# -86℃ Medical Refrigerator & Freezer

## 1. Application

Suitable for the cold storage of viruses, pathogens, red blood cells, white blood cells, skin, bone, biological products, ocean products, electronic devices, special materials, etc. blood plasma, biological materials, vaccines, and tests of military products. Used in drugstores, pharmaceutical factories, hospitals, epidemic stations, health clinics, etc. Used in laboratories blood stations, hospitals, centers for disease control, scientific research institutes, and biomedical engineering research Institutes, ocean fishing companies, etc.

## 2. Main Parameters

2.1 Working condition: Ambient temperature: 10-32°C, ambient humidity: 20-80%, voltage: 198-242V, frequency: 50±1Hz.

2.2 Type: Upright.

2.3 Valid capacity (L): 678L.

2.4 Exterior size (W×D×H mm): 1090*1025*1955.

2.5 Interior size (W×D×H mm): 750*696*1286.

2.6 NW/GW: 330/382.

*2.7 Display: 7inch touching screen control system, clear display, user-friendly interface, LCD screen dynamic real-time display of operation temperature, set temperature, environment temperature, alarm status and management, time, etc. Can connected with Bluetooth and WiFi. Can be used in sample storage management, temperature data view and date curve, message board setting.

- Sample storage: Users can select sample storage types, then set sample quantity.
- Data export: Users can export data in excel format(*.xls) to U disk including temperature data (inner box temperature, environment temperature, condenser temperature) and operation journal, and can set passwords for excel documents.
- Printing button: Users can set hours or days to print. Set starting time, ending time and interval time, or set starting time, ending time and printing time. Users can also connect printers by Bluetooth and WiFi.

- Message management: If multi users use the same freezer, they can leave messages to each other, and can create their own texts. Users can public messages or select specific messages.

2.8 Temperature control: Microprocessor-based temperature control system enables stable temperature from -40℃ to -86℃. The set temperatures can be modified by sliding the sliding bar or by clicking the temperature value, click ℃ or ℉ to switch, the temperature setting and displaying accuracy are 0.1℃.

2.9 Box material: Super steel plate, advanced anti-corrosion phosphating, and spraying process.

2.10 Inner material: Zinc coated sheet, corrosion resistant, long service life, and easy to clean.

2.11 Thermal insulation material: High performance VIP vacuum insulation material is used to improve the insulation performance. Double-layer foam insulation door, both inside and outside doors are provided with door seals, multi patent external door insulation design, effectively prevent the loss of cooling capacity: the foam inner door has better sealing performance.

2.12 The fluorine-free and environment-friendly refrigerant invented by the Institute of physics and chemistry of the Academy of Sciences has a unique refrigeration circuit with independent intellectual property rights. The cooling speed is faster and the temperature is uniform. The refrigeration technology of single-stage oil lubricated compressor has stronger refrigeration capacity.

2.13 Safe storage: Kinds of sound and light alarms: High or low temperature alarm, sensor failure, etc. enable the storage security.

2.14 Delayed start and safe stop intervals, and power failure alarm enable stable working. Double locking design enables safe and reliable storage.

2.15 Imported highly efficient SECOP compressor, powerful and reliable quality, imported EBM low noise fan, energy saving and efficient. The condensing fan and the cooling fan of the compressor can be started and stopped intelligently according to the running state of the compressor.

2.16 Large finned condenser has large heat dissipation area and good performance.

*2.17 The balance hole design of automatic heating door body can completely solve the problem of opening doors repeatedly in a short time without waiting.

2.18 Inner door compression design: Easy to open, long-term durability, and firmly lock the cooling capacity.

2.19 3 temperature testing holes for convenient temperature measurement.

2.20 The USB module can synchronously record the actual temperature, set temperature, high and low temperature alarms, input voltage, environment temperature and other data for more than 10 years. The battery can continuously supply power for temperature alarms, temperature recording printer and USB port.

2.22 Optional: Remote communication centralized monitoring system, liquid nitrogen, or carbon dioxide backup system.

2.23 Optional: Temperature recording printer, alarm, and voltage compensation system.

*2.24 Cooling rate≤6 hours when temperature reaches 25℃.

*2.25 Can store 500 boxes (standard 2in), 5000 standard cryogenic vials(2ml).

*2.26 National CQC energy conservation certification and environmental protection certification.

3. Services

3.1 After acceptance inspection, 1 year of free maintenance for this whole device.

3.2 Free lifelong technical service, support and consulting service.