

Technical Data

19 - 21 - 25 -27 CU.FT. FRENCH DOOR
ELECTRONIC BOTTOM FREEZER

**WARNING**

**ELECTRICAL SHOCK HAZARD**

Death or serious injury can result from failure to follow these instructions.

- Service by a qualified service technician only.
- Disconnect power before servicing this product.
- Reconnect all grounding devices after service.
- Replace all parts and panels before operating.

IMPORTANT SAFETY NOTICE

This information is intended for use by individuals possessing adequate backgrounds of electrical, electronic and mechanical experience. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

ELECTRICAL SPECIFICATIONS

Temperature Control (Position FF/FZ)	37/0°F
Defrost Control (w/no door openings)	96 hrs
Thermistor Kilo-ohm resistance @0°F	42.7
@37°F	14.183
@77°F	5.0
Overtemperature Thermostat	95 - 65 °F
Defrost Thermistor	58°F
Electrical Rating: 115V AC 60 Hz	See Rating Plate
Maximum Current Leakage	0.75 mA
Maximum Ground Path Resistance	0.14 Ohms

NO LOAD PERFORMANCE

Control Position 5/5 and Ambient of 65°F to 90°F	
Fresh Food, °F	34 to 44
Frozen Food, °F	- 6 to 6
Run Time, % @ 65°F	25 to 50
Run Time, % @ 90°F	50 to 80

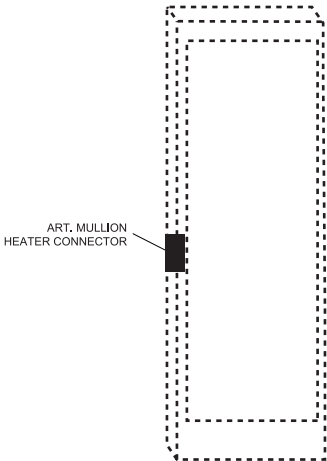
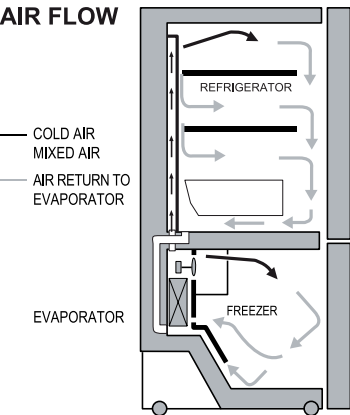
REFRIGERATION SYSTEM

Compressor 19-27 French door Model	700 BTU/hr
Compressor 21-25 French door Model	710 BTU/hr
Minimum Compressor Capacity	22 inches Hg
Minimum Equalized Pressure	
@70°F	40 to 45 PSIG
@90°F	48 to 60 PSIG

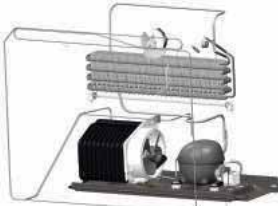
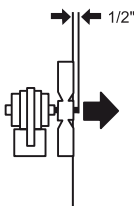
REFRIGERANT CHARGE (R134a)

19 - 21 models	4.00 ounces (113 g)
25 models	4.25 ounces (120 g)
27 models	4.48 ounces (127 g)

AIR FLOW



Service Mode
Entry Procedure
Temperature Control Board
Press and hold the " DOOR ALARM", "FREEZER" and "TURBO COOL" buttons simultaneously for 3 seconds.
Service Mode Description
The displays will flash "000" to indicate entry into the service diagnostics mode.
Use the Freezer and Fridge buttons to choose the desired service diagnostic test. The Freezer button decreases the digit while the Fridge button increases the digit.
Press "DOOR ALARM" on the temperature control board to execute the test indicated by the displays.
A test mode must be selected within 30 seconds or the temperature control board will execute a software reset to exit the service mode selection menu.
Exit Procedure
Select test code 12 (Refrigerator Reset). Press "DOOR ALARM" to reset the refrigerator and exit service mode.



NOTES:
PROCEDURE FOR ENTER & EXIT FROM SABBATH MODE
* Press and hold "DOOR ALARM" and "WATER FILTER" buttons simultaneously for 5 seconds.

PROCEDURE FOR ENTERING DEMO MODE:
Press and hold "DOOR ALARM", "FREEZER", and "FRIDGE" buttons simultaneously for 3 seconds. Display will flash "888" briefly to confirm demo mode has been entered.
Procedure for exiting Demo Mode: Cycle power to the refrigerator.

Test Code	Mode	Comments
t1	Demo Mode	Enters demo mode. All temperature control board functions will operate normally but the unit will not cool. Cycle power to refrigerator to exit demo mode.
t2	Temperature Control to Main communications	Temperature control board to main communications test. Test will query main board its version, "P"/"F" on most right display if Pass/Fail.
t3	Temperature Control Board Display Self Test	All of the LEDs and numerical segments will illuminate. All displays will initially show "888". The buttons will be used to toggle the status of the LED it is associated with. To exit this test press "TURBO COOL".
t4	Thermistor Self Test	This test does a check on all thermistors located throughout the unit. The test mode will stop flashing and the thermistor numbers from 1 to x (x is the number of thermistors) will appear on the most left display. For each thermistor the temperature control will respond by displaying the following on the most right display: P = Pass O = Open thermistor circuit F = Fail S = Short thermistor circuit 1 = FF Thermistor 2 = Ambient Thermistor 3 = FZ Thermistor 4 = Evap Thermistor 5 = N/A
t7	Open Damper	FF Damper will open, pause briefly, and then close.
t8	Fan Speed Test	Cycles each of the System fans on for 5 seconds in the following order: (Evaporator, Condenser).
t9	100% Run Time	This mode runs the sealed system 100% of the time. This test will automatically time out after 1 hour of run time. A refrigerator reset may exit this mode.
t10	Enter Pre-chill	This places the freezer in pre-chill mode essentially issuing a "Force Pre-chill" command to the main control. It will return to normal operation on its own. This command will be ignored if the refrigerator is set to OFF/Standby mode.
t11	Toggle the State of Defrost	Each time any button on the temperature board other than temperature adjust buttons is pressed the status of the defrost heater will toggle. There will be a 20 second delay before defrost heater will turn on. If the evaporator thermistor temperature is above defrost termination temperature the heater will not turn on.
t12	Refrigerator Reset	Causes a soft reset to occur at both the temperature control board and the Main board.
t13	Test Mode Exit	Causes a soft reset to occur at the temperature control board. Note this will not terminate test modes that the main board is maintaining as a result of the service diagnostics mode. To do that a Refrigerator Reset should be used.
t14	Celsius / Fahrenheit Selector	Allows the user to set the system for Celsius or Fahrenheit.

31-1000475

EVAP FAN	
Wires	Voltage
RED-YELLOW	8-10V
RED-BLUE	3-4V
RED-WHITE	13.6V
YELLOW-BLUE	5-7V
YELLOW-WHITE	8-10V
BLUE-WHITE	3-4V

