

BLOOD BANK – LIFE SCIENCE

DECEMBER - 2008



MEDICAL EQUIPMENTS

**BLOOD BANKS
LIFE SCIENCE**

Quality System Standard applied: **ISO 9001-2000**

Product Standard applied: **ISO 14001**

Product Standard applied: **ISO 13485/2003**

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International Quality Share with the World



COMPANY PROFILE

With a registered capital of RMB(Chinese Renminbi) 130,000,000, Co.H Medical and Laboratory Products Co., Ltd. is a division of Co.H Group. It specializes in design, manufacturing, and marketing of a wide range of scientific products such as low temperature freezers for scientific application. The company has built a complete infrastructure to support a full effort for product research and development to satisfy the needs of the marketplace. Production capability for scientific products can sustain an annual quantity of 800,000 units of various models.

Co.H Medical has been growing steadily since 1998 when the Co.H -40°C freezers were developed. Today, these -40°C freezers have become the workhorse units in many scientific fields such as medical institutions. In 2001, Co.H Medical was awarded an international bid of blood bank refrigerators for western China. To further support the manufacturing of these blood banks and other medical products, Co.H Medical invested a new dedicated production line in the Co.H (Huangdao) complex. The progressive advancement of the business resulted in a growing interest by the Chinese medical research community for Co.H Medical Company and its products. Meanwhile, the demand for low temperature storage brought together a team of scientists to develop a new line of cryogenic freezers. The team members included experts in cryogenics, hygiene, epidemic prevention, medicine and experienced engineers. Their effort led to an impressive accomplishment of a complete line including the already established $+4 \pm 1^{\circ}\text{C}$ blood banks, ultra-low temperature freezers, and -150°C cryogenic freezers. In 2004, Co.H won another major international bid of HSCC/PUR/IMMU-III/3/2002 to supply ice-lined refrigerators to India, which signaled the beginning of the Co.H medical products to share the global market. As the company continued to amass these successes, Co.H also simultaneously established design institutes and manufacturing plants in the United States and Korea. These establishments have furthered the company's ability to compete in the world scientific market.

COMPANY PROFILE

Medical and Laboratory Equipments

Selected to be the brand labeled "Most Valuable" in China, Co.H places its focus on becoming a professional supplier of temperature products with continuous development of modern ergonomic design, reliable service support, and an efficient global networks of logistics. The initiatives generated further financial return as the World Health Organization(WHO)recognized Co.H' s accomplishments by authorizing the manufacturing of freezers for the WHO-7 program. Today, Co.H freezers are being widely used by about five hundreds Chinese blood banks and thousands of hospitals and medical research institutes.Applications can be found in storage of blood products, pharmaceutical products, biological engineering, medical studies, clinic treatment, agriculture research, stockbreeding, hygiene, and epidemic prevention.

Along with product development, Co.H Medical and Laboratory Products Co., Ltd. has been awarded technology patents. Special techniques of design and manufacturing have also been perfected. As the author for the Chinese ULT Freezer Standards effective in November 2006, Co.H has also become a reputable international supplier of frost-free blood banks and cascade technology for -60°C and -85°C blast-freezing units.Haier's ULT freezer project proudly won funding of RMB 10,000,000 from the National Development and Reform Commission of China.

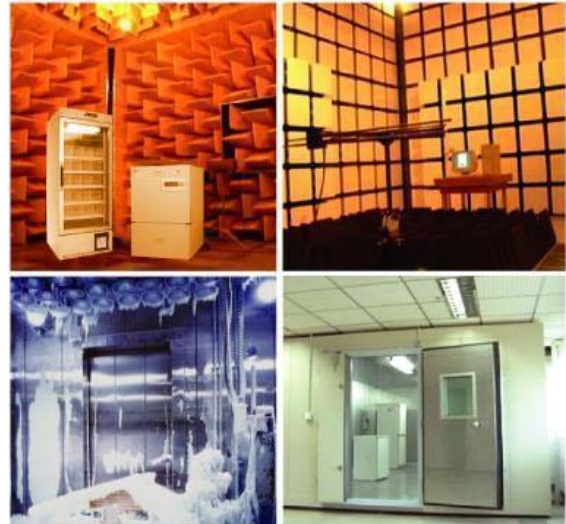
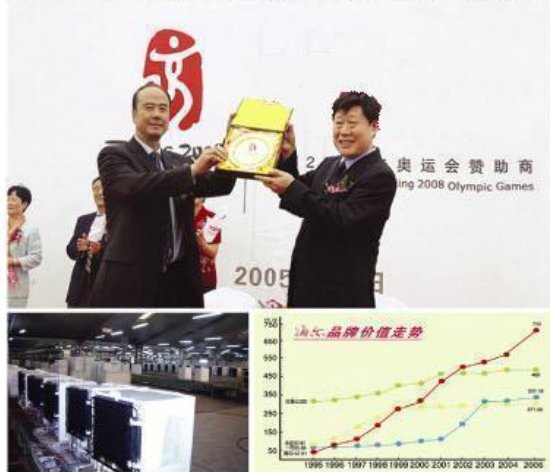
To perfect its product quality cycle, the company established a service network across China in towns and cities in accordance with national standards. Direct service phone number and service agents are available for customer's convenience.

Co.H is an ISO9001 and ISO14001 company with a strong commitment to quality from its own management.

Co.H will continue to strive to be a stronger leader in the global market of medical and laboratory equipments.



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Brand

In 2007, Co.H Group achieved sales of 118 billion RMB. The value of Haier brand name was calculated at 78.6 billion RMB. It was selected the Best Value Brand in China. The company established local design centers, manufacturing plants, and trading companies in over thirty countries.

As one of sponsors of Beijing Olympic Game in 2008, Co.H Group grows as "faster, higher and stronger" which also is the perfect union between Olympic Spirit and Co.H' Slogan "dares to break through and dares to innovate".

While facing an increasing global challenge, Co.H has strategized to build its brand name across the world. The corporate spirit of "creative source, well-known in the world" and "individual goal combination for fast actions and results" will continue to foster enhancement of the Co.H' brand name in the worldwide market.

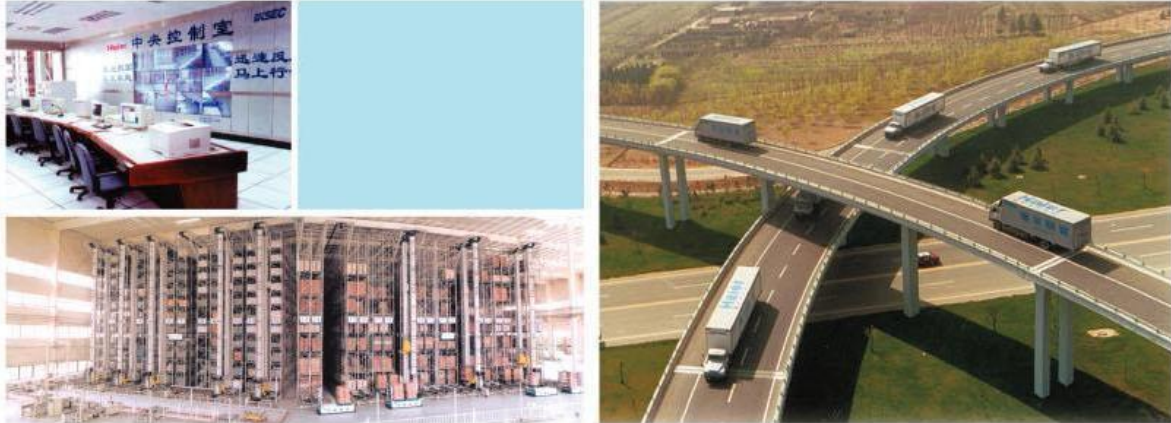
Technology

Co.H is equipped with 4 national laboratories that include an environmental laboratory, a global climate simulation center, and an acoustic laboratory. All employ the latest high technology. These laboratories provide the testing environments for engineers to develop reliable products that fit every possible ambient condition for Co.H units.



ADVANTAGES

Medical and Laboratory Equipments



Global Supplier

Co.H's logistic system and procurement management leads a network of suppliers and informations. Quantity purchasing causes lower cost than other competitors. Co.H also exercises a stringent incoming inspection procedure on parts as they arrive with an advanced test system. The Co.H system allows the professional procurement team to provide direct, efficient, and effective service to all sectors of our business.



Service

Co.H is well known for its after-sales services. From 1985 through 2002, Co.H improved its service with ever-increasing service latitudes offered to our customers.

MEMORABILIA



- 1998, -40°C freezer was launched into the market;
- 2000, Co.H blood bank refrigerators, deep freezers, and ULT freezers were registered in the Health Department of the Chinese Government;
- 2001, Co.H was awarded a large bid of supplying 823 blood bank refrigerators for China's Middle West blood bank construction project. Meanwhile, Co.H blood bank refrigerators were installed in over 500 blood banks in China;
- 2001, Co.H Group Company established a special manufacturing line in Huangdao Co.H Industry Park;
- 2002, Co.H deep freezer of -60°C and -86°C was launched into the Chinese market;
- 2004, Co.H began launching into the global market by supplying 10,000 units of ILR's for India under a World Health Organization (WHO) project;
- 2004, Co.H was charged to establish a new National Standard for ULT Freezer based on the requirements of the Ministry Health of the Chinese Government;
- 2004, Co.H laboratory equipment began to serve customers in Southeast Asian countries;
- 2005, Co.H was funded by the National Development and Reform Commission for about RMB 10,000,000 for research and development;
- 2005, Co.H's -150°C cryogenic freezers were launched into the market. This signaled the beginning of Co.H's medical and laboratory freezers covering most application temperature ranges;
- 2005, Co.H's blood work bench was launched into the market. The product filled the need of providing a work environment for proper processing of dispatching blood without cold-chain rupturing--a problem that existed for a long time. The quality of the blood supply was therefore improved. Additionally, Co.H blood Worktable was certified by the Qingdao Science commission. After that, more and more blood bank centers in China also started using the blood worktable;
- 2006, Co.H completed the draft of Deep Freezer Standard for Chinese Government;
- 2007, Co.H was certificated by ISO 13485:2003 by Germany, who is also the first one certificated in Chinese market in Bio-medical and low temperature field;
- 2007, Co.H brand low temperature plasma sterilizer was launched into the medical and researching market;
- 2008, Co.H won in the tender of Chinese government procurement for assisting Cuba government;
- 2008, Co.H won in the UNOPS tender in India and qualified supplying 15000 Ice-Line Refrigerators and Vaccine and Ice Pack Freezer;

Medical and Laboratory Equipments



4°C Blood Bank Refrigerators

Auto Defrost, Forced-Air Circulation

The blood bank refrigerators are specially designed to store blood (whole blood). They can also be used in keeping pharmaceuticals, biological products and so on.

