

● Headquarter ● Global warehouse ● Training center ● Global subsidiary ● Manufacturing base

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Note: If a slight difference occurs between pictures and actual products, please refer to actual products. Our company reserves the right of final interpretation of this brochure, please contact us for any further information if required.

# THE VACCINE SAFETY SOLUTIONS

[www.haiermedical.com](http://www.haiermedical.com)

Intelligent Protection  
of Life Science

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**A platform for sharing, an ecosystem of trust.**





# About Haier Group

Founded in 1984, Haier Group is the world's leading provider of solutions for better living and digital transformation.

Users have always been in the center of our businesses, we have built 10 R&D centers, 71 research institutes, 35 industrial parks, 138 manufacturing centers and a sales network of 230,000 nodes around the world. We are the world's only IoT Ecosystem Brand that has been ranked in the Kantar BrandZ Top 100 Most Valuable Global Brands for 5 consecutive years. We also retain the top position in Euromonitor's Global Major Appliances Brand for 14 consecutive years.

The Group has four listed companies, and our subsidiary Haier Smart Home is named among the Fortune's Global 500 and World's Most Admired Companies. We have several global high-end brands, including Haier, Casarte, Leader, GE Appliances, Fisher & Paykel, AQUA and Candy, and have the world's first smart home Scenario Brand, SAN YI NIAO. We have built the world-leading industrial Internet platform COSMOPlat and the IoT health industry ecosystem INCAIER. Our entrepreneurial acceleration platform HCH has incubated 7 unicorn companies, 102 gazelle companies and 124 specialized and sophisticated "small giant" enterprises.

Being an iconic company in the real economy, Haier Group always focuses on the industries. We build a landscape of two pillars, smart living and industrial Internet. We build high-end brands, Scenario Brand and Ecosystem Brands. We are committed to technological innovation to deliver customized smart living for global users and successful digital transformation for corporate clients, and to endeavor for high-quality and sustainable economic and social development.

Worldwide Network	 Research Institutes	 R&D Centers	 Manufacturing	 Industrial Parks	 Sales Network
Global	71	10	138	35	230,000+

(Updated by: July 2023)

# Haier Biomedical

Haier Biomedical was founded to focus on the research & development, manufacturing, and sales of low-temperature storage equipment for biomedical samples. Based on the concept of IoT, the company has become a digital scenario solution provider in life science and medical innovation.

To stay competitive in the digital economy era, Haier Biomedical has integrated IoT, automation, and other emerging technologies, and launched comprehensive digital scenario solutions, such as smart blood use and smart vaccination. The company also pioneered in-hospital medication automation, digital public health, physical examination, and other scenario solutions, leading the transformation of the biomedical industry. Haier Biomedical has continuously made innovations in microbial culture, environmental simulation, rapid refrigerated centrifuges, and surface modification of high polymer materials. By emphasizing smart labs and other comprehensive scenario solutions, the company has expanded its influence in life sciences and medical innovation.

By the end of 2022, the company has obtained a total of 795 patents, including 114 software copyright, and 131 new applications for inventions were proposed in that current year. On the life science and medical innovation track, Haier Biomedical keeps occupying the commanding heights of scientific and technological innovation and leading the high-quality development of the industry

Haier Biomedical's products and solutions have been utilized in over 135 countries and regions worldwide and has established over 700 overseas distribution networks, expanding all the time. Haier Biomedical has formed partnerships with more than 40 international organizations such as the World Health Organization (WHO), the United Nations International Children's Emergency Fund (UNICEF), and the United Nations Global Compact (UNG). The company has established experience and training centers in Dubai, Nigeria, Singapore, and the UK as examples.

## The Choice for Global Users





Haier Biomedical Supports Scientific Research Institutions to "Make Life Better"!



Haier Biomedical Products Installed at the Canadian Food Inspection Agency



UK's First Zoological Biobank Program



Research of Human Milk Oligosaccharides (HMOs) in US



A New Generation of Cold Chain Equipment Launched in Morocco



Argentina Biobank Program



Pasteur Customized Solution



Myanmar Vaccine Complete Cold Chain Solution



Cold Room Program in Cambodia



Support COVAX Program in Donesia to Fight the COVID-19

## To Human Life

**1** In more recent times, Haier Biomedical has already progressed extensively with huge global success with regard to providing cryopreservation for saving and securing life through vaccine security. Immunization by vaccine inoculation can save a child's life and is therefore vital to human life.

The Director-General of WHO claims: "Vaccines are one of our most important tools for preventing outbreaks and keeping the world safe. While most children today are being vaccinated, far too many are left behind. Unacceptably, it's often those who are most at risk— the poorest, the most marginalized, those touched by conflict or forced from their homes - who are persistently missed."



**2** More than 1 in 10 missed out on lifesaving vaccines such as measles, diphtheria and tetanus in 2018, according to data from WHO and UNICEF.

**3** Every 20 seconds a child dies from a disease that could have been prevented by secure and safe vaccine coverage.

**4** As vaccines need to be kept at a particular temperature to remain effective, one of the main reasons resulting from the numbers above lays in the unreliability of power supplies in many rural areas worldwide. Haier Biomedical combats this insufficiency of safety and security of vaccines effectively with Haier Biomedical vaccine storage solutions.

**5** 140,000 is the number of medical refrigerators that Haier Biomedical delivered till 2019, this was in order to improve improper refrigeration of vaccines in areas where safety and security of vaccine storage is needed the most.



**6** Even before COVID-19 struck, more than 10 million children born every year were deprived of even a single vaccine shot in emerging economies supported by Gavi. There remains an urgent and immediate need to catch up on children who missed vaccination before and during the pandemic – including the 10.6 million "zero-dose" children in Gavi-supported countries who, even before the pandemic, had not yet been reached with even a single dose of basic vaccines.

**7** In 2020, out of 68 Gavi-supported vaccine campaigns and projects, 47 have been delayed or are still at risk of delay due to COVID-19 disruptions. In May 2020, analysis by Gavi, along with WHO and UNICEF, revealed that disruptions to routine immunization services had put 80 million children under the age one at risk of contracting vaccine-preventable diseases.



Monitoring animal health and preventing an outbreak of an animal disease is not only essential to the country's food supply and therefore to their health, but also to the country's economy. Only healthy livestock will result in safe food supply and thus stable consumer prices.

Animal diseases with human health implications can adversely impact public health, global trade, and the stability of the agricultural segment of an economy. Those kind of disease outbreaks can actually cost a country millions if not billions of dollars due to animal slaughters, trade halts, and subsequent disease eradication efforts. This is why economic growth can even stagnate if improper access to medicines and animal care is unattainable.

Veterinary vaccines play a significant role in protecting animal health and reducing their suffering. This is also important regarding transmission of zoonotic and foodborne infections to people that can be prevented. The correlation between animal and human health is an approach known as 'One Health'. Looking at both areas simultaneously, one can prevent disease outbreaks across species.

Despite delivering a source of healthy, essential proteins through milk and meat to humans, healthy livestock is also a vital driver for farmers, families and for the communities around them.

Improving an animals well-being, farmers can increase results in enhancing efficiency of food production, which can lead to greater income for themselves, but should also be taken into consideration due to the burgeoning global over-population that we are facing. We need to ensure a safe, sufficient and nutritious food supply for future generations!

This is especially important in developing countries where agriculture is still expanding. Vaccination provides significant net income benefits from reduction in livestock mortality, increased milk products, and savings by reducing antibiotic and acaricide treatments.

Animal vaccines demand the same cold chain as human vaccines, hence a dependable medical refrigeration network is crucial. A cold chain suffering from a decimated energy infrastructure prevents suitable refrigeration for vital vaccines, Haier Biomedical is the solution provider.

# A Long Way to Vaccination

Increased vaccine usage leads to a higher amount of vaccines lost due to improper storage, which is only one of the main causes of poor immunization coverage rates. To maintain the quality of vaccines, they have to be protected from extreme and temperature fluctuations. If exposed to inadequate temperature, vaccine potency diminishes, which cannot be regained.

From the moment when vaccines are manufactured, they need to be constantly stored at the right temperature until they reach the recipient. Hence, Haier Biomedical has successfully introduced new technology and infrastructure for a complete Cold Chain Solution to secure vaccine safety and quality.

Emerging infectious diseases are a major public health problem in developing countries and a threat to developed countries. In the last 10 years, a resurgence of emerging and re-emerging diseases has been reported around the world with 3 declarations of Public Health Emergency of International Concern by WHO.

