Haier Biomedical
Intelligent Protection of Life Science

LIQUID NITROGEN
STORAGE SOLUTIONS

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North America

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FEBRUARY 2022

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Haier Biomedical International

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Company Profile

Sichuan Haishengjie Cryogenic Technology Co., Ltd. is a holding subsidiary of Qingdao Haier Biomedical Co., Ltd. (Stock Code: 688139) and based in Chengdu. As a global cryogenic product manufacturing base, the facility specializes in the research, development, and production of liquid nitrogen containers and liquid nitrogen related equipment.

Extra large LCD and cryogenic intelligent management, establishing a new global standard

The chief R&D scientist is Professor Li Zongji, the former chief technology officer of Chart Industries in US, who has 40 years of experience in the development and manufacturing of liquid nitrogen tanks. Eight industry experts make up the consulting team which supports technical development and product optimization development and product optimization.

From its inception the business has been committed to the R&D and manufacture of liquid nitrogen related equipment. Our broad range of products include:
- Liquid nitrogen supply system (liquid nitrogen tower and cryogenic tube)
- Liquid nitrogen biological container
- Sample transfer equipment
- Monitoring management and software system
- Liquid nitrogen freezing technology for food (ice cream, seafood etc.)
- Liquid nitrogen thermostat technology

Haier Biomedical products and solutions are widely used across various fields, such as medical treatment, animal husbandry, scientific research, military industry, food, and industrial. Haier Biomedical have obtained ISO9001 and EU MDD (Medical Device Directive) certification.

4	5	40
The company has four invention patents.	The company has five software copyrights and appearance patents.	The company has obtained more than 40 utility model patents.

Key Members

Dr Liu Zhanjie is the Founder and General Manager of Haier Biomedical Co., Ltd., and former General Manager and Chief Engineer of Qingdao Haier Medical and Laboratory Products Co., Ltd.

Dr Liu received his doctoral degree in refrigeration and cryogenic engineering from the University of Shanghai for Science and Technology in 2001. Dr Liu has won multiple accolades and made significant contributions to the world of science and technology innovation.

Board Chairman:
Dr Liu Zhanjie

Tang Wenming, graduated from Chengdu University of Technology, founded Chengdu Shengjie Cryogenic Equipment Co., Ltd in 2011 and served as the general manager. Following Haier Biomedical's financing in 2017, Mr. Tang established a new company, Sichuan Haishengjie Cryogenic Technology Co., Ltd. During his tenure, Mr. Tang has developed innovative solutions, directed and acquired multiple patents. At the same time, Mr. Tang also signed a cooperation agreement with the CNNC as a qualified professional supplier with the China Aerospace First Academy.

General Manager:
Mr Tang Wenming

Li Zongji was the founder and general manager of Chengdu Jinfeng Liquid Nitrogen Container Co., Ltd. He began his career within the liquid nitrogen container industry in 1976, and his company was the first Chinese manufacturer liquid nitrogen containers. During his term of office, he led the drafting of three national standards of the People's Republic of China-GBT 5458-2012, Liquid Nitrogen Biological Container, GBT 14174-2012, Large Caliber Liquid Nitrogen Container, and GBT 16774-2012, Self-pressurized Liquid Nitrogen Container.

Chief Technology Officer:
Mr Li Zongji

Scientific Research Projects

Chengdu Science and Technology Control Haze

In 2017, the business participated in the Chengdu Technology Control of Haze Project to explore the method of utilizing ultra-low temperature liquid nitrogen technology to control haze. Such efforts were aimed to find an effective way to improve local atmospheric diffusion conditions and air quality.

Long March 5 Launch Vehicle Project

The company has developed the 80K pre-cooling and pressurization system in partnership with the Long March 5 Orbital Launch Vehicle Model Office, this collaboration was to achieve the temperature's liquid nitrogen simulation and internal pressure environment for the liquid oxygen transport pipeline. The project was a success with the products performance in flight achieving all technical requirements.

Superconducting Maglev Project

For this project, the team conducted an experiment that represented cutting-edge technology that resulted in industry leading outcomes in the field of high-temperature superconducting maglev research in China, a project jointly achieved in partnership with the Southwest Jiaotong University. Under ideal conditions, the super high-speed vacuum tube high-temperature superconducting maglev vehicle can drive at the ultimate speed of more than 1000 kilometers per hour with low energy consumption and no noise pollution.

Liquid Nitrogen Storage Solution

Human Body Cryopreserving Project

We cooperated with Yinfeng Research Institute on China's first human body cryopreserving project. The research produced the latest cryonics technology in China that allowed the human body to be stored in a -196°C environment.

Seafood Liquid Nitrogen Freezing Project

We conducted a research project jointly with several large fishery enterprises. Based on the research results, we can achieve the rapid freezing of the seafood within five minutes to maintain the original colors, tastes, and nutrients. Such a freezing method has received unanimous praise from users relying on its fast freezing, long preservation time, and low operating costs.

Smart IoT Liquid Nitrogen Tank

Liquid detection systems have proven problematic over the years, the existing liquid level detection methods have a low degree of intelligence and are not conducive to LN2 management. To solve the above problems, we have developed smart IoT liquid nitrogen tanks, which improves the accuracy of the liquid level detection without polluting the stored samples.

0.1°C	temperature measurement accuracy up to ±0.1°C
±5mm	liquid level measurement error down to ±5mm

Scientific and Technological Innovations

As society today develops rapidly toward intelligence, traditional liquid nitrogen tanks have gradually become unable to meet the market's needs. In response, we launched intelligent liquid nitrogen tanks and smart caps in 2019. These products have combined advanced intelligent monitoring technologies and IoT technologies to realize remote data monitoring, scientific and intelligent management, and intuitive display of users' sample storage situations. Such efficient sample management ensures the accuracy of sampling and improves the quality control of biological samples. Our liquid nitrogen tanks can store not only blood but also human biological samples, such as cord blood, cells, and sperm, to provide the best protection for them.

Low Temperature Transport Trolley

Haier Smart Cap

YDD Series

Liquid Nitrogen Storage Solution
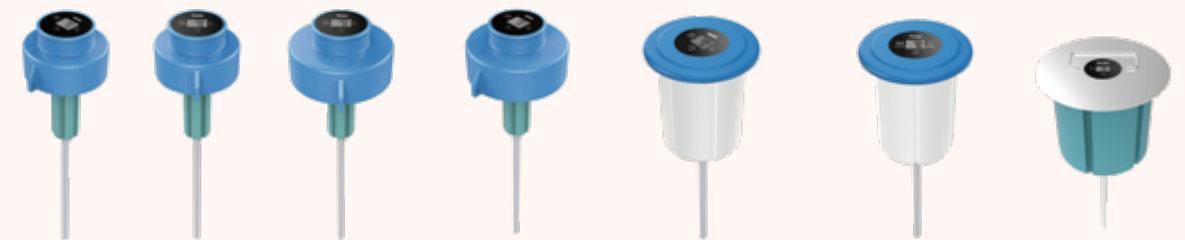
Biobank Series for Large Scale Storage

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$_2$ Splashproof
- Data Logging
- Hot Gas Bypass
- 5 Year Vacuum Warranty
- From 13,000 to 94,875 Cryovials

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

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$_2$ 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.

Advanced Vacuum Technology and Superinsulation Technology

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 ZJY-800N

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.

Haier Biomedical Liquid Nitrogen Storage Solutions

- Cryosmart level monitoring system to ensure samples safety
- Cork
- Advanced vacuum system and superinsulation
- Strong stainless steel outer shell
- Storage rack
- Rotating tray design for easy retrieval and insertion of storage racks
- Caster for easy moving

Liquid and Gas Phase

Liquid Phase
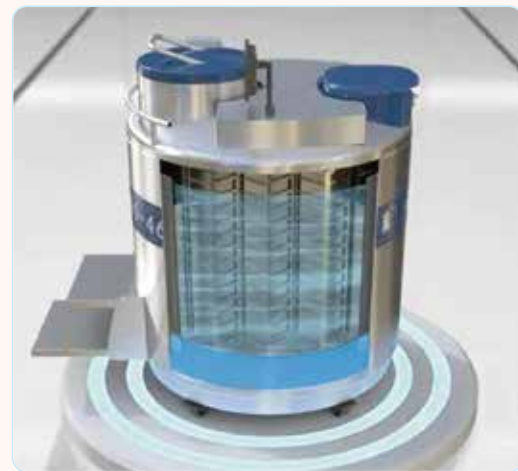
Gas Phase
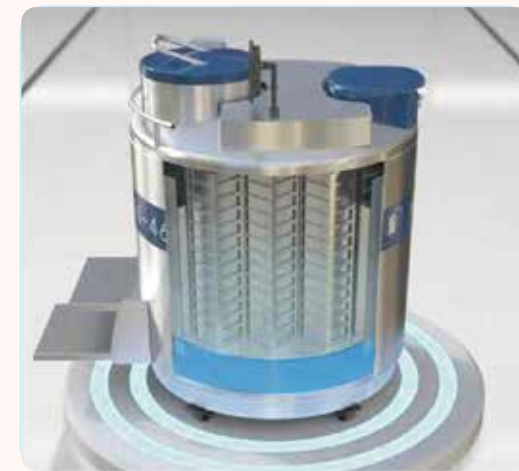
Top of the Container

