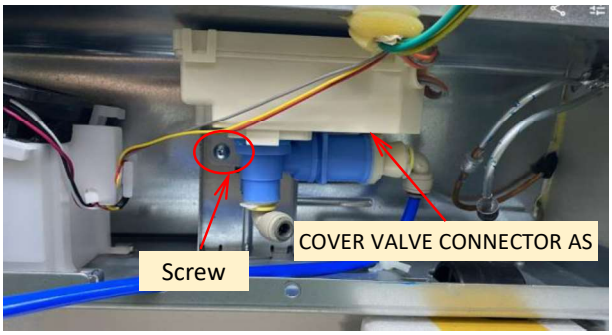


① Unscrew (5 pieces) at Cover Panel Water Eva then unhook 2 hooks to remove the Cover Panel Water Eva.

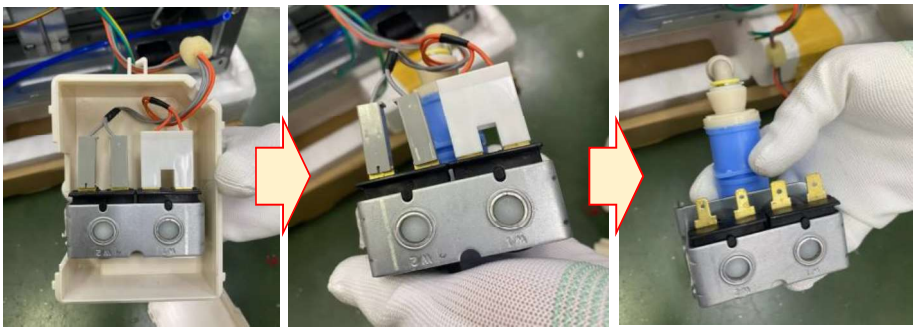
② Disassemble PIECE COVER PAN WATER EVA.



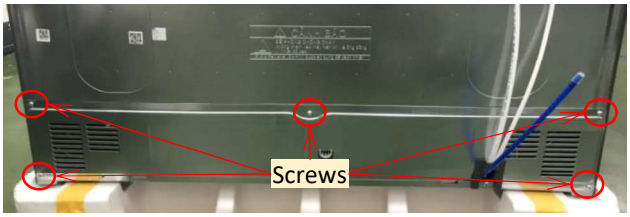

③ Remove red locks. Disconnect the Tubes.

④ Unscrew 1 position to disassemble COVER VALVE CONNECTOR AS.

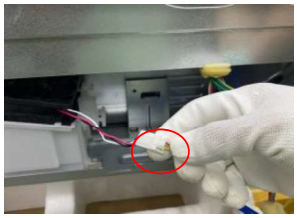


⑤ Take WATER VALVE out of the Cover. Disconnect connectors.

### 6.5.2. Disassemble Pan Water Eva, Fan Water Eva (WE Fan)





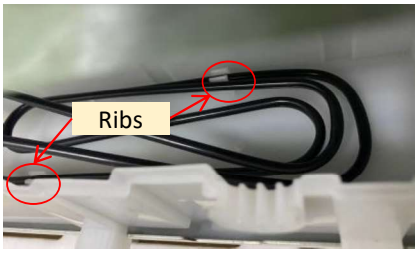
① Unscrew (5 pieces) at Cover Panel Water Eva then unhook 2 hooks to remove the Cover Panel Water Eva.

② Take the wire out of the hook.

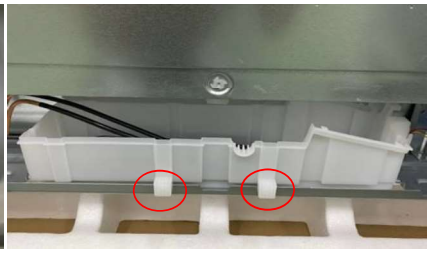
③ Disconnect the connector.



④ Take Fan Water Eva out of the rib.

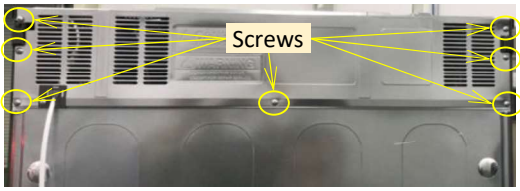



⑤Take Pipe Water Eva out of 2 hooks.



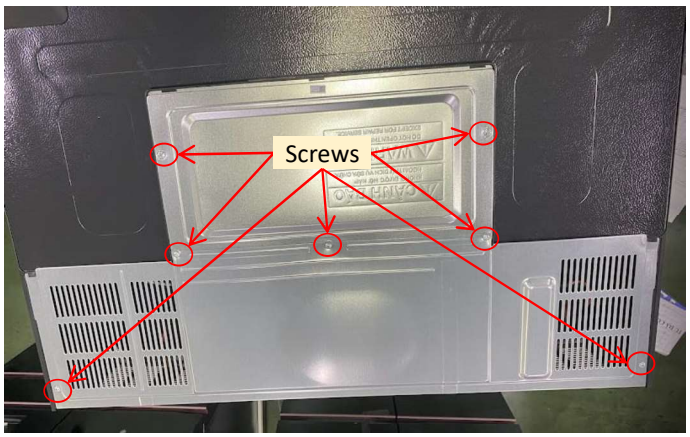
⑥ Take Pan Water Eva out of 2 hooks.

## 6.6. Disassemble PAS-CONTROL PCB (INV)






① Use screwdriver to unscrew 7 positions at Cover Panel Comp.




② Unscrew 7 screws at top



③ Disassemble all the connectors.

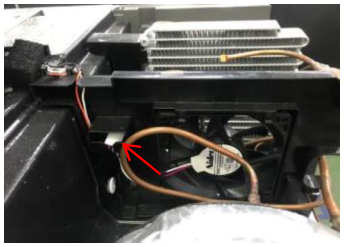


④ Unscrew 2 posititons to take out PAS-CONTROL PCB (INV).

**Note : After reassembly of PAS-CONTROL PCB (INV) must to double check lock all connector and harness loose out whether or not**

## 6.7. Disassemble FAN RING COMP AS

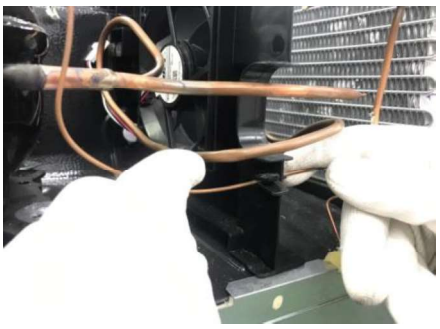


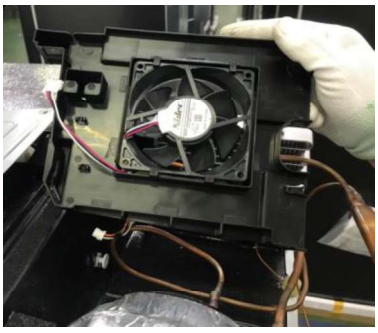


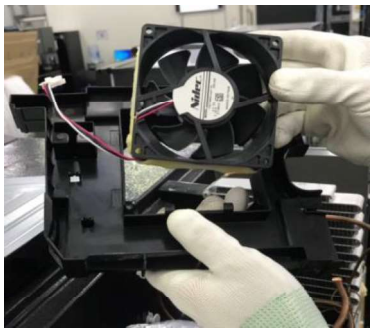


① Disassemle Cover Panel Comp.

② Take out then disconnect 1 connector.







③ Take capillary pipe out.

④ Take out Fan Ring Comp As & Fan.

# 7. INSTRUCTION FOR SERVICE

## 7.1. Inspection mode




Press and hold together 3 buttons

| How to enter | How to exit |
|---|---|
| Within 60 seconds after the power is turned on, while PC door is opened, press and hold "FRIDGE", "FREEZER", and "PRIME FRESH" within 5 seconds. | - Press "FREEZER" button.(*1)<br>- When 4 hours is pussed<br>- Power OFF |

*** Error code**

| No. | Contents | Error code |
|---|---|---|
| 1 | Door open warning (*4) | U10 |
| 2 | FCC thermistor disconnection, short | H01 |
| 3 | PCC thermistor disconnection, short | H02 |
| 4 | PFC1 thermistor disconnection, short | H03 |
| 5 | PFC2 thermistor disconnection, short | H68 |
| 5 | DEF thermistor disconnection, short | H05 |
| 6 | ATC thermistor disconnection, short | H07 |
| 7 | CT Fan motor disconnection/ lock (*2) | H28 |
| 8 | WE Fan motor disconnection/ lock (*1) | H43 |
| 9 | FC Fan motor disconnection/ lock (*2) | H29 |

*** Error code**

| No. | Contents | Error code |
|---|---|---|
| 10 | Communication error (*3) | H50 |
| 11 | Board abnormality (Microcomputer internal storage area) | H51 |
| 12 | Illumination sensor abnormality | H64 |
| 13 | Nanoe abnormality | nE |
| 14 | FC fan rotation speed abnormality | FE |
| 15 | INV protection control (com protection stop) | PU6 |
| 16 | DEF sensor temperature inspection error (when the change width is smaller than the lower limit) | dE |
| 17 | Abnormal temp. detected inside PC room (when the change width is smaller than the lower limit) | Pd |
| 18 | Abnormal temp. detected inside PF room (when the change width is smaller than the lower limit) | PF |
| 19 | Operation board judgment when judging model difference | 0E |
| 20 | Ice making mechanism abnormality (*6) | SE |
| 21 | Humidity sensor abnormality (*7) | H11 |
| 22 | SC fan motor disconnection/ lock (*2) | H45 |
| 23 | Abnormal SC fan speed | H46 |

*Note: 1. During inspection mode, H64 error can be displayed even Illumination sensor is normal because thers's no change in room light. Cover Illumination sensor in ~3s then uncover, H64 error will disappear.*
*2. Error code "dE", "Pd", "PF" are mainly for in process inspection at factory. In case these error codes happen, use specific tool to measure temperature again.*

*** Error code**

| No. | Contents | Error code |
|---|---|---|
| 24 | IoT module abnormality<br>(For check in process at factory only) | L03 |
| 25 | | L04 |
| 26 | | L05 |
| 27 | | L06 |
| 28 | | L07 |
| 29 | | L08 |
| 30 | | L11 |
| 31 | | L12 |
| 32 | | L13 |
| 33 | | L14 |
| 34 | | L15 |
| 35 | | L16 |
| 36 | | L17 |
| 37 | | L18 |
| 38 | | L19 |
| 39 | | L20 |
| 40 | | L21 |
| 41 | | L22 |
| 42 | | L23 |

## 7. INSTRUCTION FOR SERVICE

### 7.2. Service mode




| How to enter | How to exit |
|---|---|
| While PC door is opened, press and hold "FRIDGE" in 5s.<br>(Econavi&NanoeX LEDs are blink) | - 7 minutes have passed since the mode started<br>- While PC door is opened, press and hold "FRIDGE" in 5s.<br>- Power OFF |

*** Force defrost**

| How to enter | How to exit |
|---|---|
| - After enter service mode, press "PRIME FRESH 1" until "P3" is displayed. Press "PRIME FREEZE" to enter P3 - force defrost. | Automatically exit when finish defrosting. |

*** Self diagnostic mode**

| How to enter | How to exit |
|---|---|
| - After enter service mode, press "FRIDGE" -> "FRIDGE" -> "FRIDGE" (3 times). | - Automatically exit after 7 mins<br>- Power off |

• **Error code**

| No. | Contents | Error code |
|---|---|---|
| 1 | Door open warning (*4) | U10 |
| 2 | FCC thermistor disconnection, short | H01 |
| 3 | Illumination sensor abnormality | H02 |
| 4 | PFC1 thermistor disconnection, short | H03 |
| 5 | PFC2 thermistor disconnection, short | H68 |
| 6 | DEF thermistor disconnection, short | H05 |
| 7 | ATC thermistor disconnection, short | H07 |
| 8 | Protection stop auto ice | H21 |
| 9 | CT Fan motor disconnection/ lock (*2) | H28 |
| 10 | WE Fan motor disconnection/ lock (*1) | H43 |
| 11 | FC Fan motor disconnection/ lock (*2) | H29 |
| 12 | SC fan break/lock | H45 |
| 13 | Abnormality of defrost heater | H31 |
| 14 | IPM lock protection | H40 |
| 15 | Low voltage protection | H41 |
| 16 | Communication error (*3) | H50 |
| 17 | (Wirelss LAN) communication error | H85 |
| 18 | Board abnormality (Microcomputer internal storage area) | H51 |
| 19 | Abnormal over voltage protection | H52 |
| 20 | Refrigerant leak (high pressure leak) | H35 |
| 21 | Refrigerant leak (low  pressure leak) | H36 |
| 22 | FC Fan fridge is abnormal | H38 |
| 23 | SC Fan fridge is abnormal | H46 |
| 24 | Protection stop of Nanoe | H44 |
| 25 | Illumination sensor is abnormal | H64 |
| 26 | Humidity sensor abnormality (*7) | H11 |

# 7. INSTRUCTION FOR SERVICE

## 7.3. IOT module

**• Possible error**

| No | Item | Change | Change | Note |
|---|---|---|---|---|
| 1 | IoT communication error: Network disconnected (Wi-Fi LED blink slow speed) | No | No | LED ON/OFF: 0.5s/0.5s |
| 2 | IoT communication error: H85 (Wi-Fi LED blink fast speed) | Yes | Yes | LED ON/OFF: 0.1s/0.1s |
| 3 | Other errors which considered due to main PCB (Wi-Fi LED light up)<br>Example:<br>Communication failure (H50)<br>PCB failure (H51, H52) | Yes | No | |

*(*) Condition: Wi-Fi connection is successful when customer bought fridge.*

**• Recommended service action**

1- Enter Service mode & check NG status (take video for evidence)

2- If **H85 NOT occur**, check the NG & judgement to change main PCB or not

If need change main PCB, follow below steps:

① Power ON → OFF

② Change new main PCB

③ Power OFF → ON

④ Do IoT connect operation and check Wi-Fi LED (it should be light ON)

3- If H85 occur, follow below steps:

① Power ON → OFF

② Relace new IoT Module

③ Power OFF → ON

Illumination sensor abnormality

If Wi-Fi LED light up (ON, not flash) -> COMPLETE

If Wi-Fi LED blink slow speed (cycle: 0.5s) -> check network status

If Wi-Fi LED blink fast speed (cycle: 0.1s) -> do next steps

⑤ Power ON → OFF

⑥ Replace IoT module back to the one originally attached

⑦ Replace new PCB

⑧ Power OFF → ON

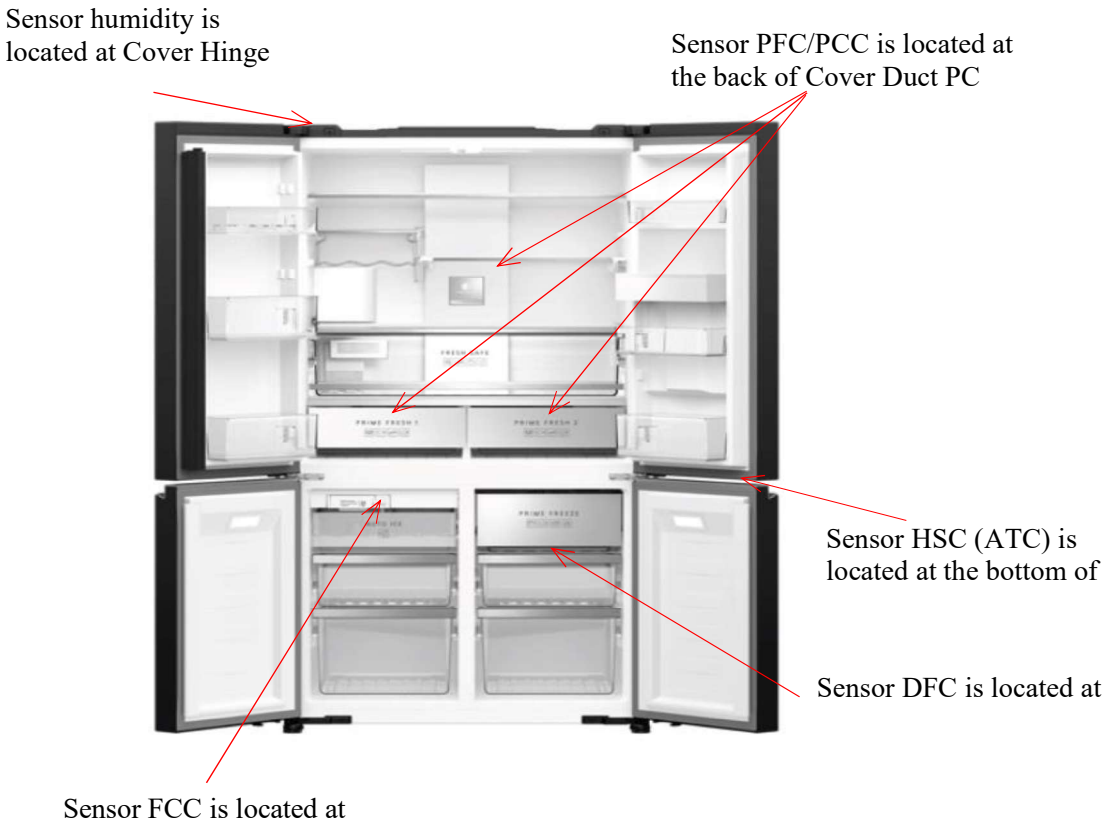
⑨ Do IoT connect operation and check Wi-Fi LED (it should be light ON)

**• App Instruction Manual**

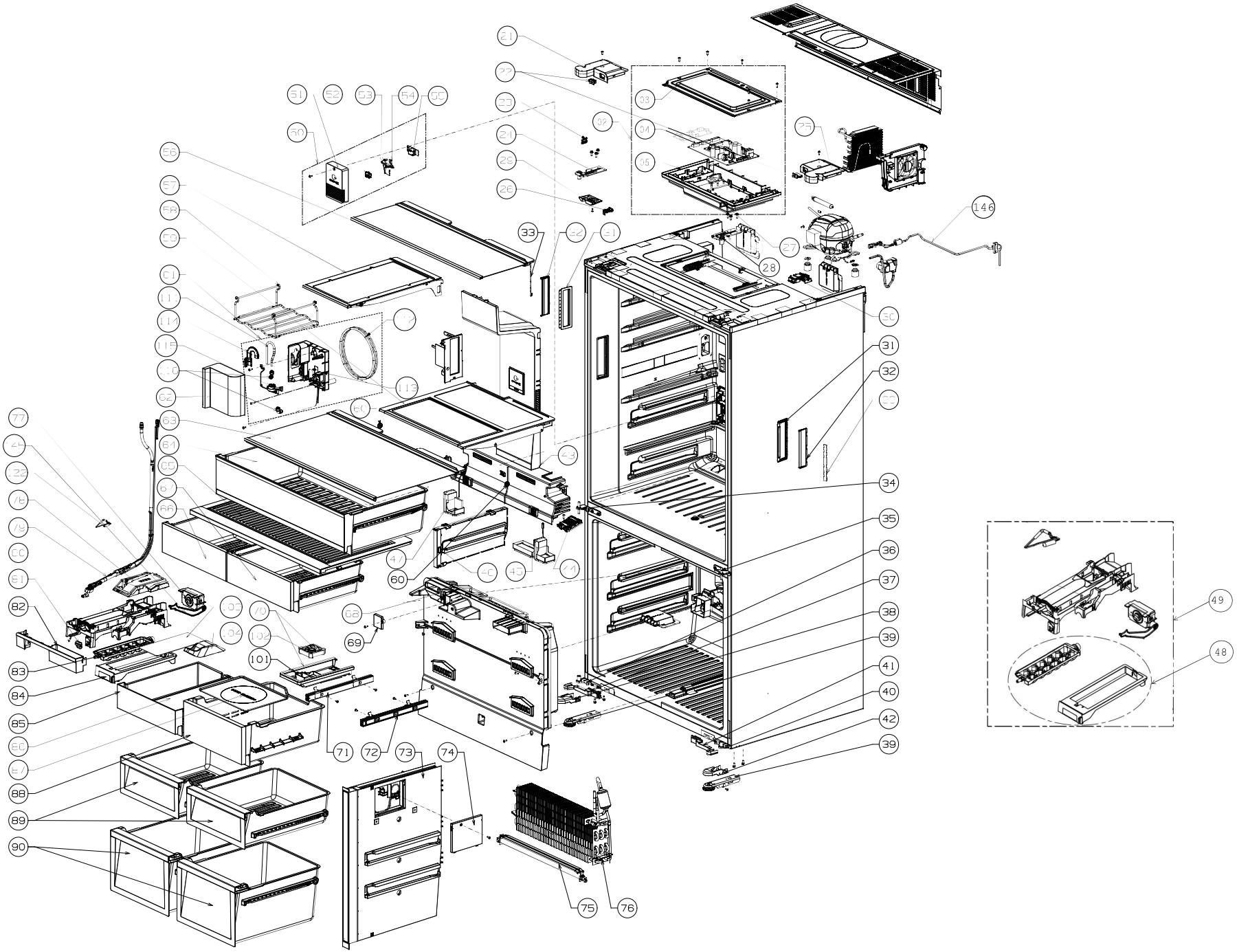
Refer page 55~88

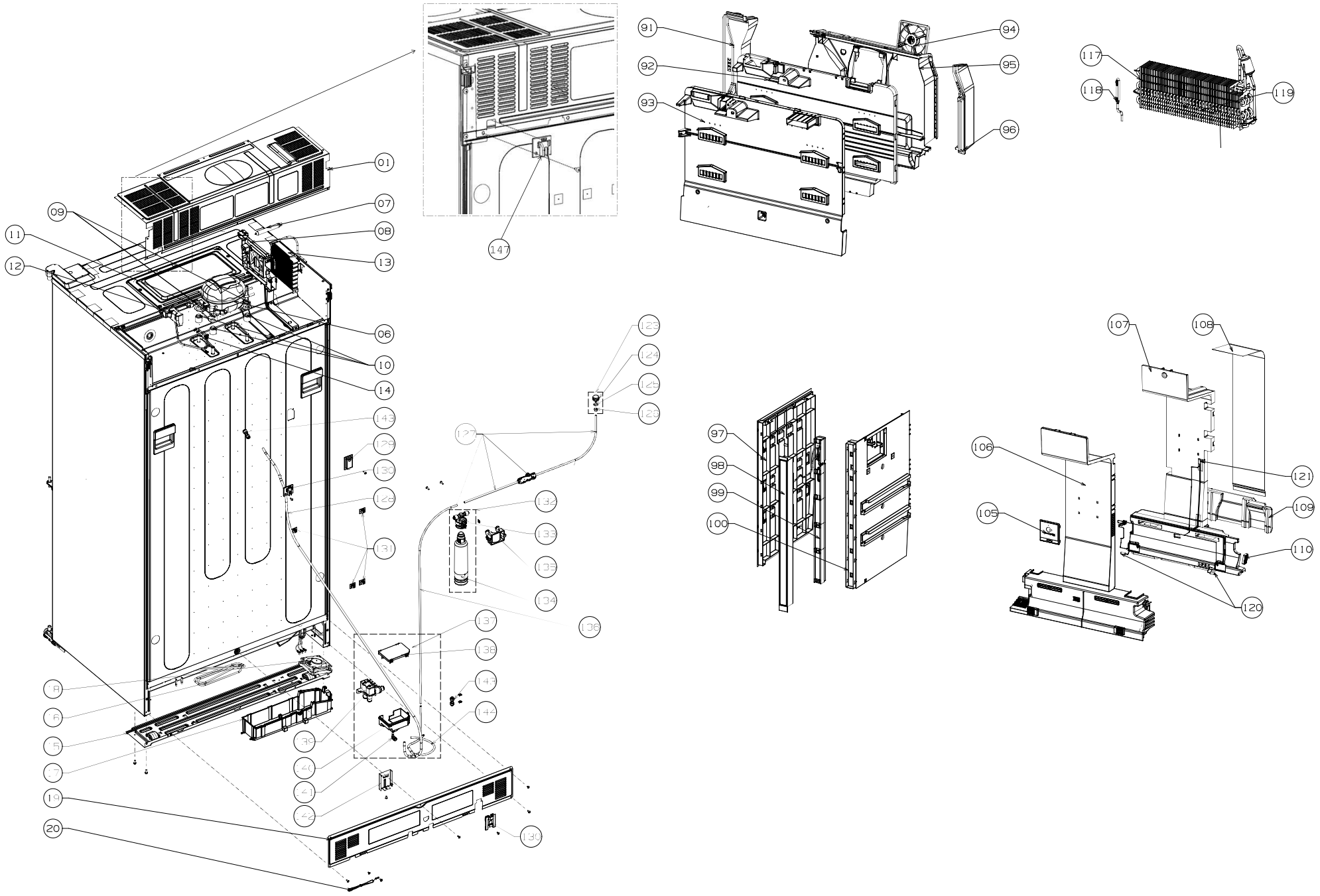
# 7. INSTRUCTION FOR SERVICE

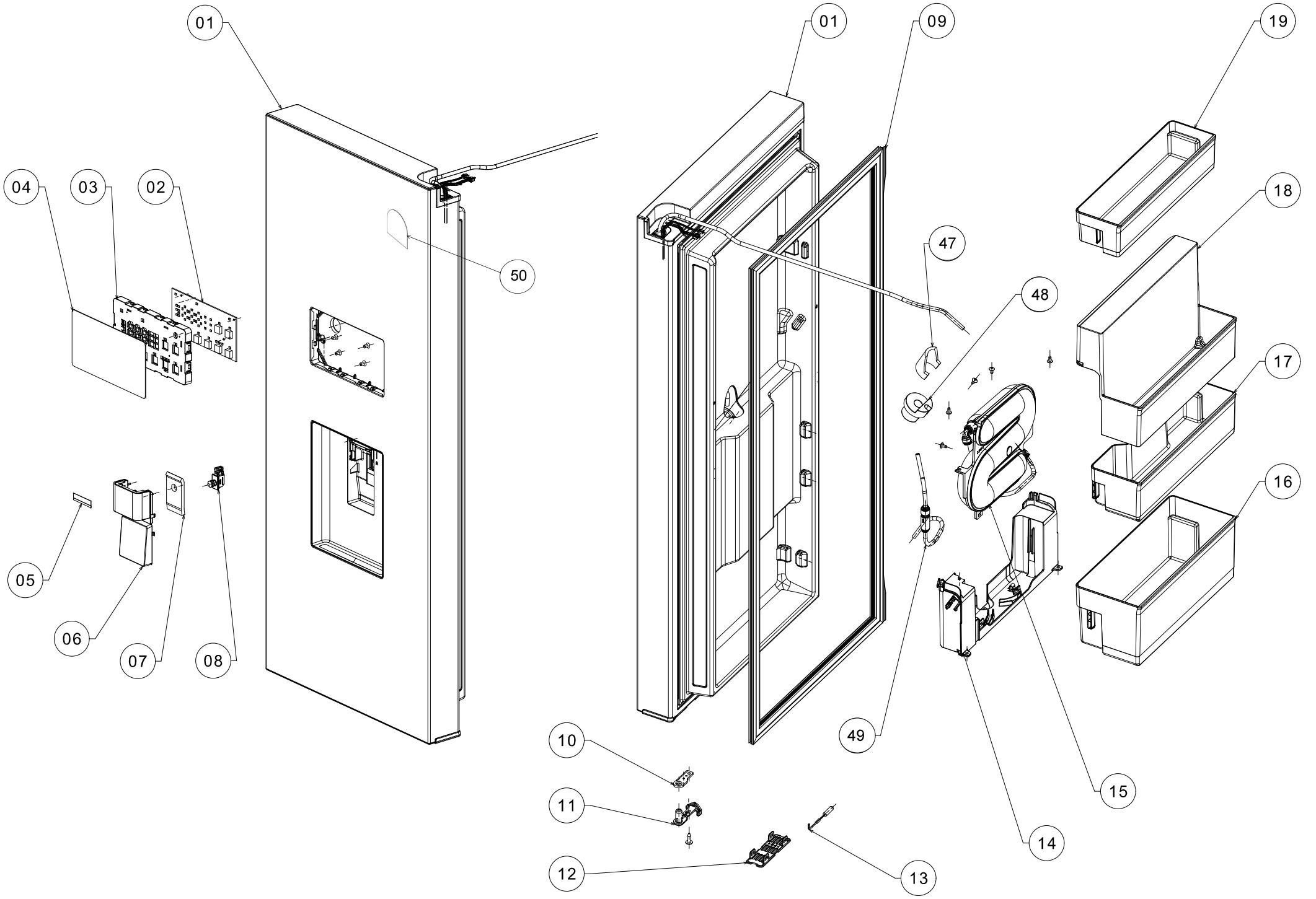
## 7.4. Sensor resistance

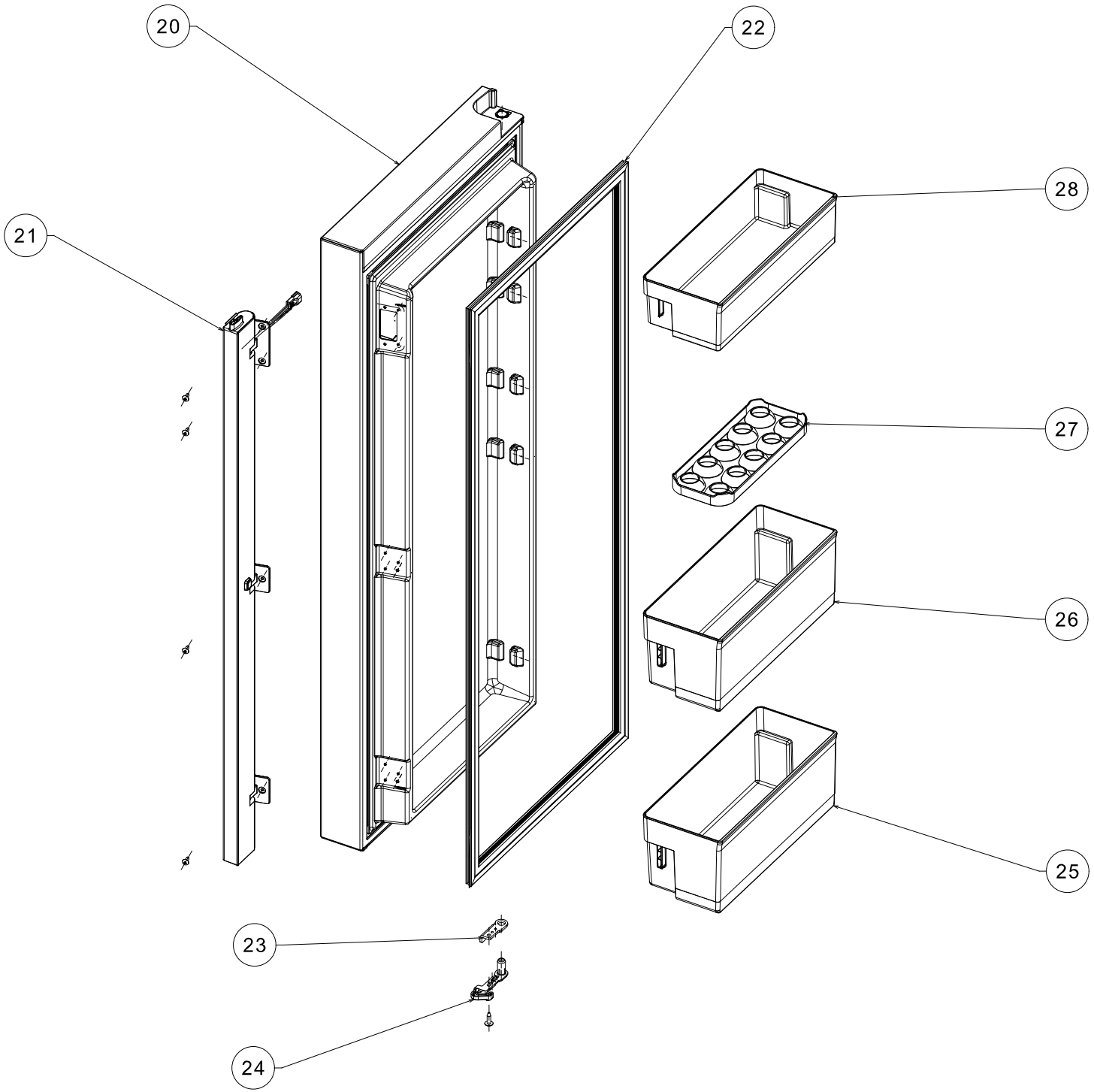


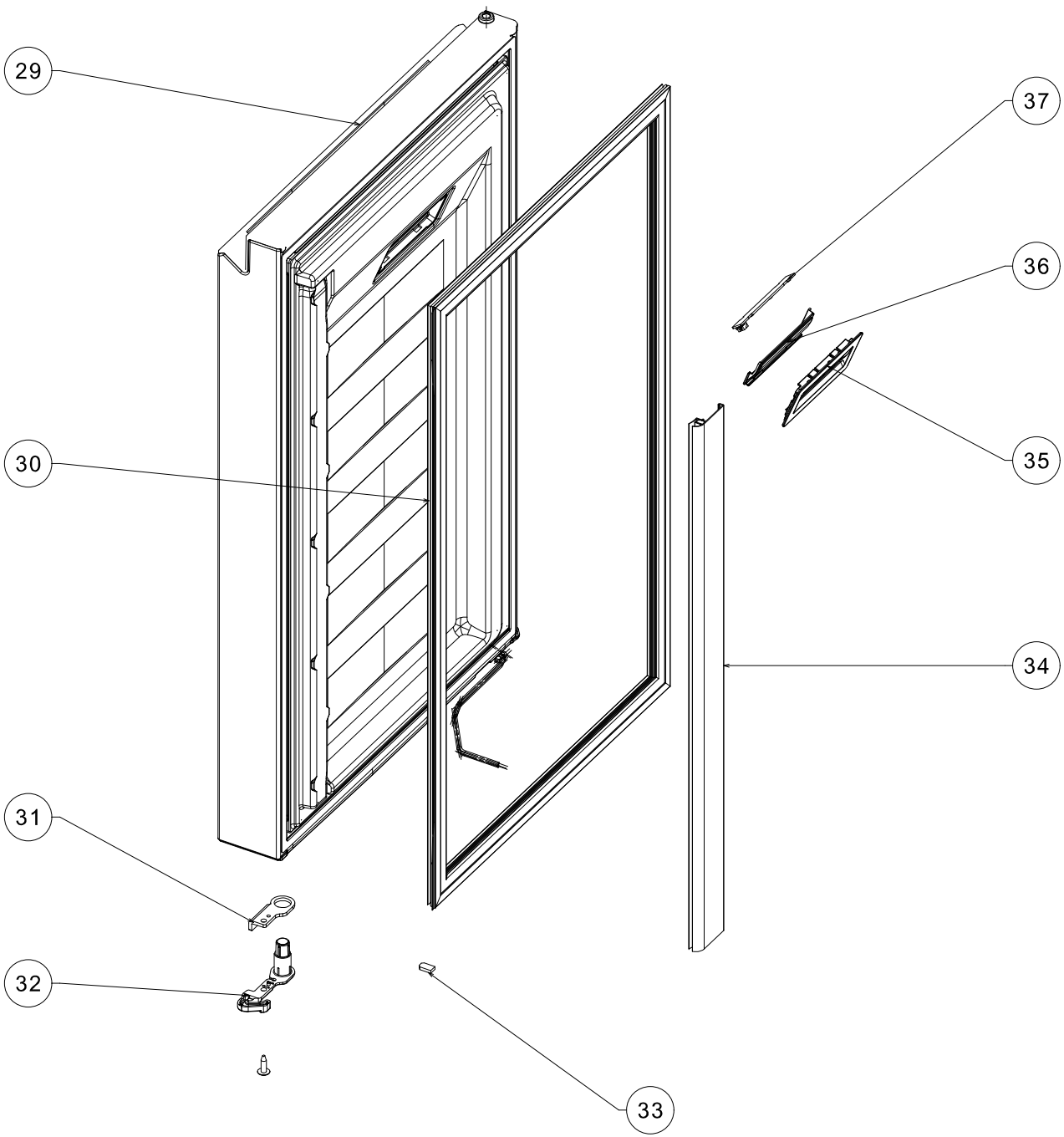

| Ambient temperature (°C) | Sensor resistance (kΩ) | | | |
|---|---|---|---|---|
| | FC sensor (FCC) | PC/PF sensor (PCC/PFC) | Ambient temperature sensor (ATC) | Defrost sensor (DFC) |
| 0 | ~6,0 | ~6,4 | ~28,0 | ~6,4 |
| 20 | ~2,3 | ~2,4 | ~12,0 | ~2,4 |
| 25 | ~2,0 | ~2,0 | ~10,0 | ~1,9 |
| 32 | ~1,4 | ~1,5 | ~7,6 | ~1,4 |

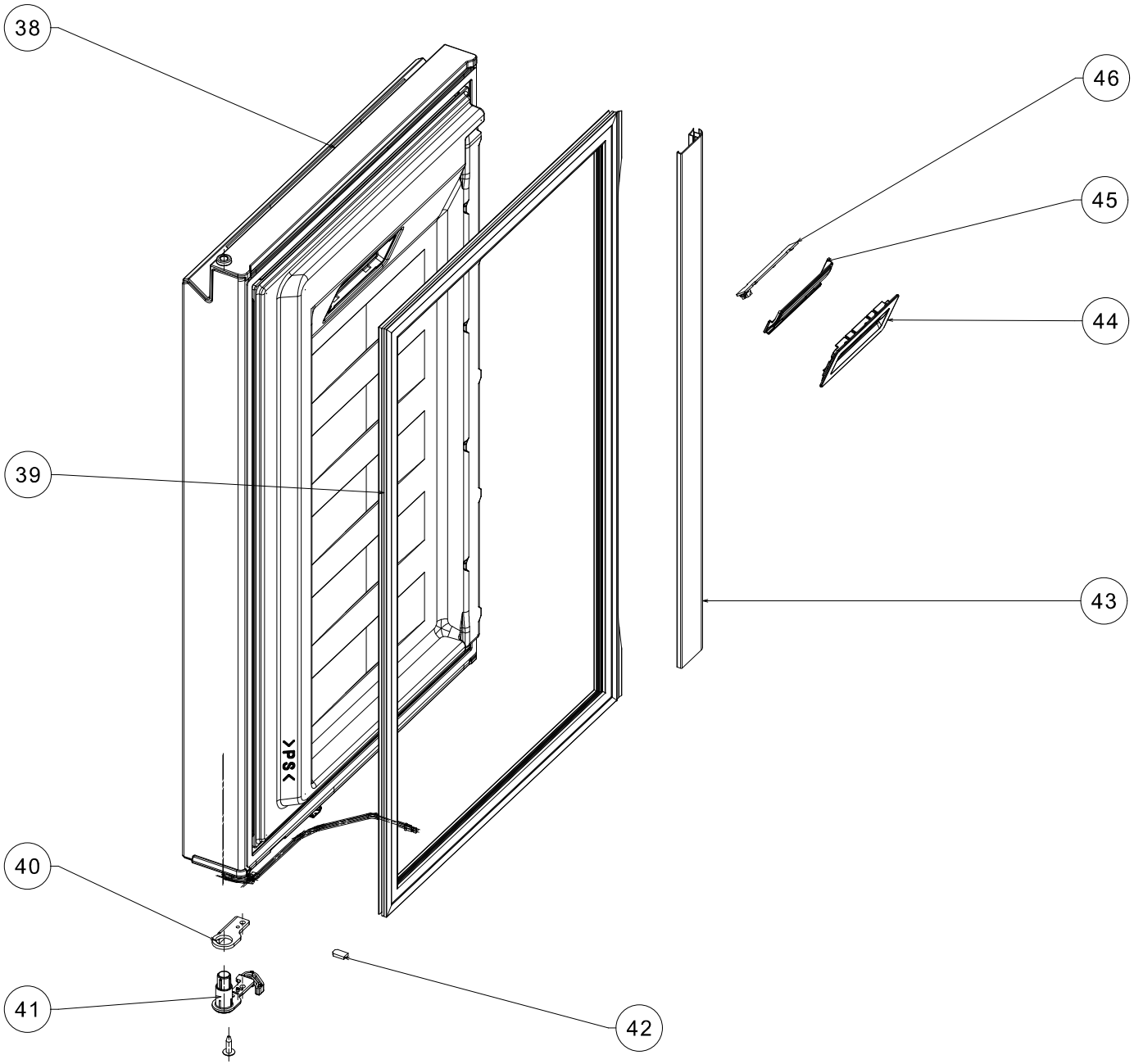

21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
48
49
51
52
53
54
55
60
69
71
72
73
74
75
76
82
83
84
85
88
89
90
101
146