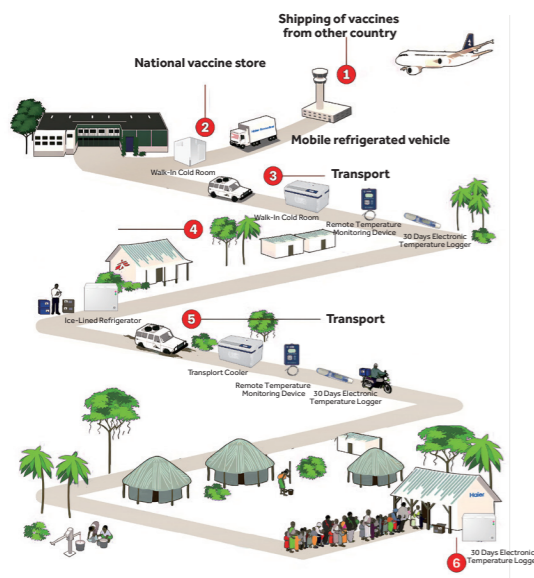
**Ebola**  
 • In 2014, the Ebola virus disease spread in 3 continents

**Zika**  
 • In 2015, Zika virus, a mosquito-borne arbovirus, showed an unprecedented expansion with 148 countries

**Covid-19**  
 • In 2020, the Covid-19 pandemic has spread lighting fast around the world with more than 5million deaths (17, 11, 2021)

Infectious diseases are only one of the challenges faced by the people in the last mile of low - and middle-income countries. There are also other challenges such as vaccination, oxygen supply and medical waste treatment that need to be improved.

Haier Biomedical has accumulated a large number of technologies, talents and industry experience in the field of life science and medical innovation in the past 20 years. Especially in the field of immunization, in the past 15 years, Haier Biomedical has introduced the vaccine cold chain solution as the core into more than 80 low - and middle-income countries around the world and served tens of millions of children. At the same time, we also see the urgent demand for basic health improvement in these areas. Therefore, Haier Biomedical launched the last mile health initiative in 2021 to provide users in remote areas with sustainable solutions to meet the best user experience.



## The Last Mile

It is not always easy to deliver lifesaving vaccines to the ones who need it the most. However, Haier Biomedical's highest priority can ensure vaccine safety and security across the entire cold chain network and continue to strive and meet the challenge of vaccine security to the last mile.

## Providing a Complete Life-Cycle Customer-Service Solutions

### After Sales Service + Local Partners

Haier Biomedical has a large network of distributors, service and sales partners, who share the Haier philosophy and spirit of customer satisfaction on a global scale. In order to assure the highest quality and customers' contentment from initial sales, installation to after sales service of our products, we have carefully selected the best partners to work together with us to ensure the platform for sharing an ecosystem of trust transcends across all our networks.



### In-Country Training

To provide the best service possible, we deliver In-country training to our Haier partners on a regular basis. Transferring knowledge from Haier Biomedical's experienced professionals to our partners and customers teams is an essential step in providing the highest of standards.



### Quality Management

Haier Biomedical's products carry manufacturer's warranty on parts and labor. To strengthen our product satisfaction internationally, we have also signed contracts with our suppliers for 10 years, which guarantees the availability of spare parts needed. Customer satisfaction is Haier Biomedical's goal on every product.



### Remote Monitoring and Control

For temperature control across thousands of devices, Haier Biomedical offers Remote Temperature Monitoring Devices, vital for surveillance and monitoring.



# Haier Biomedical's Vaccine Safety Solutions

- ✓ Cold Room
- ✓ Solar Direct Drive Refrigerator/Freezer
- ✓ Icepack Freezer
- ✓ Ice-Lined Refrigerator/Freezer
- ✓ Optional Accessories
- ✓ Refrigerated Vaccine Vehicle
- ✓ Transport Coolers

## Solar Direct Drive Cold Room

SDD cold room uses solar direct drive cooling technology, combined with ice lined technology, maintains the temperature in the cold room between 2-8 degrees throughout the day; application is used in national or regional vaccine centers, hospitals, and biopharmaceutical industries suitable for immunization projects; used for storing large quantities of temperature-sensitive products, such as vaccines and medications.



### Solar Direct Drive

SDD cold room uses solar direct drive cooling technology

### Low Operating Cost

Low operation cost, annual energy saving is about 8000kwh (10 CMB)

### Long Holdover Capacity

Long holdover during power off (Tested in QingDao), more than 22 days (10 CBM, ambient temperature 20-40°C)

### Remotely Monitored and Controlled

Temperature record and alarm system, door ajar alarm and power failure alarm; monitored & controlled by PC/APP/Web

### Specifications

Model	Solar Direct Drive Cold Room
Cold room Sizes	>10m <sup>3</sup>
Temperature Range (°C)	5-43
Refrigerant	R1234YF
Panel Insulation Material	Polyurethane High Density
Panel Thickness Options (mm)	200
Panel Jointing System	Tongue and Groove, Cam Lock
Wall & Ceiling Panel Finish	1mm Aluminum Sheet
Floor Panel Finish	Anti-slip Aluminum Sheet
Shelving System	Adjustable Shelves
Shelving Material	Steel and Aluminum
Internal Temperature Range (°C)	2-8
Holdover Time at 43°C	More than 7 Days (10 CMB)
Holdover Time at 32°C	More than 15 Days (10 CMB)
Min. Solar Radiation (kWh/m2/day)	3.5

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

## Walk-In Cold Room

The complete unit is also designed for installations in housed areas such as warehouses that need to meet specific temperature standards. Previously Haier have already successfully installed these units in India, Guinea, Syria, Pakistan, Burundi, Zimbabwe and other regions across the world.

### Temperature

- Temperature recorder
- Forced air-cooling system

### CFC-free

- CFC-free high-density foam insulation

### Alarm System

- Audible and visual alarm

### Automatic Defrosting

- Dual unit rotating operation

### Walk-In Cold Store Unit

- The cold room is suitable for a variety of applications: It can be used to freeze or refrigerate samples for healthcare, research, agriculture and biotechnology purposes.
- Walk-In Cold Room (WIC): Interior temperature can be controlled within a range of 2°C to 8°C.
- Walk-In Freezer (WIF): Temperature is set at -20°C.



### Specifications

Model	Monobloc						Split						Monobloc
	WIC (10 cbm)	WIF (20 cbm)	WIC (30 cbm)	WIC (40 cbm)	Combi. 40 cbm WIC/WIF		WIF (20 cbm)	WIC (30 cbm)	WIC (40 cbm)	Combi. 40 cbm WIC/WIF		HWIC-40-M-AC (290)	
					WIC (10 cbm)	WIF (10 cbm)				WIC (25 cbm)	WIF (15 cbm)		
Capacity (m³)	10	20	30	40	25	15	20	30	40	25	15	40	
WHO PQS Code	E001/003												
Refrigerant	R448A											R290	
Defrost Mod	Hot gas defrost						Electrical heating						Hot gas defrost
Internal Temperature Range (°C)	2-8	-20	2-8	2-8	2-8	-20	-20	2-8	2-8	2-8	-20	2-8	
Power Supply (V/ph-Hz)	220/1N~/50	380/3N~/50	380/3N~/50	380/3N~/50	380/3N~/50	380/3N~/50	380/3N~/50	380/3N~/50	380/3N~/50	380/3N~/50	380/3N~/50	220/1N~/50	
Power (W)/Unit	894	1750	1590	1590	1590	1750	1750	1590	1860	1590	1750	2510 (max)	
Refrigeration Output (W) Unit	1425	2580	3700	3700	3700	2580	2580	3700	4600	3700	2580	3367	
Condensation Temperature (°C)	43												
Density (Kg/Cbm)	40 +/- 2												
U Value (W/m²K)	0.17												
Insulation Thickness (mm)	100	120	100	100	120	120	100	100	120	120	120	120	

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## Solar Direct Drive Vaccine Refrigerator/Freezer

Haier Biomedical's solar-powered refrigerators are vital to remote, rural and other effected regions in order to ensure the right temperature for vaccines even during power shortages. Haier Biomedical produces a range of chest and upright refrigerators, with our Solar Direct Drive refrigerators available in many different sizes.

