

Service Manual Refrigerator/Freezer Model: RX611DUX1

care



841801

The specifications and servicing procedures outlined in this manual are subject to change without notice. The latest version is indicated by the reprint date and replaces any earlier editions.

Fisher & Paykel Appliances Ltd

78 Springs Road, East Tamaki Auckland 2013 PO Box 58-732, Botany, Auckland 2163, New Zealand Telephone: 09 273 0600 Facsimile: 09 273 0656

Fisher & Paykel Customer Services Pty Ltd

PO Box 798, Cleveland, QLD 4163 A.C.N. 003 3335 171 19 Enterprise Street Cleveland, QLD 4163 Australia Telephone: (07) 3826 9100 Facsimile: (07) 3826 9164

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This refrigerator contains flammable refrigerant Isobutane (R600a).

Use this appliance only for its intended purpose as described in this user guide.

IMPORTANT SAFETY INSTRUCTIONS

WARNING! When using this appliance always exercise basic safety precautions including the following:

- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Young children should be supervised to ensure they do not play with the appliance.
- The manufacturer's installation instructions for product and cabinetry ventilation must be followed when installing the appliance.
- Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction.
- Do not use mechanical devices or other means to accelerate the defrosting process.
- Do not damage the refrigerant circuit.
- In case of damage to the refrigerant circuit, ventilate the area by opening all windows. Do not operate
 electrical equipment or any other equipment that may produce arcs, sparks or flames in the area.
 Contact your Fisher & Paykel Authorised Repairer immediately to arrange for the appliance to be
 repaired.
- It is hazardous for anyone other than an authorised service person to service this appliance. In Queensland the authorised service person must hold a gas work licence or authorisation for hydrocarbon refrigerants to carry our service or repairs which involve removal of covers.

Electrical

- This appliance must be installed in accordance with the installation instructions before use.
- Never unplug your refrigerator by pulling on the power cord.
- Always grip the plug firmly and pull straight out from the outlet.
- Do not plug in any other appliance at the same power point as your refrigerator or use extension cords or double adapters.
- Repair or replace immediately all electric service cords that have become frayed or otherwise damaged.
 Do not use a cord that shows cracks or abrasion along its length or at either the plug or appliance end.
- If the power supply cord is damaged, it must only be replaced by your Fisher & Paykel Authorised Repairer because special purpose tools are required.
- When moving your appliance away from the wall, be careful not to roll over or damage the power cord.
- Do not use electrical appliances inside the food storage compartments of the appliance.

IMPORTANT!

Your refrigerator is designed to operate for many years without the need for service checks. However, if your refrigerator is malfunctioning, have it attended to by your Fisher & Paykel Authorised Repairer as soon as possible. All electrical repairs must be carried out by an adequately trained service technician or qualified electrician.

Cleaning

 Many commercially available cleaning products contain solvents which may attack plastic components of your refrigerator and cause them to crack. Please refer to the cleaning section of the Use & Care booklet for further advice.

Disposal

- Extreme care must be taken when disposing of your old appliance to avoid hazards:
 - The flammable refrigerant gas must be safely removed.
 - The thermal insulation foam contained in this appliance is produced by flammable insulation blowing gases; any exposed foam may be highly flammable and must be carefully treated during disposal.
 - The doors should be removed and the shelves left in place so that children may not easily climb inside.
- Your Fisher & Paykel Authorised Repairer will be able to give advice on environmentally friendly methods
 of disposing of your old refrigerator or freezer.

Storing food and drinks

- Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.
- Never store volatile or flammable materials in your refrigerator as they may explode.
- Never freeze liquids in glass containers. Liquid expands during freezing, which may cause the container to explode.
- Never freeze carbonated drinks. They may explode.
- Do not consume food if it is too cold. Food removed from the freezer compartment may be cold enough to cause damage when brought into contact with bare skin, e.g. frozen ice cubes.

Power failure – food safety

- Do not refreeze frozen foods that have thawed completely. The food may be dangerous to eat. Follow the recommendations below if you discover food in your freezer has thawed:
 - Ice crystals still visible food may be refrozen but should be stored for a shorter period than recommended.
 - Thawed but refrigerator cold refreezing generally not recommended. fruits and some cooked food can be refrozen but use as soon as possible. Meat, fish, poultry – use immediately or cook then refreeze. Vegetables – discard as they usually go limp and soggy.
 - Thawed and warmer than 5°C discard all food.

INSTALLATION INSTRUCTIONS

Please follow the installation steps below to ensure your appliance operates correctly.

2.1 Power

The appliance must be installed so the plug is accessible.

- To ensure that the appliance is not accidentally switched off, connect your refrigerator to its own power point. Do not plug in any other appliance at this power point or use extension cords and double adaptors, as the combined weight of both power cords can pull the double adaptor from a wall outlet socket.
- For power requirements, refer to the information on the serial plate located on the left hand side of the refrigerator compartment.
- It is essential that the appliance is properly grounded (earthed).
- Connect the appliance to the electrical supply (220-240V 50 Hz) with the plug and lead, which are fitted.
- Connections to the mains supply should be in accordance with local regulations.