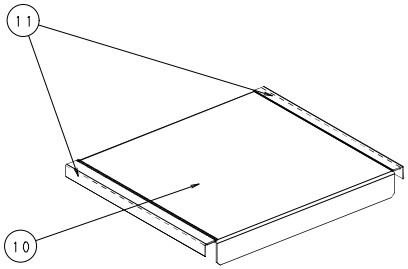

01
09
07
08
11
13
12
06
10
14
143
129
130
128
131
123
124
125
126
127
132
133
135
134
136
137
138
145
144
139
140
141
142
19
20
8
6
5
7
130
147
91
92
93
94
95
96
117
118
119
97
98
99
100
107
108
106
121
105
109
110
120

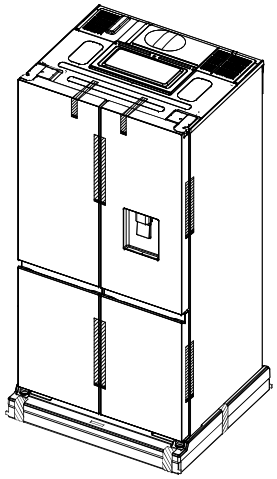

01
04
03
02
50
05
06
07
08
01
09
19
18
47
48
17
16
49
15
14
10
11
12
13

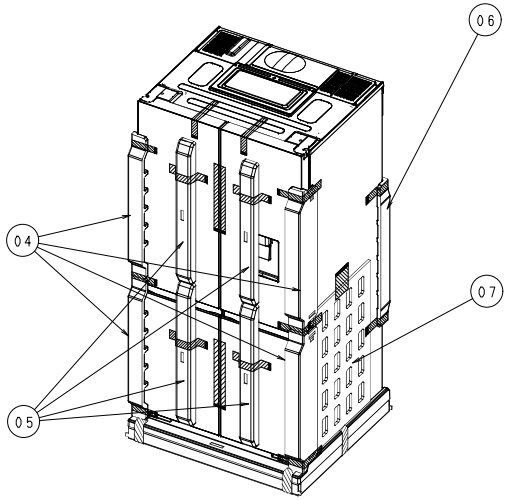

20
22
21
28
27
26
25
23
24

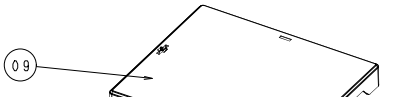

29
37
36
30
35
34
31
32
33

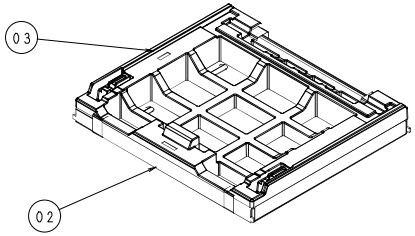

38
39
40
41
42
43
44
45
46
<PS>

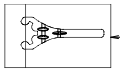




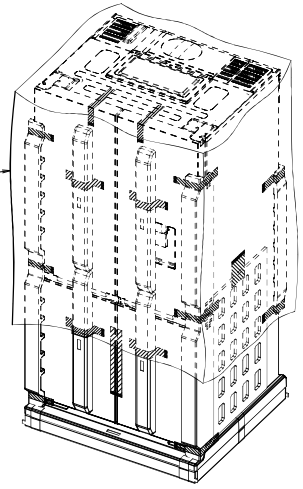
KEEP ON GLASS TRAY CRISPER AS

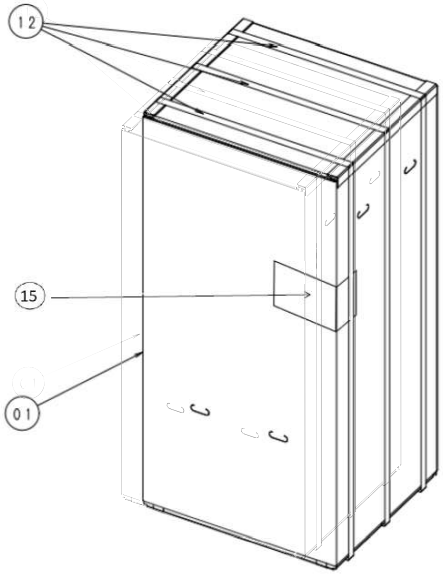


KEEP INTO THE SHELF BOTTLE

13

14



## 8. EXPLODED VIEW AND REPLACEMENT PART LIST

8.2. Replacement part list

8.2.1. Cabinet

| No. | Customer part code | Part name | Model/Quantiy | |
|---|---|---|---|---|
| | | | XY680LVSA | XY680LVKA |
| 1 | ARAFCA605412 | COVER PANEL COMP AS | 1 | 1 |
| 2 | ARBGBA206697 | BOX PCB AS | 1 | 1 |
| 3 | ARACCA105202 | COVER PCB | 1 | 1 |
| 4 | ARBPC1A10774 | PAS-CONTROL PCB (INV) | 1 | 1 |
| 5 | ARBCCD100250 | CASE PCB AS | 1 | 1 |
| 6 | 91-239560 | TKD100E20PBF-C0ECS DC MOTOR | 1 | 1 |
| 7 | ARAFDC400040 | 10 DRYER W | 1 | 1 |
| 8 | ARBFFA100222 | FAN RING COMP AS | 1 | 1 |
| 9 | CNRAJ-162500 | U-RING WASHER | 4 | 4 |
| 10 | ARACRA105050 | RUBBER GROMMET | 4 | 4 |
| 11 | GE-003721 | MOTOR PROTECTOR (MRA99991-9310) | 1 | 1 |
| 12 | ARAGCB500032 | COVER PROTECTOR | 1 | 1 |
| 13 | ARAFFA205141 | FIN TUBE CONDENSER | 1 | 1 |
| 14 | ARBGHA301320 | HARNESS AS WIRE CM | 1 | 1 |
| 15 | ARBFCC100572 | CROSSRAIL REAR AS | 1 | 1 |
| 16 | ARGFPAB00010 | PIPE WATER EVAPORATOR | 1 | 1 |
| 17 | ARHFPB100012 | PAN WATER EVA | 1 | 1 |
| 18 | ARAGBA600020 | BOX FAN WATER EVA | 1 | 1 |
| 19 | ARAFCA705041 | COVER PANEL WATER EVA | 1 | 1 |
| 20 | CNRBG-179830 | EARTH AS. COMP. 1500 | 1 | 1 |
| 21 | ARAECA205661 | COVER HINGE TOP L | 1 | 1 |
| 22 | ARAGDB200010 | DOOR SW (BLACK) | 2 | 2 |
| 23 | ARAEPC205030 | PIECE HINGE TOP | 1 | 1 |
| 24 | ARAEHA605100 | HINGE TOP L | 1 | 1 |
| 25 | ARAECA306001 | COVER HINGE TOP R | 1 | 1 |
| 26 | ARAGSD400010 | SENSOR HUMIDITY | 1 | 1 |
| 27 | ARAEPC105030 | PIECE HINGE TOP | 2 | 2 |
| 28 | ARBEHC200031 | HINGE TOP R AS | 1 | 1 |
| 29 | ARADGB105072 | GUIDE FRENCH | 1 | 1 |
| 30 | ARBGHEA00052 | HOLDER WIFI AS | 1 | 1 |
| 31 | ARACCJ300010 | COVER BASE LED | 1 | 1 |
| 32 | ARAHCFB00181 | COVER LED | 1 | 1 |
| 33 | ARBPLLA00721 | PAS-LED PCB(LIGHT)( PC SIDE) | 1 | 1 |
| 34 | ARBEHA500014 | HINGE CENTER L AS | 1 | 1 |
| 35 | ARBEHA600014 | HINGE CENTER R AS | 1 | 1 |
| 36 | ARAEHA905060 | HINGE BOTTOM L | 1 | 1 |
| 37 | ARBGCC700010 | CASE SWITCH FCL AS | 1 | 1 |
| 38 | ARAHCE300031 | COVER LEG L | 1 | 1 |
| 39 | ARBCCB700081 | CASTER AS | 1 | 1 |
| 40 | ARAEHAA05060 | HINGE BOTTOM R | 1 | 1 |
| 41 | ARBGCC200162 | CASE SWITCH FC AS | 1 | 1 |
| 42 | ARAHCGN00251 | COVER LEG R | 1 | 1 |
| 43 | ARBHCBQ00481 | COVER DUCT PC AS | 1 | 1 |
| 44 | ARGHCHF00031 | COVER DUCT PF RETURN | 1 | 1 |
| 45 | ARBGDA200232 | DAMPER ELECTRIC TWIN AS | 1 | 1 |
| 46 | ARBHPA400063 | PLATE PF AS | 1 | 1 |
| 47 | ARBGDA100051 | DAMPER ELECTRIC SINGLE AS | 1 | 1 |

| No. | Customer part code | Part name | Model/Quantiy | |
|---|---|---|---|---|
| | | | XY680LVSA | XY680LVKA |
| 48 | ARBH1A300320 | ICE TRAY AS | 1 | 1 |
| 49 | ARBH1A200821 | ICE CORNER AS | 1 | 1 |
| 50 | ARHCCD400011 | CASE NANOE AS | 1 | 1 |
| 51 | ARGCCG400010 | CASE NANOE T | 1 | 1 |
| 52 | ARAGNA200030 | NANOE UNIT (MIST) | 1 | 1 |
| 53 | ARHGHAM00010 | HARNESS AS WIRE NANOE | 1 | 1 |
| 54 | ARHGHAN00010 | HARNESS AS WIRE NANOE GND | 1 | 1 |
| 55 | ARAGNA100060 | NANOE UNIT (PCB) | 1 | 1 |
| 56 | ARBHGA400071 | GLASS TRAY PCT AS | 1 | 1 |
| 57 | ARBHGAX00015 | GLASS TRAY PCL AS | 1 | 1 |
| 58 | ARAHWC305032 | WINE RACK | 1 | 1 |
| 59 | ARBHSA800165 | SLIDE TRAY PC AS | 1 | 1 |
| 60 | ARACRE105080 | ROLLER | 1 | 1 |
| 61 | ARBHBAA00011 | BASE PIPE INJECT TUBE AS | 1 | 1 |
| 62 | ARBHCB500020 | COVER PIPE INJECT TUBE | 1 | 1 |
| 63 | ARBHGA300291 | GLASS TRAY CRISPER AS | 1 | 1 |
| 64 | ARAHCNB00523 | CRISPER AS | 1 | 1 |
| 65 | ARBCBAG00194 | BARRIER AS | 1 | 1 |
| 66 | ARBHCD400503 | CASE PF L AS | 1 | 1 |
| 67 | ARBHCD400493 | CASE PF R AS | 1 | 1 |
| 68 | ARBFCA301474 | COVER COIL AS | 1 | 1 |
| 69 | ARAGCBC00060 | COVER CONNECTOR FC XY680 | 1 | 1 |
| 70 | ARHHDA300012 | DUCT FC AS | 1 | 1 |
| 71 | ARACRH300021 | RAIL FC TL | 1 | 1 |
| 72 | ARACRH300031 | RAIL FC TR | 1 | 1 |
| 73 | ARBCBAM00013 | BARRIER FC AS | 1 | 1 |
| 74 | ARACCJ600010 | COVER BARRIER FC | 1 | 1 |
| 75 | ARBGRA100841 | RADIANT HEATER AS | 1 | 1 |
| 76 | ARAFCG105481 | COIL AS | 1 | 1 |
| 77 | ARAG1A200010 | ICE MECHA AS | 1 | 1 |
| 78 | ARBHCB500022 | COVER PIPE INJECT TUBE AS | 1 | 1 |
| 79 | ARBF1A200294 | INJECT TUBE AS | 1 | 1 |
| 80 | ARAHPDE05292 | PLATE ICE T | 1 | 1 |
| 81 | ARAHLDH05030 | LEVER LOCK | 1 | 1 |
| 82 | ARAHCA205152 | COVER ICE TRAY | 1 | 1 |
| 83 | ARAH1C205451 | ICE TRAY | 1 | 1 |
| 84 | ARAHHB905170 | HOLDER TRAY | 1 | 1 |
| 85 | ARBHBA100051 | BOX ICE TRAY | 1 | 1 |
| 86 | ARAHSK700030 | SEPARATOR IC | 1 | 1 |
| 87 | ARAHPDE05320 | PLATE FREEZING | 1 | 1 |
| 88 | ARBHCD700513 | CASE FC T AS | 1 | 1 |
| 89 | ARBHCD800151 | CASE FC M AS | 1 | 1 |
| 90 | ARBHCD900561 | CASE FC B AS | 1 | 1 |
| 91 | ARAF1B800021 | INS.COVER COIL FC L | 1 | 1 |
| 92 | ARAF1B105211 | INS.COVER COIL | 1 | 1 |
| 93 | ARAFCB205742 | COVER COIL F | 1 | 1 |
| 94 | ARAGFA200290 | FAN MOTOR FC | 1 | 1 |
| 95 | ARAFCB305640 | COVER COIL BA | 1 | 1 |
| 96 | ARAF1B900021 | INS.COVER COIL FC R | 1 | 1 |
| 97 | ARAHBC700013 | BARRIER FC L | 1 | 1 |
| 98 | ARBCCCS00013 | CROSSRAIL CENTER FC AS | 1 | 1 |
| 99 | ARAC1DG00020 | INS CROSSRAIL FC | 1 | 1 |

| No. | Customer part code | Part name | Model/Quantiy | |
|---|---|---|---|---|
| | | | XY680LVSA | XY680LVKA |
| 100 | ARAHBC800024 | BARRIER FC R | 1 | 1 |
| 101 | ARGFCA200024 | COVER DUCT FC | 1 | 1 |
| 102 | ARAGFA400010 | FAN MOTOR SC | 1 | 1 |
| 103 | ARAHMA105080 | MAT ICE | 1 | 1 |
| 104 | ARAH1C105050 | ICE SCOOP | 1 | 1 |
| 105 | ARAHDAE00050 | DECORATION PLATE DUCT | 1 | 1 |
| 106 | ARBHCBQ00481 | COVER DUCT PC | 1 | 1 |
| 107 | ARAC1EA05110 | INS.DUCT PC F | 1 | 1 |
| 108 | ARAJSE605150 | SHEET DUCT PC | 1 | 1 |
| 109 | ARAC1E905170 | INS.DUCT PC BA | 1 | 1 |
| 110 | ARAGAG100010 | AG CATALYST (LOW TEMP) | 1 | 1 |
| 111 | ARAHTC400011 | TUBE SENSOR OUTLET (1/4", L= 200mm) | 1 | 1 |
| 112 | ARAJTLJ00011 | TUBE FLOW SENSOR (1/4", L= 1330mm) | 1 | 1 |
| 113 | ARBHBAA00011 | BASE PIPE INJECT TUBE | 1 | 1 |
| 114 | ARAHHBZ00010 | HOLDER WATER TUBE | 1 | 1 |
| 115 | ARAGFC100010 | FLOW SENSOR | 1 | 1 |
| 116 | ARACJR300020 | JOINT ELBOW | 1 | 1 |
| 117 | ARAFCG105481 | COIL | 1 | 1 |
| 118 | ARBGTA300572 | TEMP FUSE AS | 1 | 1 |
| 119 | ARAGSD100620 | SENSOR DEFROST | 1 | 1 |
| 120 | ARBGTA600061 | SENSOR PFC& PCC AS. XY680 | 1 | 1 |
| 121 | | | | |
| 122 | AG-161331 | SENSOR FCC | 1 | 1 |
| 123 | ARBJJA100020 | JOINT WATER SUPPLY AS | 1 | 1 |
| 124 | ARAJJAC00020 | JOINT WATER SUPPLY | 1 | 1 |
| 125 | ARAJSH800020 | SEAL JOIN WATER SUPPLY | 1 | 1 |
| 126 | ARAJCDH0010 | CAP WATER SUPPLY | 1 | 1 |
| 127 | ARBJDC300010 | DUAL CHECK VALVE AS | 1 | 1 |
| 128 | ARAJTLL00041 | TUBE WATER DISPENSER | 1 | 1 |
| 129 | ARAHCE600010 | COVER GUIDE TUBE PC | 1 | 1 |
| 130 | ARAFPF600011 | PIECE COVER PAN WATER EVA | 1 | 1 |
| 131 | ARBJCF100010 | CLAMPER AS | 1 | 1 |
| 132 | ARBHBA300020 | BRACKET FILTER AS | 1 | 1 |
| 133 | ARBHBAP00020 | BASKET AS | 1 | 1 |
| 134 | ARBHBAB00010 | FILTER AS | 1 | 1 |
| 135 | ARAHST100030 | SUB BRACKET | 1 | 1 |
| 136 | ARAJTLM00011 | TUBE WATER SUPPLY (1/4", L=4000mm) | 1 | 1 |
| 137 | ARBHCEA00011 | CASE VALVE CONNECTOR AS | 1 | 1 |
| 138 | ARAHCHJ00010 | COVER VALVE CONNECTOR | 1 | 1 |
| 139 | ARAHWF100011 | WATER VALVE | 1 | 1 |
| 140 | ARAHCNF00011 | CASE VALVE CONNECTOR | 1 | 1 |
| 141 | ARACJR300010 | JOINT ELBOW | 1 | 1 |
| 142 | ARAHHBY00010 | HOLDER VALVE | 1 | 1 |
| 143 | ARAJJA405070 | JOINT TUBE (1/4"-1/4") | 2 | 2 |
| 144 | ARAJTLK00011 | TUBE VALVE INLET | 1 | 1 |
| 145 | ARAHCN400021 | CHECK LEVER ICE | 1 | 1 |

# 8. EXPLODED VIEW AND REPLACEMENT PART LIST

## 8.2. Replacement part list

### 8.2.2. Door

| No. | Customer part code | Part name | Model/Quantity | |
|---|---|---|---|---|
| | | | XY680LVKA | XY680LVSA |
| 1 | ARBDDL605710 | DOOR AS (FOAM) PCR | 1 | - |
| | ARBDDL605720 | | - | 1 |
| 2 | ARBP0DA02720 | PAS-OPERATION PCB (DOOR) | 1 | 1 |
| 3 | ARBDCA100671 | COVER CONTROL AS XY680LVS (SILVER) | 1 | 1 |
| 4 | ARADEA506021 | ESCUTCHEON CONTROL | 1 | - |
| | ARADEA506011 | | - | 1 |
| 5 | ARAHLBV05011 | LABEL DISPENSER | 1 | 1 |
| 6 | ARBDCW10007 | COVER WATER DISPENSER AS | 1 | 1 |
| 7 | ARAJP1L00511 | TAPE PE-F | 1 | 1 |
| 8 | ARBGDB100010 | DOOR SW AS | 1 | 1 |
| 9 | ARADGC106491 | GASKET DOOR PC XY680YM | 1 | 1 |
| 10 | AD-385121 | STOPPER DOOR | 1 | 1 |
| 11 | ARAELB605070 | LATCH DOOR | 1 | 1 |
| 12 | ARACCA405080 | COVER SENSOR FC (BLACK) | 1 | - |
| | ARACCA405060 | COVER SENSOR FC (GRAY) | - | 1 |
| 13 | ARAGSB900081 | SENSOR HSC | 1 | 1 |
| 14 | ARAHHB405150 | HOLDER TANK | 1 | 1 |
| 15 | ARBDWA100081 | WATER TANK AS | 1 | 1 |
| 16 | ARADSE505760 | SHELF BOTTLE | 1 | 1 |
| 17 | ARADSEF00110 | SHELF BOTTLE S | 1 | 1 |
| 18 | ARADSEN00030 | SHELF COVER WATER TANK | 1 | 1 |
| 19 | ARADFAE00060 | FREE RACK SMALL | 1 | 1 |
| 20 | ARBDDL504940 | DOOR AS (FOAM) PCL | 1 | - |
| | ARBDDL504950 | | - | 1 |
| 21 | ARBCFA200481 | FRENCH CROSSRAIL AS | 1 | 1 |
| 22 | ARADGC106491 | GASKET DOOR PC | 1 | 1 |
| 23 | ARAESA705040 | STOPPER DOOR L | 1 | 1 |
| 24 | ARAELB205020 | LATCH DOOR L | 1 | 1 |
| 25 | ARADSE505760 | SHELF BOTTLE | 1 | 1 |
| 26 | ARADSE505760 | SHELF BOTTLE | 1 | 1 |
| 27 | CNRAD-385900 | TRAY EGG | 1 | 1 |
| 28 | ARADSEG00070 | SHELF PC | 1 | 1 |
| 29 | ARBDDMV00191 | DOOR AS (FOAM) FCL | 1 | - |
| | ARBDDMV00211 | | - | 1 |
| 30 | ARADGC606001 | GASKET DOOR FC | 1 | 1 |
| 31 | ARAESA705040 | STOPPER DOOR L | 1 | 1 |
| 32 | ARAELB205020 | LATCH DOOR L | 1 | 1 |

| No. | Customer part code | Part name | Model/Quantity | |
|---|---|---|---|---|
| | | | XY680LVKA | XY680LVSA |
| 33 | AD-319170 | MAGNET DOOR SW | 1 | 1 |
| 34 | ARBDSD100012 | SEAL SASH DOOR AS | 1 | 1 |
| 35 | ARACCJ300010 | COVER BASE LED FC | 1 | 1 |
| 36 | ARAHCFL00041 | COVER LED LAMP FC | 1 | 1 |
| 37 | ARBPLLA00721 | PAS-LEB PCB (LIGHT) | 1 | 1 |
| 38 | ARBDDMY00251 | DOOR AS (FOAM) FCR | 1 | - |
| | ARBDDMY00271 | | - | 1 |
| 39 | ARADGC606001 | GASKET DOOR FC | 1 | 1 |
| 40 | ARAESA505070 | STOPPER DOOR FCR | 1 | 1 |
| 41 | ARAELB605070 | LATCH DOOR BV | 1 | 1 |
| 42 | AD-319170 | MAGNET DOOR SW | 1 | 1 |
| 43 | ARBDSD100012 | SEAL SASH DOOR AS | 1 | 1 |
| 44 | ARACCJ300010 | COVER BASE LED FC | 1 | 1 |
| 45 | ARAHCFL00041 | COVER LED LAMP FC | 1 | 1 |
| 46 | ARBPLLA00721 | PAS-LEB PCB (LIGHT) | 1 | 1 |
| 47 | ARAJP1L00371 | TAPE PE-F (W85*H38*t5) | 1 | 1 |
| 48 | ARAD1A700012 | INS JOINT BASE DISPENSER | 1 | 1 |
| 49 | ARBDTB100012 | TUBE TANK OUTLET AS | 1 | 1 |
| 50 | ARAHLBB19760 | LABEL ENERGY | 1 | 1 |

# 8. EXPLODED VIEW AND REPLACEMENT PART LIST

## 8.2. Replacement part list

### 8.2.3. Packing

| No. | Customer part code | Part name | Model/Quantity | |
|---|---|---|---|---|
| | | | NR-XY680LVKA | NR-XY680LVSA |
| 1 | ARBKCB102470 | CARTON BOX AS | 1 | 1 |
| 2 | ARAKBB100360 | BOTTOM TRAY | 1 | 1 |
| 3 | ARAKPCC05211 | PAD BOTTOM | 1 | 1 |
| 4 | ARAKPC805200 | PAD CORNER F L | 4 | 4 |
| 5 | ARAK1AC00060 | INS.PROTECTOR DOOR | 4 | 4 |
| 6 | ARAKPCA05140 | PAD CORNER BA L | 2 | 2 |
| 7 | ARAKPCN00011 | PAD SIDE | 2 | 2 |
| 8 | ARAJPS300071 | PLASTIC COVER | 1 | 1 |
| 9 | ARAKPC105230 | PAD TOP | 1 | 1 |
| 10 | ARAKCC100150 | CARTON TOP | 1 | 1 |
| 11 | ARAKPEC00030 | PROTECTOR PAPER CORNER | 2 | 2 |
| 12 | AK-123461 | PACKING BELT T0.8 | 3 | 3 |
| 13 | ARAHWD105010 | WRENCH ADJUSTER BOLT | 1 | 1 |
| 14 | ARAH1E203471 | INSTRUCTION BOOK | 1 | 1 |



# Panasonic SmartApp+ Operating Instructions

# Contents


**Account Setting and Connection** ..... 3

**General Settings** ..... 5

**Main Screen** ..... 10

**Fridge Tab** ..... 11

**1. Control Temperatures of Compartments** ..... 12

**2. Control Modes** ..... 13

**Log Tab** ..... 21

**Information Tab** ..... 25

**Settings** ..... 26

**Troubleshooting** ..... 34

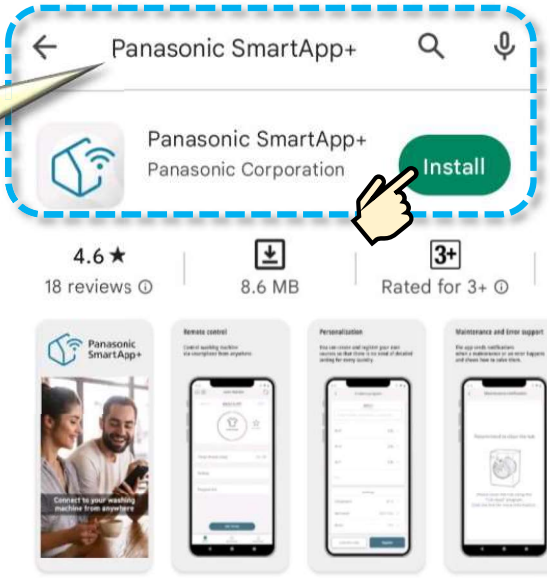
# Account Setting and Connection (1)

Panasonic SmartApp+ application is available on iOS and Android platforms. You need to download the application to your smartphone and set up the initial settings to connect the application with the refrigerator and wireless LAN (Wi-Fi).

## ■ Download the Application and Register a New Account

**① Download and install the application.**

**Method 1: In the App Store or Google Play on your smartphone, search "Panasonic Smart App+" and install it.**




**Method 2: Scan the QR code here to go to the download page and install the application.**

https://www.panasonic.com/fiot/fridge/

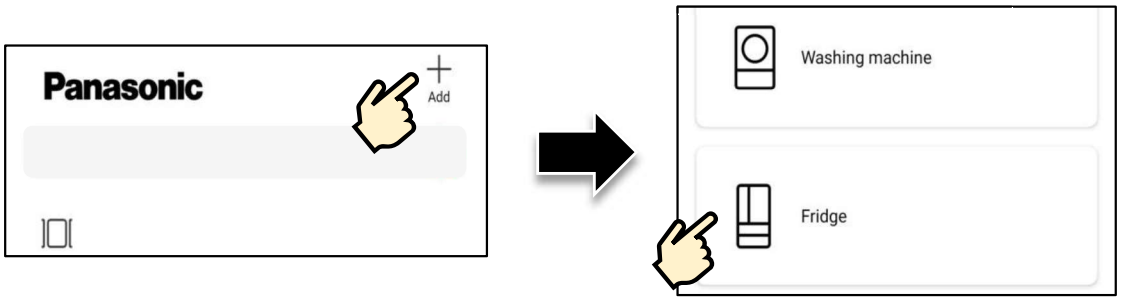
**② Sign up by your Email account to use the application.**

# Account Setting and Connection (2)

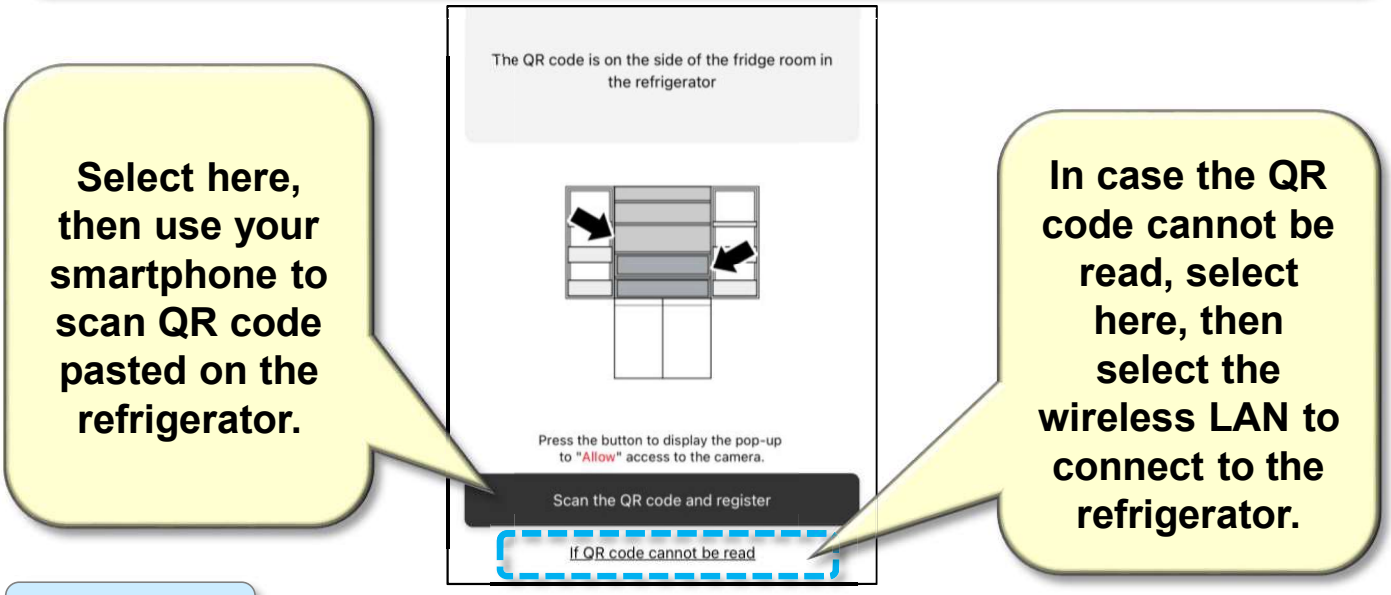
## ■ Connect the application to the refrigerator and wireless LAN (Wi-Fi)

① Plug in the refrigerator and wait for about 1 minute.

② Start the application, select “Add” and “Fridge”.




③ Follow the instructions on the application screen to initiate the connection.




**Attention**

• While the refrigerator connection is in progress, you will not be able to control the refrigerator from the Operation Panel. To use the Operation Panel, you need to disconnect by pressing and holding the “REMOTE” button for 3 seconds.

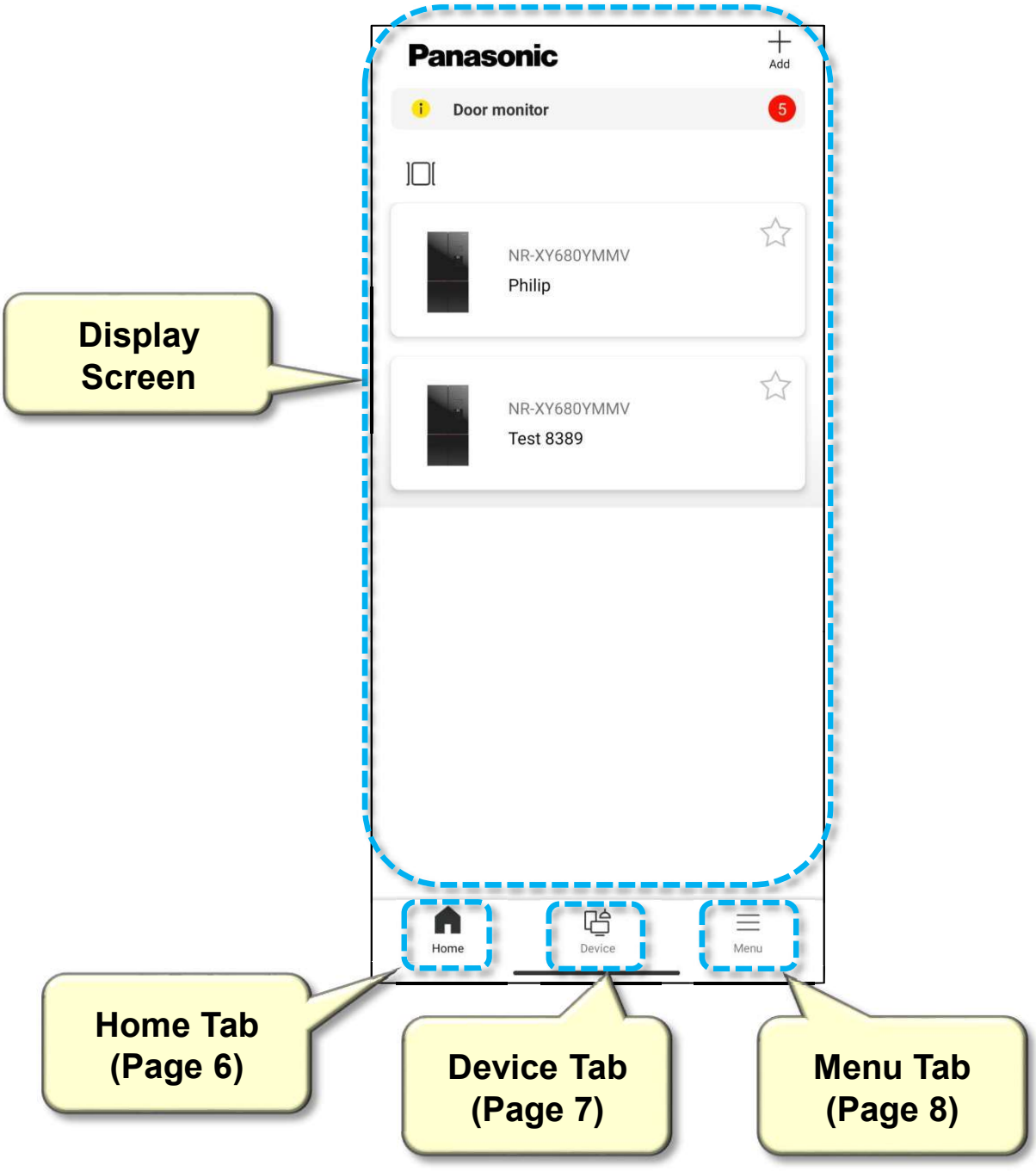
• During the connection process, there will be icons C1, C2, C4, C5, C9 displayed on the Operation Panel, in some cases the display time of C1 is very short so it may not be visible.

# General Settings (1)

After your refrigerator is successfully connected, the General Screen of the application is displayed as below.

On the General Screen, you can view an overview of newly added devices, view terms of use information and set up some general information such as notification settings, shortcut settings, adding new devices, change the device name, log out, etc.

## General Screen



# General Settings (2)

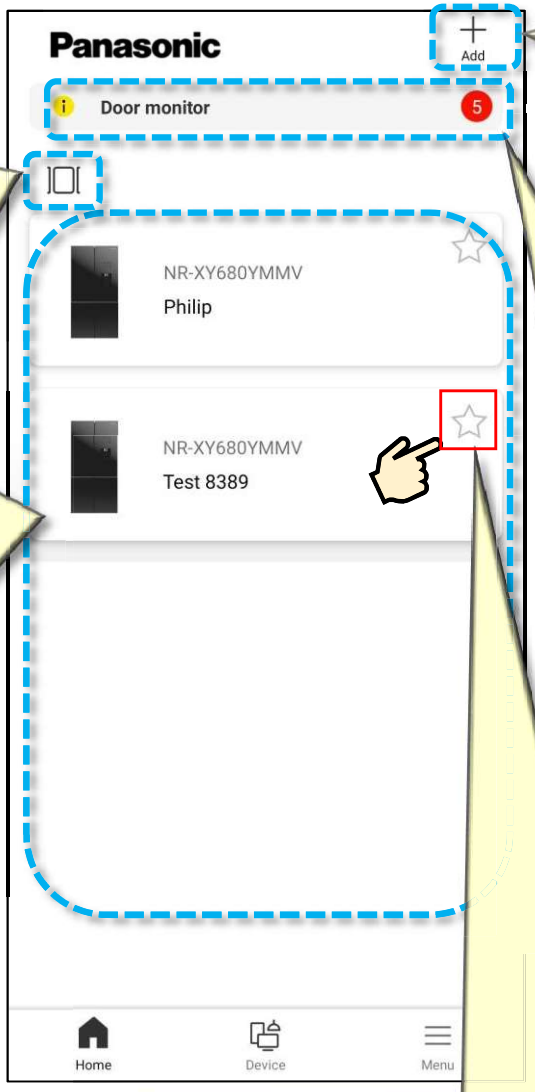
## ■ Home Tab

On the General Screen, select “Home”.

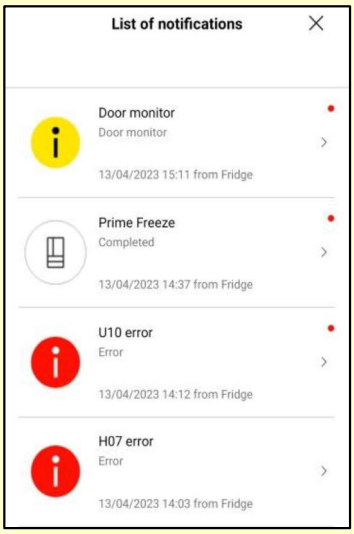



Change the display of the added device list (from portrait to landscape or vice versa).

Add the new device.




Display notifications of added devices.




The added device list.
Tap to the device you want to set, the application will go to the Main Screen of the selected device.