### Solar Energy Driven

- Solar power is green and environmentally friendly

### Environmentally friendly

- Ecofriendly product

### Anti-Freeze

- A level protection ensures required internal temperature

### Patented Technology

- Heat-pipe provides better temperature uniformity

### Ergonomic Design

- Easy to clean and corrosion proof



### Specifications

Model	HTC-40	HTC-110	HTC-112	HTD-40
Class	Refrigerator	Refrigerator	Refrigerator	Freezer for Icepacks
WHO PQS Code	E003/075	E003/076	E003/102	E003/086
Cabinet Type	Chest	Chest	Chest	Chest
Gross Volume (L)	40	110	110	48
Vaccine Storage Capacity (L)	22,5	59	75	-
Exterior Dimensions (W*D*H) in mm	788*720*875	1128*720*875	1128*720*875	788*720*875
Holdover Time at 43°C	122hrs18mins	106hrs17mins	-	-
Holdover Time at 32°C	162hrs36mins	152hrs28mins	-	/
Autonomy Time at 43°C	117hrs18mins	96hrs24mins	92hrs46mins	-
Autonomy Time at 32°C	-	-	145hrs29mins	-
Power of Solar Panels	360W	360W	360W	360W
Min. Solar Radiation (kWh/m2/day)	3.5	3.5	3.5	3.5
Freeze Protection Level	A	A	A	-
Optional	30 Days Temperature Logger Remote Temperature Monitoring Device (RTMD)			

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## Icepack Freezer



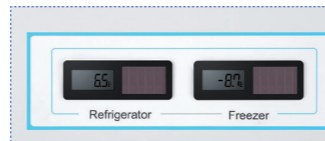
HTCD-160



Lock Catch Designed To Match Padlock



Handgrip



Display Panel



### Specifications

Model	HTCD-90	HTCD-160	HTC-120	HTC-240
Class	Refrigerator+ Freezer	Refrigerator+ Freezer	Refrigerator	Refrigerator
WHO PQS Code	E003/074	E003/057	E003/116	E003/117
Cabinet Type	Chest	Upright	Upright	Upright
Gross Volume (L)	Refrig.: 58 Freezer: 32	Refrig.: 120 Freezer: 40	120	240
Vaccine Storage Capacity (L)	37,5	100	100	200
Exterior Dimensions (W*D*H) in mm	1128*720*875	890*825*1700	865*825*1422	865*825*1815
Holdover Time at 43°C	137hrs47mins	160hrs8mins	-	-
Holdover Time at 32°C	169hrs6mins	230hrs10mins	-	-
Autonomy Time at 43°C	114hrs 56mins	121hrs27mins	112hrs24mins	95hrs23mins
Autonomy Time at 32°C	-	-	183hrs20mins	151hrs10mins
Power of Solar Panels	720W	765W	360W	360W
Min. Solar Radiation (kWh/m2/day)	3.5	3.5	3.5	3.5
Freeze Protection Level	A	A	A	A
Optional	30 Days Temperature Logger Remote Temperature Monitoring Device (RTMD)			

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Haier Biomedical's Icepack Freezer is designed to store e.g. vaccines, freeze icepacks, pharmaceuticals between -15°C and -25°C. Application is used within institutes epidemic prevention, clinics, hospitals, research institutes as key examples.

### Ergonomic Design

- Easy to clean, safety lock to prevent unauthorized access

### Temperature Control

- LCD temperature display, internal temperature range between -15°C to -25°C

### Refrigeration system

- High quality compressor
- Optimized refrigeration system design



### Specifications

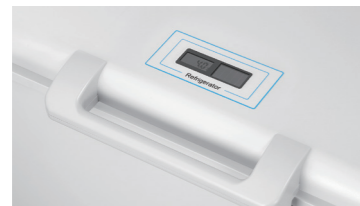
Model	HBD-86	HBD-265
Class	Freezer	Freezer
WHO PQS Code	/	/
Cabinet Type	Chest	Chest
Temperature Range (°C)	-15-25	-15-25
Refrigerant	HC	HC
Gross Volume (L)	86	265
Exterior Dimension	788*717*872	1647*717*940
Holdover Time	More than 7hrs (up to -5°C)	11hrs25min (up to -5°C)
Noise (dB(A))	40.6	39.3
Accessories	Foot	/
	Basket	3
Optional	Automatic Voltage Stabilizer	

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## Ice-Lined Refrigerator

Haier Biomedical's Ice-Lined Refrigerators are specifically designed to secure safety and potency of sensitive vaccines which need to be cooled at a controlled and stable temperature. Equipped with a solar-powered display panel, rated for a wide ambient range of 5-43°C, this refrigerator is appropriate for unstable electricity supply regions.



Solar Energy Display Panel



HBC-80



### Specifications

Model	HBC-80	HBC-150	HBC-260
Class	Refrigerator	Refrigerator	Refrigerator
WHO PQS Code	E003/089	E003/088	E003/087
Cabinet Type	Chest	Chest	Chest
Ambient Temperature (°C)	5-43	5-43	5-43
Gross Volume (L)	80	150	260
Vaccine Storage Capacity	61	122	211
Exterior Dimension	788*717*872	1128*717*872	1647*717*940
Holdover Time at 43°C	57hrs 34mins	57hrs 55mins	62hrs
Holdover Time at 32°C	98hrs 26mins	96hrs 23mins	117hrs 24mins
Noise Level (dB(A))	<40	<40	<40
Freeze Protection Level	A	A	A
Optional	30 Days Temperature Logger Automatic Voltage Stabilizer Remote Temperature Monitoring Device		

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### Patented Technology

- Heated pipe for better temperature uniformity

### Refrigeration system

- High quality compressor
- Optimized refrigeration system design

### Temperature Control

- Equipped with digital solar powered temperature display to measure controlled inside temperature range from 2°C–8°C

### Ergonomic Design

- Safety lock to avoid unauthorized access control, designed with handle on the side



HBCD-90



HBC-240



### Specifications

Model	HBCD-90	HBC-120	HBC-240
Class	Refrigerator + Freezer	Refrigerator	Refrigerator
WHO PQS Code	E003/097	E003/114	E003/115
Cabinet Type	Chest	Upright	Upright
Ambient Temperature (°C)	5-43	5-43	5-43
Gross Volume (L)	Refrig: 42 Freezer: 32	120	240
Vaccine Storage Capacity	30	100	200
Exterior Dimension	1128*717*872	890*829*1425	890*829*1815
Holdover Time at 43°C	63hrs 48mins	128hrs48min	87h14min
Holdover Time at 32°C	132hrs 21mins	185h	165h
Noise Level (dB(A))	<40	<40	<40
Freeze Protection Level	A	A	A
Optional	30 Days Temperature Logger Automatic Voltage Stabilizer Remote Temperature Monitoring Device		

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## Overview

Based on GPRS, 4G, LoRa and other communication technologies, Haier Biomedical provides three RTMD (Remote Temperature Monitoring Device) devices: U-COOL, U-COOL-LoRa and U-COOL Pro, which can meet customers' demand for real-time monitoring of temperature changes of cold chain equipment and facilitate customers to remotely monitor the running status of cold chain equipment through computers, mobile phones and other electronic devices, timely remind customers to deal with the failures such as abnormal temperature, abnormal door opening, power failure of cold chain equipment in the process of operation, and help customers analyze the current status of stored items through a large number of temperature data reports.

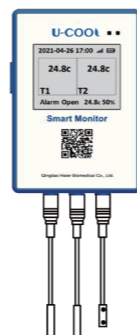
Applicable for the monitoring of the stored items in the fridge, cold rooms, refrigerated vehicles, transport coolers, liquid nitrogen containers in hospitals, in disease control centers, blood stations, laboratories, warehouses, pharmacies and machine rooms.



