Haier Biomedical
Intelligent Protection of Life Science

Combined Refrigerator and Waterpacks Freezer

HBCD-90

Scope of Application:

The vaccine combined refrigerator & freezer is applicable to pharmacy, pharmaceutical factory, epidemic prevention station, health center, hospital, etc. The combined refrigerator&freezer chamber is used to store biological products: vaccines that meet the storage conditions of + 2°C ~ + 8°C; and the freezer is used for freezing and storing ice pack.

Innovative Design

- Superior Thermal Insulation Performance
- EMS Monitoring System, 4.3-inch Color Screen Supports Multiple Language
- Safe, Secure and Reliable
- Environmentally-friendly
- Ergonomic Design

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Product Features

Dual-zone Cooling and Freezing System Design

• The product features independent cooling and freezing zones; vaccines can be placed in the refrigerator, and coolant packs in the freezer.
• Doors for the refrigerator and freezer can be opened separately, preventing cold air loss.
• Ultra-low power consumption: as low as 0.7kwh/24h.
• The refrigerator and freezer compartments are designed independently on the inside.
• Refrigerator net capacity: 30L.
• Freezer net capacity: 32 L; daily ice production: 2.43 L.

Security Guarantee

• Compliant with WHO PQS standards (WHO/PQS/E003/RF03.7 and WHO/PQS/E003/RF03-VP.5) and Class A freeze protection certification, ensuring vaccines are maintained within the qualified temperature range.
• Equipped with comprehensive alarm functions, including sensor fault alarms and high- and low-temperature alarms, with audible and visual alerts.
• All materials comply with RoHS requirements.
• CE certified in accordance meeting electrical safety design requirements.

Superior Reliability

• The complete unit has passed a 10-year accelerated ageing test.
• Operating ambient temperature range: 5–43 °C, covering the requirements of over 70% of global regions.
• The exterior is made of powder-coated cold-rolled steel, with an inner liner constructed from 1.0 mm anodised aluminium for enhanced corrosion resistance.
• Wide-voltage design ensures reliable operation under unstable power supply conditions.

Efficient Insulation Design

Low-temperature heat compensation and partition design ensure that the interior never drops below 0°C, preventing vaccine freezing.
The 140mm insulation layer provides excellent thermal insulation efficiency.
The product features a double-door design (inner and outer doors); the inner door reduces air exchange, helping to stabilize internal humidity and temperature fluctuations.
At an ambient temperature of 43°C, the unit can maintain 2°C–8°C for up to 63.8 hours.

Control System

• The refrigeration and freezing areas adopt two independent control systems. Digital electronic temperature controller with an accuracy of 0.1 °C and temperature control range of 2-8 °C;

Ergonomic Design

• EMS system can achieve wireless remote monitoring of temperature, compressor operation, and door opening and closing status; Equipped with a 4.3-inch color LCD screen; Convenient for accessing to vaccines; Equipped with status indicator lights,
convienct to operator confirm the operation status in 3 meters; USB interface and MC4 photovoltaic connection port.

Detail Introduction: EMS

Comprehensive Monitoring to Ensure Safety

• Temperature monitor: Real time monitoring of the temperature in the vaccine area to ensure that vaccines are stored at an appropriate temperature.

• Door status monitor: Detect the status of the refrigerator door to prevent temperature fluctuations caused by the door not being tightly closed.

• Power outage monitor: Monitor the power status, promptly detect power outages, and ensure the continuous operation of equipment.

• Voltage and current monitor: Real time monitoring of voltage and current

• Compressor running time monitor: Record the running time of the compressor to provide real-time status of the compressor.

• Multiple alarm : Provide sound and light alarms, SMS alarms, email alarms.

• Operation recording: Record all operation for easy auditing and traceability.

Data Analysis with Optimized Management

• Data recording and analysis: Record historical data, generate KPI statistics.

• Visual interface: Provides intuitive charts and reports for users to easily view temperature and other data trends.

Remote Control

• Wireless data download: In non-subscription situations, it supports wireless transmission and download of data between mobile phones and devices through device WIFI hotspots.

• Remote monitoring and operation: After subscribing, remote access is provided to view device status, set parameters, and configure settings.

• Global SIM card: supporting over 180 countries and regions worldwide.

• Support to replace local SIM cards.

Reliable and StableTemperature Sensor with High Precision Sensor

• Wide measurement range (-50°C~+80°C), high accuracy (± 0.5°C), fast response time.

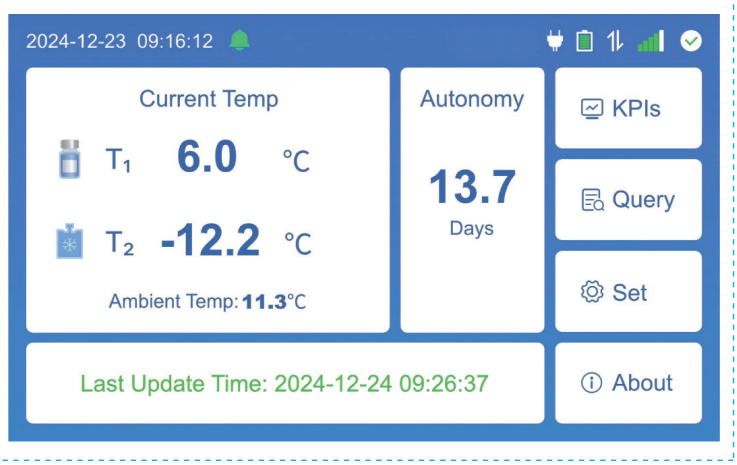
• Door sensor: Quickly detect the of the door status switch.

