

# Haier

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## Blood Bank Refrigerator

The Reliable solution for blood storage

# Blood Bank Refrigerator

Haier blood bank refrigerators are 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.



HXC-358B

# Blood Bank Refrigerator

The Haier BBR series provides two styles to storage systems: basket-type andrawer type. They are built in compliance with the requirements of :

- AABB (American Association of Blood Banks)
- DIN 58371 (Germany, "Blutkonserven-Kühlgeräte"/Blood Refrigerators)
- BIS 4376-1: 1991 (UK, "Electrically operated blood storage refrigerators.
- Specifications for closed reach-in types")

## 1 Reliability

- Microprocessor controlled forced-air cooling with electrical heat compensation system
- Digital temperature display for upper and lower sections in chamber with 0.1 °C resolution

## 2 Key Features

- Consistent cabinet temperature 4±1°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

## 3 Safety

- Dual displays of operational parameter temperature recorder display)
- Built-in backup battery to display temperature and to operate audible and visual alarm systems for up to 48 hours without ac power
- Three types of alarm alerts: Buzzer, Flashing light, and remote alarm
- Five alarm conditions: High /low temperature, power failure, sensor error, door ajar, low voltage in backup battery

## 4 Ergonomic Design

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

- 2011, Haier won MOH tender blood bank refrigerator and -86°C ULT freezer in Russia market



- 2011, Haier won the tender "Third National HIV/AIDS Control Project (NACP - III)" and successfully supplied and installed Blood Bank Refrigerators, -86°C ULT Freezers and -40°C Deep Freezers.



# Blood Bank Refrigerator

Lights when display indicates upper sensor temperature

Lights when display indicates lower sensor temperature

Both lighted displays the average temperature of upper and lower sensors

Lighted to indicate power supply connection, flashes to indicate power supply failure



To cancel buzzing

To adjust the displayed temperature

To test alarm function

To calibrate upper sensor, lower sensor and control sensor

To select sensor to calibrate

To cancel calibration

Flashes to indicate alarming status

Alarm	Alarm Triggering Condition
High Temperature	Temperature reaches the warm alarm limit
Low Temperature	Temperature reaches the low alarm limit
Power Failure	Equipment loses power
Probe Failure	1.Main cabinet temperature control sensor fails 2.Condenser sensor fails 3.Ambient sensor fails 4.Heat exchanger sensor fails
Low Battery	Battery capacity runs low or battery switch is not turned on
Door Ajar	Door open period exceeds 600s

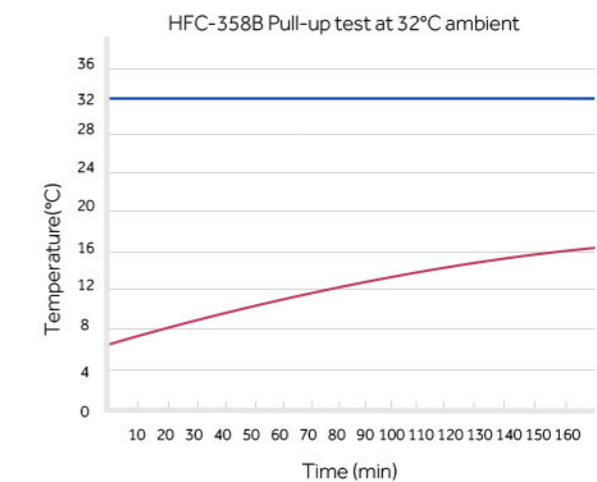
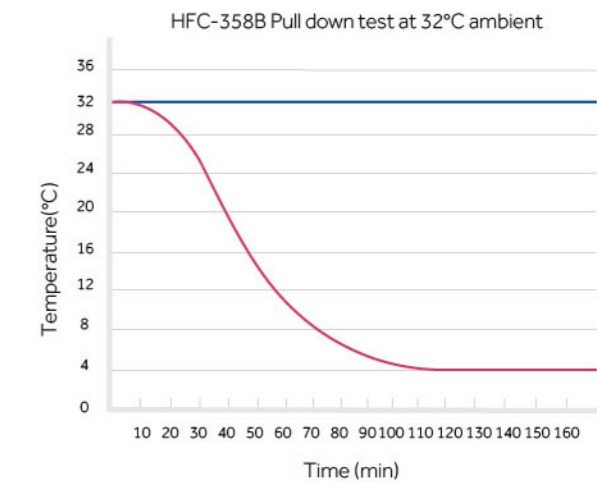
# Blood Bank Refrigerator



