The information below is given to summarize the algorithms between some of the modes, components, and operation principles in the refrigerator. All of the related information may not be available in your product.

Compressor:

The compressor is the primary active cooling component of the refrigerator that enables the circulation of the refrigerant gas in the system.

It has three different types. Conventional compressors, compressors with inverter board, and frequency-driven compressors with inverter board

Conventional Compressor: It operates at the voltage indicated in its type label. It operates when powered on. It stops when powered off.

Drop – In Compressor: Its speed is adjusted by the inverter board. The inverter board operates when powered with the energy specified on the type label. It stops when powered off.

Frequency-Driven Compressor with Inverter Board: Its speed is adjusted by the refrigerator control board. The compressor is driven when the inverter frequency inlet is provided with the frequency value of speed. The two frequency cables (red-white and blue-white, 0.25 mm) coming out of the control board transmit the frequency information to the inverter board.

It operates in accordance with the temperatures of the cabins. It starts operating when the refrigerator temperature goes above the desirable refrigerator temperature. It stops when the temperature goes below a specific level. The operating speed can have 6 different values depending on the cabin temperature and ambient. There can be a loud noise in places with high ambient temperature and food is loaded because it will operate at a higher speed. Although it varies depending on the product cooling system, the compressor does not operate during defrosting. However, if the refrigerant can be directed to the other cabin during defrosting in some products with a gas solenoid valve, the compressor operates to meet the cooling requirement of that cabin.

If either of the temperatures of the evaporator sensors is higher than 10-15°C after a power failure, it continues operating after the component test.

If either of the temperatures of the evaporator sensors is lower than 10°C after a power failure, it stops for at least 6 minutes after the component test. It starts operating afterward if needed.

A frequency-driven compressor with an inverter board operates at a low speed for the first 1 minute after it is started. Then, it starts operating at the highest speed if the temperature of evaporator sensors is higher than 10-15°C. Its speed is changed afterward if needed. The compressor stops for at least 10 minutes between each speed. If the cabin temperatures are high, the compressor operates at high speeds. It means the compressor speed increases in proportion to the cooling requirement of the cabin.

The compressor operates for at least 5 minutes after it is started. It stops for at least 6 minutes.

A frequency-driven compressor with an inverter board can permanently operate at the highest speed if the ambient temperature is too high or the refrigerator is used or loaded frequently.

Cooling Fan:

It operates in accordance with the cabin temperatures and operation of the compressor. It starts operating when the cabin temperature goes above a specific level (the desired temperature value for the cabin). It stops when the temperature goes below a specific level. Although it varies depending on the products, some cooling fans are used as DC feedback fans, DC non-feedback fans, or AC fans. If there is any problem with the rotating function of the DC feedback fan assembly or if it cannot reach the desired speed, the fan error is displayed on the display. There is no fan error on DC non-feedback and AC fans. It doesn't work while the door is open.

Freezer Fan:

General Operation: It operates in accordance with the cabin temperatures and operation of the compressor. It starts operating when the temperature goes above a specific level. It stops when the temperature goes below a specific level.

It has 2 types, namely fixed-speed and variable-speed.

Fixed-speed fans operate with the mains voltage. They have two cables. It operates at a fixed speed. When a breakdown occurs in the fan motor, no error code is shown on the display.

Variable-speed fans operate with 12V DC. They have 3 or 4 cables. The operating speed can have 6 different values depending on the cabin temperature and ambient. There can be a loud noise in places with high ambient temperature and food is loaded because it will operate at a higher speed. When a breakdown occurs in the fan motor, the E13 error code is shown on the display. It doesn't work while the door is open.

Joker Compartment Fan:

General Operation: It operates in accordance with the cabin temperatures and operation of the compressor. It starts operating when the temperature goes above a specific level. It stops when the temperature goes below a specific level.

It has 2 types, namely fixed-speed and variable-speed.

Fixed-speed fans operate with the mains voltage. They have two cables. It operates at a fixed speed. When a breakdown occurs in the fan motor, no error code is shown on the display.

Variable-speed fans operate with 12V DC. They have 3 or 4 cables. The operating speed can have 6 different values depending on the cabin temperature and ambient. There can be a loud noise in places with high ambient temperature and food is loaded because it will operate at a higher speed. When a breakdown occurs in the fan motor, the E14 error code is shown on the display. It doesn't work while the door is open.

Condenser Fan:

General Operation: It starts and stops with the compressor. In some cases, the product may operate at set values determined by the control card.

It has 2 types, namely fixed-speed and variable-speed.

