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# Blood Bank Refrigerator Solutions



# Automated Blood Management Network

IoT Management; Bedside Blood Usage; Immediate Access on Demand.



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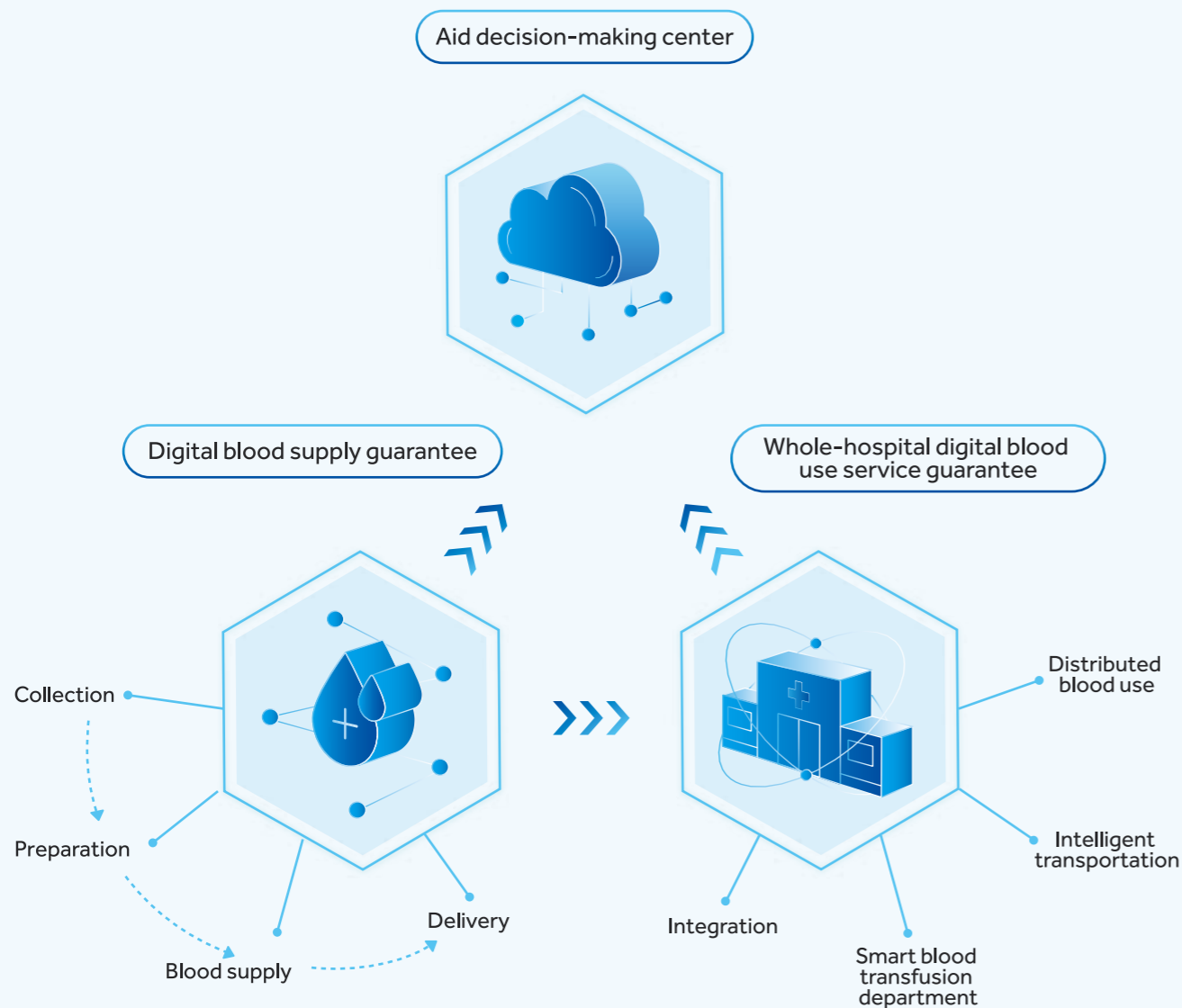
## Blood Network Introduction

The Haier Biomedical Blood Network aims to create a complete set of digital blood safety solutions and a new blood management model through the integration of devices, a big data platform, and services, thereby achieving more reasonable and efficient blood management and allocation.

Based on the IoT hardware architecture of the digital blood collection and supply scenario and the hospital blood transfusion department scenario, it strives to build an aid decision-making platform to enable the quality control and emergency scheduling of blood and the blood collection based on supply, etc., and create a smart brain of blood management for docking with the smart management brain to contribute to the Company's vision of "making life Better".

### Digital Blood Safety Management Complete Solutions

Model: IoT equipment + big data platform+ value-added services



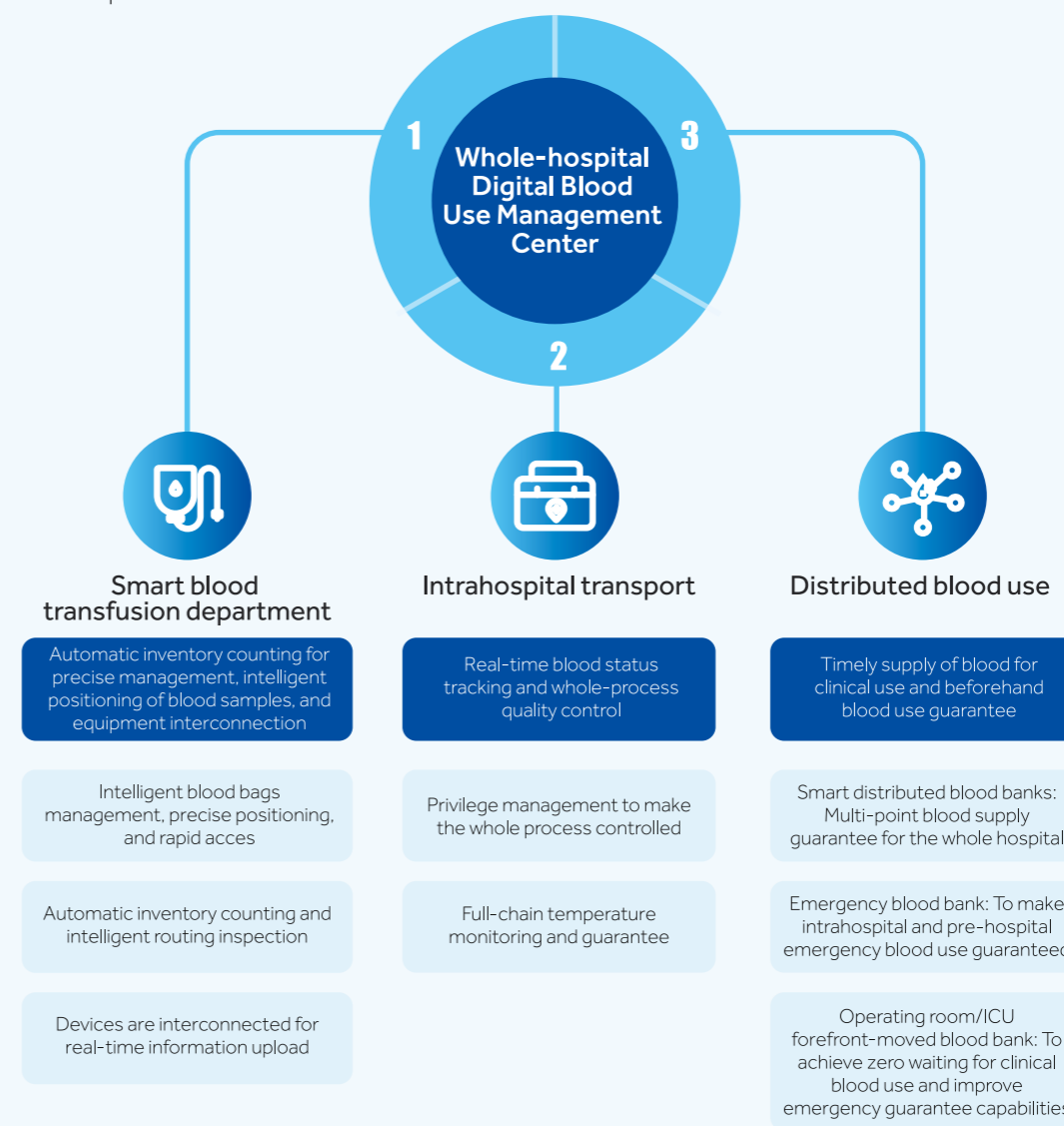
## Overview of Blood Network Scenarios

The blood network scenarios are mainly set up around three segments: Digital blood station blood collection and supply scenario, digital hospital blood use scenario, and the data integration platform based on the two digital scenarios.

### Whole-hospital Digital Blood Supply Service Platform Construction Scheme

#### Whole-hospital Digital Blood Supply Service Guarantee Platform

Based on the hospital data platform, the blood network builds a whole-hospital digital blood supply service guarantee platform to support the upgrade from centralized blood supply to distributed blood use, extend the accessibility of blood supply services, and further improve the blood supply guarantee of the whole hospital.



# Smart Blood Transfusion Department



## Platelet Management

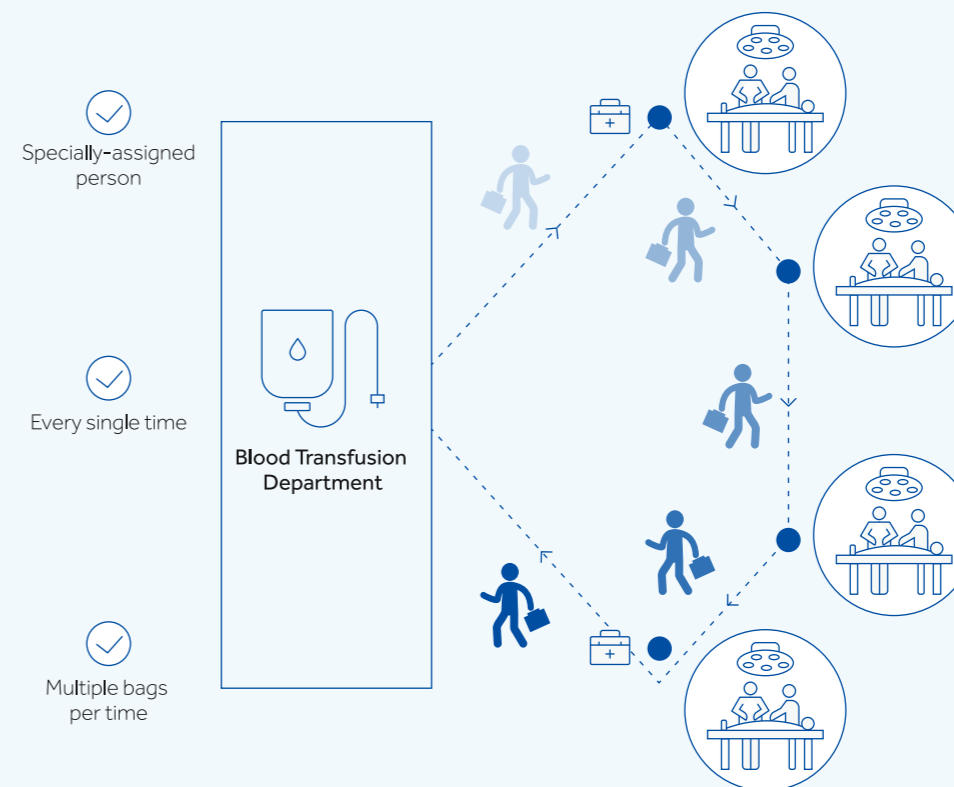


- **Precise and accurate temperature control**  
Semiconductor refrigeration and intelligent temperature control
- **Intelligent IoT and data upload**  
Real-time data information upload to facilitate traceability

## Intrahospital Transport

### Orderly Blood Distribution Mode

Number of persons required by the blood distribution window=0  
 Full-time blood delivery personnel\*(1-2)  
 Special blood collection box\*N



## Red Blood Cell Management



- **RFID radio frequency**  
Precise management, one-key inventory counting, and quick information query
- **All under control and whole-process information traceable**  
The blood intelligent management system makes the whole-process blood information from stock-in to stock-out controllable, queryable, and traceable

## Plasma Management



- **RFID radio frequency**  
Precise management, automatic inventory counting, and quick query
- **Whole-process cold chain monitoring for safety guarantee**  
Whole-process accurate temperature storage and tracking to ensure the safety of each bag of blood