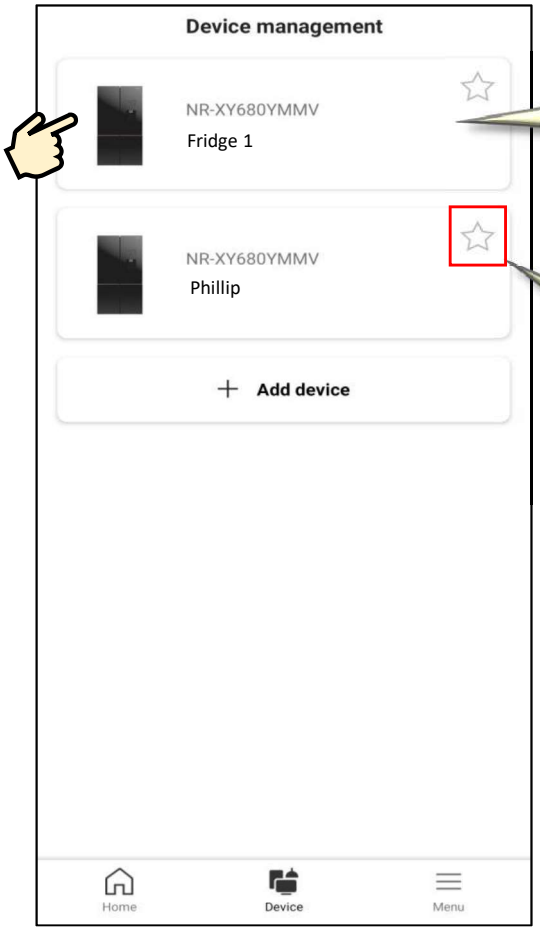
Tap to the icon ☆ to create a shortcut for the device. Then, the Main Screen of the selected device will be automatically displayed when the application starts.
(A shortcut can be created for only one device.)

# General Settings (3)

## ■ Device Tab

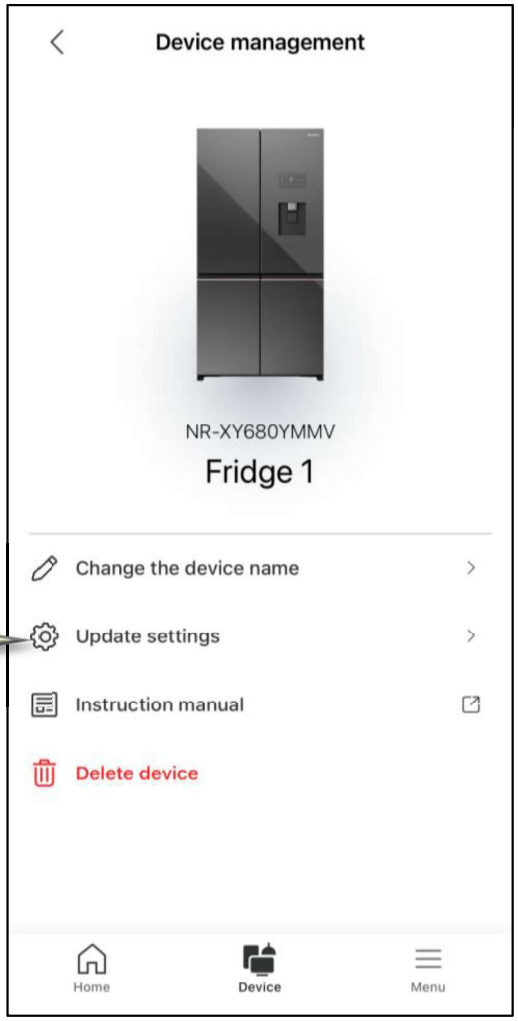
**On the General Screen, select “Device”.**




**Select the device for which you want to manage general information.**

**A shortcut for the device can be created while in Device management.**

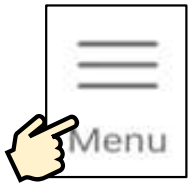



**Update settings of the device. (Page 33)**

# General Settings (4)

## ■ Menu Tab

**On the General screen, select “Menu”.**



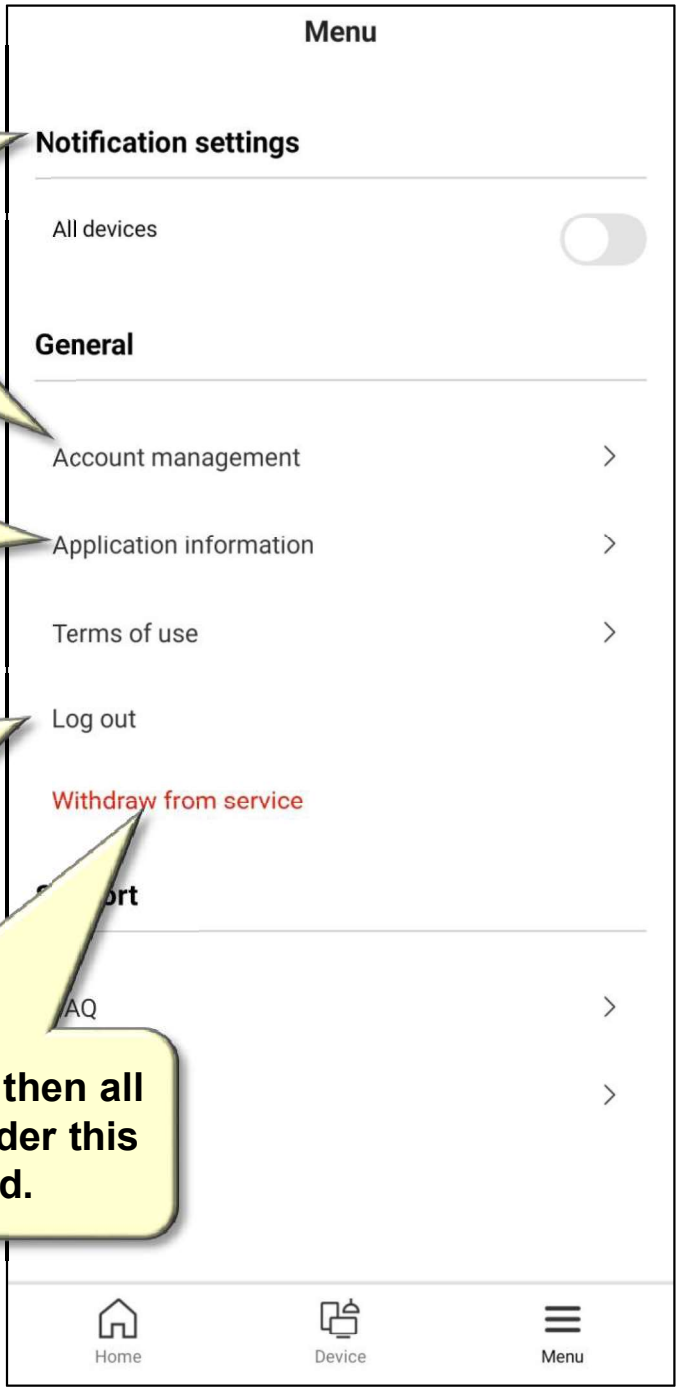

**Notification settings (Page 9).**

**Manage user information and login (change password, view login history, etc).**

**Check information about the application copyright.**

**Log your account out. All devices registered under this account will not be deleted.**

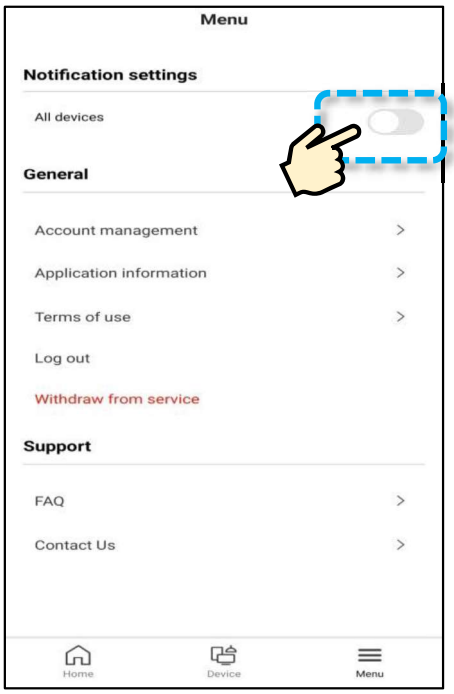
**Withdraw from the service, then all your devices registered under this account will be deleted.**

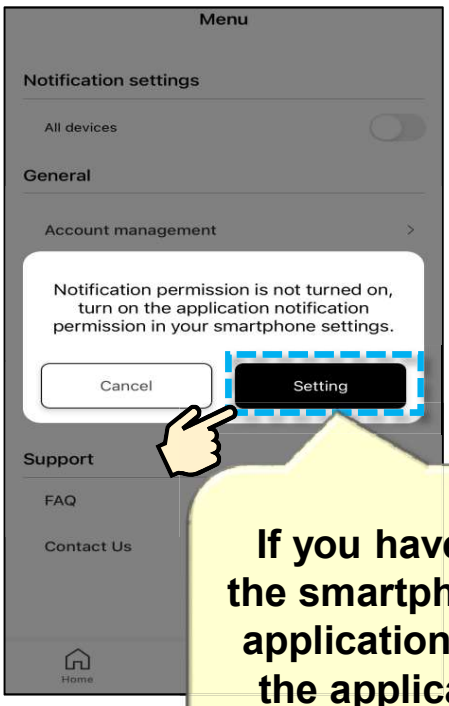


# General Settings (5)

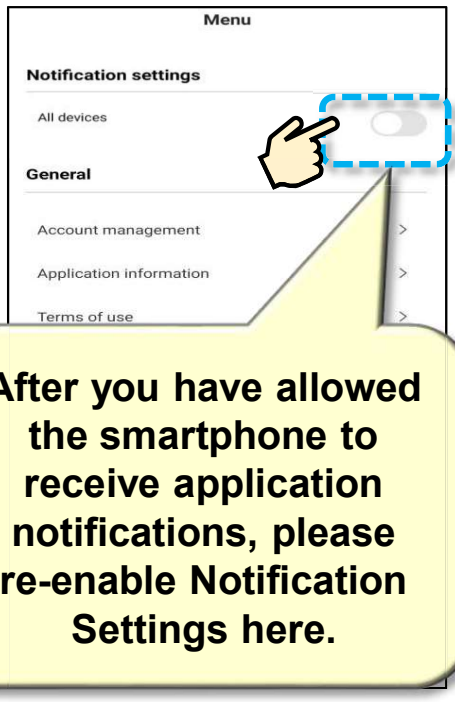
## Notification Settings

In Notification Settings section in the Menu Tab, you can set up whether you want to receive notifications or not.

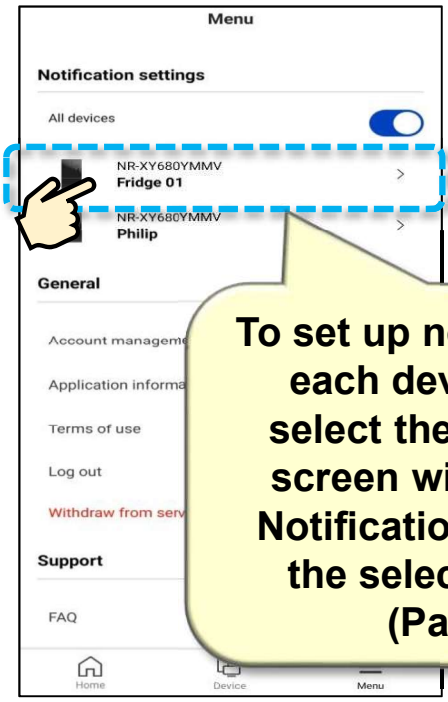



**If you have not allowed the smartphone to receive application notifications, the application will ask you for permission.**



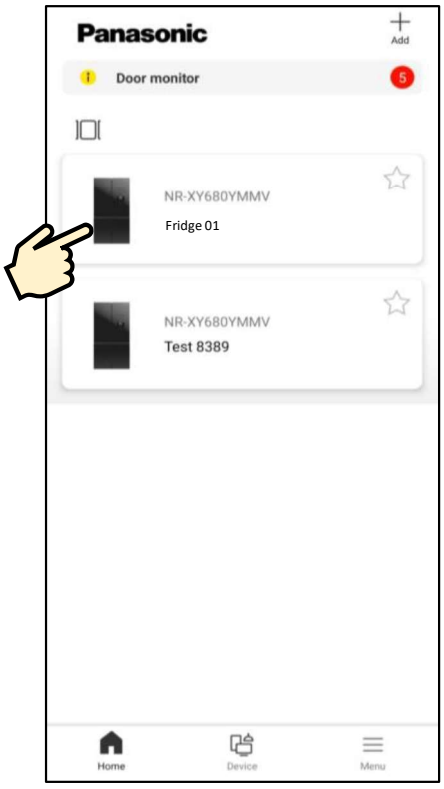

**After you have allowed the smartphone to receive application notifications, please re-enable Notification Settings here.**

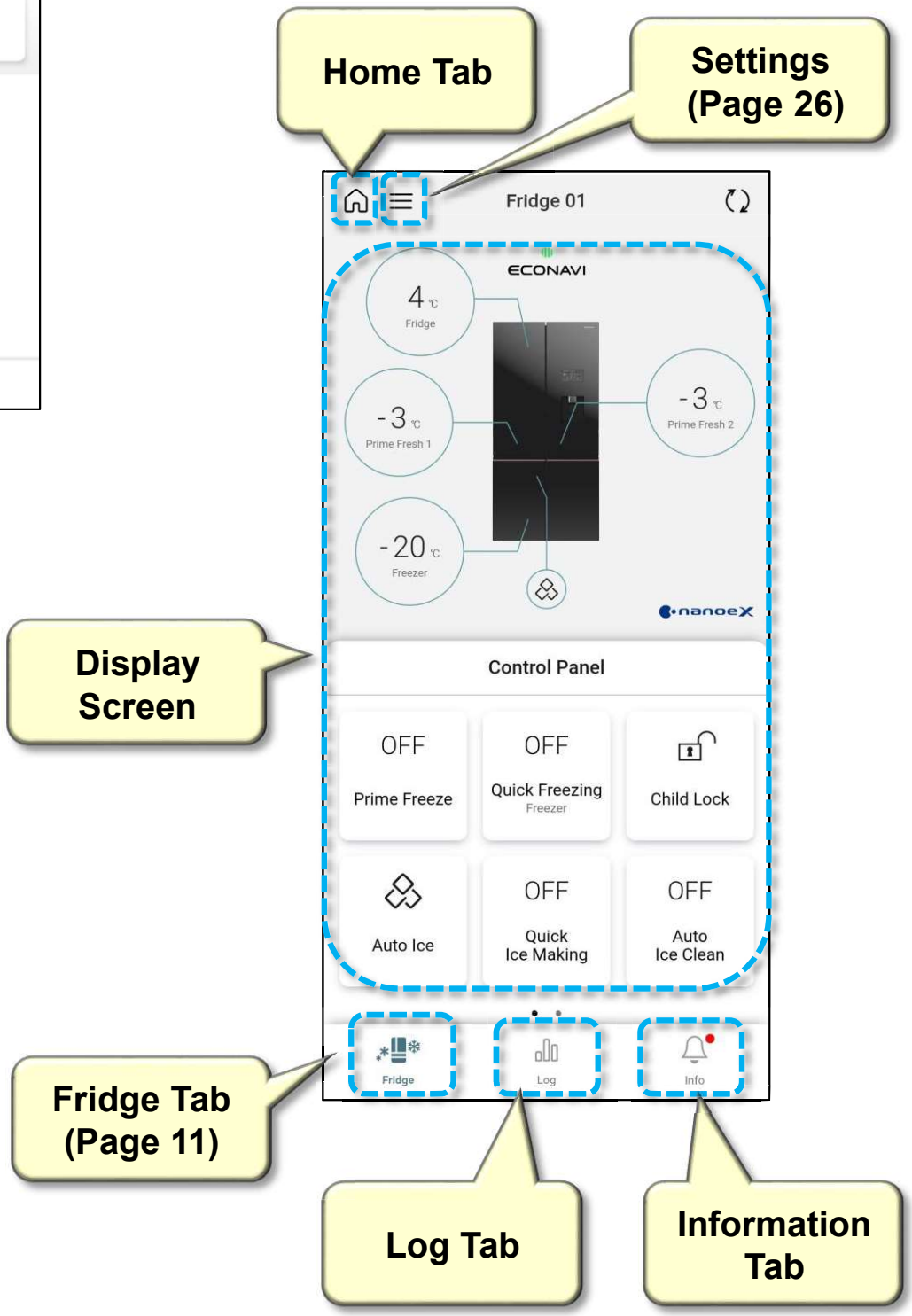



**To set up notifications by each device, please select the device. The screen will then go to Notification Settings of the selected device. (Page 27)**

# Main Screen

**On the Home Tab screen, select the device you want to control.**
**The Main Screen of the application is displayed as below.**



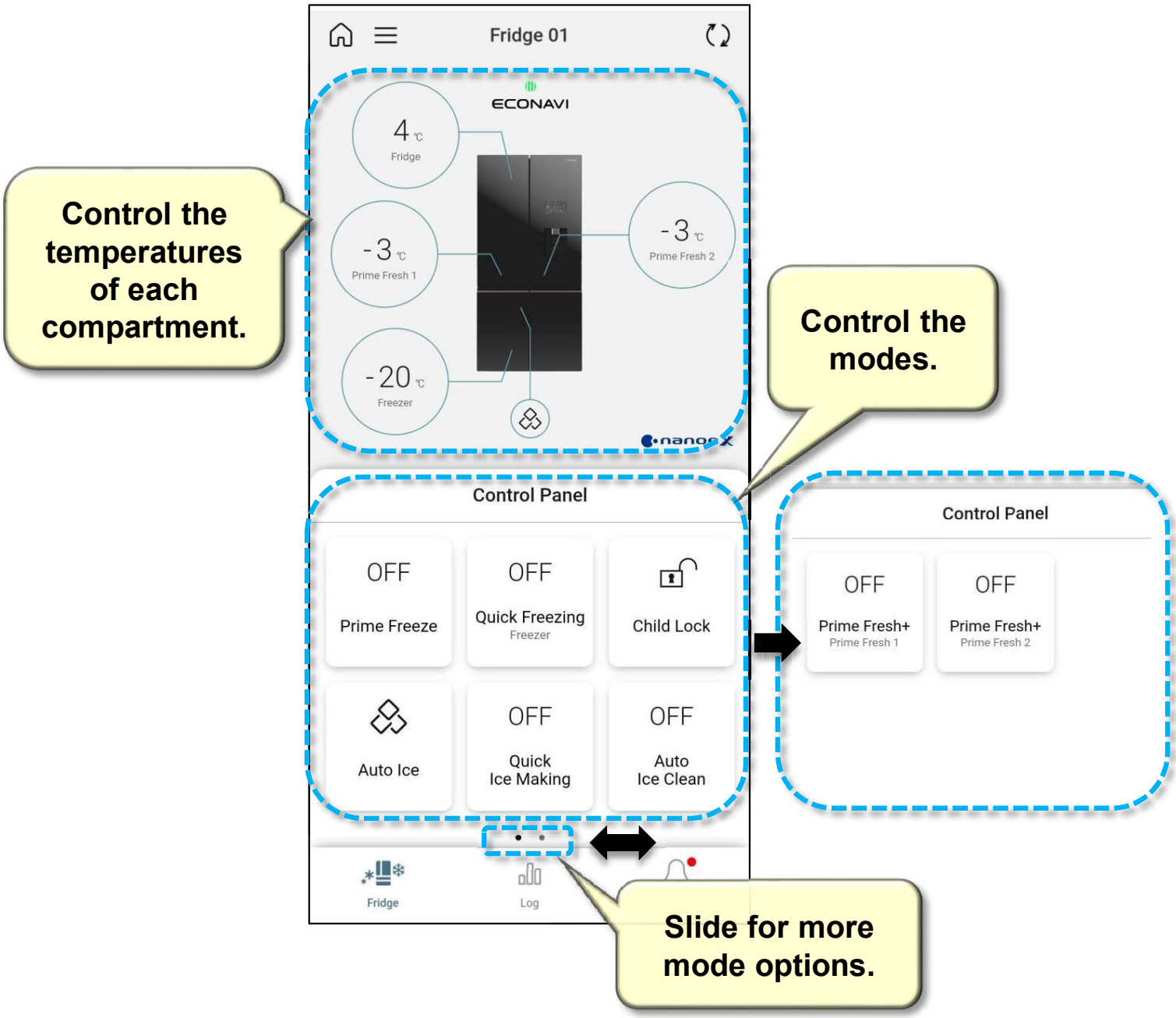



# Fridge Tab (1)

**On the Main Screen, select “Fridge”.**




The display screen of the Fridge Tab is displayed as below, allowing you to control the temperatures of each compartment and the modes.

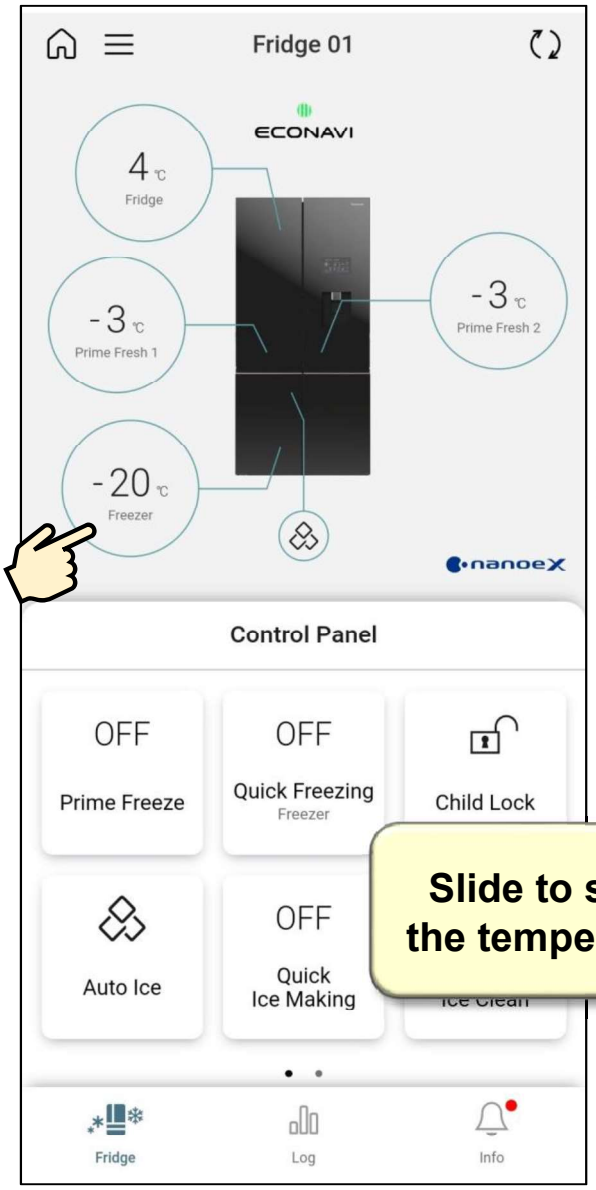


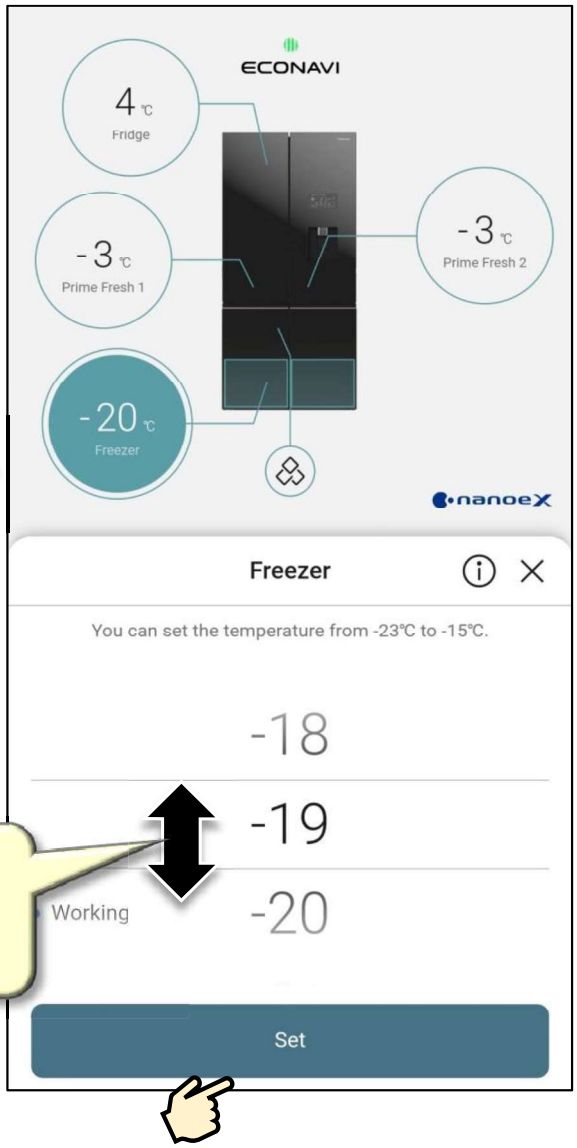
# Fridge Tab (2)

## 1. Control the Temperatures of Each Compartment

① Select the compartment.

② Select the temperature.




Slide to select the temperature.

③ Tap “Set” to confirm.

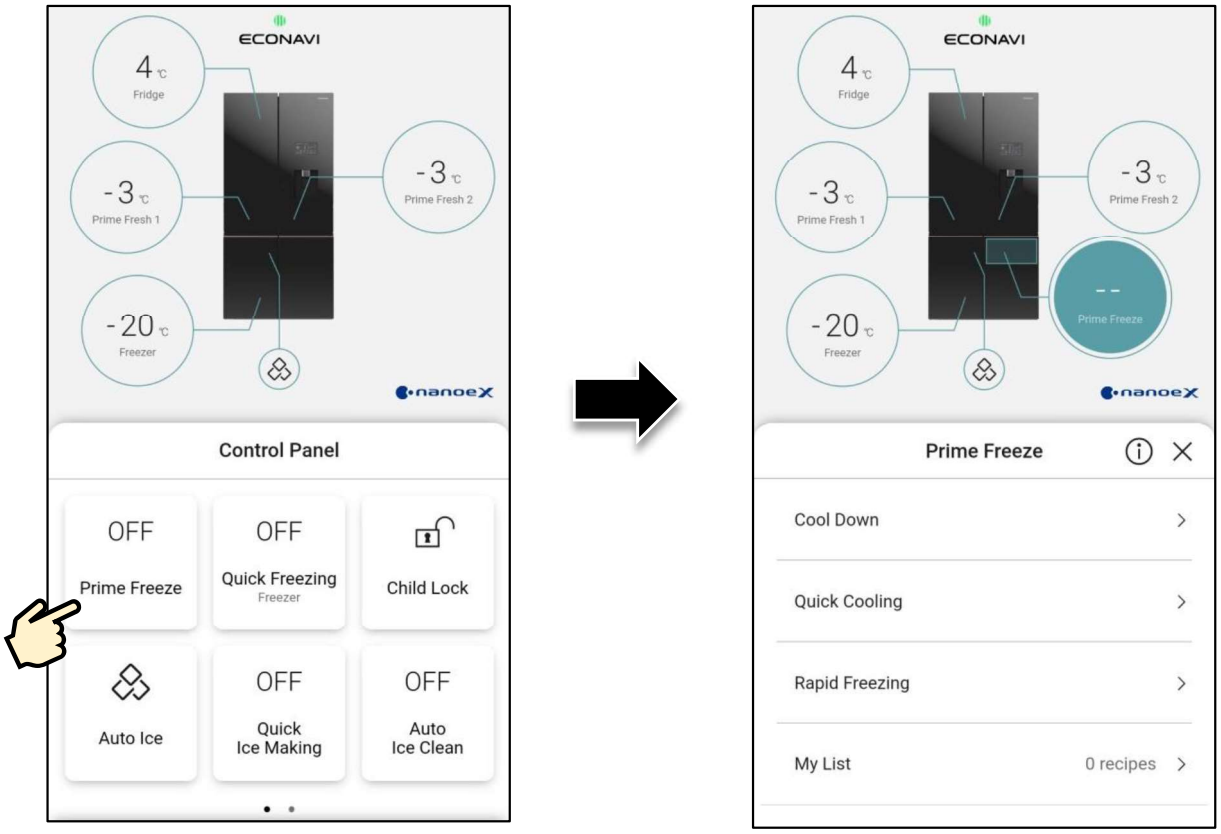
# Fridge Tab (3)

## 2. Control the Modes

### Prime Freeze Operation

① On Control Panel, select “Prime Freeze”.

② Select the mode.




There are three modes available for the Prime Freeze:

- **Cool Down**
- **Quick Cooling**
- **Rapid Freezing**

In addition, the application offers a **My List** function, which allows you to save your settings for future use.

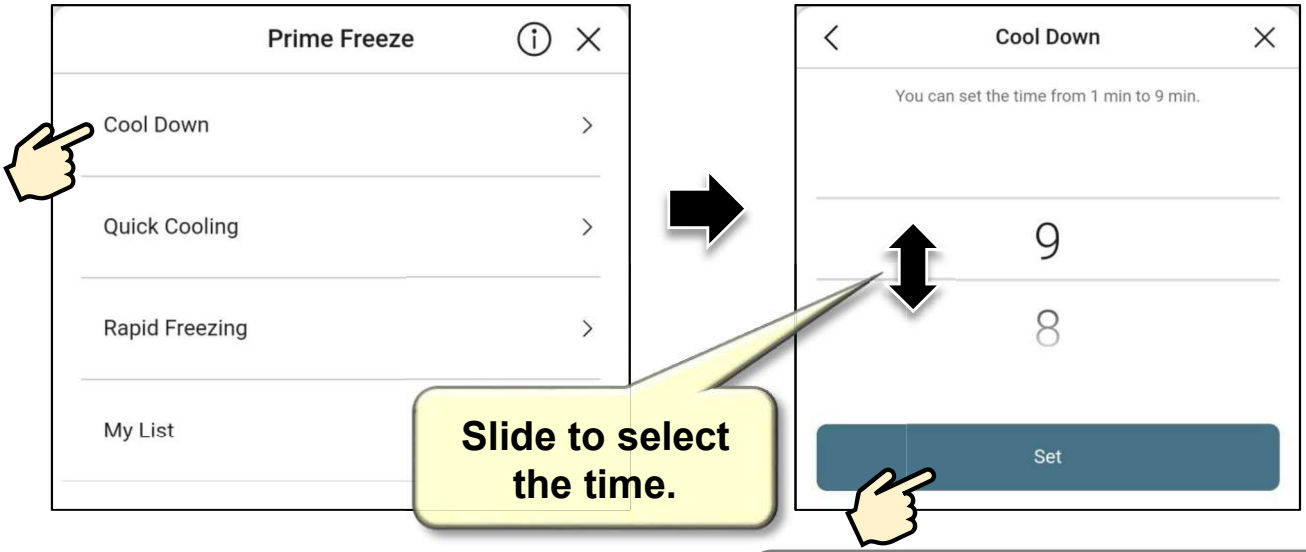
# Fridge Tab (4)

## Prime Freeze Operation (Continued)

### ■ Start Prime Freeze

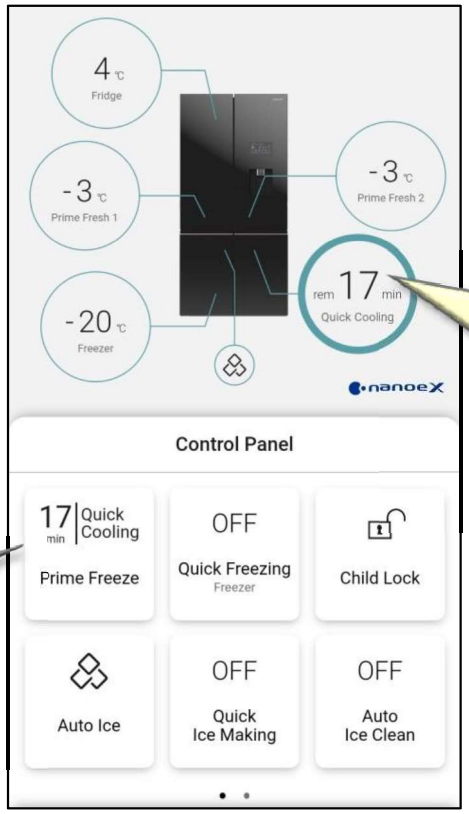
① Select the mode.

② Select the time.




③ Tap “Set” to confirm.

**After the setting of Prime Freeze operation, the operation status is displayed as below:**




Remaining Time to Finish Prime Freeze Operation

Active Mode Status

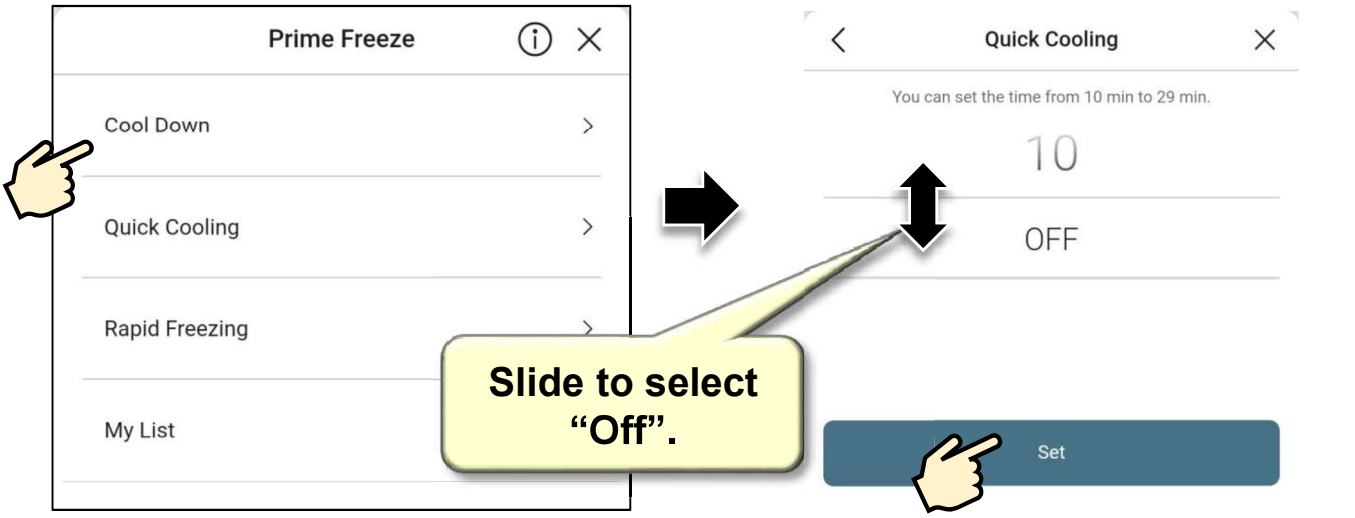
# Fridge Tab (5)

## Prime Freeze Operation (Continued)

### ■ Stop Prime Freeze

① Select the mode.

② Slide to select “Off”.




③ Tap “Set” to confirm.

# Fridge Tab (6)

## Prime Freeze Operation (Continued)

### ■ My List

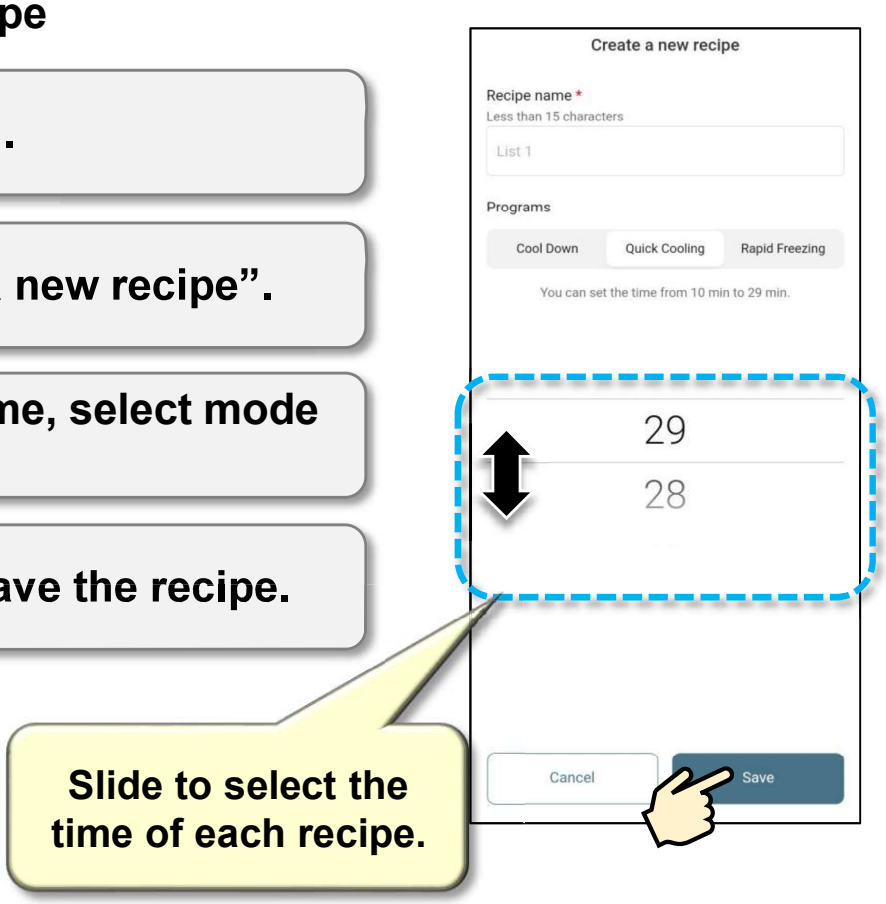
- **Create a new recipe**

① Select “My List”.

② Select “Create a new recipe”.

③ Enter recipe name, select mode and time.

④ Tap “Save” to save the recipe.




**Attention**

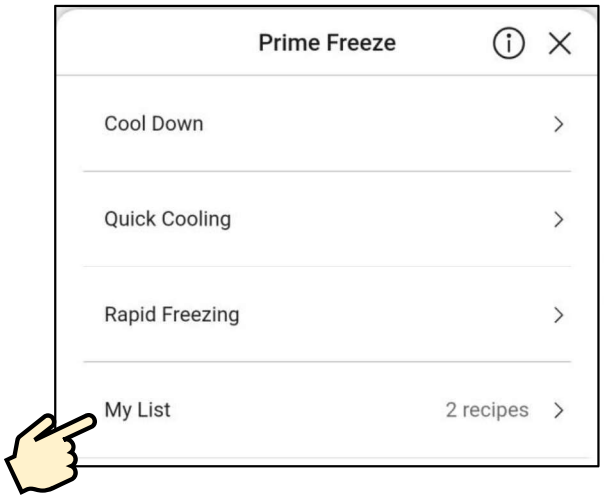
You can save up to 10 recipes.

