

# Instruction Manual



**XD-70**

**Three Way Operation**

**L P Gas    12Volt    220-240Volt**



Please read these operating instructions carefully before putting the refrigeration unit operation. If you later sell or dispose of it, please ensure that the new owner receives these operating instructions.

Thank you for choosing our appliance. We are sure it will provide you with trouble-free use.

**FOR YOUR SAFETY !**

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

**FOR YOUR SAFETY !**

If you smell gas:

1. Evacuate enclosure.
2. Call for professional help.

**Warning !**

In gas mode, this refrigerator consumes air (oxygen). Provide ample ventilation, especially when sleeping. Do not use this refrigerator in unventilated structures to avoid endangering your life. Provide additional ventilation for any additional fuel-burning appliances and additional occupants.

**Warning !**

**Electrical Grounding Instructions**

This appliance is equipped with a three-prong (grounding) plug for your protection against shock hazards and should be plugged directly into a properly grounded three-prong receptacle. Do not cut or remove the grounding prong from this plug.

**If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.**

**The appliance shall not be exposed to rain.**

**Warning !**

**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.**

**Children should be supervised to ensure that they do not play with the appliance.**

**Contact your municipal department of public works to inquire about the procedures for collecting and disposing of refrigerated appliances in your area.**

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## 1. Unpacking

After removal from the cardboard packaging, make sure the appliance is not damaged to the appliance resulting from transport; report it immediately to the transportation firm.

## 2. Parts and features



Figure 1

- 1: Cabinet    2: Lid    3: Control panel    4: Basket    6: Spirit level  
7: Flame indicator    8: AC, DC Power on lamp    9: Valves    10: Piezo  
11: Rotary Switch    12: Thermostat

## 3. Cleaning

3.1 Clean both the inside and outside of the appliance before putting it into use.

3.2 To do so, use a soft towel, lukewarm water and a non-abrasive detergent. Ensure water does not enter the rear. Cover grille or the control elements.

3.3 Afterwards, wipe the appliance with a clean towel and clear water, and then wipe it dry.

3.4 To avoid damage, do not use soap, soda or abrasive cleaners.

#### 4.Installation

The installation of the refrigerator must conform to the following

For installation, for maintaining proper clearances from combustible material to the refrigerator, the following minimum clearances must be observed:

Clearance from rear edge to outer casing of refrigerator :	4 inches ( 100mm )
Clearance above top of refrigerator lid:	16 inches ( 405mm )
Clearance at sides of refrigerator casing:	2 inches (50mm)