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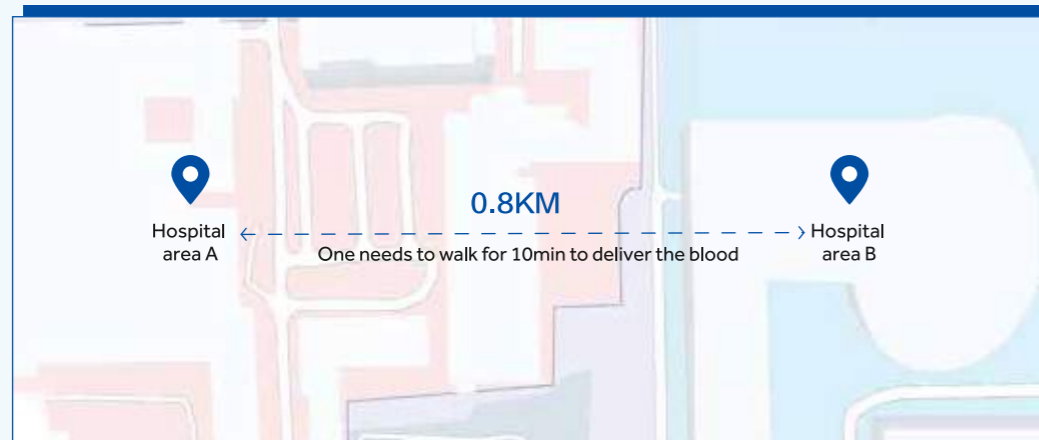
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# Distributed Blood Bank

## 1 Distributed blood use - Smart distributed blood banks



Hospital area distributed blood bank mode: Autonomous blood distribution to ensure the safety of blood use



Video Surveillance

Transfusion department handover (optional)



Confirmation By Video Call

## 2 Distributed blood use - Emergency/Operation/ICU blood use

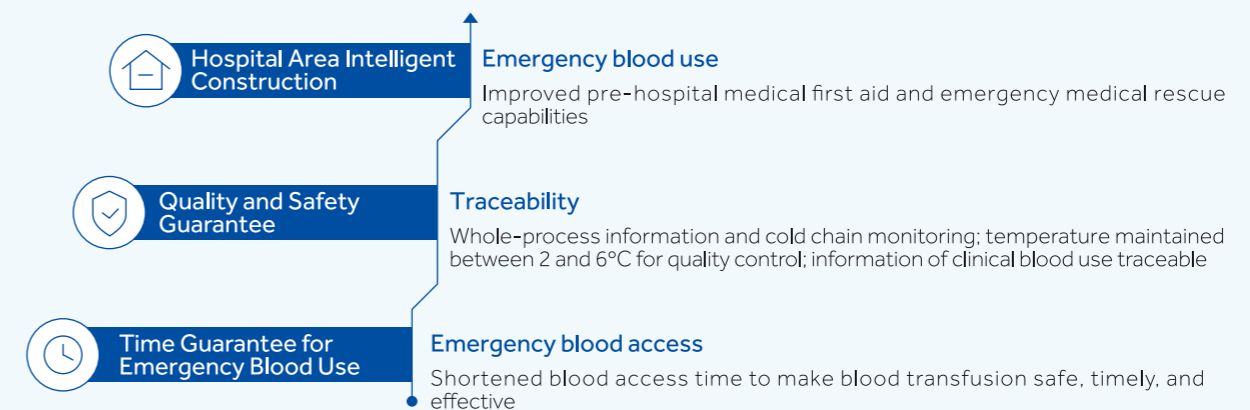


Blood storage refrigerators are placed in the clinical blood using departments, including the emergency department, operating rooms, and ICUs, and connected to the blood transfusion management system for temporary blood storage. Before infusion, the clinical staff will collect the blood by bag as needed, and the unused blood can be allocated within the hospital under the whole-process cold chain monitoring condition.

### Improving the refined management and efficiency of blood banks

The management efficiency of the blood transfusion department can be improved. The stock-in and stock-out, equipment monitoring, temperature monitoring, and personnel management of the whole blood bank are IoT-based to enable the whole-process traceability and monitoring without any need for additional labor.

### The upgrade from centralized blood supply to distributed blood use extends the accessibility of blood supply services and further improves the blood supply guarantee of the whole hospital



**Clinical Blood Use** Blood is available at the first time to make blood transfusion safe, timely, and effective

**Nursing Department** Logistics time is reduced to reduce workload while improving blood use guarantee capabilities; emergency blood use is fully guaranteed

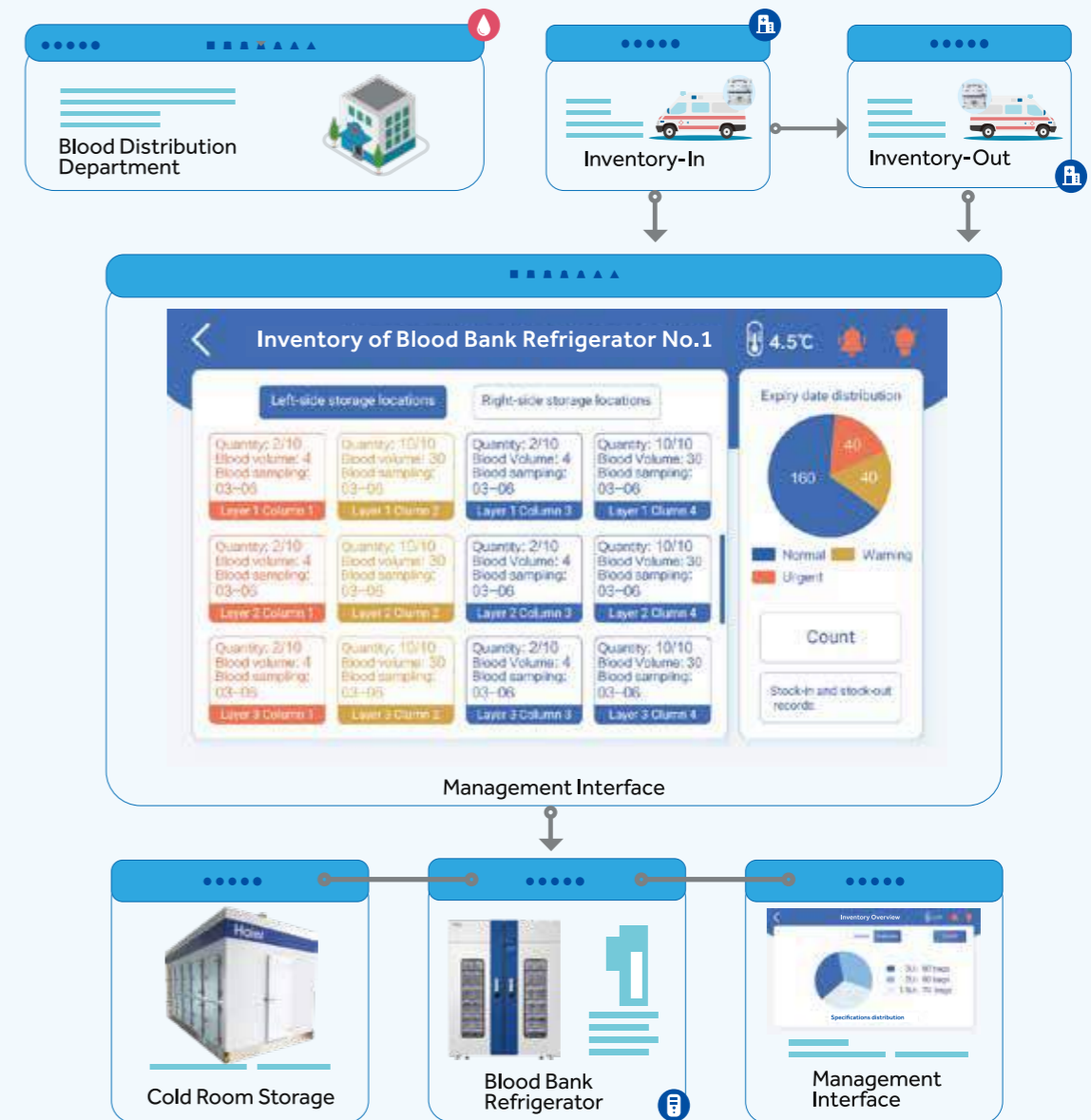
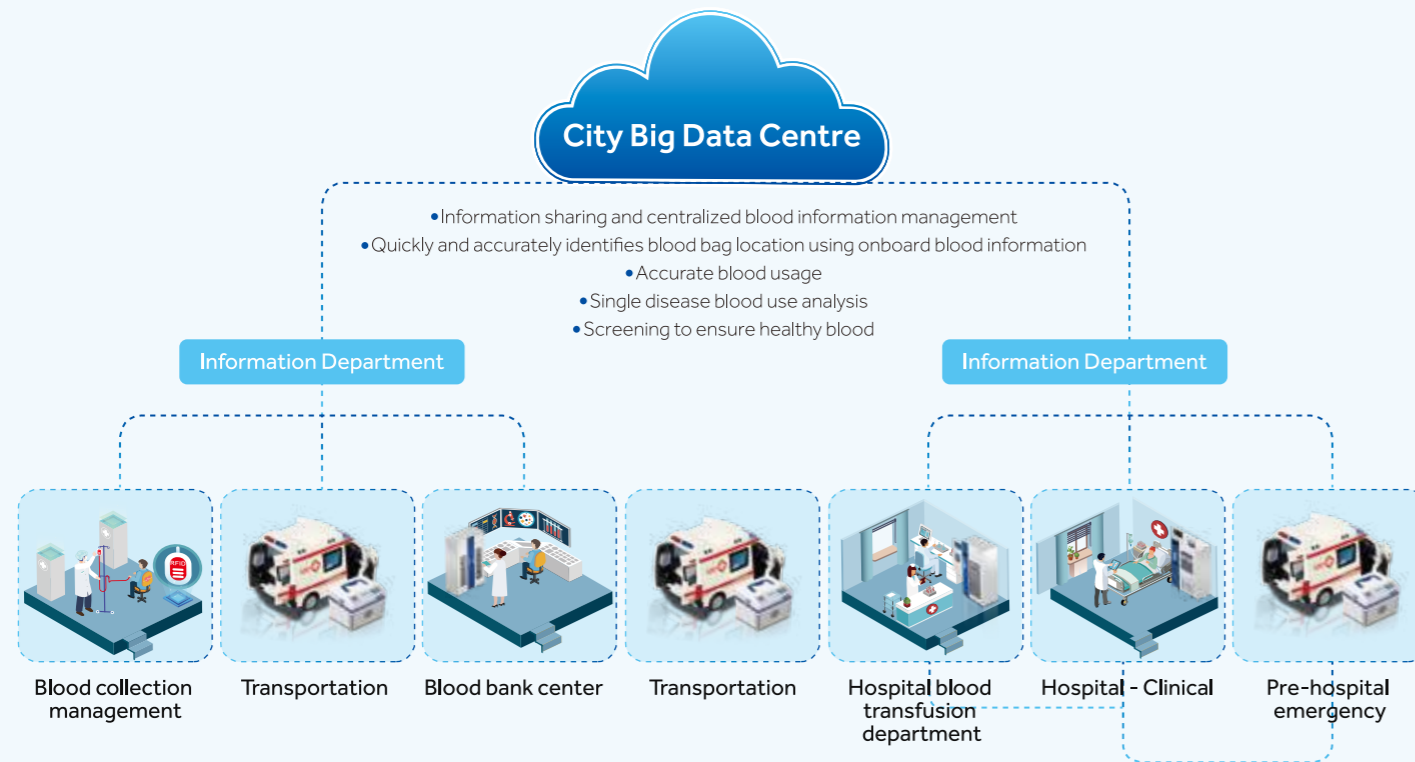
**Blood Transfusion Department** Both blood quality and patient safety are guaranteed



# Blood Network Solution

IoT Intelligent Blood Safety Management provides a unified and secure systemized platform for the entire region's blood supply. IoT is linked with the data management system and builds blood information that interconnects between a region's blood transfusion centre and/or central blood bank and the blood usage within the hospitals through establishment of a unified blood management platform. The blood use database is strengthened by the system's surveillance of the overall process from blood collection to clinical use or from vein to vein. Through the IoT Intelligent Blood Safety Management, it guarantees total blood quality and safety across the region health network.