U-COOL



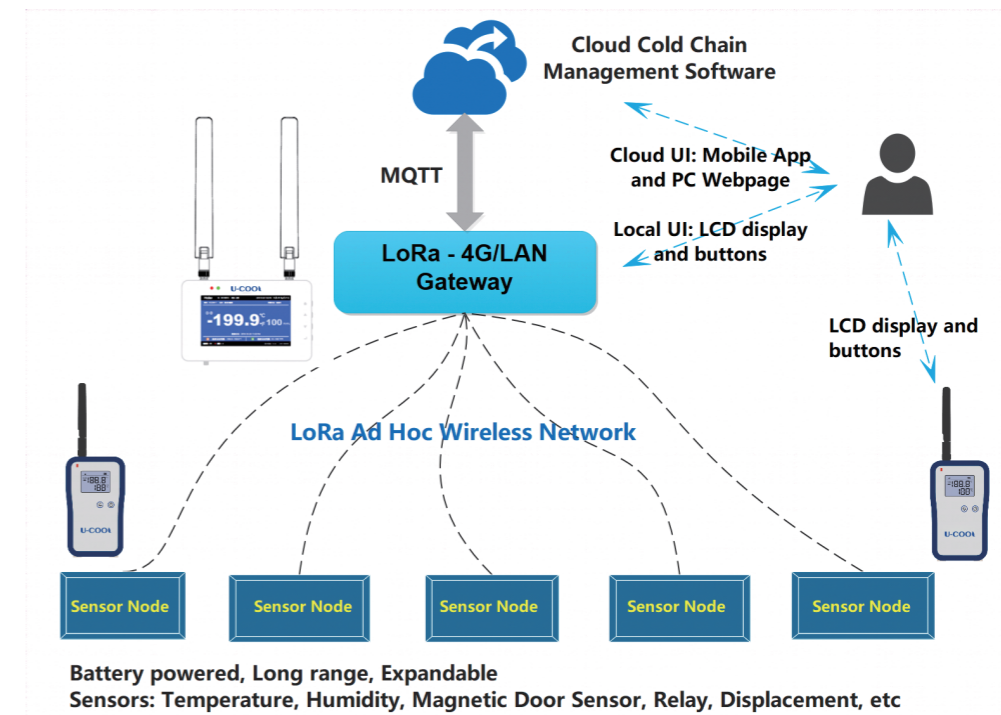
U-COOL-LoRa



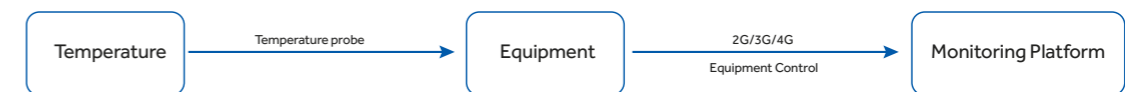
U-COOL Pro

## Fundamental Functions

- Remote monitoring function: Users can remotely monitor data through the Web terminal and APP
- Power failure detection function: the information is uploaded to platform with external power failure detection probe (LORa)
- Door opening and closing detection: the information is uploaded to the platform through 2G/3G/4G network (U-COOL Pro and LoRa)
- Real-time temperature monitoring: the information is uploaded to the platform in real-time through 2G/3G/4G network with the external temperature sensor
- Alarms: Supporting two alarm modes: buzzer and LED flashing
- Remote alarms: supporting SMS, voice and email alarms
- Data export: local storage of 60,000 pieces of exportable data in PDF
- Positioning function: LBS positioning, through 2G/3G/4G network upload monitoring platform



LoRa system schematic diagram



Schematic Diagram of U-COOL and U-COOL Pro



Haier Biomedical Global Equipment Monitoring System

## Specifications



Model	U-COOL	U-COOL Pro
Temperature Sensor	Internal temperature/humidity sensor: 1 External temperature sensor: 1	External temperature sensor: 2 External door status sensor: 1
Measurement Items	Ambient temperature/humidity, cold chain equipment temperature	Cold chain equipment temperature, door status
Measurement Unit	°C, %RH	°C
External Probe	NTC	NTC
	PT100 (optional)	PT100 (optional)
Temperature Range	NTC: -40°C~+65°C PT100: -200°C~+150°C	
Accuracy	NTC: ±0.5°C within 0°C to +65°C, ±1°C within -40°C to +0°C PT100: ±0.3°C	
Resolution Ratio	0.1°C	0.1°C
Storage Capacity	60000 sets	60000 sets
Acquisition Frequency	600s (Adjustable)	600s (Adjustable)
Upload Frequency	600s (Adjustable)	600s (Adjustable)
Local Alarm	Sound buzzer alarm and light flashing alarm (off by default, openable)	
Remote Alarm	Support global SMS, telephone dialing and email alarm (user configurable)	
SIM Card	Global roaming card (Standard) / local SIM card (optional)	Global roaming card (Standard) / local SIM card (optional)
Communication Net Work Mode	2G/3G/4G	2G/3G/4G
Ambient Temperature	-10°C~+55°C	-10°C~+55°C
Power Supply Optional Solar Panel	Built-in rechargeable battery, power adapter DC220V, 50HZ	
Standby Time	Support charge and discharge 300 times, single charge standby ≥10 days (Normal signal, acquisition frequency 10min/ time)	Support charge and discharge 300 times, single charge standby ≥10 days (Normal signal, acquisition frequency 10min/ time)
IP	IP66	IP64
Exterior Dimension	114.5*71.5*22mm	112mm*75mm*21mm
Shell Material	Shell: PA66 plus 30% fiber; Shell sleeve: ABS	Shell: PC
Weight	400g	380g
Warranty	3 years	3 years

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

## Specifications



Model	U-COOL-LoRa: Gateway	U-COOL-LoRa: Temperature Data Logger
Temperature Sensor	/	External sensor: 1
Measurement Items	/	Temperature
External Probe	/	Digital, PT100 (optional)
Temperature Range	/	Digital: -40°C~+80°C PT100: -199°C~+199°C
Accuracy	/	0.5°C
Resolution Ratio	/	0.1°C
Storage Capacity	60000 sets	60000 sets
Acquisition Frequency	600s (Adjustable)	600s (Adjustable)
Upload Frequency	600s (Adjustable)	600s (Adjustable)
Local Alarm	Sound buzzer alarm and light flashing alarm	Sound buzzer alarm and light flashing alarm (off by default, openable)
Remote Alarm	Support global SMS, telephone dialing and email alarm (user configurable)	/
SIM Card	Global roaming card (Standard) / local SIM card (optional)	/
Communication Net Work Mode	4G/LoRa (Inside the system)	LoRa (Inside the system)
Ambient Temperature	-10°C~+55°C	-10°C~+55°C
Power Supply	Built-in rechargeable battery, power adapter DC220V, 50HZ	Two non-rechargeable batteries, 3.6V
Standby Time	Single charge standby ≥48h	3 years (Normal signal, acquisition frequency 10min/ time)
IP	IP50	IP65
Exterior Dimension	160*100*33mm	125mm*73mm*23mm
Shell Material	Aluminum shell +PC panel	ABS
Weight	640g	150g
Warranty	3 years	3 years

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## Specifications

Model	U-COOL-LoRa: Door On-off Logger	U-COOL-LoRa: Power Outage Logger
Temperature Sensor	External door status sensor: 1	External power outage sensor: 1
Measurement Items	Door on-off status	Power
External Probe	Door on-off status	Power
Temperature Range	On/off	On/off
Accuracy	/	/
Resolution Ratio	/	/
Storage Capacity	60000 sets	60000 sets
Acquisition Frequency	600s (Adjustable)	600s (Adjustable)
Upload Frequency	600s (Adjustable)	600s (Adjustable)
Local Alarm	Sound buzzer alarm and light flashing alarm (off by default, openable)	
Remote Alarm	/	/
SIM Card	/	/
Communication Net Work Mode	LoRa (Inside the system)	LoRa (Inside the system)
Ambient Temperature	-10°C~+55°C	-10°C~+55°C
Power Supply	Two non-rechargeable batteries, 3.6V	Two non-rechargeable batteries, 3.6V
Standby Time	3 years (Normal signal, acquisition frequency 10min/ time)	3 years (Normal signal, acquisition frequency 10min/ time)
IP	IP65	IP65
Exterior Dimension	125mm*73mm*23mm	125mm*73mm*23mm
Shell Material	ABS	ABS
Weight	150g	150g
Warranty	3 years	3 years

## Specifications



Product	Alarm light	
Model	YB-HC600-04	
Description	Based on LoRa 433Mhz communication	
Installation	Screw fixation, wall mounting	
Communication	LoRa 433Mhz	
Power Supply	12V2A, 5.5x2.1 round port power adapter, European standard	
Working Current	200mA	
Volume	>105dB	
Lampshade Color	Red	
Alarm Mode	Sound buzzer alarm and light flashing alarm	
Alarm Type	Sensor data, power, failure, etc	
Continuous Alarm Time	>1 hour	
Structure	Shell Material	ABS
	External Dimensions	200*110*175mm
	Weight	265g
IP	IP54	
Storage and Operating Conditions	Storage condition: -40°C ~ +70°C, <80% RH Operating condition: -30°C ~ +60°C	

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## Optional Accessories

## PLM-6 Solar Panel

This product is suitable for daily charging of Haier Biomedical RTMD equipment such as Ucool and Ucool pro using solar modules. It is recommended to be used in remote and sunny areas and areas with power shortage.

## Product Features:

In order to overcome the situation of long-term power loss, battery damage, inability to charge and equipment failure caused by long-term unmanned management after power failure of equipment in remote areas, solar panels are the best choice.

## Product Advantages

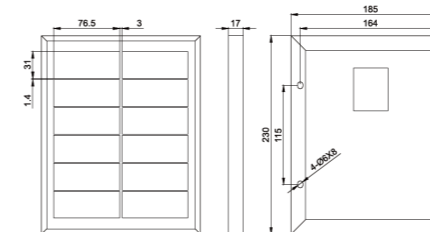
➤ Adopt high-efficiency PERC solar cells

High conversion efficiency/Low decay rate/Low temperature coefficient.

➤ User Friendly Design

With an integrated adjustable bracket, the inclination angle can be adjusted from 0 to 60°, which is suitable for variety of different installation environments.

