# Main technical parameters



#### Button and setting:

Code	Function and Range	Value
SET	Temperature setting	4.3
PS	Password	22
/C1	No. 1 sensor temperature calibration value	0
Rd	Temperature difference	1.5
R1	Minimum set value	3.5
R2	Maximum set value	5.0
C0	Initial power-on compressor delay start	3
Cl	Compressor continuous start minimum time interval	3
C2	Compressor continuous start minimum time interval	3
d0	De-icing (or heating wire) according to time	0
dl	Defrost interval	0(h)
dt	Defrost termination temperature (default value)	0
dp	Longest defrost time	0(min)
Dd	Drip time after defrosting	0(min)
Al	Over temperature alarm lower limit	0
AH	Over temperature alarm upper limit	10
Ad	Alarm delay	0

#### Alarm function:

When the box temperature exceeds the upper temperature alarm value or lower than the lower temperature alarm value and the set alarm delay time is exceeded, the buzzer will alarm and exceed the upper limit. The digital tube flashes "rH", and when it exceeds the lower limit, it flashes. "rL" is displayed.

When the box temperature exceeds the upper limit of the maximum range or the probe is short-circuited, "HHH" is displayed and the buzzer alarms. "LLL" is displayed when the lower limit is exceeded or the circuit is broken. When "HHH" or "LLL" is displayed, the compressor alternates for 15 minutes per 45 minutes of operation.

When the defrosting temperature exceeds the upper limit of the range or the probe is short-circuited, the buzzer will alarm, and "HHH" and the box temperature will be displayed alternately. When the defrosting temperature is lower than the lower limit or the circuit is broken, the buzzer will alarm, and "LLL" and box temperature will be displayed alternately.

When the defrosting temperature exceeds the set upper limit alarm value or lower than the defrosting temperature lower limit alarm value and the set defrosting alarm delay time is reached, the buzzer will alarm and the digital tube will flash when the upper limit is exceeded. EH", when the lower limit is exceeded, "EL" is flashing.

In the alarm state, press any key to cancel the alarm tone, but the alarm display status remains unchanged.

After the alarm sound is artificially eliminated in the fault state, if a new fault occurs, the intentional code is flashed without

### Purpose

The medicine refrigerator is the specific medicine cold-storage equipment. It can be also used for storing reagent, vaccine, biological product, etc. It is especially available for hospital, pharmacy, pharmaceutical factory, epidemic station, blood bank station, health center and lab.

### **Features**

- 1. The body is made of polyurethane bulk foaming plastics with light weight and good heat insulation.
- 2. Computerized temperature controller is adopted with high precision.
- 3. Temperature is automatically displayed at any time.
- 4. The refrigerating capacity of the refrigerating system is transmitted through forced air cycle with uniform temperature in the refrigerator.
- 5. The door glass of the refrigerator is an insulation glass unit specially processed with sound heat insulation and ease of observation.
- 6. Fully-enclosed compressor is applied with steady operation and low noise.

# **Operating Conditions**

- 1. Power supply: Single phase, AC, 220V, 50Hz
- 2. Ambient temperature: 10~28°C
- 3. Ambient humidity: Relative humidity not greater than 80%

## Main Technical Data

- 1. Total effective volume:218L
- 2. Temperature in the refrigerator:2~8°C
- 3. Input power:180W
- 4. Refrigerant and filling dose: R600a 60g
- 5. Net weight: 60kg
- 6. Power consumption: 1.8 kwh/24h
- 7. Noiseness: Not greater than 38dB(A)
- 8. Alarm temperature: When the temperature of the refrigerator is higher than 10°C or lower than 0°C, acousto-optical alarm will be given
- 9. Uniformity of temperature: ± 1°C

### Method of Use

- 1. The manual must be read carefully before the medical refrigerator is used.
- 2. Before operation, check if
  - A) The medical refrigerator is equipped with a separate outlet of power and reliable ground wire. The permissible voltage fluctuation range is 220-240V with a frequency of 50Hz.
  - B) Check the switch on the panel first before connection to the external power source and make sure the panel switch be in off mode.
- 3. Start up: Connect the lead-in of the set to the mains and simultaneously set the panel switch to on position. Then the temperature of the refrigerator body will be shown. After the delay start time set by the computerized temperature controller is over, the compressor will begin to run.
- 4. Operation: After the temperature of the refrigerator body meets the requirement, rapidly and gradually place the articles to be stored into the refrigerator evenly.
- 5. Stop: When suspension is necessary after use, the power switch on the panel must be set to off position first and then the external power is disconnected.

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delay. The buzzer will no longer alarm. The fault delay will not be effective until all faults have been eliminated, and the buzzer will be able to re-tick.

Note: Please do not modify the set operating parameters!!