Fixed-speed fans operate with the mains voltage. They have two cables. It operates at a fixed speed. When a breakdown occurs in the fan motor, no error code is shown on the display.

Variable-speed fans operate with 12V DC. They have 3 or 4 cables. The operating speed can have 6 different values depending on the cabin temperature and ambient. There can be a loud noise in places with high ambient temperature and food is loaded because it will operate at a higher speed. When a breakdown occurs in the fan motor, the E15 error code is shown on the display.

Operation Following Power Failure:

Components operate for test alternately up to the first 30 seconds after they are powered on. This operation order may vary depending on the product. During this test, when the door is opened, the lighting and blue light may act differently than their normal operation.

When either of the evaporator temperatures is higher than 10-15°C, the compressor continues operating after the component test. It can continue operating for at least 70 minutes. The set values adjusted on the display are not remembered after a power failure.

If the evaporator temperatures are higher than 10°C, the compressor stops for at least 6 minutes after the component test. It starts operating afterward if needed. The set values adjusted on the display are remembered after a power failure.

Service Test and Operation Afterward:

The service test is the mode in which the components in the product can be operated individually or collectively to check their strength, their sensors can be read, and door sensors can be checked.

If there is a breakdown in the product, each component in the refrigerator can be switched on and off individually via this test. This can speed up the process of detecting the faulty component. Plus, as the sensor values in the product can be shown on the display respectively in this test mode, such issues as if refrigerant gas reaches the evaporator or if there is any gas leakage can be detected especially with the help of the temperature information of the evaporator.

For example, if the following steps are carried out on a product reported to have a cooling problem, more accurate information can be obtained on the problem:

- Take the service test.
- Read and write down the temperature information on the cooler and freezer evaporator sensor.
- If the values read are around -30°C, the evaporator might be covered with frost. It must be checked.
- If there is a solenoid valve in the product, it is set to position 1 or 2. If not, skip this step.
- Start the compressor.
- Check physically if the compressor is working.
- Go back to the evaporator sensor reading step.
- Read the evaporator sensor values while the compressor is operating.
- If the values read do not change after 5-10 minutes, it can be concluded that there is gas leakage or the system is blocked.
- If the product is equipped with a solenoid gas valve, the direction of the solenoid gas valve is changed from 1 to 2 to detect the evaporator with a cooling problem if the system is blocked.

Its operation mode is indicated in the Service Test document. After the service test is finished, the operating conditions after a power outage are valid.

Defrost Frequency and Operation:

Depending on the door opening frequency and ambient temperature, defrost starts once in periods varying between 12 hours and 96 hours. The compressor and fans do not operate. During defrosting, the heaters in the freezer and cooler compartment -as well as those in the joker compartment if any- start operating. Under normal conditions, defrost starts once every 26 hours.

When the evaporator sensor temperature goes above a specific value (Usually FF 10, FRZ 4) or when the heater operating duration lasts 5 minutes at minimum and 60 minutes at maximum, the heaters stop. The system waits for up to 10 minutes for the water from the melting ice to get filtered. Then the compressor and fans (if they are variable-speed) start operating at a high speed.

Operation of Blue Light:

The blue light stays on as long as it is powered. It is located in the crisper drawer. It emits blue light with a fixed wavelength suitable for the chemistry of vegetables to help them stay fresh for longer periods.

Operation of Violed (Anti-Odour Module):

The anti-odour module removes odours that occur inside your refrigerator before it permeates on the surfaces. Thanks to this module positioned on the roof the fresh food compartment, bad odour is removed while the air is actively passed through the odour filter, and the air cleaned in the filter is directed back to the fresh food compartment. Thus, an undesirable odour that may occur during the storage of food inside the refrigerator is removed from the environment before it permeates on the surfaces. (The Violed module can also be found behind the evaporator cover.)

This feature is provided with the fan, LED, and odour filter placed inside the module. Anti-odour module shall be automatically activated periodically. The sound that may occur during periodical operation as a result of the fan equipped is normal. If the door of the fresh food compartment is opened while the module is active, the fan is stopped temporarily, and it continues to operate when the door is closed. In case of a power failure, the anti-odour module starts to operate when the power is restored.

Info: To prevent bad odours that may occur with the mixture of odours from a different food, we recommend you to store aromatic food such as cheese, olives and delicatessen in their packaging and with their lids closed. For the safety of other food stored and to prevent bad odours, we recommend you to remove the food that you have observed to be spoilt from the refrigerator as soon as possible.