## Product Dimensions



## Product Pictures



The front view of the component

Back of component

Component expansion

## Configuration List

Name	Specification	Unit	Quantity	Remark
Monocrystalline Silicon Solar Photo Voltaic Panels	6w	Piece	1	201 stainless steel, with non-slip gasket at the connection
Adjustable Stand	/	Set	1	
Wire	AVVR2*0.3mm <sup>2</sup>	Meter	15	
Nail Line Card	5mm	One	10	
Bulge	6*30	Set	2	

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30 Days Electronic Temperature Logger

- Approved by WHO, PQS Approved, PQS code:E006/042.
- Designed specifically for 2-8°C vaccine storage, equipped with high/low temperature visual alarm, meets WHO standards.
- Recording capacity is over 30days, recording interval is 6 minutes, outdated data will be overwritten by new data automatically when the recording volume is full.
- The logger can be plugged into the USB port of any PC to automatically generate a CSV file, including temperature data and temperature graph which can be generated by data management software.
- Built-in disposable wide temperature range lithium battery (Non-replaceable) with a minimum operating life of two years, after a maximum shelf life of one year.



HETL-01



Easy to download data



Accessory: Bracket

Specifications

Model	HETL-01
Temperature Range(°C)	-20~+50
Main Material	ABS (Transparent Shield: PC)
Data Interface	USB Interface
Display Medium	LCD
Resolution	0.1°C
Accuracy	±0.5°C for -20°C~+40°C ±1°C for the others
Recording Volume	8192 Data Points(34 days)
Logging Interval	6 min
Power Source	Non-Replaceable Battery
Size (L*D)(mm)	131*24
Service Life	2 years

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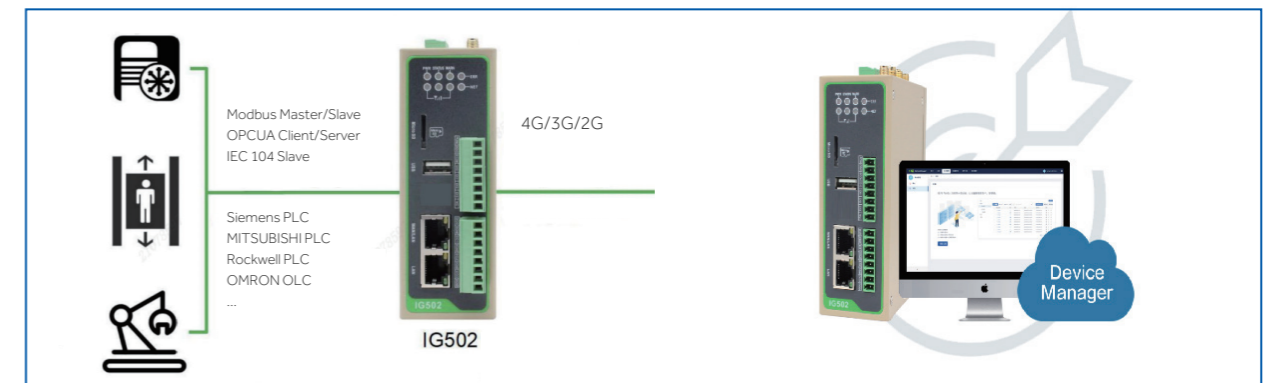
IoT Gateway

Making it easy to collect data from different onsite devices, validate data and upload them to the cloud, so as to realize the remote monitoring function. Applicable for the monitoring of the stored items in the Ultra-low temperature refrigerator, Liquid nitrogen containers, Solar power supply system, Oxygen station, cold room and liquid nitrogen containers in hospitals, in disease control centers, blood stations, laboratories, warehouses, pharmacies and machine rooms.



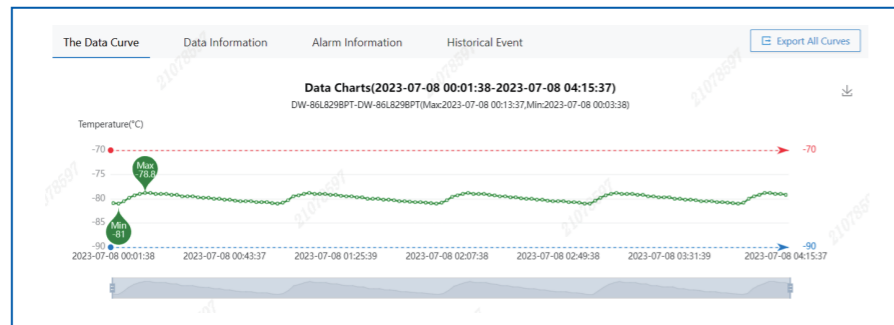
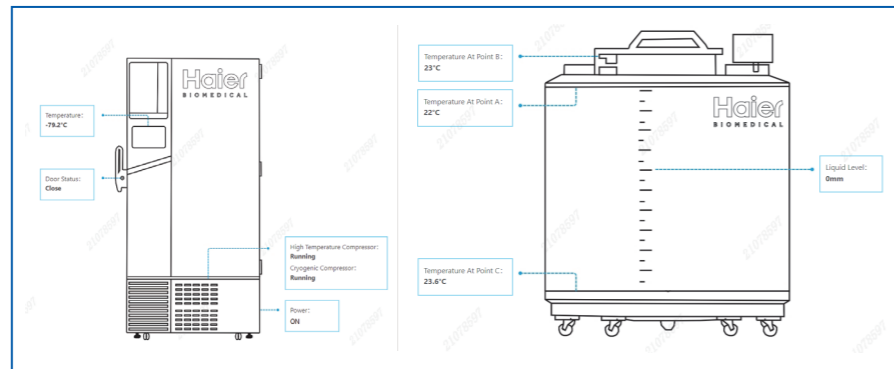
Product Advantages

- Easy configuration, little IT knowledge required, plug and play**
- Uninterrupted and highly reliable connectivity** throughing 2G/3G/4G network upload monitoring platform.
- Easy for Remote Management** Through remote monitoring and centralized management, you can easily track your devices and enjoy better efficiency for massive deployment and preventive maintenance.
- Purposely Designed for Industrial Scenarios** EMC level 3, IP30 protection rating, and wide temperature and voltage ranges make it enduring in challenging environments.

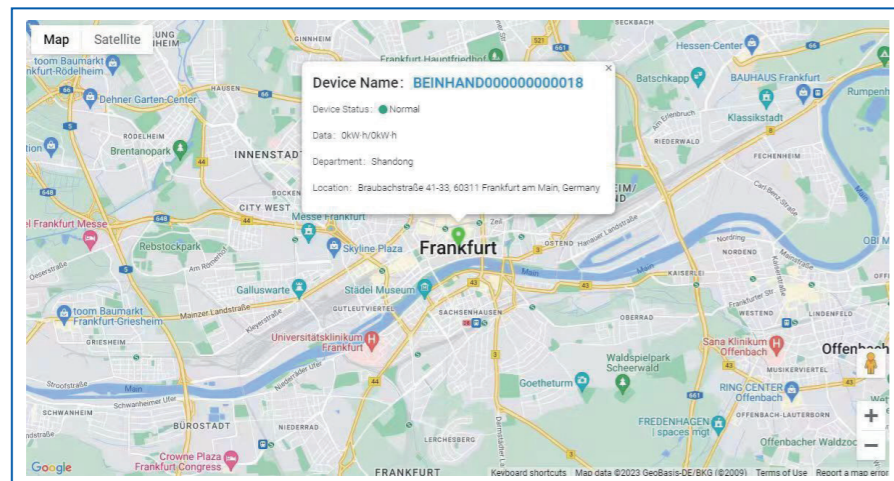


### Equipment Management

User can monitor data in real time  
(Ultra-low temperature refrigerator, Liquid nitrogen tank, etc)



### Map Display



### Hardware Specifications

Model	IG502	
Hardware Platform	CPU	ARM Cortex-A8
	Memory Capacity	512MB
	FLASH	8GB eMMC
Port	Ethernet Port	2*10/100Mbps fast Ethernet port, 1*WAN+1*LAN or 2*LAN
	Serial Port (optional)	RS485*1, RS232*1 or RS485*2
	Wi-Fi (optional)	2.4G (802.11/b/g/n)
	GPS (optional)	GPS, SMAx1
	USB	USB2.0x1
	IO Port (optional)	4*DI, 4*DO
	Reset Key	Pinhole reset button
	TF	Support MicroSD
	Bluetooth (optional)	BLE4.0
	Mechanical Features	Installation Methods
Cooling Type		Fan-free cooling
Shell		Metal shell
Power Supply	IP Grade	IP30
	Power Input	DC12-48V, Anti-reverse protection
	Standby Power Loss	200mA@12V
	Peak Power	500mA@12V
	Power Port	CLIPLINE
Environment	Working Power Consumption	250mA@12V
	Working Temperature	-20-70°C
	Environment Humidity	5-95% (Frost-free)
Indicator Light	Storage Temperature	-40-85°C
	LED	PWR, STATUS, WARN, ERR, Signal strength indicator lamps (3), LTE
EMC	Static Electricity	EN61000-4-2, level3
	Radiation Electric Field	EN61000-4-3, level3
	Pulsed Electric Field	EN61000-4-4, level3
	Surge	EN61000-4-5, level3
	Conducted Emission	EN61000-4-6, level3
	PFMF	EN61000-4-8, Horizontal direction/vertical direction 400A/m (>level3)
Physical Characteristics	Oscillation Wave Immunity	EN61000-4-12, level3
	Quakeproof	IEC60068-2-27
	Drop	IEC60068-2-32
Others	Vibration	IEC60068-2-6
	Authentication Certificate	CE/UKCA/FCC/PTCRB/UL/C1D2 (Class 1 Division 2)/ VerizonWireless/AT&T/IC/RCM/NBTC/ANATEL

