

Your Haier Biomedical Partner

Haier Medical & Laboratory Solutions America LLC

Website: www.haiermedical-usa.com



Haier Biomedical Intelligent Protection of Life Science











Haier Biomedical

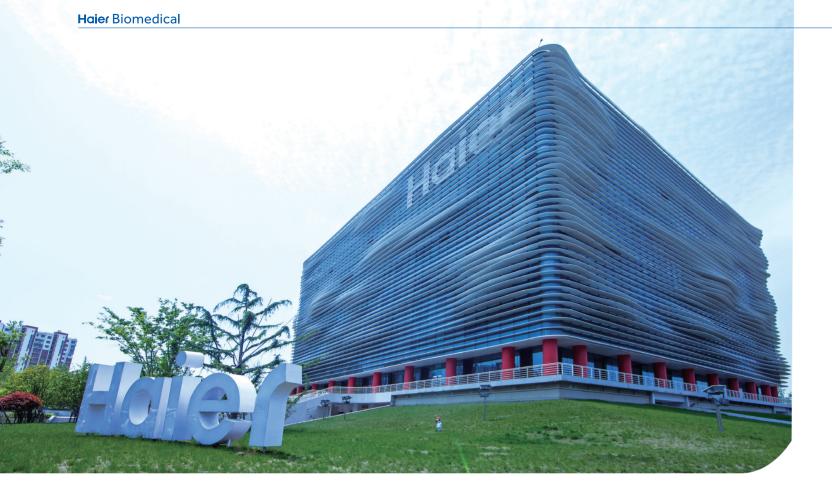
International

Haier Biomedical
Intelligent Protection of Life Science

# 2024 General Catalogue

www.usa.haiermedical.com





Established in Qingdao, China in 1984, the Haier Group is a world-leading provider of solutions for a better life. With ongoing and sustainable innovation and entrepreneurship, Haier always upholds the principle of "prioritizing people's value". In September 2005, Mr. Zhang Ruimin, Chairman of the Board and CEO of Haier Group, proposed the Rendanheyi Management Model, whose contemporary features, universality and social characteristics have achieved trans-industry and trans-culture fusion and replication. Focusing on user experience and keeping abreast of the times, Haier has experienced six strategic stages: brand building strategy, diversification strategy, internationalization strategy, global brand-ing strategy, networking strategy and ecosystem brand strategy, growing from the once collectively owned small factory on the verge of bankruptcy into an ecosystem that leads the world in the IoT era. As the world's first and only IoT ecosystem brand, Haier has been included on the list of BrandZ Most Valuable Global Brands for three consecutive years and listed in "The World's 500 Most Influential Brands" of the World Brand Lab for 17 years straight. Haier serves over 1 billion families in 160 countries or regions around the world. To date, Haier has successfully floated three listed companies (Haier Smart Home, Haier Biomedical, INKON Life), five large-scale highest enterprises and 37 medium-sized hightest companies. Moreover, the Group has established 10+N innovation ecosystems, 28 industrial parks, 122 manufacturing centers, 108 marketing centers and 240,000 sales networks globally.



Haier has topped Global Major Appliances Brand Rankings by Euromonitor International for 12 consecutive years. The Group's subsidiary Haier Smart Home is among the list of Fortune's Global 500 and World's Most Admired Companies and Forbes' World's 2,000 Largest Public Companies. The COS- MOPlat industrial Internet platform under the Haier Group has topped the cross-sector and cross-field industrial internet platforms of the Ministry of Industry and Information Technology of the People's Republic of China for two years straight. The company was named a leader in Industrial IoT platforms by Forrester and was designated by ISO, IEEE, and IEC, the three major

BIRD, Ririshun, Yingkang Life, Haina Cloud, HCH and Haier Brothers as key examples.

Upholding the vision of "creating new growth engine in the era of IoT with the Rendanheyi Model", Haier is committed to working with its world-class ecosystem partners to continuously build and upscale the brand, scenario brand and ecosystem brand, and to set up IoT ecosystems in clothing, food, accommodation, travel, health, elderly care, biomedicine and education, and to tailor personalized smart life for users around the globe.

international standard organizations, to lead the drafting of international standards for mass

The Haier Group owns a number of ecosystem brands and new acquisitions, including Haier, Casarte, Leader, GE Appliances, Fisher & Paykel, AQUA, Candy, COSMOPlat, THREE-WINGED

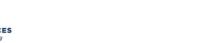














customization models.













Haier Biomedical was founded to focus on the design, manufacturing, marketing and sales of low temperature storage equipment for biomedical samples. In 2019, the company successfully listed on the Shanghai Stock Exchange Science and Technology Innovation Board. Expanding more broadly within life science applications, Haier Biomedical utilizes digital technology within its new generation IoT-enabled products to provide comprehensive, customer-centric solutions for common challenges within applications such as blood supply management, vaccine delivery programmes, biobanks, biological sample management, reagent storage and pharmaceutical supply chain.



After more than ten years of development, Haier Biomedical has 512 patents including 37 invention patents. Haier Biomedical is the world's only biomedical cryogenic cold chain manufacturer covering the full temperature range of -196°C to +8°C.

Haier Biomedical's aerospace medical cold storage refrigerators have been carried on the Shenzhou spacecraft into space multiple times, and the ULT freezers have been carried on the research vessel, Xuelong, supporting the Antarctic scientific research programme. Haier Biomedical also assisted in the development of the Chinese Bone Marrow Bank, National Gene Bank and many national strategic support projects.

In 2018 a series of Smart solutions were launched - U-Blood, U-Vaccine, U-Biobank and U-Reagent and U-Lab, these solutions are based on Haier Biomedical's IoT expertise and the core technology advantages in the biomedical cold chain.

The U-Blood solution is based on IoT-enabled blood refrigerators, linking blood collection, blood delivery and clinical blood use settings to ensure in real-time the traceability of blood information from "blood donor" to "blood user". This solution upgrades the users to a model which speeds up blood type matching and blood delivery times, reduces reagent usage, and costs and achieves zero blood wastage, providing better value and better patient outcomes and care.

The U-Vaccine solution is based on the IoT-enabled vaccine refrigerators, providing transparent end-to-end management of vaccines, ensuring vaccine safety and improving vaccination efficiency, security and reliability from manufacturer to inoculation.

Haier Biomedical built the first ecological solution for safe vaccine storage including solar-powered vaccine refrigerators, to effectively ensure the safety of children's vaccination in countries along the Belt and Road and emerging economies, including hard to reach areas due to lack of infrastructure and or

access to a sustainable electricity supply. As the first company to be selected into the World Health Organization PQS procurement catalogue, Haier Biomedical has been cooperating with the WHO organization and other internationally recognized NGO's to safeguard the health of 200 million children worldwide.



IoT-enabled ultra-low temperature refrigerators are used with the U-Biobank software solution which links sample collection, storage and application scenarios to achieve efficient sample management, precise sample positioning, one-click access and fully traceable data for compliance.

The U-Reagent solution solves a common and significant problem of 'loss' within reagent management, enabling zero wastage of pharmaceutical reagents, quick inventory and real-time information, creating efficient and more cost-effective reagent supply chain management.

Haier Biomedical is a corporate and socially responsible organization to its stakeholders and the world at large and through product innovations, solar-powered products and world-leading energy-saving refrigeration technologies it provides environmentally-friendly products to over 160 countries. In 2020, it was awarded with the UL Energy Star Witness Laboratory for Laboratory Refrigerators.

More recently, Haier Biomedical's Biological Safety Cabinet, with its own superior indicators, was approved by the NSF /ANSI 49-2019 standard, marking a new step for Haier Biomedical's Biological Safety Cabinet.

Utilizing IoT solutions within manufacturing, Haier Biomedical can monitor and control, in real-time, complex automated processes. This delivers significant benefits in terms of energy conservation, facility and resource management, production flow monitoring and inventory management to quality control, packaging, logistics and supply chain optimization. It ensures its manufacturing operations, technological developments and supply chain and customers collectively support sustainable business practices.

#### **Haier Biomedical Development Stages:**



Through independent innovation, achieving -196°C to +8°C full temperature range and complete scenario product solutions coverage



Industrial Globalization: 2013-2018

Being No.1 in market share in China, products sold in more than 100 countries and regions across six continents & the establishment of branches in the UK and India



The industry's first innovation in the integration of cryogenic storage technology and IoT technology to promote the safety of vaccination and the intelligent solutions for blood, reagent, biobank and laboratory management



# CONTENT

Logistics Cold Chain Transport Cooler

Active Cooling

Preservation	Walk in Cald/Fragger Pages
	Walk-in Cold/Freezer Room
150°C Cryo Freezer	Walk-In Cold/Freezer Room
6°C ULT Freezer	Cold Room
nCool Frequency Conversion ULT Freezer nCool ULT Freezer	Solar Direct Driven Cold Room
quency Conversion ULT Freezer	Vaccine Safety Solutions
t Exchange Circulation System ler Counter ULT Freezer	
°C ULT Freezer kible, Portable Mini-ULT Freezer	
	Temperature Monitoring Solution
medical Freezer  Of Disputation Freezer (Disput Coaling)	Remote Temperature Monitoring Device
°C Biomedical Freezer (Direct Cooling) °C Biomedical Freezer	U-COOL-PRO
°C Smart Frequency Conversion Biomedical Freezer °C Biomedical Freezer	
rmacy Refrigerator	30-Day Electronic Temperature Logger
der-Counter Pharmacy Refrigerator	
ndard Pharmacy Refrigerator	Laboratory Equipment
nbined Refrigerator and Freezer rk Free Refrigerator	Biological Safety Cabinet and Laminar Flow Cabi
od Bank Solutions (93)	Liquid Nitrogen Storage Solutions
omated Blood Management Refrigerator	Low Temperature Transport Trolley
attended Self-Service Blood Distribution Refrigerator ranced Blood Bank Refrigerator with LCD Touchscreen	CO₂ Incubator
anced Blood Bank Refrigerator with LED Display	
CBlood Bank Refrigerator sma Freezer	Consumables
ransport Cooler	Consumables
sport Cooler for Biological Products	
sport Cooler for Infectious Materials 💮	Product Portfolio
cine Transport Cooler	Product Portfolio
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# -150°C Cryo Freezer





A mechanical cryogenic freezer is used for the long-term cryopreservation of samples such as cell cultures, tissue samples, bacteria, viruses and non-biological products such as electronics. Applications include cord blood preservation, biobanks, reproductive procedures, blood banks, life science research, biomedical engineering and fisheries. Mechanical cryopreservation is a safe alternative to LN2 and can reduce or eliminate the reliance on LN2, reducing safety concerns.



# Energy Efficient Hydrocarbon Refrigeration

- Includes specialist industrial compressor, hydrocarbon refrigerant, dual-compressors 4-stage cascade refrigeration system, which delivers excellent energy-efficiencies
- Energy-efficient fan design with intelligent start/stop



#### Superior Uniformity

The temperature uniformity is  $\pm 5^{\circ}C$  with the setting temperature of -150  $^{\circ}C$ 



#### Low Noise

**Environmentally Friendly** 

Noise-reduction features and noise reduction design lowers to noise to 55 dB (A)

• 100% HC refrigerant truly environmentally-friendly refrigeration system with zero global warming potential (GWP)

• LBA polyurethane foam has low GWP and is

significantly lower than most HFCs commonly

used, offering better environmental protection



#### Safe, Secure and Reliable

Multiple alarms, including high and low temperature, power failure, door ajar, hot condenser, low battery, sensor error, and high ambient temperature. The standard ambient temperature ranges from 10°C to 32°C. The pressure state of the system can be automatically adjusted by the pressure controller to prevent the pressure from being too high to effect the freezer operation.





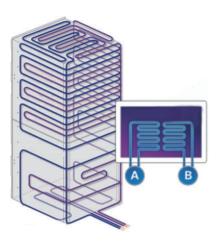
# **Specifications**

	Model	DW-150W209A		
	Cabinet Type		Chest	
	Climate Class		N	
Technical Cooling Type			Direct cooling	
Data	Defrost Mode		Manual	
	Refrigerant		HC	
	Sound Level (dB(A))		55	
	Cooling Performance (°C)		-150	
Performance	Temperature Range (°C)		-140~-150	
	Controller		Microprocessor	
Control	Display		LCD	
	Power Supply (V/Hz)		208~230/60	
Electrical Data	Electrical Current (A)		12	
	Capacity (L/Cu.Ft)		209/7.4	
	•	kg	260/295	
	Net/Gross Weight	lbs	573.2/650.4	
		mm	667*462*677	
	Interior Dimension (W*D*H)	in	26.3*18.2*26.7	
Dimensions		mm	1650*860*1010	
	Exterior Dimension (W*D*H)	in	65.0*33.9*39.8	
		mm	1810*960*1170	
	Packing Dimension (W*D*H)	in	71.3*37.8*46.1	
	Container load (20'/40'/40'H)		12/24/24	
	High/Low Temperature		Υ	
	Hot Condenser		Y	
	Power Failure		Y	
	High/Low Voltage		Y	
	Sensor Error		Y	
Functions	Low Battery		Y	
	High Ambient Temperature		Y	
	Door Ajar		Y	
	Start-up Delay		Y	
	Caster		Y	
	Foot		Y	
	Porthole		Y/1	
	Shelves/Inner Doors		-/2	
			-72 Y	
	USB Interface			
A coccerios	Remote Alarm		Y	
Accessories	5V Power Supply Port			
	Temperature Chart Recorder		Optional	
	RS232/485 Port		Optional	
	CO <sub>2</sub> Backup System		N/A	
	LN <sub>2</sub> Backup System (Built-in/Exter	nal)	Optional/Optional	
	Freezing Rack		433026, Quantity: 12 433028, Quantity: 12	
Other	Certification		UL	

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# **Product Advantages**







# Dual refrigeration system for optimal reliability and security

Two independent hydrocarbon (HC) refrigeration systems, each can maintain -80°C ensuring the safety of stored samples



# World-leading Energy Saving Refrigeration Technology

Intelligent frequency conversion technology and HC refrigeration system delivers a 50% reduction in energy usage when compared to traditional HFC refrigeration systems



#### **Environmental Protection**

Environmentally friendly hydrocarbon refrigerant and LBA foam material



#### Optional IoT System

The optional IoT monitors the operating status of the equipment in real time. Equipped with multiple alarm functions and a self-diagnostics system to identify and warn users to ensure sample

# **Ergonomic Design**



#### Low Noise Design

Optimised systems and noise-reducing cabinet design lower noise out to 42dB for a quieter working experience



#### Adjustable Sample Loading Tray (Optional)

The adjustable height sample load tray provides users with a convenient place to hold samples while opening and accessing storage compartments



#### Large loading capacity

Maximum Capacity: 600 boxes (2 inch boxes with 10\*10 configuration) 60,000 samples can be stored



#### Intelligent Control

10.1-inch high-performance touch screen, sensitive touch operation.
Using the optional IoT module, users can check the real-time operating status from an App



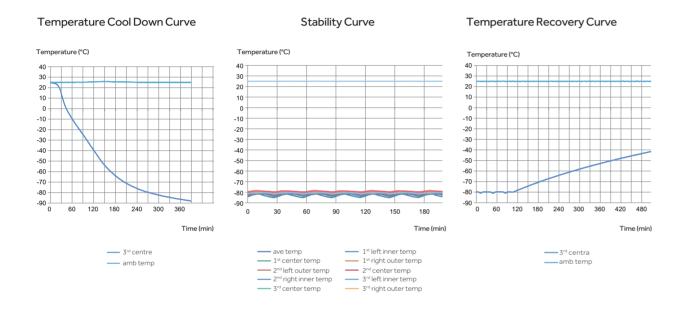
Magnetic filter screen

Filter screen is easy to clean

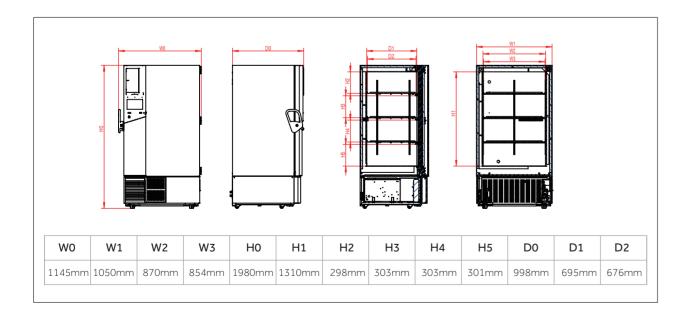
# TwinCool Trequency Conversion ULT Freezer



# **Temperature Curve**



# **Product Dimensions**



# **Specifications**

	Model		DW-86L578BPST	DW-86L728BPST	DW-86L828BPST
	Cabinet Type		Upright	Upright	Upright
	Climate Class		N	N	N
Technical Data	Cooling Type		Direct cooling	Direct cooling	Direct cooling
	Defrost Mode	Defrost Mode			Manual
	Refrigerant		HC	HC	HC
Refrigerant Sound Level (dB(A))			42	42	42
5 6	Cooling Performance (°C )		-86	-86	-86
Performance	Temperature Range (°C )		-40~-86	-40~-86	-40~-86
	Controller		Microprocessor	Microprocessor	Microprocessor
Control	Display		LCD	LCD	LCD
	Power Supply (V/Hz)		100~230/50/60Hz	100~230/50/60Hz	100~230/50/60Hz
Electrical Data	Electrical Current (A)		10.4	10.4	13
	Capacity (L/Cu.Ft)		578/20.4	728/25.7	828/29.2
		kg	325/355	350/385	380/410
	Net/Gross Weight (approx)	lbs	716.5/782.6	771.6/848.8	837.7/914.9
		mm	620*716*1310	766*716*1310	870*716*1310
	Interior Dimension (W*D*H)	in	24.4*28.2*51.6	30.2*28.2*51.6	34.3*28.2*51.6
Dimensions		mm	895*998*1980	1046*998*1980	1145*998*1980
	Exterior Dimension (W*D*H)		35.2*39.3*78.0	41.2*39.3*78.0	45.1*39.3*78.0
	Packing Dimension (W*D*H)		975*1095*2130	1120*1090*2130	1240*1080*2130
			38.4*43.1*83.9	44.1*42.9*83.9	48.8*42.5*83.9
	Cabinet Width (without handle and hinge)	in	800	946	1050
	Container Load (20'/40'/40'H)		12/24/24	10/22/22	5/11/11
	High/Low Temperature		Y	Y	Y
	Hot Condenser		Y	Υ	Y
	Hot Condenser Power Failure		Y	Y	Y
	High/Low Voltage		Y	Υ	Y
Functions	Sensor Error		Y	Y	Y
	Low Battery		Y	Υ	Y
	High Ambient Temperature		Y	Y	Y
	Door Ajar		Y	Y	Y
	Start-up Delay		Y	Y	Y
	Caster		Y	Y	Y
	Foot		Y	Y	Y
	Porthole		Y/2	Y/2	Y/2
	Shelves/Inner Doors		3/4	3/4	3/4
	USB Interface		Υ Υ	Υ Υ	Y
Accessories	Remote Alarm		Y	Y	Y
/ 10003301103	5V Power Supply Port		Y	Y	Y
	Temperature Chart Recorder		Optional	Optional	Optional
	RS232/485 Port		NA/Standard	NA/Standard	NA/Standard
	CO2 Backup System		Optional	Optional	Optional
	LN <sub>2</sub> Backup System		Optional	Optional	Optional
Certifications	UL		Y	Y	Y
	ENERGY STAR		Y	Y	Y

 $\hbox{*Haier Biomedical reserves the right to change products and specifications without prior notice}\\$ 

# **Scope of Application**

The TwinCool ULT freezer can be used for the storage and protection of valuable samples which require strict and continuous storage conditions, designed to operate even in the event of a compressor failure. Suitable for viruses, pathogens, blood cells and other biological sample cold storage applications found within hospitals, disease control, research institutions and biomedical engineering. Also used to store special materials and other products within electronics and chemicals industries.

#### **Advanced Hardware System**



#### **Smart Full-size Touch Screen**

10-inch touch screen with state-of-art user interface design, coupled with sample management system provides optimal user experience.

# Optional IOT & Sample Management System (Professional Edition)



#### Simplified Sample Management Experience

Barcode scanner for simple, effortless and precise identification. Input and retrieve your samples with higher precision and efficiency



# Wireless Monitoring Connectivity

Check the real-time operating status via mobile phones or palmtop, simple and reliable

# Dual independent refrigeration systems for maximum sample safety

The dual refrigeration systems run independently and alternately, both reaching -80°C, such that if one system fails the other will maintain temperature to ensure sample storage safety.

# B High speed refrigeration system for faster pull down and temperature recovery after door opening

Utilizing auto-cascade hydrocarbon (HC) refrigeration technology to deliver fast temperature pull down. From an ambient of  $25^{\circ}\text{C}$  it takes just 180 minutes to reach -80°C. It provides a quick temperature recovery after door opening, with the internal temperatures returning to -75°C within 1 minute, guaranteeing safety of samples.

# World-leading energy saving refrigeration technology

The HC refrigeration technology coupled with superinsulation, which increases the insulation efficiency by 30%, and a cabinet designed to reduce heat loss ensures an energy efficient freezer. The 578L model has a power consumption of 11 kWh/day and is certified by The National Quality Certification Center for Energy Saving and Environmental Protection.

# **Friendly Design**



#### Safe and secure

Equipped with key lock, padlock and optional electromagnetic lock, with optional fingerprint lock, providing multiple safeguards for sample safety



#### Cloud data storage available

Store hundreds of millions of scientific research and sample information in the cloud server



# Low noise design, reducing the noise down to 53dB

Special noise-reduction design plus super silent compressor technology and energy-saving fan, considerably lowers noise level



#### Optimized insulation

Double foaming for both inner and outer doors and five-layer sealing design and optimized super-thick VIP thermal insulation technology, extends temperature holdover time during power failure and increases insulation efficiency by 30%

#### **Specifications**

	Model		DW-86L578ST	DW-86L578SAT	DW-86L728ST	DW-86L728SAT
	Cabinet Type		Upright	Upright	Upright	Upright
	Climate Class		N	N	N	N
Technical Data	Cooling Type		Direct cooling	Direct cooling	Direct cooling	Direct cooling
	Defrost Mode		Manual	Manual	Manual	Manual
	Refrigerant		HC	HC	HC	HC
	Sound level (dB(A))		52	53	53	53
5	Cooling Performance (°C)		-86	-86	-86	-86
Performance	Cooling Performance (°C) Temperature Range (°C)		-40~-86	-40~-86	-40~-86	-40~-86
0	Temperature Range (°C)  Controller		Microprocessor	Microprocessor	Microprocessor	Microprocessor
Control	Display		LCD Touchscreen	LCD Touchscreen	LCD Touchscreen	LCD Touchscree
Electrical	Power Supply (V/Hz)		120/60	208~230/60	120/60	208~230/60
Data	Electrical Current (A)		18	10	18	10
	Capacity (L/Cu.Ft)		578/20.4	578/20.4	728/25.7	728/25.7
		kg	325/355	325/355	350/385	350/385
Construction	Net/Gross Weight (approx)	lbs	716.5/782.6	716.5/782.6	771.6/848.8	771.6/848.8
		mm	620*716*1310	620*716*1310	766*716*1310	766*716*1310
	Interior Dimension (W*D*H)	in	24.4*28.2*51.6	24.4*28.2*51.6	30.2*28.2*51.6	30.2*28.2*51.6
		mm	895*998*1980	895*998*1980	1046*998*1980	1046*998*1980
	Exterior Dimension (W*D*H)	in	35.4*39.3*78.0	35.4*39.3*78.0	41.2*39.3*78.0	41.2*39.3*78.0
		mm	975*1095*2130	975*1095*2130	1120*1090*2130	1120*1090*213
	Packing Dimension (W*D*H)		38.4*43.1*83.9	38.4*43.1*83.9	44.1*42.9*83.9	44.1*42.9*83.9
_oading Quantities	Container Load (20'/40'/40	)'H)	12/24/24	12/24/24	10/22/22	10/22/22
<u> </u>	High/Low Temperature	- ,	Υ	Y	Y	Y
	Hot Condenser		Y	Y	Υ	Y
	Power Failure		Y	Y	Υ	Y
A 1	High/Low Voltage		Y	Y	Y	Y
Alarms	Sensor Error		Y	Y	Y	Y
	Low Battery		Y	Y	Y	Y
	High Ambient Temperature		Y	Y	Υ	Y
	Door Ajar		Y	Y	Y	Y
	Caster		Y	Y	Y	Y
	Foot		Y	Y	Y	Y
	Porthole		Y/2	Y/2	Y/2	Y/2
	Shelves/Inner Doors		3/4	3/4	3/4	3/4
	USB Interface		Y	Y	Y	Y
Accessories	Remote Alarm (Dry contact	s)	Y	Y	Y	Y
ACCESSOTIES	5V Power Supply Port	-	Y	Y	Y	Y
	Temperature Recorder		Optional	Optional	Optional	Optional
	RS485 Port		Y	Y	Ү	У
	CO <sub>2</sub> Backup System		Optional	Optional	Optional	Optional
	LN <sub>2</sub> Backup System		Optional	Optional	Optional	Optional
	UI		У	Y	У	У
Certifications	-		'	'		1

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# **Scope of Application**

Applicable for products and samples which require strict storage conditions such as viruses, pathogens, red blood cells, white blood cells, skin, bones, bacteria, semen, biological products, electronics and special materials. Suitable for long term storage applications and compliant with typical storage requirements found in hospitals, disease control and prevention centers, scientific research institutions, biomedical engineering institutes, agriculture/fishery companies as well as the electronics and chemical industry.

# **Advanced Hardware System**



#### **Smart Full-size Touch Screen**

10-inch capacitive touch screen, state-of-art UI design coupled with sample management system to provide the optimal user experience.



**HC & Variable Frequency** Drive Refrigeration System for Additional Energy Saving

Advanced innovative design delivers excellent energy savings. The energy consumption is down to a single digit.

#### **Optional IoT Software System**



#### **Simplified Sample** Management Experience

Optional barcode scanner for simple, effortless and precise identification. Input and retrieve your samples with higher precision and efficiency



#### Wireless Monitoring Connectivity

Check the real-time operating status via mobile phones or palmtop, simple and reliable

# A Quicker product access, identification and retrieval

Instead of a manual system, the one-gun, one-code and one-key operation plus touch screen synchronization means you can access and retrieve your samples within seconds

#### B 24-hour sample protection

Using Haier's app and IoT technology the unit can be monitored and can self-diagnose faults, ensuring you are always aware of your unit's status and able to make real-time and informed choices to protect your samples

#### C Cloud data storage available

Store hundreds of millions of scientific research and sample information in the cloud server

# **Friendly Design**



#### Safe and secure

Standard equipped with key lock, padlock and electromagnetic lock with optional fingerprint lock, providing multiple safeguards for sample safety



#### Low noise design, reducing the noise down to 43.5dB

Special noise-reduction design plus super silent compressor technology and energy-saving fan, considerably lowers noise level



# Super energy efficient with three environmentally friendly innovations

Ultra-low power consumption, down to less than 10kWh/day, ensuring a world leading energy saving performance



#### Optimized insulation

Double foaming for both inner and outer doors and five-layer sealing design and optimized super-thick VIP thermal insulation technology, extends temperature holdover time during power failure and increases insulation efficiency

# **Specifications**

	Model		DW-86L579BPT	DW-86L729BPT	DW-86L829BPT	DW-86L959BPT
	Cabinet Type		Upright	Upright	Upright	Upright
	Climate Class		N	N	N	N
Tochnical Data	Cooling Type		Direct Cooling	Direct Cooling	Direct Cooling	Direct Cooling
Technical Data	Defrost Mode		Manual	Manual	Manual	Manual
	Refrigerant		HC	HC	HC	HC
Refrigerant Sound Level (dB(A))		43.5	43.5	43.5	47	
D (	Cooling Performance (°C)		-86	-86	-86	-86
Performance	Temperature Range (°C)		-40~-86	-40~-86	-40~-86	-40~-86
0	Controller		Microprocessor	Microprocessor	Microprocessor	Microprocessor
Control	Display		Touch Screen LCD	Touch Screen LCD	Touch Screen LCD	Touch Screen LCI
EL ID .	Power Supply (V/Hz)		100~230/50/60	100~230/50/60	100~230/50/60	100~230/50/60
Electrical Data	Electrical Current (A)		14	14	15	20
	Capacity (L/Cu.Ft)		579/20.4	729/25.7	829/29.2	959/33.9
	Net/Gross Weight (approx)	kg	325/355	350/385	380/415	450/485
	(approx)	lbs	716.5/782.6	771.6/848.8	837.7/914.9	992.1/1069.2
		mm	620*716*1310	766*716*1310	870*716*1310	1016*716*1310
Dimensions	Interior Dimension (W*D*H)	in	24.4*28.2*51.6	30.2*28.2*51.6	34.3*28.2*51.6	40.0*28.2*51.6
	E D (MADALI)	mm	895*998*1980	1046*998*1980	1145*998*1980	1296*998*1980
	Exterior Dimension (W*D*H)	in	35.2*39.3*78.0	41.2*39.3*78.0	45.1*39.3*78.0	51.0*39.3*78.0
	D 1: D: . (1/4D*1)	mm	975*1095*2130	1120*1090*2130	1240*1080*2130	1410*1160*2185
	Packing Dimension (W*D*H) in		38.4*43.1*83.9	44.1*42.9*83.9	48.8*42.5*83.9	55.5*45.7*86.0
	Container load (20'/40'/40'H)		12/24/24	10/22/22	5/11/11	5/10/10
	High/Low Temperature	-		Υ	Υ	Y
	High/Low Temperature  Hot Condenser  Power Failure		Y	Y	Y	Y
			Y	Y	Y	Y
	High/Low Voltage		Υ	Υ	Υ	Y
Functions	Sensor Error		Y	Y	Υ	Y
	Low Battery		Y	Y	Y	Y
	High Ambient Temperature		Y	Y	Y	Y
	Door Ajar		Y	Y	Y	Y
	Start-up Delay		Y	Y	Y	Y
	Caster		Y	Y	Y	Y
	Foot		Y	Y	Y	Y
	Porthole		Y/2	Y/2	Y/2	Y/2
	Shelves/Inner Doors		3/4	3/4	3/4	3/4
	USB Interface		Y	Y	Y	Y
Accessories	Remote Alarm		Y	Y	Y	Y
Accessories	5V Power Supply Port		Y	Y	Y	Y
	Temperature Chart Recorde	r	Optional	Optional	Optional	Optional
	RS485 Port		ү	Y	Y	Y
	CO <sub>2</sub> Backup System		Optional	Optional	Optional	Optional
	LN <sub>2</sub> Backup System		Optional	Optional	Optional	Optional
	UL UL		Y	Y	Y	Y
Certifications	ENERGYSTAR		Y	Y	Y	Y

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

# Salvum Frequency Conversion ULT Freezer

09/10

Haier Biomedical's SmartFrequency technology manages the compressor speeds on demand. The ultra-low temperature freezers can thus achieve the world-leading energy efficiency in ultra-low temperature.





DW-86L829BP

# **Smarter by Design**

The SmartFrequency Conversion range of ultra low temperature freezers have been designed and developed at the Haier Biomedical R&D Institute. They are certified by one of the world's leading energy conservation and environmental protection organisations.



# Intelligent frequency Conversion technology

Two variable speed compressors are controlled for optimal freezer performance. Low energy consumption is achieved.



#### Maximum energy efficiency

Our SmartFrequency Technology, coupled with our environmentally safe and friendly hydrocarbon refrigeration system, allows the Haier freezers to operate at a low level of energy of 8.2 kWh/day.



#### Precise temperature control

The innovative control algorithm balances the effects of temperature loss with the unique frequency conversion refrigeration system, ensuring the cabinet temperature stability of ±3°C.



#### Frequency conversion Adaptive technology

Variable speed compressors in Haier Biomedical freezers are operated to produce the capacity that matches the demand of the load. The control system automatically tunes the speed of the compressors to optimize the operation.



# World-leading energy saving Refrigeration technology

Our hydrocarbon refrigeration technology can save energy by 50%, significantly reducing operator's cost. The refrigerants do not contain fluoride and chloride. The global warming potential is extremely low at 3. Thus they are very friendly to the environment.



#### Minimal sound level output

Adaptive control technology controls the fans and compressors to reduce the sound level to 43.5 dB(A).





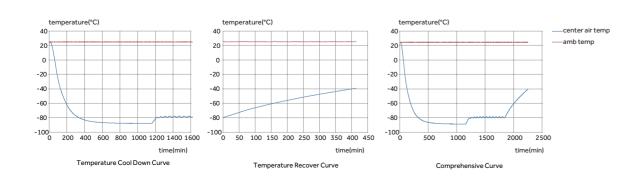
#### **USB** Interface

Enables users to download historical temperature data for compliance/auditing purposes

#### Multilevel Alarms

Alarming functions that include high and low temperature, sensor error, power failure, highambient, clean filter and door ajar

#### DW-86L829BP | TYPICAL PERFORMANCE CHARACTERISTICS AT 25°C AMBIENT



# **Specifications**

	Model		DW-86L579BP	DW-86L729BP	DW-86L829BP	DW-86L959BP
	Cabinet Type		Upright	Upright	Upright	Upright
	Climate Class		N	N	N	N
Technical Data	Cooling Type		Direct Cooling	Direct Cooling	Direct Cooling	Direct Cooling
	Defrost Mode		Manual	Manual	Manual	Manual
	Refrigerant		HC	HC	HC	HC
	Sound Level (dB(A))		43.5	43.5	43.5	47
Performance -	Cooling Performance (°C)		-86	-86	-86	-86
Periormance -	Temp Range (°C)		-40~-86	-40~-86	-40~-86	-40~-86
	Controller		Microprocessor	Microprocessor	Microprocessor	Microprocessor
Control -	Display		LED	LED	LED	LED
Electrical	Power Supply (V/Hz)		100~230/50/60	100~230/50/60	100~230/50/60	100~230/50/60
Data	Electrical Current (A)		14	14	15	20
	Capacity (L/Cu.Ft)		579/20.4	729/25.7	829/29.2	959/33.9
	Not/Cross Weight (sparsy)	kg	325/355	350/385	380/415	450/485
	Net/Gross Weight (approx)	lbs	716.5/782.6	771.6/848.8	837.7/914.9	992.1/1069.2
	Interior Dimensions (W*D*H)	mm	620*716*1310	766*716*1310	870*716*1310	1016*716*1310
Construction		in	24.4*28.2*51.6	30.2*28.2*51.6	34.3*28.2*51.6	40.0*28.2*51.6
	Exterior Dimensions (W*D*H)	mm	895*998*1980	1046*998*1980	1145*998*1980	1296*998*1980
		in	35.2*39.3*78.0	41.2*39.3*78.0	45.1*39.3*78.0	51.0*39.3*78.0
		mm	975*1095*2130	1120*1090*2130	1240*1080*2130	1410*1160*2185
	Packing Dimension (W*D*H)	in	38.4*43.1*83.9	44.1*42.9*83.9	48.8*42.5*83.9	55.5*45.7*86.0
Loading Quantities	Container Load (20'/40'/40'H)		12/24/24	10/22/22	5/11/11	5/10/10
	Remote Alarm (Dry contacts)		Υ	Y	Υ	Y
	High/Low Temp		Y	Y	Υ	Y
	Hot Condenser		Y	Y	Υ	Y
	Power Failure		Υ	Υ	Υ	Y
Alarms	Sensor Error		Y	Y	Y	Y
Alditis	Low Battery		Y	Y	Y	Y
	High Ambient Temp		Y	Y	Y	Y
	Door Ajar		Y	Υ	Y	Y
	Caster		Y	Υ	Υ	Y
	Foot		Y	Y	Y	Y
	Porthole		Y/2	Y/2	Y/2	Y/2
	Shelves/Inner Doors		3/4	3/4	3/4	3/4
	USB Interface		Υ	Υ	Υ	Y
Accessories	5V Power Supply Port		Y	Y	Y	Y
	Temp Recorder		Optional	Optional	Optional	Optional
	RS485 Port		Y	Y	Y	Y
-	CO <sub>2</sub> Backup System		Optional	Optional	Optional	Optional
	LN₂ Backup System		Optional	Optional	Optional	Optional
Certifications	UL		Υ	Υ	Y	Υ

BP suffix - Variable frequency invertor compressor Product appearance and specifications are subject to change without notice

This product line is designed and manufactured for long term storage of various biological products, including viruses, germs, erythrocytes and leucocytes. Applications can be found in blood banks, hospitals, epidemic prevention services, research institutes, biological engineering institutes, laboratories in electronic and chemical plants.





# **Advantages**

- World leading energy-efficient
- Hydrocarbon refrigeration system
- Slim cabinet design
- Reliable sample protection
- Malfunction alarms
- Excellent insulation performance















# **Insulation and System Design**

- Special V-I-P (Vacuum Insulation Panel) insulation system reduces the heat gain by 25%
- High efficiency HC refrigeration system improves the overall efficiency by 45%
- Four individual insulated inner doors reduce the cold air loss to the minimum
- Heated Pressure Equalization Port makes re-accessing the unit fast
- About 50 dba sound level

# Safe and Reliable Storage

- Superior temperature uniformity
- Dependable fans, compressors and other system related components

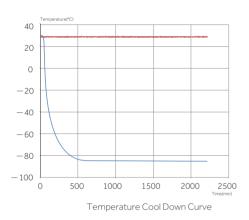
# Alarms (Visual and Audible)

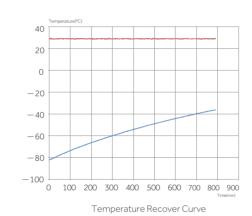
- Adjustable High/Low temperature alarm
- Sensor error
- Low battery
- Door ajar
- Power failure
- Hot condenser
- High ambient
- Remote alarm contact

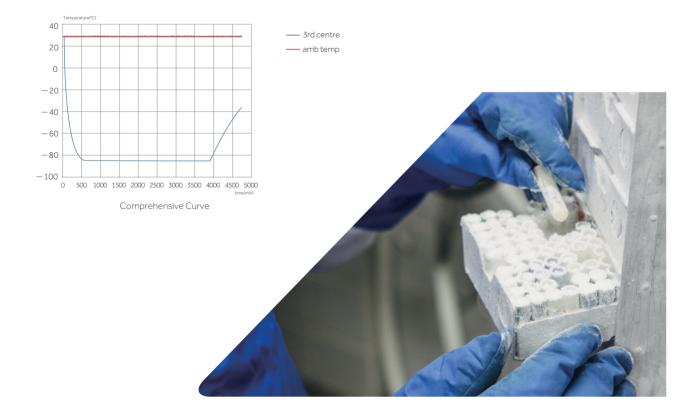
# **Extended Warm up Time During Power Failure**

- Warm up time measures the time taken for temperature to rise up (from -80°C to -50°C) at 25°C ambient when the power is interrupted.
- Haier has the longest warm up time when compared with other major brands in the market.

#### TYPICAL PERFORMANCE CHARACTERISTICS AT 25 °C AMBIENT



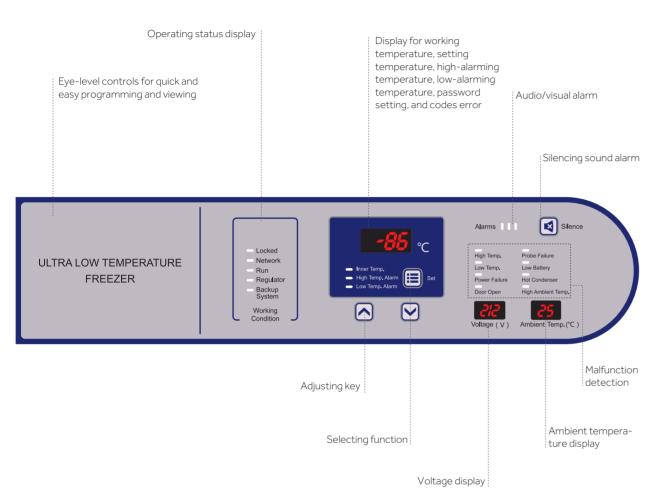






Two port holes for ease of temperature monitoring

TwinCool ULT Freezer



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
Door Ajar	Door opening time secedes set time, settable between 0 and 20 minutes
Sensor Error	E0.Ambient sensor fails E1.Condenser sensor fails E2.Main cabinet temperature control sensor fails E3.Heat exchanger sensor fails E4.Heat exchanger temperature fails
Low Battery	Battery capacity runs low or battery switch is not turned on
Hot Condenser	Condensers filter element is clogged     Ambient temperature is too high
High Ambient Temperature	Ambient temperature exceeds 32°C



Field proven reliablity

- Unique insulated inner door design for four separate storage compartments to minimize frost buildup inside the chamber
- Specialized control system design for a well-balanced operation of cascade refrigeration system
- Positive field proven reliability record



Safety

- Malfunction alarms including high and low temperature, power failure, sensor error, clean -filter, and extremely high ambient
- Capable of producing two types of alarm outputs: audible buzzer and visible
- Multiple built-in system protection features including user-settable protection code for controls, user settable delay to start, voltage compensation system, and protection against extreme high voltages
- Door open feature standard and USB port for temperature data downloading standard on upright models
- Remote alarm contacts



Installation & Application

- Wide range operating voltage system from 185V to 260 V designed to allow units installed in areas with poor voltage condition
- Suitable for 10°C to 32°C ambient temperature
- Input voltage and ambient temperature shown simultaneously for ease of monitoring environmental conditions
- Robust door latch designed for secure door closing
- Compact casters for ease of maneuvering



Low sound level

- Specialized refrigeration system design using whisper quiet fan and compressors
- Freezer chassis designed to absorb vibration and sound



- **Energy saving**
- Unique door seal design for the minimum loss of cold temperature during a door
- High performance VIP insulation panels to minimize cabinet heat gain and to improve temperature stability
- Patented cabinet insulation system designed for optimal performance of cold storage temperature and minimal frost buildup
- Unique design of independent insulated inner door systems for independent access of storage space to provide the maximum protection of stored samples



Key design features

- Microprocessor-controlled system designed for controllable range of -40°C to -86°C for cabinet space with 1°C increment
- · Large LED display for cabinet temperature, set temperature, ambient temperature, and input voltage
- Settable high temperature and low temperature alarms
- Automatic clean-filter alarm and sensor error alert
- Adjustable storage shelf height
- Optional temperature recorder, storage racks and storage boxes







# **Specifications**

	Model		DW-86L578J	DW-86L578JA	DW-86L728J	DW-86L728JA	DW-86L828JA
	Cabinet Type		Upright		Upright		Upright
	Climate Class		1	V	N		N
Technical	Cooling Type		Direct	cooling	Direct cooling		Direct cooling
Data	Defrost Mode		Ma	Manual		nual	Manual
	Refrigerant		Н	С	Н	IC	HC
	Sound level (dB(A))		5	50		0	51.5
Performance	Cooling Performance	e (°C)	-8	36	-8	36	-86
Periormance	Temperature Range	e (°C)	-40	~-86	-40	~-86	-40~-86
Carabaal	Controller		Micropr	ocessor	Micropr	ocessor	Microprocessor
Control	Display		LE	ED	LE	ED	LED
Electrical	Power Supply (V/Hz)		120/60	208~230/60	120/60	208~230/60	208~230/60
Data	Electrical Current (A)	)	12	9	18	10	10
	Capacity (L/Cu.Ft)		578/	/20.4	728	/25.7	828/29.2
	Net/Gross Weight	kg	300	/330	345	/385	380/410
	(approx)	lbs	661.4	/727.5	760.6	/848.8	837.7/903.9
	Interior Dimension	mm	620*71	6*1310	766*71	6*1310	870*716*1310
Construction	(W*D*H)	in	24.4*28	3.2*51.6	30.2*28	3.2*51.6	34.3*28.2*51.6
	Exterior Dimension	mm	903*980*1960		1049*980*1980		1145*980*1980
	(W*D*H)	in	35.6*38.6*77.2		41.3*38.6*78.0		45.1*38.6*78.0
	Packing Dimension	mm	970*108	35*2130	1120*10	90*2130	1240*1080*2130
	(W*D*H)	in	38.2*42	2.7*83.9	44.1*42	2.9*83.9	48.8*42.5*83.9
Loading Quantities	Container load (20'/4	0'/40'H)	12/2	4/24	10/22/22		5/11/11
	High/Low Tempera	iture	,	Y	Y		Υ
	Hot Condenser		,	Y	Y		Υ
	Power Failure		,	Y	Y		Υ
Alarms	Sensor Error		,	Y	,	Y	Υ
	Low Battery		,	Y	,	Y	Y
	High Ambient Temp	erature	,	Y	Y		Υ
	Door Ajar		,	Y	Y		Υ
	Caster		,	Y	Y		Υ
	Foot		,	Y	Y		Y
	Porthole		Y.	/2	Y	/2	Y/2
	Shelves/Inner doors		3.	/4	3	/4	3/4
	USB Interface		,	Y	Y		Υ
Accessories	Remote Alarm (Dry o	ontacts)	Y		Y		Υ
71000000100	5V Power Supply Por	t	Y		Y		Υ
	Temperature Recorder		Opt	Optional		ional	Optional
	RS232/485 Port	·		ional	1	ional	Optional
	CO <sub>2</sub> Backup System			ional	1	ional	Optional
	LN2 Backup System			ional	·	ional	Optional
	UL		Y	Υ	Y	Y	Y
Certifications	ENERGYSTAR		Υ	/	Y	/	Υ

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

# Capillary Tube Capillary Tube Cascade Condenser Condenser Precondenser Pressure Switch Accumilator Filter Dryer Cascade Condenser Low Stage Compressor Filter Dryer Compressor

	Filter dryer  • Filtration and drying device for water and debris
_	Capillary tube for high stage  • Expansion device for high stage liquid refrigerant
_	Capillary tube for low stage  • Expansion device for low stage refrigerant
	High stage condenser  • Extra-large air cooled condenser dissipates product heat content efficiently.
	Low stage evaporator  · Heat exchanger for expanded low stage refrigerant
	<ul> <li>Ultra low noise compressor</li> <li>Compressor provides reliable performance with ultra low noise</li> <li>Specially designed low stage evaporator yields excellent temperature uniformity and recovery after loading and door opening.</li> <li>Both high and low stage compressors are industrial grade hermetically sealed compressor designed for low temperature application. Sound level is extremely low.</li> </ul>
	Cascade condenser  • Heat exchanger between the high and low temperature stage in the system
	Temprite oil separator  • Temprite oil separator can effectively separate oil and water to improve the refrigeration performance

Suitable for clinical, medical, scientific research, quarantine and other departments to store items under low temperature conditions. Applicable for universities, hospitals, disease prevention and control centers, blood stations, scientific research institutes, electronics and chemical enterprise laboratories and biomedical engineering research institutes. For storage of biological products and biological samples such as red and white blood cells, viruses, bone and bacteria. Also used for electronic devices and other materials used for cryogenic tests.