The main aim of the scheme is to strengthen the blood information management from collection to clinical infusion, enhancing blood quality and safety. It is achieved by using an RFID read-write device, RFID detector, RFID walk-in cold room, transfer boxes and blood bank refrigerators which feed data into an IoT blood solution ecosystem. Information such as, blood products batch scanning, batch check information, quality control information, batch stock-in and stock-out, quick inventory count, accurate positioning, information statistics, cold chain storage information, transport information and blood bank product movements can be assimilated to provide a complete picture of an organization's blood management and supply network.



## Blood Station Working Solution Synopsis

By adding RFID tags to blood bags and either scanning or writing the information, this program ensures accurate positioning of blood products with the intelligent IoT information management system. Through batch verification, quality information control, batch storage accuracy, transport of blood from collection to clinical transfusion, this system enhances the blood quality and safety across the entire health network.



# Hospital Solution Summary

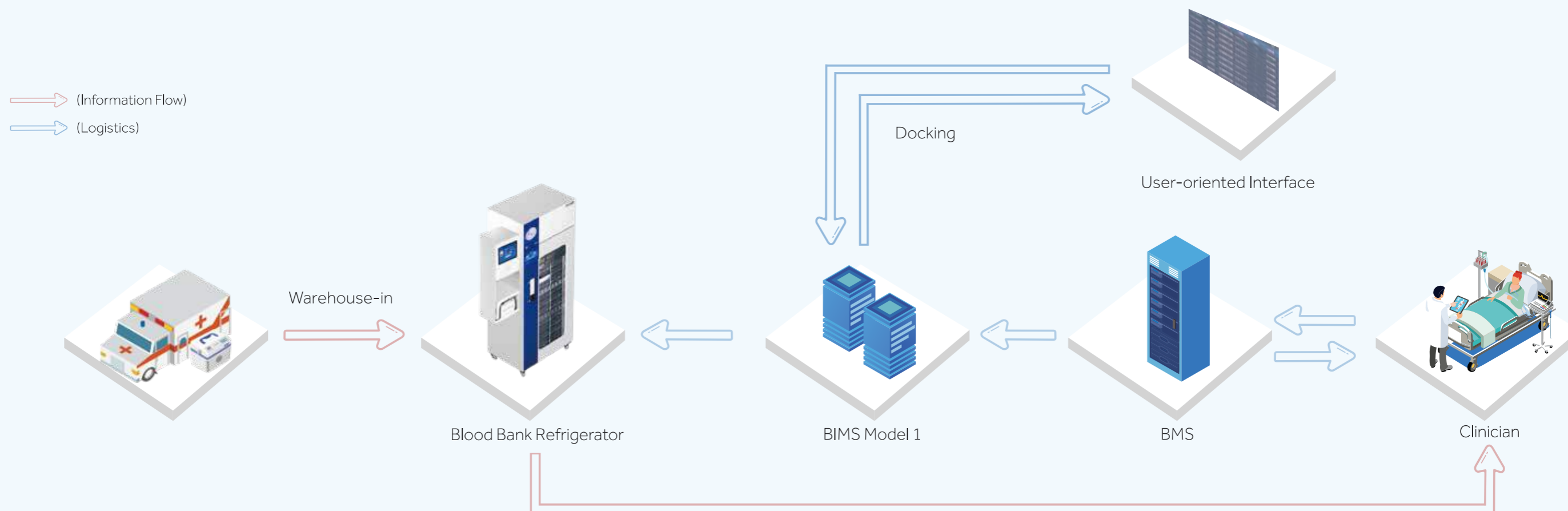
## Scheme Introduction

Connected to the blood bank refrigerator, the RFID tag reader and the server can also download the blood bank refrigerator and control data to the App through the network. The blood transfusion information management system and electronic blood matching system are connected with the hospital's intranet. The blood bank refrigerator can be moved to the operating room, ICU or emergency room.

The RFID tag reader can determine the positions of blood bags, and the App LCD screen can control the storage and removal of the blood bags and check the quantity and status of the blood bags. Using the server data, the user can also download control commands to the blood bank refrigerator App through the network to operate the refrigerator remotely. The intelligent operation of clinical blood matching, blood usage and safety are guaranteed.

## Technological Advantage

Following extensive research and proven implementation, the UBlood solution allows a hospital via control and tracking protocols within the system, to effectively manage blood throughout the entire hospital. With this system, the hospital can allocate and track the blood product usage, record the blood product transfusion in real time, ensure accurate transfusion of the blood to the right patient, at the right time and in the right dose. The result is best practice and quality clinical transfusion improves the efficiency of blood management and the blood use safety for blood recipients.



# Blood Station Product Overview

## Cold Room Storage



### Product Features

- Large 10-inch screen PLC intelligent control system provides users with clear display of storage conditions.
- PLC intelligent control system with self-diagnostics alerts users in the event of a malfunction
- Cold air leakage is reduced as the air cooling fan stops when the door is opened and it is equipped with door open sensor and alarm
- Dual refrigeration system switches automatically in case of fault of one system and the laminar air flow supply device within the unit ensures the temperature uniformity of  $\pm 2^{\circ}\text{C}$
- Energy-saving liquid self-cooling technology cools the liquid by more than  $5^{\circ}\text{C}$  through the use of melted ice and reduces energy consumption by 5%
- Certified ISO13485 medical device quality management system
- Complies to the WHO/PQS quality and safety certification

## Blood Bank Refrigerator



### Product Features

- **Smart IoT scientific and intelligent inventory management:** the blood inventory management App ensures accurate, real-time and automatic management of stock-in and stock-out information
- **RFID precise positioning and visual management:** automatic RFID identification ensures intelligent and dynamic positioning of the blood bags, guides users precisely for accurate and swift blood bag identification and removal
- **Intelligent and fully interactive visual blood bank management:** with the touch of one button, or via the refrigerator App, view statistics and query of the blood donation code, product code, blood type, blood volume, expiry date and other information of the blood bags in stock. Clearly displaying the storage location of the blood with the closest expiry date to ensure first-in first-out management practices
- **The refrigerator or freezer has a built-in RFID read-write device:** to ensure state of the art inventory count using a simple one-button protocol, the inventory information is displayed in real-time to fast track the bag from the blood bank to the required location
- **Accurate positioning:** users can quickly query and find the location of any blood bag stored at the blood bank
- **Information is accurate and reliable:** the blood information stored in the RFID tag is encrypted with read-only information to ensure that such information cannot be deleted or tampered with, and thus is safe, secure and reliable



# Hospital Blood Department Products

## Blood Bank Refrigerator



Software management interface

### Functional Characteristics

- The system ensures accurate blood positioning and one-stop blood access to reduce the door opening duration of the blood bank refrigerator, guaranteeing the blood storage environment and ensuring blood quality and safety
- No need for manual count; on each occasion when the blood bank refrigerator is closed, the automatic inventory counting mechanism will be activated to automatically count and update the inventory levels
- Intelligent inventory management follows the first-in-first-out principle to improve the efficacy of blood transfusions; the blood delivery process goes through three checks to ensure the security of the blood transfusion
- The blood bank is accessible within the operating room ensuring priority to blood matching from the blood bank refrigerator within the operating area, ensuring immediate blood collection and zero wastage

## Transport Cooler

The transport cooler is a specially designed transport temperature/humidity controlled storage device with integral wireless monitoring to transport blood products and biological samples.



### Functional Characteristics

- Equipped with cold chain monitoring module for temperature and humidity: Displays data in real-time and information is uploaded to the cloud platform for query through the 4G module  
GPS positioning allows users to query the movement and track the transport cooler in real time  
Camera monitoring to automatically identify whether there are stored items in the cooler to prevent stored items being left in error.
- Storage temperature is maintained at 2~6°C once the cooler is fully charged; the transfer temperature can be maintained at 2~10°C with no power
- Storage security is enhanced with NFC swipe card module, lock/unlock status information is uploaded in real-time
- 12V and 100-240V power supply for in-vehicle operation
- Energy-efficient optimized semi-conductor refrigeration technology

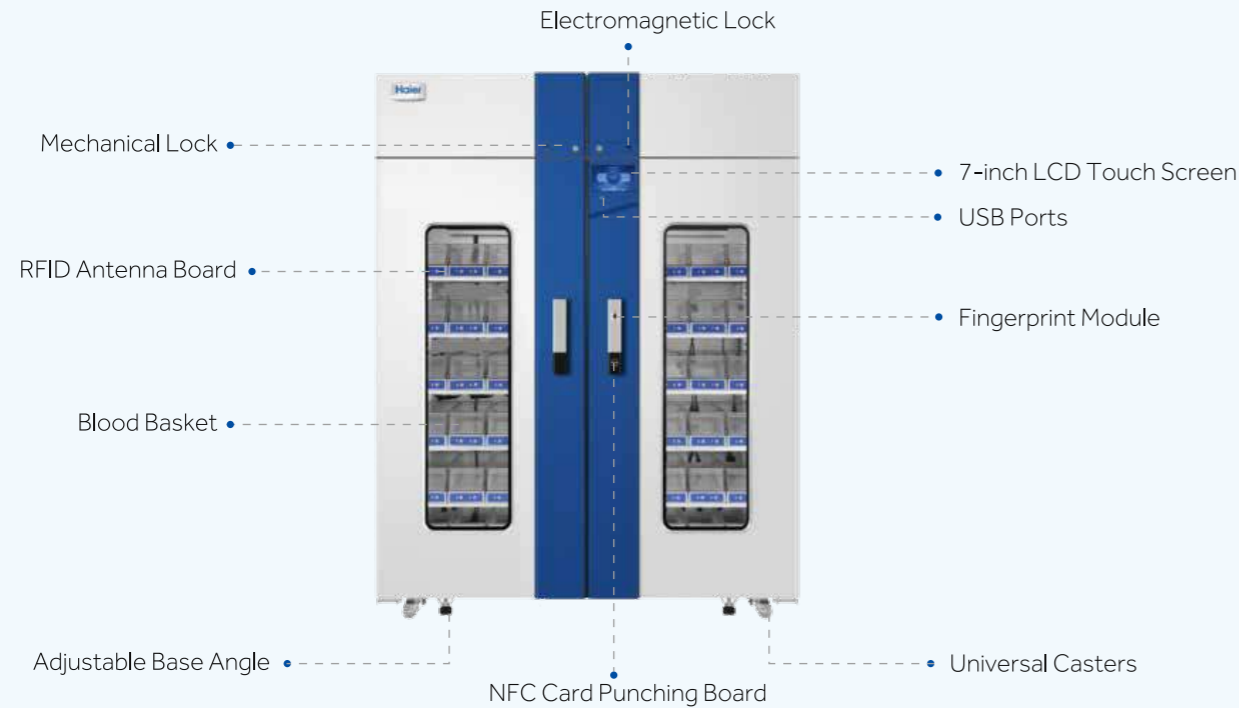


# Blood Bank Refrigerator & Freezer



# Automated Blood Management Refrigerator Used at Blood Station

## Blood Bank Center Series



### Product Advantages

**Microcomputer Control**  
The temperature inside the unit is controlled within  $4\pm 1^{\circ}\text{C}$  with temperature control accuracy of  $0.1^{\circ}\text{C}$ , and the large high-definition LCD touch screen display makes it convenient to observe.

**Multiple Fault Alarms**  
High/low temperature alarm, power failure alarm, door ajar alarm, sensor error alarm, and low battery alarm. It is configured with remote alarm interface with two alarm modes (sound buzzer alarm and light flashing alarm).

**Three-layer Glass Foam Door**  
With large viewing three-layer glass foam door design, surface glass with LOW-E film to reduce heat transfer efficiency with no condensation at  $25^{\circ}\text{C}$ , and 85% humidity environment.