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## Voltage Stabilizer

### Software Specifications

Model	IG502	
Operating System	Operating System	Customized Linux
Network Interconnection	Network Access	APN/VPDN
	Access Authentication	CHAP/PAP/MS-CHAP/MS-CHAPV2
	Network Standard	5G SA/NSA/LTECat4/LTECat1
	LAN Protocol	ARP/Ethernet
	WAN Protocol	Support static IP/DHCP
Network Protocol	IP Application	ICMP/DNS/TCP/UDP/TCPserver/DHCP
	IP Routing	Support static routing
Network Security	Multilevel User	Support multi-level administrative permissions
	Data Security	Support OpenVPN, support IPsecVPN
Reliability	Backup Function	Support dual SIM cards
	Link Online Detection	Heartbeat packet detection is sent, and the disconnection is automatically reconnected.
	Embedded Watchdog	Self-inspection technology of equipment operation, self-repair of equipment operation failure
Open Platform	Open Platform	Support Python development platform
	Access Cloud Platform	Support cloud platforms such as AWS, Azure and Ali
Protocol Type	Protocol Type	Modbus/slave, Modbus/master, EtherNet/IP, ISOonTCP, OPCUAClient/Server, MitsubishiMC 3C/3E/3COverTCP, MitsubishiCPUPort, FINSUDP, HostLink, PPI, DLT645-2007, IEC104Server and other protocols.
Maintenance Management	Collocation Method	Configuration of Web interface
	Configure Backup	Support the import and export of configuration files
	Upgrade Mode	Support proprietary upgrade mechanism, and upgrade firmware locally or remotely.
	Log Function	Support local system logs and remote logs, and save important logs in case of power failure.
	Remote Administration	Support InHand Device Manager network management cloud platform, InConnet platform and iSCADA cloud platform; HTTPS, Telnet, SSH, etc.

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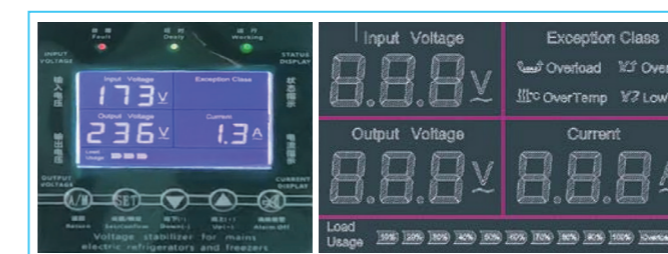
The HVS-1000U voltage stabilizer is developed, designed and manufactured according to the latest PQS standards. The product consists of single-phase multi-tap dry type transformer, relay integrated board, single-chip intelligent detection board and supporting display, external protection and control circuit. The voltage stabilizer central control system adopts single-chip intelligent control, which highlights the safety, reliability and stability of the voltage stabilizer under bad power supply conditions. With intelligent control, high safety, high reliability and other significant advantages! IoT modules can be selected to remotely view the power supply and power quality analysis, and achieve remote alarm of abnormal situations.



HVS-1000U

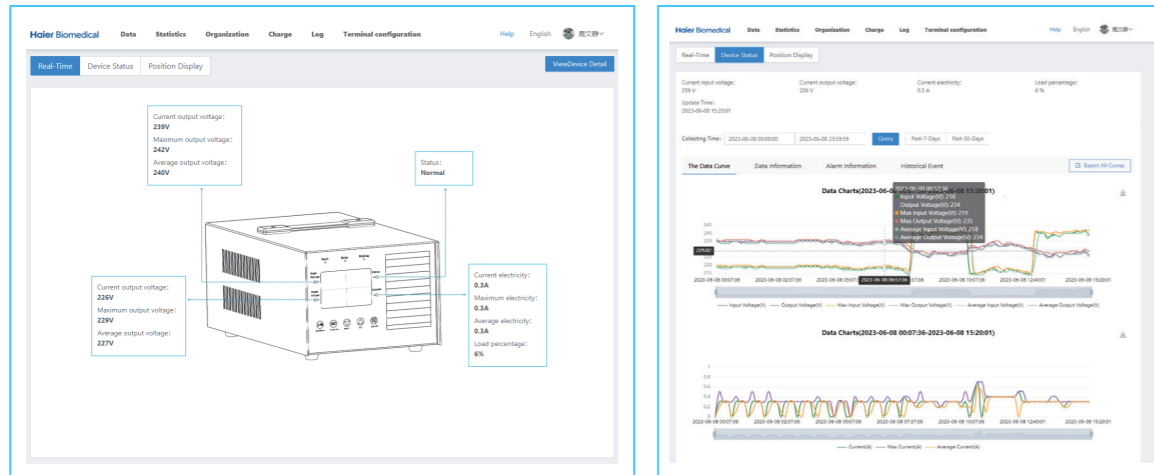
### Fundamental Functions

- Requires no maintenance
- Microprocessor controlled stabiliser
- Very wide input withstand range (0-500V)
- Meet the latest WHO/PQS standards (VS01.6)
- With LCD screen, display input/output/working status information
- Zero current changeover
- Fault record/protection record, can be viewed locally
- Frequency real-time detection, out of range protection
- Record the number of relay actions, which can be viewed locally
- The IoT function is optional to remotely view and analyze power supply information
- The product integrates a microcontroller-based intelligent detection board and a display, and the operation panel has been equipped with parameter setting buttons so that users or technicians can modify the working parameters of the voltage stabilizer.
- Alarm and protection records can be viewed through the screen



### Equipment Management

IoT modules can be selected to remotely view the power supply and power quality analysis, and achieve remote alarm of abnormal situations.



### Specifications

Model	HVS-1000U
Output Voltage Range (V)	230 ±10%
Input Voltage Range (V)	110-264 AC
Continuous Input Withstand Range (V)	0-500 AC
Input Frequency (Hz)	47-63
Display	Output Voltage/Input Voltage/Current Value/Alarm State
Protection Function	Overvoltage, overcurrent, undervoltage, overload, over frequency, under frequenc; Short circuit, high temperature
Packing Dimension (W*D*H)(mm)	450*370*300
Gross Weight (kg)	11

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### Refrigerated Vaccine Vehicle

This product is suitable for cold chain transportation of drugs, vaccines, biological products, medical raw materials, fresh food and other products with strict requirements on temperature control.

- Firm structure, suitable for complex road conditions
- Low fuel consumption, high horsepower and low transportation cost
- Strong after-sales service capability, after-sales network all over the world
- Complies with WHO PQS Specification E002/RV01.2
- Double drive refrigeration system, can be powered by diesel generator or 220V AC
- Safe and reliable
- +2°C~+8°C accurate temperature control, high uniformity
- Thickened insulation layer, excellent insulation performance
- International brand refrigeration machine, high quality, strong performance



### Specifications

Model	VR-23	VR-3	
Refrigerated Vehicle	Combustion types	Diesel	Diesel
	Engine emission	EURO VI (EURO V/ EURO IV/ EURO III is optional)	EURO VI (EURO V/ EURO IV is optional)
	Steering wheel position	Left hand (Right hand is optional)	
	Transmission	4*2	4*4
	Gearbox	Manual	Manual
	Seats	3	2+3
	Color	White	White
	Cabin air condition	Air condition + Heating	Air condition + Heating
	Gross volume (m³)	5m³-25m³	2m³-5m³
	Customized mutple capacities based on users' specific requirements	/	
Refrigerated Body	Standard configuration	Dual rear door	Rear door
		LED lighting	LED lighting
		PVC curtain	PVC curtain
		Foldable ladder	/
		Side door	/
Optional	Lifting gear	/	
	Shelves	Shelves	
	Air supply system	/	
Refrigeration Unit	Brand	Carrier (Thermo King or other Chinese brands is optional)	
	Temperature range	+2°C~+8°C	
	Refrigerant	R452A or R404A	
	Climate zone	Hot zone: 0°C~+50°C	
		Cold zone: -20°C~+32°C	
Others	The refrigeration unit with 220V~240V stand-by power device and heating device	/	
Temperature Monitoring and Control Device	Temperature monitoring range	+2°C~+8°C	
	Data recording frequency	5 min	
	Sensor type	Wireless transmission (Wire transmission is optional)	
	Alarm type	Voice alarm	

Temperatures can be recorded electronically, downloaded and printed

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



## Freeze-free Vaccine Carrier

Cold boxes, vaccine carriers and coolant packs are used for keeping vaccines cold during transportation. They are suitable for use by health workers during immunization campaigns and out-reach services. As these are passive devices, coolant packs are used as accessories for both cold boxes and vaccine carriers to provide the cooling capacity for a limited time period.