DW-86L100J



#### **Energy Efficient, Safe and Reliable**

High efficiency HC refrigeration system, optimised for energy efficiency delivering a power consumption figure of just  $5.5 \, \text{kW}/24 \, \text{hrs}$ .



#### **Personal ULT Storage**

810mm cabinet height makes it easy to place on or under counter, saving storage space. Stackable design.



#### Ergonomic design

Ergonomic handle design ensures easy one-hand door opening.



#### Low noise

Optimized noise reduction cabinet and system design, emits sound level of only 46.8dB.









#### Microprocessor control system

- $\cdot \, \text{Microcomputer electronic thermostat, LED temperature display, display precision } 1^{\circ}\text{C, adjustable cabinet}$ temperature set point -40°C~-86°C.
- · Cabinet temperature/voltage/ambient temperature checking are available.
- · Multiple alarm functions: high temperature alarm, low temperature alarm, sensor fault alarm, power failure alarm, low battery power alarm, open door alarm and high ambient temperature alert.
- · Sound and light alarm mode, attachable to remote alarm interface.
- · Battery backup alarm function operates continuously for >24hrs in the event of a power outage.
- · Standard configuration: RS485 port and USB interface.
- · Standard 5V power supply available for test equipment.
- · Optional IoT module.



#### Superior thermal insulation performance

70mm super thick insulation layer design, aviation vacuum insulation material VIP, thickness of 25 mm or more, 4 layers of silicone seal, superior thermal insulation and energy saving effect.



#### **Porthole**

Portholes as standard, allows for independent testing of cabinet temperature.



#### Security lock

Standard door lock and padlock to ensure sample security and prevent unauthorised access.



#### **USB** data storage

Capable of storing more than 15 years of data.



	Model		DW-86L100J				
	Cabinet Type		Upright				
	Climate Class		N				
Technical	Cooling Type		Direct cooling				
Data	Defrost Mode		Manual				
	Refrigerant		HC				
	Sound level (dB(A))		46.8				
Performance	Cooling Performance (°	C)	-86				
renomance	Temperature Range (°	C)	-40~-86				
Control	Controller		Microprocessor				
COLLIO	Display		LED				
Electrical	Power Supply (V/Hz)		120/60				
Data	Electrical Current (A)		6.5				
	Capacity (L/Cu.Ft)		100/3.5				
	Net/Gross Weight	kg	108/132				
	(approx)	lbs	238/291				
	Interior Dimension	mm	330*481*630				
Construction	(W*D*H)	in	13*19*25				
	Exterior Dimension	mm	770*660*810				
	(W*D*H)	in	30*26*32				
	Packing Dimension	mm	865*755*1020				
	(W*D*H)	in	34.1*29.7*40.2				
Loading Quantities	Container load (20'/40'/	40'H)	32/64/64				
	High/Low Temperatur	е	Υ				
	Hot Condenser		Υ				
	Power Failure		Υ				
A.I.	High/Low Voltage		Υ				
Alarms	Sensor Error		Υ				
	Low Battery		Υ				
	High Ambient Tempera	ture	Υ				
	Door Ajar		Υ				
	Caster		Υ				
	Foot		Υ				
	Porthole		Y/1				
	Shelves/Inner doors USB Interface Sories Remote Alarm 5V Power Supply Port Temperature Recorder		1/2				
			Y				
Accessories			Y				
			Υ				
			/				
	Rs232/485 Interface		-/Y				
	CO <sub>2</sub> Backup System		Optional				
	LN <sub>2</sub> Backup System		Optional				
Certifications	l		Optional Y				

Suitable for pharmaceutical, clinical and medical research use, for the long-term storage of samples and products under ultra-low temperature conditions.

#### Advantage



#### **Advantage**





#### HC Energy Saving

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

One porthole as standard, allows for independent testing of cabinet

temperature

# One Unit for Multiple Applications

\*Vehicle-mounted transportation with 24V(DC) power supply \*Long-term storage with 110V power supply.

# Supe

#### Superior Uniformity

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

#### **Ergonomic Design**



#### Light Weight

The whole unit weighs 27kg, easy to carry.



#### Safety Lock Catch

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



#### Superior Insulation Performance

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



#### Metal Handle

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

# **Specifications**

1	4odel		DW-80WZ15	DW-86L51J
	Cabinet Type		Chest	Upright
	Climate Class		N	N
Technical Data	Cooling Type		Direct cooling	Direct Cooling
Technical Data	Defrost Mode		Manual	Manual
	Refrigerant		R50/R1150/R600a	HC
Refrigerant Sound Level (dB(A))			60	46.8
D(	Cooling Performance (°C)		-80	-86
Performance	Temperature Range (°C)		-60~-80	-40~-86
Caralanal	Controller		Temperature controller	Microprocessor
Control	Display		LED	LED
	Power Supply (V/Hz)		110V/60Hz DC 24	120/60
Electrical Data	Max Power (W)		280	420
	Max Power (W)  Electrical Current (A)		4.5 12	7.5
	Capacity (L/Cu.Ft)		15/0.53	51/1.8
		(kg)	27/33	77/90
	Net/Gross Weight (approx)	(lbs)	59.52	160.9/189.6
	Exterior Dimension (W*D*H)	(mm)	690*320*500	532*640*806
		(in)	27.2*12.6*19.7	20.9*25.2*31.7
Dimensions		(mm)	260*180*330	330*481*316
	Interior Dimension (W*D*H)	(in)	10.2*7.1*13.0	13*16.5*12.4
	Packing Dimension (W*D*H)	(mm)	805*430*725	570*735*1100
	Packing Dimension (W·D·H)	(in)	31.7*17.0*28.5	22.4*28.9*43.3
	Cabinet Width (Without Handle a	nd Hinge)	105/210/210	470
	Container Load (20'/40'/40'H)		Υ	60/126/126
	High/Low Temperature		N	Y
	Hot Condenser		Y	Υ
	Power Failure		N	Υ
	High/Low Voltage		Υ	Y
Functions	Sensor Error		N	Υ
I UI ICLIOTIS	Low Battery		N	Y
	High Ambient Temperature		N	Y
	Door Ajar		N	Υ
	Start-up Delay		Υ	Y
	Caster		N	Y
	Foot		N/N	Y
	Porthole		N	Y/1
Accessories	Shelves/Basket		N	1/1
	USB Interface		N	Υ
	Remote Alarm		N	Υ
	RS232/485 Port		N	NA/Standard
Other	Certification		UL	UL

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

# -30°C Biomedical Freezer (Direct Cooling)

09/10

Haier Biomedical  $-30^{\circ}$ C biomedical freezer with smart control and energy-saving hydrocarbon refrigeration system for safe and reliable product storage.



**DW-30L508** 

# **Application**

Biomedical and life science laboratories within blood banks, hospitals, disease control centres and research institutes as well as electronics and chemical industries. Used for cryopreservation of plasma, biological samples and other products and cold tests for components and materials.

#### **Advantages**

#### High-efficiency and energy-saving compressor and refrigeration system

Industrial grade energy-saving compressor and optimized cooling system reduces power consumption by more than 55% compared with older models.

#### Green and environmentally friendly

Hydrocarbon refrigerant compressor system and use of hydrocarbon refrigerants makes the refrigeration system completely green and environmental friendly. Built with isopentane foam polyurethane insulation, which complies with European RoHS Directive.

#### · Superior temperature uniformity

Evaporator-shelf design speeds up the cooling process and provides a more uniform temperature distribution. The temperature uniformity at specific points throughout the unit is ±4°C.

#### Low sound level

Sound-reducing design with optimized system eliminates high-pitch noise to reduce sound level and deliver a smoother operation

#### **Key Features**



#### Microprocessor control system:

- Microprocessor temperature controller, LCD temperature display, display accuracy at 0.1°C.
- Adjustable temperature setting from -10 °C to -30 °C
- Multiple alarm functions including high temperature alarm, low temperature alarm, sensor error alarm and power failure alarm
- Sound and flash alarm
- Alarm lasts for more than 24 hours after power failure



#### Excellent temperature-retaining ability

High efficient insulation and double-sealing design improves temperature performance, energy efficiency and system reliability



#### Lock

Lock latch and key lock double-lock design provides an extra level of security



#### Porthole

Porthole design is standard



#### Recorder

Optional chart temperature recorder available

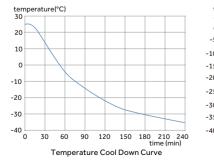


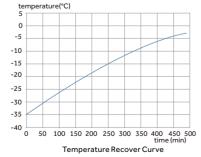
# -30°C Biomedical Freezer (Direct Cooling)

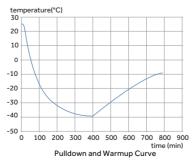
# PS(Polystyrene) interior, painted steel plate exterior, rust-proof, and easy to clean Microprocessor temperature control, LCD temperature display with display accuracy of 0.1°C Padlock design, multi-user, independent management, \*latch-lock high security Aluminum alloy handle, stable and durable Standard casters and levelling • feet for ease of manoeuvring 10 interior plastic drawers and positioning with facility for labelling for •--efficient sample organisation and identification

DW-30L508

#### DW-30L508 TYPICAL PERFORMANCE CHARACTERISTICS AT 25°C AMBIENT







— center air temp

# **Specifications**

	Model		DW-30L508		
	Cabinet Type		Upright, Double Door		
	Climate Class		SN N		
Technical Data	Cooling Type		Direct Cooling		
reen near Data	Defrost Mode		Manual		
	Refrigerant		HC		
	Sound Level (dB(A))		43		
D 6	Cooling Performance (°C)		-30		
Performance	Temperature Range (°C)		-10~-30		
0 1	Controller		Microprocessor		
Control	Display		LED		
	Power Supply (V/Hz)		115/60		
Electrical Data	Power (W)		600		
	Electrical Current (A)		5.4		
	Capacity (L/Cu.Ft)		490/17.3		
		kg	164/200		
	Net/Gross Weight (approx)	lbs	361.6/440.9		
	Interior Dimension (W*D*H)	mm	685*610*1228		
		in	27.0*24.0*48.3		
Construction	Exterior Dimension (W*D*H)	mm	915*810*1860		
		in	36.0*31.9*73.2		
	Da akina Disa sasi sa	mm	980*905*2040		
	Packing Dimension (W*D*H)	in	38.6*35.6*80.3		
_oading Quantities	Container Load (20'/40'/4	0'H)	12/26/26		
	High/Low Temperature		Υ		
	Remote Alarm		Υ		
	Power Failure		/		
Alarms	Sensor Error		Y		
	Low Battery		/		
	High Ambient Temperatu	re	/		
	Door Ajar		/		
	Caster		Y		
	Foot		Y		
	Porthole		Y		
Accessories	Drawers/Inner Doors		10/-		
	Temperature Recorder		Optional		
	USB Interface				
	RS485		/		
Certifications	UL		Υ		

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

Suitable for blood banks, hospitals, disease control centers, research institutes, electronic, chemical and other industries. Used for the cryopreservation of plasma, biologics and other products



# **Product Advantages**



# High-efficiency and energy-saving compressor and system

High-efficiency hydrocarbon compressor, optimized refrigeration system and low power consumption



#### Superior temperature uniformity

The temperature uniformity is  $\pm 3^{\circ}\text{C}$  with the setting temperature of -30°C



#### Green and environmental friendly

Hydrocarbon refrigerant, energy saving and environmental protection, built with LBA foam insulation, complies with European RoHS Directive



#### Multiple alarm functions

High/Low temperature/door ajar/power failure/sensor error/high ambient temperature alarm and also equipped with remote alarm interface, alarm mode is sound and flash

	Model		DW-30L528D		
	Cabinet Type		Upright		
	Climate Class		SNN		
Technical Data	Cooling Type		Direct cooling		
	Defrost Mode		Manual		
	Refrigerant		HC		
	Sound Level ((dB(A))		43		
D (	Cooling Performance (°C)		-30		
Performance	Temperature Range (°C)		-10~-30		
<u> </u>	Controller		Microprocessor		
Control	Display		LCD		
	Power Supply (V/Hz)		115/60		
Electrical Data	Power (W)		420		
	Electrical Current (A)		5		
	Capacity (L/Cu.Ft)		531/18.8		
		(kg)	180/205		
	Net/Gross Weight (approx)	(lbs)	396.8/451.9		
	Interior Dimension (W*D*H)	(mm)	704*620*1230		
		(in)	27.7*24.4*48.4		
Dimensions	Exterior Dimension (W*D*H)	(mm)	940*845*1878		
		(in)	37.0*33.3*73.9		
	Packing Dimension (W*D*H)	(mm)	1005*940*2040		
		(in)	39.6*37.0*80.3		
	Container Load(20'/40'/40'H)		10/22/24		
	High/Low Temperature		Y		
	Remote Alarm		Υ		
	Power Failure		Y		
Alarms	Sensor Error		Y		
	Low Battery		N		
	High Ambient Temperature		Y		
	Door Ajar		Y		
	Castor		Y		
	Foot		Y		
	Porthole		Y		
	Drawers/Inner Doors				
Accessories	USB Interface		Optional		
	RS485		Optional		
	NFC		Optional N		
	Temperature Recorder		Optional		
Others	Certification		UL		

# -30°C Smart Frequency Conversion Biomedical Freezer

# 09/10

#### **Typical Installation and Application**

Suitable for sample storage within blood banks, hospitals, disease control centres, research institutes, electronic, chemical and other industries, cryopreservation of plasma, biologics and other products, also suitable for cold tests for components and materials.



# **Key Features**



#### Energy-efficient Variable Frequency Inverter Technology

Optimized refrigeration system with a high efficiency inverter compressor to reduce energy consumption.



#### Large Capacity Storage with Excellent Temperature Uniformity

The unit offers a large storage space with adjustable shelves, the built-evaporator ensures quick temperature pull down times and excellent temperature uniformity of ±3°C



#### **Low Noise**

Sound reduction design lowers the sound level to 37dB(A) at 220V/50Hz.



#### **Environment Friendly**

 HC refrigeration system contains zero chlorine and fluorine, which is better for the environment.
 Urethane foam insulation complies with European ROHS regulation.

**DW-30L818BP** 

# **Product Advantages**



# **Microprocessor Control System**

- Microprocessor-based temperature control.
- Large LED displays cabinet temperature with 0.1  $^{\circ}$ C resolution with adjustable temperature setting from -10  $^{\circ}$ C to -30  $^{\circ}$ C.
- Cabinet temperature, ambient temperature and voltage are shown on the panel.
- Alarm conditions include high and low temperature, sensor error, power failure, low battery, door ajar and high ambient.
- Alarm modes are audible and flashing lights. Remote alarm terminals are available.
- Battery supports display and alarm system for forty eight hours after power outage.
- Optional features are IoT module, USB port, temperature recorder and NFC swipe card functions.

#### Insulation

- 70 mm thick insulation.
- Inner doors for better thermal efficiency.

#### **Porthole**

Two standard portholes allow ease of temperature testing.

# **Security Lock**

Lock is standard. Magnetic lock is optional for added protection and security

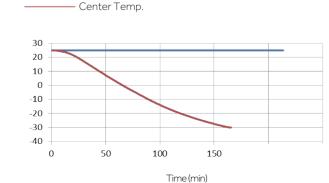
# **Temperature Recorder**

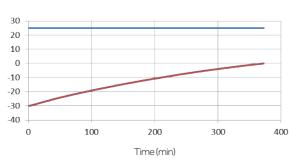
— Ambient Temp.

Optional temperature recorder for temperature recording and compliance.



# Typical Performance Characteristics at 25°C ambient





#### **Specifications**

Cabinet Type Climate Class Cooling Type Defrost Mode		Upright SN N
Cooling Type Defrost Mode		
Defrost Mode		
		Direct Cooling
		Manual
Refrigerant		HC
Sound Level (dB(A))		37
Cooling Performance (°C)		-30
Temp Range (°C)		-10~-30
Controller		Microprocessor
Display		LED
Power Supply (V/Hz)		100~230/50/60
Power (W)		680
Electrical Current (A)		7.7
Capacity (L/Cu.Ft)		818/28.8
	kg	210/240
Net/Gross Weight (approx)	lbs	463.0/529.1
	mm	750*755*1460
Interior Dimension (W*D*H)	in	29.5/29.7/57.5
	mm	988*951*1980
Exterior Dimension (W*D*H)	in	38.9/37.4/78.0
	mm	1040*1035*2110
Packing Dimension (W*D*H)	in	40.9*40.7*83.1
Container Load (20'/40'/40'H)		10/22/22
		Y
Remote Alarm		Υ
Power Failure		Y
Sensor Error		Υ
		Y
,		Y
		Y
		Y
		Y
		Y
		3
		Optional
		Optional
		Y
		· Y
		Y
	Temp Range (°C)  Controller  Display  Power Supply (V/Hz)  Power (W)  Electrical Current (A)  Capacity (L/Cu.Ft)  Net/Gross Weight (approx)  Interior Dimension (W*D*H)  Exterior Dimension (W*D*H)  Packing Dimension (W*D*H)  Container Load (20'/40'/40'H)  High/Low Temperature  Remote Alarm	Temp Range (°C)  Controller  Display  Power Supply (V/Hz)  Power (W)  Electrical Current (A)  Capacity (L/Cu.Ft)  Net/Gross Weight (approx)  Interior Dimension (W*D*H)  Exterior Dimension (W*D*H)  Exterior Dimension (W*D*H)  Facking Dimension (W*D*H)  Container Load (20'/40'/40'H)  High/Low Temperature  Remote Alarm  Power Failure  Sensor Error  Low Battery  High Ambient Temperature  Door Ajar  Castor  Foot  Porthole  Inner Doors  Temperature Recorder  USB Interface  RS485 Port  UL

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

# -25°C Biomedical Freezer

09/10

The Haier Biomedical -25°C biomedical freezer maximises storage space. Integrated cold shelf and evaporator design provides maximum refrigeration efficiency.



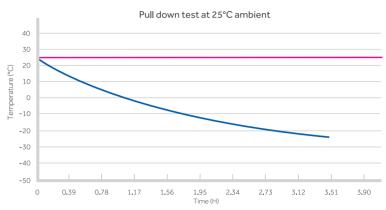
DW-25L92/262

# **Key Features**

- Chemically stable, HC commercially available and environmently safe refrigerant
- High density foam insulation for rigidity and stable storage temperature
- Microprocessor control, digital display, adjustable temperature range: -10°C~-25°C
- LED digital display for clear observation
- Wide voltage tolerance design with applicable voltage range of 187~242 V/AC

# **Safety**

- Multiple malfunction alarms including high low temperature, sensor error
- Two types of alarm indications: audible buzzing and visible flashing light
- Door lock for storage safety
- Storage drawer



	Model		DW-25L92	DW-25L262
	Cabinet Type		Upright	Upright
	Climate Class		SN N	SN N
	Cooling Type		Direct Cooling	Direct Cooling
Technical Data	Defrost Mode		Manual	Manual
	Refrigerant		HC	HC
	Sound level ((dB(A))		28	34
	Cooling Performance (°C)		-25	-25
Performance	Temperature Range (°C)		-10~-25	-10~-25
	Controller		Microprocessor	Microprocessor
Control	Display		LCD	LCD
	Power Supply (V/Hz)		115/60	115/60
Electrical Data	Power (W)		125	135
	Electrical Current (A)		1.8	2.6
	Capacity (L/Cu.Ft)		92/3.2	262/9.3
	Net/Gross Weight (appox)	kg	46/51	88/93
		lbs	101.4/112.4	194.0/205.0
	Interior Dimensions (W*D*H)	mm	435*410*635	480*465*1430
Construction		in	17.1*16.1*25.0	18.9*18.3*56.3
	Exterior Dimensions (W*D*H)	mm	640*610*810	700*705*1730
		in	25.2*24.0*31.9	27.6*27.8*68.1
		mm	660*700*910	775*760*1880
	Packing Dimensions (W*D*H)	in	26.0*27.6*35.8	30.5*29.9*74.0
oading Quantities	Container Load (20'/40'/40'H)		48/102/102	21/45/45
	High/Low Temp		Y	Y
Alarms	Sensor Error		Y	Y
	Door Ajar		Y	Y
	Remote Alarm		Y	Υ
	Caster		Y	Υ
	Foot		Υ	Υ
	Porthole		Υ	Υ
Accessories	Drawers		3	7
	USB Interface		Optional	Optional
	RS485		Optional	Optional
Certifications	UL		Υ	Υ

 $<sup>\</sup>hbox{*Haier Biomedical reserves the right to change products and specifications without prior notice}\\$ 

# **Under-Counter Pharmacy Refrigerator**

# Easy to Install, Ergonomic and Reliable

Haier are pioneers in under-counter pharmacy refrigerator design and manufacturing, offering ultra-low noise system, safety lock, complete alarm system for sample safety and protection.





HYC-68/68A





# **Ergonomic Design**

- Audible buzzer and visible flashing light
- High/low temperature, power failure, door ajar, sensor error and low battery alarm
- Superior cabinet temperature uniformity, auto defrost
- Accurate temperature control
- Interior LED
- Lockable design





	Model		HYC-68	HYC-68A
	Cabinet Type		Upright, Solid Door	Upright, Glass Door
	Climate Class		N	N
	Cooling Type		Forced Air Cooling	Forced Air Cooling
Technical Data	Defrost Mode		Auto	Auto
	Refrigerant		R600a	R600a
	Sound Level (dB(A))		41	41
Performance	Temperature Range (°C)		2~8	2~8
	Controller		Microprocessor	Microprocessor
Control	Display		LED	LED
	Power Supply (V/Hz)		115/60	115/60
Electrical Data	Power (W)		190	150
	Electrical Current (A)		2.5	1.7
	Capacity (L/Cu.Ft)		68/2.4	68/2.4
	Net/Gross Weight (approx)	kg	38/40	38/40
		lbs	83.8/88.2	83.8/88.2
<u>.</u>	Interior Dimensions (W*D*H)	mm	415*385*505	415*385*505
Dimensions		in	16.3*15.2*19.9	16.3*15.2*19.9
	Exterior Dimensions (W*D*H)	mm	495*580*660	495*580*660
		in	19.5*22.8*26.0	19.5*22.8*26.0
	Packing Dimensions (W*D*H)	mm	570*670*750	570*670*750
		in	22.5*26.4*29.5	22.5*26.4*29.5
	Container load (20'/40'/40'H)		102/207/207	102/207/207
	High/Low Temperature		Y	Y
	Remote Alarm		Y	Y
Mayora	Power Failure		Y	Y
Alarms	Sensor Error		Y	Y
	Low Battery		Y	Υ
	Door Ajar		Y	Y
	Roller		N	N
	Foot		Y/2	Y/2
Accessories	Porthole		Y	Y
	Shelves/Drawers		2/1	2/1
	USB Interface		Optional	Optional
Others	USB Interface  Certification		UL	UL

Haier Biomedical Pharmacy Refrigerator

# **Under-Counter Pharmacy Refrigerator**

# Easy to Install, Ergonomic and Reliable

Haier are pioneers in under-counter pharmacy refrigerator design and manufacturing, offering ultra-low noise system, safety lock, complete alarm system for sample safety and protection.





**HYC-118** 

**HYC-118A** 

#### **Reliability and Key Features**

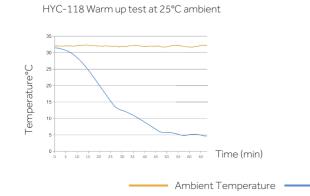
- Energy efficient hydrocarbon (HC) refrigeration system
- Permanently lubricated cooling fan for safety and longevity
- Forced-air cooling with optimized air distribution system designed to achieve maximum temperature uniformity and stability
- Optimized refrigeration system design for more effective cooling and speedy recovery
- Temperature variation within ±3°C
- Chamber temperature range 2~8°C
- $\bullet$  Microprocessor control, digital display and temperature adjustment with an increment of 0.1 °C
- Designed for ambient temperature 10~32°C with humidity below 70%

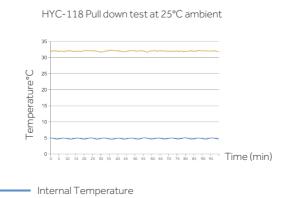
#### Safety

- Equipped with a complete temperature alarm system featuring audible buzzer and visual flashing light
- Capable of alerting failures due to high and low temperature, sensor error, door ajar, power failure, and remote alarm interface

#### **Ergonomic Design**

- Interior LED light
- Safety lock to prevent unauthorized access





**Specifications** 





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				6
	Model		HYC-118	HYC-118A
	Cabinet Type		Upright, Solid Door	Upright, Glass Door
	Climate Class		N	N
	Cooling Type		Forced Air Cooling	Forced Air Cooling
Technical Data	Defrost Mode		Auto	Auto
	Refrigerant		HC	HC
	Sound Level (dB(A))		41	41
Performance	Temperature Range (°C)		2-8	2-8
Control	Controller		Microprocessor	Microprocessor
CONTROL	Display		LED	LED
Electrical Data	Power Supply (V/Hz)		115/60	115/60
_iccti icui Data	Electrical Current (A)		1.4	1.5
	Capacity (L/Cu.Ft)		118/4.2	118/4.2
	Net/Gross Weight (approx)	kg	41/46	46/51
		lbs	90.5/101.5	101.5/112.5
	Interior Dimensions (W*D*H)	mm	515*415*630	515*415*630
Dimensions		in	20.3*16.3*24.8	20.3*16.3*24.8
JITTELISIONS	Exterior Dimensions (W*D*H)	mm	597*635*810	597*635*810
		in	23.5*25.0*31.9	23.5*25.0*31.9
	D 1: D: : (A)*C*11	mm	700*710*930	700*710*930
	Packing Dimensions (W*D*H)	in	27.6*28.0*36.6	27.6*28.0*36.6
	Container Load (20'/40'/40'H)		48/96/96	48/96/96
	High/LowTemperature		Y	Y
	Remote Alarm		Y	Y
	Power Failure		Y	Y
Alarms	Sensor Error		Y	Y
	Low Battery		Υ	Y
	Door Ajar		Y	Υ
	Caster		Y/2	Y/2
	Foot		Y/2	Y/2
	Porthole		Υ	Υ
Accessories	Shelves/Drawers		3/1	3/1
Others	Certification		UL	UL

 Haier Biomedical
 Pharmacy Refrigerator

# **Standard Pharmacy Refrigerator**

# **Scope of Application**

This product is suitable for pharmacy, pharmaceutical manufacturers, anti-epidemic stations, health centers and hospitals as key examples, which is used to store biological products and articles that need to be stored at 2~8°C.





**HYC-290** 

# **Reliability and Key Features**

- Variable frequency compressor with optimized cooling system, more energy efficient
- Hydrocarbon compressor and refrigerant, the refrigerant does not contain any fluorine or chlorine which is super friendly to the environment
- The space is efficiently used, and the utilization rate is high and the temperature uniformity is  $\pm 3^{\circ}$ C
- Optimized system and noise reduction design to reduce the noise level to 43dB(A)
- Three alarm modes (light, sound, remote); six types of alarm
- Microprocessor control system
- Self closing door with 90° stay open feature
- Precise temperature control
- Security lock

# **Specifications**



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	Model		HYC-290	
	Cabinet Type		Upright, Single Door	
	Climate Class		N	
	Cooling Type		Forced Air Cooling	
Technical Data	Defrost Mode		Auto	
	Refrigerant		HC	
	Sound Level (dB(A))		43	
Performance	Temperature Range (°C)		2-8	
Control	Controller		Microprocessor	
CONTROL	Display		LED	
Electrical Data	Power Supply (V/Hz)		115/60	
Licetifical Data	Electrical Current (A)		2.2	
	Capacity (L/Cu.Ft)		290/10.2	
	Not/Cross Weight (approx)	kg	105/127	
	Net/Gross Weight (approx)	lbs	231.6/280.1	
	Interior Dimensions (W*D*H)	mm	530*555*1080	
Dimensions		in	20.9*21.9*42.5	
2 11 1101 10101 10	Exterior Dimensions (W*D*H)	mm	665*710*1665	
		in	26.2*28.0*65.6	
	Packing Dimensions (W*D*H)	mm	700*810*1810	
		in	27.6*31.9*71.3	
	Container Load (20'/40'/40'H)		22/44/44	
	High/LowTemperature		Y	
	Remote Alarm		Y	
Alews	Power Failure		Y	
Alarms	Sensor Error		Y	
	Low Battery		Y	
	Door Ajar		Y	
	Caster		Y	
	Foot		Y	
Accessories	Porthole		Y	
Accessories	Shelves/Drawers		5/-	
	USB Interface		Y	
	Printer		Optional	
Others	Certification		UL	

Pharmacy Refrigerator

# **Standard Pharmacy Refrigerator**

New and improved Haier pharmacy refrigerators now offer an improved temperature profile and more user-friendly control features



# **Technical Advantages**

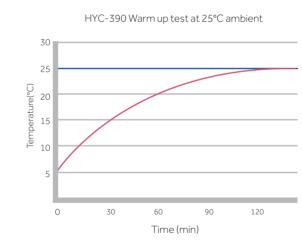
- Accurate temperature control maintains 2°C to 8°C throughout the unit with an adjustable increment at 0.1°C
- Improved user interface includes a data storage capacity of up to 10 years
- Oversized air—cooled condenser improves the robustness of the refrigeration system, reliability and refrigeration efficiency

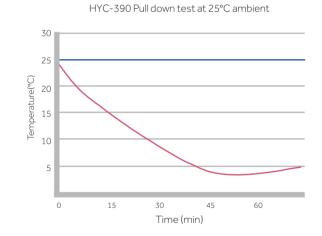
#### **Ergonomic Design**

- The temperature data of the newly improved storage management system is downloadable from the USB port
- Traceability of temperature data
- Heated double-pane glass door allows a clear view of stored products without condensation at 32°C and 85% relative humidity ambient conditions
- LED interior light saves energy and provides bright lighting of interior for easy product location and identification
- Shelves with label holders meet demands required for quick and effective product archiving and retrieving

# Safety

- Microprocessor control with digital display
- Temperature uniformity within 3°C
- Malfunction alarms include high/low temperature, door ajar, sensor error, power failure, low battery and remote alarm interface

















**Haier** Biomedical

#### Pharmacy Refrigerator

# **Standard Pharmacy Refrigerator**

#### **Specifications**



Model			HYC-390	
	Cabinet Type		Upright, Single Door	
	Climate Class		N	
	Cooling Type		Forced Air Cooling	
Technical Data	Defrost Mode		Auto	
	Refrigerant		HC	
	Sound Level (dB(A))		43	
Performance	Temperature Range (°C)		2-8	
Control	Controller		Microprocessor	
Control	Display		LED	
Electrical Data	Power Supply (V/Hz)		115/60	
Liecti icai Data	Electrical Current (A)		2.4	
	Capacity (L/Cu.Ft)		390/13.8	
	Net/Gross Weight (approx)	kg	116/139	
		lbs	255.8/306.6	
	Interior Dimensions (W*D*H)	mm	530*555*1380	
Dimensions		in	20.9*21.9*54.3	
Difficusions	Exterior Dimensions (W*D*H)	mm	665*710*1965	
		in	26.2*28.0*77.4	
	2 2	mm	710*810*2130	
	Packing Dimensions (W*D*H)	in	27.6*31.9*83.9	
	Container Load (20'/40'/40'H)		22/44/44	
	High/LowTemperature		Y	
	Remote Alarm		Y	
	Power Failure		Y	
Alarms	Sensor Error		Y	
	Low Battery		Y	
	Door Ajar		Y	
	Caster		Y	
	Foot		Y	
	Porthole		Y	
Accessories	Shelves/Drawers		7/-	
	USB Interface		Y	
	Printer		Optional	
Others	Certification		UL	

# **Standard Pharmacy Refrigerator**

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# **Scope of Application**

This product is suitable for pharmacy, pharmaceutical manufacturers, anti-epidemic stations, health centers and hospitals as key examples, which is used to store biological products and articles that need to be stored at 2-8°C



HYC-390F

#### **Product Features**

- Variable frequency compressor with optimized cooling system, more energy efficient
- Hydrocarbon compressor and refrigerant, the refrigerant does not contain any fluorine or chlorine which is super friendly to the environment
- $\bullet$  The space is efficiently used, and the utilization rate is high and the temperature uniformity is  $\pm 3^{\circ}\text{C}$
- $\bullet$  Optimized system and noise reduction design to reduce the noise level to 43dB(A)
- Three alarm modes (light, sound, remote); six types of alarm
- Precise temperature control
- Microprocessor control system
- Self closing door with 90° stay open feature
- Security lock

- Pharmacy Refrigerator

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# **Standard Pharmacy Refrigerator**

#### **Specifications**



	Model		HYC-390F	
	Cabinet Type		Upright, Single Door	
	Climate Class		N	
	Cooling Type		Forced Air Cooling	
Technical Data	Defrost Mode		Auto	
	Refrigerant		HC	
	Sound Level (dB(A))		43	
Performance	Temperature Range (°C)		2-8	
Control	Controller		Microprocessor	
Control	Display		LED	
Electrical Data	Power Supply (V/Hz)		115/60	
Liecti icai Data	Electrical Current (A)		1.5	
	Capacity (L/Cu.Ft)		390/13.8	
	Net/Gross Weight (approx)	kg	106/129	
		lbs	233.8/284.5	
	Interior Dimensions (W*D*H)	mm	530*555*1380	
Dimensions		in	20.9*21.9*54.3	
Diffierisions	F D	mm	665*710*1965	
	Exterior Dimensions (W*D*H)	in	26.2*28.0*77.4	
	0 1: 0:	mm	710*810*2130	
	Packing Dimensions (W*D*H)	in	27.6*31.9*83.9	
	Container Load (20'/40'/40'H)		22/44/44	
	High/Low Temperature		Y	
	Remote Alarm		Y	
	Power Failure		Y	
Alarms	Sensor Error		Y	
	Low Battery		Y	
	Door Ajar		Y	
	Caster		Y	
	Foot		Y	
	Porthole		Y	
Accessories	Shelves/Drawers		7/-	
	USB Interface		Y	
	Printer		Optional	
Others	Certification		UL, ENERGY STAR	

# **Scope of Application**

Used for storage of medicines, vaccines, reagents, biological products and other items that require a temperature between 2-8°C in hospitals, pharmacies, pharmaceutical factories, clinics and laboratories etc.





Eco-friendly hydrocarbon refrigerant (R600a) and CFC-free polyurethane insulation for reduced global warming potential



 $Hermetically \, sealed \, compressor, \, forced\hbox{-}air \, circulation \, with \, auto \, defrost$ to ensure high cooling performance to keep cabinet temperature between 2~8°C



Double-layer tempered glass door with electronic heater to reduce condensation even at 32°C, 80% RH ambient



Microprocessor controller, digital display with 0.1° C resolution for accurate control



Self-closing door with magnetic gaskets to ensure a positive seal



Multiple alarm functions for safer monitoring, audible/visual alert with mute function; remote alarm contacts as standard in rear of the unit



Convenient security with a top-mounted unique-key lock as well as a hasp for padlock



Easy to check the min/max temperature in the past 24 hours



Adjustable plastic-coated wire shelves for improved circulation and flexible storage



Energy efficient interior LED lighting



25mm probe access port to accept userprovided monitoring equipment



Optional USB, optional printer, optional RS 485



Dish bottom design to contain spills



4 swivel casters with 2 leveling feet

 Haier Biomedical

 Pharmacy Refrigerator

# **Standard Pharmacy Refrigerator**







	Model		HYC-639 (115V)	
	Cabinet Type		Upright, Single Door	
	Climate Class		ST	
	Cooling Type		Forced Air Cooling	
Technical Data	Defrost Mode		Auto	
	Refrigerant		HC (R600a)	
	Sound Level (dB(A))		46	
Performance	Temperature Range (°C)		2-8	
Cantual	Controller		Microprocessor	
Control	Display		LED	
EL 15 .	Power Supply (V/Hz)		115/60	
Electrical Data	Power (W)		400	
	Electrical Current (A)		2.5	
	Capacity (L/Cu.Ft)		600/21.2	
		kg	200/240	
	Net/Gross Weight (approx)	lbs	551.15/639.33	
Dimensions	Interior Dimensions (W*D*H)	mm	620*706*1520	
		in	24.4*27.8*59.8	
	Exterior Dimensions (W*D*H)	mm	760*897*1993	
		in	29.9*35.3*78.5	
	Packing Dimensions (W*D*H)	mm	910*1030*2170	
		in	35.8*40.6*85.4	
	Container Load (20'/40'/40'H)		12/24/24	
	High/Low Temperature		Υ	
	High Ambient Temperature		Y	
	Door Ajar		Y	
	Power Failure		Y	
Alarms	Low Battery		Y	
	Sensor Error		Y	
	Communication Failure		Y	
	Condenser Heat		Y	
	Caster		Y/4	
	Foot		Y/2	
	Porthole		Y	
Accessories	Shelves		4	
	Printer		Optional	
	USB Interface		Y	
	RS485		Optional	
	Chart Recorder		Optional	
Others	Certification		UL, Energy Star, ANSI 456	



**Haier** Biomedical Pharmacy Refrigerator

# **Standard Pharmacy Refrigerator**

# **Scope of Application**

The pharmacy refrigerator is suitable for pharmacies, drug stores, pharmaceutical companies, hospitals, clinics and other pharmaceutical storage areas such as storage and logistics



HYC-940

#### **Product Features**

- High/low temperature, remote alarm, power failure, sensor error, low battery, door ajar
- Better cabinet temperature uniformity, auto defrost
- Energy conserving, maintains temperature uniformity to protect valuable samples
- The shelves are adjustable to any height to fulfill different requirements
- Clear display of stored products without condensation at 32°C and 85% relative humidity condition

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	Model		HYC-940	
	Cabinet Type		Upright, Double Glass Door	
	Climate Class		N	
	Cooling Type		Forced Air Cooling	
Technical Data	Defrost Mode		Auto	
	Refrigerant		HC	
	Sound Level (dB(A))		45	
Performance	Temperature Range (°C)		2-8	
	Controller		Microprocessor	
Control	Display		LED	
The state of Dete	Power Supply (V/Hz)		115/60	
Electrical Data	Electrical Current (A)		7.5	
	Capacity (L/Cu.Ft)		890/31.4	
		kg	227/279	
	Net/Gross Weight (approx)	lbs	500.4/615.1	
	Interior Dimensions (W*D*H)	mm	1030*590*1425	
Dimensions		in	40.6*23.2*56.1	
Differisions	Exterior Dimensions (W*D*H)	mm	1130*755*1980	
		in	44.5*29.7*78.0	
	Packing Dimensions (W*D*H)	mm	1250*850*2170	
		in	49.2*33.5*85.4	
	Container Load (20'/40'/40'H)		10/22/22	
	High/LowTemperature		Y	
	Remote Alarm		Υ	
	Power Failure		Υ	
Alarms	Sensor Error		Υ	
	Low Battery		Υ	
	Door Ajar		Υ	
	Caster		Υ	
	Foot		Υ	
	Porthole		Υ	
Accessories	Shelves/Drawers		12/-	
	USB Interface		Optional	
	Printer		Optional	
	Temperature Recorder		Optional	
Others	Certification		UL	

Pharmacy Refrigerator

# **Standard Pharmacy Refrigerator**

#### **Scope of Application**

Used for storage of medicines, vaccines, reagents, biological products and other items that require a temperature between 2-8°C in hospitals, pharmacies, pharmaceutical factories, clinics and laboratories etc.



**HYC-1378** 



Eco-friendly hydrocarbon refrigerant and CFC-free polyurethane insulation for reduced global warming potential



Hermetically sealed compressor, forced-air circulation with auto defrost to ensure high cooling performance to keep cabinet temperature between 2-8°C



Double-layer tempered glass door with electronic heater to reduce condensation even at 32°C, 80% RH ambient



Convenient security with top-mounted unique-key locks



Adjustable plastic-coated wire shelves for improved circulation and flexible storage



Standard USB, optional printer and chart recorder to export temperature data



Microprocessor controller, digital display with 0.1°C resolution for accurate control, easy to check the min/max temperature in the past 24 hours



Self-closing door with magnetic gaskets to ensure a positive seal  $\,$ 



Multiple alarm functions for safer monitoring, audible/visual alert with mute function; remote alarm contacts as standard in rear of the unit



Energy efficient interior LED lighting



25mm probe access port to accept user-provided monitoring equipment



4 swivel casters with 2 leveling feet for easy movement and fixing  $\,$ 



# 77/78

# **Standard Pharmacy Refrigerator**

# **Specifications**



	Model		HYC-1378	
	Cabinet Type		Upright, Double Door	
	Climate Class		N	
	Cooling Type		Forced Air Cooling	
Technical Data	Defrost Mode		Auto	
	Refrigerant		HC	
	Sound Level (dB(A))		45	
Performance	Temperature Range (°C)		2-8	
Camtual	Controller		Microprocessor	
Control	Display		LED	
Electrical Data	Power Supply (V/Hz)		115/60	
Liectrical Data	Electrical Current (A)		7.35	
	Capacity (L/Cu.Ft)		1378/48.7	
		kg	310/360	
	Net/Gross Weight (approx)	lbs	683.4/793.7	
	Interior Dimensions (W*D*H)	mm	1320*700*1500	
Dimensions		in	52.0*27.6*59.1	
Dimensions	Exterior Dimensions (W*D*H)	mm	1440*950*1980	
		in	56.7*37.4*78.0	
	Packing Dimensions (W*D*H)	mm	1620*1040*2140	
		in	63.8*41.0*84.3	
	Container Load (20'/40'/40'H)		6/14/14	
	High/LowTemperature		Y	
	Remote Alarm		Y	
	Power Failure		Y	
Alarms	Sensor Error		Y	
	Low Battery		Y	
	Door Ajar		Y	
	Caster		Y	
	Foot		Y	
	Porthole		Y	
Accessories	Shelves/Drawers		12/-	
	USB Interface		Y	
	Printer		Optional	
	Temperature Recorder		Optional	
Others	Certification		UL	

# Combined Refrigerator and Freezer

This product is designed to store frozen plasma, biomaterials, vaccines, electronic devices and low temperature tests of special materials, in blood stations, hospitals, epidemic prevention stations, universities, scientific research institutes, electronic chemical industry and other enterprise laboratories.





