

Solar Direct Drive Vaccine Refrigerator

EMS-powered wireless remote monitoring combined with WHO-certified precision, long hold-over, and green design – the ultimate vaccine storage solution.

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



HTC-110/112

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Scope of Application

Applicable for the storage of biological products and items that need to be stored under the condition of 2~8°C within pharmacies, pharmaceutical factories, epidemic prevention stations, health centers and hospitals as key examples.

Product Features



Ergonomic Design

- Intelligent control, no adjustment required
The height of the temperature display screen is moderate, and the inner temperature can be checked at any time.
- Safety door lock.
- Low DC voltage ensures personal safety.
- Plug-and-play type quick plug, positive and negative pole error-proof.
- External door handle with door lock design to prevent random door to ensure vaccine safety.
- Built-in handgrips on both sides of the box body facilitate overall movement.



Temperature Control

- Electronic temperature controller, digital temperature display, the display precision is 0.1°C and the control range is 2°C-8°C.
- 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.



Safety System

- Sensor error alarm, high and low temperature alarm.
- Alarm mode: sound buzzer alarm and light flashing alarm.
- Key components like compressors and fans are designed for purpose to ensure reliability and safety of stored items.



Superior Performance

- World Health Organization Certified (PQS certification).
- Class A antifreeze.
- Excellent hold-over times ensure the safety of vaccines.
- Low temperature thermal compensation to prevent vaccine freezing.
- 140mm insulation provides excellent thermal efficiency.
- Wide working ambient temperature range of 5~43°C.
- Internal and external double door design, better thermal insulation performance.



Environmental Protection

- Environmentally friendly hydrocarbon refrigerant R600a.
- The shell is coated with cold rolled steel plate, and the inner liner is made of alumina, which is easy to recycle.
- Ultra low GWP value.
- Don't use any batteries

Product Advantages



Baskets

- Equipped with baskets, convenient to take out the vaccines.



Durable Construction Materials

- Interior is manufactured from aluminum oxide, the exterior is coated with cold rolled steel plate, corrosion-resistant and easy to clean.



Door Design

- Outer door: foamed outer door, good insulation performance.
- Inner door: high density PE foamed inner door, which effectively reduces cold loss.

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 operation of equipment.
- 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

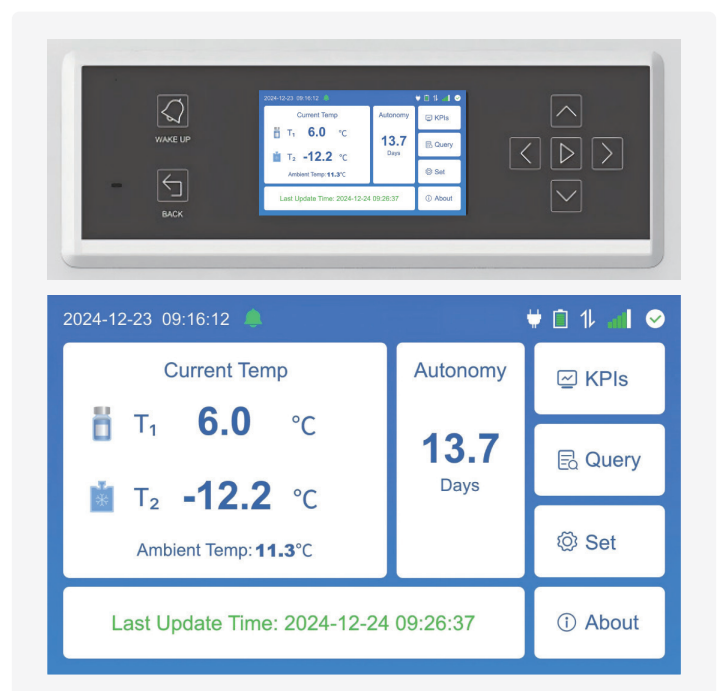
- Wide measurement range ($-50^{\circ}\text{C}\sim+80^{\circ}\text{C}$), high accuracy ($\pm 0.5^{\circ}\text{C}$), fast response time.
- Door sensor: Quickly detect the of the door status switch.