## Features

## Preventing Freezing

Preventing vaccine freezing.

## Reducing the Burden

Reducing training burden (in the long term).

## Freeze Free

Simplifying the use preparation of frozen ice packs.



## Specifications

Model	WP-0.6L
WHO Product ID (L)	FFVC-1.7
Vaccine Storage Capacity (L)	1.7
Weight Fully Loaded (kg)	6.6
Weight Empty (kg)	4
External Dimensions	308*308*300
Internal Dimensions	94*94*190
Coolant Packs Number	4
Coolant Packs Supplied	YES
Warm Life at -20°C *(hrs: mn)	12h54mins
Cold Life at +43°C *(hrs: mn)	34h
External Materials	POLYETHYLENE
Internal Lining Materials	PP
Insulation Materials	CFC FREE POLYURETHANE (PU)
Insulation Thickness (mm)	≥40
Container Type	Insulated containers
Lid Type	Removable
Type	Water-packs
Pieces per Package	1
Package Size (mm)	330*330*370
Shipping Weight (kg)	6
Shipping Volume (m <sup>3</sup> )	0.04
Storage Volume (L)	1.7
Quality Standard	ISO9001: 2015-, ISO14001: 2015-, ISO45001: 2018-, ISO13485: 2016

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## Intelligent Control Cold Chain Transport Cooler

## Temperature Range: -25~-10 / 2-8/15-25°C

## Light weight, easy to carry

•Light product with ergonomic design is easy to carry.

## Check the insulation status at any time

•Real-time upload setting parameters, operation parameters, operation curve, alarm record and event record. Monitor the operation of the transport cooler through the UCool system to visualize the complete process and traceability of information.

## Stable performance, long service life

•The product adopts VIP insulation technology which has an insulation performance of 5-8 times that of polyurethane foam, and significant extended time temperature control that handles the changing transportation conditions and environment; It has long service life by adopting nanometer core material.



## Specifications

Model	BW25-8A	BW25-12A	BW50-12A	BW25-18A	BW25-36A	BW50-36A	BW25-64A
Temperature Range (°C)	-25~-15/2-8/ 15-25/-90~-60	-25~-15/2-8/ 15-25/-90~-60	-25~-15/2-8/ 15-25/-90~-60	-25~-15/2-8/ 15-25/-90~-60	-25~-15/2-8/ 15-25/-90~-60	-25~-15/2-8/ 15-25/-90~-60	-25~-15/2-8/ 15-25/-90~-60
Exterior Dimensions (W*D*H)(mm)	455*295*295	410*345*355	470*400*410	510*350*355	515*450*460	575*510*510	590*525*525
Packing Dimensions (W*D*H)(mm)	546*381*389	504*436*444	560*492*500	607*439*447	609*541*549	665*597*605	679*611*619
Interior Net Dimensions (W*D*H)(mm)	310*215*215	270*270*270	270*270*270	370*270*270	370*370*370	370*370*370	440*440*440
Payload Size (with ice pack)(mm)	270*175*175 (8L)	230*230*230 (12L)	230*230*230 (12L)	330*230*230 (18L)	330*330*330 (36L)	330*330*330 (36L)	400*400*400 (64L)
Net Weight (kg)	4	4.8	9.8	5.6	8.2	16.4	11
Gross Weight (kg)	6	6.8	12.5	8.2	11.2	20	14.8
Recorder Monitoring	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Heat Insulating Material	VIP	VIP	VIP	VIP	VIP	VIP	VIP
Insulation Thickness (mm)	25	25	50	25	25	50	25
Daily Consumption of Dry Ice (kg)	1.5	1.6	0.75	1.85	2.5	1.5	2.7
Safety Margin (kg)	1	1	1	1	2	2	2

Note: The safety margin is the minimum amount of dry ice required to keep the temperature in the box not higher than -70°C.

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## Temperature Range -20~22°C

### Multiple Power Supply

- Supports AC and DC power.

### DC Frequency Conversion Technology

- DC frequency conversion compressor, superior energy efficiency.

### Tilt Protection Function

- Electronic gyroscope in board, effective protection for compressors.

### Integrated Main Body

- Rotational molding body better adapted to complex transport environments.

### Unique Designs

- Optional: Casters to facilitate transport
- Forced air cooling method, the temperature is more uniform
- Optional: Electromagnetic lock, with password lock equipped; more secure
- Using environmental LBA CFC-free foaming materials, thermal insulation performance is increased by up to 5%.
- The body and door use integrated rotomolding
- The body is equipped with a handle for easy carry
- Built-in UVC ultraviolet lamp for regular disinfection
- 3 in 1 wide temperature range , multiple functions within one unit, greater cost savings



### Specifications

Model	HZY-40Z
Exterior Dimension (W*D*H)(mm)	800*550*505
Interior Dimension (W*D*H)(mm)	338*348*285
Capacity (L)	33
Door	Rotational moulding integrated forming foam door
Foam Materials	LBA
Compressor	DC variable frequency compressor
Basket Load Bearing (kg)	≤35
Working Mode	Forced air cooling and heating
Outer Shell/Inner Liner	Rotational moulding
Condenser/Evaporator	Microchannel/Fin type
Controller	Microprocessor
Refrigerant	HFC
Light	LED 1W
UV Lamp	UVC 1W
Net Weight (kg)	42
Temperature Range (°C)	-20 to 22
Power Supply	AC 110-240V 50/60Hz DC 12/24V
Max Power (W)	90
Power Consumption (Kwh/24h)	1.5
Electro-magnetic Lock	Optional coded lock
USB	Optional

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## Moderna Vaccine Transport Solutions (-25 to -15°C)

(Size:5.5"L\*2.2"W\*2.5"H)

Model	BW25-8A	BW25-12A	BW50-12A	BW25-18A	BW25-36A	BW50-36A	BW25-64A	HZY-40Z
Refrigeration Principle	PCM	PCM	PCM	PCM	PCM	PCM	PCM	Compressor
Temperature Range (°C)	-25~-15	-25~-15	-25~-15	-25~-15	-25~-15	-25~-15	-25~-15	-20~-15
External Size (mm)	455*295*295	410*345*355	470*400*410	510*350*355	515*450*460	575*510*510	590*525*525	800*550*505
Payload Size (mm)	270*175*175	230*230*230	230*230*230	330*230*230	330*330*330	330*330*330	400*400*400	377*348*285
Gross Weight (kg)	6	6.8	12.5	8.2	11.2	20	14.8	61
Holdover Time (h)	56h	48h	120h	68h	70h	150h	86h	6h
Qty of Moderna Vaccine (CAR)	10	16	16	28	56	56	114	58
Qty of Moderna Vaccine (Vials)	100	160	160	280	560	560	1140	580
Qty of Moderna Vaccine (Doses)	1000	1600	1600	2800	5600	5600	11400	5800

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## AstraZeneca Vaccine Transport Solutions (2 to 8°C)

(Size:135mmL\*56mm"W\*60mm"H)

Model	BW25-8A	BW25-12A	BW50-12A	BW25-18A	BW25-36A	BW50-36A	BW25-64A	HZY-40Z
Refrigeration Principle	PCM	PCM	PCM	PCM	PCM	PCM	PCM	Compressor
Temperature Range (°C)	2~8	2~8	2~8	2~8	2~8	2~8	2~8	2~8
External Size (mm)	455*295*295	410*345*355	470*400*410	510*350*355	515*450*460	575*510*510	590*525*525	800*550*505
Payload Size (mm)	270*175*175	230*230*230	230*230*230	330*230*230	330*330*330	330*330*330	400*400*400	377*348*285
Gross Weight (kg)	6	6.8	12.5	8.2	11.2	20	14.8	61
Holdover Time (h)	60h	50h	130h	72h	72h	168h	96h	6h
Qty of AstraZeneca Vaccine (CAR)	10	16	16	28	56	56	114	58
Qty of AstraZeneca Vaccine (Vials)	100	160	160	280	560	560	1140	580
Qty of AstraZeneca Vaccine (Doses)	1000	1600	1600	2800	5600	5600	11400	5800

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## Chinese COVID-19 Vaccine Transport Solutions (2 to 8°C)

Model	BW25-8A	BW25-12A	BW50-12A	BW25-18A	BW25-36A	BW50-36A	BW25-64A	HZY-40Z
Refrigeration Principle	PPCM	PCM	PCM	PCM	PCM	PCM	PCM	Compressor
Temperature Range (°C)	2~8	2~8	2~8	2~8	2~8	2~8	2~8	2~8
External Size (mm)	455*295*295	410*345*355	470*400*410	510*350*355	515*450*460	575*510*510	590*525*525	800*550*505
Payload Size (mm)	270*175*175	230*230*230	230*230*230	330*230*230	330*330*330	330*330*330	400*400*400	377*348*285
Gross Weight (kg)	6	6.8	12.5	8.2	11.2	20	14.8	61
Holdover Time (h)	60h	50h	130h	72h	72h	168h	96h	6h
Qty of SinoVac Vaccine (Doses)	60	60	60	128	280	280	400	240
Qty of CNBG Vaccine (Doses)	68	110	110	154	315	315	618	240

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

## Temperature Range -80~-60°C



### Application

It is suitable for biobanks, vaccination production and transportation users.