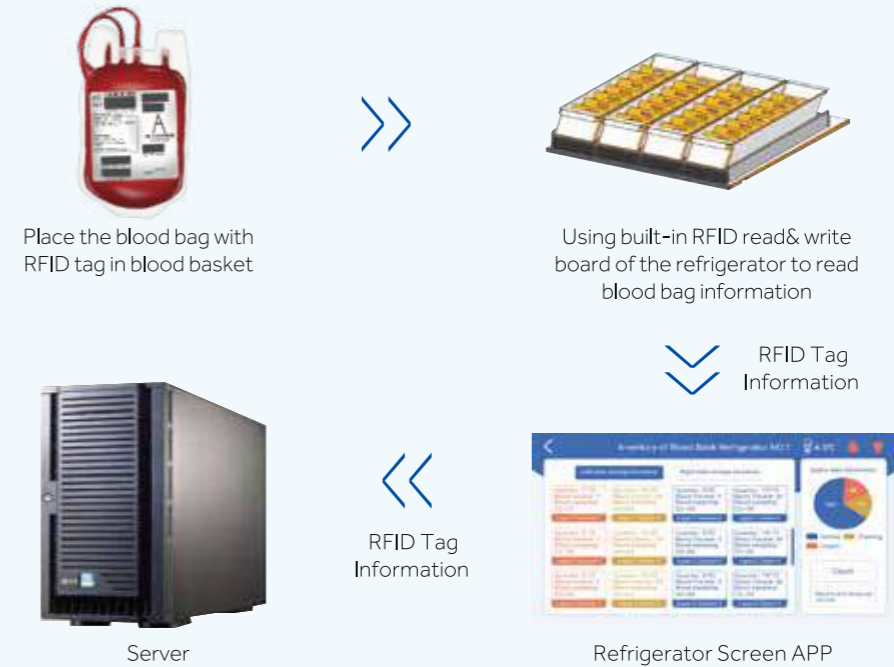
**Speed Control Condenser Fan**  
High efficiency and energy saving, low noise and long service life.

**Double Protection of Door Mechanical Lock and Electromagnetic Lock**  
Electromagnetic lock can realize NFC card punching unlocking and fingerprint unlocking function.

**Inverter Compressor**  
High efficiency and energy saving, low noise and long service life.

**Standard USB Port**  
With optional chart temperature recorder.

### Information Flow



### Operation Instructions

#### Blood Bag Inbound:



#### Blood Bag Outbound:



### Specifications

Product Model No.	Voltage (V/Hz)	Internal Temperature ( $^{\circ}\text{C}$ )	External Dimension (W*D*H)(mm)	Internal Dimension (W*D*H)(mm)	Effective Volume (L)	NW / GW (Kg)	Stainless Steel Shelf (layer)	Loading Capacity (400ml bags)
HXC-629TR	220-240/50	$4\pm 1$	765*940*1980	644*680*1456	629	235/275	6	192
HXC-1369TR	220-240/50	$4\pm 1$	1545*940*1980	1425*680*1456	1369	430/490	12	384

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



# Automated Blood Management Refrigerator Used at Hospital

## Specifications



- With multiple temperature control to guarantee constant and precise temperature: the inside temperature is constant within 4±1°C
- Multiple alarms
- Large LCD touch screen, visual blood management system
- Automatic and accurate identification of blood, light-up indicators for retrieval and archiving
- In an emergency case a large amount of blood can be withdrawn
- Intelligent blood management APP and IoT functions distribute blood bags to the operating room directly

Model	HXC-149R	HXC-429R	HXC-629R	HXC-629RB	
Type	Drawer-Type	Drawer-Type	Drawer-Type	Drawer-Type	
Climate Class	N	N	N	N	
Cooling Type	Forced Air Cooling	Forced Air Cooling	Forced Air Cooling	Forced Air Cooling	
Defrost Mode	Auto	Auto	Auto	Auto	
Refrigerant	R600a	R600a	R600a	R600a	
Sound Level (dB(A))	40	41	41	41	
Temperature Range (°C)	4±1	4±1	4±1	4±1	
Ambient Temperature (°C)	16-32	16-32	16-32	16-32	
Controller	Microprocessor	Microprocessor	Microprocessor	Microprocessor	
Display	LCD Touchscreen	LCD Touchscreen	LCD Touchscreen	LCD Touchscreen	
Power Supply (V/Hz)	220-240/50 230/60	220-240/50 230/60	220-240/50 230/60	115/60	
Power (W)	250	280	300	300	
Electrical Current (A)	1.5	1.8	1.9	3	
Capacity (L/Cu.Ft)	149/5.3	429/15.1	629/22.2	629/22.2	
Blood Storage Capacity (450ml blood bags)	18	60	88	88	
Net/Gross Weight (approx)	kg	129/179	245/280	295/335	
	lbs	283.8/ 393.8	539/616	649/737	649/737
Interior Dimensions (W*D*H)	mm	505*560*610	505*680*1315	645*680*1455	645*680*1455
	in	19.7*32.3*23.8	19.7*26.5*51.3	25.2*26.5*56.7	25.2*26.5*56.7
Exterior Dimensions (W*D*H)	mm	625*775*1425	925*940*1830	1065*940*1980	1065*940*1980
	in	24.4*30.2*55.6	36.1*36.7*71.4	41.5*36.7*77.2	41.5*36.7*77.2
Packing Dimensions (W*D*H)	mm	740*945*1575	725*985*1940	875*995*2090	875*995*2090
	in	28.9*36.9*61.4	28.3*38.4*75.7	34.1*38.8*81.5	34.1*38.8*81.5
Container Load (20'/40'/40'H)		18/36/36	18/35/35	12/26/26	12/26/26
Alarms	High/Low Temperature	Y	Y	Y	Y
	Power Failure	Y	Y	Y	Y
	Sensor Error	Y	Y	Y	Y
	Low Battery	Y	Y	Y	Y
	Door Ajar	Y	Y	Y	Y
	Remote Alarm	Y	Y	Y	Y
Accessories	Caster	4	4	4	4
	Foot	2	2	2	2
	Porthole	Y	Y	Y	Y
	Drawers	9	30	44	44
	USB Interface	Y	Y	Y	Y
	Temperature Recorder	Y	Y	Y	Y
Others	Certification	CE	UL	CE	UL

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



**Reduce Waste and Improve Efficiency**  
Electronic blood matching within 1 minute, reducing the cross matching time and reagent consumption. Quick and precise blood matching, combined with intelligent lighting guide indicators, guarantees the accurate identification and safe use of blood, without waste



**Drastically Improves the Speed of Delivery**  
Innovative blood bank system, enables the blood to be advanced to the operating room to achieve 1-minute rapid blood collection



## Configuration



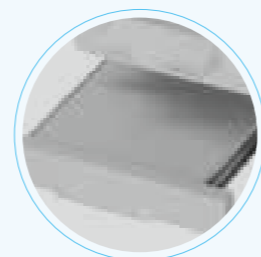
LCD



Barcode scanner



Printer



Tray



# Unattended Self-help Blood Distribution Refrigerator

## Smart IoT and self-help blood distribution



HXC-629ZZ

### Self-help blood distribution of blood transfusion departments

After blood cross matching is completed for the blood bags, specified blood collection permissions will be allocated to the different blood using departments to achieve self-help blood distribution; self-help blood collection at night can save labor cost and improve efficiency

### Mobile blood storage points set up by blood stations

The refrigerators may be used as mobile blood storage points in hospitals to guarantee the applications of emergency blood use, achieve zero waiting for blood use, and guarantee the timely blood use of patients



Self-service printing

### Ergonomic design

- Smart dual screen setting achieves a simple and intuitive LCD screen display and better user-machine interactions
- Upon checking of the warehouse-out blood bag's information, self-help printing of Blood Collection Sheet for Clinical Blood Transfusion and Blood Distribution Record Sheet is available

### User-machine interaction, making management visual

- The intelligent blood management system can display the blood donation codes, product codes, blood types, blood quantities, expiry dates and other information of the stored blood bags in real time, designed with one-key query of the stock blood information
- It can clearly show the storage location of the blood bag with the closest expiry date and follow the first-in-first-out management practices

### Microcomputer Control

Double temperature control composed of 6 high precision sensors and mechanical thermostat against low temperature makes control more accurate and maintains the refrigerator temperature constant at  $4\pm 1^{\circ}\text{C}$

## Product Advantages

### Electronic checking and bar code management

- Blood bag warehouse-in and warehouse-out management can be achieved by scanning the blood donation codes and the product codes on the bags
- The system can take the specified blood bags for the work staff accurately after identifying the operators and checking the blood bags to be error-free



A drawer corresponds to a lock

### Safe, secure and reliable, making blood collection process traceable

- Equipped with fingerprint module and NFC card punching module, providing dual permission modes to open the electromagnetic lock
- Each drawer is equipped with an independent electronic lock to ensure that only the unique and correct blood bag can be taken out in each blood collection operation
- The camera module can take photos of the operators automatically and transmit them to the platform to achieve operation information traceability

## Specifications

Model	Voltage (V/Hz)	Power (W)	Temperature Inside the Refrigerator (°C)	Uniformity (°C)
HXC-629ZZ	220-240/50/60	300	2-6	4±1

External Dimensions (W*D*H)(mm)	Internal Dimensions (W*D*H)(mm)	Effective Volume (L)	Blood bag Volume
1290*940*1980	645*680*1455	629	72 bags 450 ml

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



# Automated Blood Management Refrigerator with Touch Screen

## Product Features



HXC-1369T



### Control Interface

The intuitive high-definition LCD touch screen can display temperature graph, working status, events and alarm records



### Microcomputer Control

A dual control system of six high-precision sensors and mechanical thermostat ensures that the temperature inside the cabinet is maintained at 4±1°C

## Information Statistics

Real-time control and monitoring of blood information in the cabinet is possible via built-in smart blood management APP and cloud network connection. Blood product information and temperature are available in large LCD display



### Stable and Reliable Operation

The refrigeration system is powered with a high-quality, energy-efficient inverter compressor and variable speed fan motors. Temperature control responds quickly and reliably for a more uniform temperature using less power and lower noise



### Multiple Safety Protection

Multiple alarms include high and low temperature, power failure, door ajar, sensor error, and low battery. Sound buzzer, visual flashing light and remote contacts are standard alarm features. Built-in battery provides power to the alarm system in the event of power failure. Fingerprint and standard NFC swipe card module are optional



Multiple storage partitions are provided. Management of blood products by types and expiration dates is easy and efficient

## Specifications

Model		HXC-149T	HXC-279T	HXC-429T	HXC-629T	HXC-629TB	HXC-1369T	
Technical Data	Type	Drawer-Type	Basket-Type	Drawer-Type	Drawer-Type	Drawer-Type	Drawer-Type	
	Climate Class	N	N	N	N	N	N	
	Cooling Type	Forced Air Cooling	Forced Air Cooling	Forced Air Cooling	Forced Air Cooling	Forced Air Cooling	Forced Air Cooling	
	Defrost Mode	Auto	Auto	Auto	Auto	Auto	Auto	
	Refrigerant	R600a	R600a	R600a	R600a	R600a	R600a	
	Sound Level (dB(A))	39	41	40	40	41	41	
Performance	Temperature Range (°C)	4±1	4±1	4±1	4±1	4±1	4±1	
	Ambient Temperature (°C)	16-32	16-32	16-32	16-32	16-32	16-32	
Control	Controller	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor	
	Display	LCD Touchscreen	LCD Touchscreen	LCD Touchscreen	LCD Touchscreen	LCD Touchscreen	LCD Touchscreen	
Electrical Data	Power Supply (V/Hz)	220-240/50/60	220/50	220-240/50/60	220-240/50/60	115/60	220-240/50/60	
	Power (W)	240	400	245	255	255	400	
	Electrical Current (A)	1.4	2.6	1.5	1.5	3	2	
Dimensions	Capacity (L/Cu.Ft)	149/5.3	279/9.85	429/15.1	629/22.2	629/22.2	1369/48.3	
	Blood Storage Capacity (450ml blood bags)	60	135	195	312	312	624	
	Net/Gross Weight (approx)	kg	108/136	113/136	182/217	212/252	212/252	380/445
		lbs	237.6/299.2	249/299.2	400.4/477.4	466.4/554.4	466.4/554.4	836/979
	Interior Dimensions (W*D*H)	mm	505*560*610	505*410*1365	505*680*1315	645*680*1455	645*680*1455	1425*680*1455
		in	19.7*32.3*23.8	19.8*16.1*53.7	19.7*26.5*51.3	25.2*26.5*56.7	25.2*26.5*56.7	55.6*26.5*56.7
	Exterior Dimensions (W*D*H)	mm	625*820*1150	660*705*1750	625*940*1830	765*940*1980	765*940*1980	1545*940*1980
		in	24.4*30.2*44.9	26.0*27.8*68.9	24.4*36.7*71.4	29.8*36.7*77.2	29.8*36.7*77.2	60.3*36.7*77.2
	Packing Dimensions (W*D*H)	mm	720*920*1220	730*760*1940	725*985*1940	875*995*2090	875*995*2090	1610*995*2090
		in	28.1*35.9*47.6	28.7*30.0*76.4	28.3*38.4*75.7	34.1*38.8*81.5	34.1*38.8*81.5	62.8*38.8*81.5
Container Load (20'/40'/40'H)		18/38/76	24/48/48	18/35/35	12/26/26	12/26/26	7/14/14	
Alarms	High/Low Temperature	Y	Y	Y	Y	Y	Y	
	Power Failure	Y	Y	Y	Y	Y	Y	
	Sensor Error	Y	Y	Y	Y	Y	Y	
	Low Battery	Y	Y	Y	Y	Y	Y	
	Door Ajar	Y	Y	Y	Y	Y	Y	
	Remote Alarm	Y	Y	Y	Y	Y	Y	
Accessories	Caster	4	Y	4	4	4	4	
	Foot	2	Y	2	2	2	2	
	Porthole	Y	Y	Y	Y	Y	Y	
	Baskets	6	15	15	24	24	48	
	Shelves/Drawers	0/2	5/0	0/5	0/6	0/6	0/12	
	USB Interface	Y	Y	Y	Y	Y	Y	
	Temperature Recorder	Y	Y	Y	Y	Y	Y	
Others	Certification	CE, UL	/	CE, UL	CE, UL	UL	CE, UL	

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# Blood Management Refrigerator with LED Display

## Product Features



HXC-429

### Dual Temperature Control Technology

Refrigeration system is designed with an inverter compressor and dual-speed fans, providing an optimal temperature performance of 4± 1°C inside the cabinet to safeguard stored products.