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

YDD-1800-635

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

YDD-550-445
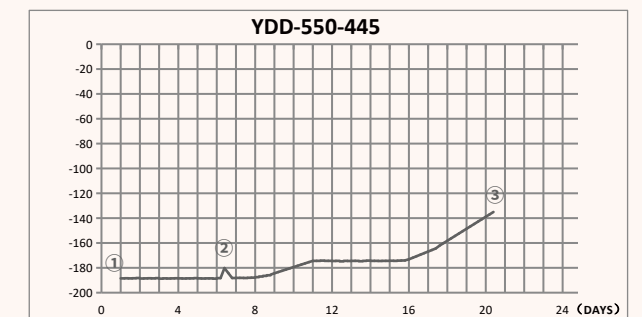
① Precooling stage when freezer filled to high level
② Lid open test, -180.2°C max
③ With no liquid nitrogen supply, the temperature maintained below -135°C for 20 days

YDD-850-465
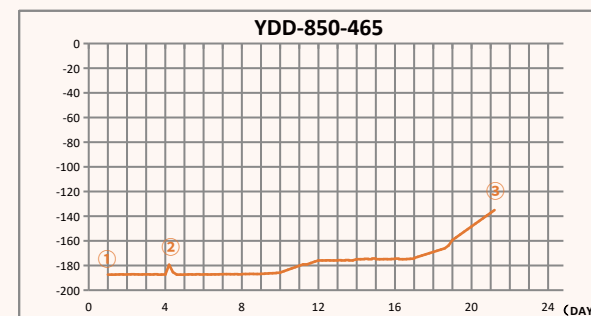
① Precooling stage when freezer filled to high level
② Lid open test, -179.4°C max
③ With no liquid nitrogen supply, the temperature maintained below -135°C for 21 days

YDD-350-326
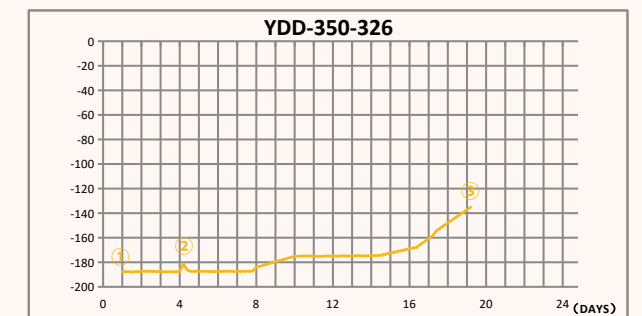
① Precooling stage when freezer filled to high level
② Lid open test, -181.4°C max
③ With no liquid nitrogen supply, the temperature maintained below -135°C for 19 days

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

Haier Biomedical Liquid Nitrogen Storage Solutions

Technical Parameters

Model	YDD-350-326	YDD-370-326	YDD-450-326	YDD-550-445	YDD-750-445	YDD-850-465
2ml Volume	13K	16K	21K	27K	38K	43K
Maximum Storage Capacity						
2 ml Vials (Internal Thread)	13000	15600	21000	27000	37800	42900
Freeze Rack (100 wells)	12	12	14	24	24	32
Freeze Rack (25 wells)	4	4	4	12	12	4
Layers of each Rack	10	12	14	10	14	13
5 ml Vials (Internal Thread)	5360	6232	8638	11220	17952	18844
Freeze Rack (81 wells)	12	12	14	24	24	32
Freeze Rack (25 wells)	4	4	4	12	12	4
Layers of each Rack	5	6	7	5	8	7
Performance						
Volume of LN2 (L)	350	370	460	587	783	890
Volume of LN2 under the Tray (L)	55	55	55	80	80	135
Dimensions						
Inside Neck Diameter (mm)	326	326	326	445	445	465
Effective Internal Height (mm)	600	704	828	600	828	773
Height (mm)	1263	1370	1495	1266	1486	1499
Operating Height (mm)	1263	1096	1212	970	995	980
Outside Diameter (mm)	875	875	875	1104	1104	1190
Door Width Requirement (mm)	895	895	895	1124	1124	1210
Empty Weight (kg)	219	230	277	328	372	441
Full Weight (kg)	502	529	649	802	1005	1160
Shipping Weight (kg)	358	438	470	520	616	702

Blood bag capacity

| Model	YDD-350-326			YDD-370-326			YDD-450-326			YDD-550-445			YDD-750-445			YDD-850-465		
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	Total No.of Bags	Rack Layers	No.of Racks
25 ml (791 OS/U)	1176	6	196	1372	7	196	1608	8	201	2208	6	368	2944	8	368	2996	7	428
50 ml (4R9951)	720	6	120	840	7	120	1024	8	128	1392	6	232	1856	8	232	1904	7	272
250 ml (DF - 200)	264	3	88	352	4	88	475	5	95	516	3	172	860	5	172	832	4	208
500ml (4R9953)	168	3	56	168	3	56	305	5	61	336	3	112	560	5	112	544	4	136
500 ml (4R9955)	144	3	48	192	4	48	280	5	56	288	3	96	480	5	96	464	4	116
700 ml (DF - 700)	96	3	32	96	3	32	152	4	38	204	3	68	272	4	68	320	4	80

Technical Parameters

Model	YDD-1000-465	YDD-1300-635	YDD-1600-635	YDD-1800-635
2ml Volume	51K	59K	76K	95K
Maximum Storage Capacity				
2 ml Vials (Internal Thread)	51000	58500	76050	94875
Freeze Rack (100 wells)	30	54	54	60
Freeze Rack (25 wells)	16	18	18	13
Layers of each Rack	15	10	13	15
5 ml Vials (Internal Thread)	22640	28944	33768	46665
Freeze Rack (81 wells)	30	54	54	60
Freeze Rack (25 wells)	16	18	18	13
Layers of each Rack	8	6	7	9
Performance				
Volume of LN2 (L)	1014	1340	1660	1880
Volume of LN2 under the Tray (L)	135	265	300	320
Dimensions				
Inside Neck Diameter (mm)	465	635	635	635
Effective Internal Height (mm)	900	620	791	900
Height (mm)	1619	1342	1534	1662
Operating Height (mm)	1090	997	967	1097
Outside Diameter (mm)	1190	1565	1565	1565
Door Width Requirement (mm)	1210	1585	1585	1585
Empty Weight (kg)	495	851	914	985
Full Weight (kg)	1314	1934	2255	2504
Shipping Weight (kg)	926	1168	1426	1520

Blood bag capacity

Model	YDD-1000-465			YDD-1300-635			YDD-1600-635			YDD-1800-635		
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
25 ml (791 OS/U)	3852	9	428	4536	6	956	5292	7	756	7218	9	802
50 ml (4R9951)	2394	9	266	2808	6	468	3276	7	468	4446	9	494
250 ml (DF - 200)	1020	5	204	1062	3	354	1770	5	354	1940	5	388
500 ml (4R9953)	670	5	134	666	3	222	888	4	222	1290	5	258
500 ml (4R9955)	520	5	104	654	3	218	792	4	198	1090	5	218
700 ml (DF - 700)	400	5	80	396	3	132	528	4	132	775	5	155

Racks (vertical type) and Blood bag racks

	Racks (vertical type)	25 ml Blood bag racks	50 ml Blood bag racks
YDD-350-326 YDD-370-326			
YDD-450-326			
YDD-550-445 YDD-750-445			
YDD-850-465			
YDD-1000-465			
YDD-1300-635 YDD-1600-635			
YDD-1800-635			

Biological Sample Bank-YDD Series

Storage Example of 2ml Internally Threaded Vial

Vial (1.2/2ml) → Plastic Cryobox (25, 81, 100) → Rack (vertical type)

Vial (1.2/2ml) → Vial Cane (3, 6) → Canister

Storage Example of Tall 5ml Cryovials

Vial (5ml) → Cryobox (25, 81) → Rack (vertical type) (5ml)