Operation of Ionizer:

When the product is powered for the first time, it does not operate for 16 hours. It operates for 10 to 30 minutes at 8-hour intervals. It is located next to the cooler compartment fan. - It prevents bad odours by emitting ions.

Harvest Fresh:

It helps vegetables stay fresh for longer periods by mimicking the sun rays they are exposed to in nature.

When the product is powered for the first time, it goes on in blue. It alternates between blue, green, and red periodically. Its dark period lasts 12 hours. During the dark period, Harvest Fresh does not operate. Whenever the door is opened, it changes color.

Operation of Ice Machine:

It automatically takes water from the water tank, water pump, or fountain in the product under the control of the icematic microprocessor. Water mains pressure must be 1 bar at minimum and 8 bars at maximum. The flexible body sensors under the freezer detect if the water in the freezer is freezing and transmit this information to the microprocessor. This way, the icematic motor is rotated according to the temperatures detected by the sensor. When the icematic sensor temperature reached -10/-12 ° C, the icematic motors pour the ice and take in water again. The cycle goes on like this. Icematic lever detects that the icebox is full and prevents dumping more ice than the icebox capacity. If the ice container is full, it checks if the container is empty at 20-minute intervals via the icematic lever. When the ice container is empty again, the ice in the icematic is poured away, water is automatically taken into the icematic so that it starts making ice again. It is expected to make ice after the first 40 to 160 minutes after water is taken in. There are icematics with fans. The icematic fan directs the air inside the freezer compartment towards the freezers to enable it to produce ice faster.

In order for it to make ice, the Cancel Ice function must be disabled.

Operation of Dispenser:

There are versions mounted on the door or inside the body. The versions mounted inside the body delivers only water. It operates with the cooler compartment door open. Water can be delivered for a maximum of 1 minute.

The versions mounted on the door operate when the trigger located on the compartment door is pushed. It delivers water/ice cube/fragmented ice from the water/ice dispensing area depending on the choice made on the display. It does not operate with the freezer compartment door open. It delivers water/ice for a maximum of 1 minute. It delivers water/ice again when the trigger is released and pushed again.

Quick Cool Function:

The quick cool function is used to quickly cool the food put in the cooler compartment.

If it is not canceled, it continues at least 1 hour. A snowflake icon is shown on the display. The compressor and fans (if they are variable-speed) start operating at a high speed. As long as the quick cool function is active, the set value is shown as +1°C on the display. This function is not remembered after a power failure.

Quick Freeze Function:

The quick freeze function is used to quickly freeze the food put in the freezer compartment.

If it is not canceled, it continues at least 24 hours. It goes on for 52 hours in the products only with a freezer. (These times vary on a product basis.)

A snowflake icon is shown on the display. The compressor and fans (if they are variable-speed) start operating at a high speed. As long as the quick freeze function is active, the set value is shown as -27°C on the display. This function is not remembered after a power failure.

Vacation Mode:

When the vacation mode is activated, "- - " is shown on the display. The cooling function of the cooler compartment is canceled. Cooling does not end completely. It continues to prevent odor formation. Providing the freezer compartment set value is prioritized, and the cooling of the fridge compartment continues.

The freezer compartment continues freezing. If the evaporator sensors' temperature is higher than +10°C after a power failure, it is restored.

Convertible Function:

When the convertible function is activated, the freezer compartment starts operating like the cooler compartment. It is an optional feature not included in all products.

Cabin Off:

The cooling of the desired cabin can be switched off via this function. It is an optional feature not included in all products.

Product Off:

This function stops product cooling in all cabins. It is an optional feature not included in all products.

Eco – Fuzzy Function:

This function enables the freezer compartment to operate in an efficient way. If this function is activated when no set value other than the hottest one is selected on the display, if the door is not opened, or if no key is not pressed on the display for a while, the eco mode will be activated after a while. The set value on the display is kept as is, and the freezer compartment operates in accordance with its hottest (most economic) set value.

Operation of Solenoid Valve:

The main board notifies the solenoid valve about the direction it should rotate to in accordance with the cooling requirement, and the solenoid valve rotates in that direction and directs the refrigerant gas.

Operation of Dealer Mode:

Dealer mode is a mode created so that the products do not consume energy while waiting at the dealer and can be displayed unpacked. When the dealer mode is activated, the cooling function is disabled, the display and lighting do not work, and the warning icon stays on. If it is constantly powered for 24 hours, dealer mode is disabled

automatically. This function can also be disabled via softkeys on the display. How to use softkeys to disable the dealer mode is explained in the Dealer Mode documentation. Dealer mode will be restored after a power failure.