These products are applicable in blood banks, hospitals, epidemic prevention services and so on.

- In 2001, H.C.Co. was the only one who won the tender of "Program for Establishment of Blood Banks in Middle and Western China" for supplying the blood bank refrigerators.



HXC-936

REFRIGERATORS

Medical and Laboratory Equipments



HXC-158



HXC-358



HXC-608

Temperature Control

- Forced-air cooling, electrically heated balancing and microprocessor controlling system ensure a constant temperature within $4 \pm 1^\circ\text{C}$.
- Digital display showing average temperature, upper and lower set points with resolution of 0.1°C for observation and monitoring.
- Adjustable temperature set points within $2\text{--}8^\circ\text{C}$ with an increment of 0.1°C .
- Using five digital integrated sensors to display and control;
- Temperature recorder to monitor safety system whole course.

Safety Control

- Dual displayed operating information.
- Inner-fixed storage battery to keep displaying chamber temperature and alarming for 72 hours.
- Malfunction alarms: over or under temperature, power failure, sensor error, door opening, low voltage of backup battery.
- Alarm representations: buzzing, flashing, remote signal.
- Double temperature recording when power fails.
- Double safe operation programs (sensor defect and disorganized digits).

Ergonomic Design

- Auto-defrost function to be used in high temperature and humidity area.
- Safety lock to prevent unauthorized access.
- Large digital display for easier observation.
- Sorted blood storage for easy operation.
- Inner light.
- Caster design.
- Broad climatization under ambient temperature $10^\circ\text{C}\text{--}32^\circ\text{C}$.

Transparency Design

- Auto defrost technology on outer door to prevent condensed vapor under 85% humidity.
- Transparent inner door.
- Foaming case and transparent double glass outer door.

Control Panel



Display panel layout is shown in above picture. Lamp colors and buttons are defined as follows:

Lamps and Colors

- ALARM(red): Flashes to indicate alarming status.
- UPPER(orange): Lighted when display indicates upper sensor temperature.
- LOWER(orange): Lighted when display indicates lower sensor temperature.
- UPPER and LOWER both lighted: Displays the average temperature of upper and lower sensors.
- POWER(red): Lighted to indicate power supply connection; flashes to indicate power supply failure.

Buttons

- BUZZER: To cancel buzzing.
- TEMP TRAN: To adjust the displayed temperature.
- ALARM TEST: To test alarm function.
- CAL: To calibrate upper, lower and control sensors.
- SENSOR: To select sensor to calibrate.
- CAL CANCEL: To cancel calibration.
- SENSOR+CAL CANCEL: To set temperature(hold for 3s).

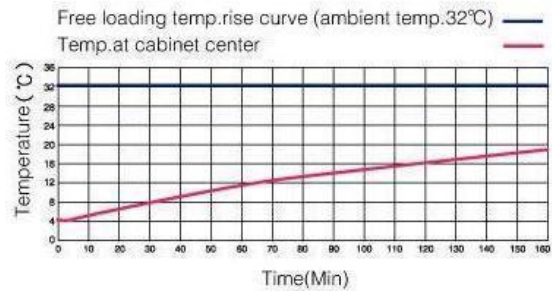


REFRIGERATORS

Medical and Laboratory Equipments



- 7-day circular chart temperature recorder.
- No ink is required.



Specification

Model No.	HXC-158	HXC-358	HXC-608	HXC-936
Liters	158	358	608	936
Input Power	350W	460W	490W	930W
Temp.range	4 ± 1 °C			4 ± 1 °C
Ambient temp.	10°C ~ 32°C			10°C ~ 32°C
Voltage	220V~240V/50Hz/60Hz			220V~240V/50Hz 115V/60Hz
Temperature control	Microprocessor control			Microprocessor control
Power failure alarm	Audible and visual alarm(72hours)			Audible and visual alarm (72hours)
Door	Single glass door			Double glass door
Foam insulation	CFC-free			CFC-free
Compressor	Danfoss compressor			Danfoss compressor
Refrigerant	R134a			R134a
Door lock	1			2
Casters	4			4
Interior light	10W*1	15W*1	15W*1	35W*2
Charge battery	DM8-6(8V6AH)35W*			
Shelves/Box	4/4	5/20	6/24	6/42
Interior Dimensions (mm)(WxDxH)	460X350X950	620X470X1160	680X620X1400	1025X590X1560
Exterior Dimensions (mm)(WxDxH)	560X570X1520	720X690X1730	780X840X1960	1130X700X2195
Packing Dimensions (mm)(WxDxH)	645X630X1632	797X766X1780	910X855X2070	1195X760X2283
Storage Capacity	108bags/200ml	300bags/200ml	432bags/200ml	320bags/450ml
Net/gross Weight(kg)	107/120	158/174	204/227	262/316
Container load(sets)20'/40'/40'H	27/57/57	21/45/45	12/28/28	12/30/30

2~8°C Pharmacy Refrigerators

Forced-Air Circulation

The H.Co pharmacy refrigerators are designed to store pharmaceutical products, medicine, and other related products. Typical installations can be found in drug stores, epidemic prevention service centers, pharmaceutical companies, and many other places.



HYC-360



HYC-940



- Danfoss compressor, ultra low noise.



- Germany EBM condensation fan.

- Transparent double glass door.

- Stop caster design.



Lamps and Colors

- ALARM(red): Flashes to indicate alarming status.
- UPPER(orange): Lighted when display indicates upper sensor temperature.
- LOWER(orange): Lighted when display indicates lower sensor temperature.
- UPPER and LOWER both lighted: Displays the average temperature of upper and lower sensors.
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Buttons

- BUZZER: To cancel buzzing.
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- ALARM TEST: To test alarm function.
- CAL: To calibrate upper, lower and control sensors.
- SENSOR: To select sensor to calibrate.
- CAL CANCEL: To cancel calibration.
- SENSOR+CAL CANCEL: To set temperature(hold for 3s).

REFRIGERATORS

Medical and Laboratory Equipments

Refrigeration System

- Danfoss compressor and EBM fan for condenser.
- Forced air circulation for large airflow with optimized air channels to deliver superior temperature uniformity.
- Special evaporator design to increase cooling capacity for quick temperature pulldown and recovery.

Safety Control

- Alarms for system malfunctions, over and under temperature, and sensor error.
- Alarm buzzer representation: audible and visible.
- Built-in chargeable battery to sustain displaying the temperature and alarm for 72 hours if power failure.

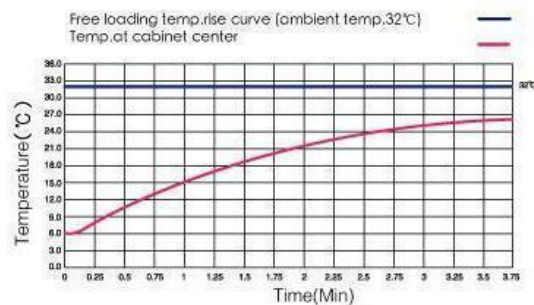


Ergonomic Design

- Multilevel adjustable shelves for flexible storage of pharmaceutical products of various dimensions.
- Door lock ensures safety to prevent unauthorized access.
- Large LED digital display for easy observation.
- Wide voltage tolerance, suitable for application with unsteady voltage.
- Applicable ambient temperature range of 10 to 35°C with humidity up to 60%.
- Polyurethane foam insulation, transparent double glass outer door.
- Lockable casters.
- Inner lights.

Transparency Design

- Digital display, cabinet temperature within 2~8°C.
- Power-on indicator.



Specification

Model No.	HYC-940	HYC-610	HYC-360
Liters	940	610	360
Input Power	930W	490W	310W
Temp. range	2~8°C	2~8°C	2~8°C
Ambient temp.	10°C~32°C	10°C~32°C	10°C~32°C
Voltage	115V/60Hz 220V/50Hz	220V/50Hz/60Hz	220V/50Hz/60Hz
Temperature control	Microprocessor control	Microprocessor control	Microprocessor control
Over temperature and undertemperature	Audible and visual alarm	Audible and visual alarm	Audible and visual alarm
Cabinet	Upright	Upright	Upright
Door	Double glass	Single glass	Single glass
Foam insulation	CFC-free	CFC-free	CFC-free
Compressor	Danfoss compressor	Danfoss compressor	Danfoss compressor
Refrigerant	R134a	R134a	R134a
Door lock	2	1	1
Casters	4	4	4
Interior light	35W*2	15W*1	15W*1
Shelves	6	6	5
Interior Dimensions (mm)(WxDxH)	1025x590x1560	680x620x1400	620x655x1955
Exterior Dimensions (mm)(WxDxH)	1130x700x2195	780x840x1960	451x530x1400
Packing Dimensions (mm)(WxDxH)	1195x760x2283	910x855x2070	690x715x2065
Net/gross Weight(kg)	220/273	204/227	103/112
Container load(sets)20'/40'/40'H	12/30/30	12/28/28	24/51/51

Pharmacy Refrigerators



HYC-68



HYC-68A



REFRIGERATORS

Medical and Laboratory Equipments

Temperature Control

- Microprocessor control, digital display and easy control.
- Forced-air cooling system with good uniformity and accurate temperature control.

Transparency Design

- It is easier to find that cabinet temperature, alarm situation of cooling system, highest or lowest temperature during the running, high and low alarm temperature and temperature of set value.

Alarm System

- Perfect alarm system with audible and visible ways for high or low temperature alarm, sensor failure alarm, door opening alarm.

Refrigeration System

- CFC-free refrigerant with good cooling performance system.
- DC power for air fan and LED light which lead ultra-low electricity consumption and noise.