Vial (5ml) → Vial Cane (6) → Canister

Blood Bag Storage Example

Blood Bag (25/50/250ml) → Blood Bag Cryo Box → Blood Bag Rack

Straw Storage Example

Straw (0.25/0.5ml) → Plastic Protective Sleeve → Canister

Product List

Model	Product	Model	Description and Accessories
YDD-350-326	Biobank Freezer (Smart type)	YDD-350-326	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 (5*5), 120pcs of cryo boxes for 2ml vial (9*9), 1 set of cryosmart (level monitoring system)
	Biobank Freezer	YDD-350-326	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-10	Used to store 2ml cryoboxes (5*5), ten layers in total, suitable for YDD-350/550/1300 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-10	Used to store 2ml cryoboxes (9*9), Ten layers in total, suitable for YDD-350/550/1300 (excluding cryoboxes)
	Blood bag Rack	DCJ-25-6	Rack used to store 25ml blood bag, 6 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-350\550\1300
	Blood bag Rack	DCJ-50-6	Rack used to store 50ml blood bag, 6 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-350\550\1300
	Blood bag Rack	DCJ-250-3	Rack used to store 250ml blood bag, 3 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-350/550/1300
	Plastic cryo box	5×5 (2.0)	Used to store 1.8ml/2ml vial (25 holes)
	Plastic cryo box	9×9 (2.0)	Used to store 1.8ml/2ml vial (81 holes)
	Plastic cryo box	10×10 (2.0)	Used to store 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	Cryosmart Level Monitoring System ZJY-800N	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
YDD-370-326	Biobank Freezer (Smart type)	YDD-370-326	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	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-12	Used to store 2ml cryoboxes (5*5), Twelve layers in total, suitable for YDD-370 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-12	Used to store 2ml cryoboxes (9*9), Twelve layers in total, suitable for YDD-370 (excluding cryoboxes)
	Blood bag Rack	DCJ-25-7	Rack used to store 25ml blood bag, 7 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-370/850/1600
	Blood bag Rack	DCJ-50-7	Rack used to store 50ml blood bag, 7 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-370/850/1600
	Blood bag Rack	DCJ-250-4	Rack used to store 250ml blood bag, 4 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-370/850
	Plastic cryo box	5×5 (2.0)	Used to store 1.8ml/2ml vial (25 holes)
	Plastic cryo box	9×9 (2.0)	Used to store 1.8ml/2ml vial (81 holes)
	Plastic cryo box	10×10 (2.0)	Used to store 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	Cryosmart Level Monitoring System ZJY-800N	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
YDD-450-326	Biobank Freezer (Smart type)	YDD-450-326	Includes vacuum isolated hose (GRG-DN10/2.0), 4pcs of 14-tier rack (5*5), 14 pcs of 14-tier rack (9*9), 56pcs of cryo boxes for 2ml vial (5*5), 196pcs of cryo boxes for 2ml vial (9*9), 1 set of cryosmart (level monitoring system)
	Biobank Freezer	YDD-450-326	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-14	Used to store 2ml cryoboxes (5*5), Fourteen layers in total, suitable for YDD-450/750 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-14	Used to store 2ml cryoboxes (9*9), Fourteen layers in total, suitable for YDD-450/750 (excluding cryoboxes)
	Blood bag Rack	DCJ-25-8	Rack used to store 25ml blood bag, 8 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-450/750
	Blood bag Rack	DCJ-50-8	Rack used to store 50ml blood bag, 8 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-450/750
	Blood bag Rack	DCJ-250-5	Rack used to store 250ml blood bag, 5 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-450/750/1000/1600/1800
	Plastic cryo box	5×5 (2.0)	Used to store 1.8ml/2ml vial (25 holes)
	Plastic cryo box	9×9 (2.0)	Used to store 1.8ml/2ml vial (81 holes)
	Plastic cryo box	10×10 (2.0)	Used to store 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	Cryosmart Level Monitoring System ZJY-800N	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