HYCD-319A

# **Ergonomic Design**



Equipped with padlocks in both refrigerator and freezer to ensure storage safety



Equipped with electrically heated glass to prevent condensation effectively



Two test holes for both refrigerator and freezer as standard, allow independent testing of cabinet temperature



Refrigerator and freezer are equipped with self-closing hinges to avoid door ajar (less than 90° self-closing) Haier Biomedical Pharmacy Refrigerator

# **Combined Refrigerator and Freezer**

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#### Multipurpose and Space Efficient

- One cabinet with two independent chambers, both are self-contained and independently controlled with individual doors
- Refrigerator chamber is equipped with a double-paned glass viewing window and LED interior lighting



#### **Environment Friendly**

 $Hydrocarbon\,refrigerant\,(R600a\,for\,refrigerator\,/\,R290\,for\,freezer)\,and\,CFC-free\,polyurethane\,insulation\,for\,reduced\,global\,warning\,potential$ 



#### Stainless Steel Interior

The interior of refrigerator and freezer are both made of stainless steel, which is easy to clean and corrosion-proof



#### Microprocessor Controller with Digital Display

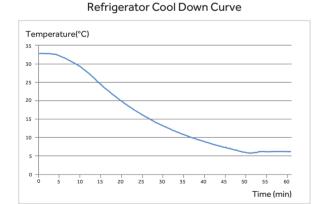
- Refrigerator temperature 2~8°C with resolution of 0.1°C
- Freezer temperature -40~-10°C with resolution of 1°C
- Multiple alarm functions with remote alarm contact to ensure safe monitoring



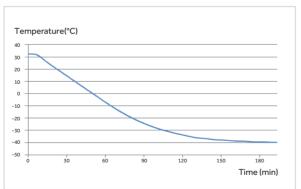
#### **High Performance**

- Refrigerator: Forced-air cooling system with cycle defrost, temperature uniformity±3°C
- Freezer: Cold wall cooling system, manual defrost, temperature uniformity±5°C
- Standard USB port & optional printer, easy to get temperature record

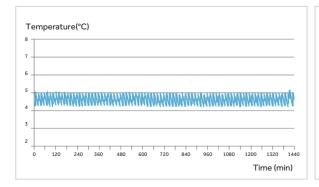
#### **Product Performance**



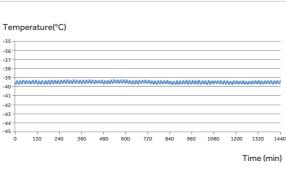
#### Freezer Cool Down Curve



#### Refrigerator Stability Curve



Freezer Stability Curve





			FY Y		
	Model		HYCD-319A		
	Cabinet Type		Upright		
	Climate Class		N		
T 1 : 15 :	Cooling Type		Refrigerator: Forced air cooling Freezer: Direct cooling		
Technical Data	Defrost Mode		Refrigerator: Auto/Freezer: Manual		
	Refrigerant		Refrigerator: R600a 45g/Freezer: R290 60g		
	Sound Level (dB(A))		50		
Performance	Temperature Range (°C)		Refrigerator: 2-8/Freezer: -1540		
	Controller		Microprocessor		
Control	Display		LED		
	Power Supply (V/Hz)		115/60		
Electrical Data	Power (W)		450		
	Electrical Current (A)		6		
	Capacity (L/Cu.Ft)		Refrigerator: 200/7.06; Freezer: 100/3.53		
		kg	145/160		
	Net/Gross Weight (approx)	lbs	319.7/352.7		
	Interior Dimensions (W*D*H)	mm	Refrigerator: 605*510*720 Freezer: 515*465*440		
Dimensions		in	Refrigerator: 23.8*20*28.3 Freezer: 20.2*18.3*17.3		
	Exterior Dimensions (W*D*H)	mm	735*660*1810		
		in	28.9*26.0*71.3		
	Packing Dimensions (W*D*H)	mm	795*740*2010		
		in	31.3*29.1*79.1		
	Container Load (20'/40'/40'H)		21/43/43		
	High/Low Temperature		Y		
	Sensor Error		Y		
	Power Failure		Y		
Alarms	Door Ajar		Y		
AldITIS	Remote Alarm		Y		
	High Ambient Temperature		Y		
	Low Battery		Y		
	Caster		Y/4		
	Foot		Y/2		
	Porthole		Y/2		
Accessories	Shelves/Drawers		Refrigerator: 3/1; Freezer: 1 (For supporting the upper drawer)/2 (without sliding rack)		
	USB Interface		Y		
Others	Certification		UL, NSF, ANSI 456		
	I		I		

**Haier** Biomedical Pharmacy Refrigerator

# **Combined Refrigerator and Freezer**

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#### **Scope of Application**

This product is designed to store blood plasma, biological products, vaccines, medicines and chemical reagents.







Temperature Control

Security Guaranteed





Data Storage

**Key Features** 

# **Temperature Control**

- •Refrigerator temperature ranges from 2°C to 8°C.
- •Freezer temperature ranges adjustable from -10°C to -40°C.
- •Microprocessor temperature control accuracy 0.1°C (refrigerator) and 1°C (freezer).

# Safety

- •Separate doors for refrigerator and freezer with independent lock catches, dual padlocks available to ensure product safety.
- •Multiple alarm functions including high or low temperature, sensor error, high ambient temp, power failure and
- •Two types of alarm indications: audible buzzer and visible flashing light.

# **Refrigerator System**

- •Refrigerator and freezer have independently controlled variable frequency refrigeration systems, standalone displays as well as separate on and off controls.
- •Robust compressor system operating with environmentally friendly hydrocarbon refrigerant.
- •Refrigerator with high quality and high efficiency cooling fan provides better temperature uniformity and stability.

# **Ergonomic Design**

- •Large LED screen display for excellent user interface experience.
- •USB port automatically saves temperature data for up to 10 years for convenient inquiry and record keeping.
- •Optional printer to simultaneously print out temperatures of the refrigerator and the freezer.
- •Four casters and two levelling legs design for ease of maneuvering.



	Model		HYCD-469A
	Cabinet Type		Upright
Technical Data	Climate Class		N (16-32°C)
	Cooling Type		Refrigerator: Forced air cooling Freezer: Direct cooling
	Defrost Mode		Refrigerator: Auto/Freezer: Manual
	Refrigerant		Refrigerator: R600a/Freezer: R290
	Sound Level (dB(A))		52
erformance	Temperature Range (°C)		Refrigerator: 2-8 / Freezer: -1540
Control	Controller		Microprocessor
	Display		LED
Electrical Data	Power Supply (V/Hz)		115V/60
	Power (W)		640
	Electrical Current (A)		7
	Capacity (L/Cu.Ft)		Refrigerator:: 245/8.65; Freezer: 200/7.1
Dimensions	Net/Gross Weight (approx)	kg	176/207
		lbs	388.0/456.4
	Interior Dimensions (W*D*H)	mm	Refrigerator:: 593*585*800 Freezer: 553*545*660
		in	Refrigerator: : 23.3*23.0*31.5 Freezer: 21.8*21.5*26.0
	Exterior Dimensions (W*D*H)	mm	738*834*1975
		in	29.1*32.8*77.8
	Packing Dimensions (W*D*H)	mm	840*910*2170
	in in		33.1*35.8*85.4
	Container Load (20'/40'/40'H)		12/28/28
Alarms	High/Low Temperature		Y
	Sensor Error		Y
	Power Failure		
	Door Ajar  Remote Alarm		Y Y
	High Ambient Temperature		Y
	Low Battery		Y
	Caster		Y
Accessories	Foot		Y
	Porthole		Y
			Refrigerator: 3/0
	Shelves/Drawers		Freezer: 3/0 (Max 3 Drawers optional, without sliding rack)
	USB Interface		Υ
Others	Certification		UL

Pharmacy Refrigerator

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Pharmacy Refrigerator

# **Spark Free Refrigerator**

### **Typical Installation**

This product is suitable for storing inflammable and explosive reagents in laboratories of universities and scientific research institutes





# Clear and Complete Alarm System with One Key Search

Multiple alarms and data function which allows users to check and save historical data, useful and convenient for laboratory inspection processes



### **Energy Efficient Design**

The hydrocarbon cooling system doubles the cooling efficiency and saves half the energy when compared to traditional refrigerants. In addition, the cabinet is fitted with an energy saving explosion proof fan



### Multiple Alarms

The refrigerator comes with high/low temperature alarm, door ajar alarm, sensor error alarm



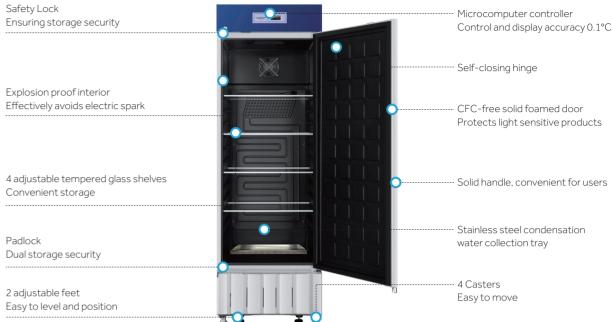
### Setting Temperature Range +3°C to +16°C

The setting temperature can be adjusted within the range of  $3^{\circ}\,\text{C}$  to  $16^{\circ}\,\text{C}$  to meet multi-temperature storage requirements. With precise control, the internal temperature variation can be kept within  $3^{\circ}\text{C}$  for great temperature uniformity



### Safe and Secure

Built-in lock and adapter kit to allow users to add a padlock. Lockable control panel to prevent anyone turning off the unit by mistake or adjusting the temperature by accident



	Madal		LUD 7405	
	Model		HLR-310FL	
	Туре		Upright	
	Climate Class		N	
Technical Data	Cooling Type		Forced Air Cooling	
	Defrost Mode		Auto	
	Refrigerant		R600a, 40g	
	Sound Level (dB(A))		43	
Performance	Temperature Range (°C)		3~16 Adjustable	
renormance	Ambient Temperature (°C)		16~32	
Control	Controller		Microprocessor	
Control	Display		LED	
	Power Supply (V/HZ)		115/60	
Electrical Data	Power (W)		210	
	Electrical Current (A)		2.5	
	Capacity (L/Cu.Ft)		310/10.9	
	Net/Gross Weight (approx)	kg	72/83	
		lbs	158.7/183	
	Interior Dimensions (W*D*H)	mm	560*500*1290	
Dimension		in	22.0*19.7*50.8	
	Exterior Dimensions (W*D*H)	mm	605*598*1840	
		in	23.8*23.6*73.6	
	2 1 2	mm	680*690*1940	
	Packing Dimensions (W*D*H)	in	26.8*27.1*74.4	
	Container load (20'/40'/40'H)		24/51/51	
	High/Low Temperature		Υ	
Alarms	Sensor Error		Υ	
	Door Ajar		Υ	
	Caster		4	
	Foot		2	
Accessories	Shelves/Baskets		4/0	
	Water tray		1	
	Padlock Adapter Kit/Quantity		1	
	Built-in Key Door Lock/Quantity		1	
Others	Certification		UL, Energy star	



# **Automated Blood Management Refrigerator**





HXC-429TR

HXC-629TR

HXC-1369TR

### Microcomputer Control

The temperature inside the unit is controlled within 4±1°C with temperature control accuracy of 0.1°C and the large high-definition LCD touch screen display makes it convenient to observe.



High/low temperature alarm, power failure alarm, door ajar, 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).



### **Inverter Compressor**

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



### Speed Control Condenser Fan

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



### 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°C and 85% humidity environment.



### Double Protection of Mechanical Door Lock and Electromagnetic Lock

Electromagnetic lock can realize NFC card punching unlocking and fingerprint unlocking function.



### Standard USB Port

With optional disc temperature recorder.



# **Operation Instructions**

# Blood Bag Inbound:





>>

<<

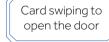
RFID Tag

Information



Outbound/inbound and inventory information pop-up display and upload

# **Blood Bag Outbound:**









Outbound/inbound and inventory information pop-up display and upload

# **Specifications**

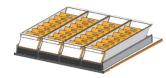
Product Model No.	Voltage (V/Hz)	Internal Temperature (°C)	External Dimension (W*D*H mm)	Internal Dimension (W*D*H mm)	Effective Volume (L)	NW/GW (Kg)	Stainless Steel Shelf (layers)	Loading Capacity (400 ml blood bag)
HXC-429TR	230V-50/60Hz	4±1	625*940*1830	505*680*1315	429	190/230	5	120
HXC-629TR	230V-50/60Hz	4±1	765*940*1980	645*680*1455	629	235/280	6	192
HXC-1369TR	230V-50/60Hz	4±1	1545*940*1980	1425*680*1455	1369	430/490	12	384



Information Flow

Place the blood bag with RFID tag in blood basket

Server



Using built-in RFID read & write board of the refrigerator to read blood bag information





Refrigerator Screen APP

# **Automated Blood Management**

97/98

# **Scope of Application**

Suitable for blood transfusion departments, operating rooms, and emergency rooms, etc. of the hospitals

# **Product Advantages**

## 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.





# **Reduce Waste and Improve Efficiency**Electronic blood matching within 1 minute, reducing the

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



# Intelligent Blood Management System

Allows integration and coordination of blood recovery within hospitals and blood allocation between hospitals and even across regions through the blood network cloud platform. Enabling the rational use of blood upon demand, thus reducing resource consumption.



# **Intelligent Blood Management System**

Quickly and accurately identify blood bag location using onboard blood information management system.

The patient's blood matching information is shown and a blood bag automatically selected and a request for the bag is sent.

The system reads the blood information and light up indicators guide the user to the correct blood bag location.

Blood information is cross-checked and blood is issued. Inventory is automatically updated within the blood management system.

# **Specifications**

	Model		HXC-149R	HXC-429R	HXC-629R	HXC-629RB
	Туре		Drawer-Type	Drawer-Type	Drawer-Type	Drawer-Type
	Climate Class		Ν	N	N	N
Technical	Cooling Type		Forced air cooling	Forced air cooling	Forced air cooling	Forced air cooling
Data	Defrost Mode		Auto	Auto	Auto	Auto
	Defrost Mode Refrigerant		R600a	R600a	R600a	R600a
	Sound Level (dB(A))		40	41	41	41
D (	Temperature Range (°C)		4±1	4±1	4±1	4±1
Performance	Ambient Temperature (°C)		16-32	16-32	16-32	16-32
Caratural	Controller		Microprocessor	Microprocessor	Microprocessor	Microprocessor
Control	Display		LCD Touchscreen	LCD Touchscreen	LCD Touchscreen	LCD Touchscree
	Power Supply (V/Hz)		230~/50/60	230~/50/60	230~/50/60	115/60
Electrical	Power (W)		250	280	300	300
Data	Electrical Current (A)		1.5	1.8	1.9	3
	Power Consumption (kWh/24h	n)	2.6	2.9	3.1	3.6
	Capacity (L/Cu.Ft)		149/5.3	429/15.1	629/22.2	629/22.2
	Blood Storage Capacity (450ml blood		18	60	88	88
		kg	129/179	245/280	295/335	295/335
	Net/Gross Weight (approx)	lbs	283.8/393.8	539/616	649/737	649/737
		mm	505*560*610	505*680*1315	645*680*1455	645*680*1455
Construction	Interior Dimensions (W*D*H)	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
		mm	625*820*1425	925*940*1830	1065*940*1980	1065*940*1980
	Exterior Dimensions (W*D*H)	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
		mm	740*945*1575	725*985*1940	875*995*2090	875*995*2090
	Packing Dimensions (W*D*H)	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
 Loading Quantities	Container load (20'/40'/40'H)		18/36/36	18/35/35	12/26/26	12/26/26
	High/Low Temperature		Υ	Υ	Y	Y
	Power Failure		Υ	Υ	Y	Y
Alarms	Sensor Error		Υ	Υ	Y	Y
	Low Battery		Υ	Υ	Y	Y
	Door Ajar		Υ	Y	Y	Y
	Caster		4	4	4	4
	Foot			2	2	2
	Porthole		Υ	Y	Y	Y
	Drawers		9	30	44	44
Accessories	USB Interface		Υ	Υ	Υ	Y
	Temperature Recorder		Υ	Υ	Y	Y
	Remote Alarm		Υ	Y	Y	Υ
 Certifications	UL		Y	Υ	Y	Y

R suffix - RFID with IoT model for blood bag management

Product appearance and specifications are subject to change without notice

# **Unattended Self-service Blood Distribution Refrigerator**

99/100

# Self-Service Blood Distribution with Smart IoT Technology

# Self-service blood distribution for 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.



HXC-629ZZ

# **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 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.



Self-service printing

### **Ergonomic design**

- Smart dual screen setting realizes 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, realizing 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.

### Real-time control of freezer temperature

• 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  $4\pm1$ °C.

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	Internal dimensions	Effective	Blood bag volume	Overall construction
(W*D*H mm)	(W*D*H mm)	volume (L)	(400ml blood bag)	
1290*940*1980	645*680*1455	629	72	Single door



# **Product Advantages**









### Control Interface

• The simple and intuitive high-definition LCD touch screen can display temperature graph, working status, events and alarm record.

### **Microprocessor Control**

 $\bullet$  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.

### **Stable and Reliable Operation**

• The refrigeration system is powered with a high-quality, energy-efficient inverter compressor and variable speed fan motors. Temperature control responses 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 a main power failure. Fingerprint and standard NFC swipe card module are optional.
- Optional fingerprint and standard NFC swipe card module.



# **Product Advantages**







### 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**

- $\bullet \ \, \text{Equipped with complete alarm function, including alarm on high and low temperature,} \\$ 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 a main power failure.
- NFC swipe card module, with safer storage management.

### Standard USB Interface

• Ability to record temperature data for ten years by using the USB interface, an optional disc temperature recorder is also available

# **Blood Bank Refrigerator**

	Model	HXC-149	HXC-429	HXC-629	HXC-629B	HXC-1369	HXC-149T	HXC-429T	HXC-629T	HXC-629TB	HXC-1369T
	Туре	Basket-Type	Basket-Type	Basket-Type	Basket-Type	Basket-Type	Drawer-Type	Drawer-Type	Drawer-Type	Drawer-Type	Drawer-Type
	Climate Class	N	N	N	N	N	N	N	N	N	N
Technical	Cooling Type	Forced air cooling									
Data	Defrost Mode	Auto									
	Refrigerant	R600a									
	Sound Level (dB(A))	39	40	40	41	41	39	40	40	41	41
D (	Temperature Range (°C)	4±1	4±1	4±1	4±1	4±1	4±1	4±1	4±1	4±1	4±1
Performance	Ambient Temperature (°C)	16-32	16-32	16-32	16-32	16-32	16-32	16-32	16-32	16-32	16-32
Caratual	Controller	Microprocessor									
Control	Display	LED	LED	LED	LED	LED	LCD	LCD	LCD	LCD	LCD
	Power Supply (V/Hz)	230~/50/60	230~/50/60	230~/50/60	115/60	230~/50/60	230~/50/60	230~/50/60	230~/50/60	115/60	230~/50/60
	Power (W)	240	245	255	255	400	240	245	255	255	400
Electrical	Electrical Current (A)	1.4	1.5	1.5	3	2	1.4	1.5	1.5	3	2
Data	Power Consumption (kWh/24h)	2.5	2.8	2.9	3.6	3.5	2.5	2.8	2.9	3.6	3.5
	Capacity (L/Cu.Ft)	149/5.3	429/15.1	629/22.2	629/22.2	1369/48.3	149/5.3	429/15.1	629/22.2	629/22.2	1369/48.3
	Blood Storage Capacity (450ml blood bags)	60	195	312	312	624	60	195	312	312	624
	Not/Gross Weight (approx) kg	97/125	169/204	187/217	187/217	345/410	108/136	182/217	212/252	212/252	380/445
	Net/Gross Weight (approx)	213.4/275	371.8/448.8	411.4/477.4	411.4/477.4	759/902	237.6/299.2	400.4/477.4	466.4/554.4	466.4/554.4	836/979
	mm	505*560*610	505*680*1315	645*680*1455	645*680*1455	1425*680*1455	505*560*610	505*680*1315	645*680*1455	645*680*1455	1425*680*1455
Construction	Interior Dimensions (W*D*H) 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	55.6*26.5*56.7	19.7*32.3*23.8	19.7*26.5*51.3	25.2*26.5*56.7	25.2*26.5*56.7	55.6*26.5*56.7
	mm	625*820*1150	625*940*1830	765*940*1980	765*940*1980	1545*940*1980	625*820*1150	625*940*1830	765*940*1980	765*940*1980	1545*940*1980
	Exterior Dimensions (W*D*H) in	24.4*30.2*44.9	24.4*36.7*71.4	29.8*36.7*77.2	29.8*36.7*77.2	60.3*36.7*77.2	24.4*30.2*44.9	24.4*36.7*71.4	29.8*36.7*77.2	29.8*36.7*77.2	60.3*36.7*77.2
	mm	720*920*1220	725*985*1940	875*995*2090	875*995*2090	1610*995*2090	720*920*1220	725*985*1940	875*995*2090	875*995*2090	1610*995*2090
	Packing Dimensions (W*D*H) in	28.1*35.9*47.6	28.3*38.4*75.7	34.1*38.8*81.5	34.1*38.8*81.5	62.8*38.8*81.5	28.1*35.9*47.6	28.3*38.4*75.7	34.1*38.8*81.5	34.1*38.8*81.5	62.8*38.8*81.5
Loading Quantities	Container load (20'/40'/40'H)	18/38/76	18/35/35	12/26/26	12/26/26	7/14/14	18/38/76	18/35/35	12/26/26	12/26/26	7/14/14
	High/Low Temperature	Y	Y	Y	Y	Y	Y	Y	Y	Y	Υ
	Power Failure	Y	Y	Y	Y	Y	Υ	Y	Y	Y	Υ
Λ1	Sensor Error	Υ	Y	Y	Y	Y	Y	Y	Y	Y	Υ
Alarms	Low Battery	Y	Υ	Y	Y	Y	Y	Υ	Y	Y	Y
	Door Ajar	Y	Υ	Y	Y	Y	Y	Υ	Y	Y	Y
	Dirty condenser	Y	Υ	Y	Y	Y	Υ	Υ	Y	Y	Υ
	Caster	4	4	4	4	4	4	4	4	4	4
	Foot	2	2	2	2	2	2	2	2	2	2
	Porthole	Y	Υ	Y	Y	Υ	Υ	Y	Y	Y	Y
	Baskets	6	15	24	24	48	6	15	24	24	48
Accessories	Shelves/Drawers	2/0	5/0	6/0	6/0	12/0	0/2	0/5	0/6	0/6	0/12
	Inner doors	2	5	6	6	12	0	0	0	0	0
	USB Interface	Υ	Y	Y	Y	Y	Y	Y	Y	Y	Υ
	Remote Alarm	Υ	Y	Y	Y	Y	Y	Y	Y	Y	Υ
	Temperature Recorder	Optional	Y	Y	Y	Y	Optional	Y	Y	Y	Υ
 Certifications	UL	Υ	Y	Y	Y	Y	Y	Υ	Y	Y	Y

T suffix - Advanced with touchscreen

**Haier** Biomedical

# Blood Bank Solutions

# 4°C Blood Bank Refrigerator

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



**HXC-106** 



# **Microprocessor Control System**

The temperature range is 4±1°C, with temperature accuracy of 0.1°C.



### 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.



### **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).



### **Multiple Protection**

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



### **Remote Alarm Function**

Can connect alarm to other rooms to achieve alarm function.



# **Automatic Evaporation of Condensed Water after Collection**

Avoid the trouble of manual treatment of condensed water.

### **Product Features**

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### Door design

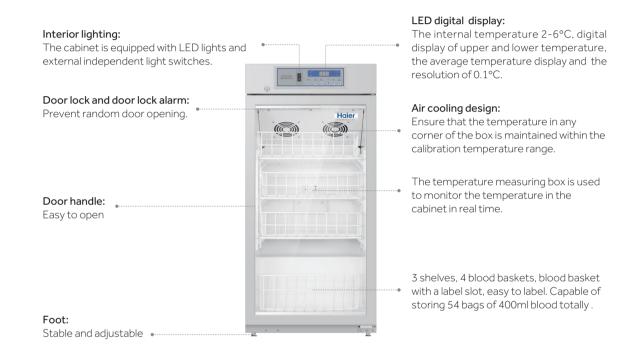
Vertical single door design, double layer electric heated glass door and self - closing function.

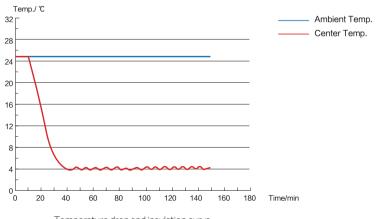
### Materials

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.





Temperature drop and insulation curve

Blood Bank Solutions

# **Blood Bank Refrigerators**

Applicable for the storage of blood and blood related products and other items that need to be stored at  $2-6^{\circ}$ C in hospitals and blood stations.



# **Specifications**

Specificat			6		
	Model		HXC-106		
	Туре		Basket-Type		
	Climate Class		N		
	Cooling Type		Forced air cooling		
Technical	Defrost Mode		Auto		
Data	Refrigerant		HC		
	Sound level (dB(A))		42		
	Temperature Range (°C)		4±1		
Performance	Ambient Temperature (°C)		10-38		
	Controller		Microprocessor		
Control	Display		LED		
	Power Supply (V/Hz)		220~240/50/60		
Electrical	Power (W)				
Data			253		
	Electrical Current (A)		1.6		
	Power Consumption (kWh/24	h)	3.8		
	Capacity (L/Cu.Ft)		106/3.75		
	Blood Storage Capacity (450ml blood bags)		54 (400ml blood bags)		
	Net/Gross Weight (approx)	(kg)	49/52		
		(lbs)	108.03/114.64		
	Interior Dimensions	(mm)	430*350*830		
Construction	· · · · · · · · · · · · · · · · · · ·	(in)	16.93*13.78*32.68		
	Exterior Dimensions (W*D*H)	(mm)	500*514*1055		
		(in) (mm)	19.69*20.24*41.54		
	Packing Dimensions (W*D*H)	(in)	565*615*1145 22.24*24.21*45.08		
Loading Quantities	Container load (20'/40'/40'H)	(11.1)	36/72/72		
	High/Low Temperature		Y		
	Power Failure		Y		
	Sensor Error		т Ү		
Alarms			Y		
	Low Battery				
	Door Ajar		Y		
	Caster		Υ		
	Foot		Υ		
	Porthole		Υ		
Accessories	Shelves/Baskets		3/4		
	Inner doors		/		
	Remote Alarm		Y		
	USB Interface				
Others	Certification		CE		

Product appearance and specifications are subject to change without notice





### Adjustable Shelves





# Three Types of Alarm

Audible buzzer, visible flashing light, remote alarm



### Five Alarm Functions

High/low temperature, power failure, senor error, low battery, door ajar



### Superior Performance

Adopting air cooling technology for the inside temperature uniformity and stability

# **Innovative Design**

- Frequency Conversion Compressor
- Condensation Free Design
- Adjustable Shelf And Basket
- Intelligent Alarm

Model			HXC-158	HXC-158B
	Туре		Basket-Type	Drawer-Type
	Climate class	ST	ST	
Technical Data	Cooling type		Forced air cooling	Forced air cooling
recrimedi Bata	Defrost mode		Auto	Auto
	Refrigerant		HC	HC
	Noise (dB(A))		42	42
Performance	Temperature range (°C)		4±1	4±1
renormance	Ambient temperature (°C)		10~38	10~38
Control	Controller		Microprocessor	Microprocessor
Control	Display		LED	LED
	Power supply (V/Hz)		220-240/50/60	220-240/50/60
Electrical Data	Power (W)		320	320
	Electrical current (A)		2.6	2.6
	Capacity (L/Cu.Ft)		158/5.6	158/5.6
	Blood storage capacity (450ml blood bags	5)	84	84
	Net/Gross weight (approx)	kg	107/120	113/126
	Net/ Gross weight (approx)	lbs	235.9/264.6	249.1/277.8
	Interior dimensions (W*D*H)	mm	460*370*950	460*370*950
Dimensions	Interior dimensions (W-D-H)	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
	Exterior diriterisions (W. D. 11)	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
	r deking dirriensions (W D Tr)	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
	High/Low temperature		Y	Y
	Power failure		Υ	Y
Alarms	Sensor error		Y	Y
711011113	Low battery		Υ	Y
	Door ajar		Υ	Y
	Remote alarm		Y	Y
	Caster		Y	Y
	Foot		Y	Y
	Test hole		Y	Y
Accessories	Shelves/Basket		4/4	-
	Drawers/Inner doors		-/2	4/-
	USB interface		Optional	Optional
	Temp recorder		Optional	Y
Others	Certification		CE	CE

# Plasma Freezer

# **RFID Solution with Real-Time IoT Technology**



DW-30L1280TR/DW-30L818TR

- RFID radio frequency, accurate management of plasma information, with automatic inventory and quick inquiry function.
- Hydrocarbon refrigeration, efficient and quick.
- Mobile terminal bio-link APP ensures real-time monitoring.
- 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.



### 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, temperature set point, input voltage, network status, user login 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.



### Equipped with IoT function, ensuring real-time temperature monitoring.

• Equipped with IoT function, capable of sending users the equipment alarm information in the form of text messages. Download bio-link APP to monitor and check cabinet temperature, alarms and event logs from anywhere at anytime.



### Bottom air inlet system, low noise

• Equipped with a special filter, ensuring the cleanness and safety of interior air.





### Multi-compartment Storage Basket

• Multi-compartment storage basket design, streamlines plasma storage and placement, easy to access.



### **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.

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-30L1280TR	220-240/ 50/60	-10~-35	1520*1065*1980	1320*752*1260	1280	440/505	576
DW-30L818TR	100-230/ 50/60	-10~-35	988*951*1980	750*755*1460	818	235/285	360



# **Transport Cooler for Biological Products**

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# Active Cooling Solution





HZY-8Z/8ZA

HZY-15Z/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's transport cooler for transport
- Blood from blood transfusion department to clinical blood transfusion point

# \*

### **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.



Air Duct Structure



### Easy to Clean

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



Internal Structure

# **Product Features**

Semiconductor for active cooling, energy saving and environmental protection.

• Connect to power to cool unit to temperature, during transportation (without power) the unit will hold temperature. Small and easy to carry.

 $2{\sim}6\,^{\circ}\text{C}$  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 pack for cold storage, providing long insulation after power off to ensure blood safety during the transportation.





- 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 hour.

### 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 Cigarette Lighter Plug, Easy for Vehicle Transportation.

• The power supply is configured to fit the vehicles internal power plug, easy for vehicle transportation.

# Passive Cooling Solution



- 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 Features**

- LCD screen, real-time display of inside temperature, battery level and other information.
- Electromagnetic lock as standard, ability to scan QR code to open the unit, safeguarding the stored items.
- 4°C ice pack ensures cool storage temperatures with zero freezing to keep blood within safe storage temperature guidelines during transportation.



HZY-5B



HZY-35B

# **Product Features**

- 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.

# **Transport Cooler for Biological Products**

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# **Specifications**

							9
	Model	HZY-5B	HZY-8Z	HZY-15Z	HZY-8ZA	HZY-15ZA	HZY-35B
echnical	Storage Temperature (°C)	/	2~6	2~6	2~6	2~6	/
ata	Operating Temperature (°C)	2~10	2~10	2~10	2~10	2~10	2~10
	Net / Gross Weight (kg)	2/3	4/5	6/8	4/5	6/8	9/12
	Exterior Dimensions (W*D*H mm)	285*186*200	320*265*260	520*300*270	320*265*260	520*300*270	550*328*370
nstruction	Interior Dimensions (W*D*H mm)	220*118*126	230*140*170	430*150*180	230*140*170	430*150*180	450*232*295
	Packing Dimensions (W*D*H mm)	357*277*287	393*362*367	595*375*404	393*362*367	595*375*404	674*455*490
	Blood Bag Capacity	5	8	15	8	15	35
	Cold Chain Monitoring	/	/	/	Υ	Y	/
	NFC Unlock	/	/	/	/	Υ	/
	Foam material	High density foam	HFO-1233zde	HFO-1233zde	HFO-1233zde	HFO-1233zde	Polyurethane Cycloisopentane
	Refrigeration method	Passive cooling	Semiconductor active refrigeration	Semiconductor active refrigeration	Semiconductor active refrigeration	Semiconductor active refrigeration	Passive cooling
nctions	Warm up time	3 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/ABS	ABS/ aluminium plate	ABS/ aluminium plate	ABS/ aluminium plate	ABS/ aluminium plate	HDPE/HDPE
	Alarm	Low Battery	High temperature, sensor error, power off	High temperature,sensor error, power off	High temperature,sensor error, power off	High temperature,sensor error, power off	/
	Battery	Lithium Battery	Rechargeable lithium battery	Rechargeable lithium battery	Rechargeable lithium battery	Rechargeable lithium battery	Button battery
thers	Certification	/	CE	CE	/	/	CE

Product appearance and specifications are subject to change without notice

# **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.

# **Packaging System**

### 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

labelina)



- • Inner Packing (Anti-leakage)

# Active Cooling II



HZY-8Z (Specimen)



HZY-15Z (Specimen)

# **Product Advantages**



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

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



### 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.



### 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.



### Multiple fault alarms, safer to use

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



### The power supply is equipped with a car cigarette lighter plug, which is convenient for vehicle transport

The power supply can support 12V and 100~240V conversion, so the container can be put into the car to plug in and transfer.

# Auxiliary Container



HZY-8Z (Specimen)



HZY-15Z (Specimen)



### 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  $-40^{\circ}$ C to  $+55^{\circ}$ C.

# - Transport Cooler

# **Transport Cooler for Infectious Materials**

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# Passive Cooling | |



UN2814 transport cooler HZY-10B (P620)



UN3373 transport cooler HZY-10B (P650)

# **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**



HZY-10B (P620)



HZY-10B (P650)



# 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			
Use	Transfer of biological specimens, etc	Transfer of biological specimens, etc			
Туре	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, 2 built-in 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 con	trol and display, display accuracy 0.1 °C			
Alarms	Sensor failure alarm, high temperature alarm, power failure alarm				

Model	HZY-10B (P620)	HZY-10B (P650)
Purpose	Disease control centers, hospitals, etc. are used for transport of infectious substance specimens (air transportation)	Disease control centers, hospitals, etc. are used for transshipment of Class B infectious substance specimens (air transportation)
Туре	Passive cooling	Passive cooling
Internal dimensions (W*D *H mm)	345*225*182	345*225*182
External dimensions (W* D* H mm)	430*312*272	395*275*245
Loading quantity	2 transport tanks	2 transport tanks
Effective volume	14L with 2 built-in specimen sealed tanks	14L with 2 built-in specimen sealed tanks
Specimen sealed tank size (mm)	H160*D130	H160*D130
Number of test tubes (Single tank)	16 test tubes D10 (small), 2 test tubes D15 (large)	16 test tubes D10 (small), 2 test tubes D15 (large)
Net weight (kg)	8	3
Transport temperature (°C)	2-10	2-10
Thermal insulation time (32°C full load) (h)	8	7
Cabinet material	Aluminum magnesium alloy box shell	PP plastic
Thermal insulation material	EPP foam liner	EPP foam liner
Cool storage mode	PCM ice pack cold storage	PCM ice pack cold storage

# **IIIM** Vaccine Transport Cooler



The vaccine transport cooler is superior and efficient, having dual capabilities for cold storage and temperature preservation, which is environmentally friendly and energy saving. The performance of the cooler and holdover time of temperature preservation is influenced by the temperature of the stored items.

### 6 Liter/12 Liter/20 Liter/30 Liter

**Scope of Application** > Suitable for vaccine cold chain transportation.

# **Product Design and Advantages**

- Both inside and outside of the boxes are made of PP (high strength plastic) material, non-toxic and harmless, safe for direct food contact.
- The body of the unit is designed with handles on both sides to facilitate manual handling & is manufactured with anti-ultraviolet materials.
- The wall of the box is filled with fluorine-free polyurethane foam insulation material without adding any chemical material, environment-friendly and odor-free.
- Equipped with professional sealing ring design, with good heat insulation and refrigeration effect.

# **Specifications**









Model	QBLL0606	QBLL0812	QBLL0820	QBLL0830	
Temperature Range (°C)	2~8	2-8	2~8	2~8	
Volume (L)	6	12	20	30	
Exterior Dimension (mm)	330*240*275	420*245*300	440*262*308	580*310*360	
Interior Dimension (mm)	238*143*195	335*170*240	375*215*250	475*245*295	
Net Weight (Kg)	1.8	2.4	3.5	4.5	
Material	PP	PP	PP	PP	
Cold Source Configuration	6 pieces QB004 ice boxes	6 pieces QB004 ice boxes	10 pieces QB004 ice boxes	6 pieces QB010 ice boxes	

 $Remark: QB004 \ and \ QB010 \ are \ models \ of ice \ packs, the \ dimension \ of \ QB004 \ is \ 160^*90^*30 \ mm \ and \ the \ dimension \ of \ QB010 \ is \ 280^*120^*30 \ mm$ 

# **Medical Transport Cooler**



High strength material, anti-collision, non-toxic and harmless, UV resistant.





The outer-unit body is equipped with an integrated handle, which is firmly installed and durable.



Real-time display of temperature inside the cooler, making the temperature monitoring more intuitive.



Specially positioned ice packs, partitioned storage, easy to operate.



Professional & innovative sealed design ensuring zero cold leakage to achieve safe, secure and reliable long-term cooling preservation.

# **Typical Application**

Cold chain transportation for samples, reagents, blood products, specimens and drugs.

# **Specifications**

Model	FS-12LS	FS-18LS	FS-35LS	FS-54LS	FS-100L	FS-110L
Temperature Range (°C)	0-10	0-10	0-10	0-10	0-10	0-10
Duration (h)	≥24	≥24	≥24	≥24	≥24	≥24
Exterior Dimensions (W*D*H)(mm)	440*262*308	440*262*308	570*305*365	615*395*450	680*500*540	832*515*524
Interior Dimensions (W*D*H)(mm)	325*170*225	363*203*244	475*245*270	520*310*355	580*400*440	732*421*425
Qty of Icepacks (Pcs)	4	4	4	4	4	6
Net Weight (kg)	6.2	6.5	9.5	18.5	22	19

 $Note: -25 - -15 ^{\circ}C \ and \ 15 - 25 ^{\circ}C \ are \ available \ with \ optional \ ice \ packs. The \ standard \ ice \ packs \ can \ only \ achieve \ 0 - 10 ^{\circ}C \ temperature \ storage.$ 

# **U-COOL** Portable Transport Cooler



ALG50

Low voltage battery protection



Detachable temperature sensor



<u>`</u>;

LED lighting

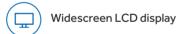


Standard basket













Detachable temperature sensor



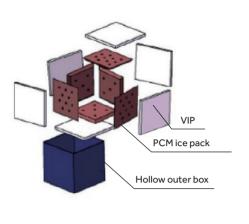
Real-time voltage display

# **Specifications**

Model		ALG50	BCD60	BCD115
Capacity (L)		50	60	115
Climate Type		T, ST, SN, N	T, ST, SN, N	T, ST, SN, N
Net Weight (Kg)		16.7	24.0	28.6
Operating Temperatu	ıre (°C)	-20~ +10 (at 25°C)	-18~ +10 (at 32°C)	-18~ +10 (at 32°C)
Power (W)		55	70	70
Refrigerant		R134a	R134a	R134a
Insulation Material		C5H10/C-Pentane	C5H10/C-Pentane	C5H10/C-Pentane
Exterior Dimensions (W*D*H)	mm	630*404*530	621*485*569	811*482*672
Packing Dimensions (W*D*H)	mm	715*450*625	718*578*638	906*575*745
Walliana Barra Gara I		AC110-240V, 50/60Hz	AC110-240V, 50/60Hz	AC110-240V, 50/60Hz
Voltage Power Supply		DC 12V/24V	DC 12V/24V	DC 12V/24V
Power Consumption (kWh/24h)		0.23	0.25	0.25

# **Logistics Cold Chain Transport Cooler**





# **Product Advantages**



### Check the insulation status at any time

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



### Stable performance, long service life

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



Light weight, easy to carry

Light product with ergonomic design is easy to carry.

# **Specifications**

Model	BW25-8A	BW25-12A	BW50-12A	BW25-18A	BW25-36A	BW50-36A	BW25-64A
Temperature Range (°C)	-2515/2-8/ 15-25/-9060	-2515/2-8/ 15-25/-9060	-2515/2-8/ 15-25/-9060	-2515/2-8/ 15-25/-9060	-2515/2-8/ 15-25/-9060	-2515/2-8/ 15-25/-9060	-25~-15/2-8/ 15-25/-90~-60
Exterior Dimensions (W*D*H)(mm)	455*295*295	410*345*355	470*400*410	510*350*355	515*450*460	575*510*510	590*525*525
Packing Dimensions (W*D*H)(mm)	546*381*389	504*436*444	560*492*500	607*439*447	609*541*549	665*597*605	679*611*619
nterior net Dimensions (W*D*H)(mm)	310*215*215	270*270*270	270*270*270	370*270*270	370*370*370	370*370*370	440*440*440
Payload Size (with ice pack)(mm)	270*175*175 (8L)	230*230*230 (12L)	230*230*230 (12L)	330*230*230 (18L)	330*330*330 (36L)	330*330*330 (36L)	400*400*400 (64L)
Net Weight (kg)	4	4.8	9.8	5.6	8.2	16.4	11
Gross Weight (kg)	6	6.8	12.5	8.2	11.2	20	14.8
Recorder Monitoring	Optional						
Heat Insulating Material	VIP						
Insulation Thickness (mm)	25	25	50	25	25	50	25
Daily Consumption of Dry Ice (kg)	1.5	1.6	0.75	1.85	2.5	1.5	2.7
Safety Margin (kg)	1	1	1	1	2	2	2

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

# **Active Cooling**



HZY-40Z

# **Product Advantages**



### **DC Frequency Conversion Technology**

 ${\hbox{DC frequency conversion compressor, superior energy efficiency.}}\\$ 



### **Tilt Protection Function**

Electronic gyroscope in board, effective protection for compressors.



### Integrated Main Body

Rotational molding body better adapted to complex transport environments.



### **Multiple Power Supply**

Supports AC and DC power.

# **Unique Designs**





The body is equipped with a handle for easy carry.

Optional: Casters to facilitate transport.

Optional: Electromagnetic lock, with password lock equipped; more secure.

Forced air cooling method, the temperature is more uniform.

Built-in UVC ultraviolet lamp for regular disinfection.

3 in 1 wide temperature range , multiple functions within one unit, greater cost savings.

Model	Exterior Dimension (W*D*Hmm)	Interior Dimension (W*D*Hmm)	Capacity (L)	Door	Foam Materials	Compressor	Basket Load Bearing(KG)	_		Condenser/ Evaporator
HZY-40Z	800*550*505	338*348*285	33	Rotational moulding integrated forming foam door	LBA	DC variable frequency compressor	≤15	Forced air cooling and heating	Rotational moulding	Microchannel/ Fin type

Controller	Refrigerant	Light	UV Lamp	Net Weight (KG)	Temperature Range(°C)	Power Supply	Max power (W)	Power Consumption (Kwh/24h)	Electro- magnetic Lock	USB	Certification
Microprocessor	HFC	LED 1W	UVC 1W	42	-20 to 22	AC 110-240V 50/60Hz DC12/24V	90	1.5	Optional coded lock	Optional	CE



### Walk-In Cold/Freezer Room



Haier Biomedical walk-in cold rooms are for storage of vaccines and other temperature sensitive products. The complete unit is also designed for installations in housed areas such as warehouses to meet specified temperature standards. These units have been installed in India, Guinea, Syria, Pakistan, Burundi, Zimbabwe and other regions across the world.

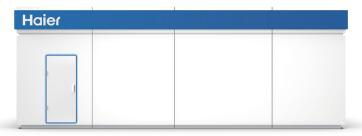
# **Specifications**

Туре	Freezer Room	Freezer Room	Cold Room	Cold Room	Cold Room	Cold Room	Cold Room	Combined Cold/Freezer Room		
Туре	Treezer Room	rreezer koom	Cold Room	Cold Room	Cold Room	Cold Room	Cold Room	Cold Room	Freezer Room	
Model	HRZK-40D	HRZK-20D	HRZK-10G	HRZK-15G	HRZK-20G	HRZK-30G	HRZK-40G	HRZk	(-40GD	
Defrost Mode				El	ectrical heating					
Refrigerant					CFC-Free					
Internal Temperature Range (°C)	-20	-20	2-8	2-8	2-8	2-8	2-8	2-8	-20	
Evaporator Temperature (°C)	-25	-25	-7	-7	-7	-7	-7	-7	-25	
Power Supply (V/Hz)	380/50	380/50	220/50	220/50	220/50	380/50	380/50	380	0/50	
Power (W)	5300	2630	1300	1750	1750	2520	2610	2520	2010	
Refrigeranting Output (W)	4200	2060	1560	2230	2230	2950	3250	2950	1580	
Capacity (m³)	40	20	10	15	20	30	40	25	15	
Condensation Temperature (°C)					43	'	'		,	
Density (Kg/Cbm)					40 <u>+</u> 2					
K-Value (m²K)		0.22								
Insulation Thickness (mm)		100								
Certification	_				WHO/PQS					

Product appearance and specifications are subject to change without notice

# **Integral Cold Store Unit**

• The cold room is suitable for a variety of applications; it can be used to freeze or refrigerate samples for healthcare, research, agriculture, and biotechnology purposes. In the walk-in cold room (WIC), the interior temperature can be controlled within a range of 2°C to 8°C. In the walk-in freezer (WIF), the temperature is set at -20°C.



### Features of the Cold Room

- The set point of the cold room has an adjustable range of 0°C to 10°C (or -15°C to -25°C for the Freezer Room) with a resolution of 0.1°C.
- High-efficiency CFC-free polyurethane insulation foamed into place. With a density of  $42 \text{kg/m}^3$ , a thickness of 100mm and an insulation K-value of 0.22 W/(m²)(K) or better.
- Internal and exterior surfaces are made up of hot-dipped galvanized steel sheet, coated in a white polyester coating. The floor is clad with non-slip material.
- Rooms are equipped with tungsten lighting.
- Rooms are equipped with shelving systems on 3 of their walls.
- Dual refrigeration system while one system is working, the other one is reserved as a back-up.
- Forced air-cooling system
- Door equipped with a lock and heavy-duty hinges, with an internal safety release.
- CFC-free refrigerant
- Automatic defrosting
- A manual change-over switch is offered as standard, an automatic change-over switch is available as an optional extra.
- Temperature recorder and audible alarm system.