# Fridge Tab (7)

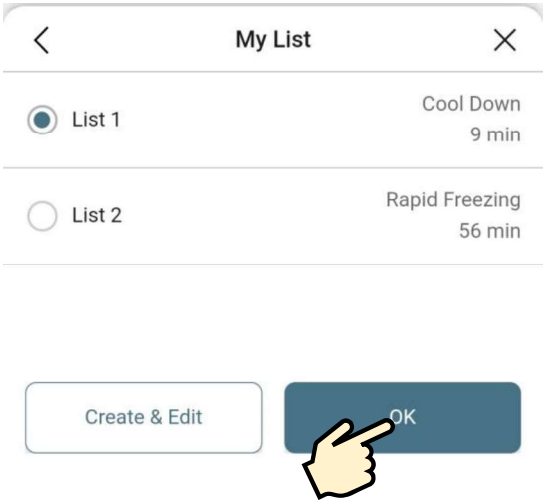
## Prime Freeze Operation (Continued)

- **To apply a saved recipe**

**① Select “My List”.**



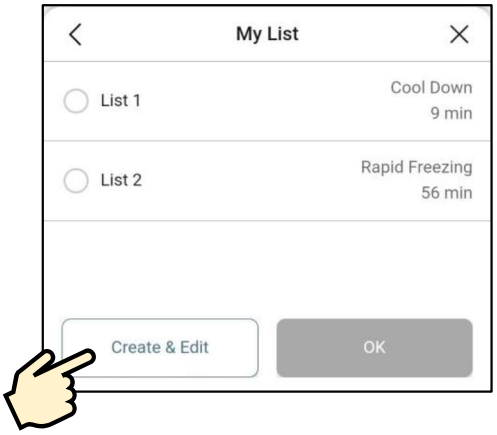

**② Select the recipe.**

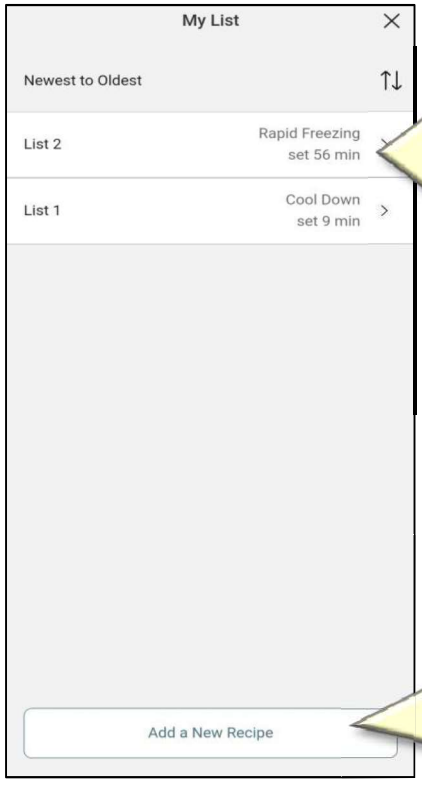



**③ Tap “OK” to confirm.**

- **To add, edit or delete a saved recipe**

**On My List, select “Create & Edit ”.**




**Select the recipe to edit or delete.**

**Select to add a new recipe.**

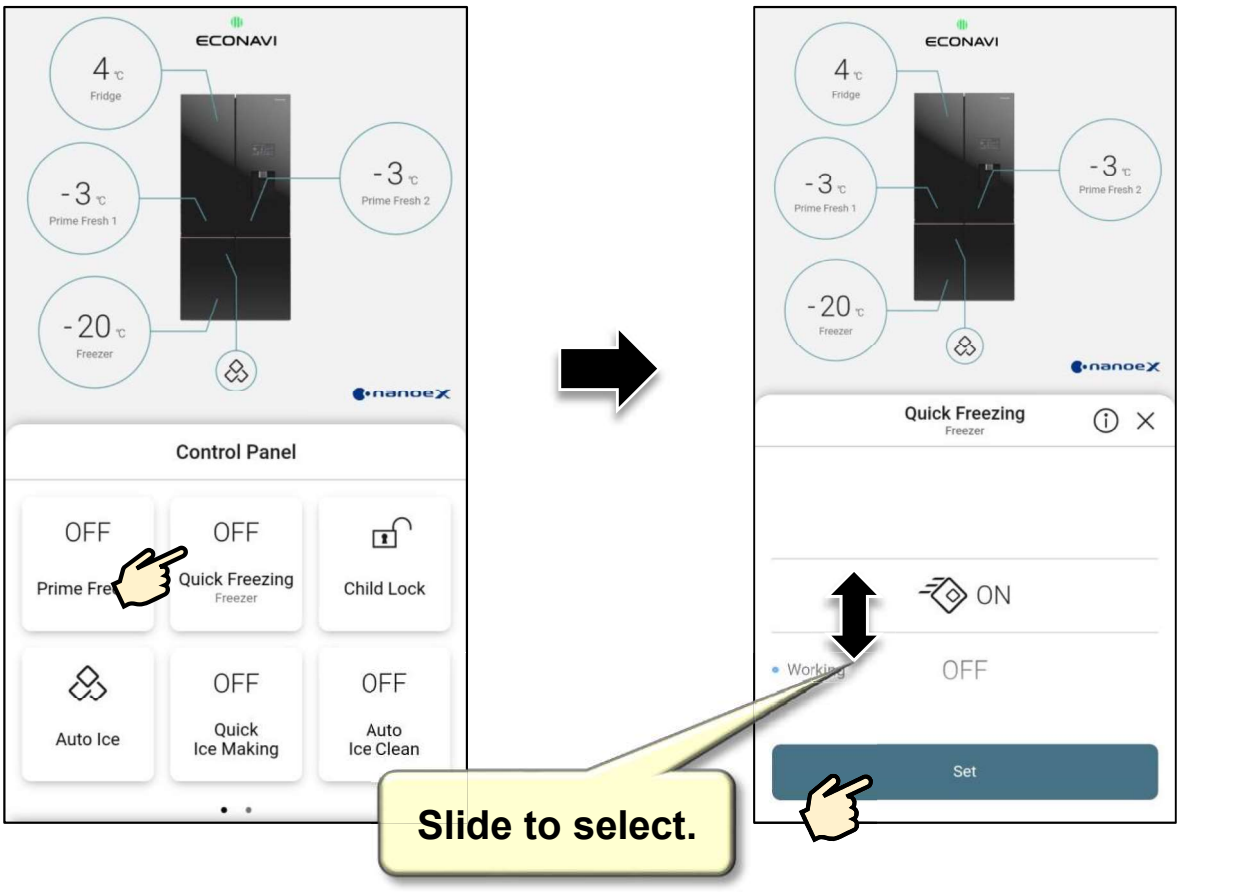
# Fridge Tab (8)

## 2. Control the Modes (Continued)

### Quick Freezing Mode

① On Control Panel, select "Quick Freezing" mode.

② Select "On" to start the mode.
Select "Off" to stop the mode.




③ Tap "Set" to confirm.

### Auto Ice, Quick Ice Making, Child Lock, and Prime Fresh+ Modes

**The settings are similar to Quick Freezing mode.**

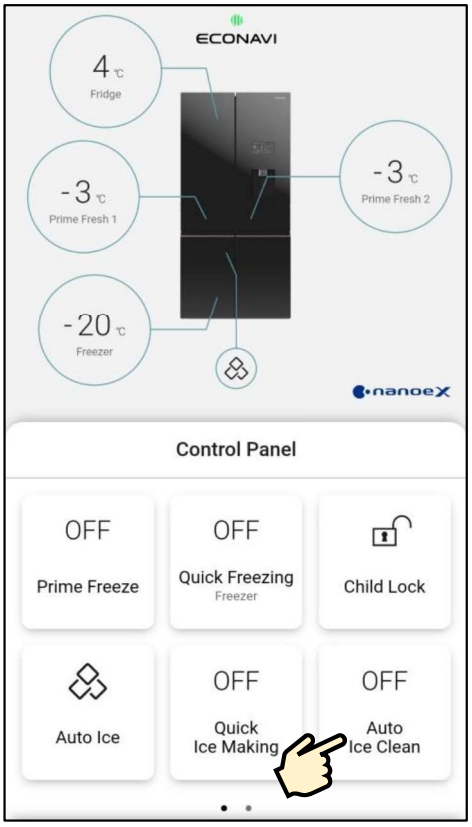
# Fridge Tab (9)

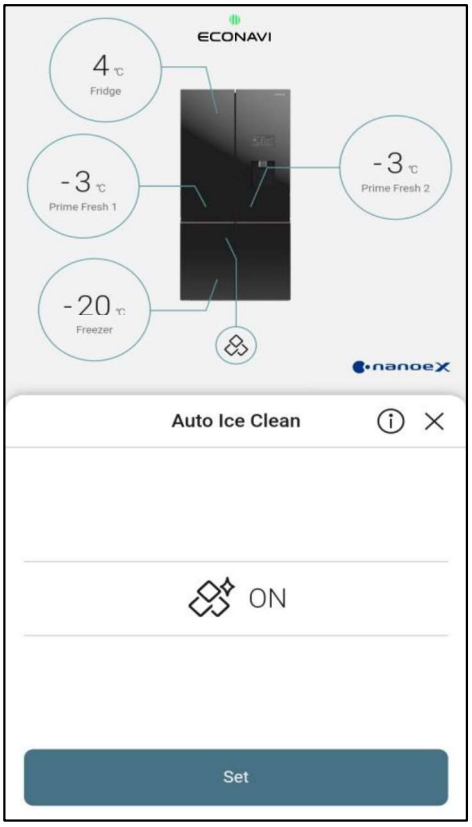
## 2. Control the Modes (Continued)

### Auto Ice Clean Mode

① On Control Panel, select “Auto Ice Clean”.

② Select “On” to start the mode.



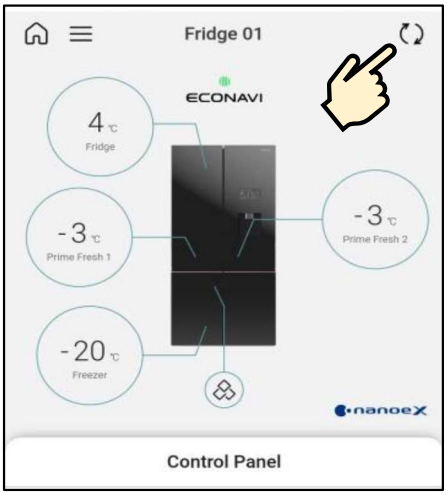

③ Tap “Set” to confirm.

# Fridge Tab (10)

**Attention**

■ **The status of the refrigerator displayed on the application is not synchronized with the actual refrigerator sometimes.**

- It takes time for the application to update the status of the refrigerator.
- Please tap to  to update the status of the refrigerator on the application.




■ **Auto Ice Clean mode**

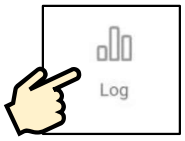
- Before start Auto Ice Clean mode, please check the Ice tray to make sure there is no ice left in the tray and check the water tank to make sure there is water in it (since the refrigerator will pump, pour water into the tray to clean the Ice maker).
- During Auto Ice Clean mode, you cannot stop/cancel it.
- During Auto Ice Clean mode, you cannot set the temperature or other functions from the application.

■ **Temperature Fine Adjustment Mode**

- Fine adjustment mode can be set by Operation Panel on the actual refrigerator unit only.
- During Fine adjustment mode, the application displays the default temperature (Fridge: 4℃, Freezer: - 20℃). If you change Fridge or Freezer temperature from the application, the refrigerator will cancel Fine adjustment mode and return normal.

# Log Tab (1)

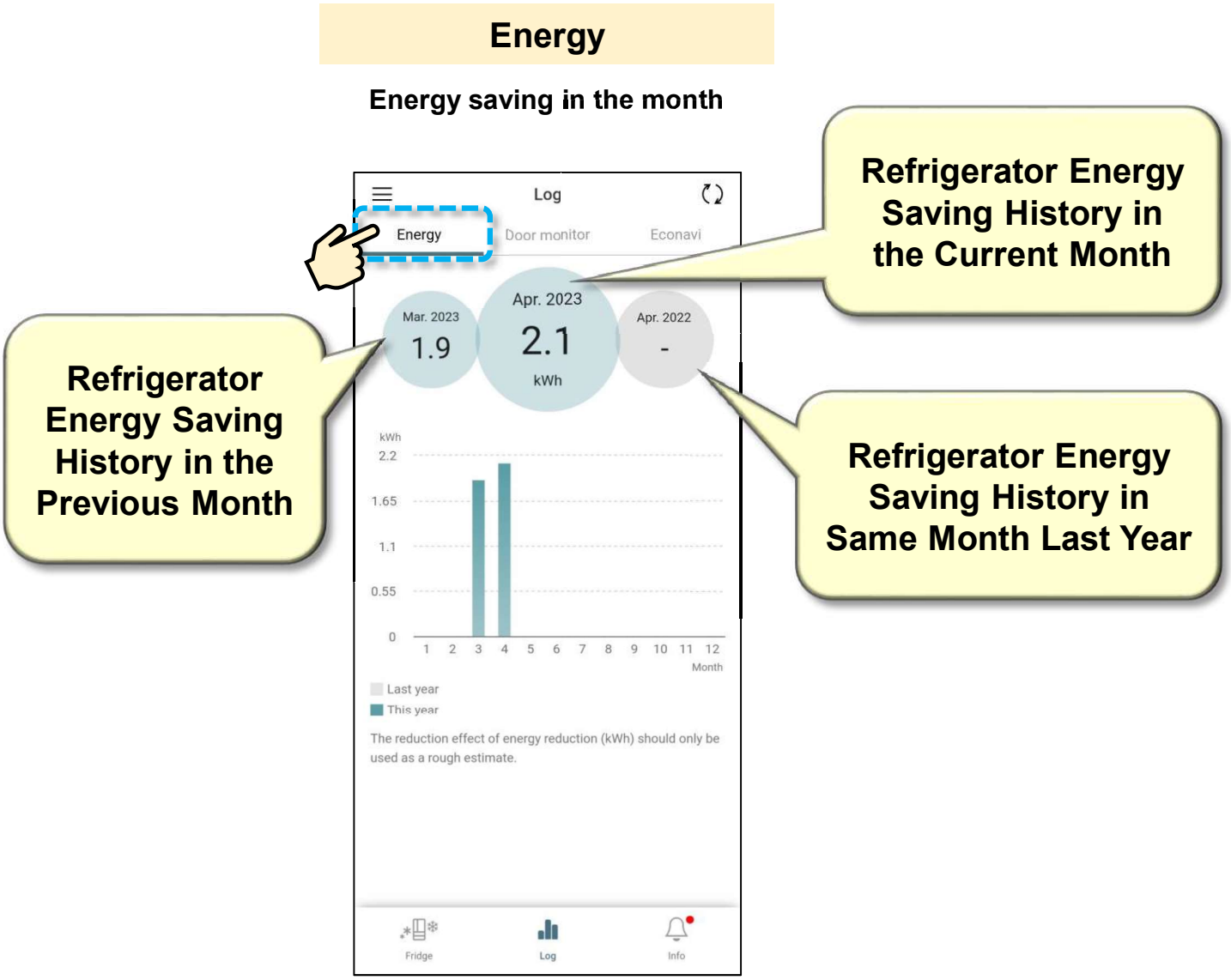
**On the Main Screen, select “Log”.**




The Log tab shows the refrigerator's energy-saving history, monitoring the opening/closing of the door, and the ECONAVI mode.

## ■ Energy

You can check your refrigerator's energy saving history for current month , previous month and same month last year.



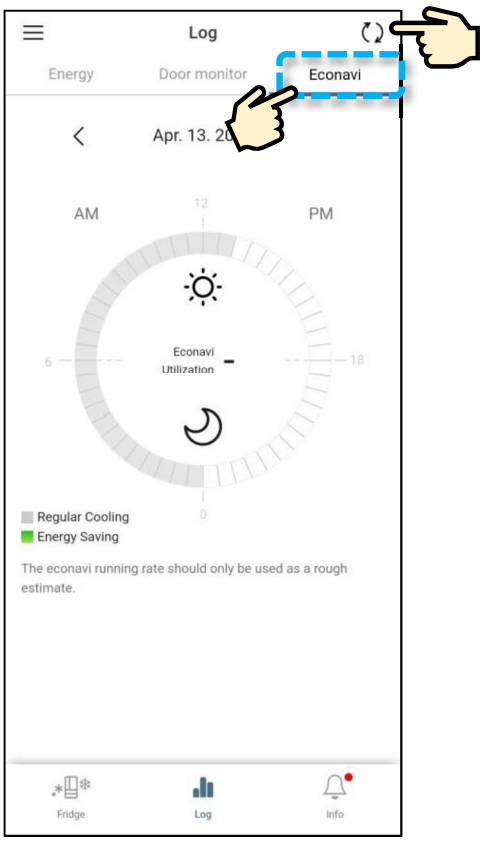
# Log Tab (2)

## ■ ECONAVI

- ECONAVI energy saving status of the refrigerator is recorded daily.
- You can check the ECONAVI status of the refrigerator for up to 7 days.
- The ECONAVI status displayed on the application is not synchronized with the actual status sometimes. Please tap to update the status of the refrigerator again.
- ECONAVI states are represented by 3 colors: gray, green and white.
  - Gray : The refrigerator operates regularly.
  - Green : The refrigerator operates energy saving mode by ECONAVI.
  - White : No data from the refrigerator.

**ECONAVI**

**ECONAVI status displayed by day**



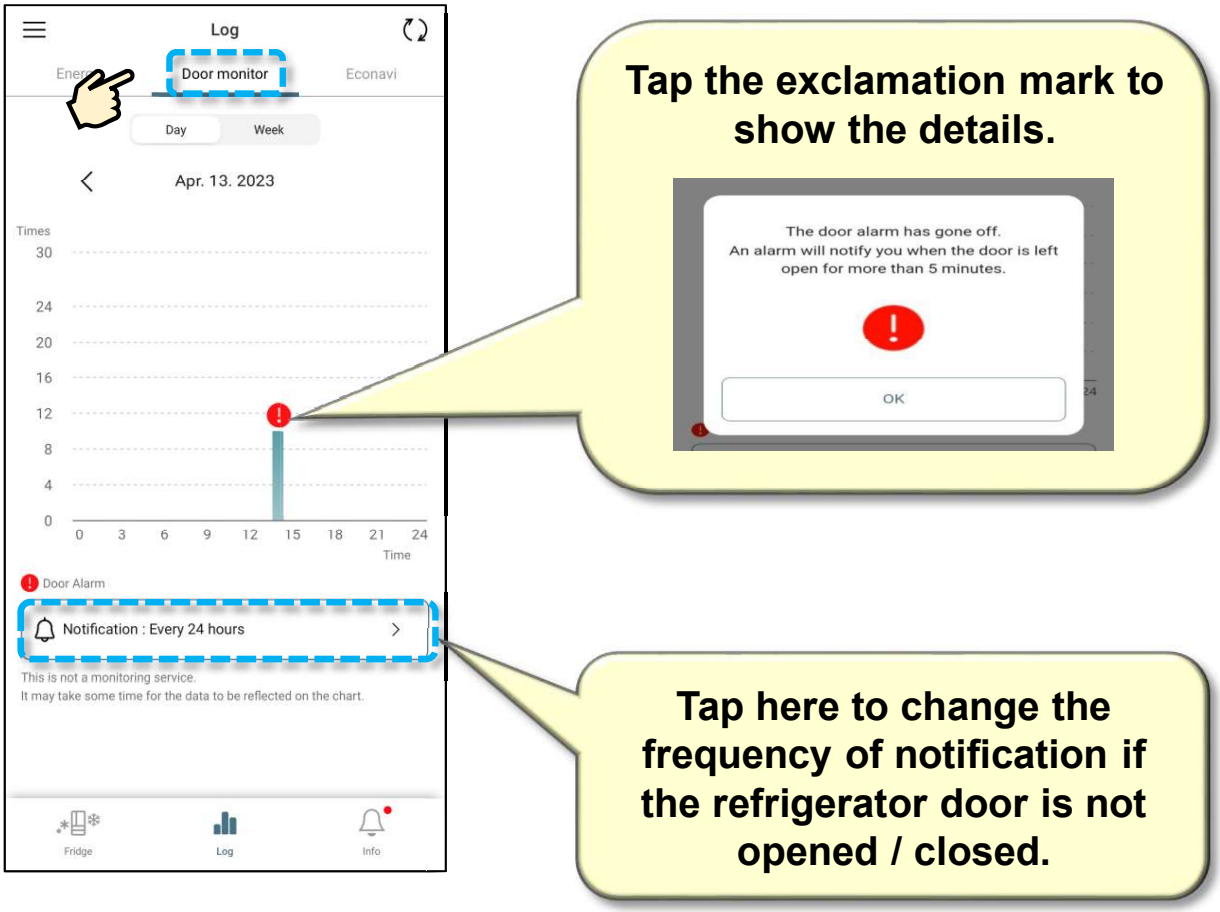
# Log Tab (3)

## ■ Door Monitor

- You can monitor the daily count of refrigerator door openings.
- The application displays the count of door openings for each hour in the screen of the day.
- The application displays the count of door openings for each day in the screen of the week.
- If the refrigerator door is opened for more than 5 minutes, a door alarm icon is shown.
- You can set to receive notifications if the refrigerator door is not opened / closed for a selected time.

**Door monitor**

**Daily/Weekly Refrigerator Door Opening/Closing Status**



# Log Tab (4)

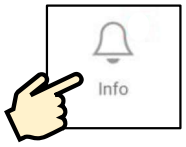
## ■ Door Monitor (Continued)

**Attention**

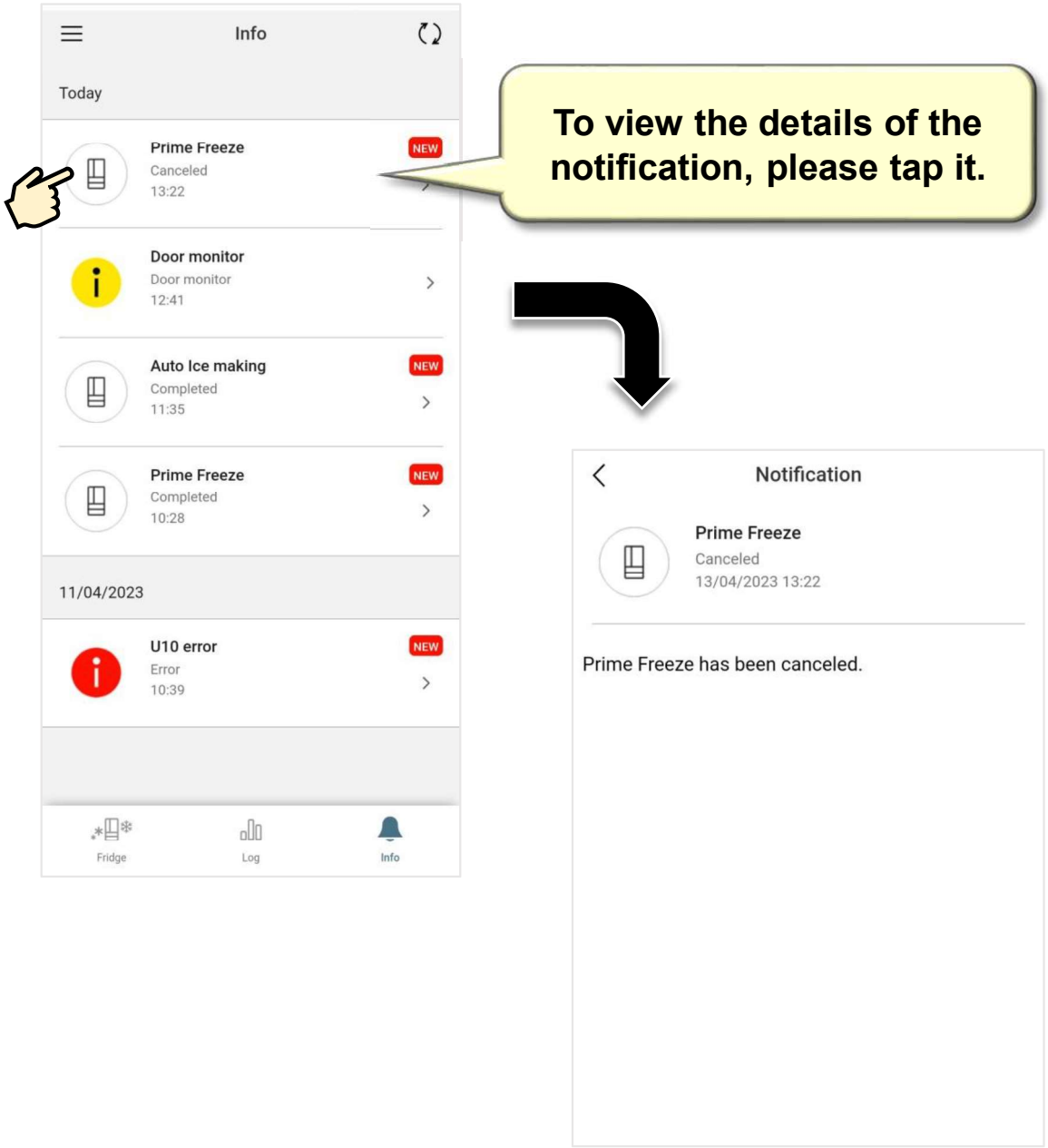
Monitor only the door opening / closing of the Fridge compartment and the Freezer compartment, not the Prime Fresh compartment.

# Information Tab

**On the Main Screen, select “Info”.**

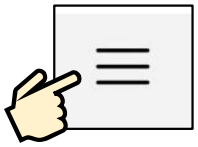



On the Information Tab screen, you can check the device's notifications. (Notifications are displayed here, whether you have them enabled in Notification settings under General settings (Page 9) or not.)

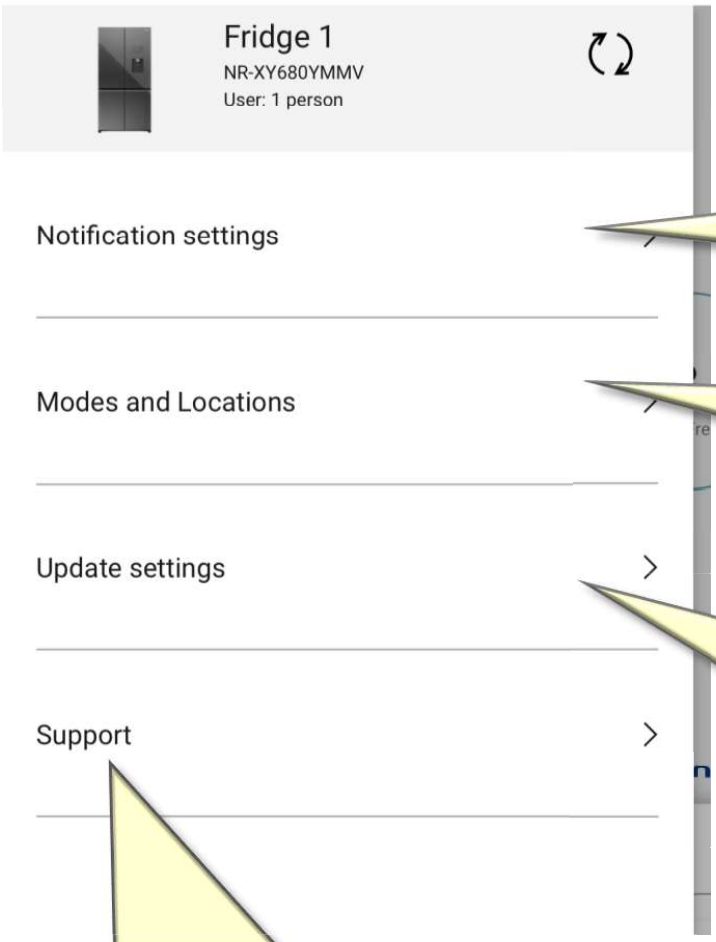


# Settings (1)

**On the Main Screen, select “Settings”.**



You can set items as below:

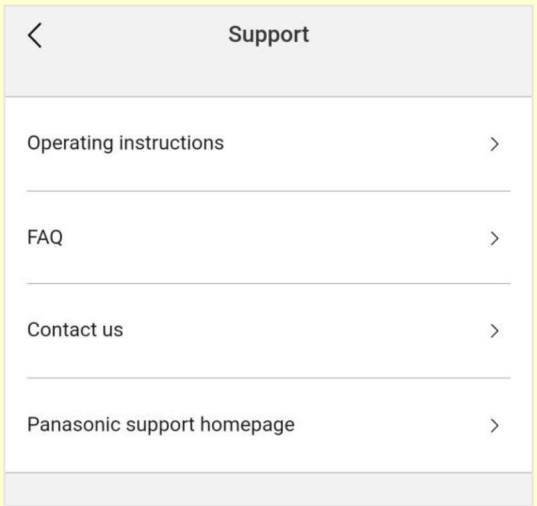



**Select the item to receive notifications (Page 27).**

**Set the modes and locations (Pages 29~32).**

**Instructions for some common cases (Page 33).**

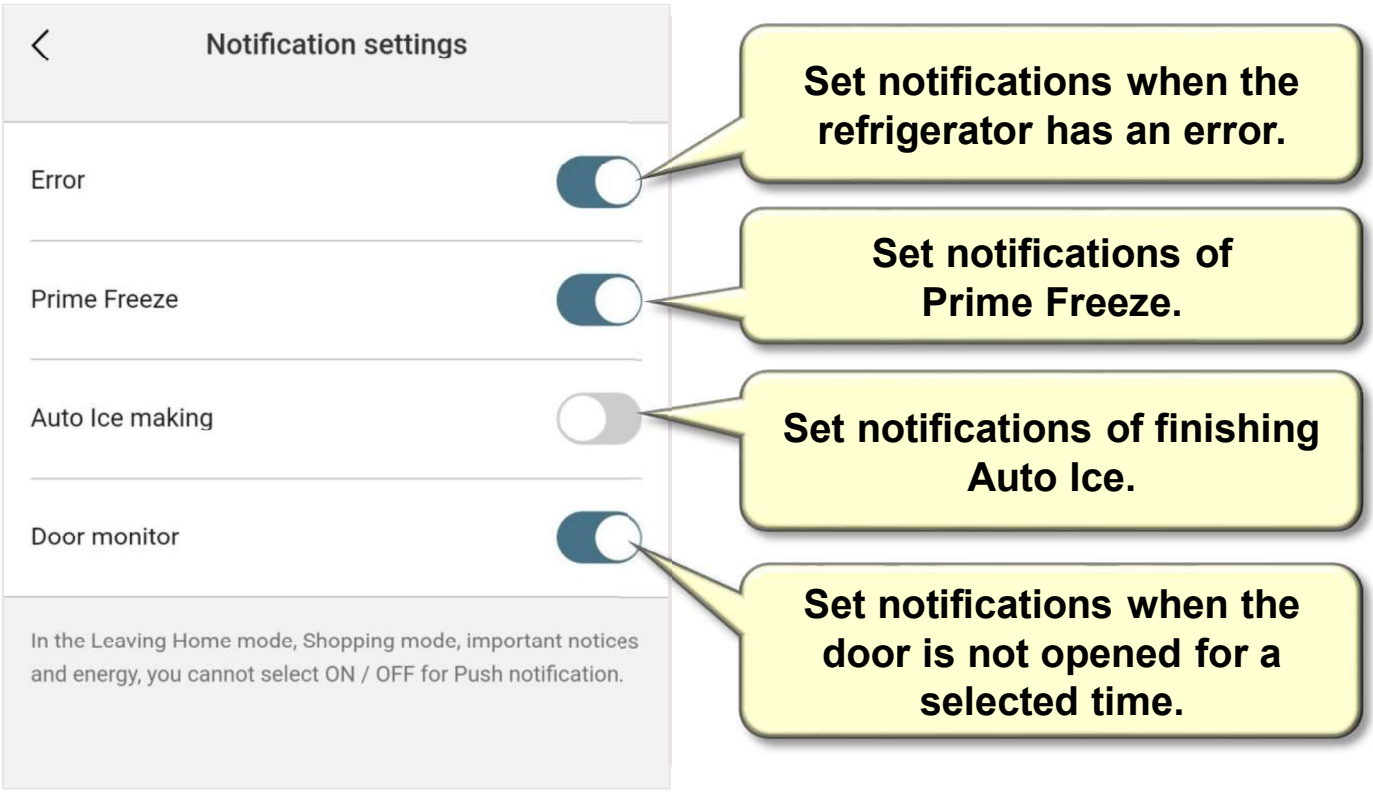
**Support when you have problems or questions.**



# Settings (2)

## ■ Notification Settings

You can set notifications which you want to receive.




**Attention**

- **Some notifications will be sent automatically from the server to your smartphone after you set notifications and start the mode.**

  For example:

  - If you set notifications of Auto Ice mode, an “Ice making completed” notification will be sent to your smartphone automatically after the designated time passes even though there is no water in the Ice maker and ice is not made.

  - If you set notifications of Door monitor mode and the refrigerator is plugged off, you may receive notification that “There is no door operation (open/close) in the set time”.

# Settings (2)

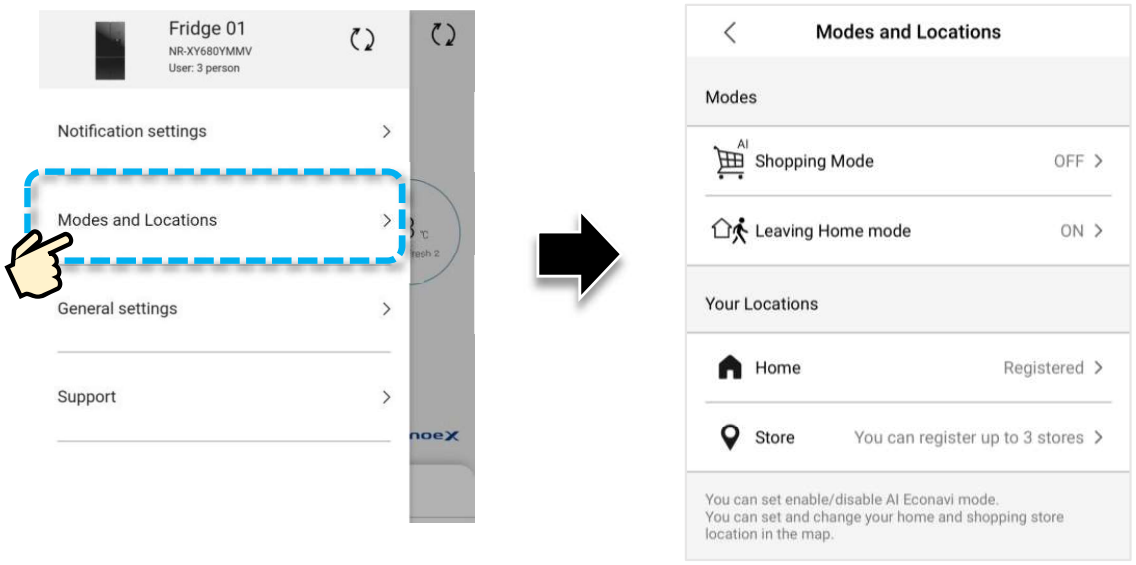
## ■ Notification Settings (Continued)

**Attention**

- **If you set Leaving Home mode or Shopping mode ON, the notifications of them will be automatically turned ON as well. You cannot set them OFF.**
- **Important notices such as application update or energy saving report are automatically sent to your smartphone. You cannot set them OFF.**

# Settings (3)

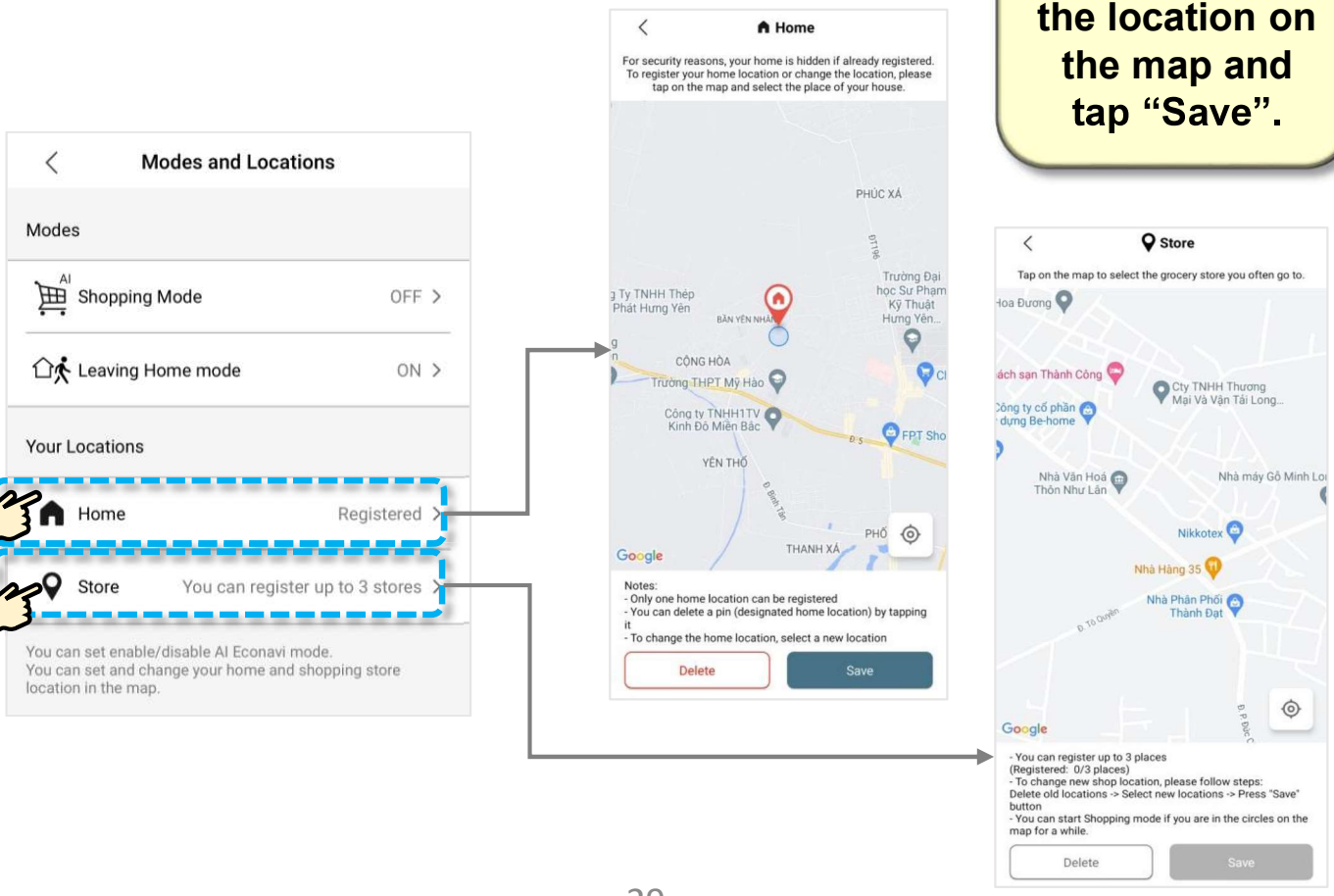
## ■ Modes and Locations




**To use Shopping mode and Leaving Home mode, the following initial settings are required:**

**① Set Home location and Store locations.**

**Tap “Home” or “Store”. Select the location on the map and tap “Save”.**



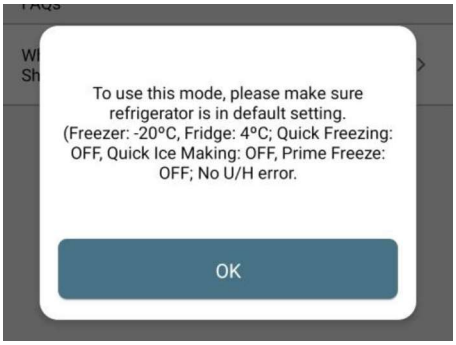
# Settings (4)

## ■ Modes and Locations (Continued)

### ② Make sure the refrigerator is in the default setting.

The default setting of the refrigerator includes all the following elements:

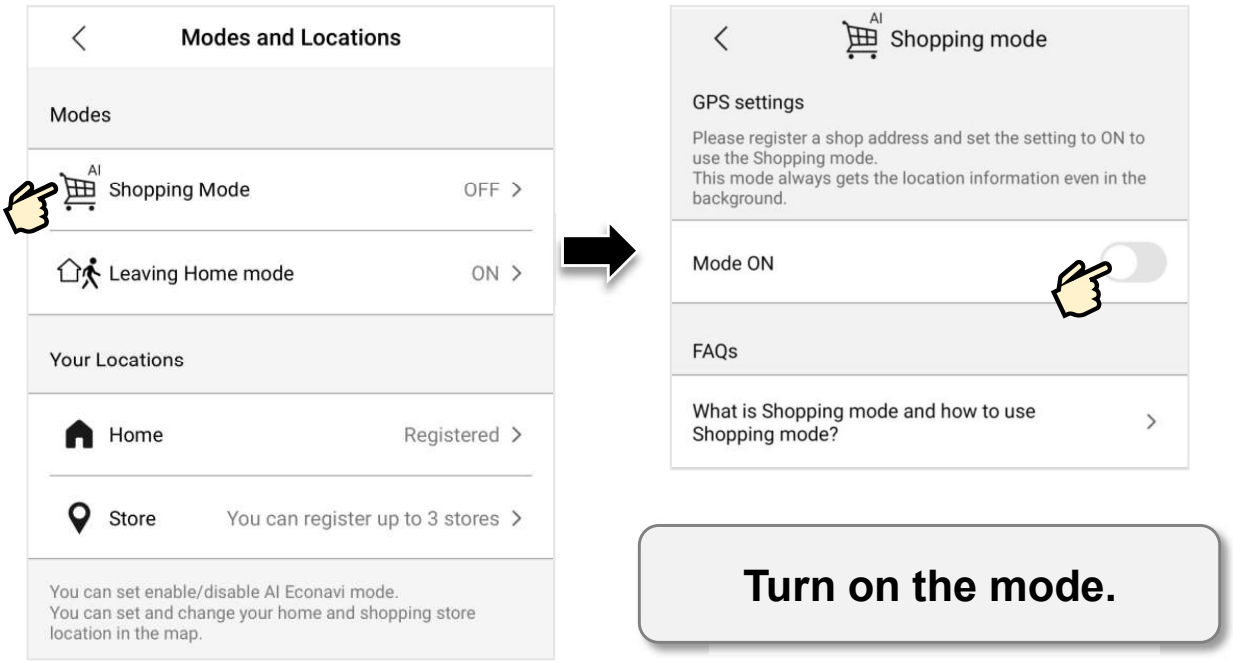
- Freezer temperature: -20°C
- Fridge temperature: 4 °C
- Quick Freezing: Off
- Quick Ice Making: Off
- Prime Freeze: Off
- No U/H error occurs




If the refrigerator is not in the default setting, Shopping mode and Leaving Home mode will automatically turn off.