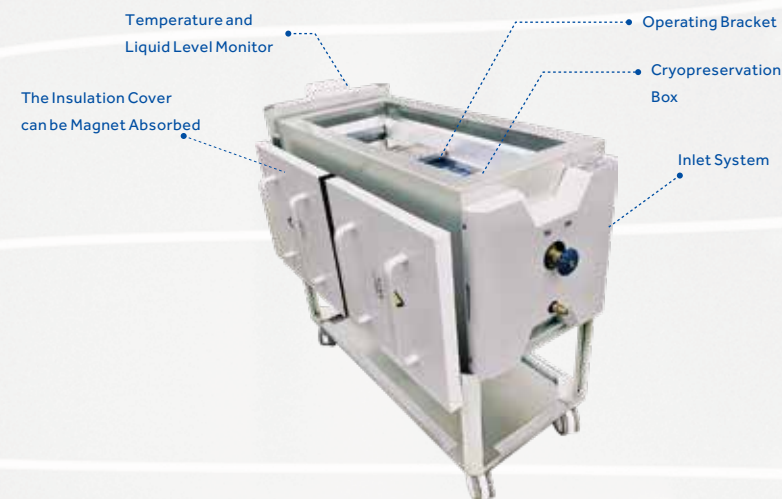| Model	Product	Model	Description and Accessories
YDD-550-445	Biobank Freezer (Smart type)	YDD-550-445	Includes vacuum isolated hose (GRG-DN10/2.0), 12pcs of 10-tier rack (5*5), 24 pcs of 10-tier rack (9*9), 120pcs of cryo boxes for 2ml vial (5*5), 240pcs of cryo boxes for 2ml vial (9*9), 1 set of cryosmart (level monitoring system)
	Biobank Freezer	YDD-550-445	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-10	Used to store 2ml cryoboxes (5*5), ten layers in total, suitable for YDD-350/550/1300 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-10	Used to store 2ml cryoboxes (9*9), Ten layers in total, suitable for YDD-350/550/1300 (excluding cryoboxes)
	Blood bag Rack	DCJ-25-6	Rack used to store 25ml blood bag, 6 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-350\550\1300
	Blood bag Rack	DCJ-50-6	Rack used to store 50ml blood bag, 6 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-350\550\1300
	Blood bag Rack	DCJ-250-3	Rack used to store 250ml blood bag, 3 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-350/550/1300
	Plastic cryo box	5×5 (2.0)	Used to store 1.8ml/2ml vial (25 holes)
	Plastic cryo box	9×9 (2.0)	Used to store 1.8ml/2ml vial (81 holes)
	Plastic cryo box	10×10 (2.0)	Used to store 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	Cryosmart Level Monitoring System ZJY-800N	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
YDD-750-445	Biobank Freezer (Smart type)	YDD-750-445	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	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-14	Used to store 2ml cryoboxes (5*5), Fourteen layers in total, suitable for YDD-450/750 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-14	Used to store 2ml cryoboxes (9*9), Fourteen layers in total, suitable for YDD-450/750 (excluding cryoboxes)
	Blood bag Rack	DCJ-25-8	Rack used to store 25ml blood bag, 8 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-450/750
	Blood bag Rack	DCJ-50-8	Rack used to store 50ml blood bag, 8 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-450/750
	Blood bag Rack	DCJ-250-5	Rack used to store 250ml blood bag, 5 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-450/750/1000/1600/1800
	Plastic cryo box	5×5 (2.0)	Used to store 1.8ml/2ml vial (25 holes)
	Plastic cryo box	9×9 (2.0)	Used to store 1.8ml/2ml vial (81 holes)
	Plastic cryo box	10×10 (2.0)	Used to store 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	Cryosmart Level Monitoring System ZJY-800N	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
YDD-850-465	Biobank Freezer (Smart type)	YDD-850-465	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	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-13	Used to store 2ml cryoboxes (5*5), Thirteen layers in total, suitable for YDD-850/1600 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-13	Used to store 2ml cryoboxes (9*9), Thirteen layers in total, suitable for YDD-850/1600 (excluding cryoboxes)
	Blood bag Rack	DCJ-25-7	Rack used to store 25ml blood bag, 7 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-370/850/1600
	Blood bag Rack	DCJ-50-7	Rack used to store 50ml blood bag, 7 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-370/850/1600
	Blood bag Rack	DCJ-250-4	Rack used to store 250ml blood bag, 4 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-370/850
	Plastic cryo box	5×5 (2.0)	Used to store 1.8ml/2ml vial (25 holes)
	Plastic cryo box	9×9 (2.0)	Used to store 1.8ml/2ml vial (81 holes)
	Plastic cryo box	10×10 (2.0)	Used to store 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	Cryosmart Level Monitoring System ZJY-800N	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	Model	Description and Accessories
YDD-1000-465	Biobank Freezer (Smart type)	YDD-1000-465	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	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-15	Used to store 2ml cryoboxes (5*5), Fifteen layers in total, suitable for YDD-1000/1800 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-15	Used to store 2ml cryoboxes (9*9), Fifteen layers in total, suitable for YDD-1000/1800 (excluding cryoboxes)
	Blood bag Rack	DCJ-25-9	Rack used to store 25ml blood bag, 9 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-1000/1800
	Blood bag Rack	DCJ-50-9	Rack used to store 50ml blood bag, 9 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-1000/1800
	Blood bag Rack	DCJ-250-5	Rack used to store 250ml blood bag, 5 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-450/750/1000/1600/1800
	Plastic cryo box	5×5 (2.0)	Used to store 1.8ml/2ml vial (25 holes)
	Plastic cryo box	9×9 (2.0)	Used to store 1.8ml/2ml vial (81 holes)
	Plastic cryo box	10×10 (2.0)	Used to store 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	Cryosmart Level Monitoring System ZJY-800N	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
YDD-1300-635	Biobank Freezer (Smart type)	YDD-1300-635	Includes vacuum isolated hose (GRG-DN10/2.0), 120 pcs of round rack, 240 pcs of φ 97mm canister (2 goblets included for each), 1 set of cryosmart (level monitoring system)
	Biobank Freezer	YDD-1300-635	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-10	Used to store 2ml cryoboxes (5*5), ten layers in total, suitable for YDD-350/550/1300 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-10	Used to store 2ml cryoboxes (9*9), Ten layers in total, suitable for YDD-350/550/1300 (excluding cryoboxes)
	Blood bag Rack	DCJ-25-6	Rack used to store 25ml blood bag, 6 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-350/550/1300
	Blood bag Rack	DCJ-50-6	Rack used to store 50ml blood bag, 6 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-350/550/1300
	Blood bag Rack	DCJ-250-3	Rack used to store 250ml blood bag, 3 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-350/550/1300
	Plastic cryo box	5×5 (2.0)	Used to store 1.8ml/2ml vial (25 holes)
	Plastic cryo box	9×9 (2.0)	Used to store 1.8ml/2ml vial (81 holes)
	Plastic cryo box	10×10 (2.0)	Used to store 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	Cryosmart Level Monitoring System ZJY-800N	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
YDD-1600-635	Biobank Freezer (Smart type)	YDD-1600-635	Includes vacuum isolated hose (GRG-DN10/2.0), 468pcs of 7-tier blood bag rack for 50ml, 3276 pcs of 50ml blood bag cryo box (4R9951), 1 set of cryosmart (level monitoring system)
	Biobank Freezer	YDD-1600-635	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-13	Used to store 2ml cryoboxes (5*5), Thirteen layers in total, suitable for YDD-850/1600 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-13	Used to store 2ml cryoboxes (9*9), Thirteen layers in total, suitable for YDD-850/1600 (excluding cryoboxes)
	Blood bag Rack	DCJ-25-7	Rack used to store 25ml blood bag, 7 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-370/850/1600
	Blood bag Rack	DCJ-50-7	Rack used to store 50ml blood bag, 7 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-370/850/1600
	Blood bag Rack	DCJ-250-5	Rack used to store 250ml blood bag, 5 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-450/750/1000/1600/1800
	Plastic cryo box	5×5 (2.0)	Used to store 1.8ml/2ml vial(25 holes)
	Plastic cryo box	9×9 (2.0)	Used to store 1.8ml/2ml vial (81 holes)
	Plastic cryo box	10×10 (2.0)	Used to store 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	Cryosmart Level Monitoring System ZJY-800N	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	Model	Description and Accessories
YDD-1800-635	Biobank Freezer (Smart type)	YDD-1800-635	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	Includes vacuum isolated hose (GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-15	Used to store 2ml cryoboxes (5*5), Fifteen layers in total, suitable for YDD-1000/1800 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-15	Used to store 2ml cryoboxes (9*9), Fifteen layers in total, suitable for YDD-1000/1800 (excluding cryoboxes)
	Blood bag Rack	DCJ-25-9	Rack used to store 25ml blood bag, 9 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-1000/1800
	Blood bag Rack	DCJ-50-9	Rack used to store 50ml blood bag, 9 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-1000/1800
	Blood bag Rack	DCJ-250-5	Rack used to store 250ml blood bag, 5 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-450/750/1000/1600/1800
	Plastic cryo box	5×5 (2.0)	Used to store 1.8ml/2ml vial (25 holes)
	Plastic cryo box	9×9 (2.0)	Used to store 1.8ml/2ml vial (81 holes)
	Plastic cryo box	10×10 (2.0)	Used to store 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	Cryosmart Level Monitoring System ZJY-800N	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
Other Racks	Blood bag Rack	DCJ-250-3	Rack used to store 250ml blood bag, 3 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-350/550/1300
	Blood bag Rack	DCJ-250-4	Rack used to store 250ml blood bag, 4 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-370/850
	Blood bag Rack	DCJ-250-5	Rack used to store 250ml blood bag, 5 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-450/750/1000/1600/1800
	Blood bag Rack	DCJ-25-6	Rack used to store 25ml blood bag, 6 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-350/550/1300
	Blood bag Rack	DCJ-25-7	Rack used to store 25ml blood bag, 7 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-370/850/1600
	Blood bag Rack	DCJ-25-8	Rack used to store 25ml blood bag, 8 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-450/750
	Blood bag Rack	DCJ-25-9	Rack used to store 25ml blood bag, 9 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-1000/1800
	Blood bag Rack	DCJ-50-6	Rack used to store 50ml blood bag, 6 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-350/550/1300
	Blood bag Rack	DCJ-50-7	Rack used to store 50ml blood bag, 7 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-370/850/1600
	Blood bag Rack	DCJ-50-8	Rack used to store 50ml blood bag, 8 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-450/750
	Blood bag Rack	DCJ-50-9	Rack used to store 50ml blood bag, 9 layers in total with each layer storing one blood bag: including blood bag cryogenic boxes, suitable for YDD-1000/1800
	Rack (vertical type)	FDCJ-25-5(5.0)	Used to store 5ml cryoboxes (5*5), five layers in total, suitable for YDD-350/550/1300 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-25-7(5.0)	Used to store 5ml cryoboxes (5*5), seven layers in total, suitable for YDD-450/750/850/1600 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-25-8(5.0)	Used to store 5ml cryoboxes (5*5), Eight layers in total, suitable for YDD-1000/1800 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-5(5.0)	Used to store 5ml cryoboxes (9*9), Five layers in total, suitable for YDD-350/550/1300 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-7(5.0)	Used to store 5ml cryoboxes (9*9), Seven layers in total, suitable for YDD-450/750/850/1600 (excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-8(5.0)	Used to store 5ml cryoboxes (9*9), Eight layers in total, suitable for YDD-1000/1800 (excluding cryoboxes)
	Rack (vertical type)	XDCJ-8-12	Used to store 2ml Aluminium cryoboxes (8 holes), Twelve layers in total, suitable for YDD-450/750/850/1600 (including aluminium cryoboxes)
	Rack (vertical type)	XDCJ-8-9	Used to store 2ml Aluminium cryoboxes (8 holes), Nine layers in total, suitable for YDD-350/550/1300 (including aluminium cryboxes)
	Round Rack	YDCJ-97-2	Includes 2 canisters (TT97-2C), 4 plastic goblets and 1 pick up hook for goblets in total, the storage capacity for 0.5ml straw is 3016, suitable for YDD-1300

Liquid Nitrogen Storage Solution

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.

Temperature and Liquid Level Monitor

Operating Bracket

The Insulation Cover can be Magnet Absorbed

Cryopreservation Box

Inlet System

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.

2020-02-15 15:26
-160℃
100 mm
480 min
Set

User Friendly Design

Appearance Spray
The appearance of spray, not easily affected by stains.

Caster Design
Integrated design, universal caster at the bottom, easy to move.

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	Dimensions (L × W × H mm)	Frozen Storage Space (L × W × H mm)	Liquid Nitrogen Under Tray (L)	Maximum Storage				
				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	900×335×163	33	65	30	105	50	3000

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 wechat.

Cloud data storage for traceability

Temperature and level data can be transmitted to Haier's IoT platform for storage. All data is traceable and stored permanently.

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

Rack	Smart Box (SW-300)	Roller Base

Haier Biomedical Liquid Nitrogen Storage Solutions

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					
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					
Liquid Nitrogen Volume (L)	65	95	115	145	175
Static Evapouration Rate* (%/d)	0.78	0.90	0.90	0.94	0.94
Static Holding Time** (Day)	83	105	127	154	186
Dimensions					
Neck Opening (mm)	216	216	216	216	216
Overall Height (mm)	712	774	846	946	1060
Overall Diameter (mm)	681	681	681	681	681
Empty Weight (kg)	39.3	42.5	43.7	49.9	54.8
Full Weight (kg)	81.5	112.3	133.5	158.9	199.5
Shipping Weight (kg)	63.8	67.9	71.2	82.1	91.3

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

** 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.

Product List

Model	Product	Model	Description and Accessories
YDS-65-216	Smart Liquid Nitrogen Container (Smart Series)	YDS-65-216-FZ	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-FZ	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-FZ	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-FZ	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-FZ	Includes 6 racks (10-tier), cryoboxes (9*9), lockable cap, roller base is optional
	Roller Base	YSC-M	Suitable for all 65L~175L aluminium tank, equipped with 5 universal wheels

Medium Sized Storage Series (Square Racks)

Medium Sized Storage Series (Square Racks) features low LN$_2$ consumption and relatively small footprint for medium capacity sample storage.