2.2 Location

- Your refrigerator should not be located in direct sunlight or next to any heat generating appliance such as a cooktop, oven or dishwasher.
- This appliance is intended to be used in household and similar applications such as
- staff kitchen areas in shops, offices and other working environments;
- farm houses and by clients in hotels, motels and other residential type environments;
- bed and breakfast type environments;
- catering and similar non-retail applications.

2.3 Ice & Water (Ice & Water Models Only)

- Your Ice & Water refrigerator must be installed by an authorised plumber or Fisher & Paykel Authorised Repairer, as incorrect plumbing can lead to water leaks.
- Fisher & Paykel Appliances does not accept responsibility for damage (including water damage) caused by faulty installation or plumbing.

2.4 **Product & Cabinetry Dimensions**



PRODUCT DIMENSIONS			
А	Overall height of product (to top of hinge)	1795	
В	Overall width of product	901	
С	Overall depth of product (excludes handle, includes evaporator)	690	
СА	CABINETRY DIMENSIONS mm		
D	Inside height of cavity Flush with refrigerator chassis – full door rotation	1845	
Е	Inside width	941	
F	Inside depth	635	
MIN	MINIMUM CLEARANCES mm		
G	Side clearance	20	
Н	Rear clearance	30	
Ι	Door clearance - hinge side flush with chassis – full rotation	460	
J	Door clearance - hinge side flush with chassis – full rotation (Small Door)	365	

Positioning The Appliance

Choosing the right location

This appliance should be installed in a room that is dry and well ventilated. To provide adequate ventilation, make sure the refrigerator is at least 20 mm clear on all sides from kitchen cabinetry, and 30 mm from the back wall. Any units placed above the appliance must be clear by 50 mm to allow sufficient ventilation.

If locating the refrigerator close to a corner, sufficient spacing must be left for opening the doors and removing the shelves.

This appliance should be at least 100 mm from any electric or gas cooker. If this is not possible, make sure that appropriate insulation is used (e.g. insulated wall).

Avoid exposing the appliance to direct sunlight, and sources of heat (such as radiators, heaters or cookers).

Locating this appliance in a cold environment (such as a shed, outhouse or garage) may compromise its performance. A consistent room temperature of 10°C or above is recommended to ensure optimum performance and food care.



Installation distance



Door rotation installation distance

2.6 Removing And Installing The Doors

IMPORTANT!

- In the event that you need to remove the refrigerator doors, please follow the door removal and installation instructions below.
- It is suggested for your safety to have two or more people to assist you in completing the tasks below to avoid injury, product damage or property loss.
- Ensure both power and water to the refrigerator are turned off.
- · First step to removing refrigerator and freezer door
- 1 Undo the 2 screws holding kick-strip in position and remove (Fig.1).
- 2 Release the water coupler: press and hold in the collet as shown (Fig.2) and remove the water tube.



Fig.1 Removing the kick-strip

Fig.2 Releasing the water coupler

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2.6.1 The Freezer Door

- 1 Undo the hinge cover screw and remove the cover (Fig.3), the clips holding the cover must be released first. Unclip the front section of the hinge cover, then push the cover towards the centre of the appliance and pull upwards to release.
- 2 Disconnect wires held together with clips (Fig.3).
- 3 Undo the screws holding down hinge bracket. Do not disconnect the earth wire from the screw (Fig.4).
- 4 Lift freezer door and thread the water tube up through the lower hinge.
- 5 Pull the door up and then away from the cabinet.





Fig. 4 Removing the hinge screws

2.6.2 The Refrigerator Door

- 1 Undo the hinge cover screw and remove the cover (Fig.5), the clips holding the cover must be released first. Unclip the front section of the hinge cover, then push the cover towards the centre of the appliance and pull upwards to release.
- 2 Undo screws holding down the hinge bracket (Fig.6).

Fig.3 Removing the hinge cover

3 Pull the door up and then away from the cabinet.



Fig.5 Removing the hinge cover

Fig.6 Removing the hinge screws

2.6.3 Refitting The Doors

Refit the doors by reversing the removal steps. It is essential that when the freezer door is replaced, the earth wire is reconnected.

2.7 Levelling The Refrigerator And Adjusting The Doors

Make sure that the appliance is on solid level flooring. If the refrigerator is placed on a plinth, the plinth must be flat and constructed from strong, fire resistant materials.

The refrigerator may require some alignment before connecting to the power supply.

This refrigerator has front adjustable feet, which can be used to level the appliance.

Insert a suitable flat-head screwdriver into the slots of the adjustable feet. Wind to the left to raise the foot and to the right to lower the foot.

2.7.1 Levelling The Doors

To raise the left-hand door, wind the left-hand foot to the left.