Ergonomic Design

- Adjustable shelves.
- Anti-corrosion and easy clean interior cabinet.
- Interior light with switch outside, you can clearly watch the pharmaceutical inside without door-open.
- Door lock with key.
- Adjustable foot can make machine stay level.
- Full range handle.
- With temperature offset function.
- Multi-function parameter can be reset by control panel.

Specification

Model No.	HYC-68	HYC-68A
Door	Soild Door	Glass Door
Voltage(V/Hz)	220/50 115/60	
Climate Type	N	
Input Power (W)	84	
Temp.range(°C)	2-8	
Liters(L)	68	
Net/gross Weight(kg)	38/40	
Shelves/Baskets	2/1	
Interior Dimensions (mm)(WxDxH)	425X351X314	425X351X314
Exterior Dimensions (mm)(WxDxH)	500X490X640	500X490X640
Packing Dimensions (mm) (WxDxH)	540X615X705	540X615X705
Container load(sets)20'/40'/40'H	108/228/228	108/228/228

2~8°C Ice-lined Refrigerators

Manual Defrost

These refrigerators are designed to store vaccines, pharmaceuticals, blood and so on.

These products are applicable in epidemic prevention services, clinics, hospitals, blood banks, research institutes and so on.

- In 2004, H.Co was the only one who won the bid of "HSCC/PUR/IMMU- III /3/2002" in India to supply ice-lined refrigerators of 10,000 sets.
- 2008, H.Co won in the UNOPS tender in India and qualified supplying 15000 Ice-Line Refrigerators and Vaccine and Ice Pack Freezer.



HBC-70



Ice-pack interlayer



HBC-200



Control panel

REFRIGERATORS

Medical and Laboratory Equipments

Refrigeration System

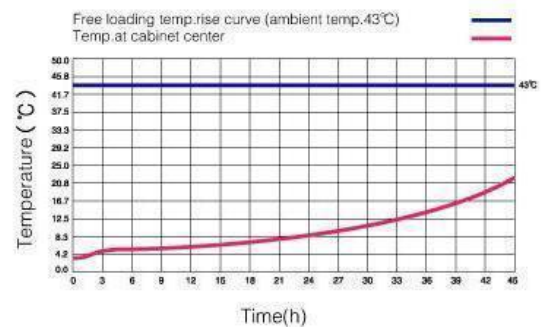
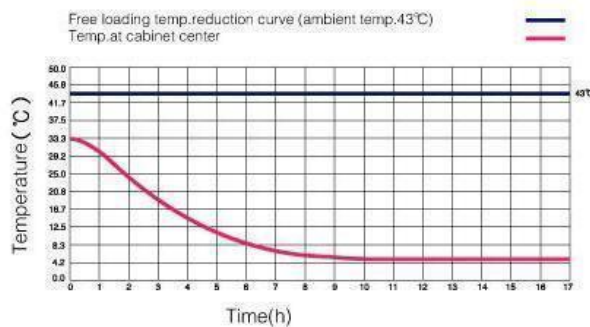
- Temperature controlled by microprocessor controller.
- CFC-free polyethylene insulation course.
- Superior refrigeration effect with an optimized evaporator and condenser design.
- Dual interior layer design features built-in ice packs to keep the chamber temperature at a range of 2 to 8°C for up to 24 hours at an ambient of no warmer than 43°C without power, presuming the ice-packs are fully charged.
- Meets WHO/UNICEF standards.
- Ambient rating from 10 to 43°C.

Temperature Control

- Digital temperature display.
- Power on/off indicator.
- Cabinet temperature range 2°C to 8°C.

Ergonomic Design

- Safety lock to prevent unauthorized access.
- Stainless steel interior for cleanliness and ease of use.
- Drainage system for easy cabinet cleaning.



Specification

Model No.	HBC-200	HBC-70
Liters	200	70
Input Power	210W	140W
Temp. range	2~8°C	2~8°C
Ambient temp.	10°C~43°C	10°C~43°C
Voltage	220V~240V/50Hz	220V~240V/50Hz
Shelves/Drawers/Baskets	-/-/3	-/-/2
Exterior Dimensions(mm) (WxDxH)	1325x760x880	755x760x880
Interior Dimensions(mm) (WxDxH)	970x360x610	400x360x610
Packing Dimensions(mm) (WxDxH)	1330x760x860	756x750x880
Net/gross Weight (kg)	109/115	65/70
Container load(sets)20'/40'/40'H	24/54/81	42/90/135

-25°C Vaccine & Ice pack Freezer

Manual Defrost

H.Co Vaccine & Ice Pack Freezer are designed to store blood plasma, biological materials, vaccines, testing reagents and other laboratory materials. Typical installations are found in research institutes, blood banks, hospitals, epidemic prevention services, and livestock systems.

- 2008, H.Co won in the UNOPS tender in India and qualified supplying 15000 Ice-Line Refrigerators and Vaccine and Ice Pack Freezer.



HBD-116



HBD-286



Control panel

Temperature Control

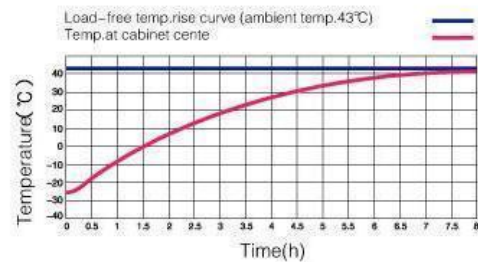
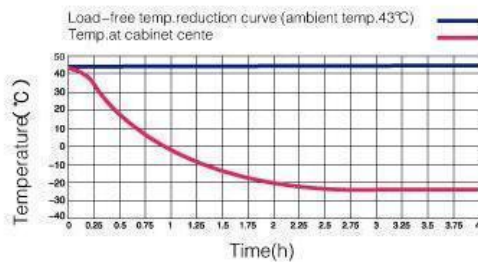
- Mechanical temperature control.
- Digital temperature display.
- Adjustable temperature range from -10 to -25°C .

Refrigeration System

- Highly efficient Danfoss compressor.
- CFC-free refrigerants.
- Fully CFC-free polyethylene insulation.
- Superior cooling performance with optimized evaporator and condenser designs.

Ergonomic Design

- Storage Box designs for convenience of vaccines and icepack.
- LED digital temperature display for easy observation.
- Wide applicable voltage tolerance of 187 VAC to 242 VAC.
- Door handle design for easy operation.
- Water drainage for easy cabinet cleaning.
- Casters for easy moving unit.



Specification

Model No.	HBD-286	HBD-116
Liters	286	116
Input Power	200W	140W
Temp. range	$-15^{\circ}\text{C} \sim -25^{\circ}\text{C}$	$-15^{\circ}\text{C} \sim -25^{\circ}\text{C}$
Ambient temp.	$10^{\circ}\text{C} \sim 43^{\circ}\text{C}$	$10^{\circ}\text{C} \sim 43^{\circ}\text{C}$
Voltage	220V~240V/50Hz	220V~240V/50Hz
Shelves/Drawers/Baskets	-/-/2	-/-/1
Exterior Dimensions(mm) (WxDxH)	1325x760x880	755x760x880
Interior Dimensions(mm) (WxDxH)	1065x455x647	495x455x647
Packing Dimensions(mm) (WxDxH)	1325x760x880	755x760x880
Net/gross Weight (kg)	76/82	53/58
Container load(sets)20'/40'/40'H	24/54/81	42/90/135

Medical refrigerator and freezer



This product is designed to store pharmaceuticals, biological products and so on. This product is applicable in drug stores, pharmaceutical plants, hospitals, epidemic prevention services, clinics and so on.

HYCD-215

Forced-Air Circulation, Stable Temperature

- Two floors room, one for refrigerator and the other for freezer, it is very convenient to use.
- Microprocessor control, digital display of temperature.
- Forced-Air circulation system to ensure the stability of temperature.
- The refrigerator room can be power off separately, it can save electricity.

Temperature Control

- Microprocessor control, adjustable digital temperature readout with the increment of 1°C.
- Forced-air circulation system to ensure the stability of temperature.

Safety Control

- Malfunction alarms: over or under temperature, sensor error.
- Alarm representations: buzzing, flashing.

Refrigerator&Freezer

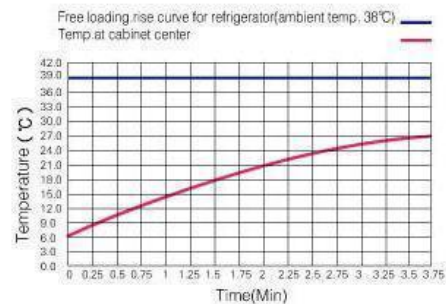
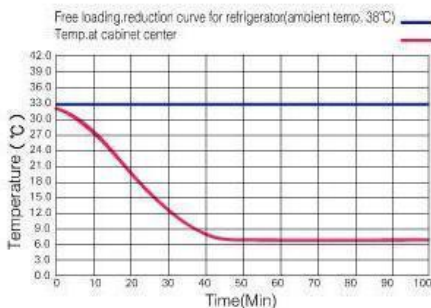
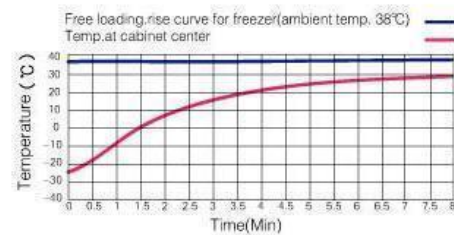
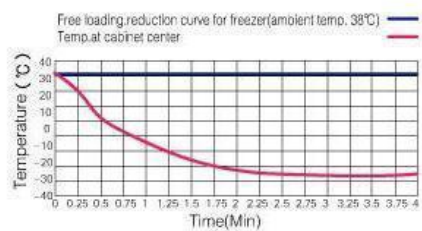
Medical and Laboratory Equipments

Refrigeration System

- Forced-air circulation structure and reasonable design of airflow channel to ensure temperature uniformity.
- Reasonable design of condensate evaporator to increase cooling coverage and temperature reduction efficiency.
- Outstanding design of cooling system to save energy.

