

Solar Direct Drive Vaccine Refrigerator



HTC-120/240

Scope of Application:

The refrigerator is designed to store vaccines and reagents. Suitable for remote where power shortages are common.

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
- Intelligent Control

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Jan, 2026



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HTC-240



HTC-120





Large-capacity refrigerated storage

- The effective capacity of refrigeration is 120L, equipped with 2 shelves (HTCD-120)
- The effective capacity of refrigeration is 240L, equipped with 4 shelves (HTCD-240)



Security Guarantee

- Compliant with WHO PQS (WHO/PQS/E003/RF03.7, WHO/PQS/E003/RF03-VP.5) and Vaccine freeze protection classification: Grade A, ensuring that the vaccines inside the refrigerator are within the qualified range;
- Compliant with CE standard (IEC 60335-1-2020, IEC 60335-2-24-2020, EN 61000-6-1:2016, EN 61000-6-3:2011), to meet electrical safety design requirements.



Superior Reliability

- The whole machine has passed a 10-year accelerated aging test. The outer shell is made of powder coated steel plate, and the inner lining is made of corrosion-resistant alumina.



Efficient Insulation Design

- The 140mm insulation and double sealing strip door design have excellent insulation performance. The temperature inside the cabin will not be lower than 0 °C to prevent vaccine freezing.



Control System

- Digital electronic temperature controller with an accuracy of 0.1°C and temperature control range of 2-8 °C; Optional humidity control system can be used to achieve no condensation inside the cabin and prevent the vaccine box from getting wet.



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; Adjustable shelf height, convenient for accessing to vaccines; Equipped with status indicator lights, convenient for operator to confirm the operation status in 3 meters.

► 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 Stable Temperature Sensor with High Precision Sensor

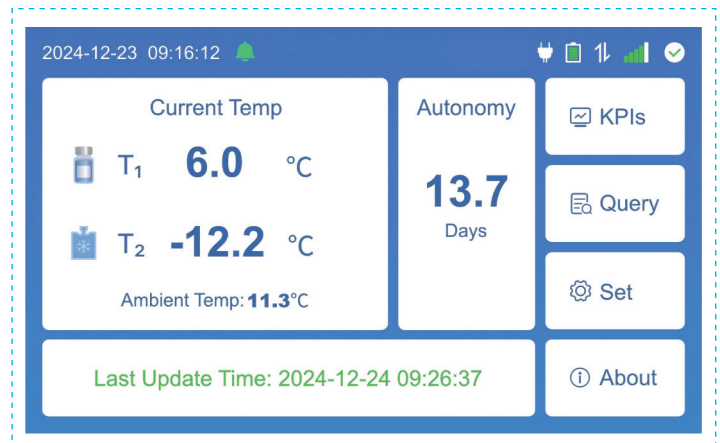
- Wide measurement range (-50°C ~ $+80^{\circ}\text{C}$), high accuracy ($\pm 0.5^{\circ}\text{C}$), fast response time.
- Door sensor: Quickly detect the of the door status switch.

● Data Storage and Transmission

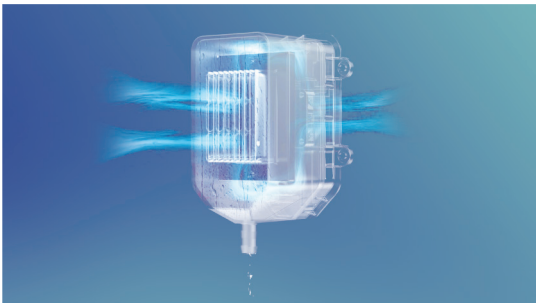
- Non volatile storage: Storage time up to 1 year (default collection frequency state)
- Multiple communication protocols: Supports 2G/3G/4G and other communication methods to ensure stable and reliable data transmission.

● 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.



Detail Introduction: Optional Humidity Control System

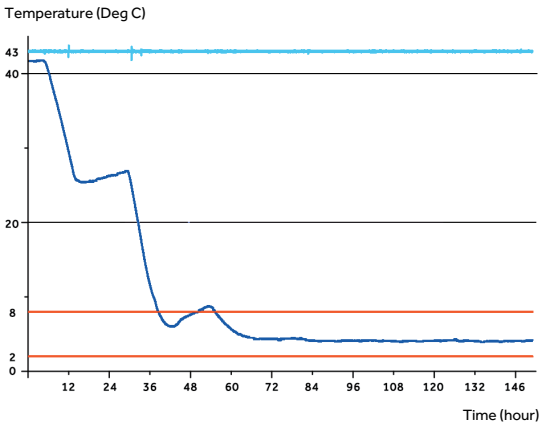


Humidity Control System (Optional)

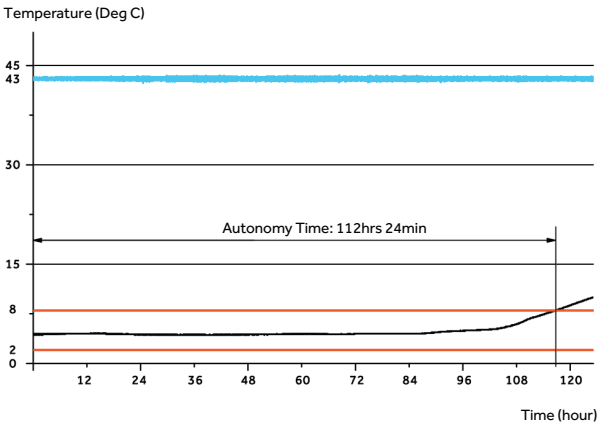
Optional humidity control system, using semiconductor condensation and fan circulation system, to achieve no condensation inside the cabin and prevent the vaccine box from getting wet.