To raise the right-hand door, wind the right-hand foot to the left.



Clockwise to raise feet



Counter-clockwise to Lower feet



Levelling doors

2.8 Water Supply Connection

IMPORTANT!

- It is recommended to have this product installed by a qualified technician.
- DO NOT use with water that is microbiologically unsafe or of unknown quality.
- WARNING connect to potable water supply only to ensure water hygiene in the ice maker and water dispenser.
- DO NOT install on line pressure above 600 kPa or below 150 kPa.
- DO NOT use on hot water supply (25°C max).
- DO NOT cut any length of tube shorter than 500 mm.
- DO NOT install near electrical wires or water pipes that will be in the path of drilling when selecting the location of the filter system.
- DO NOT mount the filter in such a position that it will be struck by other items, such as wastebaskets, etc.
- DO NOT install the filter or any water tubing in direct sunlight as prolonged exposure to light can weaken
 plastic components.
- DO NOT install the filter in a location that is susceptible to freezing temperatures as damage to the filter housing could occur.
- DO NOT screw the filter to the refrigerator.
- DO NOT install the filter or any water tubing in high temperature areas e.g. in a ceiling cavity.
- AVOID contamination of pipes during installation.
- DO NOT use copper tubing. The plastic tubing supplied should always be used.
- DO NOT continuously dispense water for a period longer than 1 minute.
- The water connection instructions are intended for the professional installer.

2.8.1 Fitting The Water Filter

- 1 Measure out and cut the length of tube required from the filter to the refrigerator, and from the filter to the water supply. When cutting, make sure the tube ends are square and clean.
- 2 Push fit one of the tubes into the water filter (Fig. 7).
- 3 Secure the tube to the filter by sliding a locking clip into the groove as shown (Fig.8).
- 4 Repeat the procedure on the other end of the filter.
- 5 Connect the end into the plastic adaptor (Fig.9). Screw the adaptor onto a suitable ½ BSP connector water outlet.
- 6 Open the water valve to flush 10 L of water through the filter to remove any trapped air. Check for leakage in the water tube connections.
- 7 Access the water valve assembly at the back of the refrigerator. Push the tube into the valve assembly (Fig.10).

Before you start using the water dispenser

Before first use, run through and discard the first 3 litres of water from the dispenser, stopping intermittently to remove trapped air in the system. Do not press for more than 1 minute to prevent overheating of the pad activator solenoid.

Note: There will be a delay while the tank fills until water is dispensed.

IMPORTANT!

- All connections must be checked for leaks.
- Ensure that the white 6 mm tubing is routed away from sharp objects, sharp corners (beware of kinking the tube as this will stop water flow), clear of the refrigerator unit compartment and not in a location where it can be squashed.
- Ensure that all push-fit connections are firmly pushed into place.
- If the tubing is removed at any point, re-cut the end and re-insert. The tubing must be fully inserted to avoid leaks.
- To remove the tube from the connection points, turn off the isolating tap, gently push the dispensing pad
 using a glass or container to remove the static line pressure, push in the collet and gently pull the tubing
 at the same time.



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Main Components



- Ice maker/ice box 1.
- Freezer main shelves 2.
- 3. Ice & water dispenser
- Freezer light 4.
- Freezer drawers 5.
- 6. Freezer door shelves
- 7.
- Refrigerator light Refrigerator door shelves 8.
- Refrigerator main shelves 9.
- 10. Vegetable drawers
- 11. Refrigerator drawer

3 OPERATING INSTRUCTIONS

3.1 Ice & Water Control Panel 9 8 Fisher & Paykel \$ 8 8 1 2 ٥ 8 Cubed Filter Ice On Dispenser Water Crushed e On/Off 3 П Δ Freezer Temp Fridge Temp 5 ŝ 0 6 n Function Max Cool Fast Freeze Holiday Function Set Lock Hold to lock/unio 10 11 12 13

- 1 Water and ice dispenser button
- 2 Icemaker on/off button
- 3 Freezer temperature button
- 4 Refrigerator temperature button
- 5 Function select button
- 6 Function set button
- 7 Dispenser status icons

3.2 Lock Function

IMPORTANT!

The temperature settings cannot be adjusted when in Fast Freeze or when Lock has been activated. If attempts are made to adjust the settings under these conditions, the special function icon beside the freezer temperature display will blink, and a beep will sound to indicate that the adjustment cannot be made at this time.

This feature will lock the temperature and function settings, preventing these from being changed. This is useful when cleaning the refrigerator. When locked, the Lock icon will blink and a beep will sound.



To lock

Press and hold the **Function Set** button for 3 seconds. The Lock icon will appear and the refrigerator display will be locked.

To unlock

Press and hold the **Function Set** button for 3 seconds. The Lock icon will turn off and the refrigerator display will be unlocked.

- 8 Filter change status icon
- 9 Icemaker on status icon
- 10 Max Cool icon
- 11 Fast Freeze icon
- 12 Holiday icon
- 13 Lock icon

3.3 Holiday Function

IMPORTANT!