### Standard USB Interface

- Ability to record temperature data for ten years by using the USB
- Interface, disc temperature recorder is also available



### With Multiple Temperature Control to Guarantee Constant and Precise Temperature

- The inside temperature is constant within 4±1°C, the digital temperature display resolution at 0.1°C
- Equipped with 6 high-precision sensors and a mechanical thermostat which enables more accurate air cooling and temperature control to ensure uniform temperature inside the unit, maintained within the specified temperature range
- The multi-layer inner door design reduces thermal loss after door openings and further ensures the temperature stability inside the cabinet



### With Multiple Safety Guarantees to Provide Worry-Free Service

- Equipped with complete alarm function, including alarm on high and low temperature, power failure, door ajar, sensor error, and low battery. Two alarm modes including audible buzzer and visual lights with remote alarm interface
- Back-up battery design ensures alarm and temperature readings continue to operate in the event of power failure
- NFC swipe card module, with safer storage management



### NFC Rights Management

NFC rights management system is designed with an electromagnetic lock with controllable, checkable and traceable flow direction, providing safer blood management

## Specifications

Model	HXC-149	HXC-279	HXC-429	HXC-629	HXC-629B	HXC-1369	
Type	Basket-Type	Basket-Type	Basket-Type	Basket-Type	Basket-Type	Basket-Type	
Climate Class	N	N	N	N	N	N	
Cooling Type	Forced Air Cooling	Forced Air Cooling	Forced Air Cooling	Forced Air Cooling	Forced Air Cooling	Forced Air Cooling	
Defrost Mode	Auto	Auto	Auto	Auto	Auto	Auto	
Refrigerant	R600a	R134a	R600a	R600a	R600a	R600a	
sound level (dB(A))	39	41	40	40	41	41	
Temperature Range (°C)	4±1	4±1	4±1	4±1	4±1	4±1	
Ambient Temperature (°C)	16-32	16-32	16-32	16-32	16-32	16-32	
Controller	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor	
Display	LED	LED	LED	LED	LED	LED	
Power Supply (V/Hz)	220-240/50/60	220/50	220-240/50/60	220-240/50/60	115/60	220-240/50/60	
Power(W)	215	400	245	255	255	320	
Electrical Current (A)	1.3	2.6	1.5	1.5	3	2	
Capacity (L/Cu.Ft)	149/5.3	279/9.85	429/15.1	629/22.2	629/22.2	1369/48.3	
Blood Storage Capacity (450ml blood bags)	60	135	195	312	312	624	
Net/Gross Weight (approx)	kg	97/125	113/136	169/204	187/217	187/217	345/410
	lbs	213.4/ 275	249/299.2	371.8/448.8	411.4/477.4	411.4/477.4	759/902
Interior Dimensions (W*D*H)	mm	505*560*610	505*410*1315	505*680*1315	645*680*1455	645*680*1455	1425*680*1455
	in	19.7*32.3*23.8	19.8*16.1*51.8	19.7*26.5*51.3	25.2*26.5*56.7	25.2*26.5*56.7	55.6*26.5*56.7
Exterior Dimensions (W*D*H)	mm	625*820*1150	660*705*1700	625*940*1830	765*940*1980	765*940*1980	1545*940*1980
	in	24.4*30.2*44.9	26.0*27.8*67.0	24.4*36.7*71.4	29.8*36.7*77.2	29.8*36.7*77.2	60.3*36.7*77.2
Packing Dimensions (W*D*H)	mm	720*920*1220	730*760*1890	725*985*1940	875*995*2090	875*995*2090	1610*995*2090
	in	28.1*35.9*47.6	28.7*30.0*74.4	28.3*38.4*75.7	34.1*38.8*81.5	34.1*38.8*81.5	62.8*38.8*81.5
Container Load (20'/40'/40'H)		18/38/76	24/48/48	18/35/35	12/26/26	12/26/26	7/14/14
High/Low Temperature	Y	Y	Y	Y	Y	Y	
Power Failure	Y	Y	Y	Y	Y	Y	
Sensor Error	Y	Y	Y	Y	Y	Y	
Low Battery	Y	Y	Y	Y	Y	Y	
Door Ajar	Y	Y	Y	Y	Y	Y	
Remote Alarm	Y	Y	Y	Y	Y	Y	
Caster	4	Y	4	4	4	4	
Foot	2	Y	2	2	2	2	
Porthole	Y	Y	Y	Y	Y	Y	
Baskets	6	15	15	24	24	48	
Shelves/Drawers	2/0	5/0	5/0	6/0	6/0	12/0	
Inner Doors	2	5	5	6	6	12	
USB Interface	Y	Y	Y	Y	Y	Y	
Temperature Recorder	N	N	Y	Y	Y	Y	
Certification	CE, UL	/	CE, UL	CE, UL	UL	CE, UL	

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



# Standard Blood Bank Refrigerator

Haier Biomedical's blood bank refrigerator is specially designed to store whole blood and blood derivatives. These refrigerators can also be used to store pharmacy and biological materials in hospitals and laboratories.

## Key Features

- Constant cabinet temperature at 2-6°C
- High-tech integrated sensors to display and control temperature
- Standard temperature recorder (Optional for HXC-158)
- Auto-defrost to remove moisture on cooling surface
- Large digital display for ease of observation
- Basket or drawer styles for managing stored products

## Reliability

- Microprocessor controlled forced-air cooling system with heat compensation system
- Digital temperature display for upper and lower sections in chamber with 0.1°C resolution
- Dual displays of operational parameter (temperature recorder display)
- Five alarm conditions: high/low temperature, power failure, sensor error, door ajar, low voltage in backup battery

## Ergonomic Design

- Safety lock to prevent unauthorized access
- Storage space designed for easy sorting of a variety of blood products
- Optional baskets or stainless steel drawers
- Caster design
- Interior light



HXC-158B



## Specifications

Model		HXC-158	HXC-158B	
Technical Data	Type	Basket-Type	Drawer-Type	
	Climate Class	ST	ST	
	Cooling Type	Forced Air Cooling	Forced Air Cooling	
	Defrost Mode	Auto	Auto	
	Refrigerant	HC	HC	
	sound level (dB(A))	42	42	
Performance	Temperature Range (oc)	4±1	4±1	
	Ambient Temperature (oc)	10-38	10-38	
Control	Controller	Microprocessor	Microprocessor	
	Display	LED	LED	
Electrical Data	Power Supply (V/Hz)	220-240/50/60	220-240/50/60	
	Power (W)	320	320	
	Electrical Current (A)	2.6	2.6	
Dimensions	Capacity (L/Cu.Ft)	158/5.6	158/5.6	
	Blood Storage Capacity (450ml blood bags)	84	84	
	Net/Gross Weight (approx)	kg	107/120	113/126
		lbs	235.9/264.6	249.1/277.8
	Interior Dimensions (W*D*H)	mm	460*370*950	460*370*950
		in	18.1*14.6*37.4	18.1*14.6*37.4
	Exterior Dimensions (W*D*H)	mm	560*570*1530	560*570*1530
		in	22.0*22.4*60.2	22.0*22.4*60.2
	Packing Dimensions (W*D*H)	mm	645*675*1680	645*675*1680
		in	25.4*26.6*66.1	25.4*26.6*66.1
Container Load (20'/40'/40'H)		27/54/54	27/54/54	
Alarms	High/Low Temperature	Y	Y	
	Power Failure	Y	Y	
	Sensor Error	Y	Y	
	Low Battery	Y	Y	
	Door Ajar	Y	Y	
	Remote Alarm	Y	Y	
Accessories	Caster	Y	Y	
	Foot	Y	Y	
	Porthole	Y	Y	
	Shelves/Drawers	4/-	-/4	
	Inner Doors	2	-	
	USB Interface	Optional	Optional	
	Temperature Recorder	Optional	Y	
Others	Certification	CE	CE	

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# 4°C Blood Bank Refrigerator

Haier Biomedical's 4°C Medical Blood Bank Refrigerator: High efficiency, energy - saving , safe and reliable, smart control.

## Product Advantages

### Automatic Evaporation of Condensed Water after Collection

Avoid the trouble of manual treatment of condensed water

### Air Cooling Design

The temperature in all corners of the cabinet is maintained within the calibrated temperature range, and the test hole design is added to meet the actual needs of the user

### Microprocessor Control System

The temperature range is  $4\pm 1^\circ\text{C}$ , with temperature accuracy of  $0.1^\circ\text{C}$

### Multiple Protection

Startup delay protection, stop interval protection, display panel password protection, power failure memory data protection, sensor error protection

### Multiple Fault Alarms

High and low temperature alarm, power failure alarm, door ajar alarm, sensor error alarm, low battery with a remote alarm interface, two alarm modes (sound beeping alarm and light flashing alarm)

### Remote Alarm Function

The alarm can be connected to other rooms to achieve remote alarm functionality

## Product Features

### Door design

Vertical single door design, double layer electric heated glass door and self - closing function

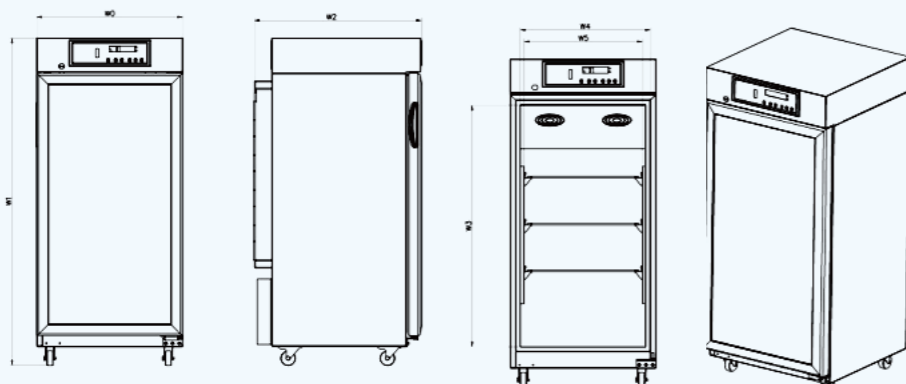
### Materials

The shell and inner liner are sprayed with steel plate, which is anticorrosive and bacteriostatic

### Compressor

Deeply optimized refrigeration system, international brand compressor, energy saving, low noise, long service life

## Product Dimensions



W0 — The width of the machine  
W1 — The height of the machine  
W2 — The depth of the machine  
W3 — The liner height  
W4 — The liner width  
W5 — The frame width