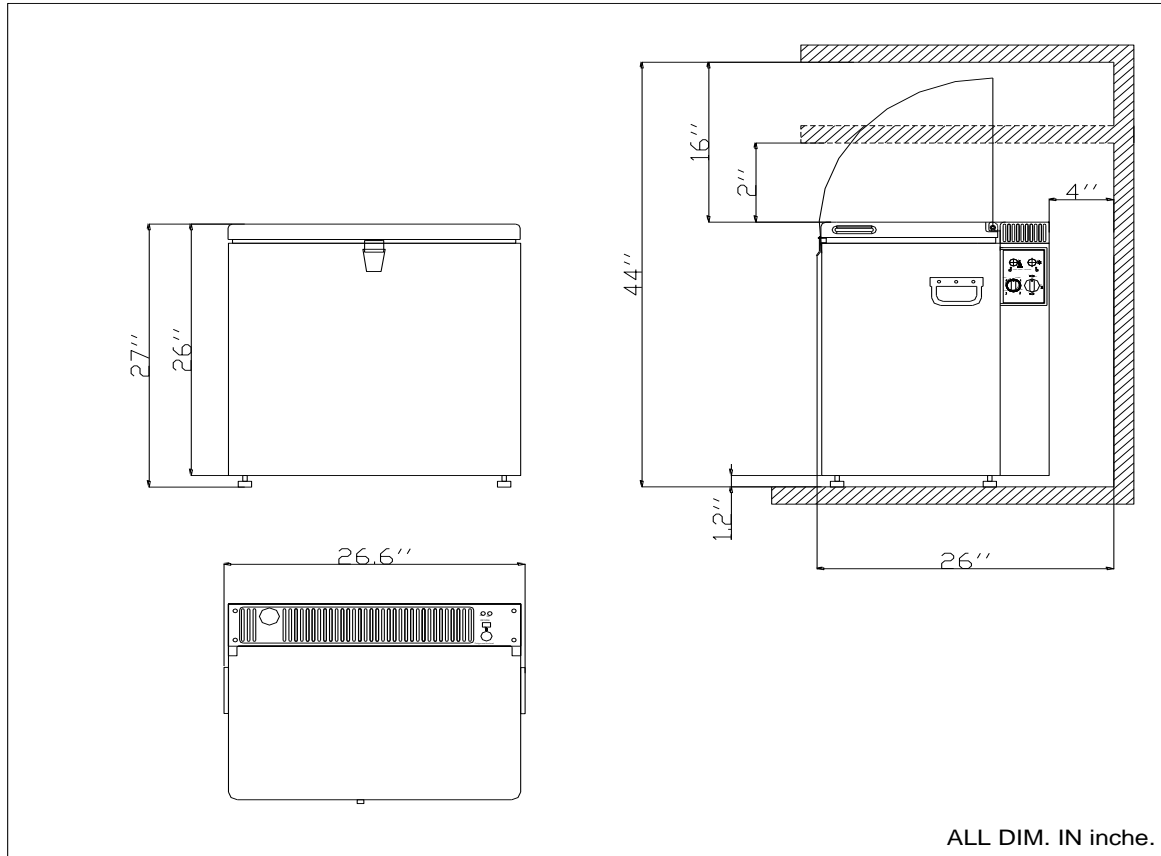


Figure 2.

Fig 2. Illustrates these minimum clearances.

The appliance must not be installed directly on carpeting. Carpeting must be protected by a metal or wood panel beneath the appliance which extends at least the full width and depth of the appliance.

See that the refrigerator is standing level in both directions by means of a spirit level. This is important for satisfactory operation of the cooling unit.

The absorption cooling unit is cooled by convection air and therefore it is of the utmost importance that the air circulates free over the unit and that the air vent openings of the refrigerator are always kept open, The more ventilation you provide, the better the performance you can expect from the refrigerator.

**NOTES: KEEP APPLIANCE AREA CLEAR AND FREE FROM COMBUSTIBLE MATERIALS,GASOLINE AND OTHER LIQUIDS WITH FLAMMABLE VAPORS. DO NOT OBSTRUCT THE FLOW OF COMBUSTION AND VENTILATION AIR.**

## 5.Operation instruction

The cable for mains connection, the 12V connecting block and the gas connector are located on the back side of the refrigerator (Figure 3.)