Before selecting the holiday function, remove all perishable food and drink from the refrigerator compartment, as perishable items may become unsafe to consume.

This feature allows the customer to leave the refrigerator section unused while the freezer section operates as normal. When in this function, the refrigerator temperature will be automatically set to 17°C.

To turn on

- 1. Press the **Function** button until the Holiday icon is selected.
- 2. Press the Function Set button. The Holiday function will be activated.

To turn off

- 1. Press the **Function** button until the Holiday icon is selected.
- 2. Press the Function Set button. The Holiday icon will turn off. Holiday function is now deactivated.

3.4 Max Cool

This function is designed to chill food quickly to retain freshness and quality. Use this feature before putting large quantities of food into the refrigerator compartment.

The Max Cool function will automatically deactivate once the refrigerator compartment has reached the set temperature.



Max Cool

To turn on

- 1. Press the Function button until the Max Cool icon is selected.
- 2. Press the Function Set button. The Max Cool function will activate.

To turn off, before automatic deactivation

- 1. Press the **Function** button until the Max Cool icon is selected.
- 2. Press the **Function Set** button. The Max Cool icon will turn off. The Max Cool function is now deactivated.

3.5 Fast Freeze

IMPORTANT!

The temperature settings cannot be adjusted when in Fast Freeze or when Lock has been activated. If attempts are made to adjust the settings under these conditions, the special function icon beside the freezer temperature display will blink, and a beep will sound to indicate that the adjustment cannot be made at this time.

This function is designed to freeze food quickly to ensure freshness, texture and taste are retained during the freezing process.

The Fast Freeze function will automatically deactivate after a set time period.

Use this feature before putting large quantities of food into the freezer (for example after food shopping). For best results we recommend that the Fast Freeze function be turned on 12 hours before food is placed into the freezer.





To turn on

1. Press the **Function** button until the Fast Freeze icon is selected.



2. Press the Function Set button. The Fast Freeze function will activate.

To turn off, before automatic deactivation

- 1. Press the Function button until the Fast Freeze icon is selected.
- 2. Press the **Function Set** button. The Fast Freeze icon will turn off. The Fast Freeze function is now deactivated.

3.6 Adjusting The Fridge Temperature

- 1. Press the **Fridge Temp** button. The refrigerator temperature display will start blinking, indicating that the refrigerator is in the temperature setting mode.
- 2. Press the **Fridge Temp** button to scroll though the refrigerator temperature range from 9°C to 1°C.

When the desired temperature is displayed, wait 5 seconds. The blinking will stop and the temperature will be set. Alternatively, press any other button on the control panel within 5 seconds to set the temperature.



3.7 Adjusting The Freezer Temperature

- 1. Press the **Freezer Temp** button. The freezer temperature display will start blinking, indicating that the freezer is in the temperature setting mode.
- 2. Press the **Freezer Temp** button to scroll through the freezer temperature range from -14°C to -24°C.

When the desired temperature is displayed, wait 5 seconds. The blinking will stop and the temperature will be set. Alternatively, press any other button on the control panel within 5 seconds to set the temperature.



Freezer Temp

3.8 Dispenser Button

Press the **Dispenser** button to scroll through the dispensing options: water, crushed ice or cubed ice. Once an icon is illuminated, the dispensing mode will change to the function selected.



Dispenser

3.9 Ice On/Off

To turn on

Press and hold the **Ice On/Off** button for three seconds. The Ice On icon will turn on, indicating that the icemaker is now functioning.

To turn off

Press and hold the **Ice On/Off** button for three seconds. The icon will turn off, indicating that the icemaker is now off.



USING THE ICEMAKER

4.1 First Use Of The Ice Maker/Water Dispenser

- Check that the refrigerator is switched on and has been cooling for at least 2 hours before use (refer to Sections 3.6 and 3.7 the temperature of the refrigerator and freezer).
- Check that the water isolation tap has been connected and turned on.
- Press the dispenser pad and discard the first 3 litres of water, stopping intermittently to remove trapped air in the system. Failure to do this will result in excessive dripping from the dispenser. This will make sure that the pipes are cleared. If in doubt, keep re-using the dispenser until the water runs clear.
- Please discard the first few batches of ice after start up.

Note: The first time the water dispenser is used, there will be a 1 - 2 minute delay while the tank fills, before water is dispensed.

4.2 Storing Ice For Extended Periods

Storing ice for long periods of time can affect its appearance and odour. We recommend disposal of any ice which has been stored for extended periods and then removal and cleaning of the icebox. Allow the ice box to dry thoroughly and cool down before replacing into the appliance to prevent ice from sticking to the bin.