## Shopping Mode

- When Shopping mode is on and you approach the registered stores (enter within a radius of 250 meters from the stores), the application will send a confirmation message to activate the Shopping mode, then please confirm to activate the mode.

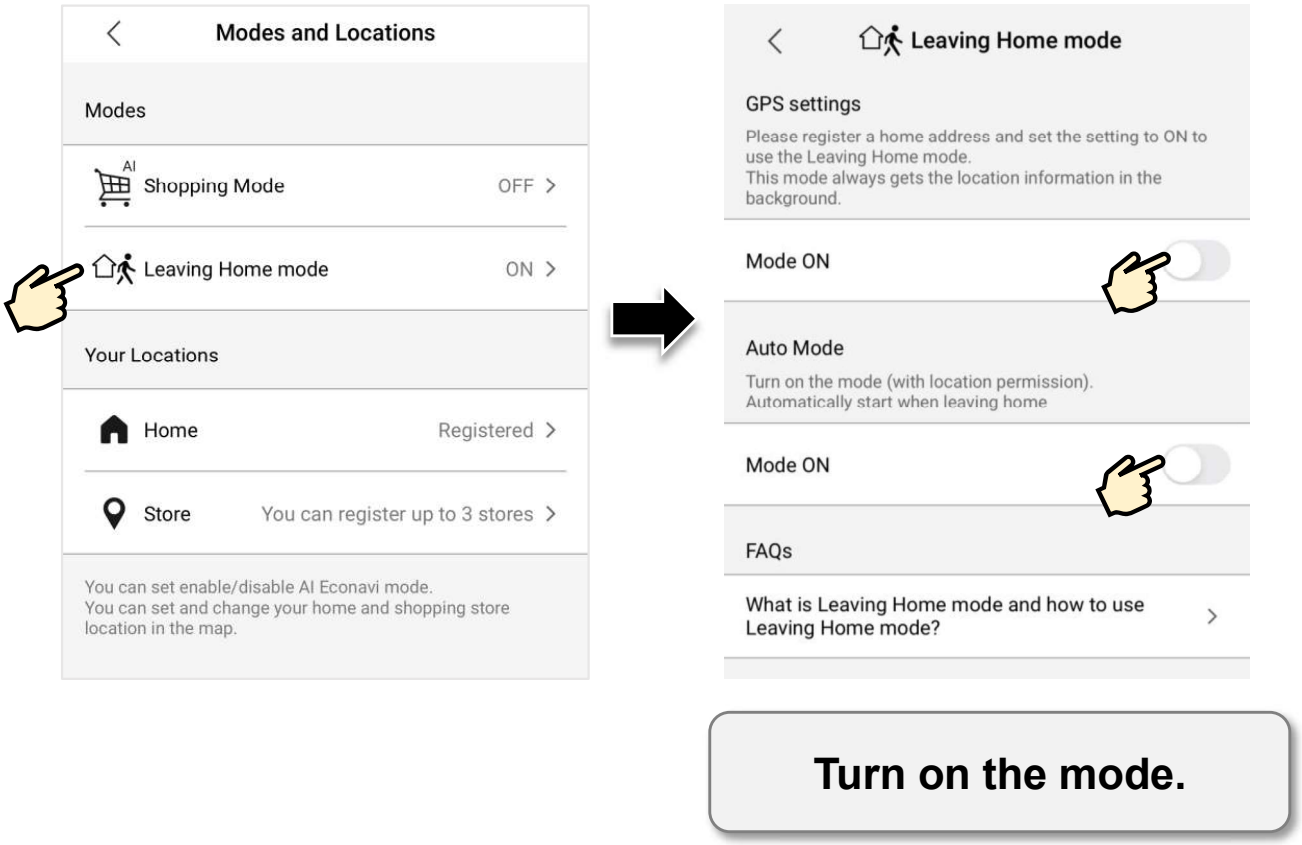



**Turn on the mode.**

# Settings (5)

## ■ Modes and Locations (Continued)

### Leaving Home Mode




**Turn on the mode.**

- **GPS settings**: When GPS setting in Leaving Home mode is on and you leave home (100 meters away from the registered home location), the application will send a confirmation message to activate the Leaving Home mode, then please confirm to activate the mode.
- **Auto mode**: If you turn on Auto mode, Leaving Home mode will automatically activate when you leave home without your confirmation each time. Auto mode can only be selected after GPS Settings is ON.

# Settings (6)

**Attention**

- Leaving Home mode automatically turns off only when you return home at least 15 minutes after leaving home. If you return home less than 15 minutes and you would like to turn off this mode, please set up manually on the application.
- Shopping mode and Leaving Home mode base on your location to determine whether you are leaving Home or going to Store to display the corresponding message. When Shopping mode is active, if Leaving Home mode is activated, Shopping mode will automatically turn off and vice versa.
- If the refrigerator is operated by multiple smartphones, Shopping mode and Leaving Home mode will send notification to each smartphone based on its location.
- If Home and Store are near each other, you may receive a notification to activate Shopping mode while you are at Home, since the radius of Home coincides with the radius of Store.
- Since Shopping mode and Leaving Home mode use GPS signals, the performances of them depend on many factors such as mobile device, geographical location, network status, operating system, etc.

  For example:

  The response may vary depending on whether you are using an iOS or Android device.
- Notifications may take about 30 minutes to be sent to your smartphone or not be sent in some cases by unexpected troubles.

# Settings (7)

## ■ Update Settings

**Update settings**

When you change the Wireless LAN router

When you repair the appliance

When you change the smartphone

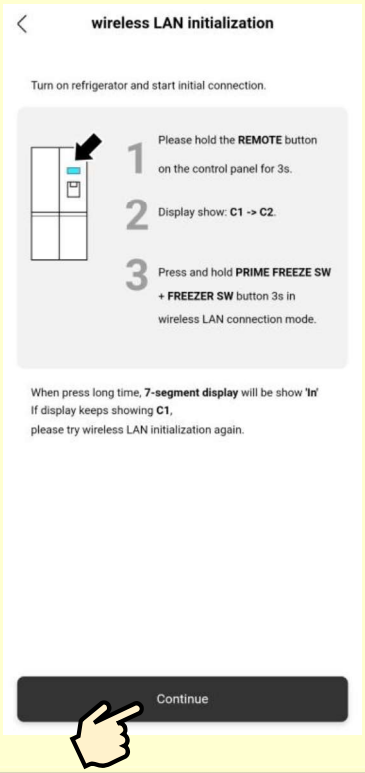
When the owner of the appliance changes

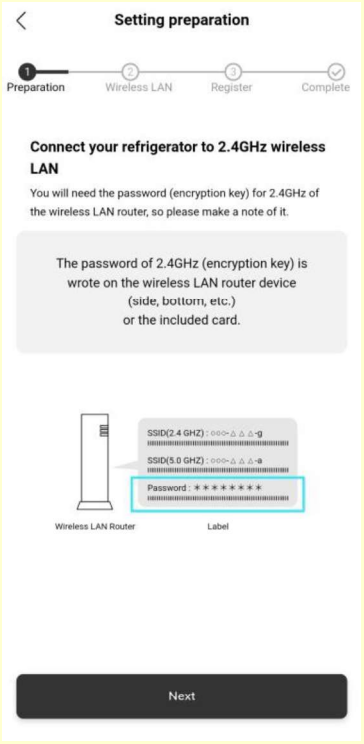
**Connect to new wireless LAN router (Wi-Fi router) or reconnect your LAN router which router name change or password change.**

**Re-establish the original connection after repairing the device.**

**Instructions for downloading the Panasonic SmartApp+ application when you change to a new smartphone.**

**Setting instructions when the owner of the device changes.**



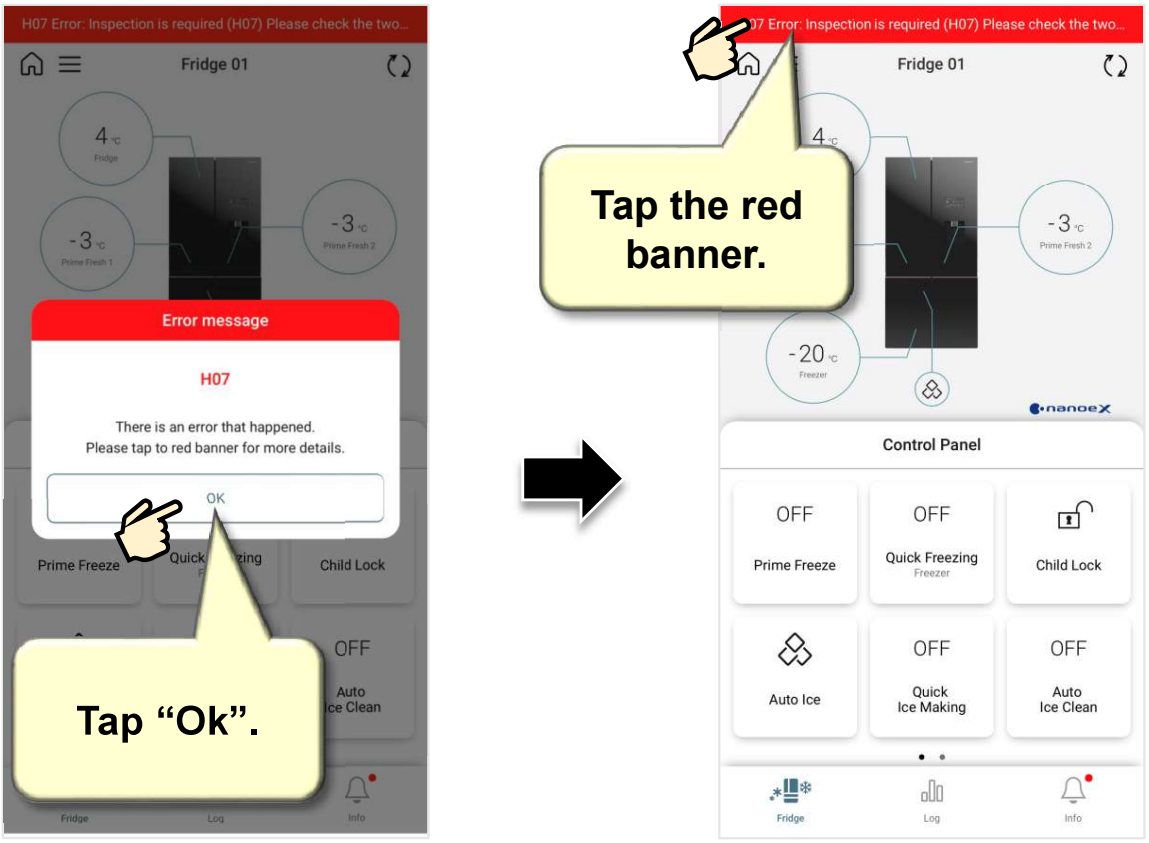



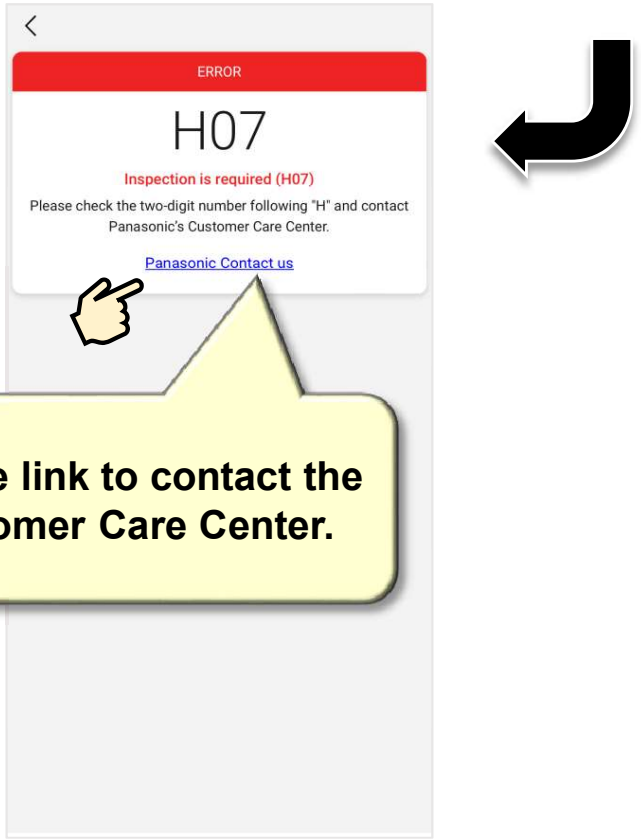

**Follow the instructions to delete all accounts connected to the refrigerator in the past.**

**Set the new owner's connection.**

# Troubleshooting

**When the device has an error, the application will give an error message, please take the steps below to contact to the Customer Care Center.**



INVERTER

Panasonic



# Operating Instructions
# Refrigerator

**For Household Use**

## Model No.: NR-XY680L

## Contents


- Safety Precautions ..... 2
- Usage Precautions ..... 6
- Installation ..... 8
- Parts Identification ..... 19
- Operation Panel ..... 21
- Temperature Control ..... 22
- ECONAVI Operation ..... 24
- nanoe™ X ..... 24
- Quick Freezing ..... 25
- Prime Fresh+ ..... 25
- Prime Freeze ..... 26
- Quick Ice Making ..... 28
- Auto Ice Off and Auto Ice Clean ..... 29
- Child Lock ..... 29
- Filter Change ..... 30
- Wireless LAN ..... 30
- Fridge compartment ..... 32
- Prime Fresh case ..... 34
- Freezer compartment ..... 35
- Water Filter Cartridge Installation and Replacement ..... 38
- How to clean the Refrigerator ..... 40
- Panasonic SmartApp+ ..... 47
- Troubleshooting ..... 51
- Specifications ..... 58
- Disposal ..... 58
- Copyright ..... 59


■ **NON-CFC**
**NON-CFC MATERIALS** have been used for the refrigerant (R600a) and for the insulation (Cyclo-Pentane), making this product better for the Earth's Ozone Layer.

Thank you for purchasing the Panasonic product.

- Please read these instructions carefully and follow safety precautions on page 2-7 before using this product.
- Please make sure the date and name of store of purchase are stamped in warranty card and keep it with this operating instructions.

AU/NZ


ARAH1E203472
P0623-2073
Printed in Vietnam

# Safety Precautions

**Please be sure to follow these instructions.**

## WARNING

This sign means: It may lead to a serious injury or death.

These signs mean prohibited action.

This sign means required action.

This sign means the appliance must be earthed to prevent electric shock.

## CAUTION

This sign means: It may result in injury or property damage.




**iso-butane**

Risk of fire / flammable materials.

**Otherwise, it may cause a fire, injury, electrical shock.**

## WARNING

### In case of emergency:




- Maintenance work should only be carried out by a qualified technician.

- **Do not** store explosive substances, such as aerosol cans with a flammable propellant, etc. in the refrigerator.
- **Do not** use electrical appliances such as a deodorizer in the refrigerator. Leaked refrigerant may catch fire from a spark of the electrical contacts and may cause an explosion.
- **Do not** use electrical appliances inside the food storage compartments of the appliance, unless they are of the type recommended by the manufacturer.

- **Do not** disassemble, repair or modify the refrigerator by yourself. If you want to repair the refrigerator, please consult your dealer or authorized service center.
- **Do not** use mechanical device or other means to accelerate the defrosting process, other than those recommended by the manufacturer.

### When recycling the product:

- Before taking the refrigerator to be recycled, please remove all the door opening seal to prevent locking a child in it.
- The warning labels mentioned above should be kept throughout the life of the refrigerator.
- The operating instructions should be handed over to any person who would use or handle the refrigerator whenever the refrigerator would be transferred to another location and delivered to a recycling plant.
- In regards to local laws, Cyclo-Pentane is used for insulation of this refrigerator. When you throw away this unit, please discard it by proper method and do not dispose it by burning.

Otherwise, it may cause a fire, injury, electrical shock.

# ⚠ WARNING

**For power plug and cord:**

- **Do not** plug or unplug with wet hands.
- **Do not** let the cord or plug be damaged.

---

- Disconnect power plug when cleaning.
- Only plug into a wall outlet of the correct rated voltage and current, and fully insert the plug on its own.
- Reserve one socket for the refrigerator only. Avoid connecting many appliances to the same socket and and unroll the full length of the cord.
- Remove dust periodically from the power plug.
- If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- If you detect burning smell, disconnect the power plug and ventilate the kitchen.
- **Stop** using the refrigerator and unplug the unit immediately if there is an abnormality or failure. Abnormality and failure examples:
  - Power cord or plug is abnormally hot.
  - Power cord is deeply cut or deformed.
  - There is burning smell.
  - You can feel tingling electricity.

**When using:**

- **Do not** damage the cooling circuit (piping on the back).
- **Do not** touch the compressor and pipes, because of high temperature, that there is a risk of burn injury.
- **Do not** let any children hang onto the refrigerator's door, it may fall and injure the child.
- **Do not** place or store open containers of water on top of the refrigerator. Spilled water can cause electrical shocks or combustion.
- **Do not** place multiple socket-outlets or portable power supplies at the rear of the appliance.
- Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction.

---

- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge of using the appliance, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the refrigerator.

**When installing:**

- Danger can occur when the appliances is unbalanced, make sure the feet are secure and appliance is level.
- When positioning the appliance, ensure the power cord is not trapped or damaged.

- Ensure that the refrigerator is plugged into an earthed mains socket.

Otherwise, it may cause a fire, injury, electrical shock.

# ⚠ WARNING

**R600a refrigerant warning:**

This appliance contains flammable R600a refrigerant. Avoid safety hazards by carefully installing, handling, servicing and disposing of this appliance.

- Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction.
- Ensure that the tubing of the refrigerant circuit is not damaged during transportation and installation.
- Leaking refrigerant may cause eye injuries or ignite.
- The room for installing appliance must be at least 1 cubic metre per 8 gram of refrigerant.The amount of refrigerant in the appliance can be found on the rating plate inside the appliance.
- If you are unsure of the refrigerant, check the rating plate inside the refrigerator compartment.
- It is hazardous for anyone other than an Authorised Service Person to service this appliance. In Queensland Australia the Authorisation Service Person MUST hold a Gas Work Authorisation for hydrocarbon refrigerants to carry out servicing or repairs which involves the removal of covers.
- Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.

**Water Connection System Warning (For Auto Ice and Water Dispenser models only)**

- Before installing the Water Connection System, read the steps for installing (Page 12 - Page 18) and follow the instructions carefully to minimize the risk of water damage.
- Installation and use MUST comply with all state and local plumbing codes. Check with your local public works department for plumbing codes. You must follow their guidelines as you install the Water Connection System.
- Only connect your Water Connection System to safe drinking water to avoid illness or poisoning.
- **Do not** reuse any existing water connections. When installing the product, please use new tubing supplied with the refrigerator.
- **Do not** install if water pressure is above 827 kPa (120 psi) or below 172 kPa (25 psi).
- The Water Filter Cartridge should be changed when the Filter Change LED on the Operation Panel is illuminated orange. The replacement of Water Filter Cartridge is recommended every 6 months.
- Installation of the Water Connection system should be carried out by a licensed plumber or the Panasonic Authorised Repairer.

Otherwise, it may cause a fire, injury, electrical shock.

# ⚠ WARNING

- Water Filter replacement is the consumer's responsibility and will not be covered by the warranty except in the case of faulty parts or materials with the Water Filter Cartridge.
- Replacement parts can be purchased at all authorized service centers. (This service is available to selected markets only).
- In cases of excessively reduced filter life, we recommend that you consult a local plumber or your water supplier for advice on suitable filtration requirements for the water supplied to your home.
- If Auto Ice maker and Water Dispenser are not used for a long period of time, or the water or ice has an unpleasant taste or odour, please dispose of remaining water and ice and clean the Auto Ice making system.
  Detail of Auto Ice Clean, please see in Page 29.
  If the problem persists, please replace the Water Filter Cartridge.
- Avoid contact with the moving parts of the Auto Ice maker mechanism, and do not place your fingers on the Auto Ice maker mechanism while the refrigerator is in operation.
- When using any electrical device (such as a power drill) during installation, be sure the device is insulated or wired in a manner to prevent electric shock.
- **Do not** use on hot water supply. The Water Connection System is designed with maximum inlet temperature by 43°C.
- **Do not** install system in areas where the ambient temparature may go above 43°C or drop below 5°C.
- **Do not** install the Water Filter in a location that is susceptible to freezing temperatures.
  Freezing the Water Filter may lead to reduced filter performance, causing property damage from water leakage or flooding.
- **Do not** install the filter or any water tubing in direct sunlight as prolonged exposure to light can weaken plastic components.
- **Do not** allow children under 3 years old to have access to small parts during the installation of Water Connection System to prevent the risk of choking.

Otherwise it may cause injury, accidents.

# ⚠ CAUTION

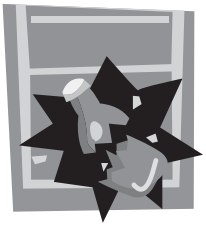
**When opening/closing the doors:**

- While opening the refrigerator, be careful not to pinch other one's hand holding the door.
- Mind the gap between the doors. They may nip your hand while closing the door.



**When storing food:**

- **Do not** freeze glass bottles, that there is a risk of injury.
  (If the liquid in a glass bottle is frozen, then the bottle may break and you may be injured.)
- **Do not** add a high impact on glass trays. (Otherwise those glass trays may break and you may be injured.)



**When moving the refrigerator:**

- Hold the refrigerator tightly when transporting.
- Apply protective covering, etc. to floors with a fragile surface.

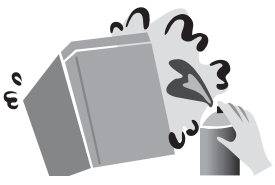
## Usage Precautions

**When opening/closing the doors:**

- **Do not** refrigerate items which are bigger than tray or shelf, as the door will not close completely causing leakage of cool air.
- **Do not** open refrigerator frequently or leave it open for long time in order to prevent water dripping inside and waste energy.
- Frequently check the door opening seal, it must fully seal to the refrigerator's body.

**When cleaning:**

- **Do not** clean the refrigerator with chemical substances or liquids. It will cause damage and lead to corrosion on the surface.



# Usage Precautions

**When using:**




- When the plug is disconnected, leave it for 7 minutes before plugging again. If not, the compressor may not work.
- Adjust the temperature according to the actual operating condition for energy saving.
- The humidity inside the fresh case may condense so wipe it with a cloth periodically. Clean the fresh case once a month.
- If you will not be at home for several days and there are nothing refrigerated in the refrigerator, the plug should be disconnected for energy saving. When the refrigerator is not used for several days, it is necessary to take out all remaining food inside the refrigerator, clean and open the doors for a few hours to let the moisture inside the refrigerator dry out, avoiding mold and oxidation of components.
- The outside wall of refrigerator cabinet may sometimes get warm, especially just after installation. This is quite normal, and is due to the built-in Mullion Dryer Pipe which prevents sweating and radiates heat.
- When humidity is high, e.g. during rainy-season, condensation may appear on the surface of cabinet, especially around the door seal gasket. Wipe off the condensed water with a clean cloth.
- **Do not** keep the door open any longer than necessary, particularly in hot, humid weather.
- The top of the refrigerator is made of steel in order to prevent fire caused by external influences. **Do not** put things on top of the refrigerator.

**When storing food:**



- **Do not** overload the refrigerator. Gaps must be provided between foodstuffs to maintain the cooling effect.
- Store fruits and vegetables in vegetable case, where trapped moisture helps preserve food quality for longer time periods.
- Drinking water and beverage bottles should be sealed to prevent odor contamination.
- Food stuff such as vegetables, fruits and fresh food should be wrapped or packed in a box or storage container before freezing.
- Meat and Fish should be put in the Freezer compartment if you want to store them for an extended period.
- Cover juicy food with tight lids, plastic film or foil.

**While using the Panasonic SmartApp+"...**

Radio waves from the refrigerator's wireless LAN module may cause interference to other devices. Therefore:

- Individuals with pacemakers must keep at least 15 cm away from the refrigerator.
- The refrigerator must be placed away from medical equipments and automated equipment (automatic doors, fire alarms, etc)

# Installation

## The distance required for installation

1 cm

- The top of the refrigerator is at least 1 cm from the ceiling.



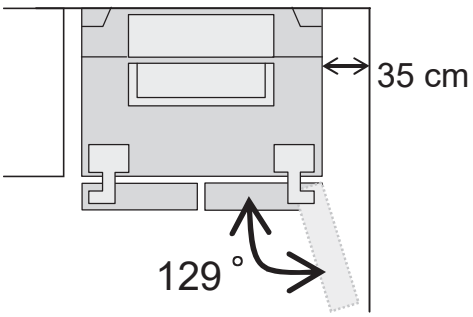
3 cm

- The left and right sides of the refrigerator are at least 3 cm from the walls.

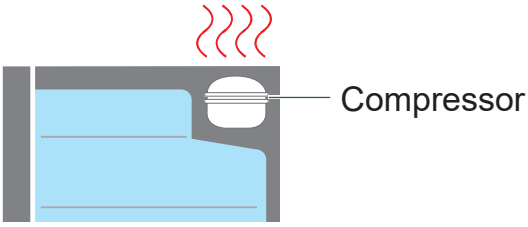
- The back of the refrigerator is at least 5 cm from the wall.

### Caution

- In case the refrigerator is placed near to walls, it is necessary to ensure that the space between the left or right side of the refrigerator and the wall is at least 35 cm. If this space is less than 35 cm, the doors may not be fully opened and the glass trays, vegetable case, etc. could not be taken out.




- Do not place any objects on top of the refrigerator. It may become hot due to heat generated by the compressor at the top of the refrigerator. If it is difficult to release heat, the cooling capacity may be lowered.



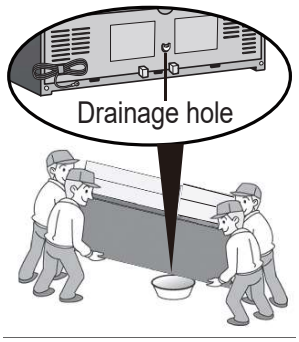

- When using for the first time: clean the inside of the refrigerator.
  - Use a soft damp cloth to clean the refrigerator.
  - Rinse the Water tanks, Water filters and Ice trays.
  - The smell of plastic could be smelt during the first time using the refrigerator. If the smell is a concern, it is recommended to ventilate the room.
- **Do not** place the refrigerator in a humid place as rust may form and may cause electric leakage.
- **Do not** place the refrigerator exposing to direct sunlight as the heat and sunlight will increase the temperature affecting the cooling capacity.
- **Do not** place the refrigerator near heat sources such as cooking stove or oven.
- **Do not** block the openings around the refrigerator.
- The refrigerator must be placed in an area where there is good air circulation.
- If the refrigerator is to be placed on an uneven surface, please adjust the adjuster bolts to ensure that the refrigerator is stable.

## LED lamp and grounding

- The refrigerator LED lamp, specifically designed for this refrigerator. Do not replace it by yourself. If the LED lamp needs to be replaced, please contact Panasonic service center.
- If there is no grounding wiring plug in the refrigerator, it should be connected with a grounding connection to prevent electrical hazards from electrical leakage.

## Moving or transporting

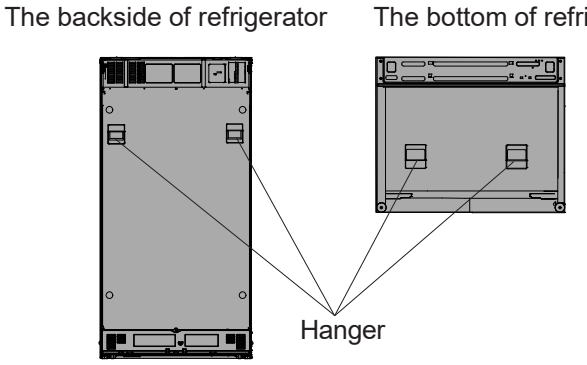
### ※ Before moving and transporting




1. Remove any food items and dispose of any ice cubes or water that remain in the refrigerator.
2. Unplug the refrigerator.
3. Adjust the adjuster bolts (left and right) so that they do not touch the floor.
4. Place a container underneath the drainage hole, then slowly tilt the refrigerator backward to drain water from the drainage hole. This action requires 4 or more people, of which 2 people lift the front of the refrigerator to prevent the refrigerator from sliding and avoiding the risk of accidents.

### ※ How to move and transport

- At least 4 people are required to transport the refrigerator.
- Each person lifts a corner of the refrigerator, 2 people lift the backside of the refrigerator and 2 people lift the bottom of the refrigerator so that their hands are on the hanger positions of the backside and bottom of the refrigerator.
- Do not transport by holding the refrigerator doors.




## Caution




- It is recommended to use the hangers when moving and transporting.
  Do not carry the refrigerator horizontally to avoid the risk of danger due to the heavy weight.
- When transporting, use tape to secure the refrigerator doors and avoid letting the doors open by itself.
- Do not place the refrigerator on its side when transporting, as this may cause damage to the refrigerator.
- After installation, wait at least 4 hours before plugging in the power to ensure that the gas and oil in the compressor are in a stable state.

**When the left/ right doors are deviated (or the height is not the same)**

Turn the adjuster bolt on the lower side, as shown in Image 1, in order to adjust the level. The Fridge/ Freezer doors may tilt within four to five days after installation due to the load of the food or adaptation to the floor surface, turn the corresponding adjuster bolt with the dedicated tool to adjust and level the door again to restore.

If the Fridge doors are still deviated after adjusting the adjuster bolts as above, continue to use Washers A[*1] as shown in Image 2 to adjust the height of Fridge door.

1. Determine the deviation between Fridge doors.
2. Select Washer A[*1] with appropriate thickness(1 mm, 1.5 mm or 2 mm).
3. Lift and hold the lower Fridge door.
4. Fit a Washer selected in step 2 into the hinge position of the lower Fridge door.
5. Check the balance again between the Fridge doors.

In case Freezer doors are deviated, use Washers B[*2] and apply the same steps as Fridge doors.

[*1] Washer is used for Fridge doors adjustment.
[*2] Washer is used for Freezer doors adjustment.

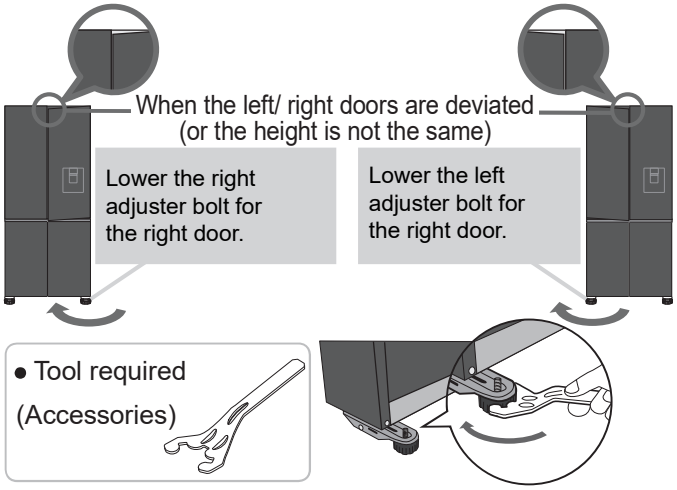



Image 1

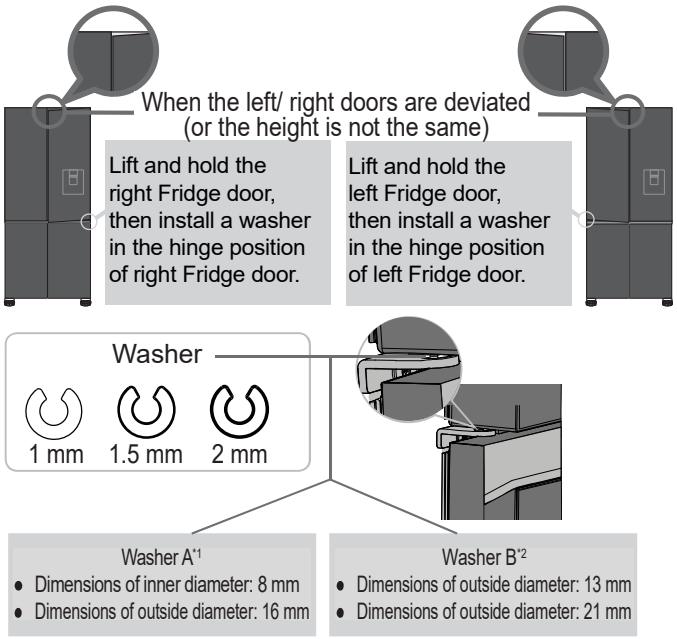


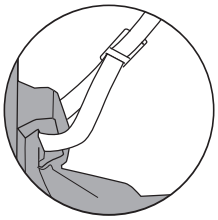

Image 2

**Remark**

- Use only one Washer for this purpose. Two or more Washers may slip out or make rubbing sound.
- Use the correct Washers for the Fridge/ Freezer doors adjustment.
- Do not lift the door too high. The door can touch and damage the top cover.
- Keep Washers out of reach of children.
- Keep the remaining Washers for future use.

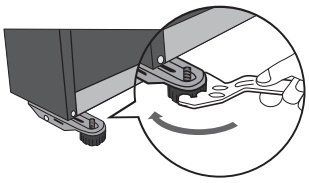
**Have any measures been taken against tipping due to earthquakes?**

In order to prevent the refrigerator from tipping due to earthquakes, permanently fix it by using belts, etc.



**Fix the refrigerator.**

Turn the adjuster bolts (right and left) until they reach the floor to stabilize the refrigerator.



**Refrigerator doors should not be opened during the interior cooling process.**

The doors should not be opened until the interior has been cooled down sufficiently. (Warm air flowing into the interior will block the cooling function.)

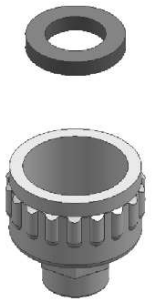


**Please wait until the interior has cooled down.**

- The refrigerator may take at least 4 hours (or longer especially in summer when the ambient temperature is high) of continuous running to cool down the interior, in the condition of no food items inside and the doors are not opened.
- Depending on ambient temperature and usage condition, it may take 24 hours to cool down the interior and achieve the correct temperatures.

## Installation of Water Connection System

※ **List of Water Connection System accessories**



①



②



③



④



⑤



⑥



⑦

① 1 x Joint Water Supply Block (1/2″)
② 1 x Dual Check Valve Assembly Block
③ 1 x Water Filter Cartridge & Filter Head
④ 1 x Joint Tube
⑤ 4 x Joint Clips (1/4″)
⑥ 1 x Sub Filter Bracket
⑦ 2 x Truss M4x25 (for fixing Sub Filter Bracket)

- Dual Check Valve must be installed to prevent backflow.
- The new tubing supplied with the refrigerator is to be used, old tubing from old water and ice connections should not be used.
- Ensure the Tube Inlet is correctly connected to the Dual Check Valve.
- A licensed plumber installs a new water supply outlet nearer to the appliance should the tubing supplied not be long enough.

  It is not recommended that the tubing be extended as this could adversely affect the flow of water to the ice maker or Water Dispenser.
- An isolator ball valve be installed by a licenced plumber for water pressure adjustment and water supply shut off to the refrigerator.
- A noise reduction valve can also be fitted in the water supply line. This will reduce water hammer and its effects from quick action household taps and fast acting valves on appliances.
- Panasonic does not accept responsibility for damage, including water damage caused by faulty installation or plumbing.

**Caution**

- **Do not** cut any length of tube shorter than 200 mm (7.87″).
- **Do not** fix Water Filter to the refrigerator.
- **Do not** install Water Connection System near electrical wires or water pipes that will be in the path of drilling when selecting the location of the filter system
- **Do not** fix the Water Filter in such a position that it will be struck by other items, such as wastebaskets, etc.
- **Do not** install the Water Filter or any water tubing in high temperature areas eg in a ceiling cavity.
- **Do not** install in a location that is susceptible to freezing temperatures as damage to the housing could occur.
- AVOID contamination of pipes during installation.
- **Do not** use copper tubing. The plastic tubing supplied should always be used.

※ **Water Connection System installation instructions**

**Step 1**: Ensure the refrigerator is NOT plugged into a power supply.
**Step 2**: Locate a cold water supply that is suitable for water connection.
**Step 3**: Connect 200 mm (7.87″) Tube Filter Inlet (blue tube ¼″) of ② Dual Check Valve Assembly Block with ③ Water Filter Cartridge & Filter Head as instructed in Figure 1.