## Product Parts

**Interior lighting:**  
The cabinet is equipped with LED lights and external independent light switches

**Door lock and door lock alarm:**  
Prevent random door opening

**Door handle:**  
Easy to open

**Foot:**  
Stable and adjustable



HXC-106

**LED digital display:**  
The internal temperature  $2-6^\circ\text{C}$ , digital display of upper and lower temperature, the average temperature display and the resolution of  $0.1^\circ\text{C}$

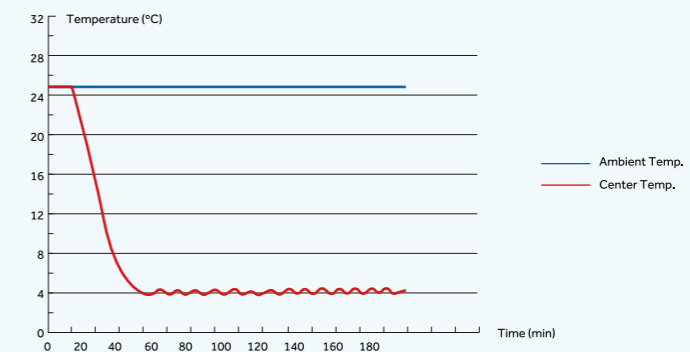
**Air cooling design:**  
Ensure that the temperature in any corner of the box is maintained within the calibration temperature range

The temperature measuring box is used to monitor the temperature in the cabinet in real time

3 shelves, 4 blood baskets, blood basket with a label slot, easy to label. Capable of storing 54 bags of 400ml blood totally

## Cooling Down Curve

Temperature drop and insulation curve



## Specifications

Model	HXC-106	
Climate Class	N	
Cooling Type	Forced air cooling	
Defrost Mode	Auto	
Refrigerant	R600a	
Noise (dB(A))	41	
Temp Range (°C)	$4\pm 1$	
Power Supply (V/Hz)	220-240-50/60	
Power (W)	253	
Electrical Current (A)	1.6	
Alarms	High/low temp, remote system, power failure, sensor error, low battery, door ajar	
Accessories	Foot, porthole, baskets(4), shelves (3)	
Capacity (L/Cu.Ft)	106/3.75	
Blood Storage Capacity (400ml blood bags)	54	
Net/Gross Weight (approx)	kg	49/52
	lbs	108.03/114.64
Interior Dimensions (W*D*H)	mm	430*350*830
	in	16.93*13.78*32.68
Exterior Dimensions (W*D*H)	mm	500*514*1055
	in	19.69*20.34*41.54
Packing Dimensions (W*D*H)	mm	565*615*1145
	in	22.24*24.21*45.08
Container load (20'/40'/40'H)	36/72/72	
Certification	CE	

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# Solar Direct Drive Blood Refrigerator


Applicable for storing wholeblood, medicines, biological products and other laboratory products that need to be stored at 4°C. Suitable for the storage of blood and blood supplies in areas where the power shortage is common.

## Product Advantages


 It is equipped with 16 blood baskets, each basket can hold 12 blood bags, and a total of 192 blood bags can be stored (350ml blood bags)


 Excellent autonomy time ensures the safety of blood


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


 Broad working ambient temperature range of 5~43°C

## Product Features

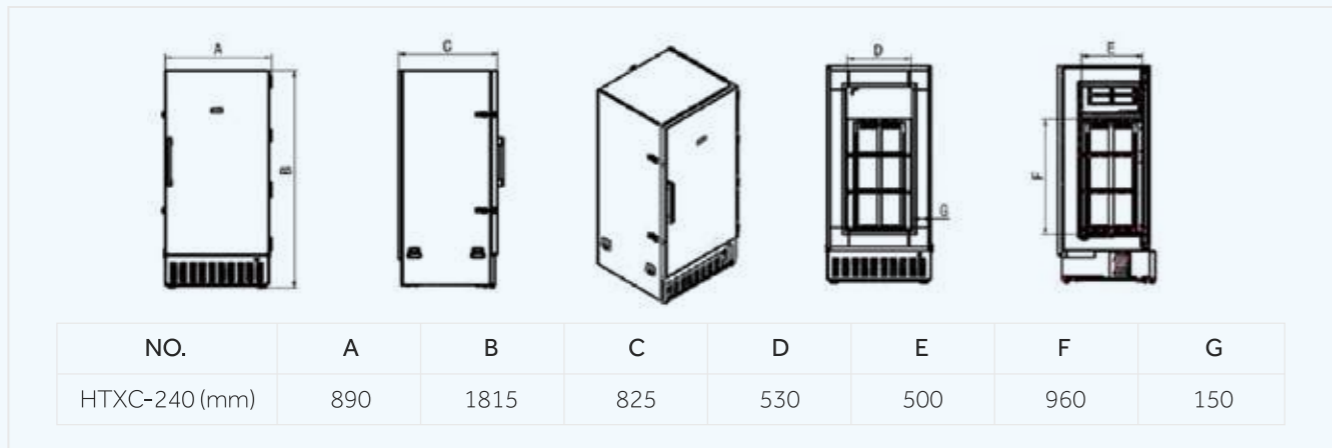
 Solar direct drive refrigerator without battery

 Vertical structure, first-in first-out, easy operation

 Environmentally friendly hydrocarbon refrigerant R600a and foam material LBA

 Automatic drainage design

## Product Dimensions



## Product Parts



Lock Catch Designed to Match Padlock



Handgrip



Display Panel

## Specifications

	Model	HTXC-240	
Technical Data	Cabinet Type	Upright	
	Ambient Temperature (°C)	≤43	
	Cooling Type	Direct Cooling	
	Defrost Mode	No electric heating defrost	
	Refrigerant	HC	
	Sound Level (dB(A))	≤43	
	Performance	Temperature Range (°C)	2-8
Freezer Protection Level		A	
Control		Controller	Microprocessor
	Display	Solar LED Temperature display	
Electrical Data	Power supply (V)	24	
	Maximal Current (A)	5	
	Energy Consumption: Stable Running (kWh/24h)	0.35	
	Energy Consumption: Cool Down Test (kWh/24h)	0.54	
	Autonomy Time at 43°C	95hrs23mins	
	Autonomy Time at 32°C	151hrs10mins	
	Solar Radiation Reference Period (kWh/m <sup>2</sup> /day)	3.5	
Construction	Blood Storage Capacity (350ml Blood Bags)	192	
	Gross Volume (L/Cu.Ft)	240/8.5	
	Net/Gross Weight (approx)	kg	150/185
		lbs	330/407.9
	Interior Dimensions (W*D*H)	mm	530*500*960
		in	20.9*19.7*37.8
	Exterior Dimensions (W*D*H)	mm	890*825*1815
		in	35*32*71
	Packing Dimensions (W*D*H)	mm	985*920*1980
		in	38.8*36.2*78
Loading Quantities	Container Load (20'/40'/40'H)	12/24/24	
Alarms	High/Low Temperature	Y	
	Sensor Error	Y	
	Shelves	4	
Accessories	Data Logger	Y	
	Remote Temperature Monitoring Device (RTMD)	Optional	
Certifications	CE	Y	
	WHO/PQS	Y	

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# -30°C Plasma Freezer

## IoT Cryogenic Solution



DW-30L1280FT

### Product Features

- RFID radio frequency, accurate management of plasma information, with automatic inventory and quick inquiry function
- Hydrocarbon refrigeration, efficient and quick
- Multiple alarms, safe and reliable
- 10-inch large screen, easy to operate and more intuitive display
- NFC permission management system combined with an electromagnetic lock, controllable flow direction and traceable information

### Product Parts



#### 10-inch large touch screen, easy to operate, intuitive display

The 10-inch large touch screen ensures an easier operating experience. Capable of displaying interior real-time temperature, ambient temperature, setting temperature, input voltage, network status, user logging status, temperature curve and new message/notebook, etc. Query interface can display plasma donation code, product code, blood type, blood volume, period of validity, etc

#### Dual Cooling System, Frost Free

Equipped with dual cooling system, if one system fails, the other system can maintain the interior temperature at -25°C for an extended period, safe and reliable

RFID read-write board can read plasma label information, providing inventory plasma information statistics. Supports automatic inventory, one-key inventory and plasma in-out stock storage information

#### Bottom air inlet system, low noise

Equipped with a special filter net, ensuring the cleanliness and safety of interior air

#### Multistage Plasma Storage Basket

Multistage plasma storage basket design, streamlines plasma storage and placement, easy to access

### Specifications

Model	Voltage (V/Hz)	Interior Temperature (°C)	Exterior Dimension (W*D*H)(mm)	Interior Dimension (W*D*H)(mm)	Effective Volume (L)	N.W./G.W. (kg)	Loading Qty (bag)
DW-30L1280FT	220/50	-10~-35	1520*1065*1980	1320*752*1260	1280	620/680	576

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# -30°C Plasma Freezer



DW-30L1280F

Applicable for blood stations, hospitals, CDCs, scientific research institutes, electronics, chemical industry and other related industries, Haier's product can cryopreserve plasma, biological products, components, materials and other items that need to be kept at low temperature

## Product Advantages



### Dual independent refrigeration systems: Superior safety

Auto defrosting system+constant refrigeration system, has successfully solved the industries problem that inside temperatures rise sharply when fan cooling refrigerators defrost; If one system fails, the other one would reach -25°C quickly, which doubles the safety of the sample; With air cooling technology, the inside uniformity can reach ±3°C (±5°C during the defrosting period).



### Intelligent defrosting: prolongs the defrosting cycle, safeguarding the stability of the storage temperature

Compared with traditional timed defrosting, the intelligent defrosting technology reduces the defrosting frequency by half, effectively draws down the temperature fluctuation caused by defrosting during the sample storage cycle by intelligently identifying the amount of frost on the evaporator.



### Advanced defrosting technology eradicates the hidden danger of electric leakage

Haier Biomedical applies full-automatic hot gas defrosting technology throughout the whole unit. Compared with heater wire defrosting technology, Haier Biomedical's technology eliminates the risk of electric leakage occurring due to wire aging, providing extra security and safety.



### Hydrocarbon energy saving: green and environmentally friendly

Using green and eco-friendly hydrocarbon refrigeration system, based on the principle of zero damage to the ozone layer with zero greenhouse effect, while reducing energy consumption to 8kW/24H.

## Product Parts

Supersized double outer doors, 70mm insulation layer

**Safe lock**  
Electronic mortise lock design, with NFC clocking-in function (fingerprint optional)



**Casters and feet**  
4 omnidirectional casters + 2 level legs, easy to move, lock and level



• Microcomputer control, LED digital temperature display with inside temperature accuracy of 0.1°C

• **Standard USB port**  
Capable of storing more than 15 years of data

• **Low noise**  
Optimal system and engine noise reduction design, the temperature can cool down to -30°C within 3 hours

• **Bottom strainer drawable design**  
Easy to clean



**Insulation design of refrigeration unit**  
Subtle temperature rise during defrosting

**Shelves**  
Equipped with 12 stainless steel shelves of 6 layers, which are adjustable to meet different requirements of users

Optional: Blood baskets (48 units), and the capacity is 900\*200ml blood bags



• **Intelligent hot gas defrosting**  
Prolongs the defrosting cycle, eradicates the hidden danger of electric leakage



• **Foam beam design**  
Better insulation effect

## Specifications

Model	Voltage (V/Hz)	Interior Temperature (°C)	Exterior Dimension (W*D*H)(mm)	Interior Dimension (W*D*H)(mm)	Effective Volume (L)	Net/Gross Weight (kg)
DW-30L1280F	220/50	-10~-30	1520*1065*1980	1320*752*1260	1280	420/480

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# Transport Cooler

## Active Cooling Solution



HZY-8ZA

HZY-15ZA

- Accurate control of the temperature between 2-6°C
- PCM ice raft
- Constant temperature
- Complete process with cold chain monitoring
- Replace the traditional insulation method with Haier Biomedical transport cooler for transport
- Blood from blood transfusion department to clinical blood transfusion point

2~6°C precise temperature control, suitable for storage of biological products such as blood, medicines and reagents etc.