4.3 Water Filter

- The Filter icon on the control panel will appear when the filter needs replacing. To maintain water quality we recommend the water filter be replaced every 6 months. Replace the water filter as per manufacturer's instructions or follow instructions below. After changing, press the Function button for 3 seconds, the Filter icon will disappear and the filter timer will reset.
- Replacement cartridges are available from your Fisher & Paykel Service Agent (Kemf lo Aicro filter part number 0060823485).

To replace the water filter

- Turn off the water supply.
- Remove the locking key at one end of the filter and then disconnect the water tube. Repeat on the other end of the filter.
- To fit the new filter, insert the water tube at the inlet end of the filter, secure with locking clip and flush 3 litres of water through the filter. Note the flow direction on the filter (refer to Section 2.8.1). Check for leaks.
- Connect the water tube to the outlet end of the filter, secure with locking clip.

IMPORTANT

- To avoid serious illness or death, do not use water of unsafe or of unknown quality.
- The water filter cartridge needs to be changed when the filter icon appears on the interface panel or after 6 months of use.
- If the water filtration system has been allowed to freeze, replace the filter cartridge.
- Filter replacement is the consumer's responsibility and will not be covered by the warranty except in the case of faulty parts or materials within the filter cartridge.
- If the water has not been dispensed for some time or has an unpleasant taste or odour, flush 10 litres of water through the system. If unpleasant taste or odour persists, fit a new filter cartridge.

4.4 Removing And Replacing The Ice Box

To remove the icebox, lift the box and then pull forwards, releasing the unit (Fig.11).

Note: Water moisture may have condensed and frozen the icebox in place.

When replacing the ice bin, if it does not fit easily, remove the box and turn the cam mechanism 90° clockwise (Fig.12). Reinstall the icebox, making sure that the catch on the tray fits into the shelf slot.



Fig. 12

4.5 If The Icemaker Does Not Work Properly

The volume of the icebox equals the quantity of ice cubes, which the appliance can make in one day. Occasionally a small number of ice cubes may remain inside the box. If the ice gets stuck, this will result in abnormal operation of the ice cube maker. To avoid this problem, remove the icebox and rearrange the ice cubes, and remove the ice cubes which cannot be separated. The sound of ice being dropped into the storage compartment may be heard. This is normal.

IMPORTANT!

- Always keep the ice cube outlet clean and clear of obstructions.
- Turning the icemaker off and removing the icebox enables extra space for food storage. Install the additional door shelf at the position above the inlet on the freezer door (fig. 13).
- Avoid contact with the moving parts of the icemaker and do not place fingers on the automatic ice making mechanism while the refrigerator is in operation.
- Do not use ice cubes which have become discoloured, usually appearing a greenish-blue. If discolouration is observed, contact your Fisher & Paykel service agent.
- Ensure that the icemaker is connected to the filter and to a potable water supply. Installation of the water connection must be completed by a qualified service technician or qualified plumber.



5 CONTROL PRINCIPAL AND RELATED TEST FUNCTIONS 5.1 Main Functions

Air Circulation within the cabinet is computer controlled. There is a single evaporator and fan in the freezer compartment. Air is circulated into the refrigeration compartment by means of this fan and the refrigeration compartment temperature is controlled through the opening and closing of the electronic damper to achieve temperature control in both compartments through the running and stopping of compressor.

LED digital displays show each inner compartment temperature.

Malfunction self-diagnosis functions are shown as error codes automatically to help in solving problems when the system does not work properly.

Open-Door warning alarm function: If the door is not properly closed, or the door is left opened for an extended period, the appliance buzzer will sounds at an interval, giving a warning of the problem

5.1.1 Air Damper

- 1. The refrigerator sensor R1 controls the opening and closing of the air damper in the refrigerator compartment.
- 2. The air damper is closed (in order to prevent the compartment from freezing) within 15 minutes from the beginning of the defrost cycle until the defrost has finished.
- 3. The air damper is opened and closed once if it has not opened within 1 hour. After that, the damper will open or close according to the R1 sensor.
- 4. The air damper heater works in phase with damper opening.

5.1.2 Control Principle Of The Fan Motors

Control of the FC fan:

When any door is opened, the FC fan will turn off. After 10 minutes, the FC fan will restart if any door is still open, and if all doors are closed, the FC fan will work in normal mode.

In the Fast Freeze mode, the FC fan speed is 1500RPM. In other modes the speed varies between 1300 and 1500rpm for different conditions, such as the ambient temperature, set temperature, etc.

Control of the condenser fan:

The condenser fan works in phase with the compressor and at various speeds between 1100 and1400RPM depending on the ambient temperature.

5.1.3 Defrost Control

When the appliance is first turned on, a defrost cycle is completed after 4 hours of compressor run time. In the normal mode the defrost interval is determined by door openings, door open times and temperatures. When there are a large number of door openings, the defrost interval is 7 to 12 hours. When the number of door openings are less, the defrost circle is 12 to 20 hours. The longest interval is 73 hours.

5.2 Ice Making Control

Control principle: When the water fills the ice mould tray, the ice maker mould sensor tests the ice-mould temperature after 100 minutes of operation to see if the temperature is below -14°C.