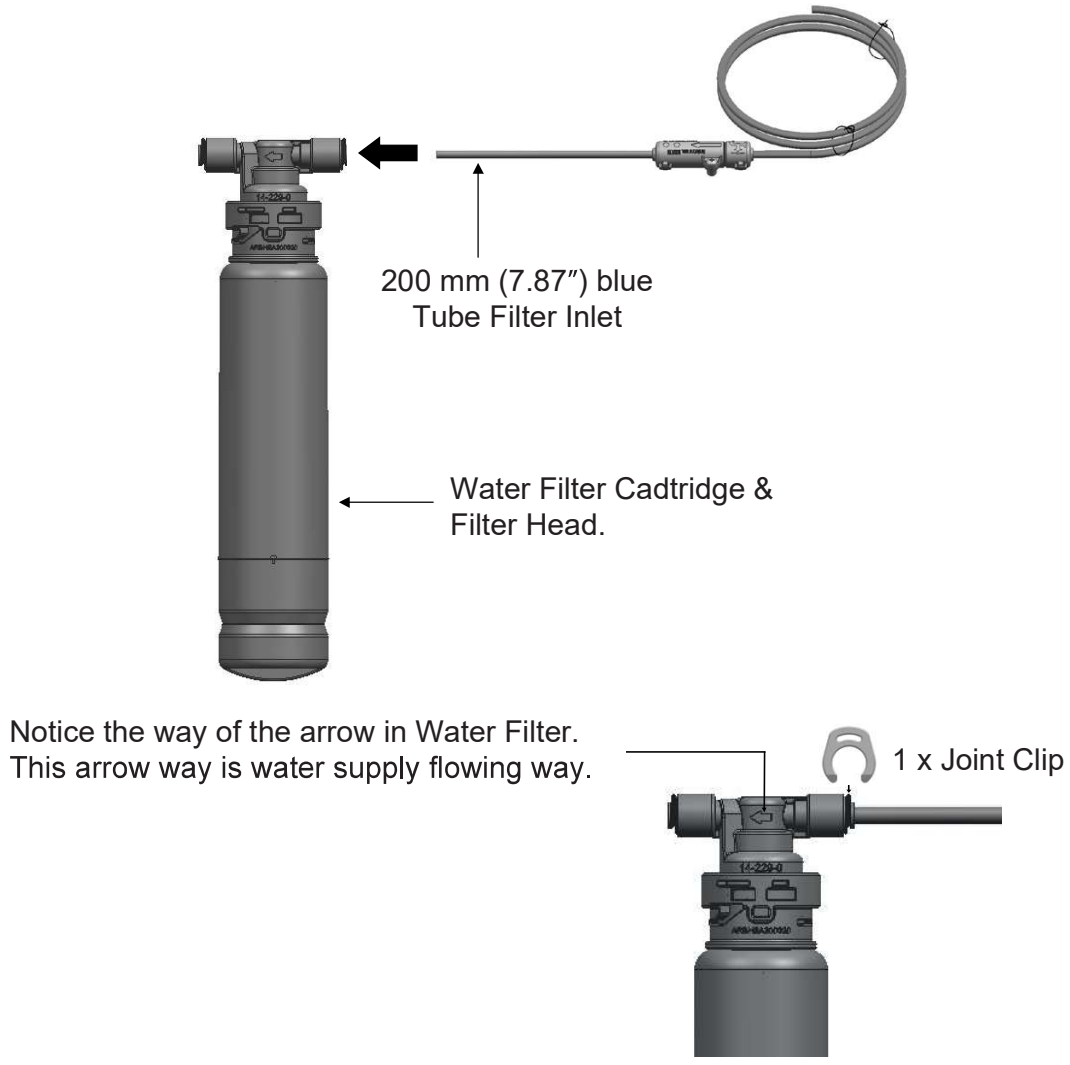



**Figure 1**: Connect 200 mm (7.87″) Tube Filter Inlet of Dual Check Valve Assembly Block with Water Filter Cartridge & Filter Head

**Step 4**: Decide the position to fix the Water Filter.

Determine the length of tubing that can be connected from the fixing position of Water Filter to the location of water supply, it's called “Tube A” (Refer to Figure 2).

Cutting tube surface should be flat and perpendicular with the length of tubing to prevent water leaks.

※ **Before cutting**




※ **After cutting**

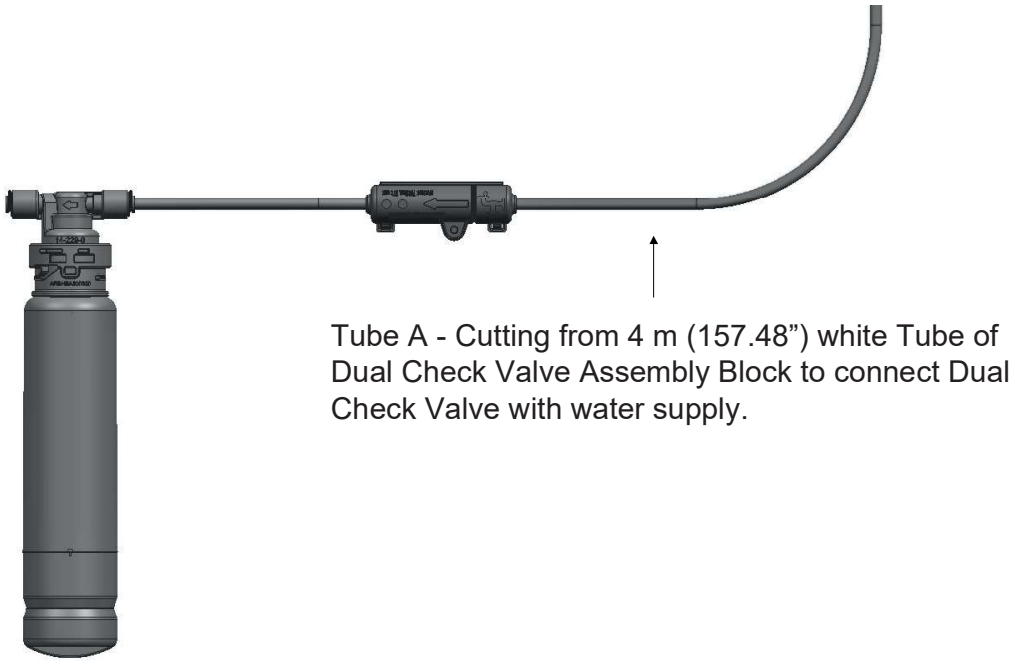
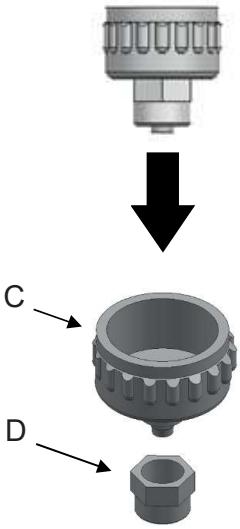
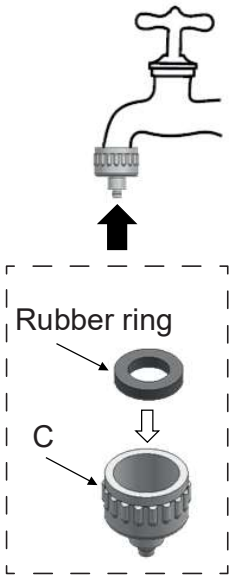



**Figure 2**: Decide position of Water Filter and cutting “Tube A” to connect Dual Check Valve with water supply.

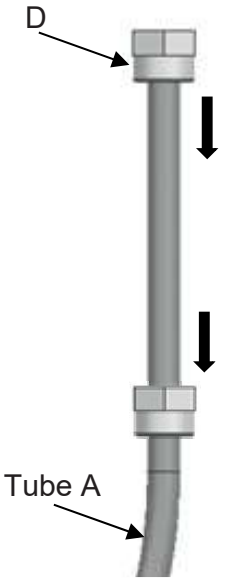
**Step 5**: Connect Joint Water Supply to water supply tab as instructed in Figure 3.



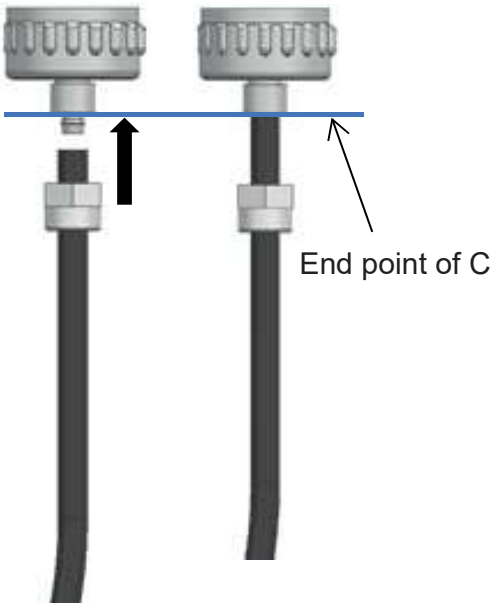

Disassemble C & D
of Joint Water Supply Block



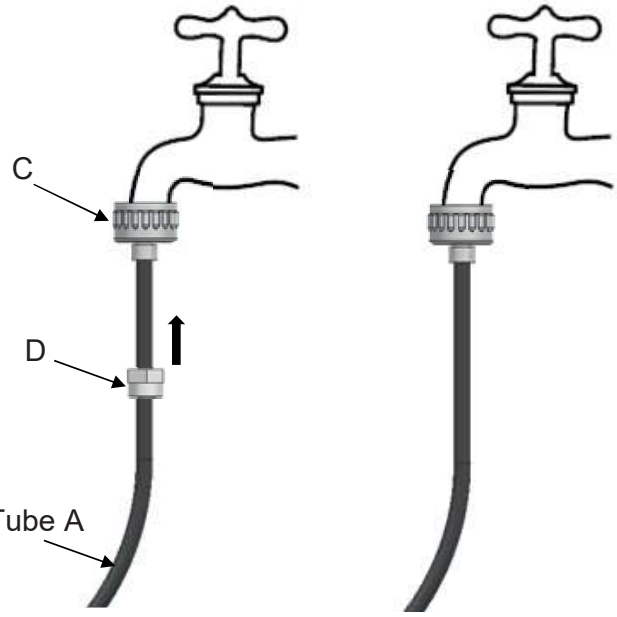

Connect C with Rubber ring
into water supply tab




Insert D into Tube A in Step 4
as shown in above image




Insert Tube A into C until Tube A
reach to end point of C.




Move up D and screw it to firmly fix Tube A
and C.

**Figure 3**: Connect Joint Water Supply to water supply tab

**Step 6:** IMPORTANT!

**To flush the Water Filter of any trapped air, aim the Water Filter into a bucket, turn water supply tap on and run the water through Water Filter at least 12 liters of water. Once complete, turn water supply tap off. This step is highly recommended to avoid water dripping.**

**Step 7:** Determine the length of tubing that can be connected from the refigerator to Water Filter, and cut or using the remaining after cutting Tube A of the 4 m (157.48″) Tube Valve Inlet (tube ¼″).

It's called “Tube B”.

Length of Tube B will be decided according to the location of refrigerator and Water Filter.

Cutting tube surface should be flat and perpendicular with the length of tubing to prevent water leaks.

**Step 8:** Connect refrigerator and Water Filter by “Tube B” and Joint Tube ④.

Plug the tube into the full depth of the Filter and Joint Tube (15 ~ 18 mm) (0.59 ~ 0.71″) to prevent water leaks.

Firmly fix the tube using Joint Clips (¼″).

After Step 8, please check again your tubing layout as Figure 4.

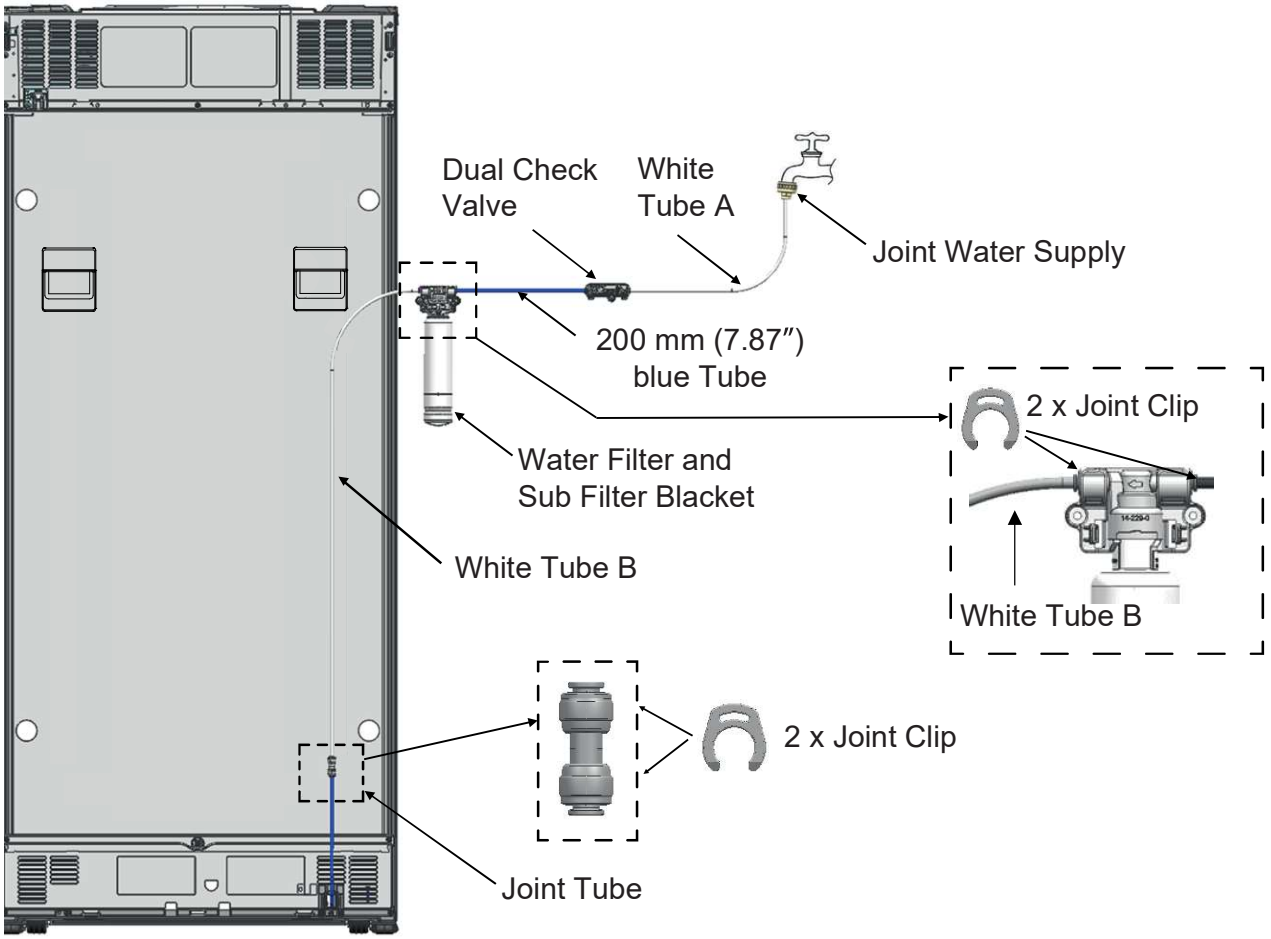



**Figure 4**: Designed Tubing layout

**Step 9:** Determine the mounting position for the Water Filter and fix the Sub Filter Bracket ⑥ with 2 pcs of Truss M4x25 ⑦ to a fixed surface.

The direction to fix Sub Filter Bracket is referred to in Figure 5.

Ensure the Water Filter is in a convenient location to access easily every 6 months for replacement.

Ensure the clearance from the bottom of Water Filter is at least 50 mm to perform filter removal (Figure 6).

Insert Water Filter to Sub Filter Bracket by inserting the Filter Head of Water Filter to hooks of Bracket until get the “Click” sound when Water Filter and Sub Filter Bracket are locked into place.

Move Water Filter down about 90° until get the “Click” sound when Water Filter is firmly locked into.

We recommend fitting the Water Filter in a vertical orientation with the Filter Head at the top as in Figure 6.

This will ensure the performance of Water Filter and minimise water leakage during replacement of the filter.

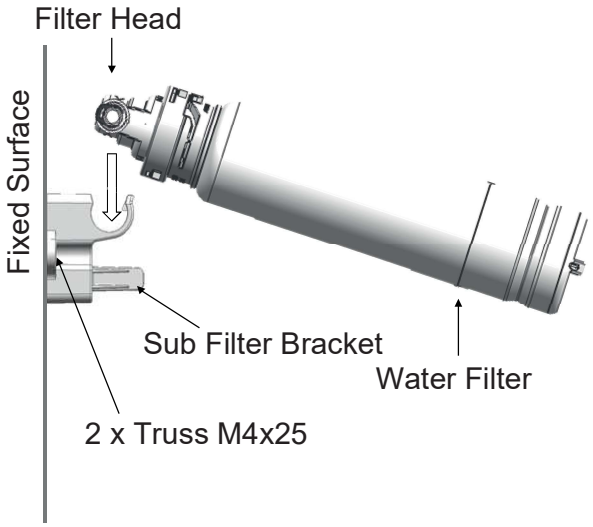



**Figure 5**: Sub Filter Bracket and Water Filter fixing direction.

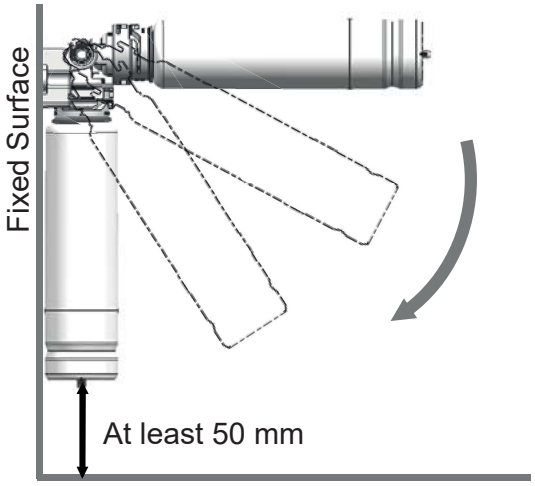



**Figure 6**: Water Filter usage setting.

※ **After Water Connection System installation**

- Check all connections carefully to prevent leaks.
- Switch on your refrigerator after finishing Water Connection installation.
- Allow at least 4 hours in continuous running for the refrigerator to cool down, in the condition of no food items inside and the doors are not opened.
- For the first time using Auto Ice making, please check the operation of Auto Ice Off mode (Page 29).

  If Auto Ice Off mode is in operation, turn off this mode.

  Activate Auto Ice Clean mode as the instruction in Page 29 to ensure the Ice tray is free from dust and eliminate unpleasant smells.
- **IMPORTANT!**

  **The first time you use your Water Dispenser, there will be a 1 - 2 minute delay while the tank fills. Please dispense continuously in about 30 seconds each time. Run through and discard approximately the first 3 liters of water, stopping intermittently to remove trapped air in the system.**

  **Failure to do this will result in excessive dripping from your dispenser.**
- **Step 6** is highly recommended to remove trapped air. If this step is skipped, please follow these below steps when using the Water Dispenser for the first time to avoid water dripping.

  ① Press the Water Dispenser to dispense 4 liters of water.

  ② Wait for 3 ~ 5 minutes before dispensing again.

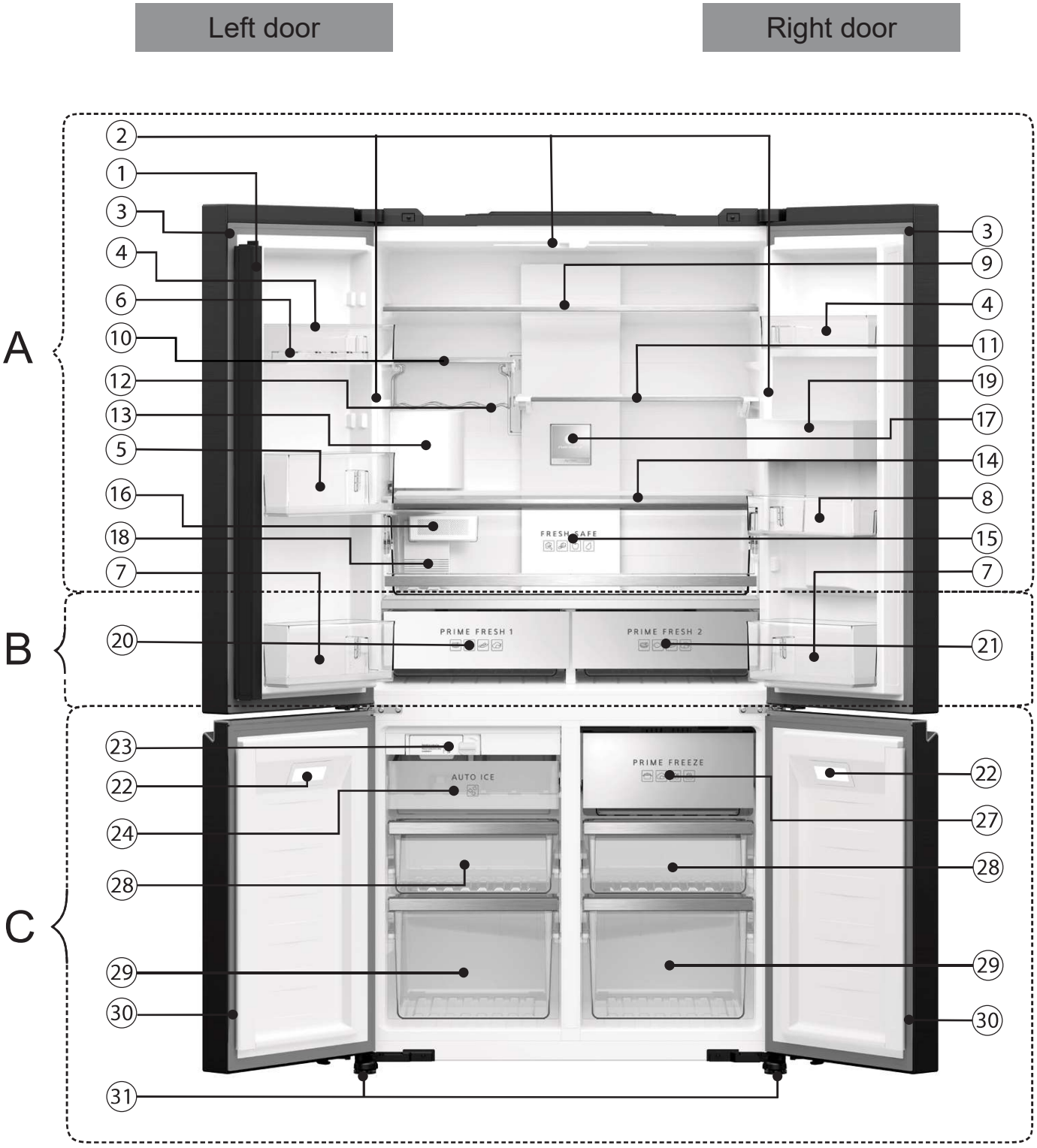
  ③ Dispense 4 liters of water then wait another 3 ~ 5 minutes.

  ④ Dispense another 4 liters of water. Your Water Dispenser is ready to use.
- Please note that after a few days once installation is completed, a few drops may appear from the dispenser as the remaining trapped air is cleared.
- Water Dispenser is set for water to flow out in about 1 second delay to prevent water from flowing out when accidentally touching the lever of Water Dispenser.

**Attention**

- The noise of water supply system is generated while taking in water.
  This is normal.
- The Water Dispenser, when first used will generate noise in the door of the refrigerator.
  This is caused by the air being pushed through the check valve.
- Do not peel off the tape that fixed the Water Tube behind the refrigerator, peeling off may cause a loud noise when taking in water.

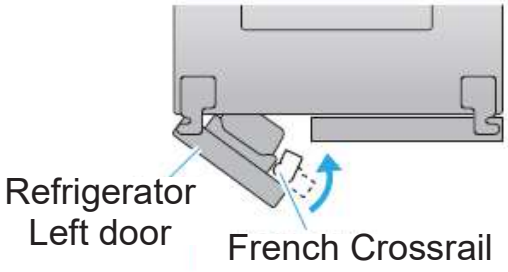
# Parts Identification



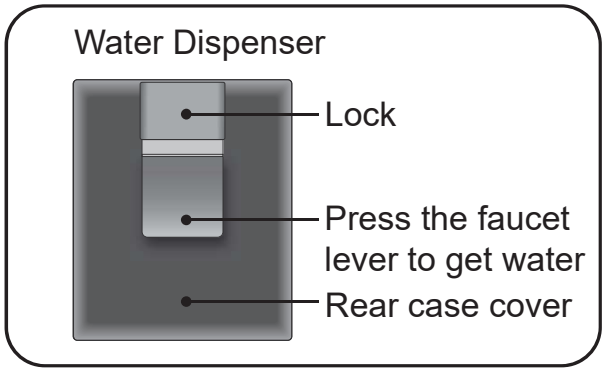
# Parts Identification

### A-Fridge compartment

① French Crossrail
The French Crossrail minimizes the gap between the left door and the right door of the refrigerator. If this French Crossrail is opened forward, put it back into place.
(Otherwise, the refrigerator doors cannot be closed fully, causing the refrigerator to lose cool air.)




② LED of Fridge compartment
(Quantity: 3 pcs)
③ Door gasket of Fridge compartment
(Quantity: 2 pcs)
④ Small door shelf (Quantity: 2 pcs)
⑤ Large door shelf
⑥ Egg tray
⑦ Bottle shelf (Quantity: 2 pcs)
⑧ Utility shelf
⑨ Large glass tray of Fridge compartment
⑩ Small glass tray of Fridge compartment
⑪ Slide glass tray
⑫ Wine rack*
⑬ Cover Auto Ice water supply
⑭ Glass tray of Vegetable case
⑮ Vegetable case
⑯ Moisture control filter for vegetable case
⑰ nanoe™ X
⑱ nanoe™ X device
⑲ Shelf cover
*The position of the Wine rack is not fixed and changeable to the purpose of use.
(Refer to Page 32)

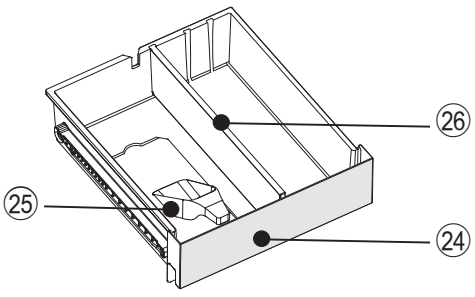


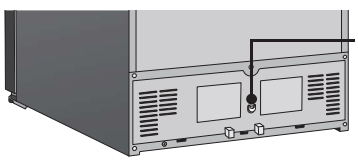

### B-Prime Fresh case

⑳ Prime Fresh case 1
㉑ Prime Fresh case 2

### C-Freezer compartment

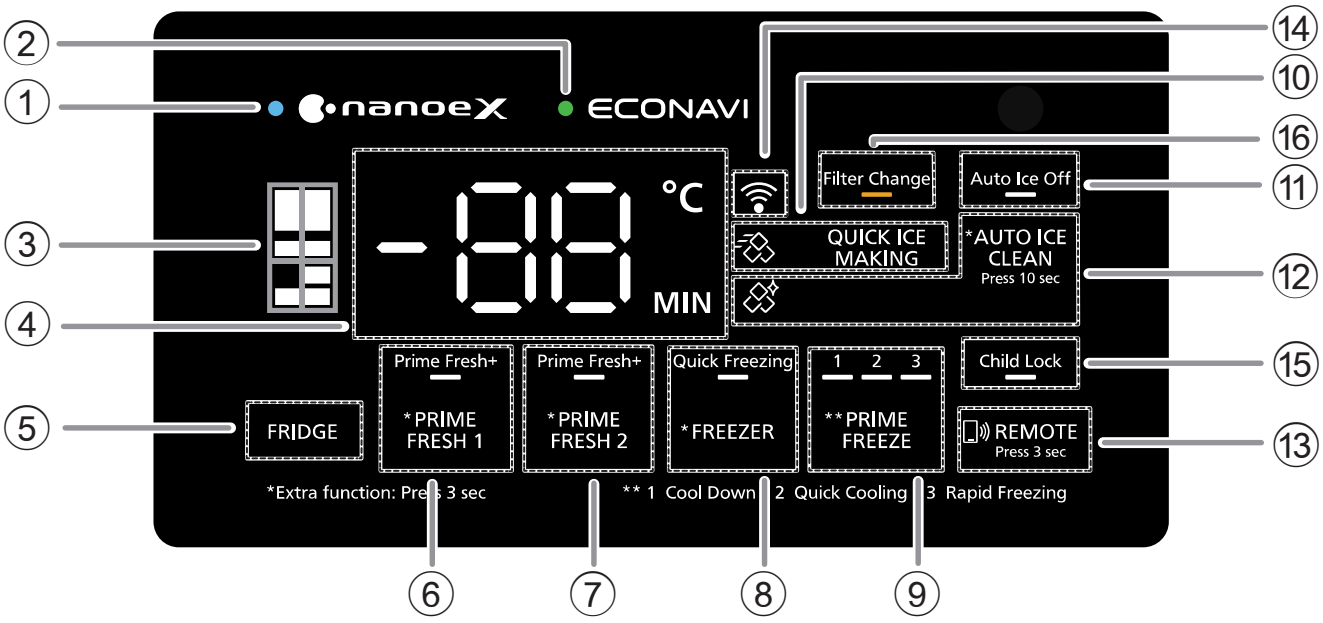
㉒ LED of Freezer case
(Quantity: 2 pcs)
㉓ Auto Ice maker
㉔ Ice box
㉕ Ice scoop
㉖ Customized divider
㉗ Prime Freeze case
㉘ Upper Freezer case
(Quantity: 2 pcs)
㉙ Lower Freezer case
(Quantity: 2 pcs)
㉚ Gasket door of Freezer compartment
(Quantity: 2 pcs)
㉛ Adjuster bolts



Product view from behind

# Operation Panel




① Icon and LED of nanoe ™ X: display the current status of nanoe™ X mode.

② Icon and LED of ECONAVI: display the current status of ECONAVI operation.

③ LED of compartments: the icon of the respective compartment will light up when the compartment is selected.

④ Temperature and time display area: display the temperature of Fridge compartment, Freezer compartment, Prime Fresh case 1, Prime Fresh case 2 and the time for modes of the Prime Freeze.

⑤ Temperature control button of Fridge compartment.

⑥ Temperature control button of Prime Fresh case 1 and LED of Prime Fresh+.

⑦ Temperature control button of Prime Fresh case 2 and LED of Prime Fresh+.

⑧ Temperature control button of Freezer compartment and LED of Quick Freezing.

⑨ Control button and LED for modes of Prime Freeze.

⑩ Control button and LED of Quick Ice Making.

⑪ LED of Auto Ice Off.

⑫ Control button and LED of Auto Ice Clean.

⑬ Control button of wireless LAN connection.

⑭ LED of wireless LAN connection.

⑮ LED of Child Lock.

⑯ LED of Filter Change.

# Operation Panel

**Remark**

- On the Operation Panel: “*Extra function: Press 3 sec”, means that you need to press and hold the button beginning with “*” mark for 3 seconds when you want to start the extra functions.
- Under normal conditions, the Operation Panel light will turn off. When you press the buttons, the Operation Panel light will turn on. The Operation Panel light will turn off and all the buttons will not operate when the refrigerator door is opened.
- In summer, when the temperature is high, if you put uncooled food in the refrigerator or open/close the refrigerator doors repeatedly, the temperature inside will increase and the displayed value will be higher than the setting temperature. Therefore, it is necessary to reduce doors opening times.
- When first plugged in, the Operation Panel will display the introduction of modes and the temperature of compartments for about 10 seconds. Buttons will not be active during this period of time. After 10 seconds, the Operation Panel can be adjusted normally.
- The LED of Filter Change will turn on orange every 6 months to notify the recommended time to change the Water Filter Cartridge.
- When cleaning the door surface of refrigerator, lock the Operation Panel by Child Lock mode to prevent unintended adjustment to the button on Operation Panel, please refer to Page 29.
- When connecting to wireless LAN, 3 buttons: “Prime Fresh 2”, “Auto Ice Clean” and “Quick Ice Making” on the Operation Panel will not work. The others “Fridge”, “Prime Fresh 1”, “Freezer”, “Prime Freeze” and “Remote” will work for wireless LAN connection mode. Please complete or cancel the wireless LAN connection mode to use the Operation Panel normally. (Refer to Page 30)

# Temperature Control

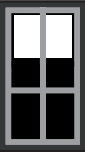
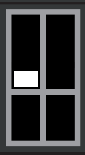
- Default setting temperature for Fridge compartment is 4 °C, Prime Fresh case 1 and Prime Fresh case 2 is -3 °C and Freezer compartment is -20 °C. The temperature setting for each compartment can be adjusted.
- The temperature setting range of the Fridge compartment is 1 °C ~ 7 °C, the Prime Fresh case is -5 °C ~ 4 °C (the temperature for soft freezing is -5 °C ~ -1 °C, and the temperature to use the Prime Fresh case as the Fridge compartment is 0 °C ~ 4 °C), the Freezer compartment is -23 °C ~ -15 °C.
- The temperature inside the refrigerator will vary depending on the ambient temperature, installation status, usage conditions and amount of food.
- Due to different testing methods and tools, the actual temperature may differ from the displayed temperature.
- This refrigerator is equipped with a processor to control the temperature inside the refrigerator. When the ambient temperature changes, the compressor runs or stops, the doors are opened or closed, the temperature inside the refrigerator and the temperature setting will have a slight difference.

## ■ Temperature setting instructions

**1. Display the current temperature**

Press the following icons to display the current temperature of these compartments: Fridge compartment, Prime Fresh case 1, Prime Fresh case 2, and Freezer compartment. The LED lights will indicate selected compartment and temperature when selected.

# Temperature Control

| Icon | Compartment | LED indicates position of the compartment | LED indicates temperature of the compartment |
|---|---|---|---|
| FRIDGE | Fridge compartment |  |  |
| * PRIME FRESH 1 | Prime Fresh case 1 |  |  |
| * PRIME FRESH 2 | Prime Fresh case 2 |  |  |
| * FREEZER | Freezer compartment |  |  |

**2. Temperature setting**

After pressing the icon of compartment (Fridge, Prime Fresh 1, Prime Fresh 2, Freezer) to display the current temperature, press again to start the temperature setting process. Then, LED indicates position of the compartment and LED indicates temperature of the compartment will flash.

Continue to press the icon of that compartment to select the desired temperature level. Each time the button is pressed, the temperature will increase by 1 °C within temperature setting range of the compartment. If the selection exceeds the compartment temperature range, the Operation Panel will display the temperature return to the lowest level in the above range.

**3. Complete temperature setting**

After completing the temperature setting, press another button to finish or wait for 5 seconds, the Operation Panel will save the setting that you have just made.

# ECONAVI Operation

The refrigerator detects the opening and closing of the refrigerator door and the brightness around the refrigerator to control operations automatically to ensure maximum energy saving.(*)




## ■ ECONAVI operation

- The refrigerator learns the lifestyle patterns of your family from door opening and time periods of infrequent use to maximize energy efficiency.
- The refrigerator learns your lifestyle patterns from the previous 3 weeks of use and uses that data from the 4th week onwards.
- The refrigerator performs the ECONAVI energy saving operation when it becomes dark around the refrigerator such as in the night.

## ■ Settings for enabling ECONAVI operation

- ECONAVI operation is enabled automatically when the temperature control for both the Fridge compartment and the Freezer compartment is set to 4 °C and -20 °C, respectively.
- ECONAVI operation does not operate if the “Quick Freezing”, “Prime Freeze” or “Quick Ice Making” mode is in operation.
- It is not possible to force start the ECONAVI mode.

**Remark**

(*) The effectiveness of the ECONAVI mode is dependant on the ambient temperature, ambient brightness and the number of times the refrigerator door is opened and closed and the state in which food is stored.

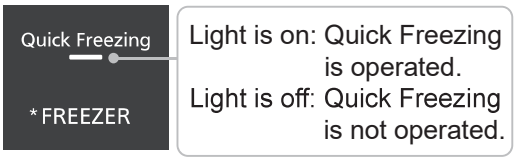
# nanoe™ X

- A nanoe™ is a nano-sized ion particle coated with water particles. nanoe™ X are nano-sized electrostatic atomized water particles with 10 times the OH radicals of nanoe™.
- nanoe™ X will start when the refrigerator is plugged in and always run when the refrigerator is in use. However, nanoe™ X requires moisture when operating, the effectiveness of this mode will be reduced if the humidity inside the Fridge compartment is reduced (such as when storing a few of vegetables, or tubers).
- The nanoe™ X device may cause a small sound during operation.
- After the doors have been closed a long time, when open the doors of the refrigerator, it is possible to smell the odor of ozone generated during nanoe™ X operation, this is a normal phenomenon.

# Quick Freezing

When “Quick Freezing” is set, the refrigerator will reduce the temperature quickly for better performance of preserving food.

■ **How to operate the “Quick Freezing” mode**




- Press and hold the “Freezer” icon for 3 seconds to start the Quick Freezing. Then, the light below the “Quick Freezing” icon will turn on.
- If you want to stop the Quick Freezing operation immediately, press and hold the “Freezer” icon for 3 seconds until the light turns off.

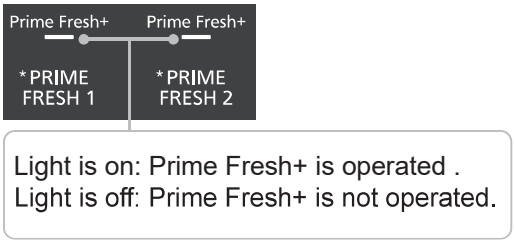
**Remark**

- The “Quick Freezing” operation will stop automatically after running for 150 minutes and return to normal mode. (The light LED [Quick Freezing] turns off.)
- The flashing LED [Quick Freezing] means that the defrosting system is currently working. The “Quick Freezing” mode will start right after the defrosting operation is finished.
- The temperature of the Freezer compartment will return to its previous setting when the Quick Freezing mode ends.
- The following modes will be stopped when Quick Freezing is turned on: “Prime Fresh+”; “Quick Ice Making”; “Prime Freeze”.

# Prime Fresh+

When “Prime Fresh+” is set, the Prime Fresh case will reduce the temperature quickly for better performance of preserving food.

■ **How to operate the “Prime Fresh+” mode**




- Press and hold the “Prime Fresh 1” or “Prime Fresh 2” icon for 3 seconds to start Prime Fresh+. Then, the light below the “Prime Fresh+” icon will turn on.
- If you want to stop the Prime Fresh+ immediately, press and hold the “Prime Fresh 1” or “Prime Fresh 2” icon for 3 seconds until the light turns off.

**Remark**

- “Prime Fresh+” will stop automatically after running for 105 minutes (when the ambient temperature is 18 °C or less) or between 145 ~ 150 minutes (when the ambient temperature is higher than 18 °C) and return to normal mode. (The LED [Prime Fresh+] turns off.)
- The flashing LED [Prime Fresh+] means that the defrosting system is currently working. “Prime Fresh+” will start right after the defrosting operation is finished.
- The temperature of the Prime Fresh case will return to its previous setting when “Prime Fresh+” ends.
- The following modes will be stopped when Prime Fresh+ is turned on: “Quick Freezing”; “Quick Ice Making”; “Prime Freeze”.
- “Prime Fresh+” will not start when the temperature of the Prime Fresh case is being set at 0 °C ~ 4 °C.

# Prime Freeze

Prime Freeze is a separate area located inside the Freezer compartment. This compartment is equipped with an individual fan system and high-class aluminum heat transfer plate, and modes to adjust the cooling time according to each food processing purpose in order to support the user in preparing dishes in a variety of way and save time.