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

- Durable
- Secure
- Liquid and Vapour Storage

Haier Biomedical Liquid Nitrogen Storage Solutions

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 LN₂ 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 LN2 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-F	YDS-95-216-F	YDS-115-216-F	YDS-140-216-F	YDS-175-216-F
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	1458	1944	2430
No. of Boxes in (5ml each Rack)	-	2	3	4	5
Performance					
Volume of LN$_2$ (L)	65	95	115	145	175
Static Evapouration Rate* (L/Day)	0.78	0.90	0.90	0.94	0.94
Static Holding Time** (Day)	83	105	127	154	186
Dimensions					
Neck Opening Diameter (mm)	216	216	216	216	216
Height (mm)	712	774	846	946	1060
Outer Diameter (mm)	681	681	681	681	681
Empty Weight (kg)	38.3	41.3	42.3	48.9	53.8
Full Weight (kg)	80.8	112.4	132.8	157.3	198.5
Shipping Weight (kg)	61.8	65.9	72.9	80.1	89.2

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

** 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.

Accessories

Roller Base	Plastic Cryo Box	Lockable Cap (SG-216)	Rack (5ml)

5 ml Customized Cryogenic Box	SmartCap	Rack	Smart Box (SW-300)

Product List

Model	Product	Model	Description and Accessories
YDC-3000H	Cryogenic transfer vehicle	YDC-3000H	Include level and temperature monitoring controller, with rechargeable battery and storage drawers
BioT Air	cryovial transfer flask	BioT Air	It can store 55pcs of 2ml cryovial
YDS-65-216	Liquid Nitrogen Container	YDS-65-216-F	Includes 6 racks (4 layers), 9*9 cryoboxes, lockable cap, no protective jacket, roller base is optional
	Liquid Nitrogen Container	YDS-65-216	Includes lockable cap, no rack, no Protective jacket
	Rack	FTT-81-4	Used to store 2ml cryo boxes (9*9), 4 layers in total, 9*9 cryo boxes included, suitable for YDS-65-216 (plastic cryo boxes included)
	Roller Base	YSC-M(2019)	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels
	Smart Cap	LT-216-340	Used to monitor level and temperature for containers with 216mm neck opening, data can be transmitted to cloud platform, suitable for YDS-65-216
	Cork (216)	GS175-216	Suitable for all aluminium tank with neck opening 216mm
	Lockable Cap	SG-216	Suitable for container with 216mm neck opening
YDS-95-216	Liquid Nitrogen Container	YDS-95-216-F (5.0)	Includes 6 racks for 5ml, 2 layers in total, 12pcs of 5ml 9*9 cryo boxes and lockable cap included, no protective jacket, roller base is optional
	Liquid Nitrogen Container	YDS-95-216-F	Includes 6 racks (5 layers), 9*9 cryoboxes, lockable cap, no protective jacket, roller base is optional
	Liquid Nitrogen Container	YDS-95-216	Includes lockable cap, no rack, no protective jacket
	Rack	FTT-81-5	Used to store 2ml cryo boxes (9*9), 5 layers in total, 9*9 cryo boxes included, suitable for YDS-95-216 (plastic cryo boxes included)
	Rack	FTT-81-2(5.0)	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-M(2019)	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels
	Smart Cap	LT-216-370	Used to monitor level and temperature for containers with 216mm neck opening, data can be transmitted to cloud platform, suitable for YDS-95-216
	Cork (216)	GS175-216	Suitable for all aluminium tank with neck opening 216mm
	Lockable Cap	SG-216	Suitable for container with 216mm neck opening
YDS-115-216	Liquid Nitrogen Container	YDS-115-216-F (5.0)	Includes 6 racks for 5ml, 3 layers in total, 18pcs of 5ml 9*9 cryo boxes and lockable cap included, no protective jacket, roller base is optional
	Liquid Nitrogen Container	YDS-115-216-F	Includes 6 racks (6 layers), 9*9 cryoboxes, lockable cap, no protective jacket, roller base is optional
	Liquid Nitrogen Container	YDS-115-216	Includes lockable cap, no rack, no protective jacket
	Rack	FTT-81-6	Used to store 2ml cryo boxes (9*9), 6 layers in total, 9*9 cryo boxes included, suitable for YDS-115-216 (plastic cryo boxes included)
	Rack	FTT-81-3(5.0)	Used to store 5ml cryo boxes (9*9), 3 layers in total, 9*9 cryo boxes included, suitable for YDS-115-216 (plastic cryo boxes included)
	Roller Base	YSC-M(2019)	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels
	Smart Cap	LT-216-450	Used to monitor level and temperature for containers with 216mm neck opening, data can be transmitted to cloud platform, suitable for YDS-115-216
	Cork (216)	GS175-216	Suitable for all aluminium tank with neck opening 216mm
	Lockable Cap	SG-216	Suitable for container with 216mm neck opening
YDS-140-216	Liquid Nitrogen Container	YDS-140-216-F (5.0)	Includes 6 racks for 5ml, 4 layers in total, 24pcs of 5ml 9*9 cryo boxes and lockable cap included, no protective jacket, roller base is optional
	Liquid Nitrogen Container	YDS-140-216-F	Includes 6 racks (8 layers), 9*9 cryoboxes, lockable cap, no protective jacket, roller base is optional
	Liquid Nitrogen Container	YDS-140-216	Includes lockable cap, no rack, no protective jacket
	Rack	FTT-81-8	Used to store 2ml cryo boxes (9*9), 8 layers in total, 9*9 cryo boxes included, suitable for YDS-145-216 (plastic cryo boxes included)
	Rack	FTT-81-4(5.0)	Used to store 5ml cryo boxes (9*9), 4 layers in total, 9*9 cryo boxes included, suitable for YDS-145-216 (plastic cryo boxes included)
	Roller Base	YSC-M(2019)	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels
	Smart Cap	LT-216-570	Used to monitor level and temperature for containers with 216mm neck opening, data can be transmitted to cloud platform, suitable for YDS-145-216
	Cork (216)	GS175-216	Suitable for all aluminium tank with neck opening 216mm
	Lockable Cap	SG-216	Suitable for container with 216mm neck opening

Product List

Model	Product	Model	Description and Accessories
YDS-175-216	Liquid Nitrogen Container	YDS-175-216-F (5.0)	Includes 6 racks for 5ml, 5 layers in total, 30pcs of 5ml 9*9 cryo boxes and lockable cap included, no protective jacket, roller base is optional
	Liquid Nitrogen Container	YDS-175-216-F	Includes 6 racks (10 layers), 9*9 cryoboxes, lockable cap, no protective jacket, roller base is optional
	Liquid Nitrogen Container	YDS-175-216	Includes lockable cap, no rack, no protective jacket
	Rack	FTT-81-10	Used to store 2ml cryo boxes (9*9), 10 layers in total, 9*9 cryo boxes included, suitable for YDS-175-216 (plastic cryo boxes included)
	Rack	FTT-81-5 (5.0)	Used to store 5ml cryo boxes (9*9), 5 layers in total, 9*9 cryo boxes included, suitable for YDS-175-216 (plastic cryo boxes included)
	Roller Base	YSC-M(2019)	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels
	Smart Cap	LT-216-670	Used to monitor level and temperature for containers with 216mm neck opening, data can be transmitted to cloud platform, suitable for YDS-175-216 / competitors' products
	Cork (216)	GS175-216	Suitable for all aluminium tank with neck opening 216mm
	Lockable Cap	SG-216	Suitable for container with 216mm neck opening
Other Racks	Blood Bag Rack	DCJ-250-1FT6	Used to store 250ml blood bag, 7 bags per layer, 1 layer in total, blood bag cryo boxes included, suitable for YDS-95-216 (6 racks)
	Blood Bag Rack	DCJ-250-1T30	Used to store 250ml blood bag, 1 bag per layer, 1 layer in total, blood bag cryo boxes included, suitable for YDS-95-216 (30 racks)
	Blood Bag Rack	DCJ-250-2FT6	Used to store 250ml blood bag, 7 bags per layer, 2 layers in total, blood bag cryo boxes included, suitable for YDS-175-216 (6 racks)
	Blood Bag Rack	DCJ-250-2T30	Used to store 250ml blood bag, 7 bags per layer, 2 layers in total, blood bag cryo boxes included, suitable for YDS-175-216 (6 racks)
	Blood Bag Rack	DCJ-50-1FT6	Used to store 50ml blood bag, 14 bags per layer, 1 layer in total, blood bag cryo boxes included, suitable for YDS-95-216 (6 racks)
	Blood Bag Rack	DCJ-50-2T30	Used to store 50ml blood bag, 1 bag per layer, 2 layers in total, blood bag cryo boxes included, suitable for YDS-95-216 (30 racks)
	Blood Bag Rack	DCJ-50-3T30	Used to store 50ml blood bag, 1 bag per layer, 3 layers in total, blood bag cryo boxes included, suitable for YDS-115-216 (30 racks)
	Blood Bag Rack	DCJ-50-2FT6	Used to store 50ml blood bag, 14 bags per layer, 2 layers in total, blood bag cryo boxes included, suitable for YDS-115-216 (6 racks)
	Blood Bag Rack	DCJ-50-4T30	Used to store 50ml blood bag, 1 bag per layer, 4 layers in total, blood bag cryo boxes included, suitable for YDS-145-216 (30 racks)
	Blood Bag Rack	DCJ-50-3FT6	Used to store 50ml blood bag, 14 bags per layer, 3 layers in total, blood bag cryo boxes included, suitable for YDS-175-216 (6 racks)
	Blood Bag Rack	DCJ-50-5T30	Used to store 50ml blood bag, one bag per layer, 5 layers in total, blood bag cryo boxes included, suitable for YDS-175-216 (30 racks)
	Rack (vertical type)	FDCJ-81-6(115)	Used to store 2ml cryo boxes (9*9), 6 layers in total, suitable for YDS-115-216 (plastic cryoboxes included)
	Rack (vertical type)	FDCJ-81-8(145)	Used to store 2ml cryo boxes (9*9), 8 layers in total, suitable for YDS-145-216 (plastic cryoboxes included)
	Rack (vertical type)	FDCJ-81-10(175)	Used to store 2ml cryo boxes (9*9), 10 layers in total, suitable for YDS-175-216 (plastic cryoboxes included)