Ergonomic Design

- Large digital temperature display.
- Two cabinets: refrigerator and freezer, convenient to handle.
- The refrigerator room can be closed separately.
- Multilevel shelves and drawer design to take full advantage of space.
- Broad climatization range under ambient temperature of 10~38°C.
- Inner light in refrigerator cabinet.



Specification

Model No.	HYCD-215	Model No.	HYCD-215
Total net volume	215L	Refrigerant	R600a (CFC-free)
Refrigerator volume	130L	Cabinet and Outer door	Cold-roll steel with powder coating
Freezer volume	85L	Inner material	HIPS
Input power	110W	Foaming Insulation	C/P
Temperature range	refrigerator: 2 ~ 10°C; freezer: -16 ~ -26°C	ambient temperature	38°C
Voltage	220V/50HZ	anti-electroshock	Class I
Temperature control	Microprocessor control	Interior Light	AV Power
Over temperature and under temperature	Audible and visual alarm	net/gross weight	62kg/68kg
Cabinet	Upright	Exterior Dimension(WxDxHmm)	620x555x1665mm
Power Consumption	0.72kW/24h	Packing Dimension(WxDxHmm)	690x615x1743
compressor	ZBS11 14CY	Container load 20'/40'/40'H	27/57/57

-40°C Deep Freezers

Manual Defrost

These freezers are designed to conduct freezing tests of electronic components and some special materials. They can also be used to store plasmas, biological materials, vaccines and so on. These products are applicable in research institutes, laboratories, blood banks, hospitals, epidemic prevention services and so on.



DW-40W255

DW-40W380

Temperature Control

- Microprocessor control, digital temperature display, adjustable temperature range: -20~-40°C.
- Over/under temperature controller with adjustable alarm set points.

Safety Control

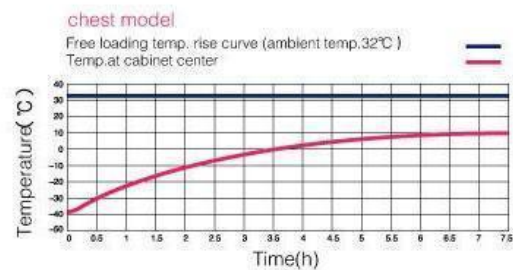
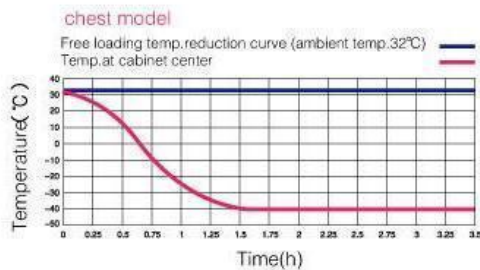
- Malfunction alarms: over/under temperature, sensor error.
- Alarm representations: buzzing, flashing.

Refrigeration System

- Danfoss compressor and Germany EBM condensation fan to get a high cooling effect.
- performance (can reduce to -40°C within 2 hours under the ambient temperature of 35°C).
- High-density insulating layer.
- Reasonable design of evaporator and condenser system.
- CFC-free refrigerant.

Ergonomic Design

- Safety lock to prevent unauthorized access.
- $\varnothing 40$ access port for laboratory tests.
- Broad voltage band for operation under $198\sim 252\text{V}$.
- Stepped rust-resisting interior cabinet design to keep various baskets.



Specification

Model No.	DW-40W380	DW-40W255
Liters	380	255
Input Power	550W	410W
Temp. range	$-20\sim -40^{\circ}\text{C}$	$-20\sim -40^{\circ}\text{C}$
Ambient temp	$10^{\circ}\text{C}\sim 32^{\circ}\text{C}$	$10^{\circ}\text{C}\sim 32^{\circ}\text{C}$
Voltage	220~240V/50Hz/60Hz	220~240V/50Hz
Temperature control	Microprocessor control	Microprocessor control
Over temperature and under temperature	Audible and visual alarm	Audible and visual alarm
Cabinet	Chest	Chest
Door	Single, foaming	Single, foaming
Foam insulation	High-density CFC-free urethane	High-density CFC-free urethane
Compressor	Danfoss compressor	Danfoss compressor
Refrigerator	R404a	R404a
Door lock	1	1
Shelves/Drawers/Baskets	-/-/3	-/-/2
Exterior Dimensions (mm)(WxDxH-)	1550x633x838	1243x633x838
Interior Dimensions (mm)(WxDxH-)	1376x457x625	1040x430x605
Packing Dimensions(mm) (WxDxH)	1630x755x920	1320x755x905
Net/gross Weight (kg)	82/89	69/81
Container load(sets)20'/40'/40'H	18/42/42	24/54/54

-40°C Deep Freezers

Manual Defrost

These freezers are designed to store plasmas, biological materials, vaccines, reagents and so on. These products are applicable in research institutes, laboratories, blood banks, hospitals, epidemic prevention services, livestock industries and so on.



DW-40L262



DW-40L626

Temperature Control

- Microprocessor control, digital temperature readout, adjustable temperature range: $-20\sim-40^{\circ}\text{C}$.
- Over/under temperature alarm system with adjustable set points.
- Memorization power.

Safety Control

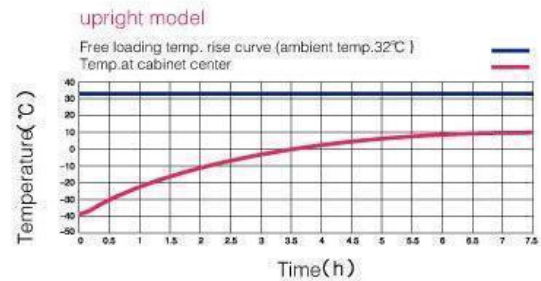
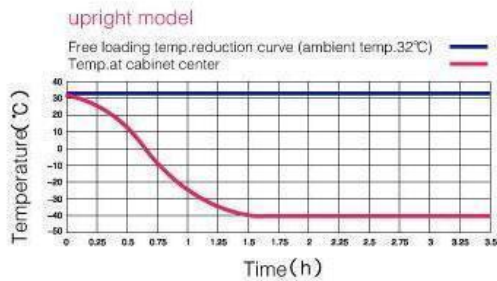
- Malfunction alarms: over/under temperature, sensor error.
- Alarm representations: buzzing, flashing.
- Compressor self-protection: open-delay set.

Refrigeration System

- Danfoss high efficiency compressor.
- CFC-free refrigerant.
- Germany EBM condensation fan.
- High-density insulation layer.
- Evaporator used as shelves to pull down temperature more quickly.

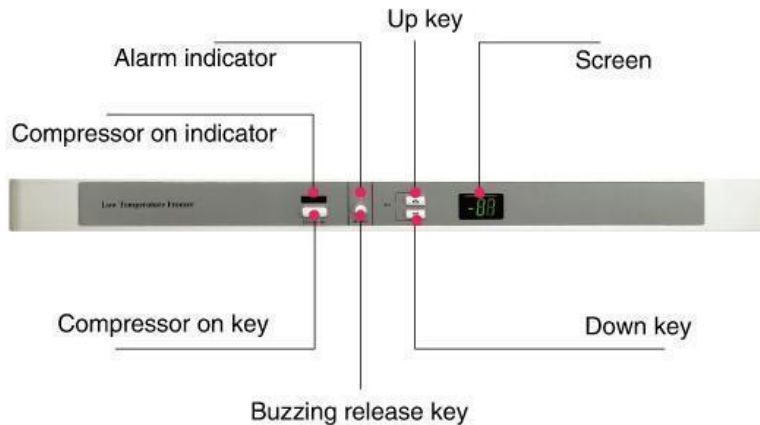
Ergonomic Design

- Safety lock to prevent unauthorized access.
- LED digital display for easy observation.
- Door handle design to operate easily.
- Caster design for moving easily.
- Broad voltage band for operation under 198~252V.



-40°C Deep Freezers

Starting up Operation and Temperature Adjustment



When powered on, the screen shows the present temperature value, if temperature reset is needed, for example, adjust the preset value from -30°C to -35°C , please follow the steps below:

Temperature Adjustment

Press “ \wedge ” “ \vee ” keys for 3 seconds simultaneously and the set temperature begins flickering. Every time when “ \vee ” key is pressed down, the temperature will drop 1°C until -42°C , then press back to -20°C ; Every time when “ \wedge ” key is pressed down, the temperature will increase 1°C until -20°C , then press back to -42°C ; If no operation is done in 5 seconds, then it exits the set state to resume the normal temperature display.

Temperature Alarming

For the safety of the inside box goods, the electronic temperature controller has the alarming function. When the inside temperature exceeds the alarming upper limit or lower limit, the buzzer will give an alarm, and the alarming indicator light on the screen will flicker at the same time. Press release key to stop the buzzing (the alarming light will keep flickering). When the inside temperature is within the range of upper and lower limits, the buzzing will disappear automatically.

Supply Interruption Memory Function

When powered again after supply interruption, the low temperature freezer has memory function so that it can keep on working under the setting condition before the supply was interrupted.

Over-high Temperature Alarming Function

When the freezing sensor shows the actual temperature above -15°C (-15°C not included), the over-high temperature alarm indicator light will be always on with the sound of buzzing (buzzing once per minute, three buzzes in one time at 0.5 second interval), press down the buzz release key to stop the buzzing while the red light keeps on (even more press will not work out to resume the buzzing sound, and only if the display temperature reduces to under -15°C or power-off, the buzzing release key will automatically reset and the buzzing function will resume).

Notes: when the freezing sensor faults occur, the red light will be always on and the alarming light will loose function.

Errors on Display

When there is a short, broken circuit or breakdown of the temperature sensor, the temperature display area shows "1" the low temperature freezer enters the protective mode. In this situation, the compressor falls into a fixed recycle of starting-up for 20 minutes and stopping for 5 minutes, the red light keeps on and the alarming sound does not work.

Suggestions: when judging the temperature sensor is in a wrong condition, please cut off power first and check if the connecting wire of the sensor is loose.

Use of the Quick-freezing Function

Press the quick-freezing key on the control panel once, then the "SF" sign on the upper side of the key is highlighted indicating the freezer enters the quick-freezing state. Press the quick-freezing key again, then this function is cancelled, or after 24 hours the quick-freezing will be cancelled automatically. When reaching needed temperature, please stop the quick-freezing function.