If the temperature of the ice mould sensor is below -14°C, the icemaker starts a harvest and the icemaker gear box bail arm moves down to check if the ice bin is full. If the ice-store box is not full of ice, the icemaker will complete an ice harvest. Rotation of the mould will occur to release the ice, and then the mould will come back to its original horizontal position. The water valve will open again, allowing the ice mould tray to fill with water and then continue a new ice-making process.

Water in: The full time of water into the ice-mould tray after an ice harvest is controlled, the water inlet time being set through the user display control panel.

The ice-making harvest delay time: The harvest delay time is dependent on two conditions;

- 1. The ice-making time reaches 100 minutes;
- 2. The ice-maker senor temperature is lower than -14°C.

Ice-detection: When the icemaker is working and ready to carry out an ice harvest, the icemaker bail arm firstly moves downwards to detect if the ice bin is full. If the bail arm can move to the lowest position, it means that the ice-bin is not full and it can continue with a full ice harvest. If the bail arm can't move to the lowest position, the ice harvest is delayed until ice is used up in the ice bin.



Icemaker tray twisted over Bail arm up

5.3 Forcing an Ice Harvest

Ensure that the display is locked (refer to Section 3.2), then press the Dispenser and Ice On/Off buttons together for 3 seconds.

When the beep sound is heard, open the freezer door within 20 seconds. The icemaker will rotate automatically to carry out a full harvest.

5.4 Self-Test Function

In this function all components of the refrigerator can be tested.

To enter the function, ensure that the display is locked (refer to Section 3.2), then press the **Function** (A), then **Fridge Temp** (B), then **Function Set** (C), then **Freezer Temp** (D), then **Function** (A) buttons one by one within 5 seconds. The freezer and refrigerator temperature displays will each show **T1**.



The refrigerator is now in the Forced Start mode. In this mode:

- The refrigerator and freezer displays will show **T1** as shown above.
- The compressor will start.
- The freezer fan will start at full speed.
- The condenser fan will start at full speed.
- The defrost heater will be off.
- The refrigerator air damper will open.

Press the **Function** (A) button again. The refrigerator is now in the Forced Defrost mode. In this mode:

- The refrigerator and freezer displays will show T2.
- The compressor will turn off.
- The freezer and condenser fans will turn off.
- The defrost heater will turn on.
- The refrigerator air damper will close.

- If the defrost sensor temperature is equal to or greater than 7°C, the defrost heater will work for 10 seconds and then switch off.
- If the defrost sensor temperature is less than 7°C, the defrost heater will keep working until the sensor temperature reaches 7°C and then switch off.

To exit the self-test function, press the **Function** (A) button. The display will change to **T3**. Press **Function** (A) again and the display will change to **T4**. Press **Function** (A) again and the display will return to normal.

5.5 Adjusting The Icemaker Water Fill Time

The amount of water in the ice mould tray can be adjusted if needed, having first checked water pressure, flow rates and the water filter for restriction.

Ensure that the display is locked (refer to Section 3.2), then press the **Function Set** and **Ice On/Off** buttons together for 3 seconds.

- The freezer display will show "ET" and the refrigerator display will show any temperature between 35°C and 85°C,
- Each time the **Fridge Temp** button is pressed, the refrigeration display it will reduce by 5°C until it displays 35°C.
- Each time the **Freezer Temp** button is pressed, the freezer display will increase by 5°C until it displays 85°C.
- Every 5°C up or down is equal to 0.5 second in fill time.

SYSTEM FLOW PRINCIPLES 6

6.1 **System Component**



List of system components

- 1. Evaporator
- 2. Suction Line
- 3. Freezer Mullion
- Condenser 4.
- Condenser Brazed Joint 5.
- 6. Suction Line Brazed Joint
- Filter Drier 7.
- 8. Capillary Tube
- 9. Process Pipe
- 10. Refrigerator Mullion

8418016.2 System Flow Chart





8418017.2 Schematic Diagram



- A Power Plug
- C2 Evaporator Fan Motor
- F Ice Dispenser Motor
- H Icemaker
- J Control Panel
- L Compressor
- M3 PC Sensor 1
- N PC LED
- P2 Thermo Cut-out 2
- S1 Beverage Valve
- T2 Dispenser Cover Heater U

- B Power Panel
- D PC Damper
- G1 PC Door Switch
- I1 Dispenser LED 1
- K1 Capacitor
- M1 Defrost Sensor
- M4 PC Sensor 2
- O FC Back LED
- Q Defrost Heater
- S2 Icemaker Intake Valve
 - Auger Motor

- C1 Condenser Fan Motor
- E Display Panel
- G2 FC Door Switch
- I2 Dispenser LED 2
- K2 PTC
- M2 FC Sensor
- M5 Ambient Sensor
- P1 Thermo Cut-out 1
- R Ice Cube Selector
- T1 Dispenser Heater
- V Dispenser Switch