# **Technical Characteristics of the Refrigerating Unit**

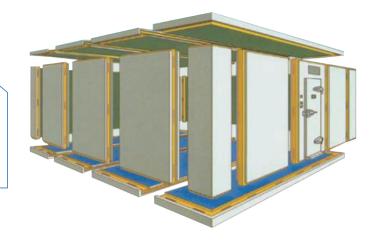
- An integrated condenser unit, called Mono block, integrating evaporator, condenser, compressor, electrical control units into one compact body, is used in cold storage rooms with temperature control of -5°C~5°C or -15°C~-20°C, in medical, clinical, agricultural and chemical industries where large scale cold storage is needed.
- Small compact structure.
- Comprises of TECUMSEH hermetic compressors, hight efficient, in-grooved copper tube and aluminium fin heat exchangers and leading brand refrigeration parts.
- The electronic control boards manage following parameters: automatic temperature setpoint and control, electric heater defrosting, protection devices for over loading, over-heating, lack of phase, high and low pressure.
- Safe, easy to use and is economical, low cost installation and operation.

# **Temperature Recorder**

- Upper and lower limits +50°C to -30°C
- Accuracy ±1°C
- Resolution ±0.5°C
- Minimum acceptable recording period between chart changes is 7 days
- USB interface is included

# **Combined Cold Room**

Applicable for storing large quantities of vaccines, reagents, medicines and other biological products. Suitable for CDCs, animal epidemic prevention and control centers, hospitals, biopharmaceutical companies, etc.



### **Technical Features:**

• The integrated solution provider integrates cold storage, automation, informatization and environmental laboratory.

### **Environmental protection**

- Uses R404a environmentally friendly refrigerant;
- Uses durable, environmentally-friendly polyethurane foam insulated walls to provide excellent insulation with a low ozone destruction coefficient.

### Safety

 With equipment fault self-diagnosis function. With a variety of active protection and passive early warning functions, the operating status is monitored to ensure the safety of stored samples.

### Modular

• The system is modular and solutions are customized according to individual requirements.

### **Energy saving**

• The technology of liquid-subcooling and exhaust-precooling via defrosting water is adopted to save energy.

### Smart

• The PLC control system can automatically control the start and stop of the refrigeration unit, the regular switching between the main and standby machines and the automatic fault switch. No manual operation is required for refrigeration and defrosting.

# **Side Loading Cold Room**

Applied to save vaccines, reagents, medicaments, biological products, etc.,
Suitable for community clinics, pharmacies, etc.

# **Technical Features:**

• All-weather: 24-hour uninterrupted monitoring of the cold storage operation status to ensure the safety of samples;



### Solar Direct Driven Cold Room

- Whole process monitoring: production, transportation and storage
- Full coverage: network monitoring, real-time query, unified management
- Stable state change rate: ≤±0.3°C/10h
- •Temperature uniformity: ≤±3°C
- Ultra-low noise: the noise of the outdoor unit is less than 50 decibels
- Exclusive perforated ceiling air supply design ensures rapid cooling and excellent temperature uniformity ±1°C
- Utilizes quick and effective hot fluoride defrosting method
- An electronic expansion valve accurately controls the storage temperature while ensuring the refrigeration system runs more energy efficiently



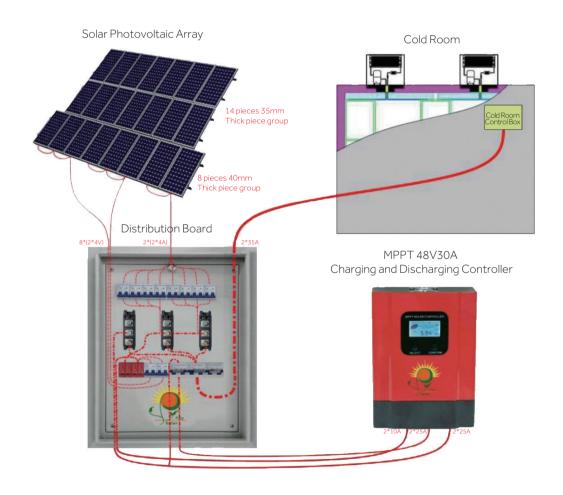
Applicable for storage of temperature-sensitive products such as large quantities of vaccines and medicines; National or regional vaccine centers, hospitals, biopharmaceutical and other industries;

### **Technical Features:**

• Powered by solar photovoltaic power generation system, low operating cost.

**Haier** Biomedical

- $\bullet$  Solar direct drive refrigeration, no battery driven compressor; combined with ice lining technology, maintain the temperature in the cold room at 2-8 °C throughout the day.
- Adopting PLC intelligent control, preferentially start the compressor of higher temperature cold storage box to ensure the uniformity of the room temperature.
- Power off and maintain 2-8° C for more than 48 hours at 43° C ambient temperature; it can last longer under low ambient temperature conditions.
- Low temperature protection function module (optional), can achieve 5-43 ° C wide temperature range operation
- Optional 48V switching power supply can be connected to single-phase 110-220V AC power supply.



# **Vaccine Refrigerated Vehicle**

- High chassis, excellent cross-country capacity.
- Euro-2 standard, easy and low-cost maintenance in African area with backup power.
- Complies with WHO/PQS standard requirements.
- Backup power supply.
- Heating system to use in -20°C ambient temperature.



# **Vaccine Stock Monitoring Solution**

Monitoring the vaccine status of all vaccination sites nationwide, providing Enterprise Resource Planning (ERP) management for decision makers with timely and accurate information of vaccine inventory and temperatures.

### Function:

- Manual entry of vaccine stock.
- Data acquisition of temperature.
- Receives immunization notifications.
- Checks inventory reports.
- Check inventory trend and alarm information.
- Information data and files of vaccines.
- Checking vaccine warehousing plans.
- Submitting information for invalid vaccines.
- Checking historical temperature curve.



- 7-inch touch screen.
- Internal Internet-enabled SIM card.
- Solar power USB, EHC power supply.
- External NTC temperature sensor.





# **Remote Temperature Recording:**

• The external temperature sensor measures the temperature, records and stores the measured temperature values automatically, and transmits them to the platform through GPRS, realizing remote platform monitoring.

### **Application Scenarios:**

• It can be used for real-time monitoring of warehousing and distribution of food, medicine, vaccine, blood, reagents, biological products, biological sample tissue and other items. The application scenarios include refrigerated trucks, incubators, cold rooms, cold packs, refrigerated cabinets, refrigerators, freezers and so on.

### Cloud Platform Website http://ems.haierbiomedical.com

# **U-COOL**

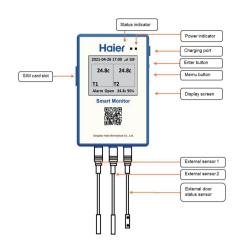
• Once powered on, the device immediately uploads the data automatically to the portal. Superior device, one simple activation - no technical skills needed, easy and user friendly.



- Remote portal management platform, which can track temperature, location, signal strength information and has multiple data analysis reports.
- One full charge, more than 10 days of battery life.
- The device supports sound and light alarms.
- USB data export (30 days temperature records).
- High precision, wide range of temperature measurements.
  - IP65 protection, waterproof, shockproof and dustproof to fit a variety of complex environments.
  - Complies with WHO Standards, WHO prequalified code: E006/060

ltem	Specifications
Model	U-Cool
Temperature Sensor	NTC sensor: -40°C~+120°C (±0.5°C within -30°C to +20°C, ±1°C for other)
Environment Sensor	Temperature: -10°C~+55°C Humidity: 0%RH~99%RH
Signal	2G/4G
Storage Capacity	260,000 sets of data
Battery	Charging voltage: 5V~12V Charging current≤1.5A
Alarm	Audio-visual: buzzer+LED light
SIM card	Built-in SIM card
Map Location	Google map and LBS(Location Based Service)
USB	Micro USB: download data /charging
Material	Shell: PC/Shell Jacket: ABS
IP	IP65
Dimension	114.5 mm *71.5 mm *22mm

# **U-COOL-PRO**



### **Product advantages**

- The user is free to set up, and automatically uploads data to portal while power on
- The device supports sound and light alarms
- LBS base station positioning, indoor use can also be positioned
- USB data export (30 days temperature record)
- One charge, more than 10 days of battery life
- 2 pluggable temperature sensor, 1 pluggable door switch sensor
- Support 4G/3G/2G signal

ltem	Specifications
Model	U-Cool-Pro
Temperature Sensor	2 Pluggable Digital temperature sensors (or PT100 optional) 1 Ambient temperature and humidity sensor
Temperature Range	-40°C~+80°C PT100 sensor(optional): -200°C~+150°C
Accuracy	±0.5°C within -30°C to +20°C, ±1°C for other
Door Sensor	1 Pluggable Reed Switch sensor
Battery	Lithium battery: 4000mAh
Alarm	Audio-visual: buzzer + LED light
Map Location	Google map and LBS(Location Based Service-Mobile Base Station Positioning)
USB	Micro USB: download data /charging
Material	Shell: PC
IP	IP64
Dimension	112mm*75mm*21mm
Communication Network Mode	4G/3G/2G
Charging Voltage	5V~12V
Charging Current	≤1A
Working Current	≤2A
Storage Temperature	-40°C~+65°C
Working Temperature	-10°C~+55°C
SIM Card	Micro SIM Card
USB	Micro USB, support charging; When the device is turned off, it can be connected to the computer as a Flash drive export data in PDF/TXT format. When the device is turned on, it can be connected to the computer as a virtual serial port, which can be configured using the configuration tool.

# **U-Cool-LoRa**

# Introduction of Temperature Data Logger

Temperature Data Logger consists of sensor node device(host) with multiple sensor probes. The intelligent gateway (LoRa -- 4G) is connected to the cloud cold chain management software to achieve real-time monitoring and alarm of temperature and humidity, door open status, power on & off of refrigerators and cold room(-40~80°C)

# **Vaccine Safety Solutions**





**YB-HC600-01**Temperature Data Logger



YB-HC600-02

Door On-off Monitor





**YB-HC600-03**Power Outage Monitor

YB-HZ600-01 Smart Gateway

# **Product advantages**

### Long communication distance

LoRa spread spectrum modulation is adopted for wireless communication, which works in sub-1 GHz band. With the characteristics of long communication distance, strong ability to pass through obstacles or walls, excellent anti-interference performance, no need to lay communication and power supply cables, user installation is flexible and beautiful.

### Local sound and light alarm

When the acquisition temperature exceeds the set domain value, or the acquisition node is not working normally, the local sound and light alarm can be realized through the collector configuration.

### Micro-USB export local data

It is equipped with standard Micro-USB interface to cooperate with PC upper computer software for local data export, firmware upgrade and system parameter configuration.

### Power supply mode

The collector works with battery power, and the gateway works with the external power through adapter. When the external power supply is off, the gateway works with standby battery power supply.

### Pluggable aviation plug

- 1) The probe is inserted into the refrigerator porthole or laid in the cold room, and the recorder host can be removed separately for operation;
- 2) When the probe is broken or damaged, it is convenient to replace it separately;
- 3) Compared to the 3.5mm audio connector, the aviation plug is more robust and offers better electromagnetic protection.

Model	YB-HC600-01	YB-HC600-02	YB-HC600-03		
Product Name	Temperature Data Logger	Door On-off Monitor	Power Outage Monitor		
Sensor	One line (2m) digital sensor	One line (3m)	One line (3+3m)		
Measuring Function	Range: -40-80°C Precision: 0.1°C Accuracy: ±0.5°C	Door open-close monitoring	Power supply monitoring		
Dimension (H*W*D mm)	125*73*23				
Battery	3.6V/5400mAh				
Communication		LoRa			
Display	LCD display, real-time display of measured data, such as electric quantity, signal strength, etc.				
Local-storage	Local storage data of 6	Local storage data of 60000 sets and it supports breakpoint continued transmission			
Model	1	YP	3-HZ600-01		

Model	YB-HZ600-01
Product Name	Smart Gateway
Transit Network	4G
Maximum Number of Transmitters That Can Be Used	30
Dimension (W*H*D mm)	160*100*33
Battery	3.7V/10000mAh
Communication	LoRa
Local-storage	60000 sets

# 30-Day Electronic Temperature Logger

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### Haier Biomedical Vaccine Cold Chain Storage Safety Solution

- •Continuous, real-time, whole-process traceable monitoring for vaccine safety storage
- •WHO approved and sourced by WHO procurement.

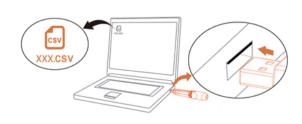
# **30-Day Electronic Temperature Logger**













WHO Certified PQS code:E006/042

Easy to download data

Accessory: Bracket

### **Product Features**

- Approved by WHO's PQS, PQS code:E006/042
- $\bullet$  Designed specifically for 2~8°C vaccine storage, equipped with high/low temperature visual alarm to meet the WHO standard
- Recording capacity is over 30 days, recording interval is 6 minutes, outdated data will be overwritten by new one automatically, when the recording volume is full
- LCD screen displays temperature
- Integrated sensor device, dust and water resistant to IP65 protection standard, can be placed in Cold Box or vaccine refrigerator to monitor the temperature
- The logger can be plugged into the USB port of any PC to automatically generate a CSV file including temperature data and temperature graph which can be generated by data management software
- Built-in disposable wide temperature range lithium battery (Non-replaceable) with a minimum operating life of two years after a maximum shelf life of one year
- The bracket is included as standard

Model	HETL-01
Temperature Range (°C)	-20~+50
Main Material	ABS (Transparent Shield: PC)
Data Interface	USB Interface
Display Medium	LCD
Resolution (°C)	0.1
Accuracy	±0.5°C for -20°C~+40°C, ±1°C for the others
Recording Volume	8192 Data Points(34 days)
Logging Interval	6 min
Power Source	Non-Replaceable Battery
Size (Length*Diameter mm)	131*24
Service Life	2~3 years



# **NSF Series Biological Safety Cabinet**

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### **Scope of Application**

Professional air purification equipment suitable for pharmaceuticals, medical and health industries, scientific research laboratories of universities and colleges as well as other related fields.



### **Product Advantages**



### Multiple Voltage Options, Suitable for Many Countries and Regions

Full voltage coverage (100-230V 50/60Hz), suitable for a wide range of countries and regions.



### Microprocessor Control System

- Intuitive and informative interactive digital LCD display.
- The hot-ball anemometer monitors the downflow and inflow air speed of the safety cabinet in real time and compares it with the standard air speed. The rotating speed of the fan is adjusted throug high the microprocessor system to maintain the constant air speed of the safety cabinet.
- Real-time display of operational information and parameters including downflow air velocity, flow rate, temperature, humidity, positive pressure, negative pressure, fan cumulative running time and filter remaining service life.
- One button UV lamp timer function, allows users to set 0 to 24 hours of automatic on/off time.



### Ultra-low Noise, Uniform Airflow

Designed with Dual DC centrifugal fans, combined with an innovative air distribution system, with lower noise, and more uniform air flow.



### Superior Filter, Multiple Protection

- ULPA is made of moisture-proof and flame-retardant glass fiber filter paper which can intercept 99.9995% solid particles with a diameter of 0.12 µm to ensure high cleanliness of air supply flow and exhaust flow.
- Perfect air distribution design, no turbulence in the working area.
- Sound and light alarm function for abnormal parameters.



### One-piece Welded Cabinet Structure, Leak Proof

Prevention of leakage performance of dangerous factors conforms to NSF specification.

Laboratory Equipment

# 147/148

# **Biological Safety Cabinet (Touchscreen)**

# **Specifications**

	Model		HR900-IIA2-N	HR1200-IIA2-N	HR1500-IIA2-N	HR1800-IIA2-N	
Working Voltage&Frequency (V/Hz)		Hz)	100~230/50/60	100~230/50/60	100~230/50/60	100~230/50/60	
	Power (VA)		1300	1300	1400	1400	
	Power of Blower (W)		DC 190W 112W	DC 120W 112W	DC 190W 112W	DC 120W 112W	
	Airflow Circulation		70% Downflow, 30% Exhaust				
General	Main Filter Typical Efficiency		ULPA, U15,99.9995%@0.12um	ULPA, U15,99.9995%@0.12um	ULPA, U15,99.9995%@0.12um	ULPA, U15,99.9995%@0.12u	
	Exhaust Filter Typical Efficiency		ULPA, U15,99.9995%@0.12um	ULPA, U15,99.9995%@0.12um	ULPA, U15,99.9995%@0.12um	ULPA, U15,99.9995%@0.12u	
	Filter's Brand		AAF	AAF	AAF	AAF	
	Downflow Velocity (m/s)		0.35	0.35	0.35	0.35	
	Inflow Velocity (m/s)		0.53	0.53	0.53	0.53	
	Lighting Intensity (Lux)		946	1323	/	1292	
	Sound Level (dB(A))		67	64	/	67	
		kg	225/265	275/335	325/365	375/460	
	Net/Gross Weight	lbs	496/584	617/750	716.5/804.7	827/1014	
		mm	930*600*650	1230*600*650	1530*600*650	1830*600*650	
	Internal Dimensions (W*D*H)	in	36.6*23.6*25.6	48.4*23.6*25.6	60.2*23.6*25.6	72.0*23.6*25.6	
	Enternal Dimon-: (M*D*II)	mm	1040*850(790)*2160	1340*850(790)*2160	1640*850(790)*2160	1940*850(790)*2160	
	External Dimensions (W*D*H) (Width without Arm Rest)	in	40.9*33.5 (31.1)*85	52.8*33.5 (31.1)*85	64.6*33.5 (31.1)*85	76.4*33.5 (31.1)*85	
imensions		mm	1135*945*1700	1435*945*1700	1735*945*1700	2038*945*1700	
	Packing Dimensions (W*D*H)	in	44.7*37.2*66.9	56.5*37.2*66.9	68.3*37.2*66.9	80.2*37.2*66.9	
	Support Stand (mm)		680mm (standard), 680-900mm adjustable height (optional)				
	Sash Opening (mm) Container Load (20'/40'/40'H) Alarm		200 (Max 460)	200 (Max 460)	200 (Max 460)	200 (Max 460)	
			12/24/24	8/16/16	6/12/12	6/12/12	
			Sound and Flash	Sound and Flash	Sound and Flash	Sound and Flash	
	Closing Fan Alarm After Door Opening		Y	Y	Y	Y	
	Door Ajar	- 3	Y	Y	Y	Y	
	Abnormal Inflow		Y	Y	Y	Y	
	Abnormal Downflow		Y	Y	Y	Y	
Alarms			Y	Y	Y	Y	
Functions	Filter Clogging		Y	Y	Y	Y	
	Filter Damage		Y Y		Y	Y	
	Filter Lifetime Lack		Y	Y	Y	Y	
	UV Light Lifetime Lack		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	Y	
	UV Lamp		Y	Y	Y	Y	
	Socket			2 sockets (optional GFCI socket)	2 sockets (optional GFCI socket)	2 sockets (optional GFCI socke	
	Valve Port		Optional	Optional Optional	Optional Optional	Optional Optional	
	Side Wall Service Taps		Optional gas tap, vaccum tap,	Optional gas tap, vaccum tap, compressed air tap and water tap	Optional gas tap, vaccum tap,	Optional gas tap, vaccum tap compressed air tap and water t	
	Antimicrobial Coating		Optional	Optional	Optional	Optional	
	316SS Work Surface		Optional	Optional	Optional	Optional	
Accessories	Work Surface		Single-piece	Single-piece	Single-piece	Single-piece	
Accessories	Touch Screen		Optional	Optional	Optional	Optional	
	Electric Front Sash		/	/	/	/	
	Foot Switch		/	1	/	/	
	Armrest		Y	Y	Y	Y	
	Exhaust Duct Connection Kits		Optional	Optional	Optional	Optional	
Others	Certification		UL, NSF	UL, NSF	UL, NSF	UL, NSF	

<sup>\*</sup>Haier Biomedical reserves the right to change products and specifications without prior notice

# **Laminar Flow Cabinet**

- Featuring many technologies and authoritative testing certification for reliability
- Microcomputer intelligent control panel with durable touch buttons
- Multiple safety protection functions including UV delay start
- Interlocking function to put an end to incorrect operation
- Ergonomic design to ensure comfortable operation
- Memory function to avoid repeated start-up setting
- Integrated stand with universal casters



# **High-Efficiency Filter HEPA**

High-efficiency HEPA filter with efficiency of 99.99%  $@0.3\mu m$ , provides ISO14644.1 Class V standard clean air, safer and reliable clean air.

### **304 Stainless Work Surface**

The durable and corrosion-resistant 304 stainless steel work table without fixing screws reduces the accumulation of dirt, reducing the risk of contamination.

# **Ergonomic Design**

- Recessed internal lighting reduces eye fatigue.
- UV sterilization start-up delay technology prevents injury by UV light. After the UV lamp switch is pressed down, the audible and visual alarm will be activated to remind the operator to leave in time;
- Pre-set function: This technology includes a pre-set UV sterilization start-up delay function to provide improved working efficiency.

# **Interlocking Function**

There is an interlocking function between illuminating lamp and UV lamp, the UV lamp only works when the illuminating lamp is off. If the UV lamp is on, it can be turned off by pressing the daylight lamp, reducing the risk of incorrect operation.

# **Memory Function**

The UV lamp start-up delay time, sterilization duration, pre-set start time, fan position can be set and saved by user on request for the convenient and quick cabinet start-up.

# **One-key Operation**

- After the UV lamp switch is pressed, the time function can be activated automatically. The default sterilization time is 30min, which can be adjusted by user within 0~99min on request;
- Sterilization pre-set, when pressing the UV lamp, the pre-set lamp will light to remind user that the sterilization pre-set function has been activated and that the sterilization pre-set can be conducted.

# **Pre-cleaning Function**

The pre-cleaning function can further improve the protection of samples.





# **Specifications**

Model		HCB-1300V	HCB-1600H
Flow Type		Vertical	Horizontal
Voltage/Frequency (V/Hz)		115/60	220/50/60
Power (W)		1200	350
Vibration Amplitude (UM)		2	2
Exhaust Filter Typical Efficiency		H13 HEPA,99.99%@0.3um	H13 HEPA,99.99%@0.3um
Average Velocity (M/S)		0.2-0.4	0.2-0.4
Lighting Intensity (Lux)		≥300	≥1000
Sound Level (dB(A))		58	61
NI LIG	kg	145/171	165/214
Net/Gross Weight (approx)	lbs	320/376	363.7/471
	mm	1300*530*520	1710*550*750
Internal Dimension (W*D*H)	in	51.2*20.9*20.5	67.3*21.7*29.6
	mm	1370*630*1730	1780*790*1960
External Dimesion (W*D*H)	in	53.9*24.8*68.1	70.1*31.1*77.2
D 1 . D (\A\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	mm	1505*745*1280	1865*940*1370
Packing Dimensions (W*D*H)	in	59.3*29.3*50.4	73.4*37.0*53.9
Supporter		755mm high chassis	765mm high chassis
Cleanliness Classification		ISO 14644.1 Class 5	ISO 14644.1 Class 5
Container Load (20'40'40'H)		10/25/25	6/12/12
Certification		1	NMPA (CFDA)

Product appearance and specifications are subject to change without notice

# **Biobank Series for Large Scale Storage**

Biobank series for large scale storage is designed to ensure the maximum storage capacity with the minimum consumption of liquid nitrogen to lower the overall cost of operation.

- LN<sub>2</sub> Splash Proof
- Data Logging
- Hot Gas Bypass
- 5 Years Vacuum Warranty
- From 13,000 to 94,875 Cryovials

- Self-diagnostics
- Vapour Phase Storage
- Lockable Lid
- Liquid Phase Storage
- · One-touch Defogging

# Haier YDD-1800-635/PT Haier YDD-370-326/PM Haier YDD-550-445/PM

## **Key Features**

- Massive capacity between 13,000 to 94,875×2ml Vials
- Vapour phase storage is the only guaranteed method to prevent cross-contamination
- Vapour phase storage at -190°C
- 5-Year vacuum warranty

- One-touch defogging for easier access
- LN<sub>2</sub> splash proof ensures a safer operation
- Can be used to store all kinds of biological sample

# **Product Advantages**

### Optimal Use of Storage Space

Racks are stored on the rotating tray with an appropriate distance from the wall of the chamber. Liquid nitrogen or supercooled nitrogen vapour is filled in the space between the tray and the wall to maintain temperature uniformity. Storage space is equally divided into four or six fan-shaped storage areas which are clearly labelled. Each storage room is easily rotated to the opening of the tank for convenient sample access.



### Designed for Both Liquid and Vapor Phase Storages

Each model from the Biobank series for large scale storage is designed for both liquid and vapor phase storage. For the vapor phase storage operation process, samples are located away from the liquid nitrogen at a uniform temperature close to that of liquid nitrogen.



Haier Biomedical's Liquid Nitrogen Storage System Biobank series for large scale storage applies advanced vacuum technology and superinsulation technology to ensure storage safety and temperature uniformity while reducing the consumption of liquid nitrogen. The temperature difference of the entire storage area does not exceed 10°C, even during the vapor phase storage process, the temperature near the top of the shelf is as low as -190°C.

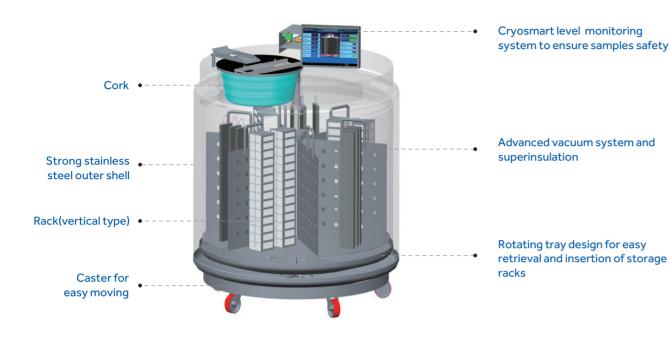




### Cryosmart Level Monitoring System ITC-800N201(N4.1)

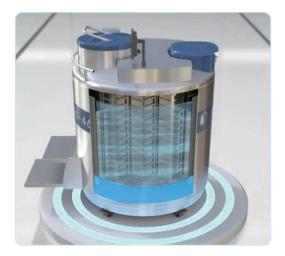
Haier Biomedical's Liquid Nitrogen Storage System Biobank series for large scale storage feature the Cryosmart system for complete monitoring and control. High-precision temperature and liquid level sensors are used to ensure accuracy. All data and samples are protected by a secure access control system.

# **Biobank Series for Large Scale Storage**



# Liquid and Gas Phase

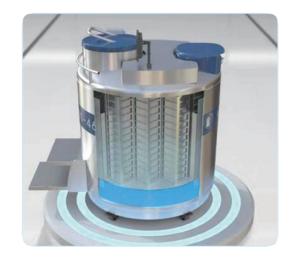
### Liquid Phase



Top of the Container



### Gas Phase



Liquid Feed System



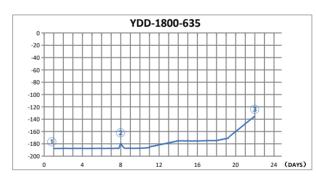
The unique design can reduce the amount of water vapor solidification on the outer surface of the neck, the container is reinforced at liquid nitrogen temperature to extend the physical service life of the container.



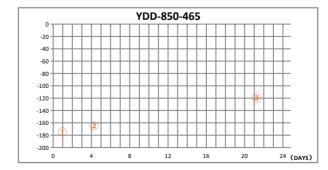
The large-caliber stainless steel liquid nitrogen biological container is matched with a self-pressurizing replenishment tank, which is suitable for scientific research institutions with a small sample storage capacity.



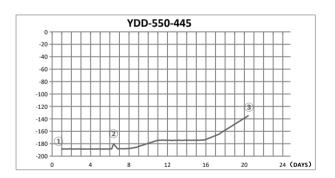
# **Temperature Test Graph**



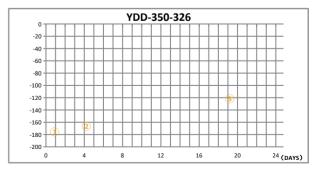
- ① Precooling stage when freezer filled to high level
- ② Lid open test, -179.2°C max
- 3With no liquid nitrogen supply, the temperature maintained below -135°C for 22 days



- 1) Precooling stage when freezer filled to high level
- 2 Lid open test, -179.4°C max
- With no liquid nitrogen supply, the temperature maintained below -135°C for 21 days



- $\ensuremath{\textcircled{1}}$  Precooling stage when freezer filled to high level
- ② Lid open test, -180.2°C max
- With no liquid nitrogen supply, the temperature maintained below -135°C for 20 days



- ① Precooling stage when freezer filled to high level
- 2 Lid open test, -181.4°C max
- ③ With no liquid nitrogen supply, the temperature maintained below -135°C for 19 days

 $Temp\ Test\ indicates\ typical\ performance\ of\ Haier\ Biobank\ freezer\ with\ factory\ recommended\ level\ settings.\ Actual\ performance\ may\ vary\ with\ atmospheric\ conditions\ and\ usage.$ 

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Haier Biomedical Liquid Nitrogen Storage Solutions

# **Biobank Series for Large Scale Storage**















Model	YDD-350-326/PM	YDD-370-326/PM	YDD-450-326/PT	YDD-550-445/PM	YDD-750-445/PM				
2ml Volume	13K	16K	21K	27K	38K				
Maximum Storage Capacity									
2 ml Vials (Internal Thread)	13000	15600	21000	27000	37800				
Freeze Rack (100 wells)	12	12	12	24	24				
Freeze Rack (25 wells)	4	4	8	12	12				
Layers of each Rack	10	12	15	10	14				
5 ml Vials (Internal Thread)	5360	6432	10548	11220	17952				
Freeze Rack (81 wells)	12	12	12	24	24				
Freeze Rack (25 wells)	4	4	8	12	12				
Layers of each Rack	5	6	9	5	8				
Performance		'							
Volume of LN <sub>2</sub> (L)	350	370	480	587	783				
Volume of LN <sub>2</sub> under the Tray (L)	55	55	55	80	80				
Dimensions									
Inside Neck Diameter (mm)	326	326	326	445	445				
Effective Internal Height (mm)	600	704	900	600	828				
Height (mm)	1263	1370	1570	1266	1486				
Operating Height (mm)	1263	1096	1060	1266	995				
Outside Diameter (mm)	875	875	875	1104	1104				
Door Width Requirement (mm)	895	895	895	1124	1124				
Empty Weight (kg)	245	283	308	328	372				
Full Weight (kg)	528	582	696	802	1005				
Shipping Weight (kg)	384	536	501	520	616				

# Blood bag capacity

Model	YDD-350-326/PM			YDD-370-326/PM		YDD-450-326/PT		YDD-550-445/PM			YDD-750-445/PM				
Bag Specifications	Total No.of Bags	Rack Layers	No.of Racks	Total No.of Bags	Rack Layers										
25ml (791 OS/U)	1176	6	196	1372	7	196	1602	9	178	2208	6	368	2944	8	368
50ml (4R9951)	720	6	120	840	7	120	990	9	110	1392	6	232	1856	8	232
250ml (4R9953)	264	3	88	352	4	88	450	5	90	516	3	172	860	5	172
500ml (DF-200)	168	3	56	168	3	56	270	5	54	336	3	112	560	5	112
500ml (4R9955)	144	3	48	192	4	48	370	5	74	288	3	96	480	5	96
700ml (DF - 700)	96	3	32	96	3	32	260	5	52	204	3	68	272	4	68











# **Technical Parameters**

Model	YDD-850-465/PM	YDD-1000-465/PT	YDD-1300-635/PM	YDD-1600-635/PM	YDD-1800-635/PT	
2ml Volume	43K	51K	59K	76K	95K	
Maximum Storage Capac	ity					
2 ml Vials (Internal Thread)	42900	51000	58500	76050	94875	
Freeze Rack (100 wells)	32	30	54	54	60	
Freeze Rack (25 wells)	4	16	18	18	13	
Layers of each Rack	13	15	10	13	15	
5 ml Vials (Internal Thread)	18844	25470	28944	33768	46665	
Freeze Rack (81 wells)	32	30	54	54	60	
Freeze Rack (25 wells)	4	16	18	18	13	
Layers of each Rack	7	9	6	7	9	
Performance						
Volume of LN₂ (L)	890	1014	1340	1660	1880	
Volume of LN₂ under the Tray (L)	135	135	265	300	320	
Dimensions						
Inside Neck Diameter (mm)	465	465	635	635	635	
Effective Internal Height (mm)	773	900	620	791	900	
Height (mm)	1499	1619	1341	1534	1661	
Operating Height (mm)	980	1090	997	967	1097	
Outside Diameter (mm)	1190	1190	1565	1565	1565	
Door Width Requirement (mm)	1210	1210	1585	1585	1585	
Empty Weight (kg)	441	495	851	914	985	
Full Weight (kg)	1160	1314	1934	2255	2504	
Shipping Weight (kg)	702	926	1168	1426	1520	

# Blood bag capacity

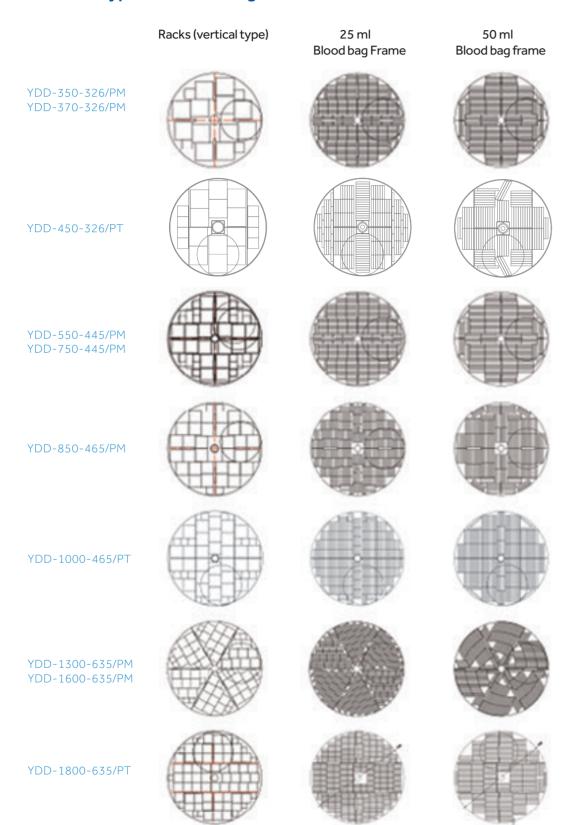
Model	YDD-850-465/PM			YDD-1000-465/PT		YDD-1300-635/PM		YDD-1600-635/PM			YDD-1800-635/PT				
Bag Specifications	Total No.of Bags	Rack Layers	No.of Racks	Total No.of Bags	Rack Layers	No.of Racks	Total No.of Bags	Rack Layers	No.of Racks	Total No.of Bags	Rack Layers	No.of Racks	Total No.of Bags	Rack Layers	No.of Racks
25ml (791 OS/U)	2996	7	428	3852	9	428	4536	6	756	5292	7	756	7218	9	802
50ml (4R9951)	1904	7	272	2394	9	266	2808	6	468	3276	7	468	4446	9	494
250ml (4R9953)	832	4	208	1020	5	204	1062	3	354	1770	5	354	1940	5	388
500ml (DF-200)	544	4	136	670	5	134	666	3	222	888	4	222	1290	5	258
500ml (4R9955)	464	4	116	520	5	104	594	3	198	792	4	198	1090	5	218
700ml (DF - 700)	320	4	80	400	5	80	396	3	132	528	4	132	775	5	155

# uid Nitrogen Storage Solutions

# **Biobank Series for Large Scale Storage**

405/406

# Racks (vertical type) and Blood bag Frame

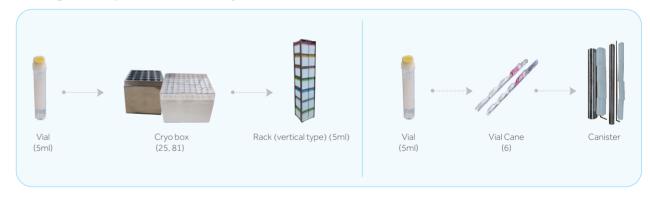


# **Biological Sample Bank-YDD Series**

# Storage Example of 2ml Internally Threaded Vial



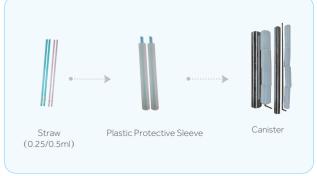
# Storage Example of Tall 5ml Cryovials



# **Blood Bag Storage Example**



# Straw Storage Example



**Haier** Biomedical

# — Liquid Nitrogen Storage Solutions

# Biobank Series for Large Scale Storage

# 407/408

# **Product List**

Model	Product	Product Model	Factory Code	Description and Accessories
	Biobank freezer (smart type)	YDD-350-326/PM	YDD-350-326 /PM-K82J2H	Includes vacuum isolated hose (GRG-DN10/2.0), 4pcs of 10-tier rack (5*5), 12 pcs of 10-tier rack (9*9), 40pcs of cryo boxes for 2ml vial (9*9), 1 set of cryosmart (level monitoring system)
	Biobank freezer	YDD-350-326/PM	YDD-350-326/PM-W	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-10	FDCJ-25-10	Used for storing 5*5 cryoboxes (2ml), ten layers in total, suitable for YDD-350/550/1300 (excluding cryoboxes)
YDD-350-326/ PM (13K)	Rack (vertical type)	FDCJ-81-10	FDCJ-81-10	Used for storing 9*9 cryoboxes (2ml), Ten layers in total, Suitable for YDD-350/550/1300 (excluding cryoboxes)
	Plastic cryo box	FH-25	FH-25	Used for storing 1.8ml/2ml vial (25 holes)
	Plastic cryo box	FH-81	FH-81	Used for storing 1.8ml/2ml vial (81 holes)
	Plastic cryo box	FH-100	FH-100	Used for storing 1.8ml/2ml vial (interally threaded, 100 holes)
	Cryosmart level monitoring system	ITC-800N-201	ITC-800N-201	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
	Biobank freezer (smart type)	YDD-370-326/PM	YDD-370-326 /PM-K82J2H	Includes vacuum isolated hose (GRG-DN10/2.0), 4pcs of 12-tier rack (5*5), 12 pcs of 12-tier rack (9*9), 48pcs of cryo boxes for 2ml vial (5*5), 144pcs of cryo boxes for 2ml vial (9*9), 1 set of cryosmart (level monitoring system)
	Biobank freezer	YDD-370-326/PM	YDD-370-326/PM-W	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-12	FDCJ-25-12	Used for storing 5*5 cryoboxes (2ml), Twelve layers in total, suitable for YDD-370 (excluding cryoboxes)
YDD-370-326/ PM (16K)	Rack (vertical type)	FDCJ-81-12	FDCJ-81-12	Used for storing 9*9 cryoboxes (2ml), Twelve layers in total, suitable for YDD-370 (excluding cryoboxes)
	Plastic cryo box	FH-25	FH-25	Used for storing 1.8ml/2ml vial (25 holes)
	Plastic cryo box	FH-81	FH-81	Used for storing 1.8ml/2ml vial (81 holes)
	Plastic cryo box	FH-100	FH-100	Used for storing 1.8ml/2ml vial (interally threaded, 100 holes)
	Cryosmart level monitoring system	ITC-800N-201	ITC-800N-201	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
	Biobank freezer (smart type)	YDD-450-326/PT	YDD-450-326 /PT-K82J2H	Includes vacuum isolated hose (GRG-DN10/2.0), 8pcs of 15-tier rack (5*5), 12 pcs of 15-tier rack (9*9), 120pcs of cryo boxes for 2ml vial (5*5), 180pcs of cryo boxes for 2ml vial (9*9), 1 set of cryosmart (level monitoring system)
	Biobank freezer	YDD-450-326/PT	YDD-450-326/PT-W	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-15	FDCJ-25-15	Used for storing 5*5 cryoboxes (2ml), Fifteen layers in total, suitable for YDD-450/1000/1800 (excluding cryoboxes)
YDD-450-326/ PT (21K)	Rack (vertical type)	FDCJ-81-15	FDCJ-81-15	Used for storing 9*9 cryoboxes (2ml), Fifteen layers in total, suitable for YDD-450/1000/1800 (excluding cryoboxes)
	Plastic cryo box	FH-25	FH-25	Used for storing 1.8ml/2ml vial (25 holes)
	Plastic cryo box	FH-81	FH-81	Used for storing1.8ml/2ml vial (81 holes)
	Plastic cryo box	FH-100	FH-100	Used for storing 1.8ml/2ml vial (interally threaded, 100 holes)
	Cryosmart level monitoring system	ITC-800N-201	ITC-800N-201	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module

# **Product List**

Model	Product	Product Model	Factory Code	Description and Accessories
	Biobank freezer (smart type)	YDD-550-445/PM	YDD-550-445 /PM-K82J2H	Includes vacuum isolated hose (GRG-DN10/2.0), 12pcs of 10-tier rack (5*5), 24 pcs of 10-tier rack (9*9), 120pcs of cryo boxes for 2ml vial (5*5), 240pcs of cryo boxes for 2ml vial (3*9), 1 set of cryosmart (level monitoring system)
	Biobank freezer	YDD-550-445/PM	YDD-550-445/PM-W	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-10	FDCJ-25-10	Used for storing 5*5 cryoboxes (2ml), ten layers in total, suitable for YDD-350/550/1300 (excluding cryoboxes)
YDD-550-445/PM (27K)	Rack (vertical type)	FDCJ-81-10	FDCJ-81-10	Used for storing 9*9 cryoboxes (2ml), Ten layers in total, Suitable for YDD-350/550/1300 (excluding cryoboxes)
	Plastic cryo box	FH-25	FH-25	Used for storing 1.8ml/2ml vial (25 holes)
	Plastic cryo box	FH-81	FH-81	Used for storing1.8ml/2ml vial (81 holes)
	Plastic cryo box	FH-100	FH-100	Used for storing 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart level monitoring system	ITC-800N-201	ITC-800N-201	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
	Biobank freezer (smart type)	YDD-750-445/PM	YDD-750-445 /PM-K82J2H	Includes vacuum isolated hose (GRG-DN10/2.0), 12pcs of 14-tier rack (5*5), 24 pcs of 14-tier rack (9*9), 168pcs of cryo boxes for 2ml vial (5*5), 336pcs of cryo boxes for 2ml vial (9*9), 1 set of cryosmart (level monitoring system)
	Biobank freezer	YDD-750-445/PM	YDD-750-445/PM-W	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-14	FDCJ-25-14	Used for storing 5*5 cryoboxes (2ml), Fourteen layers in total, suitable for YDD-450/750 (excluding cryoboxes)
YDD-750-445/PM (38K)	Rack (vertical type)	FDCJ-81-14	FDCJ-81-14	Used for storing 9*9 cryoboxes (2ml), Fourteen layers in total, suitable for YDD-450/750 (excluding cryoboxes)
	Plastic cryo box	FH-25	FH-25	Used for storing 1.8ml/2ml vial (25 holes)
	Plastic cryo box	FH-81	FH-81	Used for storing1.8ml/2ml vial (81 holes)
	Plastic cryo box	FH-100	FH-100	Used for storing 1.8ml/2ml vial (interally threaded, 100 holes)
	Cryosmart level monitoring system	ITC-800N-201	ITC-800N-201	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
	Biobank freezer (Smart type)	YDD-850-465/PM	YDD-850-465 /PM-K82J2H	Includes vacuum isolated hose (GRG-DN10/2.0), 4 pcs of 13-tier rack (5*5), 32 pcs of 13-tier rack (9*9), 52pcs of cryo boxes (5*5) for 2ml vial, 416pcs of cryo boxes (9*9) for 2ml vial, 1 set of cryosmart (level monitoring system)
	Biobank freezer	YDD-850-465/PM	YDD-850-465/PM-W	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-13	FDCJ-25-13	Used for storing 5*5 cryoboxes (2ml), Thirteen layers in total, suitable for YDD-850/1600 (excluding cryoboxes)
YDD-850-465/PM (43K)	Rack (vertical type)	FDCJ-81-13	FDCJ-81-13	Used for storing 9*9 cryoboxes (2ml), Thirteen layers in total, suitable for YDD-850/1600 (excluding cryoboxes)
	Plastic cryo box	FH-25	FH-25	Used for storing 1.8ml/2ml vial (25 holes)
	Plastic cryo box	FH-81	FH-81	Used for storing 1.8ml/2ml vial (81 holes)
	Plastic cryo box	FH-100	FH-100	Used for storing 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart level monitoring system	ITC-800N-201	ITC-800N-201	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module