The standard drawers can be optionally fitted with adjustable dividers.



This guarantees neatly and clearly arranged storage of your goods.



## 1 Application

- The large capacity blood bank refrigerator(HXC-1308/ HXC-1308B) is a professional equipment to store whole blood. It is widely applied to store pharmacy and biological products in blood banks, hospitals and disease prevention centers.

## 2 Advantage

- More Stable: The temperature range is  $4\pm 1.5^{\circ}\text{C}$ , international leading technology
- Safer: Anti-low/high temperature function
- More Ergonomic: double-layer electrical heated glass door, self-closed function
- Multilayer adjustable shelf
- Basket or stainless steel drawer is optional
- Each shelf mounted with label slot
- "One lock one key" ensures the safety in daily use

## 3 Function

- Large capacity for blood bags
- Each blood basket can be loaded 12 blood bags (450ml blood); Each drawer can load 60 blood bags (450ml blood)
- One HXC-1308 can load 576 blood bags (450ml blood) and for HXC-1308B can load 720 bags(450ml blood)
- Microprocessor control, three inner fans guarantee cabinet temperature within  $2-6^{\circ}\text{C}$  and recover temperature fast after door close.
- Mechanical prevention on high and low temperature, even the control board malfunction, the whole unit can still maintain the cabinet temperature and guarantee the blood in safe storage
- Force and automatic defrost to maintain the refrigerant system work stable
- Perfect alarm system: High /Low temperature alarm, door open alarm, sensor malfunction alarm, remote alarm under audible (buzzer) and visible (light flashing) alarm. It can guarantee the blood safe
- Backup battery, it can support the digital display for 72hours after power off.
- Electrical heating door ensures the non-condensation water on surface



HXC-1308B



HXC-1308B



HXC-1308

## 4 Ergonomic Design

- 90 degree self-close design module avoids forgetting to close the door.
- Large view angle double-layer glass door ensures observation of the blood status without opening the door.
- Two testing holes, users could test the inner temperature freely based on daily use.
- Temperature chart recorder mounted with USB outlet could record 7-day temperature data.
- Auto light LED light module, save energy, more environmentally friendly.
- CFC-free refrigerant, environmental protection foam, low-carbon environmentally friendly
- "One lock one key" ensures the safety in daily use