## ■ How to operate Prime Freeze

1. Press the icon of the Prime Freeze compartment on the Operation Panel. Then, the LED indicates position of the compartment, the LED indicates mode 1-2-3(*) and the LED indicates operating time(**) of the Prime Freeze will turn on when selected.

| Icon | Compartment | LED indicates position of the compartment | LED indicates mode 1-2-3 | LED indicates operating time |
|---|---|---|---|---|
| **PRIME FREEZE | Prime Freeze |  | 1 2 3 | MIN |

(*) LED indicates mode 1-2-3:
- If the previous setting has not run out of time, the light will display the previous setting mode.
- If there is no time left from the previous setting, all LED indicates mode 1-2-3 will turn off.

(**) LED indicates operating time:
- If the previous setting has not run out of time, the remaining minute value will be displayed.
- If there is no time left from the previous setting, the minute value will be displayed as “--”.

2. If you continue to press the icon of the Prime Freeze compartment, the LED indicating the compartment position will flash. After this step, if the previous setting has not run out of time, the minute value will be cleared and displayed back to “--”. Press the icon of the Prime Freeze until the desired mode is selected. Each time the button is pressed, the LED displays the operating time in each respective mode.

3. Complete the setting
   After completing the temperature setting, press any other button to finish or wait for 5 seconds, the Operation Panel will save the setting that you have just made.

4. End mode
   After the setting time of a mode running out, the Operation Panel will display the time back to “0” and there will be a notification sound. The notification sound will repeat every 2 minutes for 6 minutes, until you press the “Prime Freeze” icon on the Operation Panel or when the Freezer compartment door is opened. If you do not take food out immediately after the end of the mode, your food may be frozen more than desired.

## ■ Modes of Prime Freeze

| Mode name | Display | Purpose of food processing | Mode (Unit: Minute) | Recommended type of food | Remark |
|---|---|---|---|---|---|
| **Cool Down**<br>1 Cool Down | 1 | Cooling down quickly the warm/hot food | 3 | • Rice (150 g)<br>• Potato salad (150 g) | - Do not cover the box with lid or food wrapper to ensure the effectiveness of Cool Down. If you are concerned about the smell of your food, you can use a lid or food wrapper to cover it, but the food may not be cold enough.<br>- 5 minutes is the estimated time for 1 lunch box (about 150 g of rice) or 200 g of prepared food. If the amount of food is larger, it may take longer to cool down.<br>- Quick Cooling can be used to cooling down over 200 ml of formula milk within 10 minutes.<br>- After cooling down the formula milk with Cool Down, it is necessary to check the temperature of the formula milk before giving it to the baby. |
| | | | 5 | • Rice (300 g)<br>• Potato salad (300 g)<br>• Formula milk (100 ml)<br>• Soup (150 ml) | |
| **Quick Cooling**<br>2 Quick Cooling | 2 | Cooling food quickly to save time for preparing food and desserts. | 10 | • Curry (200 g)<br>• Fish (100 g)<br>• Pudding (2 pieces)<br>• Jelly (2 pieces) | - For ingredients that need to be marinated or seasoned such as meat, fried/grilled fish, soy-marinated eggs, etc., put the ingredients and spices into sealed containers/bags. The ingredients will burst with flavor during the cooling process.<br>- For fresh meat, fish, and shrimp that may be difficult to slice/cut, the slicing/cutting will be easier after placing them in Quick Cooling mode.<br>- Use aluminum or metal cups for jelly or desserts. With ceramic or porcelain containers, food may not be cold enough.<br>- This mode can be used to cool beverages quickly. |
| | | | 15 | • Curry (400 g)<br>• Chicken drumstick (250 g)<br>• Pudding or Flan (4 pieces)<br>• Jelly or cakes made from gelatine (4 pieces) | |
| **Rapid Freezing**<br>3 Rapid Freezing | 3 | Freezing rapidly prepared dishes to ensure the preservation of prepared foods and save time for every day cooking. | 45 | • Beef (150 g)<br>• Steamed vegetables (1 bunch of broccoli)<br>• Vegetables (250 g of sliced cabbage)<br>• Fried chicken (250 g for 2 people)<br>• Sherbet (300 ml)<br>• Bread (2 pieces) | - Cover fresh food and steamed vegetables with food wrapper, freezer bags or cover with tight lids.<br>- Fried foods (e.g. fried chicken, fried shrimp/squid, spring rolls,...) should be placed onto an aluminum tray and use “Rapid Freezing”. After freezing the food, put them into freezer bags or containers for storage.<br>- This mode can be used to freeze some fruits such as strawberries, lychees, berries,... for long-term preservation. |
| | | | 60 | • Jellied meat (350 g)<br>• Half of a chicken (500 g)<br>• Beef (250 g)<br>• Cubed ice (1 tray) | |

# Prime Freeze

**Remark**

- Always place food on the aluminum heat transfer plate for the best effectiveness of cooling.
- When hot or wet food is placed on the aluminum heat transfer plate without a lid or food wrapper, the surface of the food may be frozen and the inside of Freezer compartment may be frosted. If you are worried, please use lids or food wrapper.
- If cooked food is still at a high temperature, it should be cooled down to about 70 °C before putting in the Prime Freeze case.
- Leaving a glass bottle or can inside the compartment may pose a risk of broken, cracking, or damage.
- Do not place the food which is higher than the height of the Prime Freeze case to avoid the risk that the Prime Fresh case does not close completely, causing frost and damaging food or food containers in the room.
- Do not touch the metal food container directly with wet hands, as there is a risk of frostbite.
- During the operation of Prime Freeze:
  - ECONAVI operation will be stopped.
  - The noise from the fan will be louder.
  - The power consumption will be higher than normal.
  - If Quick Ice Making, Quick Freezing, Prime Fresh+ are set, Prime Freeze will be stopped.
  - The flashing of [Prime Freeze] LED means that the defrosting system is currently working. “Prime Freeze” will start right after the defrosting operation is finished. This is a normal phenomenon.
- When Prime Freeze is not in use, this case can also be used as any other position in the Freezer compartment.
  - Small foods can be stored for easier finding.
  - The temperature in this room may be higher than the temperature in the entire Freezer compartment. For long-term preservation, please transfer food to the Freezer compartment.
- To adjust the time of the modes of the Prime Freeze, refer to the application “Panasonic SmartApp+”. The application allows to adjust the time by minute, create and save the Prime Freeze modes fluently used in My list section.

# Quick Ice Making

When setting Quick Ice Making, the refrigerator will increase its capacity to reduce ice making time.

■ **How to operate Quick Ice Making**




Light is on: Quick Ice Making is operated.
Light is off: Quick Ice Making is not operated.

- Press the “Quick Ice Making” icon twice in a row to start Quick Ice Making. Then, the icon of Quick Ice Making will turn on.
- When you want to stop Quick Ice making, press the “Quick Ice Making” icon once until the light turns off.

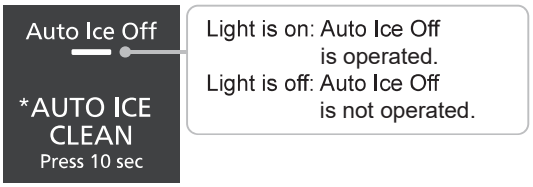
**Remark**

- The following modes will be stopped when Quick Ice Making is turned on:
  - Quick Freezing
  - Prime Fresh+
  - Prime Freeze
  - Auto Ice Off

# Auto Ice Off and Auto Ice Clean

When the refrigerator is in operation, the Auto Ice making mode will automatically operate without any setting. When setting the Auto Ice Off and Auto Ice Clean mode, the refrigerator will stop the Auto Ice making and clean the ice maker automatically.

## ■ How to operate the Auto Ice Off mode

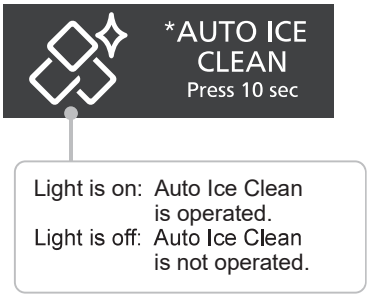



- Press and hold the “Auto Ice Clean” icon for 3 seconds to start the Auto Ice Off. Then, the LED below the Auto Ice Off icon will turn on.
- When you want to restart the Auto Ice making, press the “Auto Ice Clean” for 3 seconds. Then, the LED of the Auto Ice Off will turn off.

**Note**

- When the Auto Ice Off mode is on, Quick Ice Making, if active, will be stopped.

## ■ How to operate the Auto Ice Clean mode




- Press and hold the “Auto Ice Clean” icon for 10 seconds to enable the Auto Ice Clean mode. At that time, the LED of Auto Ice Clean will turn on.
- At the end of the Auto Ice Clean process, the refrigerator will make a notification sound.

**Remark**

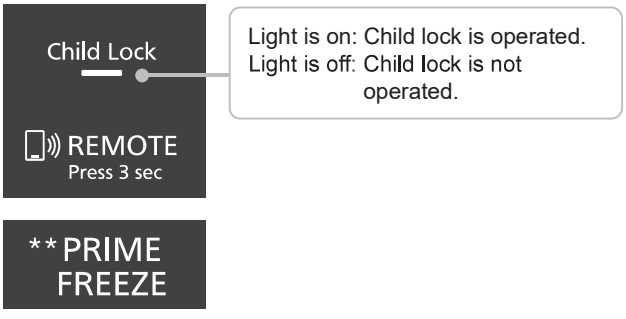
- When Auto Ice Clean is operating, it cannot be stopped / disabled midway and other modes cannot be controlled by “Panasonic SmartApp+” application.

For details on the cleaning operation of Auto Ice maker, please refer to Page 37.

# Child Lock

When setting the Child Lock mode, the Operation Panel will disable the interaction to adjust temperature and modes in order to prevent unintended adjustment by children.

## ■ How to operate Child Lock




- Press “Remote” icon and “Prime Freeze” icon at the same time for 3 seconds to start the Child Lock mode. Then, the light below “Child Lock” icon will turn on.
- When you want to stop the Child Lock mode, press “Remote” icon and “Prime Freeze” icon at the same time for 3 seconds. Then the light below the “Child Lock” icon will turn off.

**Remark**

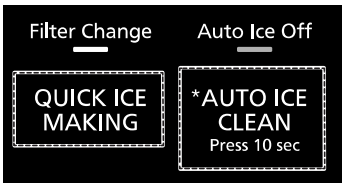
When setting the Child Lock mode, the Water Dispenser will be locked.

# Filter Change




- The LED of Filter Change will be turned on in orange LED after 6 months of operation (180 days or more of power supply or water inlet valve is left open).
- This orange LED will be continuosly light on until finish changing the Water Filter and reset it.

**How to reset the LED of Filter Change**




- While the LED of Filter Change is displayed, press and hold the “Quick Ice Making” icon and the “Auto Ice Clean” icon at the same time for 3 seconds. Then, the orange LED will be turned off.
- When the LED of Filter Change turns off, data of power supply and water valve open days will be cleared. It will reset to a new counting round for the next 180 days of Filter changing.

**Remark**

- It is necessary to change the Water Filter Cartridge right when the LED of Filter Change light on, to ensure the quality of water supply and prevent any risk of illness or poisoning damaged to your health.
- If the LED of Filter Change is displayed but you cannot immediately replace the Water Filter, do not reset the LED of Filter Change until the new Water Filter has been installed Instruction for changing new Water Filter please refer in Page 38.

# Wireless LAN

**■ Wireless LAN connection mode**

Wireless LAN connection mode will connect the refrigerator to a wireless LAN router. The user connects the refrigerator to wireless LAN router by using wireless LAN connection mode. It is used for the first time buying the refrigerator, or changing the refrigerator circuit board, or changing the wireless LAN router information (network name, password), or changing the owner of the refrigerator.




| | |
|---|---|
| Flashing light: | Wireless LAN connection is in progress. |
| Lights on: | Wireless LAN connected successfully. |
| Lights off: | Wireless LAN connection mode does not work. |

- Press the “Remote” icon for 3 seconds to start the wireless LAN connection mode. When the wireless LAN connection mode is active, the LED of wireless LAN connection mode will flash. After successfully completing the connection process, the LED of wireless LAN connection mode will turn on.
- When you want to cancel the wireless LAN connection mode, press and hold the “Remote” icon for 3 seconds. At that time, the LED of wireless LAN connection will flash.

# Wireless LAN

## ■ Power setting of wireless LAN module




- When the power of the wireless LAN module is off, press and hold the “Remote” and “Freezer” icons at the same time for 3 seconds to turn on the power of the wireless LAN module. “on” is shown for 5 seconds on the Operation Panel. Then, the power of the wireless LAN module is turned on.
- When the power of the wireless LAN module is on, press and hold the “Remote” and “Freezer” icons at the same time for 3 seconds to turn off the power of the wireless LAN module. “oF” is shown for 5 seconds on the Operation Panel. Then, the power of the wireless LAN module is turned off.

**Remark**

- When the wireless LAN connection mode is enabled, the wireless LAN module is automatically powered on by the refrigerator and the refrigerator will be connected to network.
- If you do not use the wireless LAN connection, please turn off the power of the wireless LAN module in order to save power and avoid unexpected settings from another mobile device.
- If you change the wireless LAN router information, the following steps should be taken:
  - Delete the router information that was previously stored on the refrigerator by:
    1. Press and hold the “Remote” icon for 3 seconds, then the Operation Panel displayes “C2”.
    2. Press and hold the “Freezer” and “Prime Freeze” icons at the same time for 3 seconds, the refrigerator emits a notification sound, and the Operation Panel displays “In”.
    3. The information will be deleted when the Operation Panel no longer displays “In” and the light LED of wireless LAN flashes.
  - Reconnect to router using wireless LAN connection mode. Then, open the “Panasonic SmartApp+” application on your mobile phone and follow the instructions on the application.

## ■ The LED operation of Wireless LAN

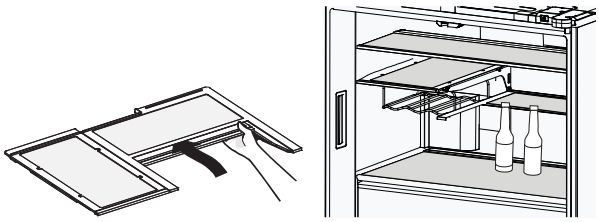
- When the wireless LAN module is powered off, the LED of wireless LAN is turned off.
- When the wireless LAN module is on and the wireless LAN is connected, the LED of wireless LAN is turned on.
- When the wireless LAN module is powered on and the wireless LAN is not connected, the LED of wireless LAN flashes once every 0.5 seconds.
- When the wireless LAN module turns on and the communication with the wireless LAN module fails, the LED of wireless LAN flashes once every 0.1 seconds.
- After restarting the wireless LAN module, the LED of wireless LAN flashes to find and reconnect with the previously saved wireless LAN network.

# Fridge compartment

The temperature range of the Fridge compartment is 1 °C ~ 7 °C
If the temperature of the Fridge compartment is set to 1 °C during a long period of time, your food may be frozen.

## How to use Slide glass tray

Slide the front-half glass tray to the back, then you can store taller items with out needing to store lying down.
The position of the Slide glass tray can be changed to place more items depending on the purpose of use.



Please refer to Page 42 for how to remove the Slide glass tray.

## Vegetable case

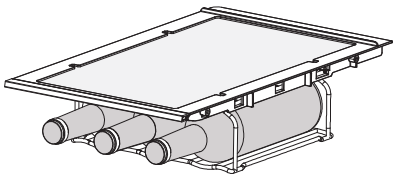
The Vegetable case is equipped with a large-capacitor and the guide rail with a maximum opening angle, making it easier to take out food and increasing its load-bearing capacity, allowing the user to gently pull the case out with just one hand. The Moisture control filter will control the humidity inside the vegetable case, helping the vegetables retain moisture and stay fresh.

**Note**

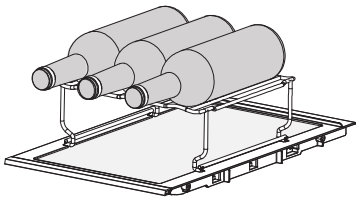
- Due to high humidity, water drops may appear on the vegetable case. Wipe droplets off with a soft cloth.
- Do not place food higher than the height of the vegetable case to avoid the risk that the vegetable case does not close completely, causing frost and damaging vegetables and fruits.

## How to use the Wine rack

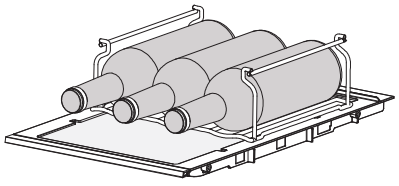
The wine rack can be flexibly placed in different positions in 3 ways:



Hang the Wine rack under the small glass tray of Fridge compartment

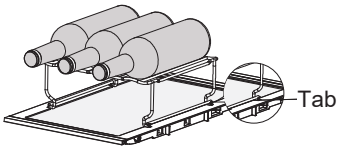


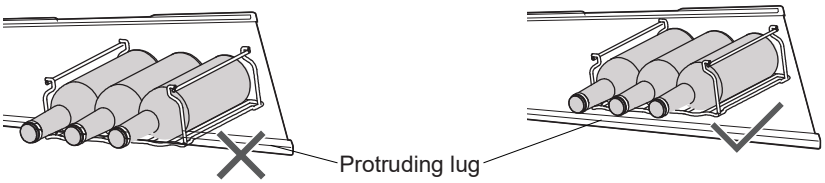
Put the Wine rack on the small glass tray of Fridge compartment



Put the Wine rack on the surface of glass trays of Fridge compartment

- Secure the pins of the Wine rack to the tabs of the Small glass tray of Fridge compartment.
- Make sure the Wine rack does not extend pass the protruding lug of the glass trays, to avoid movement when opening / closing the refrigerator door.




- Noise may occur when the Wine rack is moved on the glass trays of the refrigerator. This is a normal phenomenon.

How to remove the Wine rack, please refer to Page 45.

## How to use the Water dispenser

With the Water Dispenser, you can get cold water without opening the refrigerator door.

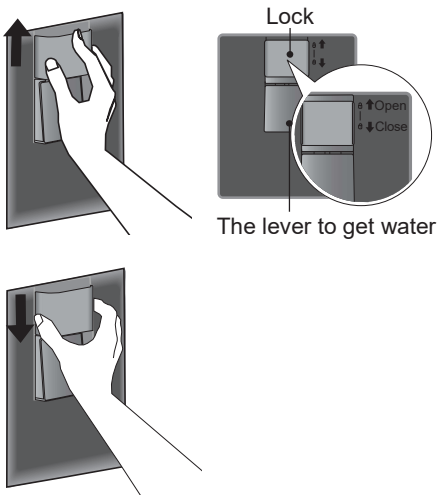
### ■ How to get water

① Push the lock upward until it touches the top edge.

② Keep the cup straight and gently push the lever to get water.

**Attention**

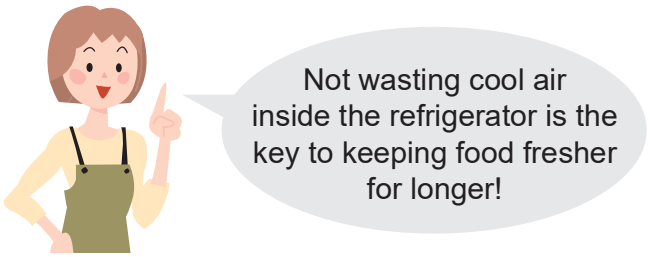
- Before using Water Dispenser, the Water Connection system must be installed correctly. Refer to the Installation instruction in Page 12 ~ Page 18 for details.
- When used for the first time, please run through and discard the first 3 liters of water, stopping intermittently to remove trapped air in the system. Failure to do this will result inexpressive dripping from your dispenser.
- It will take about a second for the water to dispense when the level is pushed. The purpose of this is to limit the water flow in case of accidentally touching the lever.
- After taking enough water, slowly take the cup out to avoid the water leaking.
- Use a clean cloth to dry if any water spills out.
- When you need to lock the Water Dispenser, pull the lock downward until it touches the bottom edge and the red line can be seen. If it is not necessary to lock the Water Dispenser, skip this step.
- Water may not cool if dispensing continuously by Water Dispenser for a period longer than 2 minutes.




## Tips for food preservation

### ■ Do not stuff too many food items

When there are too many food items and there is no space for cool air circulation inside the refrigerator, the cooling capacity will be affected. Provide sufficient space between foods.

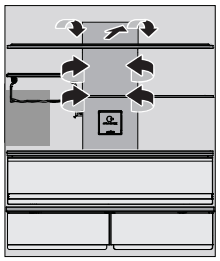



### ■ Do not block the cool air outlet with food items

If the cool air does not spread into every corner of compartments, then the interior will not be sufficiently cooled and more electricity will be consumed.

Therefore, food should not be placed in front of the cooling air vents* and block the air circulation.

*The cooling air vents are located on the duct inside the Fridge compartment.



# Prime Fresh case

The temperature in the Prime Fresh case can be selected as below:

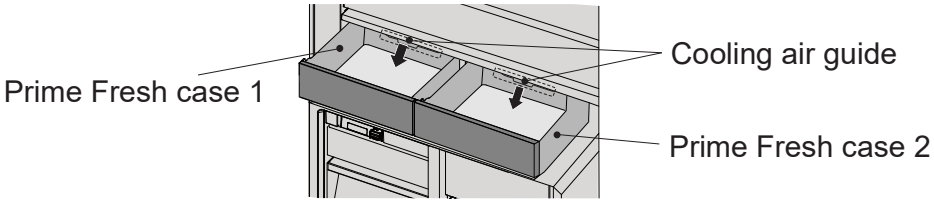
- The temperature for soft freeze is -1 °C ~ -5 °C.
- The temperature to use the Prime Fresh case as the Fridge compartment is 0 °C ~ 4 °C.

When using the refrigerator with 2 independent Prime Fresh cases, the temperature can be adjusted according to your usage.
The default temperature setting of Prime Fresh case is -3 °C.

**Using Prime Fresh case** **Approx. -5 °C ~ -1 °C**



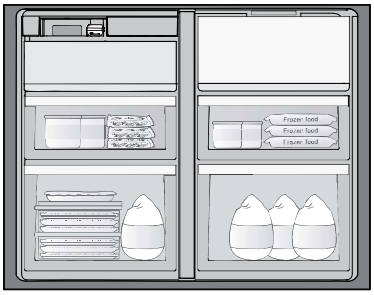

- This compartment is suitable for storing fresh food, such as meat or fish. Compared to storing in the Fridge compartment, the storage life of meat or fish is extended.
- The preservation of food with 2 independent Prime Fresh cases helps to reduce the influence of odors and flavors of different foods, by adjusting the appropriate mode for each type of food, such as raw food for Prime Fresh case 1, and cooked food for Prime Fresh case 2.
- When food is too frozen.
  Sliced raw fish or meat may be too frozen. Set the temperature to higher than -3 °C to prevent food from over frozen.
- When food is not partially-frozen.
  Depending on the type of food, such as a large block of meat or a large fish, or the food fullness of the case, the storage conditions, and the ambient temperature, food may not be partially frozen as it intended. In this case, then set to the lowest temperature of -5 °C.
- To reduce the effect of food being over-frozen or not freezing as desired, you can put the similar sized foods in the same Prime Fresh case and adjust the temperature accordingly.
- Do not overstock the case with too many food items. When there are too many food items and there is no space for cool air circulation inside the refrigerator, the cooling capacity will be affected. Provide sufficient space between foods inside Prime Fresh case.
- When storing food in large amounts, e.g. a large block of meat, a large fish, or a chicken, it is advisable to place the food at the center of the Prime Fresh case to optimize the cooling performance.
- When the temperature of the Prime Fresh case is set at 0 °C ~ 4 °C, the Prime Fresh+ mode will not operate in order to prevent food spoilage.
- When opening the Prime Fresh 2 for food storage, please open both doors of the Freezer compartment. When only the right Freezer compartment door is opened, the Prime Fresh case 2 cannot be pulled out.
- Do not block the cool air outlet with food items inside the Prime Fresh case.
  If the cool air does not spread into every corner of Prime Fresh case, then the interior will not be sufficiently cooled and the food may be affected.
  Therefore, food should not be placed in front of the Cooling air guide (on the Prime Fresh case 1 and Prime Fresh case 2) to prevent blocking the air circulation inside the compartment.



# Freezer compartment

Storing frozen food, cooked meals and freezing food by Prime Freeze case.

The temperature range of the Freezer compartment is -23 °C to -15 °C



**Three tips for freezing food and locking in the flavour**

1. Freeze thin and small items of food quickly
2. Fully sealed
3. Do not refreeze

## To make ice

- Auto Ice making will be automatically activated when refrigerator in operation and the Water Connection system is installed correctly.
  Details for installation of Water Connection system refer in Page 12 ~ Page 18.
- Ice could be made in approx. 2 hours, with the temperature in the Fridge compartment is 4°C, Prime Fresh case 1 and Prime Fresh case 2 is -3°C, and Freezer compartment is -20°C.

## How to make ice quickly

■ **In the “Quick Ice Making” mode, the ice making speed will be increased.**
Ice can be made within 90 minutes(*) at the quickest.

**Remark**

- After about 6 hours, the refrigerator will automatically return to normal Auto Ice making mode.
- The flashing of [Quick Ice Making] LED means that the defrosting system is currently working. “Quick Ice Making” will start right after the defrosting operation is finished.
- In Quick Ice Making, energy consumption increases more than usual.
- ECONAVI operation does not work during the setting of “Quick Ice Making”.

(*) Ambient temperature of 20 °C, the temperature of the Fridge compartment, the Prime Fresh case 1 and Prime Fresh case 2, and the Freezer compartment are 4 °C, -3 °C
-3 °C and -20 °C, respectively.

# Freezer compartment

## To use the Auto Ice maker in comfort

○ Please use only drinking water for Auto Ice making.

The hardness of water must be 100 mg/L or less.



Drinking water

× Do not put liquids such as the following into the Water tank.
(These liquids may damage the Auto Ice maker).



Juice, etc.



Sports drinks



Carbonated beverages



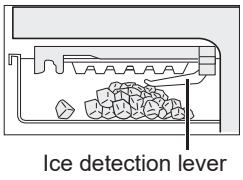
Hot water

### Tips

- The hardness of water must be 100 mg/L or less. The minerals may appear as white floating particles. They are not harmful.
- When using the Auto Ice maker for the first time, odor or dust may be on the Ice tray, etc. Please throw away the first lot of ice.
- Remember to regularly use the Auto Ice Clean function of the Auto Ice maker. (Page 29)

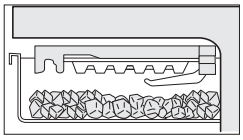
### Attention

When the Ice box is full and the ice cubes touch the ice detection lever, the ice making will stop automatically.



Ice detection lever

The pile of ice cubes will touch the ice detection lever. (Then, the Auto Ice making will stop).



Distribute the ice cubes evenly inside the Ice box for making more ice.

### Request

- Do not pour water directly into the Ice box to make ice. (Otherwise, the Ice box may be broken).
- Do not put food or other things into the Ice box. (Otherwise, the amount of ice cannot be correctly detected and Auto Ice making may be stopped or the Ice box cannot be pulled out.)

**Ice maker cycle time will be longer in the following cases.**

- The first time using the refrigerator. (It will take at least 24 hours since the Auto Ice making function only starts after the inside of the refrigerator is cool enough).
- When the refrigerator doors are frequently opened.
- When the refrigerator doors are ajar.
- When a large amount of food is stored at once.
- When the ambient temperature is low during winter or high during summer.
- When a power failure occurs.

## How to clean the Auto Ice Maker

When using for the first time or when not being used after a long time, the Ice tray and Ice box may smell unpleasantly or collect dust. Remember to process to clean the Ice maker before start to make ice.
After selecting the Auto Ice Clean mode, water will be automatically poured into the Ice tray and water supply pipe 3 times (for about 2 minutes) to drain the water.
When selecting the ice maker cleaning mode, make sure the Water Connection system is installed correctly (Page 12 ~ Page 18).

1. Pull out the Ice box, remove all ice cubes from the Ice box (after the ice cubes are fully formed), and then install the Ice box back.
2. Check the Water Connection system is installed correctly and the water supply valve is opened.
3. Select the Auto Ice Clean mode (Page 29).
   - At the same time, the refrigerator will sound a notification and begin to clean the ice maker.
   - During the cleaning process, the sound cannot be turned off.
   - After the beeping sound to inform the completion of the cleaning process, the icon of the Auto Ice Clean mode on the Operation Panel will turn off, the ice maker cleaning process will end and the Auto Ice making will be started.
4. Pull out the Ice box from the Freezer compartment, throw away the water in the Ice box and wipe the water off.
   If you do not clean all water on the Ice box, the Ice box may be damaged.

## How to turn off Auto Ice maker

You can enable/disable the Auto Ice making mode according to your needs.

### ■ Turn off Auto Ice making

1. Choose the Auto Ice Off mode, the icon of the Auto Ice Off mode on the Operation Panel will turn on and the refrigerator will stop making ice (Page 29).
2. When you want to continue making ice automatically, please choose the Auto Ice Off mode, and the icon of the Auto Ice Off mode on the Operation Panel will turn off (Page 29).

### ■ Turn off Auto Ice making for a long period of time

1. Turn on Auto Ice Off mode and remove all ice cubes from the Ice box.
2. Clean the Ice box; dry and put it back in its place.
3. When using again, please turn off Auto Ice Off mode and the Auto Ice system will automatically make ice.

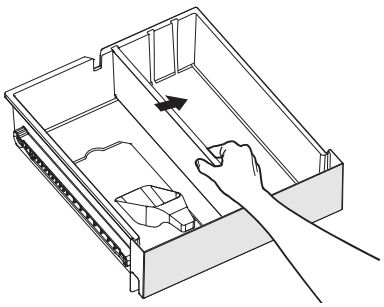
### ■ When transporting the refrigerator

1. Turn on Auto Ice Off mode and remove all ice cubes from the Ice box.
2. Choose the Auto Ice Clean mode, the icon of Auto Ice Clean mode on the Operation Panel will turn on and the refrigerator will start cleaning the ice maker. (At this time the ice cubes and water in the process of making ice will fall into the Ice box)
3. The cleaning process will stop after 2 minutes. Take out the Ice box and empty the ice cubes and water in the Ice box.
4. Clean Ice box; dry and put it back in its place.

## How to use Ice box

Use a Customized divider to increase ice storage space, and match your ice storage needs.

- Manually lift the Customized divider off the track, and move it to another desired position.
- Use the Ice scoop when removing ice from the Ice box.

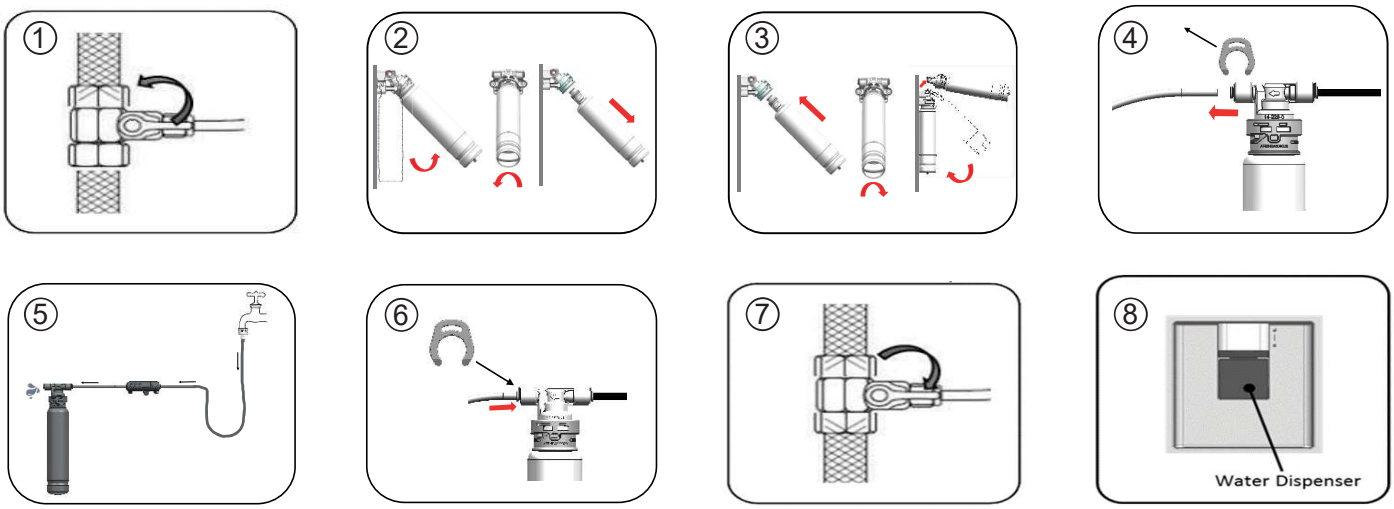


# Water Filter Cartridge Installation and Replacement

The Water Filter Cartridge is recommended to be changed after 6 months of operation to ensure the quality of water supply and prevent any risk of illness or poisoning damage to your health.

Please change Water Filter Cartridge to a new one when the LED of Filter Change on Operation Panel turns on and is orange. (Page 21)

To change the Water Filter, follow these steps:




① Shut off the main water supply valve to the refrigerator to replace the Filter Cartridge.
② Lift up the Filter (less than 90 degrees), turn the Cartridge quarter of a turn to the left and take it out of the Filter Head.
③ Remove protective cap on Filter Cartridge, then insert the new Filter Cartridge into the Filter Head, turn it quarter of a turn to the right until it stops, and take the new Filter Cartridge with the Filter Head out of Sub Filter Bracket to outside.
④ Temporary stop the connection of Water Filter and refrigerator by dissembling the white Tube B out of the new Water Filter.
⑤ Aim the new Water Filter into a bucket, turn the water supply tab on and run the water through at least 12 liters of water. Once complete, turn off the water supply tab. Purpose of these actions is to flush the new Water Filter of any trapped air, avoiding water dripping.
⑥ Reconnect “Tube B” to Water Filter. Note to firmly fix “Tube B” with the Joint Clip. Insert new Water Filter back to the Sub Filter Bracket.
⑦ Turn on main water supply valve to the refrigerator.
⑧ Reset LED of Filter Change on Operation Panel and run water through the Water Dispenser for approximately 3 liters to purge the system and to check for leaks at all water connection points in the first two or three hours after installation. Re-check after 24 hours to ensure connection is watertight. If the connection is leaking, contact a licensed plumber.

**Attention**

Step ⑤ is highly recommended to remove trapped air. If this step is skipped, please follow these below steps in the first time using Water Dispenser after replacing the new Water Filter to avoid water dripping:

- Press the Water Dispenser to dispense 4 liters of water.
- Wait for 3 ~ 5 minutes before dispensing again.
- Dispense 4 liters of water then wait another 3 ~ 5 minutes.
- Dispense another 4 liters of water. Your Water Dispenser is ready to use.

**Note**

- The Water Filter system is tested and certified by NSF International against NSF/ANSI Standards 42, 53, 401 in System Model ARBHBA300020 for reduction claims specified on the Performace Data Sheet included with the Water Filter.
- Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.
- Systems certified for cyst reduction may be used on disinfected water that may contain filterable cyst.
- For cold water only.
- NSF/ANSI Standard 53 certified to reduce cysts over 99.99% such as Cryptosporidium and Giardia by mechanical means. The testing was performed under standard laboratory conditions, actual performance may vary.
- The system and installation shall comply with applicable state and local regulations.
- Systems must be installed and operated in accordance with manufacturer's recommended procedures and guidelines.
- Spent adsorption media will not be regenerated and used.
- Do not install the Water Filter in an area of direct sunlight.
- Do not install the Water Filter in an area of the wall where there may be electrical wires and/or water supply pipes.
- To maintain proper filtration, replace the Filter approximately every 6 months.
- The System conforms to NSF/ANSI 42, 53, 401 for the specific performance claims as verified and substantiated by test data.
- Water will continue to drip from the dispenser for a few more days after installation to clear remaining trapped air in the dispenser. Dry it by cloth.

# How to clean the Refrigerator

Before cleaning or conducting maintenance, please ensure that the power plug has been disconnected from the power outlet. Do not connect or disconnect the power plug with wet hands. When the plug is disconnected, leave it for 7 minutes before plugging again. If not, the compressor may not work.

**Clean the refrigerator immediately after it is stained!**

Wipe off stains on the interior surfaces quickly before they harden. In particular, cooking oil or lard may cause plastic to crack and citrus juice may cause the refrigerator to become discolored. When stains cannot be removed easily, wipe them with a cloth lightly soaked in neutral kitchen detergent. Then, wipe with a cloth lightly dipped in water.




Rub the door surface with a soft damp cloth.



**Clean the detachable items occasionally.**

Clean the ice tray once a week. As a guide, remove the trays, door shelves, etc. and wash them by immersing them in lukewarm water every three months.




**Clean the door gasket at least once a month.**

Clean by wiping with a soft damp cloth.

Lubricated gel has been applied to the door gasket on the hinge side of the refrigerator, be careful not to wipe it off.

Point where lubricated gel was applied



**Note**

The door gasket is replaced by an authorised service agent.
If the door gasket comes off while cleaning, it can be pushed back into the groove.

**Request**

Do not use the following items for cleaning. (Otherwise, the surface will be scratched or corroded.)




Kitchen detergents (They crack plastic!)



Cleanser or soap powder



Benzine, thinner, alcohol, acid, petroleum

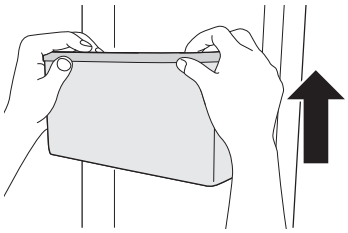


Scrubber



Hot Water

## Door shelf/ Bottle shelf — Once every 3 months



■ **Removing**

① Lift it upward, alternating between the right and left side.

■ **Attaching**

② Placing it on both supporters, and then press until it reaches the end of supporters.

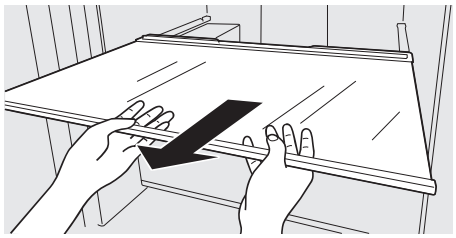
**Remark**

Shelf cover is not designed to remove for cleaning.
In case cleaning is required, please contact Panasonic service center.

## Tray — Once every 3 months

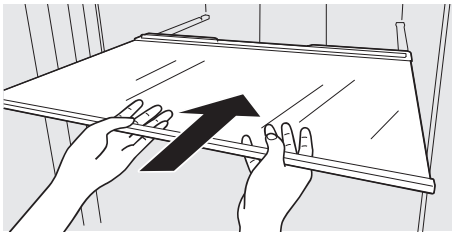
■ **Removing**

① Lift up the back of the tray and pull it forward. Once the protrusions of the tray are unhooked from the rails, tilt the tray and remove it.



■ **Attaching**

② Push the tray until it reaches the end lock.



**Remark**

- To easily take out the glass trays from the refrigerator, please remove Door shelves and Bottle shelves first.
- The Glass tray vegetable case is cleaned by directly cleaning inside the refrigerator. (Due to its fixed design.)
- In case of attaching the tray and it does not lock, make sure that you did not attach it into it the wrong tray.
- Trays made of glass are heavy.
  Please handle them with care so that they do not fall and cause any damage or injury.
  For attaching trays, hold them with the protrusion side down and firmly insert.