Data Storage and Transmission

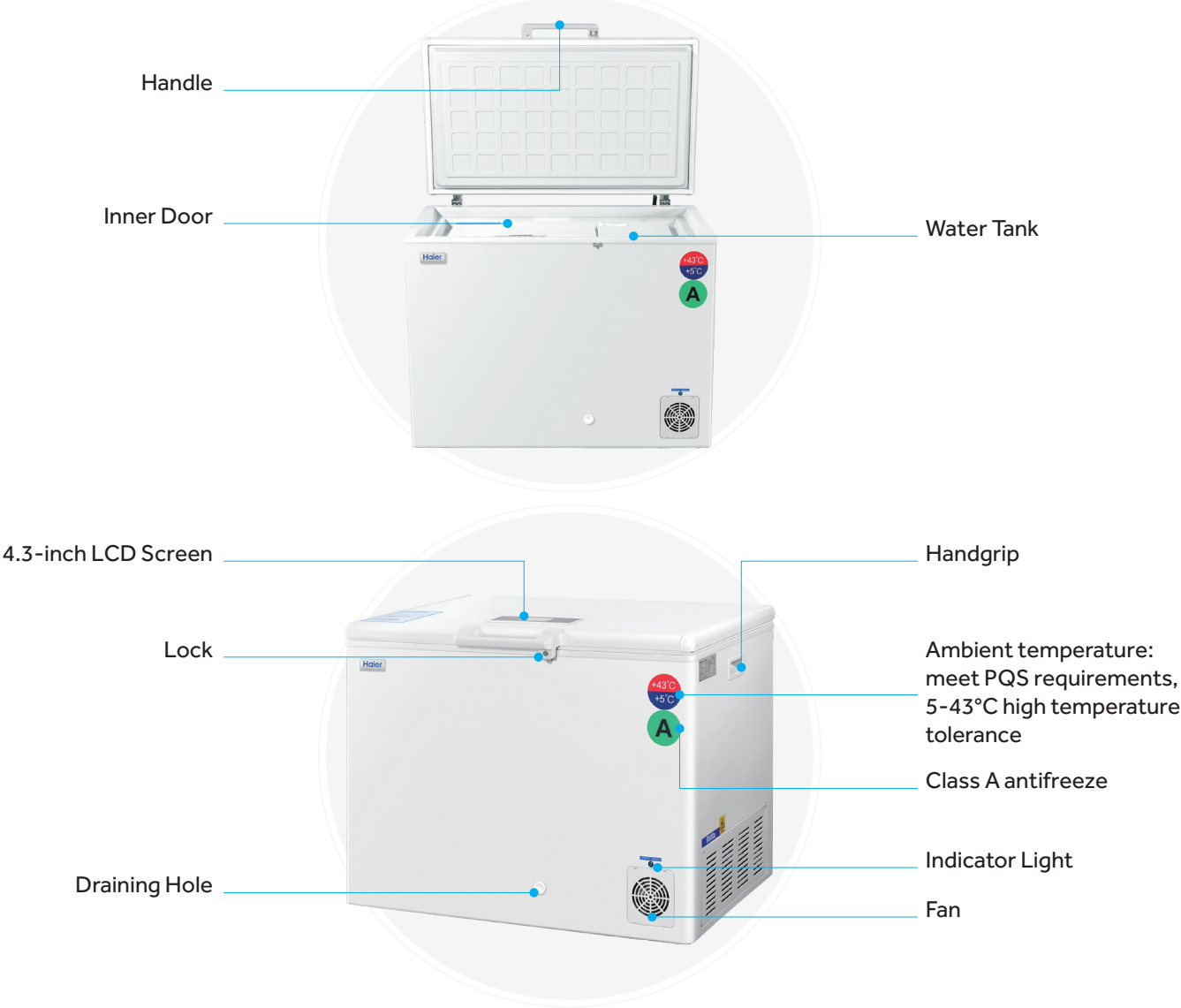
- Non volatile storage: Storage time up to 1 year (default collection frequency state).
- Multiple communication protocols: Supports 2G/3G/4G and other communication methods to ensure stable and reliable data transmission.