# Blood Bank Refrigerator

# Blood Bank Refrigerator



## Specification

	Model	HXC-158	HXC-358	HXC-608	HXC-1308	HXC-158B	HXC-358B	HXC-608B	HXC-1308B
<b>Technical Data</b>	Type	Basket-Type				Drawer-Type			
	Climate Class	ST	ST	ST	N	ST	ST	ST	N
	Cooling Type	Forced air cooling	Forced air cooling	Forced air cooling	Forced air cooling	Forced air cooling	Forced air cooling	Forced air cooling	Forced air cooling
	Deforst Mode	Auto	Auto	Auto	Auto	Auto	Auto	Auto	Auto
	Refrigerant	CFC-Free	CFC-Free	CFC-Free	CFC-Free	CFC-Free	CFC-Free	CFC-Free	CFC-Free
	Noise(dB)	42	43	43	43	42	43	43	43
Temperature Range(°C)	4±1	4±1	4±1	4±1.5	4±1	4±1	4±1	4±1.5	
<b>Performance</b>	Ambient Temperature (°C)	10-38	10-38	10-38	10-32	10-38	10-38	10-38	10-32
	Controller	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor
<b>Control</b>	Display	LED	LED	LED	LED	LED	LED	LED	LED
	Power Supply(V/Hz)	220-240/50/60	220-240/50/60	220-240/50/60	220-240/50/60	220-240/50/60	220-240/50/60	220-240/50/60	220-240/50/60
<b>Electrical Data</b>	Power(W)	400	460	490	850	400	560	560	850
	Electrical Current(A)	2.6	3	4	4.2	2.6	3	4	4.2
	Capacity(L/Cu.Ft)	158/5.6	358/12.7	608/21.5	1308/46.2	158/5.6	358/12.7	608/21.5	1308/46.2
<b>Dimensions</b>	Blood Storage Capacity (450ml blood bags)	84	200	300	576	84	200	360	720
	Net/Gross Weight(approx)	107/120(kg) 235.9/264.6(lbs)	158/174(kg) 348.3/383.6(lbs)	204/227(kg) 449.7/500.4(lbs)	310/360(kg) 683.4/793.7(lbs)	107/120(kg) 235.9/264.6(lbs)	158/174(kg) 348.3/383.6(lbs)	204/227(kg) 449.7/500.4(lbs)	310/360(kg) 683.4/793.7(lbs)
	Interior Dimensions (W*D*H)	460*370*950(mm) 18.1*14.6*37.4(in)	620*490*1160(mm) 24.4*19.3*45.7(in)	680*640*1400(mm) 26.8*25.2*55.1(in)	1320*700*1500(mm) 52.0*27.6*59.1(in)	460*370*950(mm) 18.1*14.6*37.4(in)	620*490*1160(mm) 24.4*19.3*45.7(in)	680*640*1400(mm) 26.8*25.2*55.1(in)	1320*700*1500(mm) 52.0*27.6*59.1(in)
	Exterior Dimensions (W*D*H)	560*570*1530(mm) 22.0*22.4*60.2(in)	720*690*1730(mm) 28.3*27.2*68.1(in)	780*840*1945(mm) 30.7*33.1*76.6(in)	1440*925*1980(mm) 56.7*36.4*78.0(in)	560*570*1530(mm) 22.0*22.4*60.2(in)	720*690*1730(mm) 28.3*27.2*68.1(in)	780*840*1945(mm) 30.7*33.1*76.6(in)	1440*925*1980(mm) 56.7*36.4*78.0(in)
	Packing Dimensions (W*D*H)	637*667*1647(mm) 25.1*26.3*64.8(in)	797*787*1857(mm) 31.4*31.0*73.1(in)	857*937*2097(mm) 33.7*36.9*82.6(in)	1600*1010*2100(mm) 63.0*39.8*82.7(in)	637*667*1647(mm) 25.1*26.3*64.8(in)	797*787*1857(mm) 31.4*31.0*73.1(in)	857*937*2097(mm) 33.7*36.9*82.6(in)	1600*1010*2100(mm) 63.0*39.8*82.7(in)
	Container load (20'/40'/40'H)	27/54/54	14/30/30	12/26/26	6/12/12	24/54/54	14/30/30	12/26/26	6/12/12
<b>Functions</b>	High/Low Temperature	Y	Y	Y	Y	Y	Y	Y	Y
	Power Failure	Y	Y	Y	Y	Y	Y	Y	Y
	Sensor Error	Y	Y	Y	Y	Y	Y	Y	Y
	Low Battery	Y	Y	Y	Y	Y	Y	Y	Y
	Door Ajar	Y	Y	Y	Y	Y	Y	Y	Y
	Remote Alarm	Y	Y	Y	Y	Y	Y	Y	Y
<b>Accessories</b>	Caster	Y	Y	Y	Y	Y	Y	Y	Y
	Foot	Y	Y	Y	Y	Y	Y	Y	Y
	Test Hole	Y	Y	Y	Y	Y	Y	Y	Y
	Shelves/Baskets	4/16	5/20	6/24	12/48	-	-	-	-
	Drawers/Inner doors	-/2	-/3	-/3	-/6	4(Drawers)	5(Drawers)	6(Drawers)	12(Drawers)
	USB Interface	N/A	N/A	N/A	Y	N/A	N/A	N/A	Y
<b>Others</b>	Temperature Recorder	Optional	Y	Y	Y	Y	Y	Y	Y
	Certificate	CE	CE	CE	CE	CE	CE	CE	CE