Biological Sample Library-YDS Series

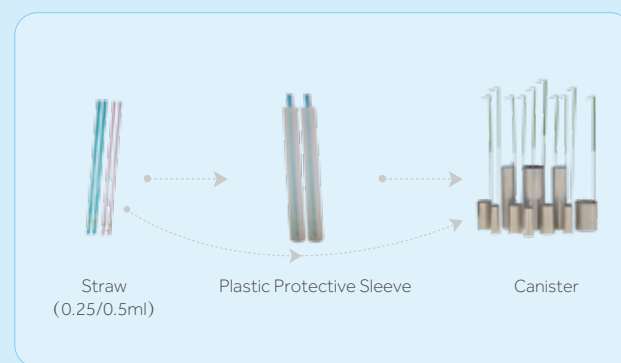### Storage Example of 2ml Internally Threaded Vial

| Vial (1.2/2ml) | Plastic Cryobox (25, 81, 100) | Rack | Vial (1.2/2ml) | Vial Cane (3, 6) | Canister |

Storage Example of Tall 5ml Cryovials

| Vial (5ml) | Cryobox (25, 81) | Rack (5ml) | Vial (5ml) | Vial Cane (6) | Canister |

Blood Bag Storage Example

Straw Storage Example

| Blood Bag (25/50/250ml) | Blood Bag Cryo Box (25/50/250ml) | Customized Blood Bag Rack | Straw (0.25/0.5ml) | Plastic Protective Sleeve | Canister |

Small Sized Storage Series (Square Racks)

Widely used within many laboratories, this small-sized storage series features low LN₂ consumption and dual handle design. Stores between 600 and 1100 vials in square racks and cryo boxes.

- 5 Year Vacuum Warranty
- High Thermal Efficiency
- Lightweight
- 30 Litre to 50 Litre Capacity

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

Haier Biomedical Liquid Nitrogen Storage Solutions

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 year vacuum warranty
- Ultra-low LN$_2$ evapouration loss

Product Advantages

Low LN$_2$ Consumption and Maximum Storage Efficiency

Haier Biomedical's Small Sized Storage Series (Square Racks) Liquid Nitrogen Storage System features low LN$_2$ 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 2 ml cryovials. All models are supplied with stainless steel racks and cryogenic boxes.

Accessories

Roller Base	Rack	Liquid Nitrogen Temperature Detector	Lockable Cap (SG-125)	Smart Cap	Smart Box (SW-300)

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$_2$ (L)	10	31.5	35.5	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	704	748	718	818
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

* Static evapouration and static holding time are theoretical values. Actual evapouration and holding time are affected by usage, atmospheric conditions and manufacturing tolerances.
** 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 equilibri um and the liquid nitrogen filling rate reaches 100% under standard atmospheric condition.

Product List

* All models with F-suffix are supplied with stainless steel racks and cryo boxes.

Model	Product	Model	Description and Accessories
YDS-10-125	Liquid Nitrogen Container	YDS-10-125	No canister; no protective jacket; no lockable cap; equipped with braces for carrying
	Liquid Nitrogen Container	YDS-10-125-F	Include 1 square rack with 4 layers and 5*5 cryobox; lockable cap; no protective jacket
	Rack	FTT-25-4	Used to store 2ml cryo boxes (5*5), 4 layers in total, 5*5 cryo boxes included, suitable for YDS-30-125 / YDS-10-125 (plastic cryo boxes included)
	Canister (TT97)	TT10H-125	Φ97 single tier canister, no goblet, suitable for YDS-10-125, YDH-10-125
	Cork (125)	GS10-125	Suitable for YDS-10-125, YDH-10-125, YDS-50B-125
	Lockable Cap	SG-125	Suitable for container with 125mm neck opening
YDS-30-125	Liquid Nitrogen Container	YDS-30-125-F	Includes 6 racks with 4 layers, 5*5 cryoboxes, lockable cap and protective jacket, roller base is optional.
	Liquid Nitrogen Container	YDS-30-125	Includes protective jacket only, roller base is optional
	Rack	FTT-25-4	Used to store 2ml cryo boxes (5*5), 4 layers in total, 5*5 cryo boxes included, suitable for YDS-30-125 / YDS-10-125 (plastic cryo boxes included)
	Canister (TT97)	TT30-125	Φ97 single tier canister, no goblet, suitable for YDS-30-125
	Roller Base	YSC-S (2019)	Suitable for all 30L / 35L / 50L aluminium tank, equipped with 5 universal wheels
	SmartCap	LT-125-370	Used to monitor level and temperature for containers with 125mm neck opening, data can be transmitted to cloud platform, suitable for YDS-20-125 / YDS-30-125
	Cork (125)	GS20-125	Suitable for YDS-30-125, YDS-35-125, YDS-47-127, YDS-35B-125
	Lockable Cap	SG-125	Suitable for container with 125mm neck opening

Product List

Model	Product	Model	Description and Accessories
YDS-35-125	Liquid Nitrogen Container	YDS-35-125-6YS	Includes 6 canisters (height 276mm), lockable cap and protective jacket, roller base is optional
	Liquid Nitrogen Container	YDS-35-125-F	Includes 6 racks with 5 layers, 5*5 cryoboxes, lockable cap and protective jacket, roller base is optional.
	Liquid Nitrogen Container	YDS-35-125	Includes protective jacket only, roller base is optional
	Rack	FTT-25-5	Used to store 2ml cryo boxes (5*5), 5 layers in total, 5*5 cryo boxes included, suitable for YDS-35-125, YDS-47-127 (plastic cryo boxes included)
	Canister (TT97)	TT35-125	Φ97 single tier canister, no goblet, suitable for YDS-35-125
	Canister (TTS97)	TTS35-125	Φ97 double-tier canister, 2 goblets included, suitable for YDS-35-125
	Roller Base	YSC-S (2019)	Suitable for all 30L / 35L / 50L aluminium tank, equipped with 5 universal wheels
	SmartCap	LT-125-400	Used to monitor level and temperature for containers with 125mm neck opening, data can be transmitted to cloud platform, suitable for YDS-25-125 / YDS-35-125 / competitors' products
	Cork (125)	GS20-125	Suitable for YDS-30-125, YDS-35-125, YDS-47-127, YDS-35B-125
	Lockable Cap	SG-125	Suitable for container with 125mm neck opening
YDS-47-127	Liquid Nitrogen Container	YDS-47-127-6YS	Includes 6 round rack with 5 layers (37 holes) and lockable cap, no protective jacket, roller base is optional
	Liquid Nitrogen Container	YDS-47-127	Includes 10 canisters (Φ72 / 276mm) and lockable cap, no protective jacket, roller base is optional
	Round Rack (Y98-37)	TT47-127-5	Φ98 round rack used to store 37 vials (2ml), 5 tiers in total, suitable for YDS-47-127-6YS
	Canister (TTS72)	TTS47-127-10T	Φ72, height 276mm double-tier canister, 2 goblets included, suitable for YDS-47-127
	Roller Base	YSC-47L	Suitable for all 47L Alunimium tank, equipped with 5 universal wheels
	SmartCap	LT-127-370-10	Used to monitor level and temperature for containers with 125mm neck opening, data can be transmitted to cloud platform, suitable for YDS-47-127/ competitors' products
	SmartCap	LT-127-400	Used to monitor level and temperature for containers with 125mm neck opening, data can be transmitted to cloud platform, suitable for YDS-47-127-6YS / YDS-47-127 / competitors' products
	Cork (125)	GS20-125	Suitable for YDS-30-125, YDS-35-125, YDS-47-127, YDS-35B-125
	Cork (125)	GS47-127-10T	Suitable for YDS-47-127
	Lockable Cap	SG-125	Suitable for container with 125mm neck opening
YDS-50B-125	Liquid Nitrogen Container	YDS-50B-125-F	Includes 6 racks with 6 layers, 5*5 cryoboxes, lockable cap and protective jacket, roller base is optional.
	Liquid Nitrogen Container	YDS-50B-125-S	Includes 6 canisters (Φ97 / 276mm), lockable cap and protective jacket. roller base is optional
	Liquid Nitrogen Container	YDS-50B-125	Includes protective jacket only, roller base is optional
	Rack	FTT-25-6	Used to store 2ml cryo boxes (5*5), 6 layers in total, 5*5 cryo boxes included, suitable for YDS-50B-125 (plastic cryo boxes included)
	Canister (TT97)	TT50-125	Φ97 single tier canister, no goblet, suitable for YDS-50B-125
	Canister (TTS97)	TTS50-125	Φ97 double-tier canister, 2 goblets included, suitable for YDS-50B-125
	Roller Base	YSC-S (2019)	Suitable for all 30L / 35L / 50L aluminium tank, equipped with 5 universal wheels
	SmartCap	LT-125-500	Used to monitor level and temperature for containers with 125mm neck opening, data can be transmitted to cloud platform, suitable for YDS-50-125
	Cork (125)	GS10-125	Suitable for YDS-10-125, YDH-10-125, YDS-50B-125
	Lockable Cap	SG-125	Suitable for container with 125mm neck opening