# Biobank Series for Large Scale Storage

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# **Product List**

Model	Product	Product Model	Factory Code	Description and Accessories
	Biobank freezer (Smart type)	YDD-1000-465/PT	YDD-1000-465 /PT-K82J2H	Includes vacuum isolated hose (GRG-DN10/2.0), 16 pcs of 15-tier rack (5*5), 30 pcs of 15-tier rack (9*9), 240pcs of cryo boxes (5*5) for 2ml vial, 450pcs of cryo boxes (9*9) for 2ml vial, 1 set of cryosmart (level monitoring system)
	Biobank freezer	YDD-1000-465/PT	YDD-1000-465/PT-W	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-15	FDCJ-25-15	Used for storing 5*5 cryoboxes (2ml), Fifteen layers in total, suitable for YDD-450/1000/1800 (excluding cryoboxes)
YDD-1000-465/PT (51K)	Rack (vertical type)	FDCJ-81-15	FDCJ-81-15	Used for storing 9*9 cryoboxes (2ml), Fifteen layers in total, suitable for YDD-450/1000/1800 (excluding cryoboxes)
	Plastic cryo box	FH-25	FH-25	Used for storing 1.8ml/2ml vial (25 holes)
	Plastic cryo box	FH-81	FH-81	Used for storing 1.8ml/2ml vial (81 holes)
	Plastic cryo box	FH-100	FH-100	Used for storing 1.8ml/2ml vial (interally threaded, 100 holes)
	Cryosmart level monitoring system	ITC-800N-201	ITC-800N-201	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
	Biobank freezer (Smart type)	YDD-1300-635/PM	YDD-1300-635 /PM-K82J2H	Includes vacuum isolated hose (GRG-DN10/2.0), 120 pcs of round rack, 240 pcs of $\phi$ 97mm canister (2 goblets included for each), 1 set of cryosmart (level monitoring system)
	Biobank freezer	YDD-1300-635/PM	YDD-1300-635 /PM-W	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-10	FDCJ-25-10	Used for storing 5*5 cryoboxes (2ml), ten layers in total, suitable for YDD-350/550/1300 (excluding cryoboxes)
YDD-1300-635/ PM (59K)	Rack (vertical type)	FDCJ-81-10	FDCJ-81-10	Used for storing 9*9 cryoboxes (2ml), Ten layers in total, Suitable for YDD-350/550/1300 (excluding cryoboxes)
111(331)	Plastic cryo box	FH-25	FH-25	Used for storing 1.8ml/2ml vial (25 holes)
	Plastic cryo box	FH-81	FH-81	Used for storing 1.8ml/2ml vial (81 holes)
	Plastic cryo box	FH-100	FH-100	Used for storing 1.8ml/2ml vial (interally threaded, 100 holes)
	Cryosmart level monitoring system	ITC-800N-201	ITC-800N-201	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
	Biobank freezer (Smart type)	YDD-1600-635/PM	YDD-1600-635 /PM-K82J2H	Includes vacuum isolated hose (GRG-DN10/2.0), 468pcs of 7-tier blood bag rack for 50ml, 3276pcs of 50ml blood bag cryo box (4R9951), 1 set of cryosmart (level monitoring system)
	Biobank freezer	YDD-1600-635/PM	YDD-1600-635 /PM-W	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-13	FDCJ-25-13	Used for storing 5*5 cryoboxes (2ml), Thirteen layers in total, suitable for YDD-850/1600 (excluding cryoboxes)
YDD-1600-635/ PM (76K)	Rack (vertical type)	FDCJ-81-13	FDCJ-81-13	Used for storing 9*9 cryoboxes (2ml), Thirteen layers in total, suitable for YDD-850/1600 (excluding cryoboxes)
	Plastic cryo box	FH-25	FH-25	Used for storing 1.8ml/2ml vial (25 holes)
	Plastic cryo box	FH-81	FH-81	Used for storing 1.8ml/2ml vial (81 holes)
	Plastic cryo box	FH-100	FH-100	Used for storing 1.8ml/2ml vial (interally threaded, 100 holes)
	Cryosmart level monitoring system	ITC-800N-201	ITC-800N-201	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module

Model	Product	Product Model	Factory Code	Description and Accessories
	Biobank freezer (Smart type)	YDD-1800-635/PT	YDD-1800-635 /PT-K82J2H	Includes vacuum isolated hose (GRG-DN10/2.0), 13 pcs of 15-tier rack (5*5), 60 pcs of 15-tier rack (9*9), 195pcs of cryo boxes (5*5) for 2ml vial, 900pcs of cryo boxes (9*9) for 2ml vial, 1 set of cryosmart (level monitoring system)
	Biobank freezer	YDD-1800-635/PT	YDD-1800-635/PT-W	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-15	FDCJ-25-15	Used for storing 5*5 cryoboxes (2ml), Fifteen layers in total, suitable for YDD-450/1000/1800 (excluding cryoboxes)
YDD-1800-635/ PT (95K)	Rack (vertical type)	FDCJ-81-15	FDCJ-81-15	Used for storing 9*9 cryoboxes (2ml), Fifteen layers in total, suitable for YDD-450/1000/1800 (excluding cryoboxes)
	Plastic cryo box	FH-25	FH-25	Used for storing 1.8ml/2ml vial (25 holes)
	Plastic cryo box	FH-81	FH-81	Used for storing 1.8ml/2ml vial (81 holes)
	Plastic cryo box	FH-100	FH-100	Used for storing 1.8ml/2ml vial (interally threaded, 100 holes)
	Cryosmart level monitoring system	ITC-800N-201	ITC-800N-201	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
	Blood bag frame	DCJ-250-3H	DCJ-250-3H	3 layers frame used for storing 250ml blood bag, each layer storing one blood bag, with blood bag cassettes included. Suitable for YDD-350/550/1300
	Blood bag frame	DCJ-250-4H	DCJ-250-4H	4 layers frame used for storing 250ml blood bag, each layer storing one blood bag, with blood bag cassettes included. Suitable for YDD-850
	Blood bag frame	DCJ-250-5H	DCJ-250-5H	5 layers frame used for storing 250ml blood bag, each layer storing one blood bag, with blood bag cassettes included. Suitable for YDD-450/750/1000/1800
	Blood bag frame	DCJ-25-6H	DCJ-25-6H	6 layers frame used for storing 25ml blood bag, each layer storing one blood bag, with blood bag cassettes included. suitable for YDD-350/550/1300
	Blood bag frame	DCJ-25-7H	DCJ-25-7H	7 layers frame used for storing 25ml blood bag, each layer storing one blood bag, with blood bag cassettes included, suitable for YDD-850/1600
	Blood bag frame	DCJ-25-8H	DCJ-25-8H	8 layers frame used for storing 25ml blood bag, each layer storing one blood bag, with blood bag cassettes included. suitable for YDD-450/750
	Blood bag frame	DCJ-25-9H	DCJ-25-9H	9 layers frame used for storing 25ml blood bag, each layer storing one blood bag, with blood bag cassettes included. suitable for YDD-1000/1800
	Blood bag frame	DCJ-50-6H	DCJ-50-6H	6 layers frame used for storing 50ml blood bag, each layer storing one blood bag, with blood bag cassettes included. suitable for YDD-350/550/1300
	Blood bag frame	DCJ-50-7H	DCJ-50-7H	7 layers frame used for storing 50ml blood bag, each layer storing one blood bag, with blood bag cassettes included, suitable for YDD-850/1600
	Blood bag frame	DCJ-50-8H	DCJ-50-8H	8 layers frame used for storing 50ml blood bag, each layer storing one blood bag, with blood bag cassettes included. suitable for YDD-450/750
Other Racks	Blood bag frame	DCJ-50-9H	DCJ-50-9H	9 layers frame used for storing 50ml blood bag, each layer storing one blood bag, with blood bag cassettes included. suitable for YDD-1000/1800
	Rack (vertical type)	FDCJ-25-5/5.0	FDCJ-25-5/5.0	Used for storing 5*5 cryoboxes (5ml), five layers in total, suitable for YDD-350/550/1300 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-25-7/5.0	FDCJ-25-7/5.0	Used for storing 5*5 cryoboxes (5ml), seven layers in total, suitable for YDD-450/750/850/1600 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-25-9/5.0	FDCJ-25-9/5.0	Used for storing 5*5 cryoboxes (5ml), nine layers in total, suitable for YDD-1000/1800 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-5/5.0	FDCJ-81-5/5.0	Used for storing 9*9 cryoboxes (5ml), Five layers in total, suitable for YDD-350/550 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-6/5.0	FDCJ-81-6/5.0	Used for storing 9*9 cryo boxes (5ml), 7 layers in total, suitable for YDD-370/1300 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-7/5.0	FDCJ-81-7/5.0	Used for storing 9*9 cryoboxes (5ml), Seven layers in total, suitable for YDD-850/1600 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-9/5.0	FDCJ-81-9/5.0	Used for storing 9*9 cryoboxes (5ml), nine layers in total, suitable for YDD-450/750/1000/1800 (excluding cryoboxes)
	Rack (vertical type)	XDCJ-8-12	XDCJ-8-12	Used for storing 8 holes aluminium cryoboxes (2ml), Twelve layers in total, with aluminium cryoboxes included. suitable for YDD-450/750/850/1600
	Rack (vertical type)	XDCJ-8-9	XDCJ-8-9	Used for storing 8 holes aluminium cryoboxes (2ml), Nine layers in total, with aluminium cryoboxes included, suitable for YDD-350/550/1300
	Round Rack	YDCJ-97-2	YDCJ-97-2	With 2 stainless steel canisters (q97/276mm), 4 plastic goblets SNT-97 and 2 pick up lifter for goblets in total, the storage capacity for 0.5ml straw is 3016, suitable for YDD-350\YDD-550\YDD-1300

# **Biobank Series Liquid Nitrogen Container**

It is suitable for scientific research institutes, electronic, chemical and pharmaceutical enterprises, laborat ries, blood stations, hospitals, disease control centers and other related institutions. It is ideal storage equipment for storing cord blood, tissue cells, biomaterials and so on to keep the activity of cell samples.

#### •Ten-inch LCD touch screen

10-inch LCD touch screen, easy to operate. The storage life of charts and digital data records is up to 5 years.

#### Safe and secure

Cryosmart Level Monitoring System ZJY-800N support fingerprint, NFC clocking-in function, providing multiple safeguards for sample safety.

#### •Innovative frost-free design

Unique exhaust structure to avoid frost on the neck. Brand-new drainage structure to avoid indoor ground water accumulation.

#### Auto-fill function

Manual and automatic liquid nitrogen filling modes available. With hot gas bypass function, the unit effectively reduces the temperature fluctuation in the tank when liquid nitrogen is filled, improving sample security.



#### **Ergonomic Design**

#### Designed for both liquid and vapor phase storages

Vapour phase storage can reach -190°C

#### Real-time run monitoring for sample protection

Real-time level, temperature monitoring Remote alarm can also be made through APP, SMS, email, etc

#### User-friendly design

Ergonomic armrest structure

Universal casters, easy to move, and equipped with brakes

The newly designed one-button pedal and hydraulic opening cover makes it easier to pick and place samples

#### **Product Parameters**

Model	2ml Vials (Internal Thread)	Freeze Rack (100 Wells)			5ml Vials (Internal Thread)	Freeze Rack (81 Wells)		Layers of Each Rack	Volume of LN₂ (L)
CryoBio 13	13000	12	4	10	5360	12	4	5	350

Volume of LN <sub>2</sub> Under the tray (L)	Operating Height (mm)	Usable Internal Height (mm)	Inside Neck Diameter (mm)	Height (mm)	Outside Diameter (mm)	Door Width Requirements (mm)	Empty Weight (kg)	Full Weight (kg)
55	990	600	326	1505	910	930	269	552

Model	Product	Product Model	Factory code	Description and Accessories
	Biobank Freezer (Smart type)	CryoBio 13	CryoBio 13-J2H	Includes vacuum isolated hose (GRG-DN10/2.0), 4 pcs of 10-tier rack (5*5), 12 pcs of 10-tier rack (9*9), 40pcs of cryo boxes (5*5) for 2ml vial, 120pcs of cryo boxes (9*9) for 2ml vial, 1 set of cryosmart (level monitoring system)
	Biobank freezer	CryoBio 13	CryoBio 13-W	Includes vacuum isolated hose (GRG-DN10/2.0) and 1 set of cryosmart (level monitoring system)
	Rack (vertical type)	FDCJ-25-10	FDCJ-25-10	Used for storing 5*5 cryoboxes (2ml), ten layers in total, suitable for YDD-350/550/1300 (excluding cryoboxes)
CryoBio 13 (13k)	Rack (vertical type)	FDCJ-81-10	FDCJ-81-10	Used for storing 9*9 cryoboxes (2ml), ten layers in total, Suitable for YDD-350/550/1300 (excluding cryoboxes)
	Plastic cryo box	FH-25	FH-25	Used for storing 1.8ml/2ml vial (25 holes)
	Plastic cryo box	FH-81	FH-81	Used for storing1.8ml/2ml vial (81 holes)
	Plastic cryo box	FH-100	FH-100	Used for storing 1.8ml/2ml vial (interally threaded,100 holes)

# **Biobank Series Liquid Nitrogen Container**

It is suitable for scientific research institutes, electronic, chemical and pharmaceutical enterprises, laboratories, blood stations, hospitals, disease control centers and other related institutions. It is ideal storage equipment for storing cord blood, tissue cells, biomaterials and so on to keep the activity of cell samples.

#### •Innovative frost-free design

Unique exhaust structure to avoid frost on the neck. Brand-new drainage structure to avoid indoor ground water accumulation.

#### •Stable performance, long service life

The design life is as long as 30 years, with the inside manufactured with specialized materials and structures to ensure the temperature in the tank is stable.

#### Auto-fill function

Manual and automatic liquid nitrogen filling modes available. With hot gas bypass function, the unit effectively reduces the temperature fluctuation in the tank when liquid nitrogen is filled, improving sample security.

#### Ten-inch LCD touch screen

10-inch LCD touch screen, easy to operate. The storage life of charts and digital data records is up to 5 years.



#### **Ergonomic Design**

#### Designed for both liquid and vapor phase storages

Vapour phase storage can reach -190°C

#### Real-time run monitoring for sample protection

Real-time level, temperature monitoring Remote alarm can also be made through APP, SMS, email, etc

#### User-friendly design

Ergonomic armrest structure

Universal casters, easy to move, and equipped with brakes

The newly designed one-button pedal and hydraulic opening cover makes it easier to pick and place samples

#### **Product Parameters**

Model	1.2ml/ 1.8ml/ 2ml Vials (Internal Thread)	Freeze Rack (100 Wells)	Freeze Rack (25 Wells)	Layers of Each Rack	Volume of LN2 (L)	Volume of LN₂ Underthe Tray (L)
CryoBio 43	42900	32	4	13	890	135

Operating Height (mm)	Usable Internal Height (mm)	Inside Neck Diameter (mm)	Height (mm)	Outside Diameter (mm)	Empty Weight (kg)	Full Weight (kg)	Door Width Requirements (mm)
1000	773	465	1810	1240	471	1190	1260

Model	Product	Product Model	Factory Code	Description and Accessories				
	Biobank Freezer (Smart type)	CryoBio 43	CryoBio 43-J2H	Includes vacuum isolated hose (GRG-DN10/2.0), 4 pcs of 12-tier rack (5*5), 32 pcs of 12-tier rack (9*9), 52pcs of cryo boxes (5*5)for 2ml vial, 416pcs of cryo boxes (9*9)for 2ml vial, 1 set of cryosmart (level monitoring system				
	Biobank Freezer	CryoBio 43	CryoBio 43-W	Includes vacuum isolated hose (GRG-DN10/2.0), 1 set of cryosmart (level monitoring system)				
	Rack (vertical type)	FDCJ-25-13	FDCJ-25-13	Used for storing 5*5 cryoboxes (2ml), Thirteen layers in total, suitable for YDD-850/1600 (excluding cryoboxes)				
CryoBio 43 (43k)	Rack (vertical type)	FDCJ-81-13	FDCJ-81-13	Used for storing 9*9 cryoboxes (2ml), Thirteen layers in total, suitable for YDD-850/1600 (excluding cryoboxes)				
	Plastic cryo box	FH-25	FH-25	Used for storing 1.8ml/2ml vial(25 holes)				
	Plastic cryo box	FH-81	FH-81	Used for storing1.8ml/2ml vial(81 holes)				
	Plastic cryo box	FH-100	FH-100	Used for storing 1.8ml/2ml vial (interally threaded,100 holes)				

# Low Temperature Transport Trolley YDC-3000H

#### **Mobile Cryogenic Transfer Operation Platform**

The unit can be used to preserve plasma and biomaterials during transportation. It is suitable for deep hypothermia operation and transportation of samples in hospitals, various biobanks and laboratories. High quality stainless steel in combination with the thermal insulation layer ensures the effectiveness and durability of the low temperature transport trolley.





## **Product Advantages**

#### **Touch Screen**

LCD touch operation

#### **USB Data Export**

It has its own USB interface and supports USB data export.

#### Real Time Monitoring

The instrument monitors the temperature and liquid level in real time and displays the expected remaining service time. Continuous working hours up to 24 hours.







# **User Friendly Design**



#### Appearance Spray

The appearance of spray, not easily affected by stains.



#### Caster Design

Integrated design, universal caster at the bottom,



#### Polymer Materials

The new type of environmentally-friendly polymer material is used inside the cover plate, which is more appealing, more environment-friendly and more advanced than the commonly used pearl foam and polyurethane materials.



#### The Insulation Cover can be Magnet Absorbed

The insulation cover can be magnet absorbed to the side of vehicle, which is convenient to extract, and the space reserved at the bottom can be used to store other tools.

#### **Technical Parameters**

Product Model							Maxi	mum Storage		
	Dimensions (L*W*H)(mm)	Frozen Storage Space (L*W*H)(mm)	(L*W*H)(mm)	Liquid Nitrogen Under Tray (L)	Empty Weight (kg)	5*5 Freezing Boxes (ea)	10*10 Freezing Boxes (ea)	50ml Blood Bag Boxes (ea)	200ml Blood Bag Boxes (ea)	2ml Cryopreservation Tube (ea)
YDC-3000H	1295*523*1095	960*335*163	950*440*220	33	150	65	30	105	50	3000

# **Cryovial Transfer Flask BioT Air**

BioT Air is suitable for small batch and short distance sample transportation in experimental units or hospitals. Lightweight, portable design, easy to easy to take.

#### Lightweight design

Lightweight design, the total empty weight is only 2.8KG.

#### Multi-specification compatibilit

Compatible with 1.2ml, 1.5ml, 1.8ml, 2.0ml and 5.0ml sample cryopreservation tubes, and can also hold a 5\*5-2ML cryopreservation box.

#### •High thermal insulation performance

Vacuum structure ensures the working temperature in the tank-135°C~-196°C, and the ultra-long low-temperature storage period.

#### No liquid nitrogen overflow

There is a liquid nitrogen adsorption layer at the bottom, and even if the container is dumped during dry storage, there will be no liquid nitrogen overflow, thus ensuring the safety of samples and personnel.



#### **Humanization Design**

#### Condensate water inflow prevention structure

The specially designed upper cover can prevent condensate from flowing into the container and ensure the container cover to open smoothly.



#### Liquid nitrogen splash prevention structure

Ensure that liquid nitrogen is not sprayed during transportation after the container is filled with liquid nitrogen, and it is safe to use



#### Ultra-low temperature adsorption function

It is specially equipped with liquid nitrogen adsorption layer, and under special circumstances, the container pours liquid nitrogen out, which can also ensure the low temperature environment in a certain period of time and ensure the safety of samples.



#### **Product Parameters**

O.D. (mm)	I.D. (mm)		Height (mm)	Total Empty Weight of Tank (Kg)	Liquid Nitrogen Volume (L)	Storage Time of Liquid Phase (h)	Storage Time of Gas Phase (h)	Internal Freezing Tube Capacity (2ml)(pcs)	Working Temperature (°C)	Working Environment (°C)
156	125	190	235	2.8	2	8	6	55	-135~-196	-20~40

# **Cryovial Transfer Flask Bio-2T**

Bio-2T is suitable for short-distance sample transportation in small batches in experimental units or hospitals. Lightweight, portable design, easy to take

#### •Lightweight design

Lightweight design of the product, the total empty weight is only 3kg

#### •Temperature visualization

Visual real-time temperature monitoring, and the instrument part is dustproof and waterproof

#### •Multi-specification compatibility

Compatible with 1.2m, 1.5m, 1.8m, 2.0m and 5.0ml sample storage tubes

#### •High thermal insulation performance

Vacuum structure, thickened thermal insulation material, ensuring the working temperature in the tank -135°C~-196°C, and ultra-long low-temperature storage period



#### **Humanization Design**

#### Condensate water inflow prevention structure

The specially designed upper cover can prevent condensate from flowing into the container and ensure the container cover to open smoothly.



#### Liquid nitrogen splash prevention structure

Ensure that liquid nitrogen is not sprayed during transportation after the container is filled with liquid nitrogen, and it is safe to use



#### No liquid nitrogen overflow

With liquid nitrogen adsorption layer at the bottom, even if the container falls down during dry storage, there will be no liquid nitrogen overflow, which ensures the safety of samples and personnel.



#### **Product Parameters**

O.D. (mm)	I.D. (mm)	Depth (mm)	Height (mm)	Total Empty Weight of Tank (Kg)	Liquid Nitrogen Volume (L)	Storage Time of Liquid Phase (h)	Phase (h)	Internal Freezing Tube Capacity (2ml)(pcs)	Working Temperature (°C)	Working Environment (°C)
156	125	190	1100	3	2	8	6	54	-135~-196	20~40

# Intelligent Liquid Nitrogen Biological Container

It is suitable for the deep and low temperature storage of plasma, cell tissues and various biological samples in hospitals, laboratories, scientific research institutes, disease control centers, various databases and other places.

#### Easier access

With the full opening design on the top of product and hydraulic uncapping, it saves energy and is easier for storing and taking sample.

#### •Brand new intelligent monitoring system

It's equipped with the brand-new intelligent monitoring system and matched with IoT module which can connect with the Haier's big data cloud platform to realize the remote data transmission. Integrating three screens, it can realize the remote alarm via APP, e-mail and other ways.

#### Reduce frosting and freezing

The brand-new cover and interlayer exhaust structure can effectively reduce the frosting and freezing at exhaust port.

#### **Personalized Design**

#### Safe

24V DC voltage makes electricity safer.

Double lock and double control design, the sample storage is safer.

The liquid nitrogen filter can effectively reduce impurities and prolong the service life of the whole machine.

#### Convenient

With USB interface, it supports data export.

Bottom caster, easy to move, with adjustable back brake, easy to fix and stabilize.

With larger battery capacity, it can still be used after power failure.

#### Experience Feeling

Haier's family-style design is more three-dimensional and beautiful.

The advantage of operating screen position effectively reduces the influence of opening low temperature and improves the stability.

The advantage of operatinLCD touch screen, integrated design, not easy to dust.g screen position effectively reduces the influence of opening low temperature and improves the stability.



#### **Product Parameters**

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Model	CryoE	Bio 11Z	CryoBio	20Z	CryoBio 34Z		
	Vapor Phase	Liquid Phase	Vapor Phase	Liquid Phase	Vapor Phase	Liquid Phase	
1.2ml, 1.8m, 2ml Vials (Internal Thread)	11000	13000	20350	24050	33550	42900	
5*5Rack (vertical type)	-	-	10	10	10	8	
10*10Rack (vertical type)	10	10	16	16	28	31	
5*5Freezer Box	-	-	110	130	110	104	
10*10Freezer Box	110	130	176	208	308	403	
Layers of Vertical Type Rack	11	13	11	13	11	13	
Volume of LN (L)	200		34	40	5.	50	
Exterior Dimensions (W*D*H)(mm)	1035*730*1190		1170*910*1190		1410*1100*1190		
Usable Internal Height (mm)	7:	90	790		790		
Static Evapouration (L/Day)		7	1	0	12		
Empty Weight (kg)	2	09	30	1.5	400		
Inside Neck Diameter (mm)	610		790		1000		
Full Weight (kg)	357		54	543		821	

Model	Product	Product Model	Factory Code	Description and Accessories
	Zhiling Liquid Nitrogen Container (Smart type)	CryoBio 11Z	CryoBio 11Z-J2H	Includes vacuum isolated hose (GRG-DN10/2.0), 1 set of cryosmart (level monitoring system), 10pcs of 11-tier rack (9*9), 110pcs of cryo boxes (9*9) for 2ml vial
	Zhiling Liquid Nitrogen Container	CryoBio 11Z	CryoBio 11Z-W	Includes vacuum isolated hose (GRG-DN10/2.0) and intelligent monitoring system, rack is optional
CryoBio 11Z (11K)	Rack (vertical type)	FDCJ-81-11	FDCJ-81-11	Used for storing 9*9 cryoboxes (2ml), eleven layers in total, suitable for CryoBio 11Z/CryoBio 20Z/CryoBio 34Z (excluding cryoboxes)
	Plastic cryo box	FH-81	FH-81	Used for storing1.8ml/2ml vial (81 holes)
	Plastic cryo box	FH-100	FH-100	Used for storing 1.8ml/2ml vial (interally threaded,100 holes)
CryoBio 20Z (20K)	Zhiling Liquid Nitrogen Container (Smart type)	CryoBio 20Z	CryoBio 20Z-J2H	Includes vacuum isolated hose (GRG-DN10/2.0), 1 set of cryosmart (level monitoring system), 11 pcs of 11-tier rack (5*5), 16pcs of 11-tier rack (9*9), 110pcs of cryo boxes (5*5) for 2ml vial, 176pcs of cryo boxes (9*9) for 2ml vial
	Zhiling Liquid Nitrogen Container	CryoBio 20Z	CryoBio 20Z-W	Includes vacuum isolated hose (GRG-DN10/2.0) and intelligent monitoring system, rack is option
	Rack (vertical type)	FDCJ-25-11	FDCJ-25-11	Used for storing 5*5 cryoboxes (2ml), eleven layers in total, suitable for CryoBio 11Z/CryoBio 20Z/CryoBio 34Z (excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-11	FDCJ-81-11	Used for storing 9*9 cryoboxes (2ml), eleven layers in total, suitable for CryoBio 11Z/CryoBio 20Z/CryoBio 34Z (excluding cryoboxes)
	Plastic cryo box	FH-25	FH-25	Used for storing 1.8ml/2ml vial (25 holes)
	Plastic cryo box	FH-81	FH-81	Used for storing 1.8 ml/2 ml vial (81 holes)
	Plastic cryo box	FH-100	FH-100	Used for storing 1.8ml/2ml vial (interally threaded,100 holes)
	Zhiling Liquid Nitrogen Container	CryoBio 34Z	CryoBio 34Z-J2H	Includes vacuum isolated hose (GRG-DN10/2.0), 1 set of cryosmart (level monitoring system), 11 pcs of 11-tier rack (5*5), 28pcs of 11-tier rack (9*9), 110pcs of cryo boxes (5*5) for 2ml vial, 308pcs of cryo boxes (9*9) for 2ml vial
	Zhiling Liquid Nitrogen Container (Smart type)	CryoBio 34Z	CryoBio 34Z-W	Includes vacuum isolated hose (GRG-DN10/2.0) and intelligent monitoring system, Rack is option
	Rack (vertical type)	FDCJ-25-11	FDCJ-25-11	Used for storing 5*5 cryoboxes (2ml), eleven layers in total, suitable for CryoBio 11Z/CryoBio 20Z/CryoBio 34Z (excluding cryoboxes)
CryoBio 34Z (34K)	Rack (vertical type)	FDCJ-81-11	FDCJ-81-11	Used for storing 9*9 cryoboxes (2ml), Eleven layers in total, suitable for CryoBio 11Z/CryoBio 20Z/CryoBio 34Z (excluding cryoboxes)
(0)	Plastic cryo box	FH-25	FH-25	Used for storing 1.8ml/2ml vial (25 holes)
	Plastic cryo box	FH-81	FH-81	Used for storing1.8ml/2ml vial (81 holes)
	Plastic cryo box	FH-100	FH-100	Used for storing 1.8ml/2ml vial (interally threaded,100 holes)

Haier Biomedical

#### - Liquid Nitrogen Storage Solutions

# **Smart Series Liquid Nitrogen Container**

This storage vessel minimises the need for and risks associated with manual filling. Applications include the storage of cord blood, stem cells, car-T cells, tissues and other biomaterials within academia, pharma and clinical labs. Stores up to 6,000 2ml cryovials (internally-threaded).

#### Auto fill design

The autofill function can eliminate the need for manual filling and associated health safety risks.

#### Accurate real-time monitoring

Equipped with a brand-new intelligent monitor, it detects and records in real-time both temperature and liquid level, and automatically saves data, including re-fill and alarm notifications for up to 5 years.

#### •Low liquid nitrogen consumption 1.5L/day

Advanced high-vacuum multi-layer heat preservation technology, as well as advanced vacuum acquisition and vacuum maintenance technology, ensure the low consumption of liquid nitrogen in the container and the stability of temperature in the sample freezing space.

The temperature at the top of the freezing rack can reach -190°C, and the average consumption of liquid nitrogen is only 1.5L.



# **Ergonomic Design**

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Designed for both liquid and vapor phase storage

The one-button defogging function makes it easier to find samples

Automatic data saving and USB data (temperature, liquid level, alarm records and otherdata) export are supported

Sealed centralized exhaust system minimises frost build up

A battery-back up as standard, the controller can function for up to 8 hours without mains power

1 year parts warranty; 5 years vacuum warranty

The multi-lock structure makes the sample storage safer

With hot gas bypass function, reduces the temperature fluctuation in the tank when liquid nitrogen is filled, enhancing sample security

A complete data recording system allows users to check the temperature, liquid level, and alarm records at any time

With multiple alarm functions such as high and low temperature, high and low liquid level, and real-time audio/visual alarms

#### **Product Parameters**

Model	Volume of LN <sub>2</sub> (L)	Inside Neck Diameter (mm)	Height (mm)		Empty Weight (kg)
CryoBio 6S	175	216	1490	681	78

Working Evaporation (L/Day)	Static Evaporation (L/Day)	2ml Vials (Internal Thread)	Square Rack	Layers of Square Rack
1.5	0.95	6000	6	10

Model	Product	Product Model	Factory Code	Description and Accessories
	Biobank Freezer	CryoBio 6S	CryoBio 6S-J2H	CryoBio 6S tank, includes 6 racks with 10 layers, 9*9 cryoboxes, lockable cap and controller. No Pu bag. 5 wheels roller base, transfer hose GRG-DN10/2.0 and one tier step are also included.
	Biobank Freezer	CryoBio 6S	CryoBio 6S-W	CryoBio 6S tank, with lockable cap and controller. no pu bag, no racks or cryoboxes. 5 wheels roller base, transfer hose GRG-DN10/2.0 and one tier step are included.
	Rack	FTT-81-10H	FTT-81-10H	Used for storing 9*9 cryo boxes (2ml), 10 layers in total, with 9*9 cryo boxes included, suitable for YDS-175-216, CryoBio 6S
CryoBio 6S	Rack	FTT-81-5/5.0H	FTT-81-5/5.0H	Used for storing 9*9 cryo boxes (5ml), 5 layers in total, with 9*9 cryo boxes included, suitable for YDS-175-216, CryoBio 6S
	Data Repeater	RP-4004G	RP-4004G	Data transmitted to cloud platform through GPRS, with SIM card included, suitable for all YDD products of Haier
	175	One step ladder	175	One tier step, suitable for CryoBio 6S
	Roller Base	YSC-685-5W	YSC-685-5W	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels

# **Smart Series (Square Racks)**

The smart, IoT and cloud management system monitors temperature and liquid levels simultaneously to provide accurate and real-time information on the critical parameters to ensure ultimate sample safety.

- IoT and Cloud Management
- Multiple Level of Protections
- Low Energy Consumption
- Temperature and Level Display

- Updated Design
- High Performance Stability
- New Lock Design



#### **Key Features**

- 5 models from 2,400 to 6,000 cryovial capacity
- 5 years vacuum warranty
- Durable aluminium construction
- Real time monitor of temperature and level
- Cloud data storage for traceability
- Low consumption rate and high performance stability
- New lock design

# **Product Advantages**

# Colour identification for Rack handles

Rack handles are colour-coded for ease of separating storage zones and managing samples.



# Double lock and double control design

The new double lock and double control design requires two people to open at the same time to ensure sample safety.



# Dual monitoring respectively for temperature and liquid level

Storage temperature and liquid level are automatically monitored by a high precision controller.
Accurate and real-time information ensures samples safety.



#### Multilayer protection for ultimate safety

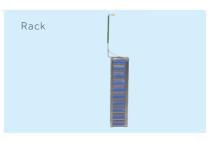
Temperature and level are monitored in real time to safeguard the storage environment. Alarms can be transmitted through email, IM and we hat.

#### Low consumption rate and high performance stability

Automated manufacture ensures build quality and reliable vacuum which delivers stable and uniform temperature performance as well as low LN2 consumption rates.



#### Accessories





# **Smart Series (Square Racks)**

#### **Technical Parameters**

Model	YDS-65-216-FZ	YDS-95-216-FZ	YDS-115-216-FZ	YDS-145-216-FZ	YDS-175-216-FZ					
Maximum Storage Volume	Maximum Storage Volume									
No. of Rack	6	6	6	6	6					
2ml Storage Vials (100/box)	2400	3000	3600	4800	6000					
Layers in Rack	4	5	6	8	10					
5ml Storage Vials (81/box)	_	972	1458	1944	2430					
Layers in Rack	_	2	3	4	5					
Function	Function									
Liquid Nitrogen Volume (L)	65	95	115	145	175					
Static Evapouration Rate* (L/D)	0.78	0.94	0.94	0.94	0.95					
Static Holding Time** (Day)	83	101	122	154	184					
Dimensions										
Neck Opening (mm)	216	216	216	216	216					
Overall Height (mm)	760	825	895	995	1110					
Overall Diameter (mm)	681	681	681	681	681					
Empty Weight (kg)	41	44	48	53	58					
Full Weight (kg)	108	121	141	171	199.5					
Shipping Weight (kg)	65.5	69.2	75.9	85.2	94.5					

<sup>\*</sup> Static evapouration and static holding time are theoretical values. Actual evapouration and holding time are affected by usage, atmospheric conditions and manufacturing tolerances.

#### **Product List**

Model	Product	Product Model	Factory Code	Description and Accessories
YDS-65-216	Smart liquid nitrogen container (smart series)	YDS-65-216	YDS-65-216-FZH	Includes 6 racks (4-tier), cryoboxes (9*9), lockable cap, roller base is optional
YDS-95-216	Smart liquid nitrogen container (smart series)	YDS-95-216	YDS-95-216-FZH	Includes 6 racks (5-tier), cryoboxes (9*9), lockable cap, roller base is optional
YDS-115-216	Smart liquid nitrogen container (smart series)	YDS-115-216	YDS-115-216-FZH	Includes 6 racks (6-tier), cryoboxes (9*9), lockable cap, roller base is optional
YDS-145-216	Smart liquid nitrogen container (smart series)	YDS-145-216	YDS-145-216-FZH	Includes 6 racks (8-tier), cryoboxes (9*9), lockable cap, roller base is optional
YDS-175-216	Smart liquid nitrogen container (smart series)	YDS-175-216	YDS-175-216-FZH	Includes 6 racks (10-tier), cryoboxes (9*9), lockable cap, roller base is optional
	Roller Base	YSC-685-5W	YSC-685-5W	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels

Medium Sized Storage Series (Square Racks) features low  $LN_2$  consumption and relatively small footprint for medium capacity sample storage.

- 5 Years Vacuum Warranty
- Cryobox Storage
- High Thermal Efficiency

- Durable
- Secure
- Liquid and Vapour Storage



<sup>\*\*</sup> Static Holding Time: the amount of days it takes for all of the LN to evapourate out after container is filled with liquid nitrogen to pre-cool and reach thermal equilibrium and the liquid nitrogen filling rate reaches 100% under standard atmospheric condition.

# **Medium Sized Storage Series (Square Racks)**

#### **Key Features**

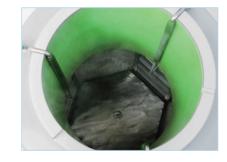
- Heavy duty lockable enclosure offers excellent security
- Compatible with all major cryobox brands
- Durable aluminium construction
- Temperature monitoring available

- Liquid or vapour phase option available
- High thermal efficiency
- 5 year vacuum warranty
- Ultra-low evapouration loss

#### **Product Advantages**

# ULT Storage with Extremely Low LN<sub>2</sub> Evapouration Loss

Freezer racks are in the ultra-low temperature environment with extremely low  $LN_2$  evapouration. Even stored in vapour phase, the temperature will be below -190°C for a long time.



# Advanced Vacuum Technology and Superinsulation Technology

Advanced vacuum and insulation technologies ensure cryopreservation for up to four months.

#### Compatible for Blood Bag Storage

Suitable for blood bag applications, the racks can be adapted to provide temporary blood bag storage before transferring bags to larger LN<sub>2</sub> storage tanks.





#### Liquid Nitrogen Temperature Detector

The temperature monitor provides continuous and reliable monitoring of the temperature in the container. It is the ideal choice for long-term monitoring of sample storage temperature and reminding users to add liquid nitrogen.

The temperature monitor ZTC-100A has real-time temperature display function, and can also provide the following alarms:

\* Over temperature alarm

\* Sensor error acousto-optic alarm



ZTC-100A

#### **Technical Parameters**

Model	YDS-65-216	YDS-95-216	YDS-115-216	YDS-145-216	YDS-175-216	
Maximum Storage Capacity						
No. of Rack	6	6	6	6	6	
No. 2.0 ml Cryovials (100 / Box)	2400	3000	3600	4800	6000	
No. of Boxes in (2ml each Rack)	4	5	6	8	10	
No. 5.0 ml Cryovials (81/Box)	972	972	1458	1944	2430	
No. of Boxes in (5ml each Rack)	2	2	3	4	5	
Performance						
Volume of LN <sub>2</sub> (L)	65	95	115	145	175	
Static Evapouration Rate* (L/Day)	0.78	0.94	0.94	0.94	0.95	
Static Holding Time** (Day)	83	101	122	154	184	
Dimensions						
Neck Opening Diameter (mm)	216	216	216	216	216	
Height (mm)	735	800	870	970	1085	
Outer Diameter (mm)	681	681	681	681	681	
Empty Weight (kg)	40	43	47	52	57	
Full Weight (kg)	107	120	140	170	198.5	
Shipping Weight (kg)	63.5	67.6	77.6	83.2	92.4	

<sup>\*</sup> Static evapouration and static holding time are theoretical values. Actual evapouration and holding time are affected by usage, atmospheric conditions and manufacturing tolerances.

#### **Accessories**



<sup>\*\*</sup> Static Holding Time: the amount of days it takes for all of the LN to evapourate out after container is filled with liquid nitrogen to pre-cool and reach thermal equilibrium and the liquid nitrogen filling rate reaches 100% under standard atmospheric condition.

Haier Biomedical

#### — Liquid Nitrogen Storage Solutions

# Medium Sized Storage Series (Square Racks)

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# **Product List**

Model	Product	Product Model	Factory Code	Description and Accessories
	Liquid Nitrogen container	YDS-65-216	YDS-65-216-FH	Includes 6 racks(4 layers), 9*9 cryoboxes, lockable cap, no PU bag, roller base is optional
	Liquid Nitrogen container	YDS-65-216	YDS-65-216-W	Includes lockable cap, no rack, no PU bag
	Rack	FTT-81-4H	FTT-81-4H	Used for storing 9*9 cryo boxes(2ml), 4 layers in total, with 9*9 cryo boxes included, suitable for YDS-65-216
	Roller Base	YSC-685-5W	YSC-685-5W	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels
YDS-65-216	SmartCap	LT-216	LT-216-340-6H530	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 530mm height. suitable for YDS-65-216
	Cork (216)	GS-216-220-7	GS-216-220-7	Suitable for YDS-65-216/YDS-95-216/YDS-115-216/YDS-145-216/YDS-175-216/ YDH-15-216/YDH-25-216
	Lockable cap	SG-216	SG-216	Suitable for container with 216mm neck opening
	Liquid Nitrogen container (5.0ml Vial)	YDS-95-216	YDS-95-216-FH5	Includes 6 racks for 5ml, 2 layers in total, 12pcs of 5ml $9*9$ cryo boxes and lockable cap included, no PU bag, roller base is optional
	Liquid Nitrogen container	YDS-95-216	YDS-95-216-FH	Includes 6 racks(5 layers), 9*9 cryoboxes, lockable cap, no PU bag, roller base is optional
	Liquid Nitrogen container	YDS-95-216S	YDS-95-216-W	Includes lockable cap, no rack, no PU bag
	Rack	FTT-81-5H	FTT-81-5H	Used for storing 9*9 cryo boxes(2ml), 5 layers in total, with 9*9 cryo boxes included, suitable for YDS-95-216(YDH-25-216
YDS-95-216	Rack	FTT-81-2/5.0H	FTT-81-2/5.0H	Used to store 5ml cryo boxes(9*9), 2 layers in total, 9*9 cryo boxes included, suitable for YDS-65-216(95-216(Plastic cryo boxes included)
	Roller Base	YSC-685-5W	YSC-685-5W	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels
	SmartCap	LT-216	LT-216-370-6H580	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 580mm height. suitable for YDS-95-216
	Cork (216)	GS-216-220-7	GS-216-220-7	Suitable for YDS-65-216/YDS-95-216/YDS-115-216/YDS-145-216/YDS-175-216/ YDH-15-216/YDH-25-216
	Lockable cap	SG-216	SG-216	Suitable for container with 216mm neck opening
	Liquid Nitrogen container (5.0ml Vial)	YDS-115-216	YDS-115-216-FH5	Includes 6 racks for 5ml, 3 layers in total, 18pcs of 5ml 9*9 cryo boxes and lockable cap included, no PU bag, roller base is optional
	Liquid Nitrogen container	YDS-115-216	YDS-115-216-FH	Includes 6 racks(6 layers), 9*9 cryoboxes, lockable cap, no PU bag, roller base is optional
	Liquid Nitrogen container	YDS-115-216	YDS-115-216-W	Includes lockable cap, no rack, no PU bag
	Rack	FTT-81-6H	FTT-81-6H	Used for storing 9*9 cryo boxes(2ml), 6 layers in total, with 9*9 cryo boxes included, suitable for YDS-115-216
YDS-115-216	Rack	FTT-81-3/5.0H	FTT-81-3/5.0H	Used for storing 9*9 cryo boxes(5ml), 3 layers in total, with 9*9 cryo boxes included, suitable for YDS-115-216
	Roller Base	YSC-685-5W	YSC-685-5W	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels
	SmartCap	LT-216	LT-216-450-6H660	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 660mm height. suitable for YDS-115-216
	Cork (216)	GS-216-220-7	GS-216-220-7	Suitable for YDS-65-216/YDS-95-216/YDS-115-216/YDS-145-216/YDS-175-216/ YDH-15-216/YDH-25-216
	Lockable cap	SG-216	SG-216	Suitable for container with 216mm neck opening
	Liquid Nitrogen container (5.0ml Vial)	YDS-145-216	YDS-145-216-FH5	Includes 6 racks for 5ml, 4 layers in total, 24pcs of 5ml 9*9 cryo boxes and lockable cap included, no PU bag, roller base is optional
	Liquid Nitrogen container	YDS-145-216	YDS-145-216-FH	Includes 6 racks(8 layers), 9*9 cryoboxes, lockable cap, no PU bag, roller base is optional
	Liquid Nitrogen container	YDS-145-216	YDS-145-216-W	Includes lockable cap, no rack, no PU bag
	Rack	FTT-81-8H	FTT-81-8H	Used for storing 9*9 cryo boxes(2ml), 8 layers in total, with 9*9 cryo boxes included, suitable for YDS-145-216
YDS-145-216	Rack	FTT-81-4/5.0H	FTT-81-4/5.0H	Used for storing 9*9 cryo boxes(5ml), 4 layers in total, with 9*9 cryo boxes included, suitable for YDS-145-216
	Roller Base	YSC-685-5W	YSC-685-5W	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels
	SmartCap	LT-216	LT-216-570-6H770	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 770mm height.suitable for YDS-145-216
	Cork (216)	GS-216-220-7	GS-216-220-7	Suitable for YDS-65-216/YDS-95-216/YDS-115-216/YDS-145-216/YDS-175-216/ YDH-15-216/YDH-25-216
	Lockable cap	SG-216	SG-216	Suitable for container with 216mm neck opening

Model	Product	Product Model	Factory Code	Description and Accessories
	Liquid Nitrogen container (5.0ml Vial)	YDS-175-216	YDS-175-216-FH5	Includes 6 racks for 5ml, 5 layers in total, 30pcs of 5ml 9*9 cryo boxes and lockable cap included, no PU bag, roller base is optional
	Liquid Nitrogen container	YDS-175-216	YDS-175-216-FH	Includes 6 racks(10 layers), 9*9 cryoboxes, lockable cap, no PU bag, roller base is optional
	Liquid Nitrogen container	YDS-175-216	YDS-175-216-W	Includes lockable cap, no rack, no PU bag
	Rack	FTT-81-10H	FTT-81-10H	Used for storing 9*9 cryo boxes(2ml), 10 layers in total, with 9*9 cryo boxes included, suitable for YDS-175-216/CryoBio 6S
YDS-175-216	Rack	FTT-81-5/5.0H	FTT-81-5/5.0H	Used for storing 9*9 cryo boxes(5ml), 5 layers in total, with 9*9 cryo boxes included, suitable for YDS-175-216、CryoBio 6S
	Roller Base	YSC-685-5W	YSC-685-5W	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels
	SmartCap	LT-216	LT-216-670-6H870	Used for monitoring real time level and temperature for containers with 216mm neck opening. 6 grooves and 870mm height suitable for YDS-175-216
	Cork (216)	GS-216-220-7	GS-216-220-7	Suitable for YDS-65-216/YDS-95-216/YDS-115-216/YDS-145-216/YDS-175-216/ YDH-15-216/YDH-25-216
	Lockable cap	SG-216	SG-216	Suitable for container with 216mm neck opening
	Blood bag rack	XTT-25-2F14/65H	XTT-25-2F14/65H	Used for storing 25ml blood bag, 2 levels in total with each layer storing 14pcs of 25ml blood bag, with 28 cassettes included, suitable for YDS-65-216, 6 racks can be fitted.
	Blood bag rack	XTT-25-2F14/95H	XTT-25-2F14/95H	Used for storing 25ml blood bag, 2 levels in total with each layer storing 14pcs of 25ml blood bag, with 28 cassettes included, suitable for YDS-95-216, 6 racks can be fitted.
	Blood bag rack	XTT-25-3F14/115H	XTT-25-3F14/115H	Used for storing 25ml blood bag, 3 levels in total with each layer storing 14pcs of 25ml blood bag, with 42 cassettes included, suitable for YDS-115-216, 6 racks can be fitted.
	Blood bag rack	XTT-25-4F14/145H	XTT-25-4F14/145H	Used for storing 25ml blood bag, 4 levels in total with each layer storing 14pcs of 25ml blood bag, with 56 cassettes included, suitable for YDS-145-216, 6 racks can be fitted.
	Blood bag rack	XTT-25-5F14/175H	XTT-25-5F14/175H	Used for storing 25ml blood bag, 5 levels in total with each layer storing 14pcs of 25ml blood bag, with 70 cassettes included, suitable for YDS-175-216, 6 racks can be fitted.
	Blood bag rack	XTT-50-1F14/65H	XTT-50-1F14/65H	Used for storing 50ml blood bag, 1 level in total with each layer storing 14pcs of 50ml blood bag, with 14 cassettes included, suitable for YDS-65-216, 6 racks can be fitted.
	Blood bag rack	XTT-50-1F14/95H	XTT-50-1F14/95H	Used for storing 50ml blood bag, 1 level in total with each layer storing 14pcs of 50ml blood bag, with 14 cassettes included, suitable for YDS-95-216, 6 racks can be fitted.
Other Racks	Blood bag rack	XTT-50-2F14/115H	XTT-50-2F14/115H	Used for storing 50ml blood bag, 2 levels in total with each layer storing 14pcs of 50ml blood bag, with 28 cassettes included, suitable for YDS-115-216, 6 racks can be fitted.
	Blood bag rack	XTT-50-2F14/145H	XTT-50-2F14/145H	Used for storing 50ml blood bag, 2 levels in total with each layer storing 14pcs of 50ml blood bag, with 28 cassettes included, suitable for YDS-145-216, 6 racks can be fitted.
	Blood bag rack	XTT-50-3F14/175H	XTT-50-3F14/175H	Used for storing 50ml blood bag, 3 levels in total with each layer storing 14pcs of 50ml blood bag, with 42 cassettes included, suitable for YDS-175-216, 6 racks can be fitted.
	Blood bag rack	XTT-250-1F8/65H	XTT-250-1F8/65H	Used for storing 250ml blood bag, 1 level in total with each layer storing 8pcs of 250ml blood bag, with 8 cassettes included, suitable for YDS-65-216, 6 racks can be fitted.
	Blood bag rack	XTT-250-1F8/95H	XTT-250-1F8/95H	Used for storing 250ml blood bag, 1 level in total with each layer storing 8pcs of 250ml blood bag, with 8 cassettes included, suitable for YDS-95-216, 6 racks can be fitted.
	Blood bag rack	XTT-250-1F8/115H	XTT-250-1F8/115H	Used for storing 250ml blood bag, 1 level in total with each layer storing 8pcs of 250ml blood bag, with 8 cassettes included, suitable for YDS-115-216, 6 racks can be fitted.
	Blood bag rack	XTT-250-1F8/145H	XTT-250-1F8/145H	Used for storing 250ml blood bag, 1 levels in total with each layer storing 8pcs of 250ml blood bag, with 8 cassettes included, suitable for YDS-145-216, 6 racks can be fitted.
	Blood bag rack	XTT-250-2F8/175H	XTT-250-2F8/175H	Used for storing 250ml blood bag, 2 levels in total with each layer storing 8pcs of 250ml blood bag, with 16 cassettes included, suitable for YDS-145-216, 6 racks can be fitted.