Autonomy Test

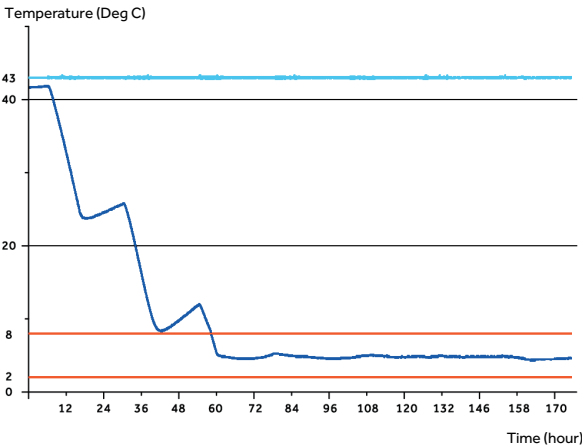
HTC-120: Cool down test



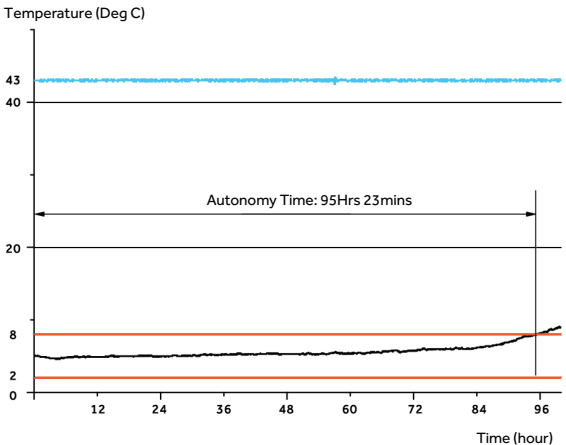
HTC-120: Autonomy test



HTC-240: Cool down test



HTC-240: Autonomy test

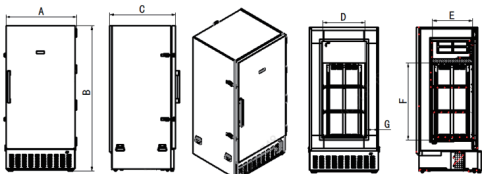


► Specifications

Model		HTC-120	HTC-240
Technical Data	Cabinet Type	Upright	Upright
	Climate Type	H	H
	Cooling Type	Direct Cooling	Direct Cooling
	Defrost Mode	Manual	Manual
	Refrigerant	R600a	R600a
	Sound Level (dB(A))	≤43	≤43
	Temperature Range (°C)	2~8	2~8
Control	Controller	Microprocessor	Microprocessor
	Display	Solar LED Temperature display	Solar LED Temperature display
Electrical Data	Power supply (V)	24VDC	24VDC
	Maximal Current (A) (24VDC)	5	5
	Energy Consumption: Stable Running (kWh/24h)	0.44	0.35
	Energy Consumption: Cool Down Test (kWh/24h)	0.48	0.54
	Autonomy Time at 43°C	112hrs24mins	95hrs23mins
	Solar Radiation Reference Period (kWh/m ² /day)	3.5	3.5
Construction	Vaccine Storage Capacity (L)	100	200
	Gross Volume (L)	120	240
	Net/Gross Weight (kg)	150/185	170/210
	Interior Dimensions (W*D*H) (mm)	530*500*530	530*500*960
	Exterior Dimensions (W*D*H) (mm)	920*915*1470	920*915*1860
	Packing Dimensions (W*D*H) (mm)	970*950*1635	970*950*2015
	Container Load (20'/40'/40'H)	12/24/24	12/24/24
	Solar Panel Dimensions (WxDxH) (mm)	1640*990*35	1640*990*35
Alarm	High/Low Temperature	Y	Y
	Power Failure (Y/N)	Y	Y
	Sensor Error (Y/N)	Y	Y
Accessory	Basket	/	/
	Shelf	3	4
Others	Certificate	CE/PQS	CE/PQS
	Vaccine Freeze Protection Classification	Grade A	Grade A

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

► Product Dimension Drawings

							
Model	A	B	C	D	E	F	G
HTC-240 (mm)	865	1815	825	530	500	960	150
HTC-120 (mm)	865	1422	825	530	500	530	150