Specification

Model No.	DW-40L262	DW-40L188	DW-40L626
Liters	262	188	626
Input Power	340W	290W	700W
Temp. range	-10°C ~ -40°C	-10°C ~ -40°C	-20°C ~ -40°C
Ambient temp	10°C ~ 32°C	10°C ~ 32°C	10°C ~ 32°C
Voltage	220~240V/50Hz	220~240V/50Hz	220~240V/50Hz
Temperature control	Microprocessor control	Microprocessor control	Microprocessor control
Over temperature and undertemperature	Audible and visual alarm	Audible and visual alarm	Audible and visual alarm
Cabinet	Upright	Upright	Upright
Door	Single, foaming	Single, foaming	Single, foaming
Foam insulation	High-density CFC-free urethane	High-density CFC-free urethane	High-density CFC-free urethane
Compressor	Danfoss compressor	Danfoss compressor	Danfoss compressor
Door lock	1	1	1
Shelves/Drawers/Baskets	- /7/ -	- /7/ -	3/4/ -
Exterior Dimensions (mm)(WxDxH-)	657x685x1665	597x610x1475	910x835x1950
Interior Dimensions (mm)(WxDxH-)	480x462x1430	380x410x1225	760x630x1300
Packing Dimensions(mm) (WxDxH)	735x735x1756	668x687x1520	1060x945x2127
Net/gross Weight (kg)	88/93	64/71	298/314
Container load(sets)20'/40'/40'H	21/48/48	24/51/51	12/24/24

-50°C Deep Freezers

Manual Defrost

These freezers are designed to conduct freezing tests of electronic components and some special materials. They can also be used to store tuna, plasmas, biological materials, vaccines and so on.

These products are applicable in blood banks, hospitals, epidemic prevention services, laboratories and so on.



DW-50W380

Temperature Control

- Microprocessor control.
- Italian Eliwell thermostat.
- Adjustable temperature range: -30~-60°C(under ambient temperature of 10~25°C).

Safety Control

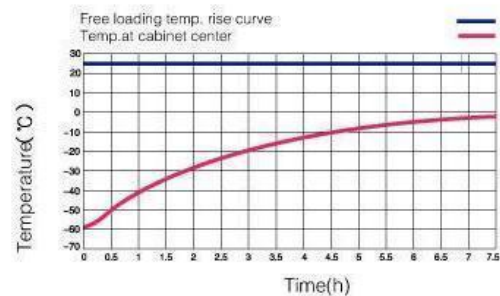
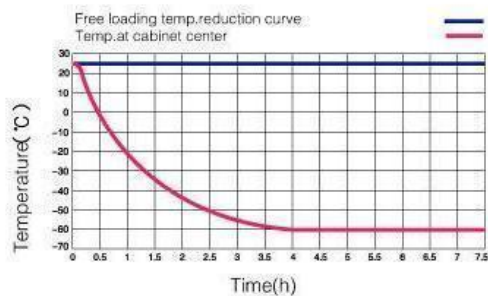
- Compressor self-protection: open-delay, off-on-delay.

Refrigeration System

- Danfoss compressor makes a reliable refrigerating performance.
- Totally-closed freezing structure ensures a super freezing capacity, which can reach -60°C within the ambient temperature of $10\sim 25^{\circ}\text{C}$.
- New style of CFC-free refrigerating system.

Ergonomic Design

- Safety lock to prevent unauthorized access.
- Stepped anti-corrosive interior cabinet design to keep various baskets.



Specification

Model No.	DW-50W380
Liters	380L
Basket	3
Input Power	550W
Temp. range	$-20^{\circ}\text{C}\sim -50^{\circ}\text{C}$
Ambient temp	$10^{\circ}\text{C}\sim 32^{\circ}\text{C}$
Voltage	220V/50Hz
Climate type	N
Exterior Dimensions (mm)(WxDxH-)	1550x633x838
Interior Dimensions (mm)(WxDxH-)	1376x457x625
Packing Dimensions(mm) (WxDxH)	1630x755x920
Net/gross Weight (kg)	83/87
Container load(sets)20'/40'/40'H	18/42/42

-86°C ULT Freezers

Manual Defrost

The first ULT freezer with mobile message alarm and remote monitoring function in the world.

H₂CO ULTs are specially designed and manufactured for long term storage of a variety of biological products, for example viruses, germs, erythrocytes, leucocytes, cutis. H₂CO ULTs are suitable for applications in blood banks, hospitals, epidemic prevention services, research institutes, laboratories in electronic and chemical plants, biological engineering institutes, and transoceanic fishery companies.



DW-86L628/388 VIP Series

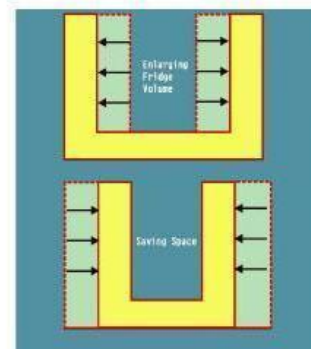
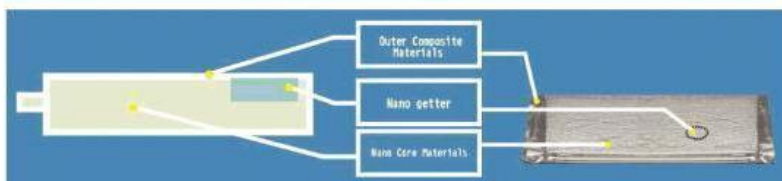
DW-86W420

- Cold-rolled plate
- Patented hermetically-sealed construction and insulated system to defrost efficiently.
- Ultra thick insulating layer.
- Low temperature resistant anticorrosive galvanized sheet.
- The evaporator is fixed special technology to ensure conformity.
- Danfoss compressor with ultra low noise under cascade cooling system.
- "U-COOL" short message function to realize short message alarm and network remote monitoring.
- Innovative integral door handle and lock design.
- Patented pressure-equalizing design make an easier door opening.
- Germany EBM condensation fan, intelligent on-off system to save energy effectively.
- American Temprite oil separator ensures no oil entering and a better freezing effect.
- Packaged design caster.

DW-86L628

VIP Temperature Preservation Technology

- Reduce heat transmissions from ambient.
- Improve insulation performance with thinner walls.
- Decrease unit's occupied floor area.
- Increase ULT's inner space volume.
- Use flame retarded VIP materials.
- Use nuisanceless nanophase materials and CFC free.



-86°C ULT Freezers

Temperature Control

- Microprocessor temperature control.
- Digital temperature display.
- Adjustable temperature range from -10°C to -86°C with an increment of 1°C.

Safety Control

- Malfunction alarm includes audible and flashing alarms for high temperature, low temperature, incorrect voltage setting, sensor failure, condenser efficiency effect, high ambient temperature, and power failure.
- Multiple level protections: password, compressor delay start, extra high and low pressure back up.
- All separate parts are safely grounded.

Refrigeration System

- Optimized cascade refrigeration technology.
- High efficiency Danfoss compressor.
- Extra thick, high density insulation material for the best temperature preservation.
- Special design of three-layer sealing structure, and heat-insulating system to reduce frost formation.
- Special designed computer controlled system for low temperature stage to prevent the second stage compressor from overloading.

Ergonomic Design

- LED display for cabinet temperature, set point, ambient, and input voltage.
- Adjustable high temperature and low temperature alarm set points.
- Multiple shelves for storage of various sizes of samples.
- Safety lock to prevent unauthorized access.
- Broad range of ambient temperature of 10 to 32°C.
- Innovative integral door and lock design, and packaged caster design.
- Pressure-equalizing port for ease of re-entry after door closes.
- Intelligently controlled condenser fan for higher energy savings.
- Advanced remote monitoring and voltage compensation system.
- Optional storage box.

"U-COOL"(OPTIONAL)

- Sending alarm information to user's mobile phone by message.
- Sending message to check the real-time temperature or alarm information by user.
- Sending text to adjust the cabinet temperature or set the alarm temperature by user.
- Monitoring freezers remotely as long as there is signal for user's mobile phone.



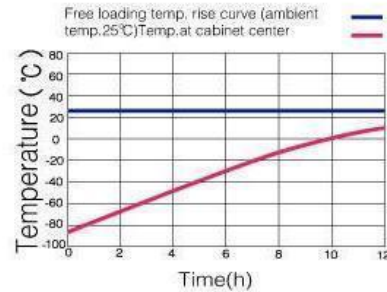
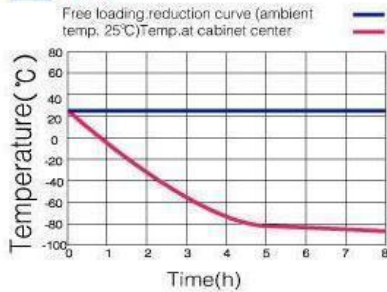
- Temperature recorders.
- Circular chart, 7-days temperature recorders.
- Use pressure sensitive chart paper.
- No ink is required. (optional)

- Standard box storage racks for upright and chest freezers.
- Optional inventory components including racks and boxes are ordered separately. (optional)

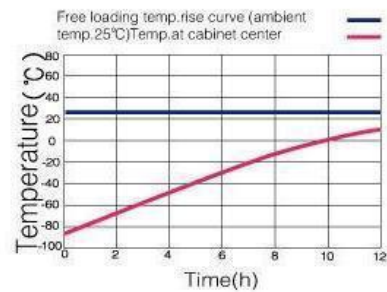
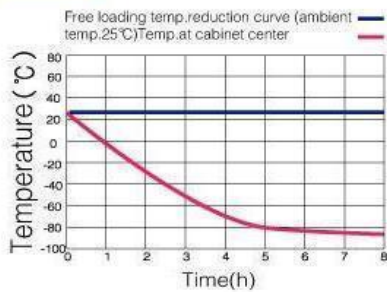




Upright



Chest



Specification

Model No.	DW-86L388	DW-86L628	DW-86W420
Liters	388	628	420
Input Power	3/4HPX2	1HPX2	3/4HPX2
Temp. range	-40~-86°C	-40~-86°C	-40~-86°C
Ambient temp.	10°C~32°C	10°C~32°C	10°C~32°C
Voltage	220V~240V/50Hz	220V~240V/50Hz 115V/60Hz	220V~240V/50Hz
Cabinet	Upright	Upright	Chest
Door	Single, foaming	Single, foaming	Single, foaming
Shelves/Inner door	3/4	3/2	-/3
Exterior Dimensions(mm) (WxDxH-)	860x757x1950	1000x890x1960	2130x870x1020
Interior Dimensions(mm) (WxDxH-)	620x490x1300	760x630x1300	1367x462x652
Packing Dimensions(mm) (WxDxH)	975x943x2125	1065x954x2120	2300x970x1151
Net/gross Weight(kg)	254.1/276.1	298/314	- /357
Container load(sets)20'/40'/40'H	12/24/24	12/24/24	12/24/24
Total rack/box capacity	12/192	20/320	27/297

-150°C Cryo freezers

This kind of freezer is designed for storage of virus, germ, erythrocyte, leucocyte, cutis, skeleton, bacteria, semen, biologicals, transoceanic products, electronic components, freezing tests for special materials and so on.