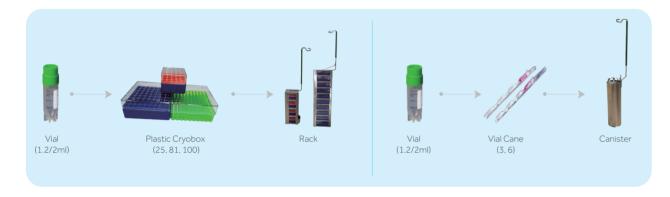
# **Small Sized Storage Series (Square Racks)**

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# **Biological Sample Library-YDS Series**

#### Storage Example of 2ml Internally Threaded Vial

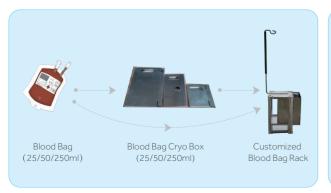
**Medium Sized Storage Series (Square Racks)** 



#### Storage Example of Tall 5ml Cryovials



#### **Blood Bag Storage Example**



#### **Straw Storage Example**



Widely used within many laboratories, this small-sized storage series features low  $LN_2$  consumption and dual handle design. Stores between 100 and 1100 vials in square racks and cryo boxes.

- 5 Years Vacuum Warranty
- High Thermal Efficiency
- Lightweight
- 10 Litre to 50 Litre Capacity

- Durable
- Secure
- Super-Insulation
- Ideal for Lab Applications



# **Small Sized Storage Series (Square Racks)**

# **Key Features**

- Heavy duty lockable enclosure offers excellent security
- Strong, lightweight aluminium construction
- Dual handles
- Temperature monitoring available

- Roller bases available
- High thermal efficiency
- 5 years vacuum warranty
- Ultra-low LN2 evapouration loss

#### **Product Advantages**

#### Low LN<sub>2</sub> Consumption and Maximum Storage Efficiency

Haier Biomedical's Small Sized Storage Series (Square Racks) Liquid Nitrogen Storage System features low LN2 consumption and small storage capacity for laboratory applications. The lightweight containers have a smaller footprint whilst providing maximum efficiency of cryogenic storage capacity.

# Advanced Vacuum Technology and Super-insulation Technology

Advanced vacuum and insulation technologies provide ultra-low liquid nitrogen evapouration loss and ensure up to three months cryogenic storage.

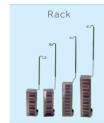


#### Five Models Available

Small Sized Storage Series (Square Racks) offers Five models with different capacity from 100, 600, 750, 900 to 1100 standard 2ml cryovials. All models are supplied with stainless steel racks and cryogenic boxes.

#### **Accessories**











#### **Technical Parameters**

Model	YDS-10-125	YDS-30-125	YDS-35-125	YDS-47-127	YDS-50B-125		
Maximum Storage Capacity							
No. of Rack	1	6	6	6	6		
1.2&2 ml Cryovials (25 per box)	100	600	750	1110	900		
No. of Boxes in (Rack)	4	4	5	5	6		
Performance							
Volume of LN <sub>2</sub> (L)	10	30	35	47	50		
Static Evapouration* (L/Day)	0.42	0.35	0.36	0.36	0.45		
Static Holding Time** (Day)	24	90	97	130	110		
Dimensions							
Opening Diameter (mm)	125	125	125	127	125		
Height (mm)	625	725	765	740	830		
Outside Diameter (mm)	300	462	462	508	462		
Empty Weight (kg)	6.3	13	14.5	18.2	17.3		
Full Weight (kg)	15.1	38.9	43.2	60.9	62.4		
Shipping Weight (kg)	9.6	19.3	21.9	30.7	30.3		

<sup>\*</sup> Static evapouration and static holding time are theoretical values. Actual evapouration and holding time are affected by usage, atmospheric conditions and manufacturing tolerances.

Model	Product	Product Model	Factory Code	Description and Accessories
	Liquid Nitrogen container	YDS-10-125	YDS-10-125-FH	Include 1 square rack with 4 layers , 5*5 cryobox, lockable cap and PU bag.
	Liquid Nitrogen container	YDS-10-125	YDS-10-125-W	Includes PU bag only; No canister; no lockable cap;
	Rack	FTT-25-4H	FTT-25-4H	Used for storing 5*5 cryo boxes(2ml), 4 layers in total, with 5*5 cryo boxes included, suitable for YDS-30-125/YDS-10-125
YDS-10-125	Canister	TTH10-125	TTH10-125	Φ97,120mm single tier canister, No goblet, suitable for YDH-10-125
	SmartCap	T-125	T-125-6H180	Used for monitoring real time temperature for containers with 125mm neck opening, 6 grooves and 180mm heigh cork, data can be transmitted to Haier's IoT platform. suitable for YDH-10-125/YDS-10-125
	Cork (125)	GS-125-180	GS-125-180	Suitable for YDS-10-125/YDH-10-125/YDS-50B-125
	Lockable cap	SG-125	SG-125	Suitable for container with 125mm and 127mm neck opening
	Liquid Nitrogen container	YDS-30-125	YDS-30-125-FH	Includes 6 racks with 4 layers, 5*5 cryoboxes, lockable cap and PU bag, roller base is optional.
	Liquid Nitrogen container	YDS-30-125	YDS-30-125-W	Includes PU bag only, roller base is optional
	Rack	FTT-25-4H	FTT-25-4H	Used for storing 5*5 cryo boxes(2ml), 4 layers in total, with 5*5 cryo boxes included, suitable for YDS-30-125/YDS-10-125
YDS-30-125	Canister	TT30-125	TT30-125	Φ97,120mm single tier canister. No goblet, suitable for YDS-30-125
	Roller Base	YSC-465-5W	YSC-465-5W	"Suitable for tanks with diameter less than $\Phi$ 465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."
	SmartCap	LT-125	LT-125-370-6H540	Used for monitoring real time level and temperature for containers with 80mm neck opening, 6 grooves and 540mm height. suitable for YDS-20-125/YDS-30-125
	Cork (125)	GS-125-210	GS-125-210	Suitable for YDS-30-125/YDS-35-125/YDS-47-127/YDS-35B-125
	Lockable cap	SG-125	SG-125	Suitable for container with 125mm and 127mm neck opening

<sup>\*\*</sup> Static Holding Time: the amount of days it takes for all of the LN $_2$  to evapourate out after container is filled with liquid nitrogen to pre-cool and reach thermal equilibrium and the liquid nitrogen filling rate reaches 100% under standard atmospheric condition.

#### **Product List**

Model	Product	Product Model	Factory Code	Description and Accessories
	Liquid Nitrogen container	YDS-35-125	YDS-35-125-LYS	Includes 6 canisters (Height 276mm), lockable cap and PU bag, roller base is optional
	Liquid Nitrogen container	YDS-35-125	YDS-35-125-FH	Includes 6 racks with 5 layers, 5*5 cryoboxes, lockable cap and PU bag, roller base is optional.
	Liquid Nitrogen container	YDS-35-125	YDS-35-125-W	Includes PU bag only, roller base is optional
	Rack	FTT-25-5H	FTT-25-5H	Used for storing 5*5 cryo boxes (2ml), 5 layers in total, with 5*5 cryo boxes included, suitable for YDS-35-125
	Canister	TT35-125	TT35-125	Φ97,120mm single tier canister, No goblet, suitable for YDS-35-125
YDS-35-125	Canister	TTS35-125	TTS35-125	$\Phi$ 97,276mm double-tier canister, 2 goblets included. Suitable for YDS-35-125
	Roller Base	YSC-465-5W	YSC-465-5W	"Suitable for tanks with diameter less than $\Phi$ 465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."
	SmartCap	LT-125	LT-125-400-6H575	Used for monitoring real time level and temperature for containers with 125mm neck opening. 6 grooves and 575mm height. suitable for YDS-25-125/YDS-35-125/YDS-35-125
	Cork (125)	GS-125-210	GS-125-210	Suitable for YDS-30-125/YDS-35-125/YDS-47-127/YDS-35B-125
	Lockable cap	SG-125	SG-125	Suitable for container with 125mm and 127mm neck opening
	Liquid Nitrogen container	YDS-47-127	YDS-47-127-T37H	Includes 6 round rack with 5 layers (37 holes) , lockable cap and PU bag; Roller base is optional
	Liquid Nitrogen container	YDS-47-127-10	YDS-47-127-10TS	"Includes 10 canisters( $\Phi$ 72/276mm), lockable cap and PU bag. roller base is optional"
	Round Rack (Y98-37)	YTT-37-5	YTT-37-5	$\Phi$ 98 round rack used for storing 37 holes cryobox (2ml), 5 tiers in total, suitable for YDS-47-127-T37
	Canister	TTS47-127-10T	TTS47-127-10T	$\Phi$ 72, 276mm double-tier canister, 2 goblets included. Suitable for YDS-47-127-10T
	Roller Base	YSC-525-5W	YSC-525-5W	Suitable for tanks with diameter less than Φ525. Can be used for 47L alunimium tank, equipped with 5 universal wheels
YDS-47-127	SmartCap	LT-127	LT-127-370-10H570	Used for monitoring real time level and temperature for containers with 127mm neck opening, 10 grooves and 570mm height. Suitable for YDS-47-127-10T/MVE-XC47/11-10
	SmartCap	LT-127	LT-127-400-6H570	Used for monitoring real time level and temperature for containers with 127mm neck opening, 6 grooves and 570mm height. suitable for YDS-47-127-6/YDS-47-127/MVE XC-47/11-6
	Cork (125)	GS-125-210	GS-125-210	Suitable for YDS-30-125/YDS-35-125/YDS-47-127/YDS-35B-125
	Cork (125)	GS-127-210-10	GS-127-210-10	Suitable for YDS-47-127-10T
	Lockable cap	SG-125	SG-125	Suitable for container with 125mm and 127mm neck opening
	Liquid Nitrogen container	YDS-50B-125	YDS-50B-125-FH	Includes 6 racks with 6 layers, 5*5 cryoboxes, lockable cap and PU bag, roller base is optional.
	Liquid Nitrogen container	YDS-50B-125	YDS-50B-125-LYS	"Includes 6 canisters ( $\Phi$ 97/276mm), lockable cap and PU bag. roller base is optional"
	Liquid Nitrogen container	YDS-50B-125	YDS-50B-125-W	Includes PU bag only, roller base is optional
	Rack	FTT-25-6H	FTT-25-6H	Used for storing 5*5 cryo boxes (2ml), 6 layers in total, with 5*5 cryo boxes included, suitable for YDS-50B-125
YDS-50B-125	Canister	TT50-125	TT50-125	$\Phi$ 97,120mm single tier canister. No goblet, suitable for YDS-50B-125
	Canister	TTS50-125	TTS50-125	$\Phi$ 97,276mm double-tier canister, 2 goblets included. Suitable for YDS-50B-125
	Roller Base	YSC-465-5W	YSC-465-5W	"Suitable for tanks with diameter less than $\Phi$ 465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."
	SmartCap	LT-125	LT-125-500-6H670	Used for monitoring real time level and temperature for containers with 125mm neck opening, 6 grooves and 670mm height. suitable for YDS-50B-125
	Cork (125)	GS-125-180	GS-125-180	Suitable for YDS-10-125/YDH-10-125/YDS-50B-125
	Lockable cap	SG-125	SG-125	Suitable for container with 125mm and 127mm neck opening

# **Product Description**

SmartCap is a low energy consumption module that can monitor liquid nitrogen level and temperature in a liquid nitrogen tank. It is suitable for aluminium alloy liquid nitrogen tanks with opening port size of 50mm, 80mm, 125mm, 216mm. The built-in high efficiency lithium battery can operate the device for more than two years.



SmartCap

#### **Product Characteristics**





Independent, high accuracy measuring system for liquid level and temperature



Real time display of level and temperature.



Built-in high efficiency lithium battery for longevity

# d Nitrogen Storage Solutions

# **Small Sized Storage Series (Square Racks)**

#### **Product List**

Model	Product	Product Model	Factory Code	Description and Accessories
	SmartCap	LT-50	LT-50-220-6H360	Used for monitoring real time level and temperature for containers with 50mm neck opening, 6 grooves and 360mm height, data can be transmitted to cloud platform, suitable for YDS-3/YDS-6
	SmartCap	LT-50	LT-50-280-6H420	Used for monitoring real time level and temperature for containers with 50mm neck opening, 6 grooves and 420mm height. suitable for YDS-10/YDS-15
	SmartCap	LT-50	LT-50-370-6H540	Used for monitoring real time level and temperature for containers with 50mm neck opening, 6 grooves and 540mm height. suitable for YDS-20/YDS-30
	SmartCap	LT-50	LT-50-400-6H570	Used for monitoring real time level and temperature for containers with 50mm neck opening, 6 grooves and 570mm height. suitable for YDS-25/YDS-35/VDS-35
	SmartCap	LT-50	LT-50-450-6H580	Used for monitoring real time level and temperature for containers with 50mm neck opening, 6 grooves and 580mm height. suitable for YDS-25/YDS-35
	SmartCap	LT-50	LT-50-500-6H640	Used for monitoring real time level and temperature for containers with 50mm neck opening, 6 grooves and 640mm height. suitable for YDS-50
	SmartCap	LT-80	LT-80-220-6H370	Used for monitoring real time level and temperature for containers with 80mm neck opening, 6 grooves and 370mm height. suitable for YDS-6-80
	SmartCap	LT-80	LT-80-280-6H430	Used for monitoring real time level and temperature for containers with 80mm neck opening, 6 grooves and 430mm height. suitable for YDS-10-80/YDS-15-80
	SmartCap	LT-80	LT-80-370-6H530	Used for monitoring real time level and temperature for containers with 80mm neck opening, 6 grooves and 530mm height. suitable for YDS-20-80/YDS-30-80
	SmartCap	LT-80	LT-80-400-6H580	Used for monitoring real time level and temperature for containers with 80mm neck opening, 6 grooves and 580mm height. suitable for YDS-25-80/YDS-35-80
	SmartCap	LT-80	LT-80-500-6H640	Used for monitoring real time level and temperature for containers with 80mm neck opening, 6 grooves and 640mm height. suitable for YDS-50-80
	SmartCap	LT-125	LT-125-280-6H445	Used for monitoring real time level and temperature for containers with 125mm neck opening, 6 grooves and 445mm height. suitable for YDS-10-125/YDS-15-125
	SmartCap	LT-125	LT-125-370-6H540	Used for monitoring real time level and temperature for containers with 80mm neck opening, 6 grooves and 540mm height. suitable for YDS-20-125/YDS-30-125
	SmartCap	LT-125	LT-125-400-6H575	Used for monitoring real time level and temperature for containers with 125mm neck opening, 6 grooves and 575mm height. suitable for YDS-25-125/YDS-35-125/YDS-35-125
	SmartCap	LT-125	LT-125-500-6H670	Used for monitoring real time level and temperature for containers with 125mm neck opening, 6 grooves and 670mm height. suitable for YDS-508-125
	SmartCap	LT-127	LT-127-370-10H570	Used for monitoring real time level and temperature for containers with 127mm neck opening, 10 grooves and 570mm height. Suitable for YDS-47-127-10T/MVE-XC47/11-10
Smart Cap	SmartCap	LT-127	LT-127-400-6H570	Used for monitoring real time level and temperature for containers with 127mm neck opening, 6 grooves and 570mm height. suitable for YDS-47-127-6Y/YDS-47-127/MVE XC-47/11-6
	SmartCap	LT-216	LT-216-340-6H530	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 530mm height, suitable, for YDS-65-216
	SmartCap	LT-216	LT-216-340-4H540D1	Used for monitoring real time level and temperature for containers with 216mm neck opening, 4 grooves and 540mm height. suitable for Thermo-Locator Jr.plus(CY50925-70THERMO)/MVE Crosysterm 2000
	SmartCap	LT-216	LT-216-370-6H580	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 580mm height suitable for YDS-95-216
	SmartCap	LT-216	LT-216-450-6H660	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 660mm height, suitable for YDS-115-216
	SmartCap	LT-216	LT-216-570-6H770	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 770mm height.suitable for YDS-145-216
	SmartCap	LT-216	LT-216-670-6H870	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 870mm height.suitable for YDS-175-216
	SmartCap	T-50	T-50-6H180	Used for monitoring real time temperature for containers with 50mm neck opening, 6 grooves and 180mm heigh cork, data can be transmitted to Haier's loT platform, suitable for YDH-3
	SmartCap	T-80	T-80-6H180	Used for monitoring real time temperature for containers with 80mm neck opening, 6 grooves and 180mm heigh cork, data can be transmitted to Haier's IoT platform, suitable for YDH-6-80
	SmartCap	T-125	T-125-6H180	Used for monitoring real time temperature for containers with 125mm neck opening, 6 grooves and 180mm heigh cork, data can be transmitted to Haier's IoT platform. suitable for YDH-10-125/YDS-10-125
	SmartCap	T-216	T-216-6H150	Used for monitoring real time temperature for containers with 216mm neck opening, 6 grooves and 150mm heigh cork, data can be transmitted to Haier's IoT platform. suitable for YDH-15-216
	SmartCap	T-216	T-216-6H210	Used for monitoring real time temperature for containers with 125mm neck opening, 6 grooves and 180mm heigh cork, data can be transmitted to Haier's IoT platform, suitable for
	Data repeater	RP-3002G	SG-300	YDH-10-125/YDS-10-125  SIM card to tranfer data through GPRS and WIFI; include the SIM card
	Data transfer module-WIFI	RP-300W	RP-300W	WIFI to transfer data; prior for client not in China
	SMS alarm service cost	SMS alarm service cost	SMS alarm service cost	Not recommended
	Cloud platform service cost	Cloud platform	Cloud platform	

# **High Capacity Series for Storage or Transport** (Round Canisters)

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High Capacity Series for Storage or Transport (Round Canisters) provides two cryopreservation solutions for long-term static storage and transportation of biological samples.

- Numbered Index Canister Locations
- High Capacity
- High Thermal Efficiency
- 5 Years Vacuum Warranty
- Extended Hold Time

- LN<sub>2</sub> Dispenser
- Round Canisters for Straw Storage
- Lockable
- Roller Bases Available



# **High Capacity Series for Storage or Transport (Round Canisters)**

#### 441/442

# **Key Features**

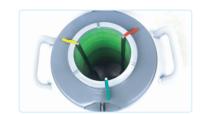
- Strong and lightweight aluminium construction
- Heavy duty lockable enclosure offers excellent security
- Numbered index location points for canisters
- Straw storage
- LN2 dispense pump available

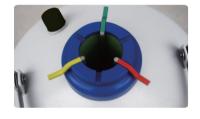
- Roller bases available
- High thermal efficiency
- 5 years vacuum warranty
- Ultra-low evapouration loss

#### **Product Advantages**

Narrow neck design and excellent thermal conductivity reduces evapouration loss of liquid nitrogen to extend storage times.

Large-capacity models have wider necks for easy access to biological samples.





Long-term cryopreservation models have narrower necks with less heat intrusion.

#### **Technical Parameters**

	Model	YDS-2-30	YDS-2-35	YDS-3	YDS-6	YDS-10	YDS-10-80
	No. of Canister	3 (3)	3 (3)	6 (0)	6 (0)	6 (0)	6 (0)
	No. of Straws (Single Layer) (0.5ml each canister)	90	165	792	792	792	2244
Maximum Capacity	No. of Straws (Single Layer) (0.25ml each canister)	204	330	1788	1788	1788	5022
	No. of Straws (Double Layer) (0.5ml each canister)	_	_	_	_	_	_
	No. of Straws (Double Layer) (0.25ml each canister)	_	_	_	_	_	_
	Volume of LN <sub>2</sub> (L)	2	2	3	6	10	10
Performance	Static Evapouration* (L/Day)	0.07	0.08	0.12	0.12	0.12	0.21
	Static Holding Time** (Day)	28	24	26	52	86	48
	Opening Diameter (mm)	30	35	50	50	50	80
	Height (mm)	415	435	445	495	565	567
	Outside Diameter (mm)	223	204	223	300	300	300
Dimensions	Canister Outside Diameter (mm)	19	25	38	38	38	63
	Outside Height (mm)	120	120	120	120	120	120
	Empty Weight (kg)	2.8	2.6	3.1	4.8	6.1	6.2
	Full Weight (kg)	4.5	4.4	6	9.9	14.5	14.7
	Shipping Weight (kg)	5.1	4.9	5.8	8	9	9.3

	Model	YDS-10-125	YDS-13	YDS-15	YDS-20	YDS-30
	No. of Canister	1 (0)	6 (0)	6 (0)	6 (0)	6
	No. of Straws (Single Layer) (0.5ml each canister)	854	-	792	792	792
Maximum Capacity	No. of Straws (Single Layer) (0.25ml each canister)	1940	-	1788	1788	1788
	No. of Straws (Double Layer) (0.5ml each canister)	-	1284	-	1284	1284
	No. of Straws (Double Layer) (0.25ml each canister)	-	2832	-	2832	2832
	Volume of LN <sub>2</sub> (L)	10	13	15	20	30
Performance	Static Evapouration* (L/Day)	0.42	0.12	0.11	0.12	0.12
	Static Holding Time** (Day)	24	109	134	168	254
	Opening Diameter (mm)	125	50	50	50	50
	Height (mm)	625	635	610	700	725
	Outside Diameter (mm)	300	310	394	394	462
Dimensions	Canister Outside Diameter (mm)	97	38	38	38	38
	Outside Height(mm)	120	276	120	120/276	120/276
	Empty Weight (kg)	6.3	6.3	8.5	9.5	12.9
	Full Weight (kg)	15.1	17.3	20.5	28.1	36.6
	Shipping Weight (kg)	8.6	11	13	15	18

	Model	YDS-30 -80	YDS-30 -125	YDS-35	YDS-35 -80	YDS-35 -125	YDS-47 -127
	No. of Canister	6 (0)	6 (0)	6 (0)	6 (0)	6 (0)	10 (0)
	No. of Straws (Single Layer) (0.5ml each canister)	2244	5124	792	2244	5124	-
Maximum Capacity	No. of Straws (Single Layer) (0.25ml each canister)	5022	11640	1788	5022	11640	-
	No. of Straws (Double Layer) (0.5ml each canister)	3624	-	1284	3624	9048	8200
	No. of Straws (Double Layer) (0.25ml each canister)	8460	=	2832	8460	20760	16400
	Volume of LN <sub>2</sub> (L)	30	30	35	35	35	47
Performance	Static Evapouration* (L/Day)	0.21	0.35	0.12	0.22	0.37	0.36
	Static Holding Time** (Day)	147	90	286	159	97	130
	Opening Diameter (mm)	80	125	50	80	125	127
	Height (mm)	729	725	765	768	765	740
	Outside Diameter (mm)	462	462	462	462	462	508
Dimensions	Canister Outside Diameter (mm)	63	97	38	63	97	72
	Outside Height (mm)	120/276	120	120/276	120/276	120/276	276
	Empty Weight (kg)	13	13	14.2	14.5	14.6	18.2
	Full Weight (kg)	37	38.9	42.7	42.9	43.2	56.2
	Shipping Weight (kg)	18.3	19.3	20	20.7	22	28

# **High Capacity Series for Storage or Transport (Round Canisters)**

	Model	YDS-20B	YDS-30B	YDS-35B
	No. of Canister	6 (0)	6 (0)	6 (0)
	No. of Straws (Single Layer) (0.5ml each canister)	792	792	792
Maximum	No. of Straws (Single Layer) (0.25ml each canister)	1788	1788	1788
Capacity	No. of Straws (Double Layer) (0.5ml each canister)	1284	1284	1284
	No. of Straws (Double Layer) (0.25ml each canister)	2832	2832	2832
	Volume of LN <sub>2</sub> (L)	20	30	35
Performance	Static Evapouration* (L/Day)	0.2	0.2	0.2
	Static Holding Time** (Day)	101	159	179
	Opening Diameter (mm)	50	50	50
	Height (mm)	700	725	765
	Outside Diameter (mm)	394	462	462
Dimensions	Canister Outside Diameter (mm)	38	38	38
	Outside Height (mm)	120/276	120/276	120/276
	Empty Weight (kg)	9.5	12.9	14.2
	Full Weight (kg)	27.9	37.1	42.8
	Shipping Weight (kg)	15.1	18.3	20.1

	Model	YDS-35B-80	YDS-35B-125	YDS-50B	YDS-50B-125
	No. of Canister	6 (0)	6 (0)	6 (0)	6 (0)
_	No. of Straws (Single Layer) (0.5ml each canister)	2244	5124	792	5124
Maximum Capacity	No. of Straws (Single Layer) (0.25ml each canister)	5022	11640	1788	11640
	No. of Straws (Double Layer) (0.5ml each canister)	3624	9048	1284	9048
	No. of Straws (Double Layer) (0.25ml each canister)	8460	20760	2832	20760
	Volume of LN <sub>2</sub> (L)	35	35	50	50
Performance	Static Evapouration* (L/Day)	0.3	0.41	0.24	0.45
	Duration of Normal Operation** (Day)	119	86	213	110
	Opening Diameter (mm)	80	125	50	125
	Height (mm)	768	765	825	830
	Outside Diameter (mm)	462	462	462	462
Dimensions	Canister Outside Diameter (mm)	63	97	38	97
Dimensions	Outside Height (mm)	120/276	120/276	120/276	120/276
	Empty Weight (kg)	14.5	14.6	17.2	17.3
	Full Weight (kg)	43	43.5	60.3	62
	Shipping Weight (kg)	20.7	22	24	25.4

# **Vials Cane Specification**

Canister	Height 120mm, Diameter 38mm (50mm neck)				
Vials	Canes/Canister	Vials/Cane	Vials/Canister		
0.5ml	4	3	12		
1.5ml	4	3	12		
2ml	4	3	12		
3ml	4	3	12		
5ml	4	1	4		

Canister	Height 120mm, Diameter 63mm (80mm neck)					
Vials	Canes/Canister	Vials/Cane	Vials/Canister			
0.5ml	16	3	48			
1.5ml	16	3	48			
2ml	16	3	48			
3ml	16	3	48			
5ml	16	1	16			

Canister	Height 120mm, Diameter 72mm (127mm neck)				
Vials	Canes/Canister	Vials/Cane	Vials/Canister		
0.5ml	21	3	63		
1.5ml	21	3	63		
2ml	21	3	63		
3ml	21	3	63		
5ml	21	1	21		

Canister	Height 120mm, Diameter 97mm (125mm neck)				
Vials	Canes/Canister	Vials/Cane	Vials/Canister		
0.5ml	-	-	-		
1.5ml	40	3	120		
2ml	40	3	120		
3ml	40	3	120		
5ml	40	1	40		

Canister	Height 120mm, Diameter 104mm (127mm neck)				
Vials	Canes/Canister	Vials/Cane	Vials/Canister		
0.5ml	-	-	-		
1.5ml	46	3	138		
2ml	46	3	138		
3ml	46	3	138		
5ml	46	1	46		

Canister	nister Height 276mm, Diameter 38mm (50mm ne				
Vials	Canes/Canister	Vials/Cane	Vials/Canister		
0.5ml	4	6	24		
1.5ml	4	6	24		
2ml	4	6	24		
3ml	4	6	24		
5ml	4	3	12		

Canister	Height 276mm, Diameter 63mm (80mm neck)								
Vials	Canes/Canister	Vials/Cane	Vials/Canister						
0.5ml	16	6	96						
1.5ml	16	6	96						
2ml	16	6	96						
3ml	16	6	96						
5ml	16	3	48						

Canister	Height 276mm, Diameter 72mm (127mm neck)							
Vials	Canes/Canister	Vials/Cane	Vials/Canister					
0.5ml	21	6	126					
1.5ml	21	6	126					
2ml	21	6	126					
3ml	21	6	126					
5ml	21	3	63					

Canister	Height 276mm, Diameter 97mm (125mm neck)							
Vials	ials Canes/Canister Vials/Cane		Vials/Canister					
0.5ml	-	-	-					
1.5ml	40	6	240					
2ml	40	6	240					
3ml	40	6	240					
5ml	40	3	120					

Canister	Height 276mm, Diameter 104mm (127mm neck)							
Vials	Canes/Canister Vials/Cane		Vials/Canister					
0.5ml	-	-	-					
1.5ml	46	6	276					
2ml	46	6	276					
3ml	46	6	276					
5ml	46	3	138					

#### Accessories







<sup>\*</sup> Static evapouration and static holding time are theoretical values. Actual evapouration and holding time are affected by usage, atmospheric conditions and manufacturing tolerances.

<sup>\*\*</sup> Static Holding Time: the amount of days it takes for all of the LN to evapourate out after container is filled with liquid nitrogen to pre-cool and reach thermal equilibrium and the liquid nitrogen filling rate reaches 100% under standard atmospheric condition.

# High Capacity Series for Storage or Transport (Round Canisters)

# **Product List**

Model	Product	Product Model	Factory Code	Description and Accessories
L	iquid Nitrogen container	YDS-2-30	YDS-2-30-YS	Includes 3 canisters, lockable cap and PU bag
YDS-2-30	Canister	TT2-30	TT2-30	Ф19, 120mm single tier canister, No goblet, suitable for YDS-2-30
103 2 30	Cork (30)	GS-30-125	GS-30-125	Suitable for YDS-2-30
	Lockable cap	SG-30	SG-30	Suitable for container with 30mm neck opening, suitable for YDS-2-30
L	iquid Nitrogen container	YDS-2-35	YDS-2-35-YS	Includes 3 canisters, lockable cap and Braces for carrying, no PU bag
	Canister	TT2-35	TT2-35	Φ25,120mm single tier canister, No goblet, suitable for YDS-2-35
YDS-2-35	Cork (30)	GS-35-125	GS-35-125	Suitable for YDS-2-35
	Lockable cap	SG-35	SG-35	Suitable for container with 35mm neck opening, suitable for YDS-2-35
L	iquid Nitrogen container	YDS-3	YDS-3-YS	Includes 6 canisters (Height 120mm), lockable cap and PU bag
L	iquid Nitrogen container	YDS-3	YDS-3-W	Includes PU bag only
YDS-3	Canister	TT3-50	TT3-50	Φ38, 120mm single tier canister, No goblet, suitable for YDS-3
	Cork (50)	GS-50-180	GS-50-180	Suitable for YDS-3/YDH-3/YDS-6/YDS-10/YDS-13/YDS-25/YDS-50B
	Lockable cap	SG-50	SG-50	Suitable for container with 50mm neck opening
L	iquid Nitrogen container	YDS-6	YDS-6-YS	Includes 6 canisters (Height 120mm), lockable cap and PU bag
L	iquid Nitrogen container	YDS-6	YDS-6-W	Includes PU bag only
YDS-6	Canister	TT6-50	TT6-50	Φ38,120mm single tier canister, No goblet, suitable for YDS-6
	Cork (50)	GS-50-180	GS-50-180	Suitable for YDS-3/YDH-3/YDS-6/YDS-10/YDS-13/YDS-25/YDS-50B
	Lockable cap	SG-50	SG-50	Suitable for container with 50mm neck opening
L	iquid Nitrogen container	YDS-10	YDS-10-YS	Includes 6 canisters (Height 120mm), lockable cap and PU bag
L	iquid Nitrogen container	YDS-10	YDS-10-W	Includes PU bag only
YDS-10	Canister	TT10-50	TT10-50	$\Phi$ 38,120mm single tier canister, No goblet, suitable for YDS-10
	Cork (50)	GS-50-180	GS-50-180	Suitable for YDS-3/YDH-3/YDS-6/YDS-10/YDS-13/YDS-25/YDS-50B
	Lockable cap	SG-50	SG-50	Suitable for container with 50mm neck opening
L	iquid Nitrogen container	YDS-10-80	YDS-10-80-YS	Includes 6 canisters (Height 120mm), lockable cap and PU bag
Li	iquid Nitrogen container	YDS-10-80	YDS-10-80-W	Includes PU bag only
YDS-10-80	Canister	TT10-80	TT10-80	$\Phi$ 63,120mm single tier canister. No goblet, suitable for YDS-10-80
	Cork (80)	GS-80-180	GS-80-180	Suitable for YDH-6-80/YDS-10-80
	Lockable cap	SG-80	SG-80	Suitable for container with 80mm neck opening
L	iquid Nitrogen container	YDS-13	YDS-13-LYS	Includes 6 canisters (Height 276mm), lockable cap and PU bag
L	iquid Nitrogen container	YDS-13	YDS-13-W	Includes PU bag only
YDS-13	Canister	TTS13-50	TTS13-50	$\Phi$ 38,276mm double-tier canister, 2 goblets included. Suitable for YDS-13
	Cork (50)	GS-50-180	GS-50-180	Suitable for YDS-3/YDH-3/YDS-6/YDS-10/YDS-13/YDS-25/YDS-50B
	Lockable cap	SG-50	SG-50	Suitable for container with 50mm neck opening

Model	Product	Product Model	Factory Code	Description and Accessories	
	Liquid Nitrogen container	YDS-15	YDS-15-YS	Includes 6 canisters (Height 120mm), lockable cap and PU bag	
	Liquid Nitrogen container	YDS-15	YDS-15-W	Includes PU bag only	
YDS-15	Canister	TT15-50	TT15-50	Φ38,120mm single tier canister, No goblet, suitable for YDS-15	
	Cork (50)	GS-50-210	GS-50-210	Suitable for YDS-15/YDS-20/YDS-30/YDS-35/YDS-20B/YDS-30B/YDS-35B	
	Lockable cap	SG-50	SG-50	Suitable for container with 50mm neck opening	
	Liquid Nitrogen container	YDS-20	YDS-20-LYS	Includes 6 canisters (Height 276mm), lockable cap and PU bag	
	Liquid Nitrogen container	YDS-20	YDS-20-YS	Includes 6 canisters (Height 120mm), lockable cap and PU bag	
	Liquid Nitrogen container	YDS-20	YDS-20-W	Includes PU bag only	
YDS-20	Canister	TT30-50	TT30-50	Φ38,120mm single tier canister, No goblet, suitable for YDS-20/YDS-30	
	Canister	TTS30-50	TTS30-50	$\Phi$ 38,276mm double-tier canister, 2 goblets included. Suitable for YDS-20/YDS-30	
	Cork (50)	GS-50-210	GS-50-210	Suitable for YDS-15/YDS-20/YDS-30/YDS-35/YDS-20B/YDS-30B/YDS-35B	
	Lockable cap	SG-50	SG-50	Suitable for container with 50mm neck opening	
	Liquid Nitrogen container	YDS-30	YDS-30-LYS	Includes 6 canisters(Height 276mm), lockable cap and PU bag, roller base is optional	
	Liquid Nitrogen container	YDS-30	YDS-30-YS	Includes 6 canisters(Height 120mm), lockable cap and PU bag, roller base is optional	
	Liquid Nitrogen container	YDS-30	YDS-30-W	Includes PU bag only, roller base is optional	
\/ <b>T</b> = 0 = 1	Canister	TT30-50	TT30-50	Φ38,120mm single tier canister, No goblet, suitable for YDS-20/YDS-30	
YDS-30	Canister	TTS30-50	TTS30-50	Φ 38,276mm double-tier canister, 2 goblets included. Suitable for YDS-20/YDS-30	
	Roller Base	YSC-465-5W	YSC-465-5W	"Suitable for tanks with diameter less than $\Phi$ 465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."	
	SmartCap	LT-50	LT-50-370-6H540	Used for monitoring real time level and temperature for containers with 50mm neck opening, 6 grooves and 540mm height. suitable for YDS-20/YDS-30	
	Cork (50)	GS-50-210	GS-50-210	Suitable for YDS-15/YDS-20/YDS-30/YDS-35/YDS-20B/YDS-30B/YDS-35B	
	Lockable cap	SG-50	SG-50	Suitable for container with 50mm neck opening	
	Liquid Nitrogen container	YDS-30-80	YDS-30-80-LYS	Includes 6 canisters (Height 276mm), lockable cap and PU bag, roller base is optional	
_	Liquid Nitrogen container	YDS-30-80	YDS-30-80-YS	Includes 6 canisters(Height 120mm), lockable cap and PU bag, roller base is optional	
	Liquid Nitrogen container	YDS-30-80	YDS-30-80-W	Includes PU bag only, roller base is optional	
\/DC =0 00	Canister	TT30-80	TT30-80	$\Phi$ 63,120mm single tier canister, No goblet, suitable for YDS-30-80	
YDS-30-80	Canister	TTS30-80	TTS30-80	Φ63,276mm double-tier canister, 2 goblets included. Suitable for YDS-30-80	
	Roller Base	YSC-465-5W	YSC-465-5W	"Suitable for tanks with diameter less than <b>Φ</b> 465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."	
	SmartCap	LT-80	LT-80-370-6H530	Used for monitoring real time level and temperature for containers with 80mm neck opening, 6 grooves and 530mm height. suitable for YDS-20-80/YDS-30-80	
	Cork (80)	GS-80-210	GS-80-210	Suitable for YDS-30-80/YDS-35-80/YDS-35B-80	
	Lockable cap	SG-80	SG-80	Suitable for container with 80mm neck opening	
	Liquid Nitrogen container	YDS-35	YDS-35-LYS	Includes 6 canisters(Height 276mm), lockable cap and PU bag, roller base is optional	
	Liquid Nitrogen container	YDS-35	YDS-35-YS	Includes 6 canisters(Height 120mm), lockable cap and PU bag, roller base is optional	
	Liquid Nitrogen container	YDS-35	YDS-35-W	Includes PU bag only, roller base is optional	
	Canister	TT35-50	TT35-50	Φ38,120mm single tier canister, No goblet, suitable for YDS-25/YDS-35	
YDS-35	Canister	TTS35-50	TTS35-50	Φ 38,276mm double-tier canister, 2 goblets included. Suitable for YDS-35	
	Roller Base	YSC-465-5W	YSC-465-5W	"Suitable for tanks with diameter less than $\Phi$ 465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."	
	SmartCap	LT-50	LT-50-450-6H580	Used for monitoring real time level and temperature for containers with 50mm neck opening, 6 grooves and 580mm height. suitable for YDS-25/YDS-35	
	Cork (50)	GS-50-210	GS-50-210	Suitable for YDS-15/YDS-20/YDS-30/YDS-35/YDS-20B/YDS-30B/YDS-35B	
	Lockable cap	SG-50	SG-50	Suitable for container with 50mm neck opening	
	Liquid Nitrogen container	YDS-35-80	YDS-35-80-LYS	Includes 6 canisters(Height 276mm), lockable cap and PU bag,roller base is optional	
	Liquid Nitrogen container	YDS-35-80	YDS-35-80-W	Includes PU bag only, roller base is optional	
	Canister	TT35-80	TT35-80	Φ63,120mm single tier canister, No goblet, suitable for YDS-35-80	
YDS-35-80	Canister	TTS35-80	TTS35-80	Φ 63,276mm double-tier canister, 2 goblets included. Suitable for YDS-35-80	
	Roller Base	YSC-465-5W	YSC-465-5W	"Suitable for tanks with diameter less than Φ 465.  Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."  Lead for popularing and temperature for experience with 90mm peek experience.	
	SmartCap	LT-80	LT-80-400-6H580	Used for monitoring real time level and temperature for containers with 80mm neck opening, 6 grooves and 580mm height. suitable for YDS-25-80/YDS-35-80	
	Cork (80)	GS-80-210	GS-80-210	Suitable for YDS-30-80/YDS-35-80/YDS-35B-80	
	Lockable cap	SG-80	SG-80	Suitable for container with 80mm neck opening	

# High Capacity Series for Storage or Transport (Round Canisters)

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# **Product List**

Model	Product	Product Model	Factory Code	Description and Accessories	
	Liquid nitrogen container	YDS-20B	YDS-20B-W	Includes PU bag only.	
	Canister	TT30-50	TT30-50	$\Phi$ 38,120mm single tier canister, No goblet, suitable for YDS-20/YDS-30	
YDS-20B	Canister	TTS30-50	TTS30-50	Φ38,276mm double-tier canister, 2 goblets included.Suitable for YDS-20/YDS-30	
	Cork (50)	GS-50-210	GS-50-210	Suitable for YDS-15/YDS-20/YDS-30/YDS-35/YDS-20B/YDS-30B/YDS-35B	
	Lockable cap	SG-50	SG-50	Suitable for container with 50mm neck opening	
	Liquid nitrogen container	YDS-30B	YDS-30B-W	Includes PU bag only, roller base is optional	
	Canister TT30-50		TT30-50	$\Phi$ 38,120mm single tier canister, No goblet, suitable for YDS-20/YDS-30	
YDS-30B	Canister	TTS30-50	TTS30-50	Φ38,276mm double-tier canister, 2 goblets included. Suitable for YDS-20/YDS-30	
103-306	Roller base	YSC-465-5W	YSC-465-5W	Suitable for tanks with diameter less than $\Phi$ 465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels.	
	Cork (50)	GS-50-210	GS-50-210	Suitable for YDS-15/YDS-20/YDS-30/YDS-35/YDS-20B/YDS-30B/YDS-35B	
	Lockable cap	SG-50	SG-50	Suitable for container with 50mm neck opening	
	Liquid nitrogen container	YDS-35B	YDS-35B-W	Includes PU bag only, roller base is optional	
	Canister	TT35-50	TT35-50	$\Phi$ 38,120mm single tier canister, No goblet, suitable for YDS-25/YDS-35	
YDS-35B	Canister	TTS35-50	TTS35-50	Ф38,276mm double-tier canister, 2 goblets included. Suitable for YDS-35	
103-336	Roller base	YSC-465-5W	YSC-465-5W	Suitable for tanks with diameter less than $\Phi$ 465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels.	
	Cork (50)	GS-50-210	GS-50-210	Suitable for YDS-15/YDS-20/YDS-30/YDS-35/YDS-20B/YDS-30B/YDS-35B	
	Lockable cap	SG-50	SG-50	Suitable for container with 50mm neck opening	

Model	Product	Product Model	Factory Code	Description and Accessories		
	Liquid Nitrogen container	YDS-35B-80	YDS-35B-80-W	Includes PU bag only, roller base is optional		
	Canister	TT35-80	TT35-80	$\Phi$ 63,120mm single tier canister, No goblet, suitable for YDS-35-80		
YDS-35B-80	Canister	TTS35-80	TTS35-80	Φ63,276mm double-tier canister, 2 goblets included. Suitable for YDS-35-80		
	Roller Base	YSC-465-5W	YSC-465-5W	"Suitable for tanks with diameter less than <b>Φ</b> 465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."		
	Cork (80)	GS-80-210	GS-80-210	Suitable for YDS-30-80/YDS-35-80/YDS-35B-80		
	Lockable cap	SG-80	SG-80	Suitable for container with 80mm neck opening		
	Liquid Nitrogen container	YDS-35B-125	YDS-35B-125-W	Includes PU bag only		
	Canister TT35-125		TT35-125	$\Phi$ 97,120mm single tier canister, No goblet, suitable for YDS-35-125		
	Canister	TTS35-125	TTS35-125	Φ97,276mm double-tier canister, 2 goblets included. Suitable for YDS-35-125		
YDS-35B-125	Rack	FTT-25-5H	FTT-25-5H	Used for storing 5*5 cryo boxes(2ml), 5 layers in total, with 5*5 cryo boxes included, suitable for YDS-35-125		
	Roller Base	YSC-465-5W	YSC-465-5W	"Suitable for tanks with diameter less than $\Phi 465$ . Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."		
	Cork (125)	GS-125-210	GS-125-210	Suitable for YDS-30-125/YDS-35-125/YDS-47-127/YDS-35B-125		
	Lockable cap	SG-125	SG-125	Suitable for container with 125mm and 127mm neck opening		
	Liquid Nitrogen container	YDS-50B	YDS-50B-W	Includes PU bag only, roller base is optional		
	Canister	TT50-50	TT50-50	$\Phi$ 38,120mm single tier canister, No goblet, suitable for YDS-50		
	Canister	TTS50-50	TTS50-50	$\pmb{\Phi}$ 38,276mm double-tier canister, 2 goblets included. Suitable for YDS-50		
YDS-50B	Roller Base	YSC-465-5W	YSC-465-5W	"Suitable for tanks with diameter less than $\Phi$ 465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."		
	Smart cap	LT-50-500-6H640	LT-50-500-6H640	Used for monitoring real time level and temperature for containers with 50mm neck opening, 6 grooves and 640mm height. suitable for YDS-50		
	Cork (50)	GS-50-180	GS-50-180	Suitable for YDS-3/YDH-3/YDS-6/YDS-10/YDS-13/YDS-25/YDS-50B		
	Lockable cap	SG-50	SG-50	Suitable for container with 50mm neck opening		

# **Dryshipper Series for Transportation (Round Canisters)**

Dryshipper Series for Transportation (Round Canisters) is designed for safe sample transportation under cryogenic conditions (vapour phase storage, temperature under -190°C). Since the risk of  $LN_2$  release is avoided, it is suitable for air transportation of samples.