Product Description

SmartCap is a low energy consumption IoT-based 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 50 mm, 80 mm, 125 mm, 216 mm. The built-in high efficiency lithium battery can operate the device for more than two years.
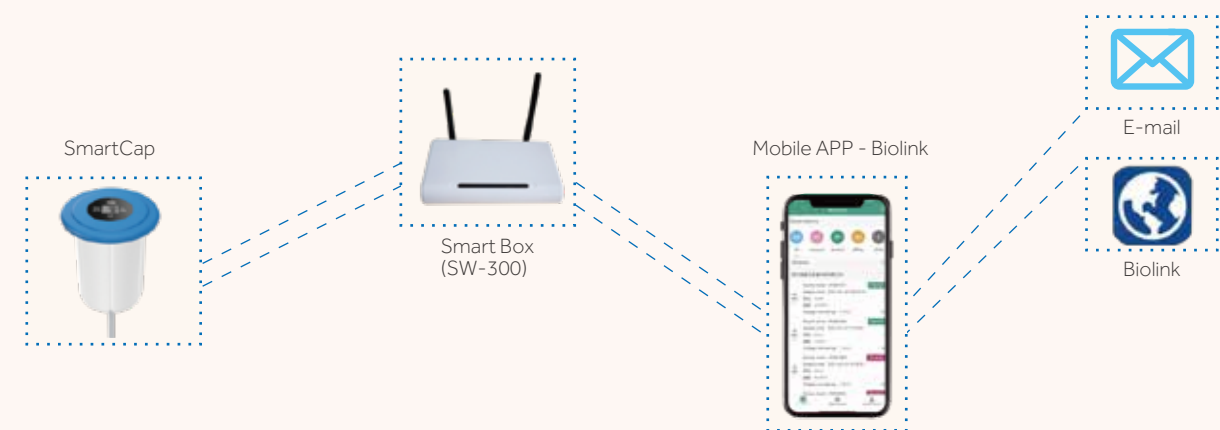
SmartCap

Product Characteristics

Independent, high accuracy measuring system for liquid level and temperature

Real time display of level and temperature, alarm setting via phone message, email, and wechat

Wireless transmission of level and temperature data to a data interrupter

Fluid level and temperature data uploaded remotely to cloud terminals for recording, printing, and storage

Built-in high efficiency lithium battery for longevity

SmartCap

Smart Box (SW-300)

Mobile APP - Biolink

E-mail

Biolink

The SmartCap collects liquid level data and temperature data and transmits the information to cloud data store wirelessly, via 2.4G at a fixed interval every 10 minutes. Users can check real-time data and system alarm situation at any time through the Haier mobile APP-Biolink.

Liquid Nitrogen Storage Solution

Product List

Model	Product	Model	Description and Accessories
Smart Cap	SmartCap	LT-50-220	Used to monitor level and temperature for containers with 50mm neck opening, data can be transmitted to cloud platform, suitable for YDS-3 / YDS-6
	SmartCap	LT-50-280	Used to monitor level and temperature for containers with 50mm neck opening, data can be transmitted to cloud platform, suitable for YDS-10 / YDS-15
	SmartCap	LT-50-370	Used to monitor level and temperature for containers with 50mm neck opening, data can be transmitted to cloud platform, suitable for YDS-13 / YDS-20 / YDS-30
	SmartCap	LT-50-400	Used to monitor level and temperature for containers with 50mm neck opening, data can be transmitted to cloud platform, suitable for YDS-35
	SmartCap	LT-50-450	Used to monitor level and temperature for containers with 50mm neck opening, data can be transmitted to cloud platform, suitable for YDS-25 any make of tank with 50mm opening.
	SmartCap	LT-50-500	Used to monitor level and temperature for containers with 50mm neck opening, data can be transmitted to cloud platform, suitable for YDS-50
	SmartCap	LT-80-220	Used to monitor level and temperature for containers with 80mm neck opening, data can be transmitted to cloud platform, suitable for YDS-6-80
	SmartCap	LT-80-280	Used to monitor level and temperature for containers with 80mm neck opening, data can be transmitted to cloud platform, suitable for YDS-10-80/YDS-15-80
	SmartCap	LT-80-370	Used to monitor level and temperature for containers with 80mm neck opening, data can be transmitted to cloud platform, suitable for YDS-20-80/YDS-30-80
	SmartCap	LT-80-400	Used to monitor level and temperature for containers with 80mm neck opening, data can be transmitted to cloud platform, suitable for YDS-35-80
	SmartCap	LT-80-450	Used to monitor level and temperature for containers with 80mm neck opening, data can be transmitted to cloud platform, suitable for YDS-25-80
	SmartCap	LT-80-500	Used to monitor level and temperature for containers with 80mm neck opening, data can be transmitted to cloud platform, suitable for YDS-50-80
	SmartCap	LT-125-280	Used to monitor level and temperature for containers with 125mm neck opening, data can be transmitted to cloud platform, suitable for YDS-10-125/YDS-15-125
	SmartCap	LT-125-340	Used to monitor level and temperature for containers with 125mm neck opening, data can be transmitted to cloud platform, suitable for any make of tank with 125mm opening.
	SmartCap	LT-125-370	Used to monitor level and temperature for containers with 125mm neck opening, data can be transmitted to cloud platform, suitable for YDS-20-125/YDS-30-125
	SmartCap	LT-125-400	Used to monitor level and temperature for containers with 125mm neck opening, data can be transmitted to cloud platform, suitable for YDS-25-125/YDS-35-125/competitors' products
	SmartCap	LT-125-500	Used to monitor level and temperature for containers with 125mm neck opening, data can be transmitted to cloud platform, suitable for YDS-50-125
	SmartCap	LT-127-370-10	Used to monitor level and temperature for containers with 125mm neck opening, data can be transmitted to cloud platform, suitable for YDS-47-127-10/any make of tank with 125mm opening.
	SmartCap	LT-127-400	Used to monitor level and temperature for containers with 125mm neck opening, data can be transmitted to cloud platform, suitable for YDS-47-127-6Y/YDS-47-127/any make of tank with 125mm opening.
	SmartCap	LT-200-340	Used to monitor level and temperature for containers with 200mm neck opening, data can be transmitted to cloud platform, suitable for any make of tank with 200mm opening
	SmartCap	LT-200-370	Used to monitor level and temperature for containers with 200mm neck opening, data can be transmitted to cloud platform, suitable for any make of tank with 200mm opening
	SmartCap	LT-200-450	Used to monitor level and temperature for containers with 200mm neck opening, data can be transmitted to cloud platform, suitable for any make of tank with 200mm opening
	SmartCap	LT-216-340	Used to monitor level and temperature for containers with 216mm neck opening, data can be transmitted to cloud platform, suitable for YDS-65-216
	SmartCap	LT-216-340-4	Used to monitor level and temperature for containers with 216mm neck opening, data can be transmitted to cloud platform, suitable for any make of tank with 200mm opening
	SmartCap	LT-216-370	Used to monitor level and temperature for containers with 216mm neck opening, data can be transmitted to cloud platform, suitable for YDS-95-216
	SmartCap	LT-216-450	Used to monitor level and temperature for containers with 216mm neck opening, data can be transmitted to cloud platform, suitable for YDS-115-216
	SmartCap	LT-216-570	Used to monitor level and temperature for containers with 216mm neck opening, data can be transmitted to cloud platform, suitable for YDS-145-216
	SmartCap	LT-216-670	Used to monitor level and temperature for containers with 216mm neck opening, data can be transmitted to cloud platform, suitable for YDS-175-216/any make of tank with 216mm opening.
Accessories	Smart Box	SW-300	Date transferred with WIFI network connected, required for International users (outside China)

High Capacity Series for Storage or Transport (Round Canisters)

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 Year Vacuum Warranty
- Extended Hold Time

- LN_2 Dispenser
- Round Canisters for Straw Storage
- Lockable
- Roller Bases Available

# Haier Biomedical Liquid Nitrogen Storage Solutions

Key Features

• Strong and lightweight aluminium construction
• Heavy duty lockable enclosure offers excellent security
• Numbered index location points for canisters
• Straw storage
• LN$_2$ dispense pump available

• Roller bases available
• High thermal efficiency
• 5 year 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.
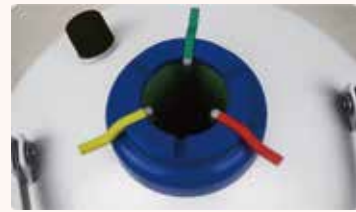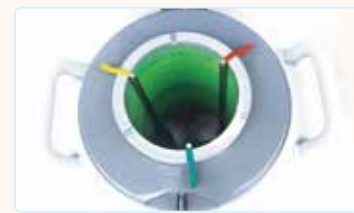
Long-term cryopreservation models have narrower necks with less heat intrusion.