This kind of freezer is applicable in blood banks, hospitals, epidemic prevention services, research institutes, laboratories of electronic and chemical factories, biomedical engineering institute and so on.



DW-150W200

IPD Control System (complete data dealing system)

- all function data entered by touching key, big LED display.
- Supply dual user's password protecting function, parameter can be set.
- When the temperature and alarm point are set, the power and alarm system are locked.

Monitoring System

- The protecting and rescuing monitor of the compressor performance and adjust the inner and outer condition, so it can extend the life of the compressor.
- If the temperature in the compressor affect the performance of the machine, the warmer will alarm.
- The indicating lamp will light if the condenser is blocked or needs to be cleaned.

Cooling System

- High efficient CFC-free refrigerant cooling system.
- The boiler from up to down ensure the refrigerant flowing efficiently.
- Excellent cascade cooling system with dual fan whose blade is designed according to aerodynamics.
- The condenser fillter with removal and easily cleaning make sure the best cooling efficiency.

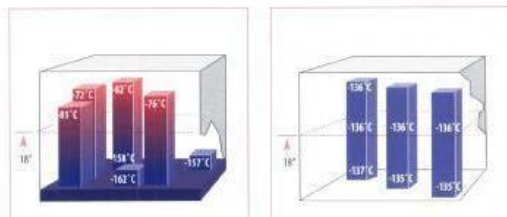
Ergonomic Design

- Applicable to use far away from the working ambient temperature within 10–25°C.
- Gravis type added self-locked caster, it is convenient for moving.
- Low temperature level compressor control only if need to avoid mistake for a longer life.
- It is easy to wash because of Inner round angle dealing design.
- Optional LN2 backup system makes it convenient to use under emergency situation, make the operation safe.
- Optional temperature record instrument, so it is convenient to record temperature and save forever.
- Optional intelligent monitoring system, you can record the data and monitor on the computer and realize remote supervising.

"U-COOL"(OPTIONAL)

- Sending the alarm information to the user's mobile phone by short message.
- Sending the text to check the real-time temperature or alarm information by the user.
- Sending the text to adjust the cabinet temperature or set the alarm temperature by the user.
- Monitoring the freezers remotely as long as there is signal for the mobile phone.

Liquid nitrogen saving system Cryo freezer



Liquid nitrogen(-196°C)

Set temperature(-135°C)

Specification

Model No.	DW-150W200
Liters	200
Temp. range	-126°C--150°C
The lowest temperature	-150°C
Voltage(V/Phase)	380/3
Exterior Dimensions(mm) (WxDxH)	1570x855x1060
Interior Dimensions(mm) (WxDxH)	667x462x650
Net/gross Weight (kg)	315/385

Clean Benches

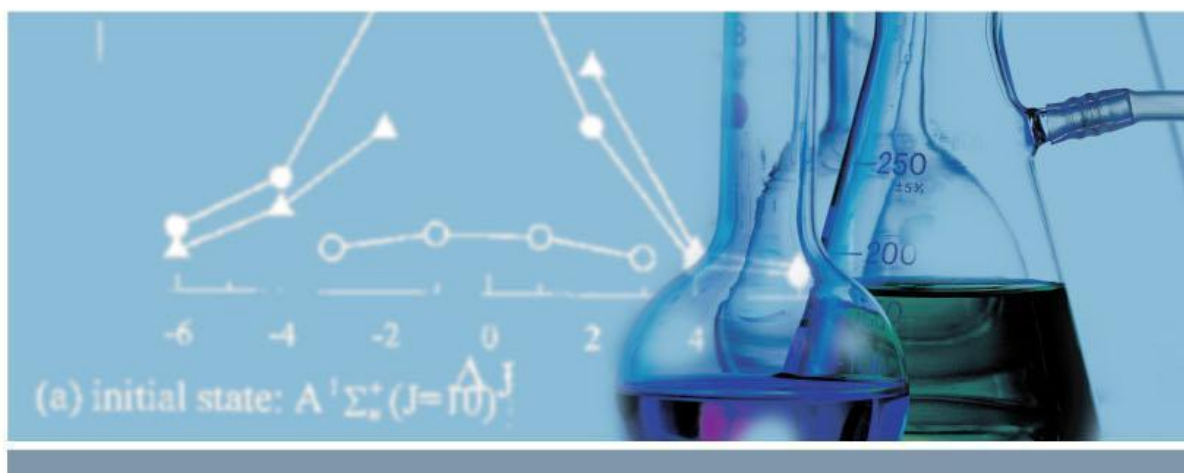
Widely used in medicine , pharmacy and laboratories to get non-microorganisms, non-dust and clean conditions.



HRCJ-1S



HRCJ-2D



Features

- Vertical flow, work closed flat makes air outside and harmful smell prevented.
- Adjustable air quantity and fan system, touching switch to adjust voltage and wind speed in work area in good condition.
- Table surface is made of high quality stainless-steel.

Specification

Model No.	HRCJ-1D	HRCJ-1S
Cleanliness	CLASS 100 @ $\geq 0.5 \mu\text{m}$	CLASS 100 @ $\geq 0.5 \mu\text{m}$
Average wind speed	0.3–0.6m/S(Adjustable)	0.3–0.6m/S(Adjustable)
Noise	$\leq 60\text{dB(A)}$	$\leq 60\text{dB(A)}$
Vibration and semi-peak value	$\leq 3 \mu\text{m}$	$\leq 3 \mu\text{m}$
Illuminance	$\geq 300\text{LX}$	$\geq 300\text{LX}$
Daylight & u.v lamp	18Wx ^① 20Wx ^①	20Wx ^① 18Wx ^①
Maximum power	0.4kw	0.4kw
Voltage	220V 50Hz	220V 50Hz
Specification and quantity of(HEPA)	820x600x50x ^①	820x600x50x ^①
Size of working room LxWxH(mm)	880x680x520	880x700x520
Outer size LxWxH(mm)	1040x770x1730	1040x790x1730
Packing dimension (mm)	1240x920x1900	1240x990x1900
Net weight (kg)	160	160
Gross weight (kg)	225	225
Operator(s)	1	1
Container load(sets)20'/40'/40'H	8/18/18	8/18/18

Model No.	HRCJ-2D	HRCJ-2S
Cleanliness	CLASS 100 @ $\geq 0.5 \mu\text{m}$	CLASS 100 @ $\geq 0.5 \mu\text{m}$
Average wind speed	0.3–0.6m/S(Adjustable)	0.3–0.6m/S(Adjustable)
Noise	$\leq 60\text{dB(A)}$	$\leq 60\text{dB(A)}$
Vibration and semi-peak value	$\leq 4 \mu\text{m}$	$\leq 4 \mu\text{m}$
Illuminance	$\geq 300\text{LX}$	$\geq 300\text{LX}$
Daylight & u.v lamp	30Wx ^① 30Wx ^①	18Wx ^② 20Wx ^②
Maximum power	0.8kw	0.8kw
Voltage	220V 50Hz	220V 50Hz
Specification and quantity of(HEPA)	610x610x50x ^②	610x610x50x ^②
Size of working room LxWxH(mm)	1310x680x520	1310x700x520
Outer size LxWxH(mm)	1490x770x1760	1490x790x1760
Overall dimension of packing(mm)	1700x920x1900	1700x990x1900
Net weight (kg)	200	200
Gross weight (kg)	305	305
Operator(s)	2	2
Container load(sets)20'/40'/40'H	6/14/14	6/14/14

Pulse Vacuum Sterilizer



HRMD-1.2

Capability feature

- The main subassemblies and the air-go in pipelines of the sterilizer complies with the international standard, and they are made of international top grade steels, and each place which touches with the goods to be sterilized has been polished, it's velvet and trim, no dead angle, easy to wash, so it can avoid the propagation of the rudimental bacillus. It complies with the American FDA standard and GMP requirement and also complies with the European IDF standard and the requirement of GMP, and also tally with the European IDF standard.
- The sealed door has adopted the technology of electric lifting, greatly decreased the operator's working intension, this improves the automatization level of the sterilizer. The intelligent man-machine interface makes it easier to observe the process of sterilizing, and also greatly decreased the operator's intension.
- A liquid piston vacuum pump has installed in the sterilizer, it takes a short time to vacuum pumping with a high efficiency. The vacuum pump is water-cooled. There are few failure in long-term pump drainage of the high temperature steam and it is more reliable.

Specification

Model No.	HRMD-1.2	
Rating working pressure	0.21Mpa	
Rating working temperature	132~134℃	
Vapor pressure	0.3Mpa~0.5Mpa	
Water pressure	0.15Mpa~0.3Mpa	
Compress vapor pressure	0.5Mpa~0.7Mpa	
Pulsatile times range	0~99	
Sterilization time range	0~9999s	
Dryness time range	0~9999s	
Relief valve(inter layer)	start pressure 0.23Mpa/shut pressure 0.21Mpa	
Relief valve(inner-chamber)	start pressure 0.23Mpa/shut pressure 0.21Mpa	
Pulsatile range	Positive value	0.065Mpa~0.09Mpa
	Negative value	-0.05Mpa~-0.09Mpa
Air drain volume	> 99%(over 3 pulsatile times)	
Exterior dimensions(LXWXH)mm	1800x1341x1910	

Low Temperature Plasma Sterilizer



HRPS-120

Convenient installation

- Single phase access, without any necessary pipeline, aeration or disposal system;
- With minimum exterior dimension among similar products to reduce floor space;
- Versatile castors to move easily;
- Low environment and tool requirements for installation.