- Rugged and Durable
- 3 Years Vacuum Warranty
- Cryo Absorbant

- Vapour Phase Storage
- Secure
- No LN<sub>2</sub> Spillage



# **Key Features**

- Straw and cryovial storage options
- Rugged and durable aluminium construction
- Designed to ensure no LN2 spillage
- Vapour phase cryogenic storage

- Faster LN<sub>2</sub> fill times
- Lockable lids
- 3 years vacuum warranty

## **Product Advantages**

#### Liquid Nitrogen Adsorption

 $Adsorbent\ materials\ are\ used\ to\ absorb\ and\ retain\ LN_2\ for\ safe\ transport.\ No\ spillover\ of\ LN_2\ can\ occur\ even\ when\ the\ tank\ is\ capsized.$ 

#### Stainless Steel Mesh

Special stainless steel mesh divides storage space and LN $_2$  absorbents to prevent absorbent materials from contaminating the samples.

#### Complete Accessories Set

All models are offered a variety of stainless steel canisters and polycarbonate cryogenic boxes. Locking cover is optional.



#### **Accessories**









Shipping Weight (kg)

# uid Nitrogen Storage Solutions

# **Dryshipper Series for Transportation (Round Canisters)**

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#### **Technical Parameters**

Model	YDH-3	YDH-6-80	YDH-10 -125	YDH-10 -125	YDH-15 -216	YDH-25 \ -216
Maximum Storage Capacit	у		,			,
No. of Canister	1	1	1	1	1	1
No. of Straws (0.5ml / EA)	132	374	854	_	_	_
No. of Straws (0.25ml / EA)	298	837	1940	_	_	_
No. of 2.0 ml Cryovials	_	_	_	100	300	500
No. of Boxes in (2ml per holder)	_	_	_	_	3	5
Performance						
Absorbable Volume of LN <sub>2</sub> (L)	1.3	2.9	3.4	3.4	6	9
Static Evapouration* (L/Day)	0.16	0.2	0.43	0.43	1.5	0.89
Vapour Phase Static Holding Time***(Day)	8	14	8	8	4	10
Dimensions						
Opening Diameter (mm)	50	80	125	125	216	216
Height (mm)	445	500	625	625	555	730
Outside Diameter (mm)	223	300	300	300	394	394
Canister Outside Diameter (mm)	38	63	97	_	_	_
Outside Height (mm)	120	120	120	_	_	_
Empty Weight (kg)	3.2	6.5	8.9	8.9	13	15
Full Weight (kg)	4.7	8.9	12.5	12.5	17.8	23

9.7

9.7

15.2

20.5

7.7

5.5

Model	Product	Product Model	Factory Code	Description and Accessories
	Dry Shipper	YDH-3	YDH-3-YS	Includes 1 canister (Height 120mm), lockable cap and PU bag
	Canister	TTH3-50	TTH3-50	Φ38,120mm single tier canister, No goblet, suitable for YDH-3
YDH-3	Smart cap	T-50	T-50-6H180	Used for monitoring real time temperature for containers with 50mm neck opening, 6 grooves and 180mm heigh cork, data can be transmitted to Haier's IoT platform. suitable for YDH-3
	Cork (50)	GS-50-180	GS-50-180	Suitable for YDS-3/YDH-3/YDS-6/YDS-10/YDS-13/YDS-25/YDS-50B
	Lockable cap	SG-50	SG-50	Suitable for container with 50mm neck opening
	Dry Shipper	YDH-6-80	YDH-6-80-YS	Includes 1 canister (Height 120mm), lockable cap and PU bag
YDH-6-80	Canister	TTH6-80	TTH6-80	Φ63.120mm single tier canister, No goblet, suitable for YDH-6-80
	Smart cap	T-80	T-80-6H180	Used for monitoring real time temperature for containers with 80mm neck opening, 6 grooves and 180mm heigh cork, data can be transmitted to Haier's IoT platform. suitable for YDH-6-80
	Cork (80)	GS-80-180	GS-80-180	Suitable for YDH-6-80/YDS-10-80
	Lockable cap	SG-80	SG-80	Suitable for container with 80mm neck opening
	Dry Shipper	YDH-10-125	YDH-10-125-FH	Includes 1 rack (4 layers),5*5 cryoboxes, lockable cap and PU bag
	Dry Shipper	YDH-10-125	YDH-10-125-S	Includes lockable cap and PU bag: No Rack
	Rack	FTT-25-4H	FTT-25-4H	Used for storing 5*5 cryo boxes (2ml), 4 layers in total, with 5*5 cryo boxes included, suitable for YDS-30-125/YDS-10-125
YDH-10-125	Canister	TTH10-125	TTH10-125	Φ97,120mm single tier canister, No goblet, suitable for YDH-10-125
	Smart cap	T-125	T-125-6H180	Used for monitoring real time temperature for containers with 125mm neck opening, 6 grooves and 180mm heigh cork, data can be transmitted to Haier's IoT platform, suitable for YDH-10-125/YDS-10-125
	Cork (125)	GS-125-180	GS-125-180	Suitable for YDS-10-125/YDH-10-125/YDS-50B-125
	Lockable cap	SG-125	SG-125	Suitable for container with 125mm and 127mm neck opening
	Protective case X	HKX-300/660	HKX-300/660	Suitable for YDH-10-125
	Dry Shipper	YDH-15-216	YDH-15-216-FH	Includes 1 rack (3 layers),9*9 cryoboxes , lockable cap and PU bag
	Rack (vertical type)	FDCJ-81-3H	FDCJ-81-3H	Used for storing 9*9 cryo boxes (2ml), 3 layers in total. With 9*9 cryoboxes included. Suitable for YDH-15-216
YDH-15-216	SmartCap	T-216	T-216-6H150	Used for monitoring real time temperature for containers with 216mm neck opening, 6 grooves and 150mm heigh cork, data can be transmitted to Haier's IoT platform. suitable for YDH-15-216
	Cork (216-2)	GS-216-150 (L)	GS-216-150 (L)	Suitable for YDH-15-216
	Lockable cap	SG-216	SG-216	Suitable for container with 216mm neck opening
	Dry Shipper	YDH-25-216	YDH-25-216-FH	Includes 1 rack (5 layers),9*9 cryoboxes , lockable cap and PU bag
	Rack (vertical type)	FDCJ-81-5H	FDCJ-81-5H	Used for storing 9*9 cryo boxes (2ml), 5 layers in total, with 9*9 cryoboxes included.suitable for YDH-25-216YDS-95-216
YDH-25-216	Smart cap	T-216	T-216-6H210	Used for monitoring real time temperature for containers with 216mm neck opening, 6 grooves and 210mm heigh cork, data can be transmitted to Haier's loT platform, suitable for YDH-25-216/YD5-65-216/YD5-95-216/YD5-115-216/YD5-147-216/YD5-175-216
	Cork (216)	GS-216-220-7	GS-216-220-7	Suitable for YDS-65-216/YDS-95-216/YDS-115-216/YDS-145-216/YDS-175-216/ YDH-15-216/YDH-25-216
	Lockable cap	SG-216	SG-216	Suitable for container with 216mm neck opening

<sup>\*</sup> Static evapouration and static holding time are theoretical values. Actual evapouration and holding time are affected by usage, atmospheric conditions and manufacturing tolerances.

<sup>\*\*</sup> Liquid Phase Static Holding Time: the amount of days it takes for all of the LN to evapourate out after container is filled with liquid nitrogen to pre-cool and reach thermal equilibrium and the liquid nitrogen filling rate reaches 100% under standard atmospheric condition.

<sup>\*\*\*</sup> Vapour Phase Static Holding Time: the amount of days it takes for all of the LN to evapourate out after pouring liquid nitrogen into container to makeing absorbent materials fully absorb LN under standard atmospheric condition.

# Self-pressurized Series for LN2 Storage and Supply

Liquid Nitrogen Supplement Series for LN₂ Storage and Supply incorporates the latest innovation, its unique design utilises the pressure generated from the vapourisation of a small amount liquid nitrogen to discharge LN₂ into other containers. Storage capacities range from 5 to 500 litres.

- 5 Year Vacuum Warranty
- Decant Valves
- Liquid Storage

- Stainless Steel Construction
- Pressure Raising
- Integral Safety Mechanisms



#### **Key Features**

- All models are equipped with safety valves
- All welded stainless steel construction

- Rotary ring construction
- Labelled valves for easy identification
- 5 year vacuum warranty

#### **Product Advantages**

#### Stainless Steel Structure

Stainless steel structure can withstand the most demanding environment and ensure long-lasting security. It also provides reduced evapouration loss rate, compared with conventional welding insulation tanks.

#### Variety of accessories

Each Self-pressurized Series for LN2 Storage and Supply model is equipped with a pressure valve, a drain valve, a relief valve, and a pressure gauge.

#### Casters

All models have four casters for better mobility and convenient use in different occasions.

#### **Accessories**





# Additional Series for Liquid Nitrogen Tank (Comparison between Standard Series and K Series)

#### Standard series





#### **New Functions of K Series**

Digital Display Level Gauge

DLZ-300 Digital display of fluid level Remote data transmission function

Large diameter vent valve

Rapid relief of over pressure Protection of safety valve

Pressure stabilizing valve

Stabilize fluid pressure during auto filling



# **Technical Parameters**

Model	YDZ-5	YDZ-15	YDZ-30	YDZ-50	YDZ-100 YDZ-100K				
Performance	Performance								
Volume of LN₂ (L)	5	15	30	50	100				
Static Evapouration (L/Day)	0.15	0.38	0.75	1	1.3				
LN <sub>2</sub> Output (L/Min)	≥2	≥2	≥3	≥3	≥4				
Dimensions									
Height (mm)	652	771	879	1009	1179				
Outside Diameter (mm)	354	404	454	506	606				
Empty Weight (kg)	19	26	32	54	86				
Full Weight (kg)	23.0	38.1	62.2	94.4	166.8				
Shipping Weight (kg)	32	37	53	63	107				
Pressure Parameters (MPA)		1. Standard working pressure 0.05, 2. Maximum working pressure 0.09, 3. First stage safety valve relief pressure 0.099, 4. Second stage safety valve release pressure 0.15, 5. Pressure gauge range 0-0.25							

Model	YDZ-150	YDZ-200 YDZ-200K	YDZ-240K	YDZ-300 YDZ-300K	YDZ-500 YDZ-500K
Performance					
LN₂ Capacity (L)	150	200	240	300	500
Static Evapouration (L/Day)	1.95	2.4	2.9	3.3	5.5
LN₂ Output (L/Min)	≥6	≥8	≥8	≥8	≥10
Dimensions					
Height (mm)	1208	1288	1405	1484	1607
Outside Diameter (mm)	706	758	758	858	1008
Empty Weight (kg)	107	145	159	193	273
Full Weight (kg)	228	307	353	435	677
Shipping Weight (kg)	137	179	188	223	342
Pressure Parameters (MPA)	Standard working pressur     Second stage safety valve				

<sup>\*</sup> Static evapouration and static holding time are theoretical values. Actual evapouration and holding time are affected by usage, atmospheric conditions and manufacturing tolerances.

Model	Product	Product Model	Factory Code	Description and Accessories
	Self-pressurized Filling tank	YDZ-5	YDZ-5-W	Includes single-layer transfusion hoses (ZG-DN10/1.5)
	Self-pressurized Filling tank	YDZ-15	YDZ-15-W	Includes single-layer transfusion hoses (ZG-DN10/1.5)
	Self-pressurized Filling tank	YDZ-30	YDZ-30-W	Includes single-layer transfusion hoses (ZG-DN10/1.5)
	Self-pressurized Filling tank	YDZ-50	YDZ-50-W	Includes single-layer transfusion hoses (ZG-DN10/1.5)
	Self-pressurized Filling tank	YDZ-100	YDZ-100-F	Includes single-layer transfusion hoses (ZG-DN10/1.5) and float-type liquidometer
	Self-pressurized Filling tank	YDZ-150	YDZ-150-F	Includes single-layer transfusion hoses (ZG-DN10/1.5) and float-type liquidometer
	Self-pressurized Filling tank	YDZ-200	YDZ-200-F	Includes single-layer transfusion hoses (ZG-DN10/1.5) and float-type liquidometer
	Self-pressurized Filling tank	YDZ-300	YDZ-300-F	Includes single-layer transfusion hoses (ZG-DN10/1.5) and float-type liquidometer
	Self-pressurized Filling tank	YDZ-500	YDZ-500-F	Includes single-layer transfusion hoses (ZG-DN10/1.5) and float-type liquidometer
	Self-pressurized Filling tank	YDZ-100K	YDZ-100-K	Includes single-layer transfusion hoses (ZG-DN10/1.5), Digital display level gauge (DLZ-300) and pressure stabilizer. can be used for auto filling
	Self-pressurized Filling tank	YDZ-200K	YDZ-200-K	Includes single-layer transfusion hoses (ZG-DN10/1.5), Digital display level gauge (DLZ-300) and pressure stabilizer. can be used for auto filling
	Self-pressurized Filling tank	YDZ-240K	YDZ-240-K	Includes single-layer transfusion hoses (ZG-DN10/1.5), Digital display level gauge (DLZ-300) and pressure stabilizer. can be used for auto filling
YDS	Self-pressurized Filling tank	YDZ-300K	YDZ-300-K	Includes single-layer transfusion hoses (ZG-DN10/1.5), Digital display level gauge (DLZ-300) and pressure stabilizer. can be used for auto filling
	Self-pressurized Filling tank	YDZ-320K	YDZ-320-K	Includes single-layer transfusion hoses (ZG-DN10/1.5), Digital display level gauge (DLZ-300) and pressure stabilizer. can be used for auto filling
	Self-pressurized Filling tank	YDZ-500K	YDZ-500-K	Includes single-layer transfusion hoses (ZG-DN10/1.5), Digital display level gauge (DLZ-300) and pressure stabilizer. can be used for auto filling
	Digital display level gauge	DLZ-300(YDZ-240K)	DLZ-300(YDZ-240K)	Digital display real time liquid nitrogen level of self pressurized tank, low power consumption battery, wireless transmission (YDZ-240K)
	Digital display level gauge	DLZ-300(YDZ-320K)	DLZ-300(YDZ-320K)	Digital display real time liquid nitrogen level of self pressurized tank, low power consumption battery, wireless transmission (YDZ-320K)
	Digital display level gauge	DLZ-300(YDZ-500K)	DLZ-300(YDZ-500K)	Digital display real time liquid nitrogen level of self pressurized tank, low power consumption battery, wireless transmission (YDZ-500K)
	Float-type Liquidometer	FZ-100	FZ-100	Suitable for YDZ-100
	Float-type Liquidometer	FZ-150	FZ-150	Suitable for YDZ-150
	Float-type Liquidometer	FZ-200	FZ-200	Suitable for YDZ-200
	Float-type Liquidometer	FZ-300	FZ-300	Suitable for YDZ-300
	Float-type Liquidometer	FZ-500	FZ-500	Suitable for YDZ-500

# **Product List**

Model	Product	Product Model	Factory Code	Description and Accessories
	LN pump-Hand held type	YDB-5S-50	YDB-5S-50	Suitable for tank (20L-50L) with 50mm neck opening
LN Pump	LN pump-Foot step type	YDB-8J-50	YDB-8J-50	Suitable for tank (20L-50L) with 50mm neck opening
	Roller Base	YSC-600-5W	YSC-600-5W	Suitable for tanks with diameter less than $\Phi$ 600. Suitable for GP 65L and 120L aluminium tank
	Roller Base	YSC-685-5W	YSC-685-5W	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels
Roller Base	Roller Base	YSC-465-5W	YSC-465-5W	"Suitable for tanks with diameter less than <b>Φ</b> 465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."
	Roller Base	YSC-525-5W	YSC-525-5W	Suitable for tanks with diameter less than $\Phi$ 525. Can be used for 47L alunimium tank, equipped with 5 universal wheels
YDS/YDZ Temperature Detector	Liquid Nitrogen Temperature Detector	ZTC-100A	ZTC-100A	Using platinum resistor to measure the temperature, and setting single-point level alarm through the temperature: with buzzer alarm function available
	Full Bottom Canister	MTT2-30	MTT2-30	Φ19, 120mm single tier canister (full bottom), No goblet, suitable for YDS-2-30
	Full Bottom Canister	MTT2-35	MTT2-35	Φ25, 120mm single tier canister (full bottom), No goblet, suitable for YDS-2-35
	Full Bottom Canister	MTT3-50	MTT3-50	Φ38, 120mm single tier canister (full bottom). No goblet, suitable for YDS-3
	Full Bottom Canister	MTTH3-50	MTTH3-50	Φ38, 120mm single tier canister (full bottom), No goblet, suitable for YDH-3
	Full Bottom Canister	MTT6-50	MTT6-50	Φ38, 120mm single tier canister (full bottom), No goblet, suitable for YDS-6
	Full Bottom Canister	MTT10-50	MTT10-50	Φ38, 120mm single tier canister (full bottom), No goblet, suitable for YDS-10
	Full Bottom Canister	MTT15-50	MTT15-50	Φ38, 120mm single tier canister (full bottom), No goblet, suitable for YDS-15
	Full Bottom Canister	MTT30-50	MTT30-50	Φ38, 120mm single tier canister (full bottom), No goblet, suitable for YDS-20/YDS-30
	Full Bottom Canister	MTT35-50	MTT35-50	Φ38, 120mm single tier canister (full bottom), No goblet, suitable for YDS-25、YDS-35
	Full Bottom Canister	MTT50-50	MTT50-50	Φ38, 120mm single tier canister (full bottom), No goblet, suitable for YDS-50
	Full Bottom Canister	MTTH6-80	MTTH6-80	Φ63, 120mm single tier canister (full bottom), No goblet, suitable for YDH-6-80
	Full Bottom Canister	MTT10-80	MTT10-80	Φ63, 120mm single tier canister (full bottom), No goblet, suitable for YDS-10-80
Full Bottom Canister	Full Bottom Canister	MTT30-80	MTT30-80	Φ63, 120mm single tier canister (full bottom) , No goblet, suitable for YDS-30-80
<b>G</b> ai <b>G</b>	Full Bottom Canister	MTT35-80	MTT35-80	Φ63, 120mm single tier canister (full bottom), No goblet, suitable for YDS-35-80
	Full Bottom Canister	MTTH10-125	MTTH10-125	Φ97, 120mm single tier canister (full bottom), No goblet, suitable for YDH-10-125
	Full Bottom Canister	MTT30-125	MTT30-125	Φ97, 120mm single tier canister (full bottom), No goblet, suitable for YDS-30-125
	Full Bottom Canister	MTT35-125	MTT35-125	Φ97, 120mm single tier canister (full bottom), No goblet, suitable for YDS-35-125
	Full Bottom Canister	MTT50-125	MTT50-125	Φ97, 120mm single tier canister (full bottom), No goblet, suitable for YDS-50B-125
	Full Bottom Canister	MTTS13-50	MTTS13-50	Φ38, 276mm double tiers canister (full bottom), with goblets included. suitable for YDS-13
	Full Bottom Canister	MTTS30-50	MTTS30-50	$\Phi$ 38, 276mm double tiers canister (full bottom), with goblets included. suitable for YDS-20/YDS-30
	Full Bottom Canister	MTTS35-50	MTTS35-50	$\Phi$ 38, 276mm double tiers canister (full bottom), with goblets included. suitable for YDS-25/YDS-35
	Full Bottom Canister	MTTS50-50	MTTS50-50	Φ38, 276mm double tiers canister (full bottom), with goblets included. suitable for YDS-50
	Full Bottom Canister	MTTS30-80	MTTS30-80	Φ63, 276mm double tiers canister (full bottom), with goblets included. suitable for YDS-30-80
	Full Bottom Canister	MTTS35-80	MTTS35-80	Φ63, 276mm double tiers canister (full bottom), with goblets included. suitable for YDS-35-80
	Full Bottom Canister	MTTS47-127-10T	MTTS47-127-10T	$\pmb{\Phi 72,276} mm  double  tiers  can ister  (full  bottom),  with  goblets  included.  suitable  for  YDS-47-127-10T$
	Full Bottom Canister	MTTS35-125	MTTS35-125	$\Phi$ 97, 276mm double tiers canister (full bottom), with goblets included. suitable for YDS-35-125
	Full Bottom Canister	MTTS47-127	MTTS47-127	Φ104, 276mm double tiers canister (full bottom), with goblets included. suitable for YDS-47-127
	Full Bottom Canister	MTTS50-125	MTTS50-125	Φ97, 276mm double tiers canister (full bottom), with goblets included. suitable for YDS-50B-125

Model	odel Product Product Model Factory Code		Description and Accessories	
	Vial cane	3X	3X	Used for holding 3 vials (2ml)
	Vial cane	6X	6X	Used for holding 6 vials (2ml), plastic sleeve not included
	Plastic cryo box	FH-25	FH-25	Used for storing 1.8ml/2ml vial (25 holes)
	Plastic cryo box	FH-81	FH-81	Used for storing1.8ml/2ml vial (81 holes)
	Plastic cryo box	FH-81/5.0	FH-81/5.0	Used for storing 4.5/4.7/5ml vial (81 holes)
	Plastic cryo box	FH-100	FH-100	Used for storing 1.8ml/2ml vial (interally threaded.100 holes)
	Plastic cryo box	YH-37	YH-37	Suitable for round rack to store 1.8ml/2ml vial (37 holes)
	Pastic Goblets	SNT-97	SNT-97	Suitable for diameter 97mm canisters
	Blood bag cassette	XH-25	XH-25	one bag per box,rocker arm type
	Blood bag cassette	XH-50	XH-50	one bag per box,drawer type
Cryobox	Blood bag cassette	XH-250	XH-250	one bag per box, rocker arm type
	Plastic sleeve for vial cane	5016-0002 (6-type)	5016-0002 (6X)	Suitable for vial cane that can hold 6 vials
	Stainless steel cryo box	BH-25/5.0	BH-25/5.0	Used for storing 4.5ml/4.7ml/5ml vials (25 holes)
	Stainless steel cryo box	BH-81/5.0	BH-81/5.0	Used for storing 4.5ml/4.7ml/5ml vials (81 holes)
	Valve adaptor	CGA295	CGA295	Used for connecting the valve of YDZ self-pressurized tank with single layer transfer hose
	Cryogenic solenoid valve	DN7.0 (ASCO 24V)	DN7.0 (ASCO 24V)	Suitable for piping pressure≤0.5MPa, pressure 0.3MPA
	Cryogenic solenoid valve	DN7.0 (JASA 24V)	DN7.0 (JASA 24V)	Suitable for piping pressure≤0.5MPa
	Low temperature solenoid valve	DN3.0 (ASCO 24V)	DN3.0 (ASCO 24V)	Suitable for piping pressure≤0.5MPa, pressure 0.8MPA
	Vacuum isolated hose	GRG-DN10/1.0	GRG-DN10/1.0	Diameter 10mm, Length 1m, special use for liquid nitrogen transferring, connection type for both side and length can be customized, charged by meter
Other	Vacuum isolated hose	GRG-DN10/2.0	GRG-DN10/2.0	Diameter 10mm, Length 2m, special use for liquid nitrogen transferring, connection type for both side and length can be customized, charged by meter
Accessories	Single-layer transfusion Hose	ZG-DN10/1.5	ZG-DN10/1.5	Diameter10mm, Length 1.5m, Suitable for YDZ series
	Single-layer transfusion Hose	BG-DN10/1.0	BG-DN10/1.0	Diameter 10mm, Length 1.0m, Suitable for liquid nitrogen pump YDB series
	Single-layer transfusion Hose	RG-DN10	RG-DN10	Diameter 10mm, used for liquid nitrogen transfering, fitting and length can be customized, charged in meters.
	Single-layer transfusion Hose	RG-DN6	RG-DN6	Diameter 6mm, used for liquid nitrogen transfering, fitting and length can be customized, charged in meters.
	Hose heat insulation cotton	BMT-DN10	BMT-DN10	Suitable for DN10 single layer metal hose, 1 meter
	Cryogenic gloves	ST-32	ST-32	overall length 32cm
	Cryogenic gloves	ST-45	ST-45	overall length 45cm
	Cryogenic gloves	ST-72	ST-72	overall length 72cm
	Level measuring scale	YWC-100	YWC-100	Measuring length100CM

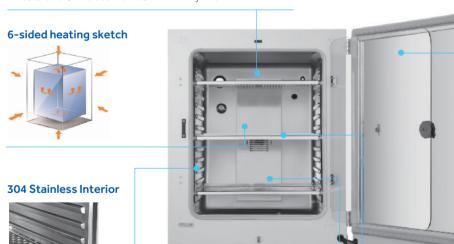
#### CO<sub>2</sub> Incubator

Haier Biomedical IoT enabled CO<sub>2</sub> incubator with 180°C dry heat sterilization provides a safe and secure reproducible growth environment for cell cultures.



#### IR Sensitive Control of CO<sub>2</sub> Concentration

The new IR sensor with high temperature resistance of  $190^{\circ}\text{C}$  is based on the NDIR measurement principle and uses a silicon MEMS transmitter to replace the traditional light source. It can withstand more than 300 dry heat sterilization cycles with a service life of up to 15 years and control accuracy of  $\pm 0.1\%$ . German IR infrared sensing technology, zero drift, without need for calibration, drift less than 0.3% within 2 years



# (2) Archived (5,0,0) (6-pm) (2) (8) Setting (7,0) (77) Sampler (7)

#### 7-inch Touchscreen

Displays CO<sub>2</sub> concentration and temperature data in real time. 15 years of data can be exported via USB

#### **Inner Door**

The door ensures the inside of the cabinet is sealed

#### **Outer Door**

The heated outer door prevents the condensation of the inner door

#### **Internal Partition**

Safety anti-slip design of pull out shelves



#### **Adjustable Feet**

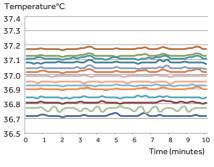
It can be double stacked

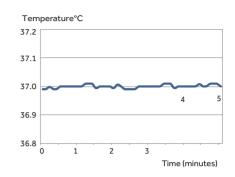
#### 180°C Dry-heat Sterilization

All internal components do not need to be disassembled and do not need separate autoclave sterilization to prevent secondary pollution. Cleaning consumables are not needed, one-button sterilization. German INFRARED CO2 sensor, NDIR light source technology drift < 0.3% within two years. The unit can withstand sterilization at  $180^{\circ}\text{C}$  with no disassembly and no manual calibration

#### **Precise and Accurate Temperature Control**

Controls the temperature precisely, within  $\pm 0.1^{\circ}$ C, with six-sided heating based on the fuzzy PID control principle, to provide a stable temperature to ensure the normal growth of cells throughout their life cycle.



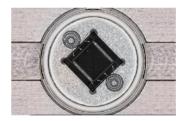


Uniformity of 27 measuring points <±0.3°C

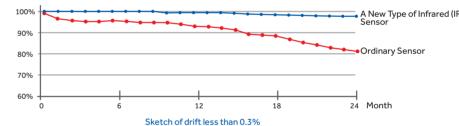
Central consistency point <±0.1°C

#### Precise CO<sub>2</sub> Concentration Using New IR Sensor Control Technology

Haier Biomedical's new IR Sensor technology uses NDIR measurement principles and withstands high temperatures of  $190^{\circ}$ C. The silicon MEMS transmitter can carry out more than 300 dry heat sterilization cycles to extend the service life to 15 years. Built-in temperature and humidity compensation technology reduces the impact of changes in humidity and temperature without the need for calibration after the high temperature sterilization. Five point calibration yields a higher measuring accuracy, sensitivity with less drift.

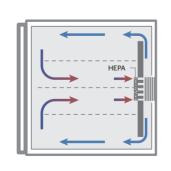


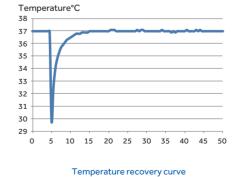
Silicon-based mems transmitter



Fast Environment Recovery for Optimal Cell Growth

Adopting active airflow control technology, and based on the fuzzy PID control principle, the parameters can be restored without overshoot. After opening the door for 30 seconds, the temperature and CO2 concentration can be quickly restored within 4 minutes. Even if multiple users share a CO2 incubator and frequently open and close the door, the stability and uniformity of the incubator can be ensured.





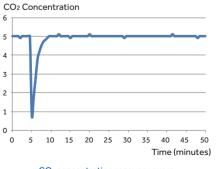


Illustration of purified airflow

(door open for 30s)

CO₂ concentration recovery curve (door open for 30s)

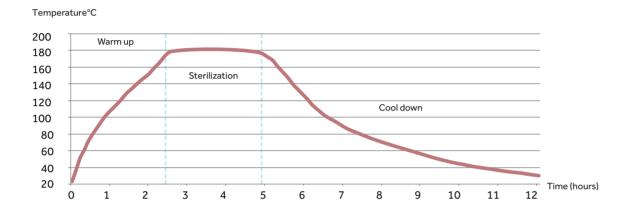
#### CO<sub>2</sub> Incubator

#### 180°C Dry-Heat Sterilization Technology Minimises Contamination

Easy and effective sterilization of microorganisms including bacteria, fungi and microplasma with strong resistance, at 180°C high temperatures without the need for consumables. Simply press the "sterilization key" to activate and complete the sterilization process automatically in just 12 hours.

Delivers sterility level within the chamber of all surfaces to meet WS/T367-2012 standards.

All components are sterilized during the process, there is no need to dissemble internal components (including CO<sub>2</sub> sensors) and decontaminate separately, thus avoiding secondary pollution.



#### **High Efficiency Microbial Filter**



The CO<sub>2</sub> inlet is equipped with a high-efficiency microbial filter, with 99.99% filtration efficiency for particles larger than or equal to  $0.2\mu m$  in diameter. It can effectively filter bacteria and dust particles in the CO<sub>2</sub> gas line to ensure the safety of experimental results.

#### **Easy to Clean Interior**





The working chamber is plasma electro polished, stamped stainless steel with wide-arc, laser welded corners. Bracketless shelving design ensures that it is quick and easy to clean.

#### Interactive Intelligent Display with Easy Touch Operation

Touch-sensitive screen with rapid sensing even in rubber gloves. Green indicates normal operational parameters, while a red warning display indicates abnormal, making it easy to view data at a glance. A red warning display and audible buzzer will alarm when water level is low.



Home screen red warning.



Announcement function designed for multiple persons to use the same incubator making it clear to all users on important matters.



Real-time display of operation data & real-time display of temperature, for CO<sub>2</sub> concentration and O<sub>2</sub> concentration, and the data during the culture cycle can be viewed at any time.



Operation mode clear management authority: three-levels of authority to ensure the security of data.

#### Real-time Monitoring



An IoT module with multi-screen interface provides real-time uploadset parameters, operation parameters, operation curves, records and event records through the IoT cloud platform. The operation ofincubator can be monitored at anytime and anywhere throughmobile APP or computer terminal. Alarm function, and servicefunction are available through an one button touch.

#### **Anti-Condensation Heating System to Reduce Pollution Risk**

The door on the CO<sub>2</sub> incubator radiates heat to the inner glass door, effectively preventing the glass door from forming condensation. The possibility of microbial contamination caused by the condensate water is eliminated.

#### Intelligent Control of Circulating Air Maintains Uniformity

Automatically adjusts the circulation of the air flow, optimizing the airflow to avoid air volatilization of samples and ensuring proper uniformity throughout the chamber.

#### **Comprehensive Safety Alarm System**

The system ensures the safety of experiments and processes by utilizing an independent temperature alarm system, including a sound light and remote reminder. Other alarms include CO<sub>2</sub> concentration, door ajar and water shortage.

#### CO<sub>2</sub> Incubator

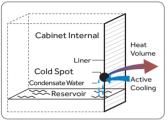
#### Innovative and User-friendly Design with Attention to Detail



Safe anti-slip design with pull out shelves.



Drainage design

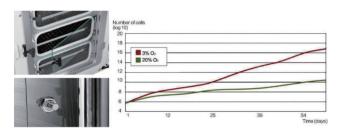


Active heat pipe condensation technology with any condensation directly returning to the reservoir.



Data traceable for 15 years with large storage capacity and data exportable through USB.

#### Accurate oxygen control (optional) for HCP-168



Three or six internal doors are available to reduce gas consumption

 $O_2$  concentration can be controlled within the range of 1-21% After opening the door for 30 seconds, the  $O_2$  concentration can recover to 5% in only 8 minutes and 1% in 18 minutes High precision zirconia  $O_2$  sensor, oxygen control accuracy 0.1% Advanced and reliable gas solenoid valve, low noise

#### The Quality of ISO Class 5 Clean Room Can Ensure a Better Cell Growth Environment



The optional HEPA high-efficiency filtration system combined with the unique air duct circulation design can continuously filter pollutants (biological pollutants and suspended particles) in the cabinet, ensuring that the incubator can reach the ISO class 5 clean room within 5 minutes after the external door is closed, which is equivalent to the class 100 environment of the 209 E standard of the united states

#### **Optional Accessories**

Name	Material Description
Oxygen module	Zirconia O₂ sensor, control accuracy: 0.1%; control range: 1-21% or +5-90%
3 Inner door (for HCP-168)	Reduce the temperature, humidity and carbon dioxide concentration in the box after opening the door, and minimize the mutual influence of multiple cultures
6 Inner door (for HCP-168)	Reduce the temperature, humidity and carbon dioxide concentration in the box after opening the door, and minimize the mutual influence of multiple cultures
8 Inner door (for HCP-258)	Reduce the temperature, humidity and carbon dioxide concentration in the box after opening the door, and minimize the mutual influence of multiple cultures
Water tray	Provides different bottom humidification methods
Roller base	Easy to move, prevent the ground bacteria contamination
HEPA filter	Ensure the cleanliness of the cabinet, suitable for users who open and close the door frequently, After opening the door for 30 seconds, the air inside the cabinet can be passed through HEPA filters within 5 minutes and reach ISO 5 clean room quality
Pressure reducing valve	Suitable for users with cylinder gas supply
Shelf	Increase the number of samples cultured 4 materials : SUS 304 single mirror surface SUS 304 double mirror surface tempering glass 100% Pure copper
Cylinder switching	Supports switching between multiple steel cylinders to ensure uninterrupted air intake into the incubator
Electromagnetic lock	Important tests can be dedicated by dedicated personnel to ensure test safety
Stacking bracket	Supports stacking of different volume models up and down, saving laboratory space

#### **Specifications**

	Model		HCP-80B	HCP-168B	HCP-258B	
Туре			Air Jacket	Air Jacket	Air Jacket	
31	Chamber Volume (L)		80	170	258	
	Interior Chamber		304 Stainless Steel			
Construction	Exterior Chamber		Cold-rolled steel powder coated			
	Access Port		/	35mm Diameter	35mm Diameter	
	Data Outputs		Remote Ala	arm Contacts, USB, and Optional	4-20mA	
	kg kg		75/95	95/130	110/155	
	Net/Gross Weight (approx)		165.3/209.4	209.4/286.6	242.5/341.7	
		mm	400*420*490	490*560*650	570*610*745	
Disconsions	Interior Dimensions (W*D*H)	in	15.7*16.5*19.3	19.3*22*25.6	22.4*24.0*29.3	
Dimensions	5 5	mm	625*684*735	714*812*887	794*867*985	
	Exterior Dimensions (W*D*H)	in	24.6*26.9*28.5	28.1*32*34.9	31.3*34.1*38.8	
		mm	700*770*910	890*800*1050	870*950*1150	
	Packing Dimensions (W*D*H)	in	27.6*30.3*35.8	35*31.5*41.3	34.3*37.4*45.3	
	Dimensions (W*D)	mm	380*300	473*434	550*484	
Shelves	Number Standard/Maximum		3/8	3/11	3/13	
Shelves	Max.Load Per Shelf/Total Load	kg	15/45	15/45	15/45	
	Construction			Perforated, Adjustable		
Flankataal	Rated Voltage Power Supply (V/	Hz)	115/60 220-240~50/60	115/60 220-240~50/60	115/60 220-240~50/60	
Electrical	Steri-Run Consumption (kw)		0.08 (0.75)	0.095 (1.1)	0.12 (1.2)	
	Heat Emission to Environment a	at 37°C	0.06KWh/h	0.075KWh/h	0.1KWh/h	
Control	Controller		Microprocessor	Microprocessor	Microprocessor	
	Display		7 "LCD Screen	7 "LCD Screen	7 "LCD Screen	
	Control Accuracy		0.1%	0.1%	0.1%	
	Range		0-20%	0-20%	0-20%	
	Alarm Range		±0.5%	±0.5%	±0.5%	
00	Inlet Pressure		12-17Psi (0.8-1.2 Bar)			
CO <sub>2</sub>	Gas Purity			≥99.5%		
	Sensor		IR	IR	IR	
	Recovery Time at 5vol%/CO <sub>2</sub> for a 30 Second Door Opening* (	min)	4	4	4	
	CO2 Inlet Filter (µm)		<0.2	<0.2	<0.2	
	Control		0.1%	0.1%	0.1%	
	Range		1-21%	1-21%/+5-90%	1-21%	
O <sub>2</sub> (Optional)	Tracking Alarm		±0.5%	±0.5%	±0.5%	
Oz (Optiorial)	Inlet Pressure		0.08-0.12MPa	0.08-0.12MPa	0.08-0.12MPa	
	Gas Purity		Min.99.5	Min.99.5	Min.99.5	
	O2 Inlet		1/8" hose (barbed)	1/8" hose (barbed)	1/8" hose (barbed)	
	High/Low Temperature		Υ	Υ	Υ	
	Remote Alarm		Y	Y	Υ	
Alarms	Excessive CO <sub>2</sub> Concentration		Y	Y	Υ	
	Water Shortage		Y	Y	Y	
	Sensor Error		Y	Y	Y	
	Door Ajar		Y	Y	Y	
	Control Accuracy (°C)		0.1	0.1	0.1	
	Range			Ambient temperature+3-55°C		
Temperature	Uniformity (°C)		±0.3	±0.3	±0.3	
Parameter	Ambient Range (°C)		18-34	18-34	18-34	
	Sensor		2PT1000	2PT1000	2PT1000	
	Recovery Time at 37°C for a 30 Second Door Opening*(r	nin)	4	4	4	
Sterilization	Cycle Temperature		180°	C on internal Surfaces and Shelv	es	
Cycle	Cycle Duration		Under 12 Hours	Under 12 Hours	Under 12 Hours	
Humidity	RH (Relative Humidity)		Setting 37°C ≥90%	Setting 37°C ≥90%	Setting 37°C ≥90%	
- Idiriidity	Humidity Reservoir		Max.1.5L/min 0.5L	Max.3.5L/min 0.5L	Max.5.5L/min 0.5L	
	HEPA Filter		Υ	Υ	Υ	
	Pressure Reducing Valve		Y	Υ	Υ	
	4-20mA		Y	Υ	Y	
	The Cylinder Switch		Y	Υ	Y	
Option	Shelf		Y	Υ	Y	
	Water Tray		Y	Υ	Y	
	3 Inner Door		N	Υ	N	
	6 Inner Door		N	Υ	N	
	8 Inner Door		N	N	N	
	Oxygen Module		Υ	Υ	Y	
Others	Oxygeninodule		·			

# **Pipette Series**

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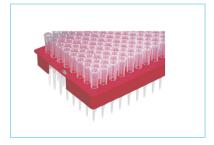




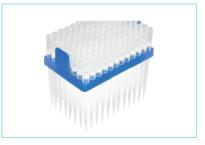




#### **Product Features**



Internal thread design ensures secure sealing and reproducibility



Filtered tips. Uniform filter for improved accuracy



Fine scale makes the suction volume clearly discernible

# **Standard Tips**





- Made of medical-grade polypropylene (PP), the tips are high-temperature-resistant, high-pressure-resistant, and resist deformation
- Optimized pore size ensures smooth sample suction
- Various packaging methods, including bulk packing and EO sterile racked
- High clarity and perpendicularity ensure pipetting accuracy
- RNase, DNase, human DNA and Pyrogen Free

CAT.NO.	Description	Unit Quantity	Packing Specification
122001	10µl tip, bag-packed, basic type, non-sterile	20000	1000pcs/bag, 20bags/case
121002	10µl tip, box-packed, sterile	4800	96pcs/box,10boxes/inner box, 50boxes/case
122018	200µl tip, bag-packed, basic type, non-sterile, yellow	20000	1000pcs/bag, 20bags/case
121019	200µl tip, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
122034	200µl extended bag-packed, non-sterile	20000	1000pcs/bag, 20bags/case
122025	200µl with scale, bag-packed basic type, non-sterile	20000	1000pcs/bag, 20bags/case
111027	200µl with scale, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
122029	200µl extended bag-packed, non-sterile	20000	1000pcs/bag, 20bags/case
121030	200µl extended, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
122038	300µl extended bag-packed, non-sterile	5000	1000pcs/bag, 5bags/case
121039	300µl extended, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
122044	10µl extended bag-packed, non-sterile	20000	1000pcs/bag, 20bags/case
121045	10µl extended, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
122051	1000µl bag-packed, non-sterile, blue	5000	1000pcs/bag, 5bags/case
122052	1000µl bag-packed, non-sterile	5000	1000pcs/bag, 5bags/case
121053	1000µl, box-packed, sterile	5000	100pcs/box, 10boxes/inner box, 50boxes/case
122061	1250µl bag-packed, non-sterile, blue	5000	1000pcs/bag, 5bags/case
122062	1250µl bag-packed, non-sterile	5000	1000pcs/bag, 5bags/case
121063	1250µl, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case

# **Pipette Series**

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# **Filter Pipette Tips**





#### **Product Features**

- Made of medical-grade polypropylene (PP)
- Super hydrophobicity, the hydrophobic filter element forms a strong barrier to the aerosol, eliminating the risk of cross contamination between the sample and the pipette
- ${\color{red} \bullet} \ \, \text{Ultra-fine grinding moulding technology, demoulding without agent guarantees better product quality}$
- Ultra-fine point ensures smooth sample absorption, the innovative design to ensure good flexibility, sealing and compatibility