### HC Energy Saving

• High quality HC high-efficiency compressor with optimized refrigeration system, which can save 50% on power consumption.

### Superior Uniformity

• Built-in evaporator, fast cool down refrigeration, the temperature is safe, secure and reliable with the uniformity of  $\pm 3^{\circ}\text{C}$  at key characteristic points.

### Safety Lock Catch

• Simple adjustable mechanical lock with lock catch, and it can be equipped with an external lock to guarantee the safety of sample transportation and storage.

### One Unit for Multiple Applications

• Vehicle-mounted transportation with 24V (DC) power supply  
• Long-term storage with 220V power supply.

### Metal Handle

• Hidden metal handle, stylish and comfortable, safe and durable, easy to carry.

### Lightweight

• The whole unit weighs 27kg, easy to carry.

### Superior Insulation Performance

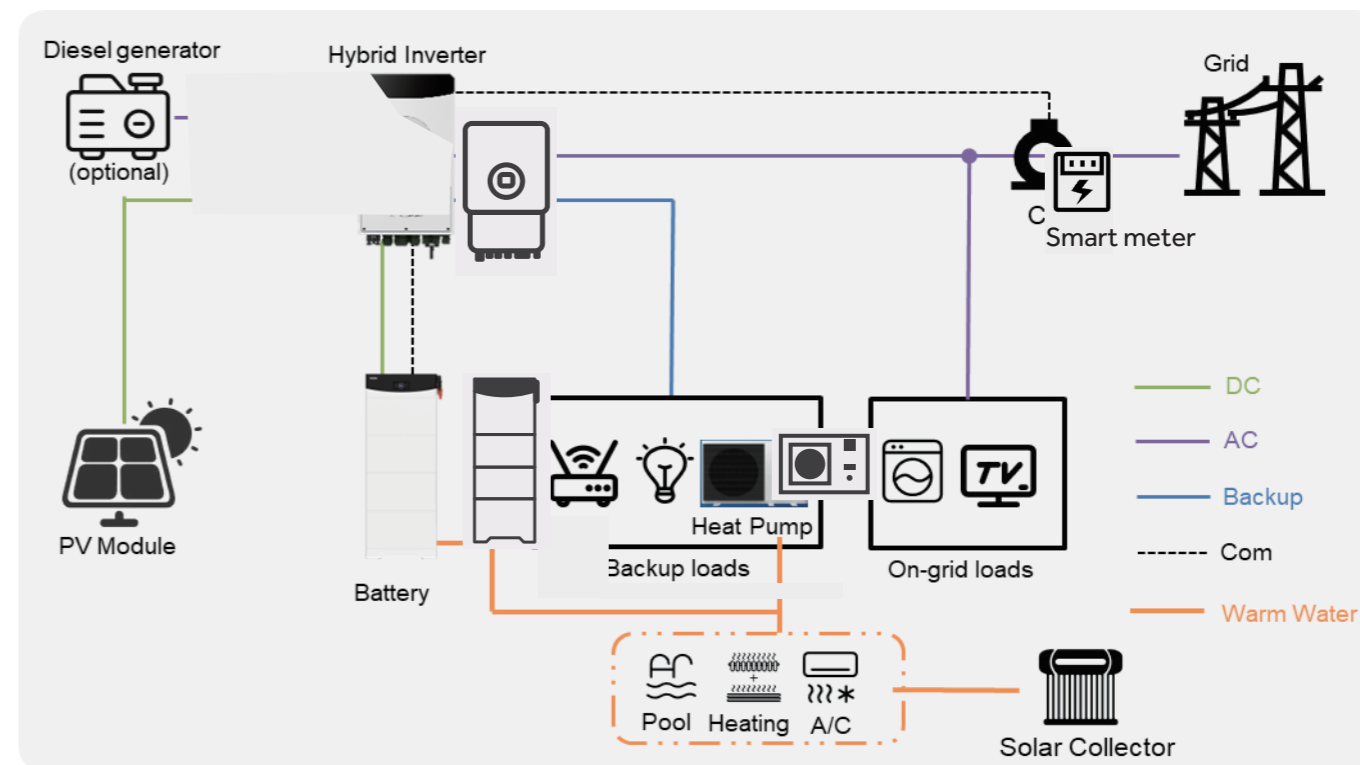
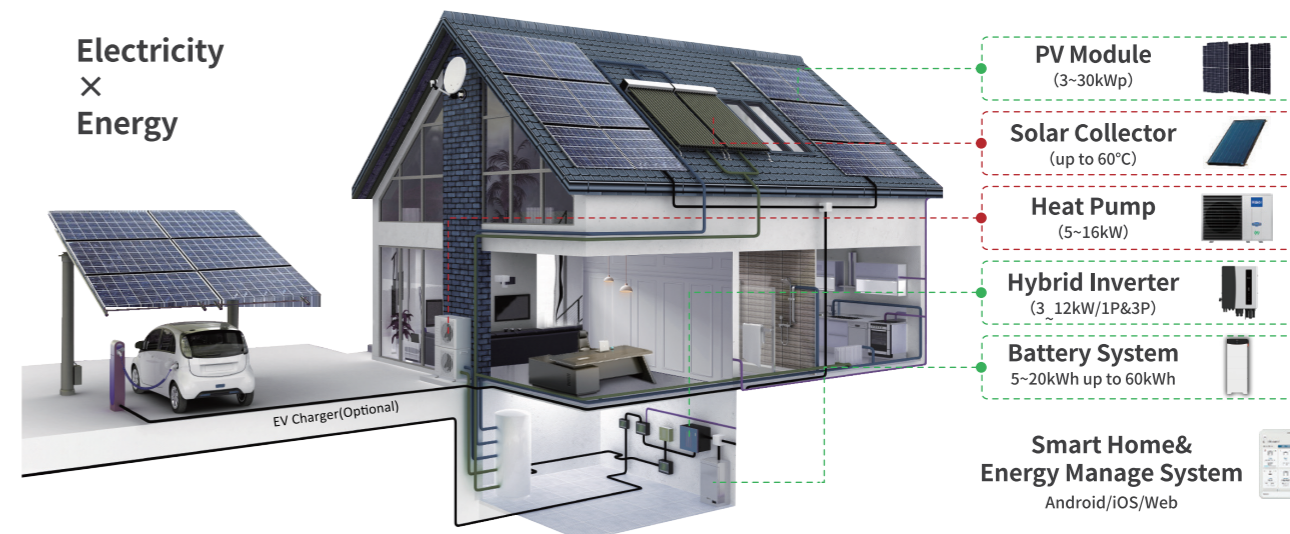
• 25mm VIP + 70mm thick LBA foam insulation layer design, dual seal strips for better insulation.

## Specifications

Model	DW-80WZ15
Power Supply (V/Hz)	220V/50Hz, 110V/60Hz, DC24
Temp Range (°C)	-80~-60
Exterior Dimensions (W*D*H)(mm)	690*320*500
Interior Dimensions (W*D*H)(mm)	260*180*330
Effective Capacity (L)	15
Net/Gross Weight (kg)	27/33

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

## Smart Energy Management System



- Extreme Safety**  
Batteries active and passive safety design
- Lower Cost**  
Higher efficiency of RESS and heat pump
- Easy To Install**  
Modular wiring-free design, 1 person installation
- Wide Range Operation**  
Full power operation down to -30°C
- UPS Level Switch**  
Automatic on/off grid switching time 4ms
- Multi Inputs**  
Grid/PV/Diesel GEN Standard
- Flexible Parallel**  
Flexible Inverter & Batteries parallel
- One-Stop Service**  
All new/Retrofit one-stop Service

# Milestones & Awards