8 SENSORS & FAULT CODES

8.1 Sensor Location



REF.	SENSOR	LOCATION	FUNCTION
A	Ambient Sensor	Under LH hinge cover	Measure ambient temperature
R1	PC Sensor 1	Beside air vent in PC	Measure PC temperature
R2	PC Sensor 2	RH side of PC cabinet	Measure PC temperature
ICE	Icemaker Mould Sensor	Under ice bin in FC	Measure ice bin temperature
D	Defrost Sensor	On top of evaporator in FC	Measure evaporator temperature
FC	FC Sensor	Middle of FC	Measure FC temperature

841801 Fault Code List

No.	MALFUCTION	FAULT INDICATION		FAULT CODE MEANING
		FC	PC	
1	FC Sensor Fault	F4	Normal	FC sensor is short circuit or open circuit
2	Ambient Sensor Fault	Normal	F2	Ambient sensor is short circuit or open circuit
3	PC1 Sensor Fault	Normal	F3	PC1 sensor is short circuit or open circuit
4	PC2 Sensor Fault	Normal	F8	PC2 sensor is short circuit or open circuit
5	Defrost Sensor Fault	Normal	F6	Defrost sensor is short circuit or open circuit
6	Ice Mould Sensor Fault	Normal	FC	Ice mould sensor is short circuit or open circuit
7	FC Fan Motor Fault	Normal	E1	More than 30 seconds without signal
8	Evaporator Fan Motor Fault	Normal	E2	More than 30 seconds without signal
9	Communication Failure	Normal	E0	No signal transmitted between display PCB and
				power PCB for over 2 minutes
10	Defrost System Failure	Normal	Ed	Cannot reach -12 ^o within 2 hours
11	Icemaker Failure	Normal	Er	Icemaker defective

8.3 Fault Code Display

NOTE: These fault codes will not display automatically.

To display the fault code:

- Lock the display (refer to Section 3.2).
- Press and hold the Function button (A) and Fridge Temp button (B) together for 3 seconds. The display will change to "--" and the buzzer will sound once.



No Faults Recorded

- If there are no faults recorded, the display will be as shown above.
- If there is a fault code, it will be displayed in the PC display after a further 3 seconds.
- The function will exit automatically after a further 3 seconds and revert back to showing the current compartment temperatures.

ICE & WATER LINE LAYOUT



The water lines split two ways from the water valves, one way to the icemaker and the other to the water tank, and then to dispenser.

Cold water principle:

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Water enters the water tank in the PC where it is chilled for drinking before flowing to the dispenser.

Icemaker principle:

Water enters the icemaker from the water valve located at the back of the cabinet. When the ice is formed, the icemaker will carry out a harvest, having first checked the ice bin to ensure that it is not full. The icemaker then refills to carry out another ice making process.

10 DISASSEMBLY AND INSTALLATION

Note: Unplug the power cord from the outlet when dismantling the refrigerator;

10.1 Ice-Crushed Motor Disassembly

1. Remove the ice storage bin by lifting upwards and pulling forward at the same time.



2. Remove the two screws that attach the ice maker to the roof of the freezer.





- 4. Disconnect the crushed ice motor harness.
- 5. Remove the four screws securing the crushed ice motor gearbox and remove the gearbox.



10.2 User Display Panel Disassembly

1. Remove 2 screws securing the bottom of the control panel assembly;





2. Remove the display panel with the aid of a suction cup and disconnect the harness.





3. Remove 2 screws securing the display PCB to the front panel.



10.3 PC Damper Removal Remove the lower cover by depressing the face of it to disengage the two clips.



Remove the 2 screws from the rear cover to release the cover housing.



Disconnect both plugs of the wiring harness, then pull the damper housing down and away from the side wall.



Remove the tape holding both halves of the damper housing together and separate the foam halves.



10.4 Evaporator Cover Removal Remove the screw cover in the centre of the duct cover and remove the screw securing the cover to the rear wall.





Using a suction cup, pull the duct cover away from the rear wall.



Unplug the fan harness and remove the fan housing.







Remove the evaporator cover. This exposes the evaporator.