OTA Update

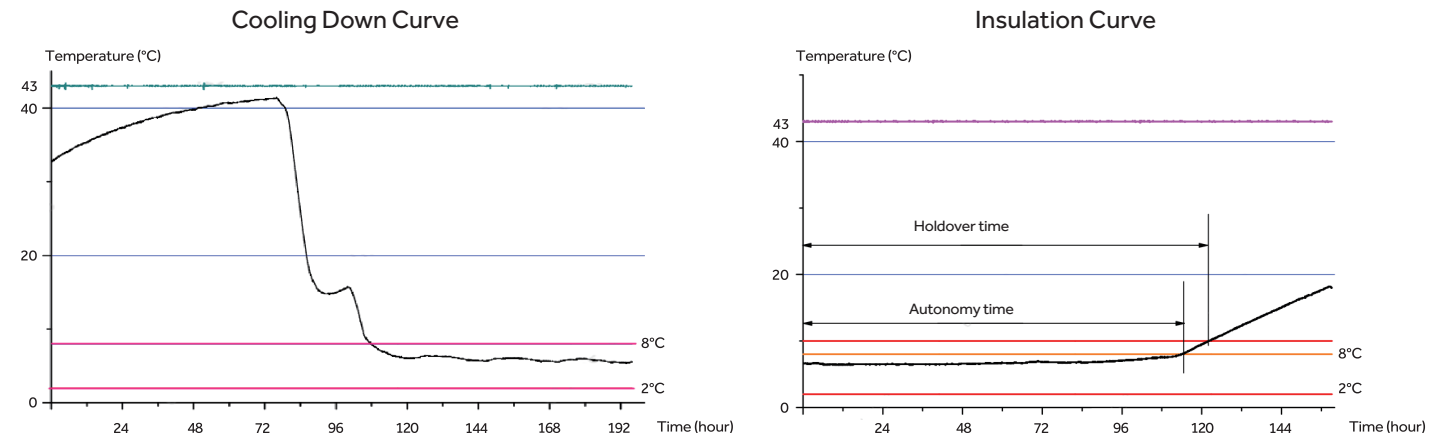
- EMS meets Level 2 requirements as standard and can be upgraded to Level 3 through remote operation without the need for any additional hardware.



Product Parts Diagram

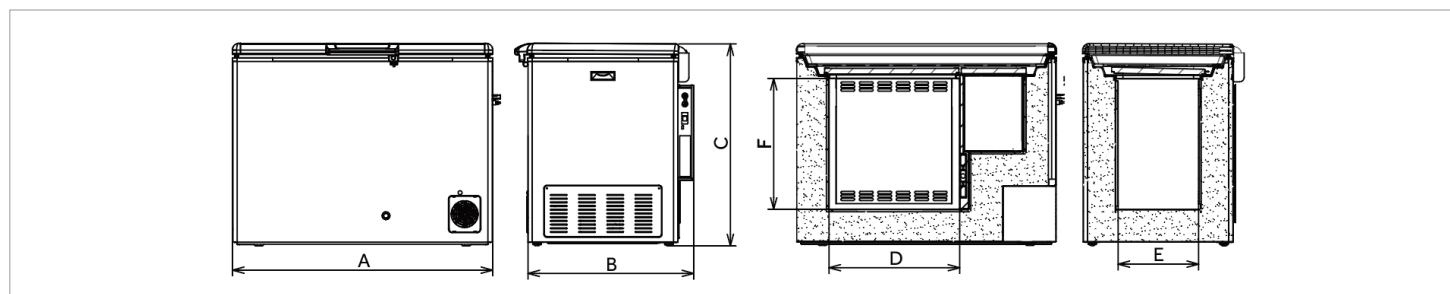


Product Performance



Model	Autonomy Time	Holdover Time
HTC-110	96hrs24mins	106hrs17mins
HTC-112	92hrs46mins	-

Product Dimension Drawings



Model	A	B	C	D	E	F
HTC-110 (mm)	1128	720	875	545	345	555
HTC-112 (mm)	1128	720	875	545	345	555

Specifications

Model		HTC-110	HTC-112
Technical Data	Cabinet Type	Upright	Upright
	Climate Type	H	H
	Cooling Type	Direct Cooling	Direct Cooling
	Defrost Mode	Manual	Manual
	Refrigerant	HC	HC
	Sound Level (dB(A))	≤30	≤30
	Temperature Range (°C)	2-8	2-8
	Vaccine Freeze Protection Classification	Grade A	Grade A
Control	Controller	Microprocessor	Microprocessor
	Display	4.3-inch LCD Screen	4.3-inch LCD Screen
Electrical Data	Power Supply (V)	24VDC	24VDC
	Maximal Current (A) (24VDC)	5	5
	Energy Consumption: Stable Running (kWh/24h)	0.58	0.59
	Energy Consumption: Cool Down Test (kWh/24h)	0.62	0.62
	Autonomy Time at 43°C	106hrs17mins	/
	Solar Radiation Reference Period (kWh/m2/day)	3.5	3.5
Construction	Vaccine Storage Capacity (L)	59	75
	Gross Volume (L)	110	110
	Net/Gross Weight (kg)	80/108	80/108
	Interior Dimensions (W*D*H) (mm)	545*345*555	545*345*555
	Exterior Dimensions (W*D*H) (mm)	1128*720*875	1128*720*875
	Packing Dimensions (W*D*H) (mm)	1190*770*1080	1190*770*1080
	Container Load (20'/40'/40'H)	26/56/56	26/56/56
	Solar Panel Dimensions (W*D*H) (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	4	4
	Shelf	/	/
Others	Certificate	CE/PQS	PQS