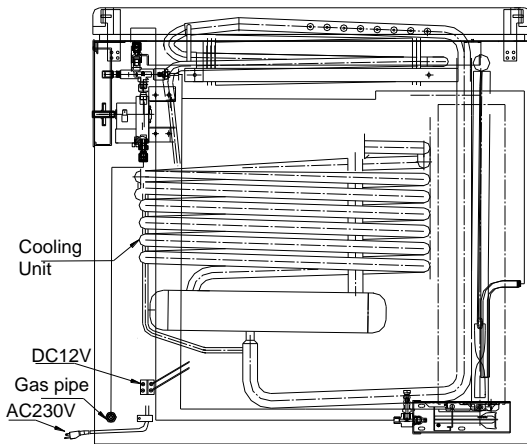


Figure 3,

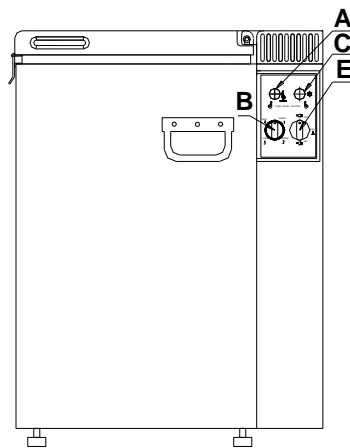


Figure4

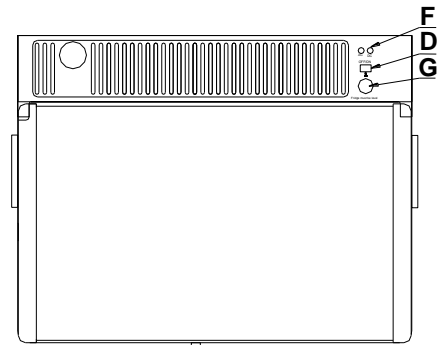


Figure 5

A: Safety device button    B: Thermostat knob    C: Piezo ignitor    D: Flame indicator  
E: Rotary switch            F: Power on lamp    G: Spirit level

The refrigerator can be run on either AC 220-240 V or Propane gas or DC12V. Switching among these modes of operation is carried out by means of control buttons positioned as shown in fig. 4. The refrigerator temperature is controlled by a thermostat (B). The refrigerator is fitted with a safety device which automatically shuts off the supply of gas if the flame goes out. The safety device can be opened manually by depressing button (A). If the burner is working the flame indicator (D) pointer will be in the green field.

The piezoelectric igniter discharges sparks over the burner when the button (C) is depressed. The Gas/Power rotary switch (E) can be set at either AC (=AC power is on, while Propane gas and DC12V are shut off), or OFF (=Neither power can work.), or GAS (=Propane gas needs to be connected, while AC and DC power are shut off.).The green AC Neon lamp (F) will light when AC220-240V power is on. The red DC Neon lamp (F) will light when DC12V power is on.

### 5.1 AC220-240V mode operation

Turn the power switch to AC mode.

Plug the power cord to the power socket.

#### **Warning: Electrical grounding instructions:**

This appliance is equipped with a three-prong (grounding) plug for your protection against shock hazards and should be plugged directly into a properly grounded three-prong socket. Do not cut or remove the grounding prong from this plug.

The cord is approximately 5 feet long and a grounded three-prong receptacle should be installed in an accessible position within reach of the plug. Do not use any extension cords!

When connecting the appliance for the first time, set the thermostat to maximum (Figure 4.B); Then, after about 5 hours, set it back a medium position .This is suitable for general refrigeration requirements.

## **5.2 DC12V mode operation**

Turn the power switch to OFF mode.

Then connect the DC12V power cables to the terminal block which is available in the rear bottom part of the refrigerator. See figure 3.

Then turn the power switch to DC mode.

Switch on your DC12V power supply.

DC operation is not as efficient as Propane or AC operation. DC electric should not be used to initially cool the refrigerator. Only use DC when the other modes are unavailable (for example; while in transit).

If you are getting DC power from your automobile, make sure, if the engine is not running, that the refrigerator is removed from the DC power supply. Otherwise, the refrigerator will discharge the vehicle battery when in operation.

In this refrigerator DC12V power supply is not regulated by thermostat.

## **5.3 Liquid gas operation**

After initial installation, servicing, or changing gas cylinders etc., the gas pipes may contain some air which should be allowed to escape by briefly depressing the safety device bottom. This will ensure that the flame lights easily.

1. Make sure that all valves between the gas container and the refrigerator are open.
2. Turn power switch (E) to gas.
3. Depress the safety device button (A) and hold it down while depressing the piezoelectric igniter button (C) repeatedly.
4. Check the flame indicator (D) to see whether the flame is alight. If the flame does not ignite, repeat the 3, 4 process.
5. Keep the safety device button depressed for a further 10-15 seconds.
6. Release the safety device control and again check to see that the flame is alight.

To terminate gas operation, turn the power switch to OFF, then turn off the gas valve from the gas cylinder..

If for any reason, the gas flame extinguishes, the flame safety device is working automatically and shuts off gas supply. While the button is pushed, this device is temporary inoperative.

## **6. Maintenance**

### **6.1 Defrosting**

Frost will gradually accumulate on the refrigerating surfaces. It must not be allowed to grow too thick as it acts as an insulation and adversely affects refrigerator performance.

Check the formation of frost regularly every week and when it gets about 3 mm thick, defrost the refrigerator. To defrost the refrigerator, turn it off and remove all food items.