CAT.NO.	Description	Unit Quantity	Packing Specification
112005	10µl with filter, bag-packed basic type, non-sterile	10000	1000pcs/bag, 10bags/case
111006	10µl with filter, box-packed, sterile	4800	96pcs/box,10boxes/inner box, 50boxes/case
112008	20µl with filter, bag-packed basic type, non-sterile	10000	1000pcs/bag, 10bags/case
111009	20µl with filter, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
112011	50µl with filter, bag-packed basic type, non-sterile	10000	1000pcs/bag, 10bags/case
111012	50µl with filter, box-packed, sterile, yellow	4800	96pcs/box, 10boxes/inner box, 50boxes/case
111013	50µl with filter, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
112015	100µl with filter, bag-packed basic type, non-sterile	10000	1000pcs/bag, 10bags/case
111016	100µl with filter, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
112022	200µl with filter, bag-packed basic type, non-sterile	10000	1000pcs/bag, 10bags/case
111023	200µl with filter, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
111031	200µl extended with filter, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
111035	200µl extended with filter, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
112041	300µl extended with filter, bag-packed, non-sterile	5000	1000pcs/bag, 5bags/case
111042	300µl extended with filter, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
112048	10µl extended with filter, bag-packed, non-sterile	10000	1000pcs/bag, 10bags/case
111049	10µl extended with filter, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
112057	1000µl with filter, bag-packed basic type, non-sterile, blue	5000	1000pcs/bag, 5bags/case
112058	1000µl with filter, bag-packed basic type, non-sterile	5000	1000pcs/bag, 5bags/case
111059	1000µl with filter, box-packed, sterile	5000	100pcs/box,10boxes/inner box,50boxes/case
112066	1250µl with filter, bag-packed basic type, non-sterile, blue	5000	1000pcs/bag, 5bags/case
112067	1250µl with filter, bag-packed basic type, non-sterile	5000	1000pcs/bag, 5bags/case
111068	1250µl with filter, box-packed, sterile, blue	4800	96pcs/box, 10boxes/inner box, 50boxes/case
111069	1250µl with filter, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case

## **Low Retention Tips**



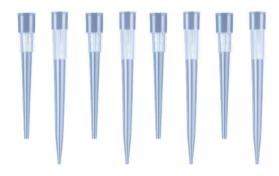
- The coated inner wall delivers super hydrophobicity to effectively reduce the risk of the sample binding to the surface
- Low retention tips help to reduce the loss of precious samples and improve their recovery rate
- Pipette tips reduce the adhesion of DNA, enzymes, proteins, cells, as well as other viscous materials to the tip surface
- Low retention tips can be used for pipetting detergent-containing solutions (e.g. PRC master mixes, buffers, or enzyme solutions)
- Suitable for applications that require high micro-pipetting accuracy
- RNase, DNase, human DNA and Pyrogen Free

CAT.NO.	Description	Unit Quantity	Packing Specification
122003	10µl low retention, bag-packed, non-sterile	20000	1000pcs/bag, 20bags/case
121004	10µl low retention, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
111007	10µl with filter, low retention, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
111010	20µl with filter, low retention, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
111014	50µl with filter, low retention, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
111017	100µl with filter, low retention, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
122020	200µl low retention, bag-packed, non-sterile	20000	1000pcs/bag, 20bags/case
121021	200µl low retention, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
111024	200µl with filter, low retention, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
122026	200µl with scale, low retention, bag-packed, non-sterile	20000	1000pcs/bag, 20bags/case
111028	200µl with scale, low retention, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
122032	200µl extended low retention, bag-packed, non-sterile	20000	1000pcs/bag, 20bags/case
111033	200µl extended with filter, low retention, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
122036	200µl extended low retention, bag-packed, non-sterile	20000	1000pcs/bag, 20bags/case
111037	200µl extended with filter, low retention, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
122040	300µl extended low retention, bag-packed, non-sterile	5000	1000pcs/bag, 5bags/case
111043	300µl extended with filter, low retention, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
122046	10µl extended low retention, bag-packed, non-sterile	20000	1000pcs/bag, 20bags/case
121047	10µl extended low retention, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
111050	10µl extended with filter, low retention, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
122054	1000µl low retention, bag-packed, non-sterile	5000	1000pcs/bag, 5bags/case
121055	1000µl low retention, box-packed, non-sterile	5000	100pcs/box, 10boxes/inner box, 50boxes/case
121056	1000µl low retention, box-packed, sterile	5000	100pcs/box, 10boxes/inner box, 50boxes/case
111060	1000µl with filter, low retention, box-packed, sterile	5000	100pcs/box, 10boxes/inner box, 50boxes/case
122064	1250µl low retention, bag-packed, non-sterile	5000	1000pcs/bag, 5bags/case
121065	1250µl low retention, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
111070	1250µl with filter, low retention, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case

# **Pipette Series**

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# **Rainin Tips**

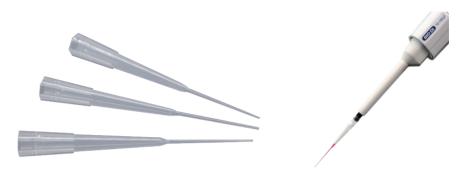


#### **Product Features**

- Designed to fit Rainin pipettes for precise liquid handling
- 100% medical grade polypropylene (PP) for transparency and flexibility to ensure precise dispensing
- Manufactured and packaged in a class 100,000 cleanroom
- RNase, DNase, Pyrogen Free

CAT.NO.	Description	Unit Quantity	Packing Specification
122071	RAININ, 20µl bag-packed, non-sterile	10000	500pcs/bag, 20bags/box
122072	RAININ, 20µl low retention, bag-packed, non-sterile	10000	500pcs/bag, 20bags/box
122075	RAININ, 200µl bag-packed, non-sterile	10000	1000pcs/bag, 10bags/box
122076	RAININ, 1000μl bag-packed, non-sterile	5000	1000pcs/bag, 5bags/box
122077	RAININ, 20µl low retention, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
122078	RAININ, 200µl low retention, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
122079	RAININ, 1000µl low retention, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
122080	RAININ, basic 20µl bag, non-sterile	10000	500pcs/bag, 20bags/box
122073	RAININ, basic 200µl bag, non-sterile	10000	1000pcs/bag, 10bags/box
122074	RAININ, basic 1000µl bag, non-sterile	5000	1000pcs/bag, 5bags/box
122081	RAININ, 20µl plain, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
122082	RAININ, 200µl plain, box-packed, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case
122083	RAININ, 1000µl plain box, sterile	4800	96pcs/box, 10boxes/inner box, 50boxes/case

# Sample Loading Tips



- Made of medical grade polypropylene which can withstand high temperature and pressure without deformation
- The surface of the tip is uniform and smooth, with high vertical transparency
- ${\color{gray} \bullet} \ \ \text{No mold release agent, no additives, to ensure that the experimental process is free of contamination } \\$
- $\, \bullet \,$  RNase, DNase, Pyrogen and Endotoxin Free  $\,$
- High versatility and good adaptability, can be applied to the mainstream pipettes on the market
- Pipette tip is fine-tuned for easy insertion into the bottom of gel sampling holes or narrow containers

CAT.NO.	Description	Unit Quantity	Packing Specification
1322079	200µl bag-packed, for gel sampling	1000	1000pcs/bag,10bags/box

# **Pipette Series**

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#### **Serological Pipette**



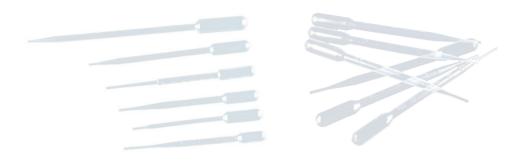


#### **Product Features**

- Multiple volume sizes available, different color rings on the tube head for easy identification of different models
- Bi-directional scale design for easy reading of pipette volume, negative scale increases pipette capacity for larger
- Clear and accurate scale with a precision of ±2% of total volume
- Filter cartridge prevents samples, aerosols and water vapor from entering the pipette to avoid cross-contamination
- Adaptable to a wide range of pipettes on the market with rubber adapters
- Multiple packaging options, easy-tear paper-plastic single packs as well as large packs for easy batch use and reduced packaging waste
- Irradiated, meet SAL 10<sup>-6</sup>, DNase/RNase free, no pyrogenic endotoxin

CAT.NO.	Description	Unit Quantity	Packing Specification
692109	1ml (yellow) disposable serum pipette, sterile	1000	50pcs/bag, 20bags/box
692110	2ml (green) disposable serum pipettes, sterile	1000	50pcs/bag, 20bags/box
692111	5ml (blue) disposable serum pipettes, sterile	500	50pcs/bag, 10bags/case
692112	10ml (orange) disposable serum pipettes, sterile	500	50pcs/bag, 10bags/case
692113	25ml (red) disposable serum pipettes, sterile	250	25pcs/bag, 10bags/case
692114	50ml (violet) disposable serum pipettes, sterile	200	25pcs/bag, 8bags/case
692115	100ml (black) disposable serum pipettes, sterile	120	20pcs/bag, 6bags/case

# **Pasteur Pipette**



- Good fluidity of the tube wall, easy to control the pipetting volume during operation
- $\, ^{\circ} \,$  High transparency, clear scale, easy to observe the pipetting process in real time
- Made of high quality material, it can be used for pipetting liquids in all kinds of containers
- Individual packages, easy to use, well sealed, reproducible pipetting
- Each package is individually labeled with a lot number for quality tracking and traceability
- Enzymatic, Pyrogenic, Endotoxic, Cytotoxic and Hemolytic Free
- EO sterilized to ensure contamination-free experiments

CAT.NO.	Description	Unit Quantity	Packing Specification
603008	Pasteur Pipette, 1 mL, 145mm, individually wrapped, E.O. sterilized	1000	250pcs/bag, 4bags/case
603009	Pasteur Pipette, 2 mL, 150mm, individually wrapped, E.O. sterilized	1000	250pcs/bag, 4bags/case
603010	Pasteur Pipette, 3 mL, 162mm, individually wrapped, E.O. sterilized	1000	250pcs/bag, 4bags/case
603011	Pasteur Pipette, 3 mL extended, 183mm, individually wrapped, E.O. sterilized	600	200pcs/bag, 3bags/case
603012	Pasteur Pipette, 3 mL extended, 183mm, bulk	600	200pcs/bag, 3bags/case
603013	Pasteur Pipette, 1 mL, bulk	5000	100pcs/bag, 50bags/ case
603014	Pasteur Pipette, 2 mL, bulk	5000	100pcs/bag, 50bags/ case
603015	Pasteur Pipette, 3 mL, bulk	5000	100pcs/bag, 50bags/ case
603016	Pasteur Pipette, 3 mL extended, 195mm, bulk	4500	100pcs/bag, 45bags/ case
603017	Pasteur Pipette, 5mL, 210mm, bulk	2500	100pcs/bag, 25bags/ case
603018	Pasteur Pipette, 10 mL, bulk	1200	100pcs/bag, 12bags/ case

# **Centrifuge Tube Series**

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#### **Centrifuge Tubes**



#### **Product Features**

- Tube and lid made of medical-grade polypropylene (PP) USP Class VI standards
- 15ml/50ml conical bottom design, high clarity, clear black line scale and pre-set white writing area
- The double-threaded tube cap is easy to grip for single-handed operation and reliable sealing
- Flat cap design; the cap top can be used as a sample information marking area
- RNase and DNase Free
- Gamma sterilized, sterile and pyrogen-free
- Various packaging options, including sterile racked packing, sterile bag-packed bulk packing, and non-sterile packing.









A large white frosted writing area

Flat and frosted tube cap facilitates marking

Clear printed scale

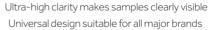
CAT.NO.	Description	Unit Quantity	Packing Specification
311005	15ml centrifuge tube, sterile	500	25pcs/bag, 20bags/box
311006	50ml centrifuge tube, sterile	500	25pcs/bag, 20bags/box

# **Microcentrifuge Tubes**



- Made of USP Class VI, medical-grade polypropylene (PP), free from release agent, plasticizer, bacteriostatic agent, and heavy metals
- High-clarity tube for convenient sample observation
- The unique cap design with flat surface for writing, delivers enhanced sealing and enables single-handed operation
- Temperature range: -80°C~120°C







Frosted writing area



Snap-on safety cap to ensure safe centrifugation to maximize operational safety during centrifugation

CAT.NO.	Description	Unit Quantity	Packing Specification
311001	0.6ml microcentrifuge tube, non-sterile	10000	1000pcs/box, 10box/ctn
311002	1.5ml microcentrifuge tube, non-sterile	5000	500/box, 10boxes/case
311004	2.0ml microcentrifuge tube, non-sterile	5000	500/box, 10boxes/case

# **Centrifuge Tube Series**

# **PCR Series**

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# **Centrifuge Bottle**

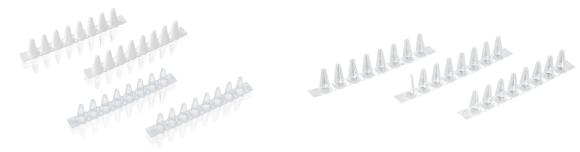


#### **Product Features**

- Unique design for highly-effective two-way sealing
- Design increases max centrifugal limits
- Temperature range: -80°C-120°C
- Clear scale for accurate and convenient data reading
- Sterile and RNase, DNase, human DNA and Pyrogen Free

CAT.NO.	Description	Unit Quantity	Packing Specification
321007	225ml centrifuge bottle, sterile	36	6pcs/bag, 6bags/case
321008	250ml centrifuge bottle, sterile	102	6pcs/bag, 17bags/case
321009	500ml centrifuge bottle, sterile	36	6pcs/bag, 6bags/case

#### **PCR Tubes**





- $\, \bullet \,$  Made from pure polypropylene, it has thin and uniform wall for optimal heat transfer
- The easy-to-open tube and tube lid fasten securely to prevent evaporation and leakage
- RNase, DNase, human DNA and Pyrogen Free
- Suitable for the mainstream PCR and real-time PCR instruments





CAT.NO.	Description	Unit Quantity	Packing Specification
211001	0.2ml PCR single tube, thin-wall, flat cover	10000	500pcs/bag, 2bags/box, 10boxes/case
222002	0.1ml PCR 8-strip tube (with flat cover)	1250	125sets/bag, 10bags/case
222003	0.1ml PCR 8-strip tube (with flat cover), white	1250	125sets/bag, 10bags/case
292004	0.1ml PCR 8-strip tubetype B (with flat cover)	1250	125sets/bag, 10bags/case
292005	0.1ml PCR 8-strip tubetype B (with flat cover), white	1250	125sets/bag, 10bags/case
292006	0.2ml PCR 8-strip tubetype B (with flat cover)	1250	125sets/bag, 10bags/case
292007	0.2ml PCR 8-strip tubetype B (with flat cover), white	1250	125sets/bag, 10bags/case
222008	0.2ml PCR 8-strip tube (with flat cover)	1250	125strips/bag, 10bags/case
272009	0.2ml PCR 8-strip tube (with convex cover)	1250	125sets/bag, 10bags/case

#### **PCR Series**

#### **Cell Culture Series**

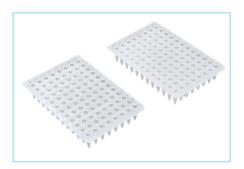
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#### **PCR 96-Well Plates**



#### **Product Features**

- High-quality polypropylene, manufactured in accordance with high quality standards to produce a reliable plate, delivering excellent uniformity across experiments.
- With a maximum volume of 0.3ml, it is suitable for 0.2ml PCR instruments
- The thin wall of the tube ensures uniform heat transfer and superior light transmittance
- The whole surface of the plate is smooth, firm, and resists deformation
- RNase, DNase, human DNA and Pyrogen Free



Clear and easy to read and easy to operate and identify



Prominent open profile reduces the risk of cross contamination

CAT.NO.	Description	Unit Quantity	Packing Specification
232024	0.2ml 96-well PCR plate, no skirt edge	50	10pcs/box, 5boxes/case
242025	0.2ml 96-well PCR plate, half skirt edge	50	10pcs/box, 5boxes/case
242026	0.2ml 96-well PCR plate, half skirt edge, high-temperature-resistant and anti-static	50	10pcs/box, 5boxes/case
232029	0.1ml 96-well PCR plate, no skirt edge	50	10pcs/box, 5boxes/case
242030	0.1ml 96-well PCR plate, half skirt edge	50	10pcs/box, 5boxes/case
242031	0.1ml 96-well PCR plate, half skirt edge, high-temperature-resistant and anti-static	50	10pcs/box, 5boxes/case
252032	0.1ml 96-well PCR plate, full skirt edge	50	10pcs/box, 5boxes/case
252035	0.1ml 96-well PCR plate with full skirt, H1 cutting angle, dual material (plate color random)	50	10pcs/box, 5boxes/case
252033	0.1ml 96-well PCR plate, full skirt edge, high-temperature-resistant and anti-static	50	10pcs/box, 5boxes/case

#### **Cell Culture Flask**



- High quality polystyrene material, 100,000 clean workshop manufacturing
- TC treated and non-TC treated specifications can be used for cell adhesion culture and cell suspension culture
- Large mouth design for easy removal of cell suspension or digestive cells
- Two closure type to choose: One type is with septum cap, which has a 0.22µm membrane that allows sterile air exchange or a leak resistant seal, the other is with screw cap.
- Product irradiation sterilization. RNase, DNase, Pyrogen and Endotoxin Free
- Scales and marking areas on both sides of the bottle

CAT.NO.	Description	Unit Quantity	Packing Specification
633017	25cm², sealed cap, wall culture, TC treatment	200	10pcs/bag, 20bags/case
634018	25cm², vented cap, wall culture, TC treatment	200	10pcs/bag, 20bags/case
633019	75cm², sealed cap, wall culture, TC treatment	100	5pcs/bag, 20bags/case
634020	75cm², vented cap, wall culture, TC treatment	100	5pcs/bag, 20bags/case
633021	175cm², sealed cap, wall culture, TC treatment	40	5pcsbag, 8bags/case
634022	175cm², vented cap, wall culture, TC treatment	40	5pcsbag, 8bags/case
633023	225cm², sealed cap, wall culture, TC treatment	25	5pcs/bag, 5bags/case
634024	225cm², vented cap, wall culture, TC treatment	25	5pcs/bag, 5bags/case
631025	25cm², sealed cap, suspension culture, untreated	200	10pcs/bag, 20bags/case
632026	25cm², vented cap, suspension culture, untreated	200	10pcs/bag, 20bags/case
631027	75cm², sealed cap, suspension culture, untreated	100	5pcs/bag, 20bags/case
632028	75cm², vented cap, suspension culture, untreated	100	5pcs/bag, 20bags/case
631029	175cm², sealed cap, suspension culture, untreated	40	5pcs/bag, 8bags/case
632030	175cm², vented cap, suspension culture, untreated	40	5pcs/bag, 8bags/case
631031	225cm², sealed cap, suspension culture, untreated	25	5pcs/bag, 5bags/case
632032	225cm², vented cap, suspension culture, untreated	25	5pcs/bag, 5bags/case

#### **Cell Culture Series**

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#### **Erlenmeyer Flask**



#### **Product Features**

- Two type of materials are available: PC/PETG with baffled bottom/flat bottom
- Two closure type to choose: One type is with septum cap, which has a 0.22µm membrane that allows sterile air exchange or a leak resistant seal, the other is with screw cap.
- Single independent vacuum packaging, easy to use, avoid cross contamination
- Product irradiation sterilization. RNase, DNase, Pyrogen and Endotoxin Free
- The scale on the outer wall of the bottle is clear and precise, and the inner wall is smooth
- Both suspension cells and adherent cells can be cultured

CAT.NO.	Description	Unit Quantity	Packing Specification
641049	125ml, PETG, sealed cap	24	1pcs/bag, 24bags/case
641050	250ml, PETG, sealed cap	12	1pcs/bag, 12bags/case
641051	500ml, PETG, sealed cap	12	1pcs/bag, 12bags/case
641052	1000ml, PETG, sealed cap	12	1pcs/bag, 12bags/case
642053	125ml, PETG, vented cap	24	1pcs/bag, 24bags/case
642054	250ml, PETG, vented cap	12	1pcs/bag, 12bags/case
642055	500ml, PETG, vented cap	12	1pcs/bag, 12bags/case
642056	1000ml, PETG, vented cap	12	1pcs/bag, 12bags/case
643057	125ml, PC, sealed cap	24	1pcs/bag, 24bags/case
643058	250ml, PC, sealed cap	12	1pcs/bag, 12bags/case
643059	500ml, PC, sealed cap	12	1pcs/bag, 12bags/case
643060	1000ml, PC, sealed cap	12	1pcs/bag, 12bags/case
644061	125ml, PC, vented cap	24	1pcs/bag, 24bags/case
644062	250ml, PC, vented cap	12	1pcs/bag, 12bags/case
644063	500ml, PC, vented cap	12	1pcs/bag, 12bags/case
644064	1000ml, PC, vented cap	12	1pcs/bag, 12bags/case
645065	125ml, PC, sealed cap	24	1pcs/bag, 24bags/case
645066	250ml, PC, sealed cap	12	1pcs/bag, 12bags/case
645067	500ml, PC, sealed cap	12	1pcs/bag, 12bags/case
645068	1000ml, PC, sealed cap	12	1pcs/bag, 12bags/case
646069	125ml, PC, vented cap	24	1pcs/bag, 24bags/case
646070	250ml, PC, vented cap	12	1pcs/bag, 12bags/case
646071	500ml, PC, vented cap	12	1pcs/bag, 12bags/case
646072	1000ml, PC, vented cap	12	1pcs/bag, 12bags/case

#### **Cell Culture Plate**



- A wide range of sizes, materials and shapes to suit different experimental needs of the laboratory
- There are TC treated and non-TC treated options which is suitable for cell suspension culture and cell adhesion culture
- Sterile, no enzyme, no heat source and endotoxin, individually packed to ensure the stability of the experimental results
- High transparency polystyrene material can be used for microscope observation
- Raised edge on wells to prevent cross contamination
- The left side and the upper side have alphanumeric labels, easy to distinguish and identify, easy to record
- Suitable for most plate readers and automated equipment

CAT.NO.	Description	Unit Quantity	Packing Specification
612001	96-well, blister box/F-bottom (flat bottom), TC treatment, wall culture	100	1pcs/bag, 100bags/case
612002	48-well, blister box/F-bottom (flat bottom), TC treatment, wall culture	100	1pcs/bag, 100bags/case
612003	24-well, blister box/F-bottom (flat bottom), TC treatment, wall culture	100	1pcs/bag, 100bags/case
612004	12-well, blister box/F-bottom (flat bottom), TC treatment, wall culture	100	1pcs/bag, 100bags/case
612005	6-well, blister box/F-bottom (flat bottom), TC treatment, wall culture	100	1pcs/bag, 100bags/case
611006	96-well, blister box/F-bottom (flat bottom), untreated, suspension culture	100	1pcs/bag, 100bags/case
611007	48-well, blister box/F-bottom (flat bottom), untreated, suspension culture	100	1pcs/bag, 100bags/case
611008	24-well, blister box/F-bottom (flat bottom), untreated, suspension culture	100	1pcs/bag, 100bags/case
611009	12-well, blister box/F-bottom (flat bottom), untreated, suspension culture	100	1pcs/bag, 100bags/case
611010	6-well, blister box/F-bottom (flat bottom), untreated, suspension culture	100	1pcs/bag, 100bags/case

#### **Cell Culture Series**

#### **Bacteria Culture Series**

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#### **Cell Culture Dish**





#### **Product Features**

- Assorted sizes, styles and surface finishes for different culture requirements
- Designed with raised edges, easy to stack and transport
- Polystyrene material, surface treatment, suitable for cell adhesion growth
- Vents designed to maintain gas exchange under sterile conditions
- Sterile, Enzyme, Pyrogen and Endotoxin Free, individual packaging, to ensure the stability of the experimental results

CAT.NO.	Description	Unit Quantity	Packing Specification
622011	6cm, plastic sealed bag/easy grip, TC treated, wall culture 500		10pcs/bag, 50bags/case
622012	10cm, plastic sealed bag/easy grip. TC treated, wall culture	300	10pcs/bag, 30bags/case
622013	15cm, plastic sealed bag/easy grip, TC treatment, wall culture	100	5pcs/bag, 20bags/case
621014	6cm, plastic sealed bag/easy grip, untreated, suspension culture	500	10pcs/bag, 50bags/case
621015	10cm, plastic sealed bag/easy grip, untreated, suspension culture	300	10pcs/bag, 30bags/case
621016	15cm, plastic sealed bag/easy grip, untreated, suspension culture	100	5pcs/bag, 20bags/case

#### **Bacteria Culture Dish**



- It can be used for microbial inoculation, marking, coating, isolation of bacteria and other microbial culture experiments
- A variety of specifications, can cover different laboratory experimental needs
- High quality polystyrene material, high transparency, uniform thickness, easy to observe
- Smooth surface design and flat bottom for more uniform cell culture
- Designed with raised edges, easy to stack and transport
- The product has been sterilized and tested, RNase, DNase, Pyrogen and Endotoxin Free

CAT.NO.	Description	Unit Quantity	Packing Specification
811001	811001 60*15mm, 1 cell/3 vents, E.O. sterilized		10pcs/bag, 100 bags*10pcs/case
811002	65*15mm, with counting compartment/3 vent, E.O. sterilized	1000	10pcs/bag, 100 bags*10pcs/case
811003	90*15mm, 1 cell/3 vent, E.O. sterilized	500	10pcs/bag, 50 bags*10pcs/case
811004	90*18mm, 1 cell, bagged, sterilized	500	20pcs/bag, 25bags/case
811005	90*18mm, 1 cell, bagged, sterilized	500	10pcs/bag, 50bags/case
811006	90*15mm, 3 cells, bagged, sterilized	500	10pcs/bag, 50bags/case
811007	90*20mm, 1 cell, not TC treated, sterilized	500	10pcs/bag, 50bags/case

# **Reagent Bottle Series**

# **Filter Series**

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# **Reagent Bottles**



#### **Product Features**

- Smooth and shiny surface, to reduce adherence of residues, easy to clean
- Chemically-stable, high-quality, durable and transparent for storage of various reagents
- The scale is clear, durable, and the bottle is easy to write and mark
- Crack-resistant and suitable for a wide temperature range to suit most requirements
- PET material, high transparency, easy to observe and distinguish
- Individually packed, aseptic treatment, Enzyme, Pyrogen and Endotoxin Free, to ensure experimental results

CAT.NO.	Description	Unit Quantity	Packing Specification
711001	8mL bottle (Clear)	1000	1000pcs/case
711002	15mL bottle (Clear)	1000	1000pcs/case
711003	30mL bottle (Clear)	400	400pcs/case
711004	60mL bottle (Clear)	650	650pcs/case
711005	125mL bottle (Clear)	350	350pcs/case
711006	250mL bottle (Clear)	200	200pcs/case
711007	500mL bottle (Clear)	100	100pcs/case
711008	1000mL bottle (Clear)	50	50pcs/case
713009	1000mL bottle, narrow opening (Clear)	50	50pcs/case
721010	8mL bottle (Brown)	1000	1000pcs/case
721011	15mL bottle (Brown)	1000	1000pcs/case
721012	30mL bottle (Brown)	400	400pcs/case
721013	60mL bottle (Brown)	650	650pcs/case
721014	125mL bottle (Brown)	350	350pcs/case
721015	250mL bottle (Brown)	200	200pcs/case
721016	500mL bottle (Brown)	100	100pcs/case
721017	1000mL bottle (Brown)	50	50pcs/case
732018	60ml, PETG, leak-proof design, resistant to -80 low temperature, immersed in water 2PSI 2min without leakage	192	24pcs/bag, 8bags/case
732019	125ml, PETG, leak-proof design, resistant to -80 low temperature, immersed in water 2PSI 2min without leakage	96	24pcs/bag, 4bags/case
732020	250ml, PETG, leak-proof design, resistant to -80 low temperature, immersed in water 2PSI 2min without leakage	60	30pcs/bag, 2bags/case
732021	500ml, PETG, leak-proof design, resistance to -80 low temperature, immersed in water 2PSI 2min without leakage	48	24pcs/bag, 2bags/case
732022	1000ml, PETG, leak-proof design, resistant to -80 low temperature, immersed in water 2PSI 2min without leakage	24	12pcs/bag, 2bags/case
732023	125ml, PET, leak-proof design, resistance to -80 low temperature, immersed in water 2PSI 2min without leakage	96	24pcs/bag, 4bags/case
732024	250ml, PET, leak-proof design, resistance to -80 low temperature, immersed in water 2PSI 2min without leakage	224	56pcs/bag, 4bags/case
732025	500ml, PET, leak-proof design, resistance to -80 low temperature, immersed in water 2PSI 2min without leakage	80	40pcs/bag, 2bags/case
732026	1000ml, PET, leak-proof design, resistance to -80 low temperature, immersed in water 2PSI 2min without leakage	40	20pcs/bag, 2bags/case

# **Syringe Filter**



- Made of high quality polycarbonate material, sterile treatment, high cleanliness, avoid contamination
- The expansion of the filter membrane area increases the flow rate and filtration amount during the filtration operation, and improves the filtration efficiency
- $\bullet \ \, {\sf Secondary} \ injection \ molding \ process \ with stands \ higher \ pressure \ and \ improves \ filtration \ speed$
- A variety of specifications and packaging to meet different experimental needs
- $\, \bullet \,$  RNase, DNase, Pyrogen and Endotoxin Free, safe and reliable
- $\, \bullet \,$  Each filter is individually packaged for ease of use

CAT.NO. Description		Unit Quantity	Packing Specification
1001301 30mm needle filter, PVDF hydrophilic, 0.22 µm, sterile		100	100pcs/case
1001302	30mm needle filter, PES, 0.22 µm, sterile	100	100pcs/case

#### **Filter Series**

# **Biobank Series**

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#### **Vacuum Filter**





#### **Product Features**

- The filter cup and liquid storage bottle are made of polystyrene, a polymer material with high transparency and comply with USP Class-6 standards
- Selection of high-quality membrane material with a strong bacterial retention ability and a bactericidal filtration: LRV>7
- A variety of membrane materials, a variety of specifications (500 mL, 1000 mL), to meet different experimental needs
- The filter cup has high flow rate and large flux, which can shorten the filtration time and improve the filtration efficiency
- The filter nozzles is angled to enable the liquid level to be read with ease. Filter adapter for three hose diameters
- Secure leak-free connection between filter cup, membrane, filter nozzle and liquid storage bottle
- Aseptic packaging, RNase, DNase, Pyrogen and Endotoxin Free

CAT.NO.	Description	Unit Quantity	Packing Specification	
1002501	500mL vacuum filter, complete, PES, 0.22µm, sterile	12	1pcs/bag, 12bags/case	
1002502	500mL vacuum filter, complete, PES, 0.45µm, sterile	12	1pcs/bag, 12bags/case	
1002503	500mL vacuum filter, complete, PVDF, 0.22µm, sterile	12	1pcs/bag, 12bags/case	
1002504	500mL vacuum filter, complete, PVDF, 0.45µm, sterile	12	1pcs/bag, 12bags/case	
1002505	500mL vacuum filter, receiver bottle, sterile	24	1pcs/bag, 24bags/case	
1002506	500mL vacuum filter, upper cup, PES, 0.22µm, sterile	24	1pcs/bag, 24bags/case	
1002507	500mL vacuum filter, upper cup, PES, 0.45µm, sterile	24	1pcs/bag, 24bags/case	
1002508	500mL vacuum filter, upper cup, PVDF, 0.22µm, sterile	24	1pcs/bag, 24bags/case	
1002509	500mL vacuum filter, upper cup, PVDF, 0.45µm, sterile	24	1pcs/bag, 24bags/case	
1002510	1000mL vacuum filter, complete, PES, 0.45µm, sterile	12	1pcs/bag, 12bags/case	
1002511	1000mL vacuum filter, complete, PES, 0.22µm, sterile	12	1pcs/bag, 12bags/case	
1002512	1000mL vacuum filter, complete, PVDF, 0.45µm, sterile	12	1pcs/bag, 12bags/case	
1002513	1000mL vacuum filter, complete, PVDF, 0.22µm, sterile	12	1pcs/bag, 12bags/case	
1002514	1000mL vacuum filter, receiver bottle, sterile	12	1pcs/bag, 12bags/case	
1002515	1000mL vacuum filter, upper cup, PES, 0.22µm, sterile	24	1pcs/bag, 24bags/case	
1002516	1000mL vacuum filter, upper cup, PES, 0.45µm, sterile	24	1pcs/bag, 24bags/case	
1002517	1000mL vacuum filter, upper cup, PVDF, 0.22µm, sterile	24	1pcs/bag, 24bags/case	
1002518	1000mL vacuum filter, upper cup, PVDF, 0.45µm, sterile	24	1 pcs/bag, 24bags/case	

#### **Sample Storage Tubes**



- Rigorous cytoxicology-testing ensures pyrogen, RNase, DNase and endotoxins levels are less than 0.005EU/mL
- Complying with ANSI/SLAS international standards, suitable for a variety of automated storage and processing equipment
- Laser etching process and three-code information integration technology are adopted to ensure the security and redundancy to provide an extra layer of protection
- $\, \bullet \,$  The snap design of the base is easy to use and prevents scratches after freezing
- Designed and manufactured to prevent leakage at -98kpa to meet the IATA dangerous goods PI650 standard

CAT.NO.	Description	Unit Quantity	Packing Specification
413001	0.5ml (ultra-low temperature volume 0.5ml), slender, external spin tube, bottom prefabricated QR code, side wall prefabricated digital code and 1D barcode; box side prefabricated digital code and 1D barcode, box bottom prefabricated QR code, 8°12 standard SBS layout	7680	96pcs/box, 80boxes/case
413002	0.75ml (ultra-low temperature volume 0.75ml), slender, external spin tube, bottom prefabricated QR code, side wall prefabricated digital code and 1D barcode: box side prefabricated digital code and 1D barcode, box bottom prefabricated QR code, 8*12 standard SBS layout	6720	96pcs/box, 70boxes/case
413003	1.0ml (ultra-low temperature volume 1.0ml), slender, external spin tube, bottom prefabricated QR code, side wall prefabricated digital code and 1D barcode: box side prefabricated digital code and 1D barcode, box bottom prefabricated QR code, 8°12 standard SBS layout	4800	96pcs/box, 50boxes/case
413004	2.0ml (ultra-low temperature volume 1.9ml), slender, external spin tube, bottom prefabricated QR code, side wall prefabricated digital code and 1D barcode: box side prefabricated digital code and 1D barcode. box bottom prefabricated QR code, 6°48 standard SBS layout		48pcs/box, 50boxes/case
413005	2.0ml (ultra-low temperature volume 1.9ml), slender, external spin tube, bottom prefabricated QR code, side wall prefabricated digital code and 1D barcode: box side prefabricated digital code and 1D barcode, box bottom prefabricated QR code, 10*10 square layout	3000	100pcs/box, 30boxes/case
413006	0.5ml (ultra-low temperature volume 0.5ml), slender, external spin tube, bottom prefabricated QR code, side wall prefabricated digital code and 1D barcode	13200	220pcs/bag, 60bags/box
413007	1.0ml (ultra-low temperature volume 1.0ml), slender, external spin tube, bottom prefabricated QR code, side wall prefabricated digital code and 1D barcode	6000	150pcs/bag, 40bags/case
413008	2.0ml (ultra-low temperature volume 1.9ml), slender, external spin tube, bottom prefabricated QR code, side wall prefabricated digital code and 1D barcode	3500	70ticks/bag, 50bags/box
413009	Cryopreservation box, matching 0.5ml slender external rotation cryopreservation tube, prefabricated digital code and 10 barcode on the side of the box, prefabricated QR code at the bottom of the box, 8*12 standard SBS layout	80	80boxes/case
413010	Cryopreservation box, matching 0.75ml slender external rotation cryopreservation tube, prefabricated digital code and 1D barcode on the side of the box, prefabricated QR code at the bottom of the box, 8*12 standard SBS Jayout	70	70boxes/case
413011	Cryopreservation box, matching 1.0ml slender external rotation cryopreservation tube, prefabricated digital code and 1D barcode on the side of the box, prefabricated QR code at the bottom of the box, 8*12 standard SBS Jayout	50	50boxes/case
413012	Cryopreservation box, matching 2.0ml slender external rotation cryopreservation tube, prefabricated digital code and 1D barcode on the side of the box, prefabricated QR code at the bottom of the box, 6*8 standard SBS layout	50	50boxes/case
413013	Cryopreservation box, matching 2.0ml slender external rotation cryopreservation tube, prefabricated digital code and 1D barcode on the side of the box, prefabricated QR code at the bottom of the box, 10°10 standard SBS layout	30 30boxes/case	

#### **Biobank Series**

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# **Universal Cryopreservation**





#### **Product Features**

- Detachable color label design, color classification of samples according to requirements
- Clear scale and large writing area
- Internal rotation and external rotation are designed to meet different sample storage requirements
- Multi-color tube cap design, according to the needs of the sample color classification
- 2D tube bottom prefabricated two-dimensional code, laser etching technology, wear and corrosion resistant
- Pipe wall prefabricated bar code and digital code, three codes in one, to meet different scene identification

CAT.NO.	Description	Unit Quantity	Packing Specification		
423001	Paper freezer box, 2 inches 81 compartments, white, flip lid	50	50boxes/case		
423002	Paper freezer box, 2 inches 100 compartments, white, flip lid	50	50boxes/case		
421003	81-well PP freezer box, -121-90°C, monochrome box, white, yellow, red, blue, green optional, flat lid	50	50boxes/case		
421004	100-well PP freezer box, -121-90°C, monochrome box, white, yellow, red, blue, green optional, flat lid	50	50boxes/case		
422005	25-well PC freezer box, -196-121°C, monochrome box, purple, red, blue, green optional, flat lid	50	50boxes/case		
422006	81-well PC freezer box, -196-121°C, monochrome box, purple, red, blue, green optional, flat lid	50	50boxes/case		
422007	100-well PC freezer box, -196-121°C, monochrome box, purple, red, blue, green optional, flat lid	50	50boxes/case		
422010	3-inch 81-well PC freeze storage box, -196-121°C, single color one box, white, red, blue, green optional, flat lid	20	20boxes/case		
422008	Supporting 0.5ml external rotation cryopreservation tube, 100-well PC cryopreservation box, -196-121°C, blue (supporting H-ES05B; H-ES05D-TS)	50	50boxes/case		
422009	Supporting 1.5ml external rotation cryopreservation tube, 100-well PC cryopreservation box, -196-121°C, blue (supporting H-ES15B; H-ES15D-TS)	50	50boxes/case		
423010	0.5ml cryopreservation tube, external rotation, self-standing bottom, with scale, with white writing area, -196°C - 121°C	1000	100pcs/bag, 10bags/case		
423011	1.5ml cryopreservation tube, external rotation, self-supporting bottom, with scale, with white writing area, -196°C - 121°C	1000	100pcs/bag, 10bags/case		
423012	2ml cryopreservation tube, external rotation, self-supporting bottom, with O-ring, with scale, with white writing area, -196°C - 121°C	1000	100pcs/bag, 10bags/case		
423013	5ml cryopreservation tube, external rotation, self-supporting bottom, with O-ring, with scale, with white writing area, -196°C - 121°C	1000	100pcs/bag, 10bags/case		
423014	1ml cryopreservation tube, internal rotation, self-supporting bottom, with O-ring, with scale, with white writing area, -196°C - 121°C	1000	100pcs/bag, 10bags/case		
423015	2ml cryopreservation tube, internal rotation, self-supporting bottom, with O-ring, with scale, with white writing area, -196°C - 121°C	1000	100pcs/bag, 10bags/case		
423016	0.5ml cryopreservation tube (boxed), external rotation, self-supporting bottom, with scale, with white writing area, -196°C - 121°C	1200	100pcs/box, 12boxes/case		
423017	1.5ml cryopreservation tube (boxed), external rotation, self-supporting bottom, with scale, with white writing area, -196°C - 121°C	1200	100pcs/box, 12boxes/case		
423018	0.5ml 2D cryopreservation tube (bagged), external rotation, self-supporting bottom, with scale, bottom QR code, side barcode + digital code, -196 <sup>8</sup> C-121 <sup>o</sup> C	1000 100pcs/bag, 10bags/ca			
423019	1.5ml 2D cryopreservation tube (bagged), external rotation, self-supporting bottom, with scale, bottom QR code, side barcode + digital code, -196 <sup>8</sup> C-121 <sup>o</sup> C	1000 100pcs/bag, 10bags/cas			
423020	0.5ml 2D cryopreservation tube (boxed), external rotation, self-supporting bottom, with scale, bottom QR code, side barcode + digital code, -196°C-121°C	1200 100pcs/box, 12boxes/case			
423021	1.5ml 2D cryopreservation tube (boxed), external rotation, self-supporting bottom, with scale, bottom QR code, side barcode + digital code, -196°C-121°C	1200	100pcs/box, 12boxes/case		

# **Frozen Storage Rack**



- Manufactured using advanced capacitor energy storage resistance welding to produce solid weld with smooth finish
- Various specifications for different storage requirements-frozen storage tube (box), SBS frozen storage tube (box), centrifugal tube, etc
- Handle is designed to reduce frost and ice build-up around handle
- Customised racking is available for different types of storage containers or models of freezer

CAT.NO.	Material	Вох Туре	Freezer Layou (Rows*Columns)	Rack Dimensions (D*W*H)(mm)	Maximum Box Dimensions (mm)	Packing Dimensions (D*W*H)(mm)	Unit Quantity	Packing Specification
433001	SUS201	2 inch	5*5	686*141*291	133*133*53	730*160*310	1	1pcss/box
433002	SUS304	2 inch	5*5	686*141*291	133*133*53	730*160*310	1	1pcs/box
433003	SUS201	2 inch	5*4	552*141*291	133*133*53	590*160*310	1	1pcs/box
433004	SUS304	2 inch	5*4	552*141*291	133*133*53	590*160*310	1	1pcs/box
433005	SUS201	2 inch	5*3	417*141*291	133*133*53	460*160*310	1	1pcs/box
433006	SUS304	2 inch	5*3	417*141*291	133*133*53	460*160*310	1	1pcs/box
433007	SUS201	2 inch	4*4	552*141*240	133*133*53	590*160*250	1	1pcs/box
433008	SUS304	2 inch	4*4	552*141*240	133*133*53	590*160*250	1	1pcs/box
434040	SUS304	2 inch	4*5	686*141*233	133*133*53	720*160*320	1	1pcs/box
434041	SUS304	2 inch	3*3	421*141*175	133*133*53	455*160*190	1	1pcs/box
433009	SUS304	3 inch	3*5	686*141*291	133*133*94	730*160*310	1	1pcs/box
433010	SUS304	3 inch	3*4	552*141*291	133*133*94	590*160*310	1	1pcs/box
433011	SUS304	For 0.5ml tube	7*5	686*141*291	133*133*37	730*160*310	1	1pcs/box
434036	SUS304	2 inch	6*4	558*140*320	133*133*53	610*160*335	1	1pcs/box
433012	SUS304	2 inch	5*5	686*141*291	133*133*53	730*160*310	1	1pcs/box
433013	SUS304	2 inch	5*4	552*141*291	133*133*53	590*160*310	1	1pcs/box
433037	SUS304	2 inch	5*3	417*141*291	133*133*53	460*160*310	1	1pcs/box
433014	SUS304	3 inch	3*5	686*141*291	133*133*94	730*160*310	1	1pcs/box
433015	SUS304	3 inch	3*4	552*141*291	133*133*94	590*160*310	1	1pcs/box
433016	SUS304	2 inch	4*4	552*141*240	133*133*53	590*160*250	1	1pcs/box
433017	SUS304	For 1.0ml/2ml sbs tube	5*7	686*141*291	86*128*50.8	730*160*310	1	1pcs/box
433018	SUS304	For 0.5ml sbs tube	7*7	686*141*291	86*128*38.5	730*160*310	1	1pcs/box
433019	SUS304	For 1.0ml/2ml sbs tube	5*6	552*141*291	86*128*50.8	590*160*250	1	1pcs/box
433020	SUS201	For 1.0ml/2ml sbs tube	5*7	686*141*291	86*128*50.8	730*160*310	1	1pcs/box
433021	SUS201	For 0.5ml sbs tube	7*7	686*141*291	86*128*38.5	730*160*310	1	1pcs/box
433022	SUS201	For 1.0ml/2ml sbs tube	5*6	552*141*291	86*128*50.8	590*160*250	1	1pcs/box
433023	SUS304	2 inch	6 layer	141*141*332	133*133*53	160*160*350	1	1pcs/box
433025	SUS304	2 inch	8 layer	141*141*442	133*133*53	160*160*480	1	1pcs/box
433026	SUS304	2 inch	10 layer	141*141*552	133*133*53	160*160*560	1	1pcs/box
433028	SUS304	2 inch	12 layer	141*141*662	133*133*53	160*160*680	1	1pcs/box
433029	SUS304	15ml centrifuge tube	5*22*2 layer	686*141*291	/	730*160*310	1	1pcs/box
433030	SUS304	50ml centrifuge tube	3*16*2 layer	686*141*291	/	730*160*310	1	1pcs/box
434038	SUS304	96-well plates	13*7	686*141*291	127.4*85.1*16.1	730*160*310	1	1pcs/box

#### **Product Portfolio**

#### -86°C ULT Freezer



#### **ULT Water Cooling**

#### -40°C Biomedical Freezer





#### -30°C Biomedical Freezer



# -25°C Biomedical Freezer



#### **Combined Refrigerator** and Freezer



#### **Pharmacy Refrigerator**



#### Spark Free Freezer/Refrigerator





#### **Product Portfolio**

#### **Blood Bank Refrigerator**





#### **Transport Cooler**



# Biological Safety Cabinet and Laminar Flow Cabinet

#### **Liquid Nitrogen Container**





#### Consumables



#### Walk-in Cold Room