TROUBLESHOOTING

PROBLEM	POSSIBLE REASON	REMEDY
Moisture accumulates on the refrigerator's inner walls.	1. Hot & moist climate.	1. Accumulation of frost and moisture is accelerated in such
	 The doors are not closed tightly. 	 Make sure the refrigerator is level and there is no food or container interfering with the door closing
	3. The door is opened too frequently or for too long a time.	 Do not open the door as frequently.
Moisture accumulates on the refrigerator's outside surface or between the two doors.	1. Damp climate.	1. This is normal on a damp climate. The moisture will decrease when the humidity
	2. The refrigerator's doors are not closed tightly. This caused mixing of the cold air from the refrigerator with warm air outside it.	 Make sure the refrigerator is level and there is no food or container interfering with the door closing.
The compressor does not work.	1. The refrigerator is in a defrost	1. This is normal for an automatic
	 Cycle. The refrigerator is not plugged in to power. 	2. Check that the plug is plugged into the socket firmly and there is power at the socket.
	3. The refrigerator is in the OFF state at the display module	3. Restart the refrigerator.
The PC compartment is not	1. The damper harness is not	1. Check that the damper harness
cooling.	connected properly.	is connected correctly. Verify that the damper operates normally when the On/Off button is operated on the display module.
	2. The fan is not working.	2. The fan does not operate when the refrigerator's doors are open. Check that the door switch is operating correctly.
	 The PC compartment is turned off at the display module. 	 Turn the PC on at the display module.
The refrigerator runs frequently or	1. The ambient temperature is	1. In this case, it is normal for the
runs for too long a period.	 The refrigerator has been powered off for a period of time 	 It normally takes 8 to 12 hours for the refrigerator to totally cool
	3. The automatic icemaker is	3. The icemaking process makes
	 4. The door is opened too frequently or for too long a time. 	 4. Warm air enters the refrigerator and causes it to start frequently. Do not open the door as often.
	 The doors are not closed tightly. 	 Make sure the refrigerator is level and there is no food or container interfering with the door closing.
	6. The temperature setting for the FC is too low.	 Set the FC temperature higher until a satisfactory temperature is obtained.
	 The door gasket is dirty, worn, cracked or not fitting correctly. 	 Clean or replace the door gasket.
	8. The condenser is dirty.	8. Clean the condenser.

PROBLEM	POSSIBLE REASON	REMEDY
Too high a temperature in the refrigerator.	 The door is opened too frequently or for too long a time. 	 Warm air enters the refrigerator and causes it to start frequently. Do not open the door as often.
	2. The temperature is set too high.	2. Reset the temperature.
	 The doors are not closed tightly. 	 Make sure the refrigerator is level and there is no food or container interfering with the door closing.
	4. The condenser is dirty.	4. Clean the condenser.
The temperature in the FC is too high while the temperature in the PC is OK.	 The temperature is set too high. 	1. Set the FC temperature lower. It takes 24 hours for the temperature to become stable.
The temperature in the PC is too high while the temperature in the FC is OK.	1. The temperature is set too high.	1. Set the PC temperature lower. It takes 24 hours for the temperature to become stable.
Bad odors in the refrigerator.	 The inside of the refrigerator needs cleaning. Food with a strong odor is stored in the refrigerator. 	 Clean the inside of the refrigerator. Wrap food tightly.
The refrigerator beeps.	 The PC door is open. The temperature in the FC is too high. 	 Close the PC door. The alarm is normal when the refrigerator is first started due to relatively high temperature.
Abnormal sounds.	 The refrigerator is not located on a level surface. The refrigerator is touching some object around it. 	 Adjust the feet to level the refrigerator. Remove object around it.
Slight sound similar to running water.	1. It is the sound of the refrigeration system.	1. This is normal.
The outside of the cabinet is warm.	1. The mullion heater is operating.	 This is a process to prevent condensation round the doors. This is a normal operation.

11.2 Icemaker Problems

11.2.1 Not Making Ice

CHECK STEPS	REPAIR METHOD
1. Check whether the FC temperature reaches the	1. Carry out checks as per Section 11.1.
set temperature.	
2. Check whether the icemaker is in the Off mode.	2. Press the Icemaker On/Off button on the display module for 3 seconds. The Icemaker On icon will turn on and the icemaker will start working.
3. Check the water valve.	 Connect 230 volts AC power to the water valve. If the valve opens, that means that the valve is OK. If not, it is defective.
 If the valve is operating and water runs into the icemaker in test mode, check the icemaker sensor. 	 Check that the icemaker sensor resistance is normal using a multimeter.
 If all the above checks are OK, it means that the icemaker motor is defective and should be replaced. 	 Replace the icemaker motor or icemaker assembly.

11.2.2 **No Crushed Ice CHECK STEPS** 1. Open the FC door and ensure that the selecting bar under the ice storage box is not stuck into the selecting valve. 2. Disassemble the ice storage box and make sure that the ice blade is in good condition. 11.2.3 **No Ice Cubes CHECK STEPS** 1. Open the FC door and ensure that the selecting bar under the ice storage box is not stuck into the selecting valve. 2. Check the ice storage box and check whether the ice cubes are stuck together. If so, shorten the water fill time (refer to Section 5.5). 3. Select Ice Cubes on the display module, open the FC door and while holding the light switch in the closed position, press the dispenser button. See whether the selecting valve works. If not, check the delivery motor to see if the harness is connected correctly and is in good condition.

11.2.4 Drain Trough Icing Up

There is only one defrost heater in this model, and it has no drain tube heater, so the defrost heater must be close to the drain pan (<20mm, >10mm) to heat the drain pan when defrosting and prevent water freezing in the pan or tube.