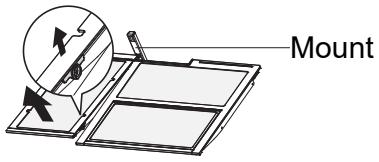
# How to clean the Refrigerator

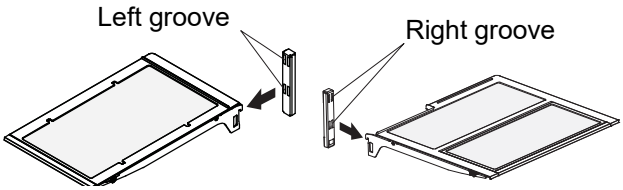
## Slide glass tray — Once every 3 months

**If the position of the Slide glass tray is in line with the Small glass tray of Fridge compartment:**

### ■ Removing

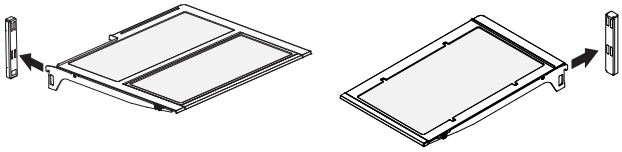
1. Separate the joint between the Slide glass tray from the Small glass tray of Fridge compartment.
2. Lift up the underside of the Small glass tray of Fridge and pull it out from the left groove of the mount to the front. Once the protrusions are unhooked from the rails, tilt the tray and remove it.
3. Lift up the underside of the Slide glass tray and pull it out from the right groove of the mount to the front. Once the protrusions are unhooked from the rails, tilt the tray and remove it.

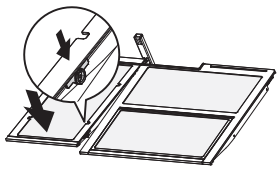



### ■ Attaching

1. Lift up the underside of the Slide glass tray and push into the right groove of the mount.
2. Lift up the underside of the Small glass tray of Fridge compartment and push into the left groove of the mount.
3. Fix the joint between the Slide glass tray and the Small glass tray of Fridge compartment.

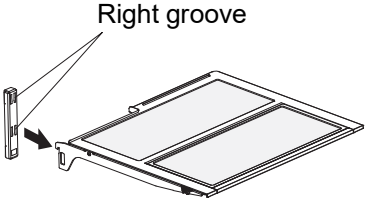




**If the position of the Slide glass tray is not in line with the Small glass tray of Fridge compartment:**

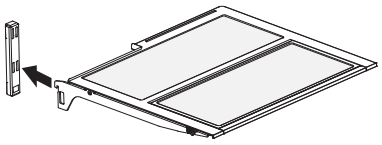
### ■ Removing

Lift up the underside of the Slide glass tray and pull it out from the right groove of the mount to the front. Once the protrusions are unhooked from the rails, tilt the tray and remove it.




### ■ Attaching

Lift up the underside of the Slide glass tray and push into the right groove of the mount.



**Remark**

- To easily take out the Slide glass tray from the refrigerator, please remove Door shelves and Bottle shelves first.
- Trays made of glass are heavy.
  Please handle them with care so that they do not fall and cause any damage or injury.
  For attaching trays, hold them with the protrusion side down and firmly insert them.

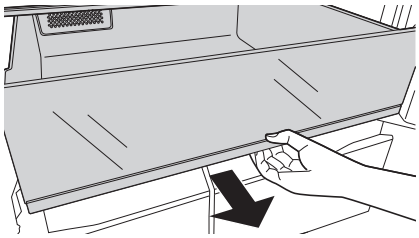
## Vegetable case/ Freezer cases — Once every 3 months

### ※ Vegetable case



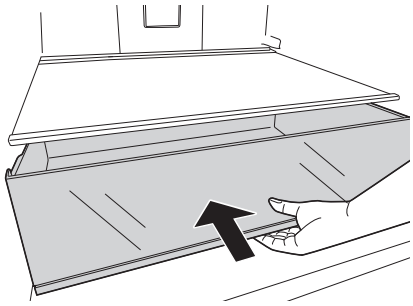

#### ■ Removing

1. Fully open both doors of the Fridge compartment.
2. Remove the Utility shelf ⑧ and Large door shelf ⑤ (According to Parts Identification in Page 19, 20) before removing the Vegetable case.
3. Pull the case forward until it reaches the end and gently lift the front of the case to remove it completely.



#### ■ Attaching

1. Insert the case into the shelf.
2. Gently lift the case and push forward until it reaches the end.
3. Install Utility shelf ⑧ and Large door shelf ⑤ into.

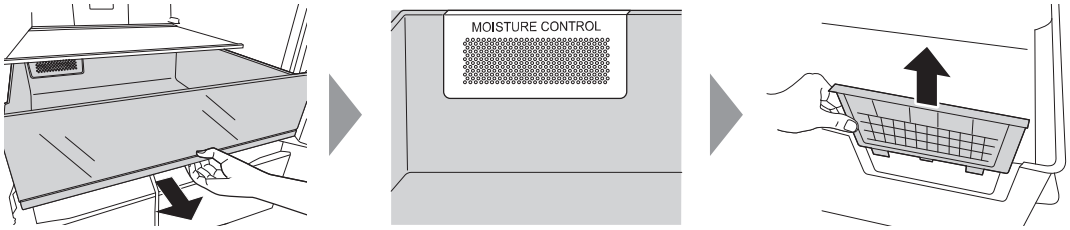


### ※ Freezer cases

Skip the steps of removing and installing the Utility shelf ⑧ and Large door shelf ⑤. Remove and install Freezer cases in steps same as Vegetable case.

## Moisture control of Vegetable case — Once every 3 months

1. After pulling out the Vegetable case, the Moisture control is located at the back of the Vegetable case.
2. Slide the Moisture control upward to remove it.




**Remark**

- After cleaning by water, wipe it or let it dry.
- For tough stains, dilute (neutral) kitchen detergent, and gently wash with a soft toothbrush, then rinse thoroughly with water.

# How to clean the Refrigerator

## Prime Fresh case — Once every 3 months

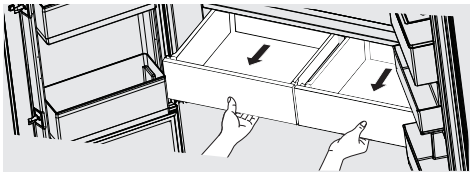


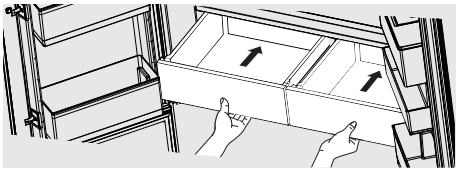

### ■ Removing

1. Fully open both doors of the Fridge compartment.
2. Remove the Bottle shelf ⑦ (According to Parts identification in Page 19, 20) before removing the Prime Fresh case.
3. Pull the case forward until it reaches the end and gently lift the front of the case to remove it completely.

### ■ Attaching

1. Put the case into the shelf.
2. Gently lift the case and push forward until it reaches the end.
3. Install the Bottle shelf ⑦ into.

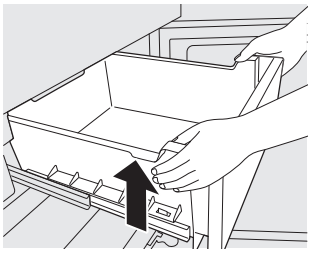


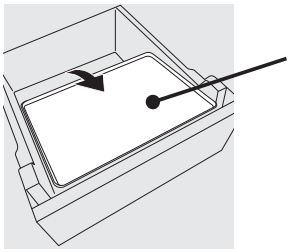


## Prime Freeze case — Once every 3 months

### ■ Removing

1. Pull out the Prime Freeze case completely.
2. Lift the case, tilt it, and lift it out of the compartment diagonally.





Aluminum heat transfer plate (Note that the aluminum plate can be easily scratched and damaged)

### ■ Attaching

Pull out the Prime Freeze case, lift the back of the case and hook along the inner grooves until it matches and touches the end point.

### Remark

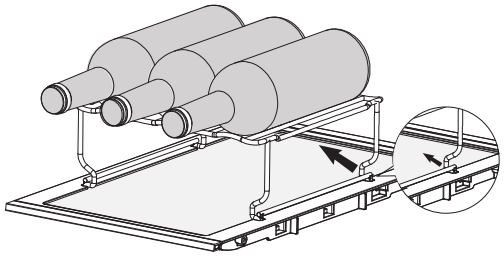
- The aluminum heat transfer plate can be removed; however, remember not to hold it with wet hands when the aluminum plate is cold, as there may be a risk of frostbite.
- When removing or installing the case, be sure to grasp the tray handle with your outstretched hand. Otherwise, the compartment door may accidentally hit your finger. Please refer to the illustration above.
- If cleaning by water, wipe the aluminum plate or allow it to dry before reinstalling into the refrigerator.
- Do not wipe the lubricant off the contact surface of the guide rail.
  If you have wiped out the lubricant, please contact with the Panasonic service center.

## Wine rack — Once every 3 months

**Adjusting the position of the Wine rack on the Small glass tray of Fridge compartment and hanging the Wine rack under the Small glass tray of Fridge compartment:**

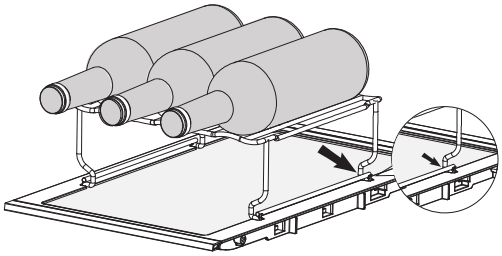
### ■ Removing

1. Remove the Wine rack pins from the tabs on the Small glass tray of Fridge compartment.
2. Pull out the Wine rack.



### ■ Attaching

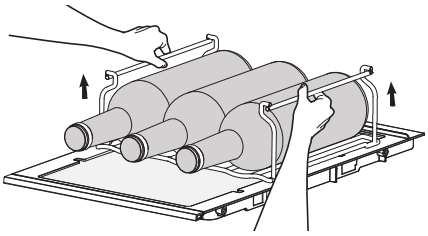
1. Put the Wine rack at position to be mounted.
2. Adjust the pins of the Wine rack to the tabs on the Small glass tray of Fridge compartment.



**Adjusting the position of the Wine rack on the surface of the glass trays of Fridge compartment:**

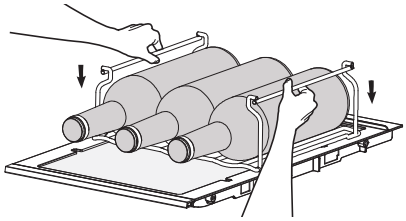
### ■ Removing

Lift the Wine rack out of the glass trays of the Fridge compartment.



### ■ Attaching

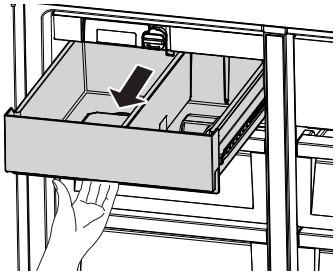
Put the Wine rack on the glass trays of Fridge compartment, so that the Wine rack does not leave the protruding lugs on glass trays of Fridge compartment.



## Ice box — Once every 3 months

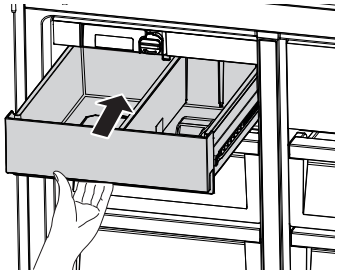
### ■ Removing

Lift and pull the Ice box forward until it is completely removed.



### ■ Attaching

Push the Ice box until it reaches the end of the Ice box holder.



**Note**

- Stop the Auto Ice making function before cleaning the Ice box (Page 36).
- Remove the Customized divider and Ice scoop. Clean them with water, wipe or let them dry before attaching and returning to the Ice box.

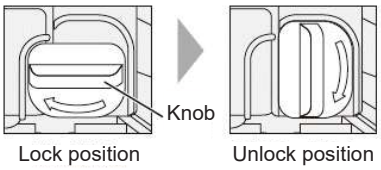
# How to clean the Refrigerator

## Ice tray — Once every 3 months

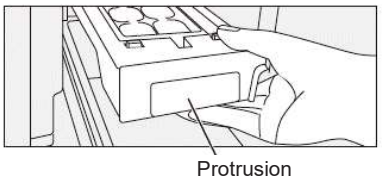
The Ice tray can be cleaned by using the Auto Ice Clean function (Page 29). In addition, the Ice tray can be removed and cleaned manually.

How to clean the Ice tray manually.

### ■ Removing and cleaning the Ice tray

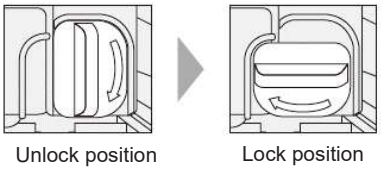



1. Choose the Auto Ice Off mode (Page 29).
2. Turn the knob on the Auto Ice maker to the unlocked position.
3. Pull the protruding side forward to remove the Ice tray.
4. Clean it with water. (Do not use sharp scouring pads to scrub the surface of Ice tray. If the Ice tray is scratched, ice may not be properly released, leading to a malfunction.)




**Note**

- The Ice tray and its frame cannot be separated.
- Do not clean with dishwashers or dish drying rack.




### ■ Attaching

1. Push the Ice tray in until you hear a “click”.
2. Turn the knob into the locked position.
3. Disable the Auto Ice Off mode (Page 29) to restart the Auto Ice making.

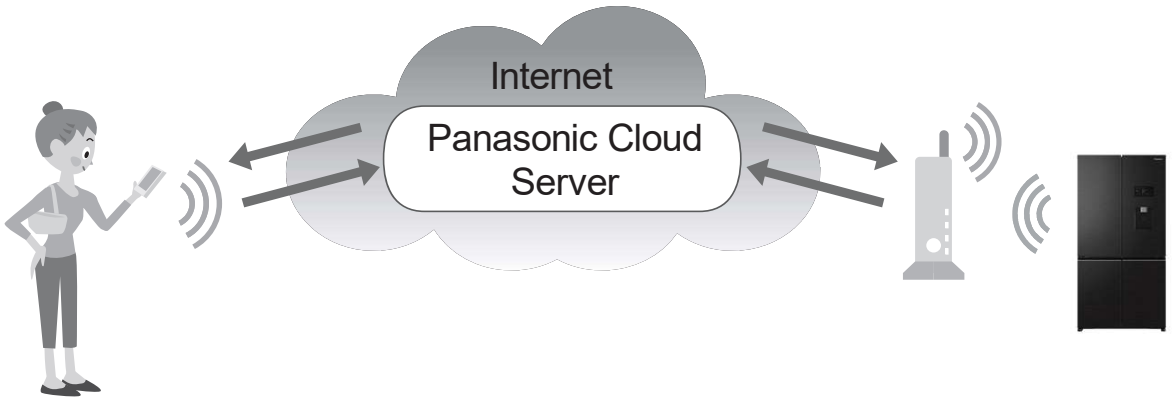
**Note**

- Ice will not be made automatically when the Auto Ice Off mode is turned on.
- Do not pour water directly into the Ice tray after manual cleaning. (That may cause ice cubes sticking together or a malfunction.)
- Turning the knob into the locked position after cleaning and checking the lock position of the Ice tray regularly is essential to ensure that the Auto Ice maker is working properly. If the knob is unlocked, the Auto Ice maker may not work.

# Panasonic SmartApp+

## Features of the Panasonic SmartApp+

More convenience with your smartphone.
You can use the refrigerator through the “Panasonic SmartApp+”.




### ■ Remote control

Refrigerator modes can be controlled anytime, anywhere if connected to a wireless LAN network.

### ■ AI feature

AI ECONAVI will work better efficiency by detecting your location.

- Leaving home mode
  If you are far away from the registered home location, AI ECONAVI will detect your location by GPS and switch the operation mode to energy saving mode.
- Shopping mode
  If you shop at registered shopping locations, AI ECONAVI detects your location using GPS, after you confirm to active Shopping mode on the “Panasonic SmartApp+”. application, refrigerator will start to increase the cooling level to prepare for food storage.

### ■ Monitoring through notifications

When the refrigerator encounters problems or other warnings appear, the notification will be displayed on your phone to help you promptly solve the problem and use the refrigerator more efficiently.

# Panasonic SmartApp+

## Required Equipment and Environment

Let's check the required Equipment and Environment to use the app.

■ Android or iOS (iPhone) smartphone

● About supported OS
https://www.panasonic.com/fiot/fridge/







■ Internet environment
Example) FTTH (optical fiber), ADSL, CATV (cable television), etc. Internet communication fee will be charged by you.




■ Wireless LAN router
Use a wireless LAN router to connect to the internet.



**Remark**

- Make sure that the wireless LAN router has a communication standard of 2.4 GHz band. (Communication standards: IEEE802.11b, IEEE802.11g, IEEE802.11n) Other than the above cannot be used.
- Models that only support WEP cannot be used.
- As a security measure, be sure to use a wireless LAN router that can set the encryption method WPA3, WPA2, or WPA.
- We recommend WPA3 and WPA2 (AES) as the encryption method.
- We do not guarantee the operation of all wireless LAN routers. (Mobile router is not guaranteed to work.)
- The refrigerator cannot connect to the router without password authentication.
- The refrigerator should not be connected to public wireless LAN network.
- The surrounding environment can affect the performance of the wireless network causing the remote control to not work properly.
- When connecting for the first time, you must make sure that the mobile phone and the refrigerator are connected to the same wireless network, otherwise the connection will not be successful.
- After the wireless LAN router changes its name or password, the refrigerator needs to be reconnected.
- Personal information related to customer activities such as Email, GPS signal,... is saved. To view details about the information stored, please open the “Panasonic SmartApp+” application, select “Menu”, then select “Terms of Use”.
- If the circuit board is replaced in the refrigerator, after repaired completely, the connection will need to be redone.

## Required Equipment and Environment

● When you destroy or transfer the refrigerator, please delete the registered user information as below:
  • On the “Panasonic SmartApp+” application:
    Open the “Panasonic SmartApp+” application, select “Menu”, then select “Withdraw from service” and select “OK”.
  • On the Operation Panel:
    1. Press and hold “Remote” icon for 3 seconds, then the Operation Panel displays “C2”.
    2. Press and hold “Freezer” icon and “Prime Freeze” icon for 3 seconds at the same time, refrigerator generates the notice sound and the Operation Panel displays “In”.
    3. The connection will be deleted when the Operation Panel no longer displays “In” and LED light of wireless LAN flashes.

## Initial Settings

### 1 Install the “Panasonic SmartApp+” (free)

● You can find the link to download the application from “Panasonic Website”.
https://www.panasonic.com/fiot/fridge/
or the QR code as below:

● Alternatively, you can search for the “Panasonic SmartApp+” application on Google Play (Android) or App Store (iOS).
● You can check the Operating Instruction of “Panasonic SmartApp+” application directly from the application or find the link to download the Operating Instruction of “Panasonic SmartApp+” application from “Panasonic Website”.
  • **For Australia:**
    https://www.panasonic.com/au/consumer/household/refrigeration-learn/article/smart-connectivity/oi.html
    or the QR code as below:

  • **For New Zealand:**
    https://www.panasonic.com/nz/consumer/home-appliances/kitchen-appliances-learn/article/smart-connectivity/oi.html
    or the QR code as below:

### 2 Follow instructions displayed on the screen of the app and register the refrigerator.

● Setup position of the refrigerator where you can check the display on the refrigerator door.

Use the app

# Panasonic SmartApp+

## Using the “Panasonic SmartApp+”

After initial setting is completed, you can use the application.

Please find the link below to check the update status of “Panasonic SmartApp+” application

https://www.panasonic.com/fiot/fridge/

To check the communication status with the LED on Operation Panel:

| | | |
|---|---|---|
|  | Light up | Communicatable (Connected) |
|  | Blinking | Trying to communicate<br>(Connecting to server) |
|  | Off | Not connected |

■ LED position (Page 21)

## Usage for wireless LAN/Bluetooth®

### ■ Usage restrictions

Please note that there are the following restrictions while using. Panasonic is not liable for any incidental damages resulting from the failure to comply with the restrictions and the use or inability to use the machine.

- Do not connect to a wireless network that you do not have permission to use.
  A wireless network (SSID(*)) that you are not authorized to use may be displayed during detection, but if you connect it may be considered unauthorized access.
- Do not use in a place where magnetic field, static electricity, or radio interference is generated.
  If you use the application near the following devices, communication may be interrupted or the speed may slow down.
  - Microwave oven
  - Other wireless LAN / Bluetooth® devices
  - Other devices that use radio waves in the 2.4 GHz band (digital cordless phones, wireless audio devices, game consoles, PC peripherals, etc.)
  - Metal objects that easily reflect radio waves

(*) A name used to identify a specific network on a wireless LAN. If this SSID matches on both devices, communication is possible.

### ■ Security measures

- Since the wireless LAN uses radio waves to send and receive data, there is a risk of unauthorized access. Take security measures to ensure the safety of your data. Please note that we are not responsible for any problems that occur when not following the security measures.
- For the password (encryption key) of the wireless LAN router, refer to the instruction manual of the wireless LAN router and set it in consideration of security.

# Troubleshooting

Before you call for service, please check the following steps:

**The refrigerator does not operate.**

- Check that the plug and its socket are in good condition.
- Check if there is any problem on the main fuse and electrical system of the house.
- Unplug the unit and wait for 7 minutes before plugging it back in.

**The refrigerator does not cool enough.**

- Check that the lights on the Operation Panel are displayed at the proper position.
- Check to see if the refrigerator is overloaded with stuff or if there is any hot foodstuff refrigerated inside.
- Is the refrigerator exposed directly to sunlight or heat source?
- Is the refrigerator door completely closed?
- Is the refrigerator door opened frequently?

**Dew, frost appears.**

**Outside**

- When the air humidity is high, there is a chance that moisture will condense on the refrigerator surface, around the door gasket or on the door surface. This situation will stop if the air humidity decreases. Please wipe it up with dry cloth.



**Inside**

- Is the door closed firmly?
- Is the door being opened and closed too frequently?
- Condensation inside the refrigerator can also be caused by leaving high-humidity foods uncovered or unwrapped.
- When the humidity is high, the door is open for a long time, or when the refrigerator contains too much food or makes too much ice, frost may form inside the Freezer compartment at the location of the Freezer compartment case, Ice box or the Prime Freeze case door. This is normal. Please wipe with dry and soft cloth.

**The refrigerator generates noise.**

- Check if the refrigerator is located on a stable floor or is installed properly.
- Check if there is any object in contact with the refrigerator.
- Cracking sound within caused by the parts adjusting temperature which is normal.
- After installation, the refrigerator may make loud noise. The noise will be less when the refrigerator has been cooled.

**The inside is smelling.**

- Do you store food with dry odor without wrapping it?

**Light does not turn on.**

- Please contact Panasonic service center.

# Troubleshooting

**The back and sides of the refrigerator are warm and hot.**

- Because the refrigerator is equipped with the dew prevention and heat radiation tubes, the back and sides of the refrigerator get warmer when operating.
- The back and side plates may get warmer especially when starting up or if the door is frequently opened and closed.

**The normal sounds of refrigerator.**

- When the refrigerator starts operation, the sound like water flowing and boiling water is created. This is the sound of the cooling liquid.
- The noise is generated when the automatic defrost system operates.
- The dilatation of the details inside the refrigerator in the cooling process can cause sound “crack-crack”.
- You may feel that the operation sound is larger because the compressor operates in high-speed under the following conditions: the refrigerator does not cool fully on the occasion such as using it for the first time, opening/closing the door too frequently, the surrounding temperature is high. The sound becomes more quiet after cooling fully.

**The Operation Panel flashes.**

- Are you adjusting the temperature of your refrigerator?
  → Flashes during adjusting. Please complete the setting and the Operation Panel will stop flashing after 5 seconds.

**Food becomes frozen.**

- Do you put the food near cold air holes?
- Do you adjust the temperature control to less than 4 °C for the Fridge compartment and/or -3 °C for the Prime Fresh case?
  → Adjust to a higher temperature.
- Do you put food in Prime Fresh case?

**Error display on Operation Panel.**

- The letter “H” and two digits are displayed on Operation Panel. For example: H01
  → Please contact the Panasonic service center for support.

- U10: Warning if doors are opened too long.
  → Check that the doors are closed properly.

- U83: The refrigerator does not connect to the wireless LAN router. Check the following:
  • The router is not turned on. →Power on.
  • The distance between the router and the refrigerator is too far.
  →Place the router close to the refrigerator.
  • A device that uses radio waves is used nearby, such as a microwave oven.
  →Keep an appropriate distance.
  →Stop using the device or wait for a while and try again.

# Troubleshooting

## Auto Ice making.

### The refrigerator does not make ice.

- If the water in the tank does not decrease after a while, the ice maker is not working.
- The ice making process begins after the inside of the refrigerator is cold enough. (It may take more than 24 hours to start the process)
- Check if the Auto Ice Off mode is set. (Page 29)
- Be sure to fully push the Water tank and Ice tray into place.
- Do not leave food in the ice maker.
- Do not install or remove the Ice tray frequently.
- Check if the Water tank is almost empty.
- If water spills on the Ice box, clean it up.
- Please contact Panasonic service center.

### The ice does not form any ice cube

- Is the temperature of Freezer compartment set to a higher temperature than -20 °C?
  → Adjust to a lower temperature. (Page 22)

### Unusual shape of ice cubes.

- There are protrusions.
  → The grooves of the Ice tray may be frozen.
- The ice cubes are round or connected to other ice cubes.
  → Ice has been stored for a long time.
  (Ice cubes get round of connected by sublimation.)
- The ice is small.
  → Small ice cubes are made when there is no water left in the tank.

## Prime Fresh case 1 and Prime Fresh case 2

### Food is over-frozen or not frozen.

- When the food in Prime Fresh case 1 or Prime Fresh case 2 is over-frozen.
  → Please set to a higher temperature than -3 °C.
- When the food in Prime Fresh case 1 or Prime Fresh case 2 is not partially frozen.
  → Set the temperature to as low as -5 °C.

### Not cool, not freezing.

- Cooling or freezing may not be sufficient depending on the type of food, packaging condition, storage capacity, and how often the door is opened and closed.
  → Create space between foods for cold air circulation, arrange similar sized food in a Prime Fresh case and adjust the temperature accordingly.

### Not fully sealed.

- When there is too much food, it may overflow from Prime Fresh case 1 or Prime Fresh case 2 and enter the gap behind Prime Fresh case 1 or Prime Fresh case 2, causing it not to be fully sealed.
  → Check the back of Prime Fresh case 1 or Prime Fresh case 2 contains food items? If so, remove them before attaching Prime Fresh case 1 or Prime Fresh case 2.
  → Arrange food properly to avoid overflowing.

# Troubleshooting

| | | |
|---|---|---|
| The ECONAVI light does not come on normally. | **The ECONAVI function does not work (the ECONAVI light does not come on).** | ●Are Quick Freezing , Quick Ice Making, Prime Freeze active?<br>●When the temperature is not set at 4 °C for the Fridge compartment and -20 °C for the Freezer compartment, the ECONAVI function does not activate automatically.<br>●Is the door opened too often or are there hot food stored in the refrigerator?<br>●The learning function can automatically disable the ECONAVI operation during regular use.<br>●Does the refrigerator display any error codes? |
| | **The ECONAVI operation is rarely active.** | ●Is there a power failure?<br>If there is a power failure, the data collected by the learning function until the power failure will be lost.<br>The ECONAVI operation is not active until the learning function can collect the data again. |
| | **The ECONAVI operation is stopped halfway.** | ●If the automatic defrost function is enabled while the ECONAVI operation is active, the normal cooling mode will be activated after the defrosting process completes. As a result, the ECONAVI operation may be stopped during defrosting/cooling.<br>●Sometimes, the learning function restarts the normal cooling mode. |
| | **The ECONAVI operation works too often (the ECONAVI light rarely turns off).** | ●Is the light intensity sensor hidden?<br>●Are there any dirt or scratches on Operation Panel of the light intensity sensor?<br>●The ECONAVI operation may operate while the refrigerator is in use depending on the usage conditions, but the cooling operation is still maintained. |
| Prime Freeze. | **The food melts.** | ●Store frozen foods with the Prime Freeze case in a long period of time, or store high-fat ice cream in the freezer.<br>●Do not place cold food next to hot food. |
| | **Not cold, no freezing.** | ●Freezing capacity may not be sufficient depending on the type of food, packaging condition, storage capacity, and how often that the door is opened and closed.<br>→ Reset Prime Freeze. (Page 26) |
| | **Stop working halfway.** | ●If Prime Freeze is set during defrosting, the time display will start counting, but the fan will stop and the food will not be cooled enough. After defrosting, reset Prime Freeze.<br>●If Quick Ice Making, Quick Freezing, Prime Fresh+ are set during the operation of Prime Freeze, Prime Freeze will be stopped. |

# Troubleshooting

| | | |
|---|---|---|
| "Panasonic SmartApp+" application | Smartphone cannot be connected. | ●Please refer Required Equipment and Environment section. (Page 48) |
| | Forget password | ●From login screen, select "If you forgot your password, click here", then set your password again. |
| | Cannot connect to refrigerator | ●Is the wireless LAN router turned off?<br>●The connection is not stable, please put the wireless LAN router near the refrigerator. |
| | Cannot open the application | ●Is your smartphone connected to Internet? |
| The LED of wireless LAN on the Operation Panel. | The LED of wireless LAN on the Operation Panel flashes. | ●The LED of wireless LAN flashes every 0.5 seconds.<br>→ The wireless LAN connection may be disconnected. Please check the wireless LAN connection status again. (Page 30)<br>●The LED of wireless LAN flashes every 0.1 second.<br>→ The wireless LAN module communication may be faulty. Please contact Panasonic service center immediately. |
| | The LED of wireless LAN on the Operation Panel turns on unexpectedly. | ● Is the refrigerator being connected to wireless LAN? Then, turn off the wireless LAN module, the LED of wireless LAN will turn off. |
| Water Dispenser | Droplets are kept on top of faucet | ● After getting water, a few droplets are kept on top of nozzle and may drip into the Water tray. This is a normal phenomenon.<br>● When the air humidity is high, a few droplets are kept on top of nozzle and may flow into the Water tray. This is a normal phenomenon and no longer appears when the air humidity is decreased. Please clean with soft dry towel.<br>● When the air humidity is low but a few droplets are still kept on top of faucet and flows into the Water tray, please contact Panasonic service center immediately. |
| | Only a few droplets flows into Water tray. | |
| | Water flows continuously | ● Does the Water tray of the Water Dispenser have any abnormal object or scale formation?<br>→ Please clean the Water tray of the Water Dispenser if it has any abnormal object or scale formation.<br>● In case water flows continuously and no abnormal objects are in the Water tray, please contact Panasonic service center immediately. |

## Performance Data Sheet For Filter System Model: ARBHBA300020

This system has been tested according to NSF/ANSI 42, 53, 401 for reduction of the substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system, as specified in NSF/ANSI 42, 53, 401.

System tested and certified by NSF International against NSF/ANSI Standards 42, 53, 401 in System Model ARBHBA300020 for reduction claims specified on the Performance Data Sheet.

| Substance | Influent Challenge Concentration | Average Reduction | Reduction Requirement | Max Permissible Product Water Concentration |
|---|---|---|---|---|
| Chlorine Taste and Odor | 2 mg/ L ± 10% | 97.5% | ≥ 50% | N/A |
| Nominal Particulate Class I >0.5$\mu$m to 1$\mu$m | At least 10,000 particles/ ml | 99.7% | ≥ 85% | N/A |
| 2,4-D | 0.21 mg/ L ± 10% | 98.7% | N/A | 0.07 mg/ L |
| Atrazine | 0.009 mg/ L ± 10% | > 94.8% | N/A | 0.003 mg/ L |
| Cyst | Minimum 50,000/ L | > 99.99% | 99.95 % | N/A |
| Mercury pH 6.5 | 0.006 mg/ L ± 10% | 96.6% | N/A | 0.002 mg/ L |
| Mercury pH 8.5 | 0.006 mg/ L ± 10% | 95.9% | N/A | 0.002 mg/ L |
| Asbestos | $10^7$ to $10^8$ fibers/ L; fibers greater than 10$\mu$m in length | > 99% | 99 % | N/A |
| Benzene | 0.015 mg/ L ± 10% | > 97.0% | N/A | 0.005 mg/ L |
| Lead pH 6.5 | 0.15 mg/ L ± 10% | 99.3% | N/A | 0.005 mg/ L |
| Lead pH 8.5 | 0.15 mg/ L ± 10% | > 99.3% | N/A | 0.005 mg/ L |
| P-Dichlorobenzene | 0.225 mg/ L ± 10% | > 99.8% | N/A | 0.075 mg/ L |
| Toxaphene | 0.015 mg/ L ± 10% | > 93.8% | N/A | 0.003 mg/ L |
| Turbidity | 11 ± 1 NTU | 99.1% | N/A | 0.5 NTU |
| Lindane | 0.002 mg/ L ± 10% | > 99.1% | N/A | 0.0002 mg/ L |
| Carbofuran | 0.08 mg/ L ± 10% | 98.7 % | N/A | 0.04 mg/ L |
| Tetrachloroethylene | 0.015 mg/ L ± 10% | > 96.6 % | N/A | 0.005 mg/ L |
| O-Dichlorobenzene | 1.8 mg/ L ± 10% | > 99.9 % | N/A | 0.6 mg/ L |
| Ethylbenzene | 2.1 mg/ L ± 10% | > 99.9 % | N/A | 0.7 mg/ L |
| Chlorobenzene | 2.0 mg/ L ± 10% | > 99.9 % | N/A | 0.1 mg/ L |
| Endrin | 0.006 mg/ L ± 10% | > 96.7 % | N/A | 0.002 mg/ L |
| Meprobamate | 400 ng/ L ± 20% | 93.5 % | N/A | 60 ng/ L |
| Atenolol | 200 ng/ L ± 20% | 94.7 % | N/A | 30 ng/ L |

## Performance Data Sheet For Filter System Model: ARBHBA300020

| Substance | Influent Challenge Concentration | Average Reduction | Reduction Requirement | Max Permissible Product Water Concentration |
|---|---|---|---|---|
| Carbamazepine | 1,400 ng/ L ± 20% | 98.4 % | N/A | 200 ng/ L |
| DEET | 1,400 ng/ L ± 20% | 98.6 % | N/A | 200 ng/ L |
| Metolachlor | 1,400 ng/ L ± 20% | 98.2 % | N/A | 200 ng/ L |
| Trimethoprim | 140 ng/ L ± 20% | 96.4 % | N/A | 20 ng/ L |
| Linuron | 140 ng/ L ± 20% | > 96.5 % | N/A | 20 ng/ L |
| TCEP | 5,000 ng/ L ± 20% | > 98.1 % | N/A | 700 ng/ L |
| TCPP | 5,000 ng/ L ± 20% | 98.2 % | N/A | 700 ng/ L |
| Phenytoin | 200 ng/ L ± 20% | > 94.4 % | N/A | 30 ng/ L |
| Ibuprofen | 400 ng/ L ± 20% | > 95.4 % | N/A | 60 ng/ L |
| Naproxen | 140 ng/ L ± 20% | > 97.5 % | N/A | 20 ng/ L |
| Estrone | 140 ng/ L ± 20% | > 95.2 % | N/A | 20 ng/ L |
| Bisphenol A | 2,000 ng/ L ± 20% | 99.0 % | N/A | 300 ng/ L |
| Nonyl phenol | 1,400 ng/ L ± 20% | > 96.4% | N/A | 200 ng/ L |
| Microplastics, particles 0.5 to < 1$\mu$m | At lease 10,000 particles/ ml | 99.7% | ≥ 85% | N/A |

### Operation Conditions

| | |
|---|---|
| Capacity | 1,136 L (300 gal) |
| Function | Chemical / Mechanical |
| Usage Life | 6 months |
| Flow Rate | 1.9 lpm (0.5 gpm) |
| Temperature | 1 ~ 38 °C (34 ~ 100 °F) |
| Pressure | 206 ~ 861 kPa (30 ~ 125 psi) |

System model: ARBHBA300020
Replacement Cartridge: ARAHFA105010
EPA Number: EPA Est No.94813-KOR-1
(NSF/ANSI Standard 53 Certified to reduce Cyst by mechanical means.)
Manufactured by Microfilter Co.,Ltd.
162-1, Sansu, Deoksan, Jincheon, Chung-Buk 27856, Korea.
Made in Korea
Tel no.: T: 82-43-531-7021~5 /F: 82-43-530-5499

### Remark

- Systems must be installed and operated in accordance with manufacturer's recommended procedures and guidelines. Follow any and all local plumbing codes and requirements. Some local codes may require the use of a licensed plumber or a certified installer when disrupting a potable water line.
- Failure to follow instructions may result in voidance of warranty.
- Change the filter cartridge at least every 6 months.
- To reduce the risks associated with water leakage, which, if not avoided, may result in property damage - check with your plumbing professional to verify that water pressure is less than 827 kPa (120 psi).

# Specifications

| Model No. | | NR-XY680L |
|---|---|---|
| Freezer Star Rating | | ✱✱✱ |
| Capacity (L) (IEC 62552:2015) | Total | 618 |
| | Freezer | 212 |
| | Fridge, Prime Fresh | 406 |
| Outside Dimensions Width x Depth x Height (mm) | | 900 x 750 x 1790 |
| Net Weight (kg) | | 107 |
| Refrigerant Type | | R600a |
| Cooling System | | Non-frost cooling. |
| Rated Voltage (V) Rated Frequency (Hz) | | Refer to the rating label attached inside the cabinet. |

# Disposal



For the purpose of recycling to facilitate utilization of resources, please return this product to a nearby authorized collection center, registered dismantler of recycler, or Panasonic service center when disposing of this product.

Customer care number: 132600 (AU)
09 272 0178 (NZ)

Please see the Panasonic website for further information on collection centers, etc. or call the customer care number.

https://www.panasonic.com/au

https://www.panasonic.com/nz

# Copyright

- Android and Google Play are trademarks or registered trademarks of Google LLC.
- iPhone is a trademark of Apple Inc., registered in the U.S. and other countries.
- The App Store is a service mark of Apple Inc.
- “WPA™”, “WPA2™” and “WPA3™” are trademarks of “Wi-Fi Alliance®”.
- QR Code is registered trademark of DENSO WAVE INCORPORATED.
- Bluetooth® word mark and logo are registered trademarks owned by Bluetooth SIG, Inc.
- Panasonic Corporation uses these marks under license. Other trademarks and trade names are property of their respective owners.
- Other names, company names, product names, etc. described in this manual are trademarks or registered trademarks of their respective companies. Some ™ and ® marks are not included in the text.

## ■ About software

This product consists of the following types of software.

(1) Software developed by or for Panasonic Corporation (Panasonic)
(2) Software owned by a third party and licensed to Panasonic
(3) Conditionally licensed open source software
The software classified in (3) above is distributed with the expectation that it will be useful on its own, but we do not warrant any implied guarantee of “commerciality” or “fitness for a specific purpose”. No warranty is given, including.

You can find the link to download the most up-to-date information of Copyright for “Panasonic SmartApp+” application.

- **For Australia:**
  https://www.panasonic.com/au/consumer/household/refrigeration-learn/article/smart-connectivity/oi.html
  or QR code as below:

- **For New Zealand:**
  https://www.panasonic.com/nz/consumer/home-appliances/kitchen-appliances-learn/article/smart-connectivity/oi.html
  or QR code as below:

# Memo

Panasonic Corporation
Website: https://www.panasonic.com

© Panasonic Appliances Vietnam Co., Ltd. 2023