# Mobile Blood Bank Refrigerator

This product is designed to be installed on ambulances, blood transportation vehicles and vaccine transportation vehicles. It can operate safely in an extremely hostile environment between -2°C and 43°C with the humidity up to 80%.

- 2008, Haier Blood Transportation Box, won the bid of UNOPS/NACO/BTB/35/2008, from Indian National AIDS Control Organization.
- 2013, Haier made a great breakthrough in Turkey market, broke more than 10 years domination of D brand and won 170 units mobile blood bank refrigerator in Turkey Redcrescent.



## 1 Temperature Control

- Microprocessor control with digital temperature display at two modes of 4 °C to 22 °C
- Forced air cooling system for the chamber to reach ± 1.5 °C. At 4 °C setting, the chamber temperature range is 2.5°C to 5.5°C. At 22°C setting, the chamber temperature range is 20 °C to 24°C

## 2 Safety System

- Alarm system to offer audible buzzer and visible flashing light for high temperature
- Built-in battery can provide power for temperature display and alarm system for 72 hours in case of power outage
- Microprocessor control to provide realtime information on electricity supply for refrigerators from vehicles



# Mobile Blood Bank Refrigerator

## 3 Control and refrigeration systems

- Specialized hermetically sealed compressor and ADDA fan
- Forced air cooling system designed to provide stable and uniform chamber temperature
- Finned coil evaporator design for maximum cooling ability
- Electric heater designed to provide speedy defrost process

## 4 Ergonomic design and key features

- Double layer blood basket design
- Double lock design to accommodate padlock
- LED display with 45 degree viewing angle
- Wide voltage range with power selection of DC12/24V and AC 100-240 V/AC, 50/60 Hz
- Formed cabinet, easy to clean exterior
- Drainage tube inside the cabinet
- Built with handles and casters for ease of moving

	Model	HXC-80
<b>Technical Data</b>	Cabinet Type	Chest
	Climate Class	T
	Cooling Type	Forced air cooling
	Defrost Mode	Manual
	Refrigerant	CFC-Free
<b>Performance</b>	Temperature Range(°C)	4±2 or 22±2
	Ambient Temperature(°C)	-2 to 43
<b>Control</b>	Controller	Microprocessor
	Display	LED
<b>Electrical Data</b>	Power Supply(V/Hz)	DC12/24V; AC 100-240V/50-60Hz Automatic power supply selection
	Power(W)	DC75; AC105
	Electrical Current(A)	6A at DC 12V, 3A at DC 24V, 1A at AC 100V, 0.45A at AC 240V
<b>Dimensions</b>	Capacity(L/Cu.Ft)	80/2.8
	Blood Storage Capacity(450ml blood bags)	48
	Net/Gross Weight(approx)	58/65(kg) 127.9/143.3(lbs)
	Interior Dimensions(W*D*H)	504*350*513(mm) 19.8*13.8*20.2(in)
	Exterior Dimensions(W*D*H)	1000*550*856(mm) 39.4*21.7*33.7(in)
	Packing Dimensions(W*D*H)	1145*615*950(mm) 45.1*24.2*37.4(in)
<b>Functions</b>	Container load (20'/40'/40'H)	36/76/76
	High/Low Temperature	Y
	Power Failure	Y
	Sensor Error	Y
	High Ambient Temp	Y
<b>Accessories</b>	Caster	Y
	Baskets	4
<b>Others</b>	Certificate	CE