Easy operation

- Very friendly man-machine interface.
- The interface shows the whole process parameters.
- Flexible way of loading and manipulation.
- Users only need a simple training to master the system skillfully.

Secure and environmental

- Adopting low temperature and vacuum sterilization technology to avoid risk of high temperature/pressure etc.
- No noxious substance produced or released.
- Intellectual warning and error correcting system improve the sterilization performance.
- Complete and soft sterilization techniques to avoid the damage to objects.
- Reasonable design of consumables to use safely, conveniently and circularly.

High performance

- With hi-efficient sterilization capability among similar products.
- Realize the highest appliances circulative rate.

Reducing appliance cost

- Soft sterilization techniques do to prolong the appliance life and reduce maintenance cost.
- Hi-efficient sterilization capacity to improve the circulative rate and reduce the quantity of spare appliances.

Intellectual memorizing and printing

- Equipped with intellectual large memory system to record and print out real time important parameters for convenient recording and checking.

Innovation technology

- Adopting international advanced technology, much optimized design and many innovation technologies to keep the products' leading, stable and versatile.
- Adopting many advanced technologies to realize intellectual monitoring, remote maintenance, system upgrading, functional extending and so on.

Specification

Model No.	HRPS-120
Exterior dimension(WXHXDmm)	740X1680X950
Minimum install area(mm)	800X1000
Minimum maintenance interval	300mm per side face
Weight	350kg
Specification of sterilizing cabinet(WXHXDmm)	rectangular,430X430X760
Gross volume	141 liters
Net volume	122liters
Bearing capacity	40kg
Electrical source	210V~240V/50~60Hz13.6A single-phase 3KW
Ambient tempersture/humidity	5~40°C/0~95%
Sterilizing temperature	normal temperature~55°C
Sterilizing speed	25minutes(for appliances with simple structure) 38 minutes(for appliances with structure or pipe)
Dosage of H ₂ O ₂	2.2mL/single circl
Information disposal	real time shown on a 5.6-inch touch screen,intellectual memory printing system
Sterilizing capability	the sterilizing length is 10m for the polytetrafluorethylene pipe with 1mm inner diameter

Biological Safety Cabinets

HuCo bio-safety cabinets are designed for laboratory uses where there are rigorous work environment requirements. The cabinets can efficiently prevent the spread of pathogenic microorganisms, microorganisms, and genes. Additionally, the cabinets can obstruct the contamination of related viruses to laboratory operators. The cabinets provide a safe, non-bacteria and non-dust working condition for medical treatment, medical production, and other scientific research.

- High efficiency fan, ensure the excellent performance of the cabinet.
- Advanced technology of front glass balancer suspension system design, can prevent from leaking.
- 6mm anti-ultraviolet radiation toughened glass front window can provide safety protection.
- Three sides of the inner wall are all stainless steel and adopt integrated structure, 12mm big circular arc filtration can do complete washing.
- The cabinet and the bracket can be separated, there are many kinds of brackets for choice, firm and stable tail can be adjusted to 75mm.
- American AAF filter, ensure the safety of the operator, swatch and environment.
- Stainless steel water faucet, durable and stable.
- Anti-burst, anti-splash receptacle.
- The capacity of the collecting slot is above 4L, and equipped with blow down valve, it is convenient for cleaning and maintaining.

HR40-II A2 HR60-II A2

HR40-II B2

Specification

Model No.	HR40-IIA2	HR60-IIA2	HR40-IIB2
Cleanliness Class	CLASS 10 @ ≤ 0.3	CLASS 10 @ ≤ 0.3	CLASS 10 @ ≥ 0.5
Downflow Air Velocity	0.32 ± 0.015 m/s	0.32 ± 0.015 m/s	0.32 ± 0.015 m/s
Inflow Air Velocity	0.62 ± 0.015 m/s	0.62 ± 0.015 m/s	0.62 ± 0.015 m/s
Illumination	≥ 1100 Lx	≥ 1100 Lx	≥ 1100 Lx
Noise	≤ 64 dB(A)	≤ 64 dB(A)	≤ 64 dB(A)
UV light	≥ 30 w	≥ 30 w	≥ 30 w
Exterior Dimensions	1360x780x2200	1960x780x2200	1360x780x2200
Interior Dimensions	1200x610x680	1734x610x680	1200x610x680
Packing Dimensions	1470x900x2150	2090x880x2020	1490x880x2120
Operator	1	2	1
Container load(sets)20'/40'/40'H	6/16/16	6/13/13	6/16/16

Detachable Structure

- Designed with 10 degree tilt angle for comfortable position to operate.
- Air flow motor and air filter are easily replaceable from the front of the cabinet.
- Support bracket and cabinet are separable.

Visual Front Screen

- Use safety ultraviolet ray intercepting glass.
- Adjustable glass height per requirement.
- Audible and visible alarm when the glass exceeds the safety height.
- Advanced balancer technology suspension system for safer and reliable operation.

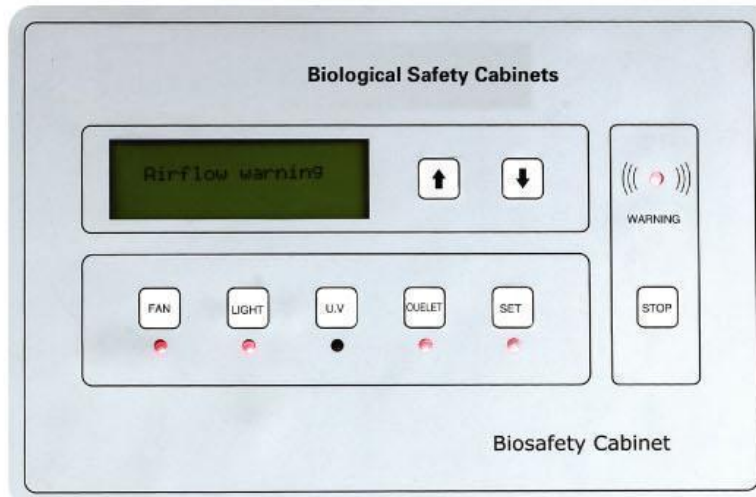
Inner Cabinet

- Use 304 stainless steel to weld side walls and back wall into one piece for cleaner transition.
- Left, right, back and bottom working areas have negative pressure pathway.
- Use the one piece forming work table concept for ease of detachment and cleaning.
- Equipped with anti-explosion, anti-splash power socket, water outlet.
- Negative pressure in vertical laminar flow with air curtain type isolation design.
- Comply with criteria of YY0569-2005II standard.
- Innovated technology in air flow isolation eliminates air leaks from the seams of the front screen.

Ultra High Efficient Filter System

- In bound flow system is equipped with a ULPA filter whose efficiency is higher than 99.9995%.
- Digital display of life span of filter.
- Real time alarm function for filter system.

Biological Safety Cabinets



HR40-IIA2

- Button Definition 1: [Blower Fan] Air-suction fan Switch.
- Button Definition 2:[Light source] Fluorescent lamp Switch of inner cabinet.
- Button Definition 3: [Ultra-violet light] Inner Cabinet Sterilizing Ultra-violet light Switch.
It can be only operate when blower fan, fluorescent lamp is shut, and the front window is closed.
- Button Definition 4: [Outlet] Electric outlets switch of Inner cabinet , which can be controlled independently.
- Button Definition 5: [Set] Button for advanced setup of BSC, though which can setup time switch-on and switch-off of the Ultra-violet light and other advanced adjustment etc.
- Button Definition 6: Add, Subtract [↑] [↓] and Overturn Button, through which can add and subtract the advanced setup data after setup button taking effect, also, through which can check the operation state, operation time, etc.
- Button Definition 7: [Stop] Sound Alarming Close Button, only cancel buzzer, lighting alarm still remain.
- Basic Function and Operation Display Lattice LC displayer, and it should be 4 pages in normal state.

Data displayed on the screen

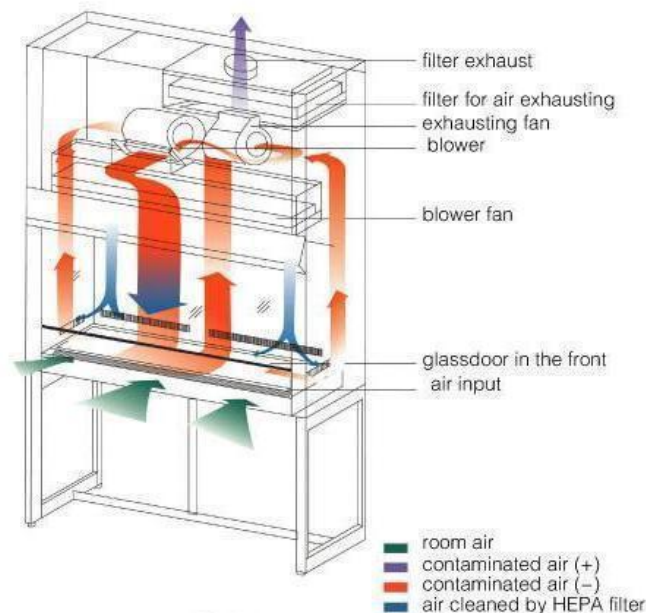
- Air exhaust value in m³/hr
- Velocity of air laminar flow in m/s
- Counters for exhaust fan and blower

Safety Control System

- Alarm for low air exhaust value, low air-velocity of down laminar flow, exhaust fan fault, and closing status of viewing window
- When the viewing window is opened, the UV light is closed automatically
- When the fluorescent light works, the UV light is closed automatically
- When the blower begins to work, the UV light is off until the laminar air flow is established
- When there is a malfunction with the exhaust fan, the blower stops working automatically. The exhaust fan speed increases automatically to keep the working space in negative pressure. Microprocessor controls the air inward flow and air downflow in normal condition under any conditions.