Temporary blood storage to ensure blood safety at clinical blood stations

Embedded with 4°C phase change PCM ice raft for cold storage, providing long insulation after power off to ensure blood safety during the transportation

- The PCM ice raft is a 4°C phase change material with freezing point greater than 2°C, which ensures the cryopreservation temperature of the blood.
- At 25°C under no load, the time for temperature inside the box rises to 10 °C is more than 1 hour
- At 25°C under full load, the time for temperature inside the box rises to 10 °C is more than 2 hours

**Multiple Fault Alarms, Making It Safer to Use**

High/low temperature alarm, power failure alarm, and sensor error alarm

**The Power Supply Is Configured with Vehicle Power Plug, Easy for Vehicle Transportation**

The power supply is configured with vehicle power plug, easy for vehicle transportation

## Passive Cooling Solution

- Multi-function handle with casters for easy transportation
- Multi dimensional binding of orders and blood, and whole process with cold chain monitoring
- From blood collection vehicle/blood donation house to blood center/blood station, from blood center/blood station to hospital

## Product Advantages



### Low Noise

The ultra-quiet fan is equipped with air outlets on both sides, noise level less than 34 dB providing a more comfortable environment



### Easy to Clean

The inner liner adopts aluminium oxidation process to make it smooth inside and easy to clean

## Product Features

### Semiconductor for active cooling, energy saving and environmental protection

Self-contained cooling function, cooling after electrified

## Product Features



HZY-5B

- LCD screen, real-time display of inside temperature, battery level and other information
- Standard electromagnetic lock, scan the QR code to open the door, safeguarding stored items
- 4°C PCM ice pack equipped to store cold, zero freezing, keep the safety of blood during transportation



HZY-35B

- Real-time display of inside temperature.
- Integrated cold storage ice pack box, easy to access ice pack
- Rotational moulding shell, anti-knocking, easy to carry
- Multifunctional handle, sided casters, easy to be transported on flat road



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# Transport Cooler

## Specifications



	Model	HZY-8ZA	HZY-15ZA	HZY-35B
Technical Data	Storage Temperature (°C)	2-6	2-6	/
	Operating Temperature (°C)	2-10	2-10	2-10
Dimensions	Exterior Dimensions (W*D*H mm)	320*265*260	520*300*270	550*328*370
	Interior Dimensions (W*D*H mm)	230*140*170	430*150*180	450*232*295
	Packing Dimensions (W*D*H mm)	393*362*367	595*375*404	674*455*490
	Net Weight (kg)	4	6	9
	Gross Weight (kg)	5	8	12
	Blood Bag Capacity	8	15	35
Functions	Cold Chain Monitoring	Y	Y	/
	NFC Unlock	/	Y	/
	Foam Material	Polyurethane Cycloisopentane	Polyurethane Cycloisopentane	Polyurethane Cycloisopentane
	Refrigeration Method	Semiconductor Active Refrigeration	Semiconductor Active Refrigeration	Passive Cooling
	Warm Up Time	2 Hours (32°C ambient temperature load situation)	2 Hours (32°C ambient temperature load situation)	6 Hours (43°C ambient temperature load situation)
	Shell/Liner	ABS/Aluminium Plate	ABS/Aluminium Plate	HDPE/HDPE
	Alarm	High Temperature, Sensor Error, Power off	High Temperature, Sensor Error, Power off	/
	Battery	Rechargeable Lithium Battery	Rechargeable Lithium Battery	Button Battery

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

## Specifications



	Model	HZY-5B	HZY-8Z	HZY-15Z
Technical Data	Storage Temperature (°C)	/	2-6	2-6
	Operating Temperature (°C)	2-10	2-10	2-10
Dimensions	Exterior Dimensions (W*D*H)(mm)	285*186*200	320*265*260	520*300*270
	Interior Dimensions (W*D*H)(mm)	220*118*126	230*140*170	430*150*180
	Packing Dimensions (W*D*H)(mm)	357*277*287	393*362*367	595*375*404
	Net Weight (kg)	2	3.5	6
	Gross Weight (kg)	3	5	8
	Blood Bag Capacity	5	8	15
Functions	Foam Material	High Density Foam	Polyurethane Cycloisopentane	Polyurethane Cycloisopentane
	Refrigeration Method	Passive Cooling	Semiconductor Active Refrigeration	Semiconductor Active Refrigeration
	Warm up Time	3 Hours (32°C ambient temperature load situation)	2 Hours (32°C ambient temperature load situation)	2 Hours (32°C ambient temperature load situation)
	Shell/Liner	ABS/ABS	ABS/ aluminium plate	ABS/ aluminium plate
	Alarm	Low Battery	High Temperature, Sensor Error, Power off	High Temperature, Sensor Error, Power off
	Battery	Lithium Battery	Rechargeable Lithium Battery	Rechargeable Lithium Battery

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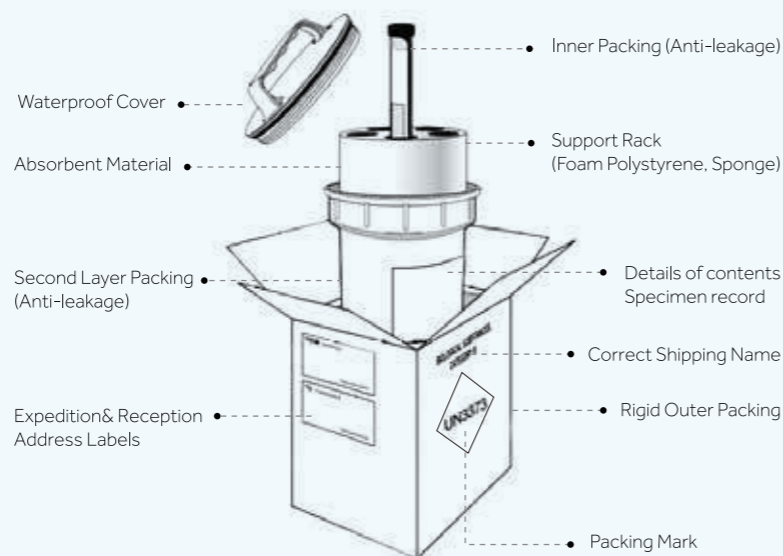
# Transport Cooler for the Infectious Material

The virus is high-risk specimen, and if there is collision during the transportation or transmission, there will be a risk of leakage and re-infection. A solution is urgently needed to ensure the viability of the samples and the safety of transport personnel, Haier Biomedical has the solution!

## Product Features

### Three-layer packaging

- Main container**  
Test tube with cap (user configures according to business)
- Auxiliary container**  
≥95kPa pressure sealed tank (EPS or EPE bracket for fixing test tube, 16 hole D10 test tube and 2 hole D15 test tube)
- Outer packaging**  
Transfer box (ice row, foam used to fix sealed container, activated carbon and other adsorbed substances, sample labeling)



## Active Cooling



## Product Advantages



**The power supply is equipped with a Vehicle Power plug, which is convenient for vehicle transport**

The power supply can support 12V and 220V conversion, so the container can be put into the car to plug in and transfer



**Built-in, 4°C phase change PCM, ice row cooling, long-term insulation after power failure, to ensure the safety of specimen**

Under the condition of no load at 25°C, the temperature of the air in the box rising to 10°C takes 1 hour; Under the loading condition of 25°C, the air temperature in the box rising to 10°C takes 2 hours



**Precise Temperature Control**

Precise temperature control at 2°C ~ 6°C is suitable for the temporary storage of biological products such as serum and blood specimens



**Active semiconductor cooling, energy saving and environment friendly**

Active semiconductor cooling, energy saving and environmental protection, built-in cooling function, cooling after power on



**Multiple fault alarms, safer to use**

High and low temperature alarm, power failure alarm, sensor error alarm

## Auxiliary Container



**Pressure sealed tank (EPS or EPE holder for fixing test tubes, 16-hole D10 test tube and 2-hole D15 test tube)**

The pressure-sealed tank remains intact at the temperature of the refrigerant used, as well as the temperature and pressure that may occur after loss of refrigeration. Under the condition of no leakage, it can withstand the internal pressure of 95kPa, and can ensure that it will not be damaged in the temperature range of -40°C to + 55°C



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# Transport Cooler for the Infectious Material

## Passive Cooling



UN2814 transport cooler  
HZY-10B (P620)

## Product Advantages



**Passive cooling, long heat preservation time, suitable for air transportation**

At 32°C ambient temperature, the temperature inside the box (pre-cooled in advance) rising to 10°C takes 7 hours (P650) and 8 hours (P620) separately



**PCM ice row, frozen at 4°C, to ensure the safety of specimen storage**



**The shell is made of aluminum-magnesium alloy, with high strength; Meeting the P620 packaging requirements of Class A infectious substances(HZY-10B) and the P650 packaging requirements of Class B infectious substances(HZY-10B) separately**

## Auxiliary Container

**Pressure sealed tank (EPS or EPE holder for fixing test tubes, 16-hole D10 test tube and 2-hole D15 test tube)**

The pressure-sealed tank remains intact at the temperature of the refrigerant used, as well as the temperature and pressure that may occur after loss of refrigeration. Under the condition of no leakage, it can withstand the internal pressure of 95kPa, and can ensure that it will not be damaged in the temperature range of -40°C to + 55°C



## Specifications

Model	HZY-8Z	HZY-15Z
Type	Active cooling, portable	Active cooling, portable
Internal dimensions (W*D*H mm)	230*140*170	430*150*180
External dimensions (W*D*H mm)	320*265*260	520*300*270
Loading quantity	1 transport tank	2 transport tanks
Effective volume	6L, 1 built-in specimen seal can	12L, built-in 2 specimen seal cans
Specimen seal can dimension (mm)	H160*D130	H160*D130
Tube storage capacity	16 pcs D10 test tubes (small), 2 pcs D15 test tubes (large)	
Net weight (kg)	3.5	6
Controller	Microprocessor control	Microprocessor control
Temporary storage temperature (°C)	2-6	2-6
Transfer temperature (°C)	2-10	2-10
Holdover time (25°C, no load) (h)	1	1
Holdover time (25°C, full load) (h)	2	2
External material	ABS, high-density EPS foam filling	ABS, high-density EPS foam filling
Internal material	Aluminum plate	Aluminum plate
Door material	ABS, high-density EPS foam filling	ABS, high-density EPS foam filling
Cold storage	PCM ice-pack for cold storage	PCM ice-pack for cold storage
Cooling type	Optimized semiconductor cooling	Optimized semiconductor cooling
Cooling fan	ADDA fan	ADDA fan
Temperature control and display	Microprocessor control, dual sensors for control and display, display accuracy 0.1 °C	
Alarms	Sensor failure alarm, high temperature alarm, power failure alarm	

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Model	HZY-10B (P620)
Type	Passive cooling
Internal dimensions (W*D*H)(mm)	345*225*182
External dimensions (W*D*H)(mm)	430*312*272
Loading quantity	2 transport tanks
Effective volume	14L with 2 built-in specimen sealed tanks
Specimen sealed tank size (mm)	H160*D130
Number of test tubes (Single tank)	16 test tubes D10 (small), 2 test tubes D15 (large)
Net weight (kg)	8
Transport temperature (°C)	2-10
Thermal insulation time (32°C full load) (h)	8
Cabinet material	Aluminum magnesium alloy box shell
Thermal insulation material	EPP foam liner
Cool storage mode	PCM ice pack cold storage

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# Plasma Blast Freezer



# Plasma Blast Freezer



Mainly intended for the quick-frozen treatment of blood plasma or biological samples to a core below -30°C in blood stations or medical institutions

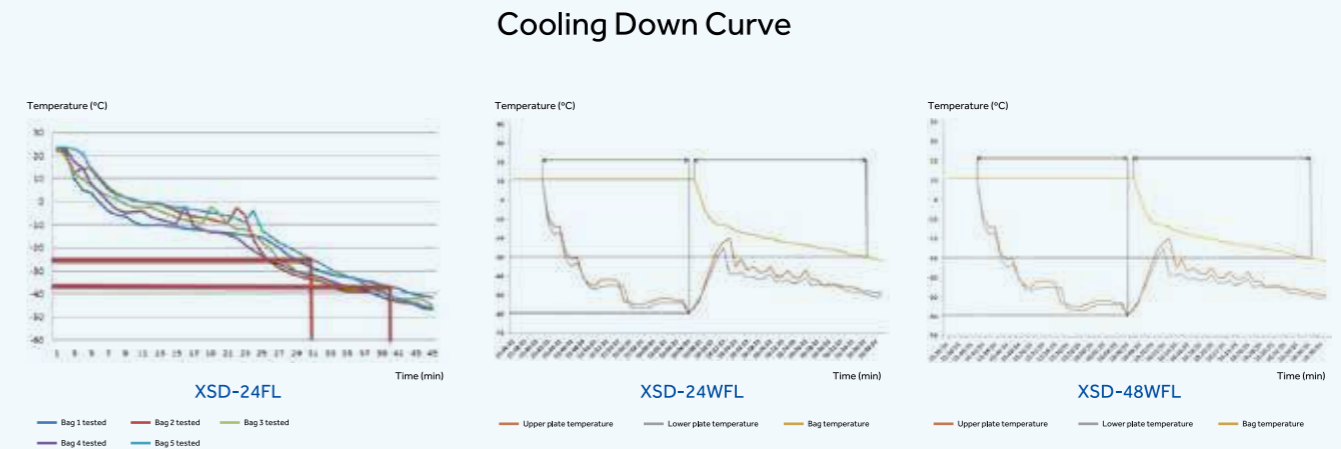


## Product Advantages

- Low rapid-freezing temperature**  
Rapid-freezing temperature can be reduced to -60°C, superior performance
- Data is printable and the information traceable**  
Plasma storage data and corresponding curves can be exported via USB, which is convenient for information traceability
- Efficient core components, energy saving**  
High efficiency compressor and dual-cooling system, better performance; Hydrocarbon refrigerant, energy saving and environmental protection