Warning: normally the temperature of items of frozen foods would rise unduly during defrosting and so they should be consumed within 24 h or discarded.

Do not use any sharp objects to scrape off the ice.

Defrost water should be mopped up with a cloth.

When all ice has melted, wipe the refrigerator dry and restart it.

Place the food items back inside but wait until the refrigerator is cold before making ice cubes

## 6.2 Cleaning the refrigerator

Warning: To avoid electric shock always unplug you absorption refrigerator before cleaning. Ignoring this warning may result in injury.

General: Do not use harsh chemicals, abrasives, ammonia, chlorine bleach, concentrated detergents, solvents or metal scouring pads. SOME of these chemicals may dissolve, damage and/or discolor your absorption refrigerator.

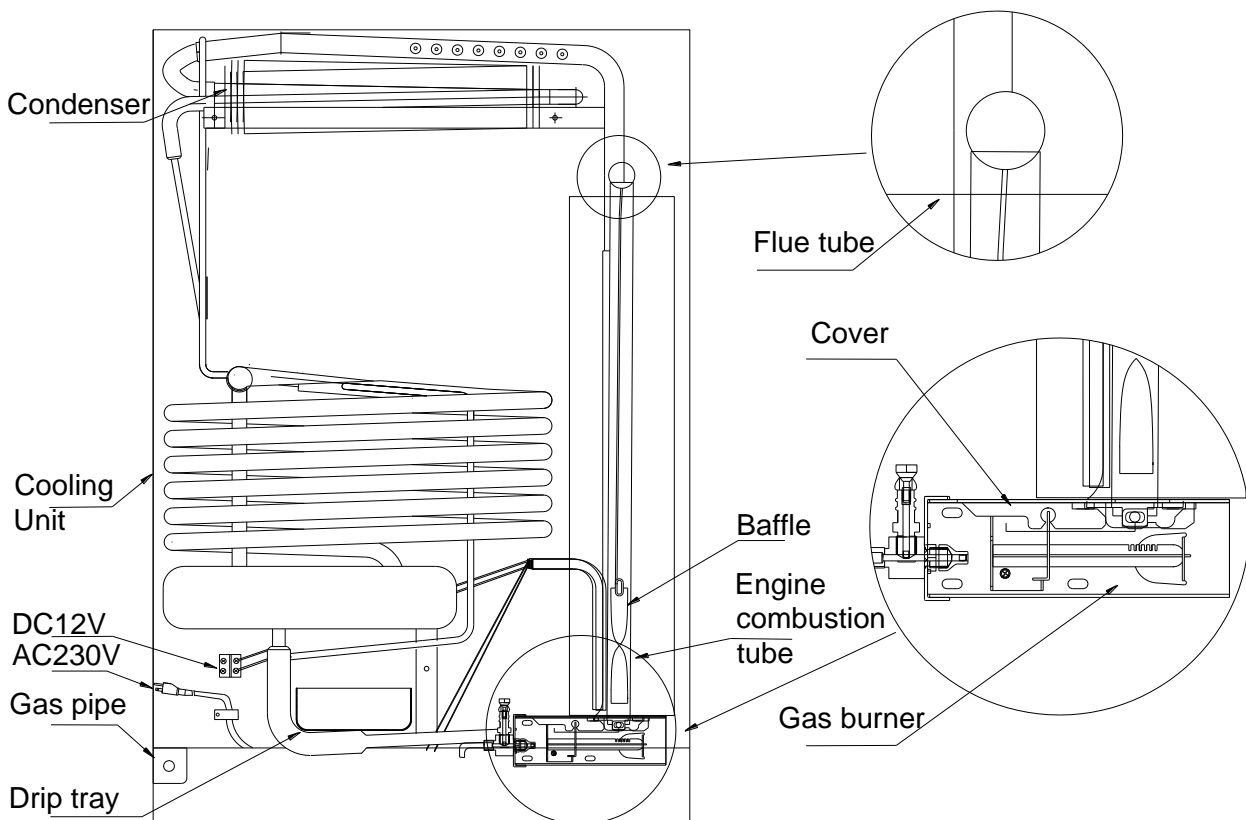
- 1) Remove the contents of the appliance
- 2) Wipe the inside and outside surfaces with a damp cloth. The addition of vinegar to the water is good for the prevention of mold and fungus.
- 3) Wipe all parts thoroughly after the cleaning.