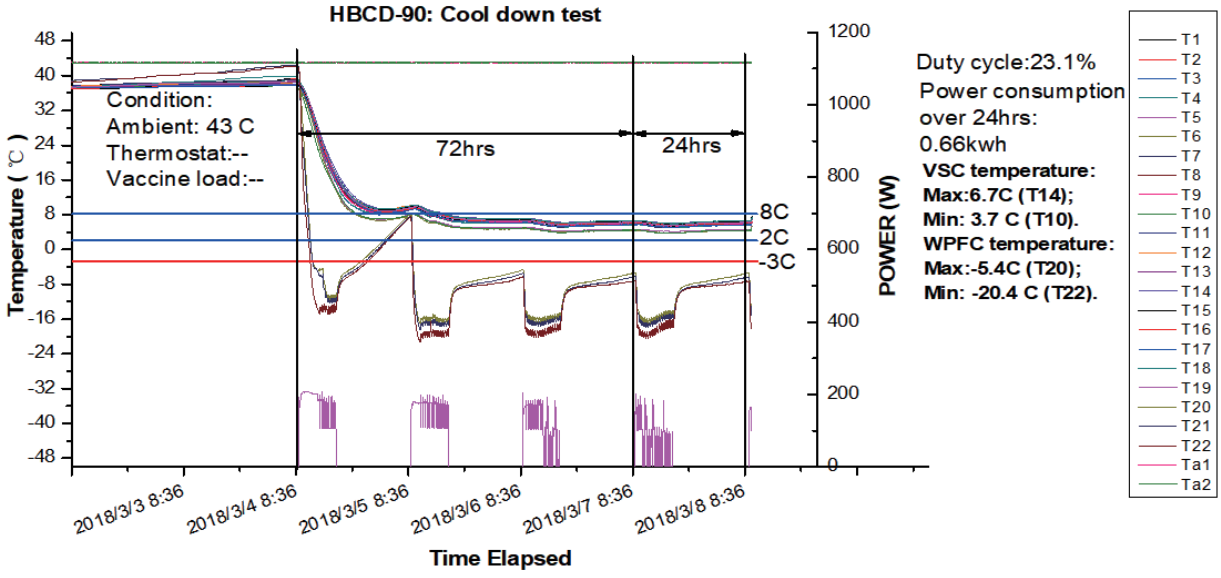
Data Storage and Transmission

- Non volatile storage: Storage time up to 1 year (default collection frequency state)
- Multiple communication protocols: Supports 2G/3G/4G and other communication methods to ensure stable and reliable data transmission.

OTA Update

- EMS meets Level 2 requirements as standard and can be upgraded to Level 3 through remote operation without the need for any additional hardware.





Specifications

Model			HBCD-90
Technical Data	Cabinet Type		Chest
	Ambient Temperature		5°C~43°C
	Cooling Type		Direct Cooling
	Defrost Mode		Manual
	Refrigerant		HC
	Sound Level (dB(A))		＜40
Performance	Temperature Range (°C)		Freezer ≤-10 Refrigerator: 2~8
	Freezer Protection Level		A
Control	Controller		Microprocessor
	Display		Solar LCD temperature display 4.3-inch color LCD screen
Electrical Data	Power Supply (V/Hz)		220V~240V/50Hz
	Power (W)		190 210
	Electrical Current (A)		1.5
	Power Consumption: stable running (KWh/24h)		0.7
	Power Consumption: cool down test (KWh/24h)		0.66
	Holdover Time at 43°C		63hrs48mins
	Holdover Time at 32°C		132hrs21mins
Dimensions	Vaccine Storage Capacity (L/Cu.Ft)		30/1.1
	Gross Volume (L/Cu.Ft)		Refrigerator: 42/1.5 Freezer: 32/1.1
	Net/Gross Weight (approx)	kg	105/135 116/146
		lbs	231/298 255.74/321.87
	Interior Dimensions (W*D*H)(mm)	mm	Refrigerator Chamber: 279*273*556 Freezer Chamber: 166*366*580
		in	Refrigerator Chamber: 11*10.8*21.9 Freezer Chamber: 6.5*14.4*22.8
	Exterior Dimensions (W*D*H)	mm	1128*654*875 (mm)
		in	44.4*25.7*34.4 (in)
	Packing Dimensions (W*D*H)	mm	1190*770*1080 (mm)
		in	47*30*42.5 (in)
	Container Load (20'/40'/40'H)		26/56/56
Functions	High/Low Temperature		Y
	Power Outage		Y
	Door Opening Alarm		Y
	Compressor Failure		Y
Accessories	Sensor Error		Y
	Foot		N
Others	Baskets		4
	Certification		CE/WHO/PQS
	Data Logger		Y N
	Freezer Gross Volume (L/Cu.Ft)		32/1.1
	Waterpack Storage Capacity (kg)		16
	Waterpack Freezing Capacity (kg/24h)		4
	Optional		30 Days Temperature Logger (TAG2E) Automatic Voltage Stabilizer Remote Temperature Monitoring Device

*Haier Biomedical reserves the right to change products and specifications without prior notice.