Standard Compliance

- EN 12469 type tested (exceeds requirements for Class II microbiological safety cabinets)
- Air cleanliness: ISO 14664.1 Class 3, IEST-G-CC1001, IEST-G-CC1002 and other equivalent air cleanliness requirements
- Filter performance: IEST-RP-CC034.1, IEST-RP-CC007.1, IEST RPCC007.1, IEST-RP-CC001.3 and EN1822
- Electrical safety: IEC 61010-1/ EN 61010-1/ UL3101-1/ CSA C22.2 NO.1010.1-92
- Electrical safety: IEC 61010-1/ EN 61010-1/ UL3101-1/ CSA C22.2 NO.1010.1-92



Disinfector

This product is designed for washing and disinfecting breath pipes, plastic material tools, medical containers, flasks, test tubes, breakers, petri dishes, endoscopes and so on.





HRQX-415



HRQX-380

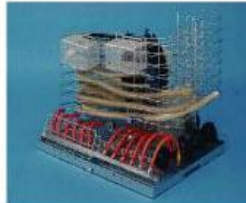


HRQX-180

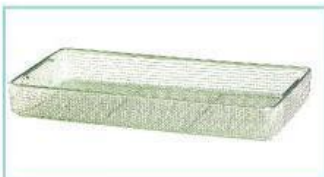
Accessories for Different Objects



- Standard Cleaning Shelf



- This is designed to clean respiratory tubes. If the tube is made from plastic, please make sure that the material is resistant to elevated temperatures, since the temperature of the water inside is about 90°C.



- Standard Cleaning Basket



- This is designed to clean medical containers.



- This is designed for flasks, test tubes, breakers, Petri dishes and so on.



- This is designed for endoscopes.

Disinfector

Stable and Reliable

- PLC control, precise, stable, reliable, touching screen display, easy operating, parameter real-time display, direct-viewing.

Dual Door Interlocking

- The two doors can not be opened at the same time to make a safety curtain between the clean area and the dirty area.

Self-Cleaning Program

- To clean the pipe interior and avoid being blocked.

Complete Matching Parts

- Providing all kinds of cleaning shelves and baskets to meet various requirements.

Safety Nature

- Strictly encapsulating to ensure and maintain the moisture pressure unit connected with the door to avoid the door falling down quickly.

Self-Selection Program

- Preset parameters such as cleaning time and temperature.

Spraying and Drying

- Unique rotary jet can spray under heavy pressure ejecting from any angle. High efficiency drying system can dry the rest completely.

High Efficiency Air Filtering

- During heating progress, the air filter can prevent the cleaned things being polluted efficiently.

LED Touching Screen Display Photo



Specification

Model No.	Efficient volume	Voltage	Exterior Dimensions (WXDXH)(mm)	Effective Washing Area (WXDXH)(mm)	Standard parts	Heating method	Washing temperature	Washing time
HRQX-180	180L	380V	930 × 550 × 1690	600 × 530 × 720	two layers adjustable washing shelves, standard washing basket (four sets)	Electrical heating	Normal temperature to 93°C (adjustable)	gaiven value (adjustable)
HRQX-280	280L	380V	930 × 700 × 1840	600 × 630 × 820	four layers adjustable washing shelves, standard washing basket (eight sets)	Electrical heating	Normal temperature to 93°C (adjustable)	gaiven value (adjustable)
HRQX-380	380L	380V	950 × 700 × 1990	600 × 630 × 975	one layers adjustable washing shelves, standard washing basket (two sets)	Electrical heating	Normal temperature to 93°C (adjustable)	gaiven value (adjustable)
HRQX-480	480L	380V	1110 × 910 × 2000	690 × 690 × 850	five layer adjustable washing shelves, standard washing basket (teo sets)	Electrical heating	Normal temperature to 93°C (adjustable)	gaiven value (adjustable)

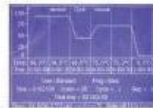
PCR Gradient Thermal Cycler



HR-PCR-96G



- Researcher Cfriendly interface for easy operation;
- Auto restart and auto program save.



- Large LCD graph and wording readout;
- Look over total time and remain time momentarily.



- High performance temp.gradient mode for optimizing tssets;
- Arrive 4°C auto after experiment without watching for.



- With time,temperature and rate increment function;
- With the link function for complicated program.



- Universal arial aluminous block,accommodate to tubes of 0.2ml and 0.5ml;
- Conformable sensor fixing mode to reach high accuracy control.



- Equipped with hot lid,along with adjustable temperature and switch.



- RS232 interface,accommodate to PC or printer;



- USB interface to save self-program conveniently.

Specification

Model No.	HR-PCR-96G	Model No.	HR-PCR-96G
Sample Capacity	96X0.2ml+77X0.5Xml	Number of Programs	Max 200
Block Temp.Range	4°C~99.9°C	Max.Segment of Cycles	40 Segments
Max,Block Heating Rate	3°C/	Max,numbersof Cycles	99
Min.Block Cooling Rate	3°C/s	Dimensions(mm)	425X285X29
Block Uniformity	20°C~72°C ≤ ± 0.4°C 94 °C ≤ ± 0.5°C	Voltage/Frequency	220V ± 22V 50Hz/60Hz
Block Accuracy	≤ ± 0.2°C	Weight	14kg
Temp.Gradient Range	0.0°C~20°C	Fuses	250V,5A
Temp.Increment	0.0°C~10°C	Computer Interface	RS232
Time Increment	1s~60s	Rate Increment	0.0°C / s~1.0°C / s
Runing Time Display	Yes	Remaining Time Display	Yes
Hot Lid Temp.	≤ 110°C	Auto Restart	Yes
USB Interface	Yes	Printer	Yes
Temp.Control	Block and Tube		

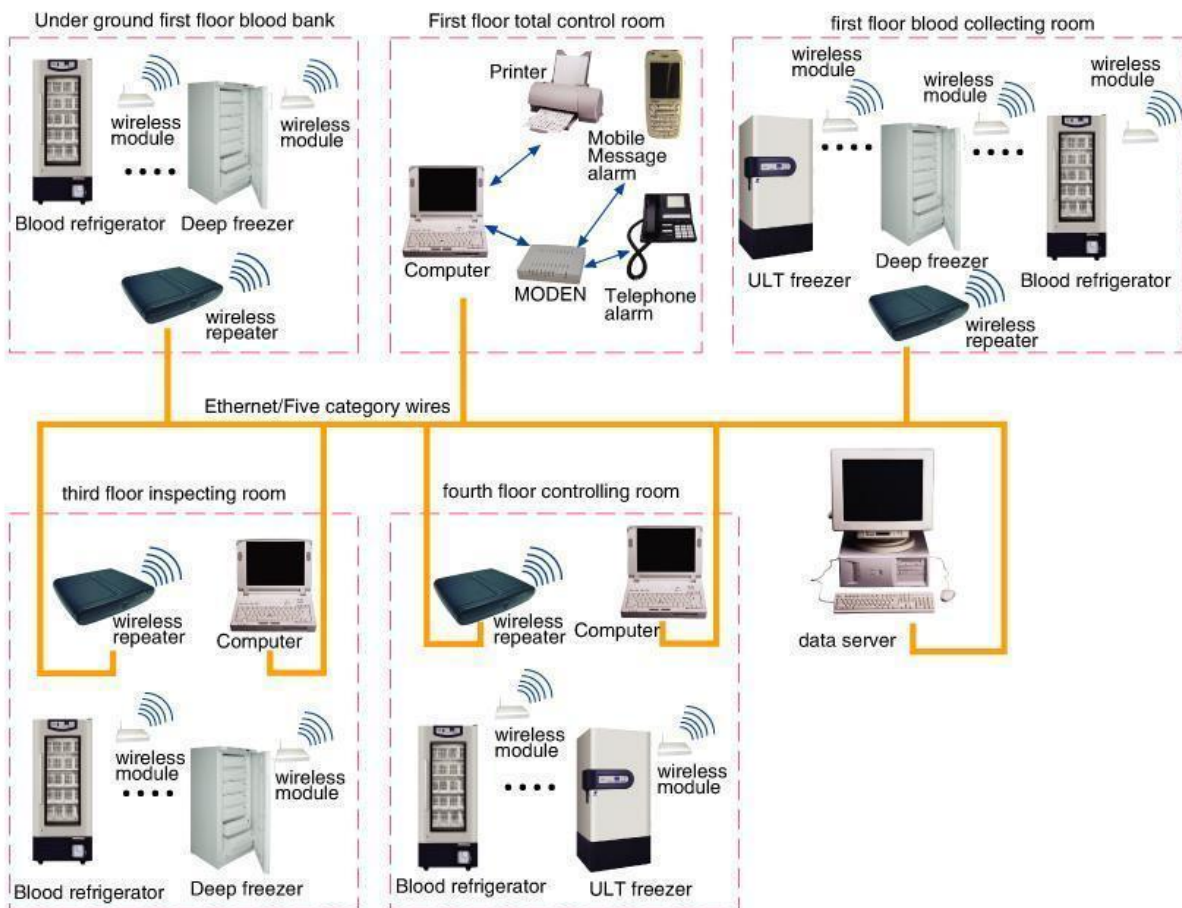
Blood—chain Equipments watching and control system

This product is applicable to blood bank, hospital, medical institution and so on, it can be used to control the temperature of the cooling chain equipments.

Product Nature

- 24 hours wireless, independent monitoring and unified management combine each other.
- Over temperature alarm, safe and reliable.
- Real-time monitoring, real-time reporting.

System Measurement Diagram



Centralized Control Solutions

Medical and Laboratory Equipments

Blood—chain Equipments watching and control system

System Advantage

- Installation: Wireless monitoring, without knob-and-tube wiring trouble.
- Safe and Reliable: Monitoring the temperature 24 hours per day with over temperature alarm system.
- Abundant Function: Checking the historical or real-time data through journal sheets or graphs.
- Network Design: Independent and unified management joint together.
- Wide Climitazation Range: $-200\sim+150^{\circ}\text{C}$.

Chief Index

- Monitoring Ways: wireless monitoring
- Temperature Measurement Range: $-200\sim+150^{\circ}\text{C}$
- Error Measurement: 0.5°C
- Velocity of Collection: adjustable
- Time Recording: depends on the computer's internal storage capacity, usually maintain 10 years recording