Another: the factory value is set according to the national standard, so users do not need to make adjustments!

When there are many refrigerated items, pay special attention to the placement method. Pay attention to the passage of cooling air circulation. Otherwise, the temperature sensing temperature of the temperature sensor will be inaccurate, which will directly affect the actual temperature inside the box!

Do not stick against the inner wall of the box when placing the item, because the temperature inside the box is too low!

\* Please keep your value for the whole day when you use it.

### Cautions

- 1. Pay special attention to placing more refrigerated goods and provide a passageway of cooling air, otherwise the temperature sensor won't be accurate, thereby affecting the actual unit temperature.
- 2. The door should be closed tightly and should be opened as less frequently as possible with a shorter time of opening to prevent heat from entering and reduce the unit load for power conservation.
- 3. After power is turned off, re-energization is possible only in an interval of five minutes. In case power fails or the unit doesn't work for long, power should be cut off promptly.
- 4. Refrigerating pipeline should never be moved at random.
- 5. The unit should be moved at a slope angle of less than 45° to guard against failure of the compressor or the system;
- 6. The unit should be protected from dampness, exposure to sunlight and heat source, over 100mm away from the wall and placed indoor steadily.

### **Trouble Shooting Procedures**

- 1. Compressor fails to operate
  - 1) Check if the power is available and voltage within the specified ranged;
  - 2) Check if there is any poor connection of electric circuit, short circuit or broken circuit. If the compressor fails, it must be repaired by professional maintenance workers.
- 2. Despite long-term operation of the compressor, the temperature still drops slowly or not up to the requirement
  - The magnetic door is not sealed closely and should be adjusted or replaced for aging after a long lapse
    of time
  - 2) If the radiating power of the condenser is poor, it should be replaced. The dust between radiators should be removed regularly to improve the radiating condition.
  - 3) If too much blood is put in the refrigerator without any space, part of it should be taken out and the rest be placed in good order for good cycle of cooling air in the unit.
  - 4) The refrigerating pipe leaks slowly without enough refrigerant; the refrigerating pipe is blocked in part with hindrance;
  - 5) As the refrigerator has been in use for long years, the compressor shows a lower efficiency or the unit can't keep warm sufficiently; these faults should be repaired by professional maintenance workers.
- 3. The compressor runs without refrigeration. The refrigerant has leaked completely; the refrigerating pipe is fully blocked; and the compressor fails to rise in pressure. They should be repaired by maintenance workers; the blower fan in the unit is damaged, affecting the cycle of cooling air.
- 4. Loud noise
  - 1) The pipes collide with each other or with the body once in a while. The collided area can be separated.
  - 2) The foot screw in the compressor has become loose and should be tightened.
  - 3) There is too much noise within the compressor for many reasons and it should be dismantled for repair or replaced by professional maintenance workers.

1. The compressor runs and refrigerates, but after start-up, it keeps running or fails to start after suspension.

The temperature controller is out of order and is to be checked up or replaced by professionals.

## Principle of Refrigeration

Refrigeration of the refrigerator is carried out in an enclosed refrigerating system. The compressor absorbs in the refrigerant of low-pressure air in the evaporator from the low-pressure end and simultaneously compresses it into high temperature and pressure air and feeds in to the condenser. When the heat is emitted, it is condensed into a high-pressure liquid and flows through a dry filter. After removal of moisture and impurities, it enters the evaporator through a capillary throttling liquid. At this time as the pressure is lowered abruptly and the liquid boils and evaporates rapidly to absorb heat, the temperature in the unit is reduced. The evaporated refrigerant of low pressure air is absorbed by the compressor once more. This process goes on in cycle. Before leaving the factory, the refrigerant is filled already. Under normal circumstances, it needn't be replaced and increased.

### **Principle of Electrical Control**

The unit temperature is controlled by the temperature controller. When the unit temperature is higher than the range controlled by the temperature controller, the compressor will be operated to refrigerate. When the unit temperature is reduced below range controlled by the temperature controller, the compressor will stop. When the unit temperature rises again, the above action will be repeated and goes round and round.

### Other Description

The following phenomena are not faults to cause concern:

- 1. When the refrigerator works and for some time after it stops, the refrigerant in the pipe flows in cycle with a rumble.
- 2. The surface temperature of the compressor may reach 70°C-80°C when it works.
- 3. In rainy and damp season, the body and insulation glass unit may be condensed with dew externally, which can be dried by a cloth as it doesn't affect the normal use of the refrigerator.
- 4. When the door is opened for access to goods, the computerized temperature controller will send acousto-optical alarm if the alarm temperature is surpassed because of instontanem discharge of coding air from the unit.

## **Packing List**

Serial No.	Name	Quantity
1	Manual	1
2	Support Net	1

The manual should be read carefully and kept properly!

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