- Plate rapid-freezing, efficient cooling**  
The central temperature of full-load plasma can be quickly frozen to below -30°C within 45 minutes, which effectively guarantees the activity of factor VIII
- Precise temperature control, control precision 1°C**  
PLC control module, the system is stable and reliable, temperature control precision 1°C, to ensure the safety of plasma

## Cooling Down Curve



## Product Parts



## Specifications

Model	Rapid-cooling Type	Power Supply (V/HZ)	Cooling Method	Power Cord	External Dimension (mm)	Weight (KG)
XSD-24FL	Plate contact refrigeration	3N 380-50/60	Forced air cooling	Plug and play	1455*915*1465	400
XSD-24WFL	Plate contact refrigeration	3N 380-50/60	Forced air cooling	Plug and play	(Indoor unit /Outdoor unit) 1455*915*1465 1500*860*1850	(Indoor unit /Outdoor unit) 400 450
XSD-48WFL	Plate contact refrigeration	3N 380-50/60	Forced air cooling	Plug and play	(Indoor unit /Outdoor unit) 2040*880*1895 1500*860*1850	(Indoor unit /Outdoor unit) 750 450*2

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# Platelet Incubator with Agitator

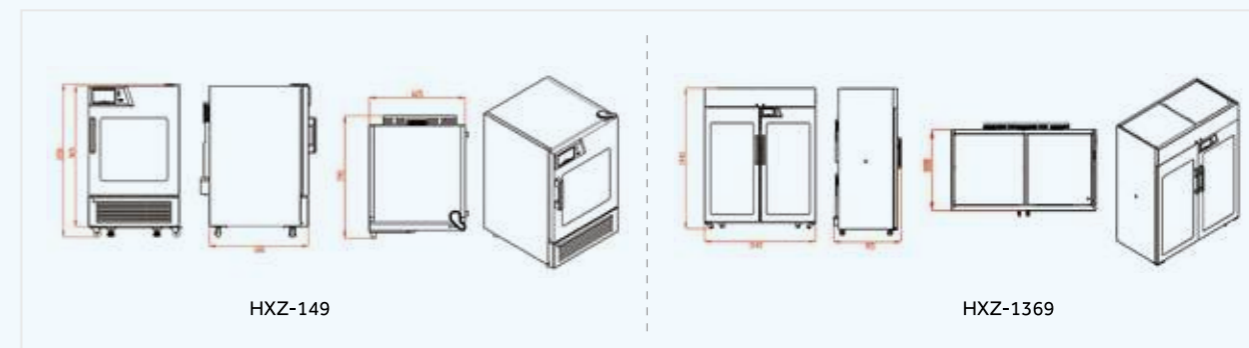


# Platelet Incubator with Agitator



This incubator includes an integrated platelet agitator and is designed to create the optimal storage environment of platelets after collection. Suitable for hospitals, blood stations and research applications

## Product Dimensions



## Product Advantages



### Data Traceability

- Real-time temperature monitoring, records and stores historical data, alarm records and events
- USB interface, convenient and safe data transfer



### Multiple Alarms

- Multiple alarms including overtemperature alarm, power failure alarm, sensor failure alarm, door ajar alarm, low battery alarm, abnormal alarm of oscillating motor, remote alarm ensures maximum safety



### Reliable Oscillation

- The agitator mechanism is equipped with an alarm and calibration device to ensure platelet quality



### Low Noise

- Semiconductor and EBM oscillating motor provide a quiet working environment



### Energy Saving

- Semiconductor temperature control technology, PID algorithm adjustment, energy saving 30% than the traditional compressor



### Superior Insulation Performance

- 60mm thickened foam layer. In the event of a power failure within a 25°C ambient and an empty load, the warm up time from 22°C to 24°C in the center of the chamber is more than 4 hours



### Precise Temperature Control

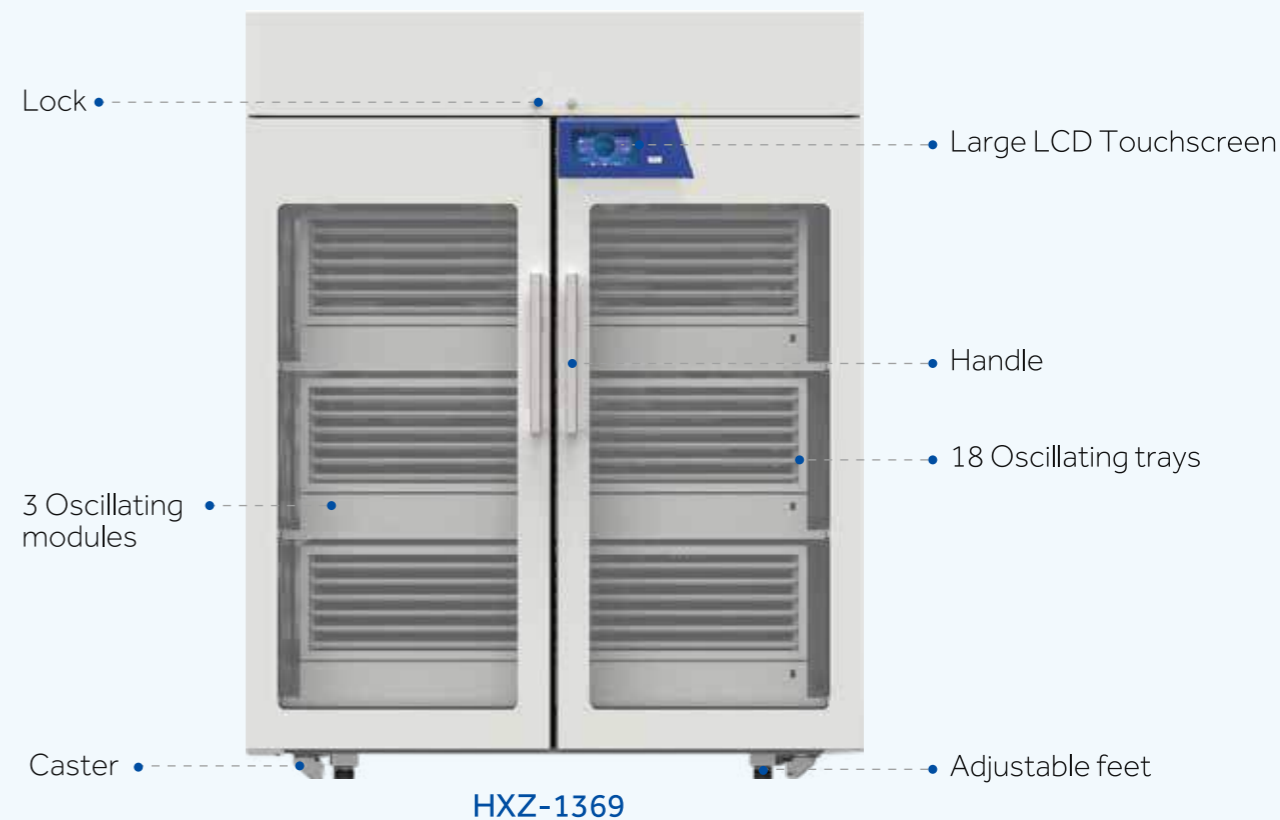
- Semiconductor temperature control, internal temperature is maintained at 22°C±1°C



### Ultraviolet Disinfection

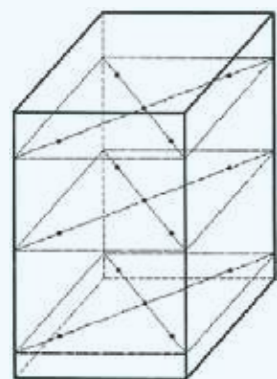
- The UV disinfection function helps maintain a sterile environment

## Product Parts



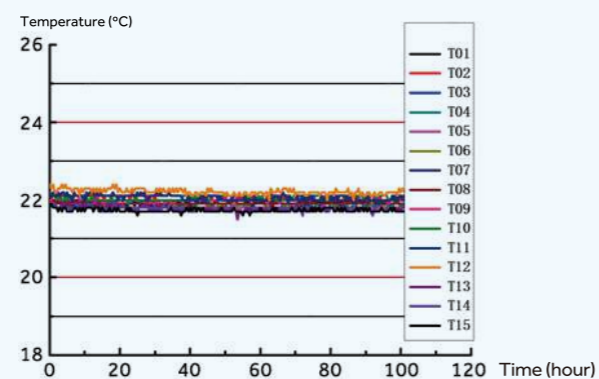
## Platelet Incubator with Agitator

### Cooling Down Curve



HXZ-149 15 test points

HXZ-149 Running temperature curve (Empty loaded)



Temperature uniformity:  $22 \pm 1^\circ\text{C}$   
Single point temperature fluctuation  $< 0.5^\circ\text{C}$

### Specifications

Model	HXZ-149	HXZ-1369
Temperature (°C)	20-24	20-24
Oscillation Range (mm)	50	50
Oscillation Frequency (Times/min)	50±5	60±5
Power Supply (V/Hz)	220-240/50	220-240/50
Exterior Dimensions (mm)	625*795*1050	1545*915*1945
Interior Dimensions (mm)	505*560*610	1425*680*1455
Effective Capacity (L)	149	1369
Tray	9	18
Maximum Storage Capacity (300ml blood bags)	36	216
Net Weight (kg)	114	345

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## Cryogenic Workstation for Blood Applications



HXT-C5-0.7/1.3

A cryogenic workstation for blood and blood component work, such as labelling and audits. For use within hospital blood banks and blood operations.

### Product Advantages



#### Safe Operation

- Tamper-proof adjustable temperature setting with self-locking mechanism.
- High-quality construction, made with corrosion-resistant stainless steel.
- The workstation is fitted with electrical leakage protection.



#### Temperature Control

- Intuitive and clear digital temperature display and microcomputer controller.
- The use of table face plate uniform air supply, uniform temperature, high precision.



#### Ergonomic Design

Designed to be consistent with working bench height for comfortable operation.



#### Refrigeration System

Independent refrigeration system, double compressor control double evaporator, can be installed separately, energy saving, low noise.

### Product Parts

Model	HXT-C5-0.7	HXT-C5-1.3
Power Supply (V/Hz)	220/50/60	220/50/60, 115/50/60
Power (W)	1200	1500
Temperature Range (°C) (adjustable)	2-8	2-8
Ambient Temperature (°C)	10-28	10-28
Exterior Dimensions (W*D*H) (mm)	1200*750*880	1900*850*880
Refrigerated Area (m <sup>2</sup> )	0.65	1.25
Refrigeration Mode	Forced air cooling	Forced air cooling
Weight (kg)	140	190

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# Product Portfolio

Automated Blood Management Refrigerator  
Used at Blood Station



Automated Blood Management Refrigerator  
Used at Hospital



Cold Room



-30°C Plasma Freezer



Standard Blood Bank Refrigerator



Unattended Self-help Blood  
Distribution Refrigerator



Automated Blood Management Refrigerator  
with Touch Screen



Plasma Blast Freezer



Platelet Incubator with Agitator



Automated Blood Management Refrigerator  
with LED Display



Solar Direct Drive  
Blood Refrigerator



Transport Cooler



Cryogenic Workstation for  
Blood Applications