The cooling unit behind the refrigerator should be cleaned with a brush from time to time, but make sure that the refrigerator is switched off when doing this.

The entire unit must be left for drying completely after cleaning with damp cloth

## 6.3 Cleaning the Cooling System Flue

WARNING Carbon Monoxide can be hazardous to your health. Gas appliances may emit excessive Carbon Monoxide if the refrigerator's burner, burner orifice, and the flue tube are not regularly cleaned. To prevent Carbon Monoxide, the burner, burner orifice, and the cooling system's flue tube must be cleaned at least once a year and after all prolonged (seasonal) shut-down periods. Refer to the following cleaning procedures, or contact a qualified installer, your dealer.



Before cleaning, put a cloth on the burner to protect it from dirt;

1. Remove the refrigerator from its enclosure.
2. Remove the heat deflector cap from the flue.

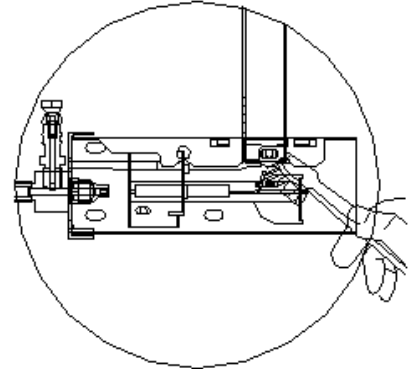


3. Remove the spiral flue baffle from the flue tube.
4. Using a stiff brush or fine emery cloth, clean the spiral flue baffle of debris.
5. Clean the inside of the flue tube with a flue brush. Inspect burner after cleaning.
6. Re-install the spiral flue baffle. Insure the spiral flue baffle is securely in place. The spiral flue baffle is required for efficient cooling while operating in the gas mode.

## 6.4 Cleaning the burner

Take off the protection hood and do the following:

1. Clean the openings and the burner screen with a toothbrush;
2. Clean and inspect the electrode and thermocouple. If either is corroded, have it changed. Check that they are well attached and if necessary tighten the screws;
3. Check that the spark is created by pressing the electric piezo ignite button on the control panel.
4. Do not use thin objects to either clean or unblock the injector.



## 7. Trouble shooting

If the refrigerator fails to work, Check the following points before calling a service technician:

1. That the above installation and operating instructions have been followed.
2. The refrigerator is level.
3. If it is possible to start the refrigerator on any of the connected sources of energy.
4. If the refrigerator fails to work on gas, check:
  - That the gas bottle is not empty.
  - That all Propane gas valves are open.
  - That the safety device button was depressed long enough.
  - The gas pressure is correct.
5. If the refrigerator fails to work on 220-240 V, check:
  - That the 220-240 V supply is connected to the refrigerator.
  - That the fuse is intact.

If the refrigerator is not cold enough it may be because:

The ventilation of the cooling unit is inadequate.

The thermostat is set on the high temperature position.

The doors are opened frequently, or the gasket is not sealed properly.

Too much food at one time.

If the refrigerator still does not work properly, call a service technician.

### FOR YOUR SAFETY !

Do not check for leaks with a naked flame! Do not smoke while checking for leaks!

### Warning !

The sealed cooling system must not be opened, since it contains corroding chemicals under high pressure.

## 8 Technical data

<b>Model</b>	<b>XD-70</b>
Dimensions without packing	(mm)
Height(including leveling feet)	685
Width	655
Depth	525
Capacity	(liters)
Total	61
Gas	Propane
Propane pressure	2.75KPa
Voltage	AC220-240V/DC12V
Input power	160W
Total Nominal Gas consumption	1.03MJ/h
Packing dimensions(H / W / D)	730*700*560(mm)
20 ' Container load	96
40 ' Container load	204
40' HC Container load	204