Technical Parameters

	Model	YDS-2-30	YDS-2-35	YDS-3	YDS-6	YDS-10	YDS-10-80
Maximum Capacity	No. of Canister	3 (0)	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
	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)	—	—	—	—	—	—
Performance	Volume of LN$_2$ (L)	2	2	3	6	10	10
	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
Dimensions	Opening Diameter (mm)	30	35	50	50	50	80
	Height (mm)	399	428	435	482	552	557
	Outside Diameter (mm)	223	204	223	300	300	300
	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
Maximum Capacity	No. of Canister	1（0）	6（0）	6（0）	6（0）	6（0）
	No. of Straws (Single Layer) (0.5ml each canister)	854	—	792	792	792
	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
Performance	Volume of LN$_2$ (L)	10	13	15	20	30
	Static Evapouration* (L/Day)	0.43	0.12	0.11	0.12	0.12
	Static Holding Time** (Day)	24	109	134	168	254
Dimensions	Opening Diameter (mm)	125	50	50	50	50
	Height (mm)	625	623	591	672	705
	Outside Diameter (mm)	300	310	394	394	462
	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
Maximum Capacity	No. of Canister	6（0）	6（0）	6（0）	6（0）	6（0）	10（10）
	No. of Straws (Single Layer) (0.5ml each canister)	2244	5124	792	2244	5124	6714
	No. of Straws (Single Layer) (0.25ml each canister)	5022	11952	1788	5022	11640	14070
	No. of Straws (Double Layer) (0.5ml each canister)	3624	—	1284	3624	9048	10704
	No. of Straws (Double Layer) (0.25ml each canister)	8460	—	2832	8460	20760	23604
Performance	Volume of LN$_2$ (L)	30	30	35	35	35	47
	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
Dimensions	Opening Diameter (mm)	80	125	50	80	125	127
	Height (mm)	709	704	749	753	748	718
	Outside Diameter (mm)	462	462	462	462	462	508
	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	54
	Shipping Weight (kg)	18.3	19.3	20	20.7	22	28

Haier Biomedical Liquid Nitrogen Storage Solutions

Model		YDS-20B	YDS-30B	YDS-35B
Maximum Capacity	No. of Canister	6（0）	6（0）	6（0）
	No. of Straws (Single Layer)(0.5ml each canister)	792	792	792
	No. of Straws (Single Layer)(0.25ml each canister)	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
Performance	Volume of LN$_2$ (L)	20	30	35
	Static Evapouration* (L/Day)	0.2	0.2	0.2
	Static Holding Time** (Day)	101	159	179
Dimensions	Opening Diameter (mm)	50	50	50
	Height (mm)	672	705	749
	Outside Diameter (mm)	394	462	462
	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
Maximum Capacity	No. of Canister	6（0）	6（0）	6（0）	6（0）
	No. of Straws (Single Layer)(0.5ml each canister)	2244	5124	792	5124
	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
Performance	Volume of LN$_2$ (L)	35	35	50	50
	Static Evapouration* (L/Day)	0.3	0.41	0.24	0.45
	Duration of Normal Operation** (Day)	119	86	213	110
Dimensions	Opening Diameter (mm)	80	125	50	125
	Height (mm)	753	748	810	817
	Outside Diameter (mm)	462	462	462	462
	Canister Outside Diameter (mm)	63	97	38	97
	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

† A(B): A for maximum number of canisters, B for number of canisters in standard configuration

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

** Static Holding Time: the amount of days it takes for all of the LN to evaporate 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.

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 276mm, Diameter 38mm （50mm neck)		
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 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 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 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 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 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 276mm, Diameter 97mm （125mm neck)		
Vials	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 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	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

Vial

Vial cane

Canister

Product List

Model	Product	Model	Description and Accessories
YDS-2-30	Liquid Nitrogen Container	YDS-2-30	Includes 3 canisters, lockable cap and protective jacket
	Canister (TT19)	TT2-30	Φ19 single tier canister, without goblets, suitable for YDS-2-30
	Cork (30)	GS2-30	Suitable for YDS-2-30
	Lockable Cap	SG-30	Suitable for container with 30mm neck opening, suitable for YDS-2-30
YDS-2-35	Liquid Nitrogen Container	YDS-2-35	Includes 3 canisters, lockable cap and braces for carrying, no protective jacket
	Canister (TT25)	TT2-35	Φ25 single tier canister, without goblets, suitable for YDS-2-35
	Cork (30)	GS2-35	Suitable for YDS-2-35
	Lockable Cap	SG-35	Suitable for container with 35mm neck opening, suitable for YDS-2-35
YDS-3	Liquid Nitrogen Container	YDS-3YS	Includes 6 canisters (height 120mm), lockable cap and protective jacket
	Liquid Nitrogen Container	YDS-3（2019)	Includes protective jacket only
	Canister (TT38)	TT3-50	Φ38 single tier canister, without goblets, suitable for YDS-3
	Cork (50)	GS10-50	Suitable for YDS-3 / YDH-3 / YDS-6 / YDS-10 / YDS-13 / YDS-25 / YDS-50B
	Lockable Cap	SG-50	Suitable for container with 50mm neck opening
YDS-6	Liquid Nitrogen Container	YDS-6YS	Includes 6 canisters (height 120mm), lockable cap and protective jacket
	Liquid Nitrogen Container	YDS-6	Includes protective jacket only
	Canister (TT38)	TT6-50	Φ38 single tier canister, without goblets, suitable for YDS-6
	Cork (50)	GS10-50	Suitable for YDS-3 / YDH-3 / YDS-6 / YDS-10 / YDS-13 / YDS-25 / YDS-50B
	Lockable Cap	SG-50	Suitable for container with 50mm neck opening
YDS-10	Liquid Nitrogen Container	YDS-10YS	Includes 6 canisters (height 120mm), lockable cap and protective jacket
	Liquid Nitrogen Container	YDS-10	Includes protective jacket only
	Canister (TT38)	TT10-50	Φ38 single tier canister, without goblets, suitable for YDS-10
	Cork (50)	GS10-50	Suitable for YDS-3 / YDH-3 / YDS-6 / YDS-10 / YDS-13 / YDS-25 / YDS-50B
	Lockable Cap	SG-50	Suitable for container with 50mm neck opening
YDS-10-80	Liquid Nitrogen Container	YDS-10-80-6YS	Includes 6 canisters (height 120mm), lockable cap and protective jacket
	Liquid Nitrogen Container	YDS-10-80	Includes protective jacket only
	Canister (TT63)	TT10-80	Φ63 single tier canister, without goblets, suitable for YDS-10-80
	Cork (80)	GS10-80	Suitable for YDH-6-80 / YDS-10-80
	Lockable Cap	SG-80	Suitable for container with 80mm neck opening
YDS-13	Liquid Nitrogen Container	YDS-13YS	Includes 6 canisters (height 276mm), lockable cap and protective jacket
	Liquid Nitrogen Container	YDS-13	Includes protective jacket only
	Canister (TTS38)	TTS13-50	Φ38 double-tier canister, 2 goblets included, suitable for YDS-13
	Cork (50)	GS10-50	Suitable for YDS-3 / YDH-3 / YDS-6 / YDS-10 / YDS-13 / YDS-25 / YDS-50B
	Lockable Cap	SG-50	Suitable for container with 50mm neck opening

Product List

Model	Product	Model	Description and Accessories
YDS-15	Liquid Nitrogen Container	YDS-15YS	Includes 6 canisters (height 120mm), lockable cap and protective jacket
	Liquid Nitrogen Container	YDS-15	Includes protective jacket only
	Canister (TT38)	TT15-50	Φ38 single tier canister, without goblets, suitable for YDS-15
	Cork (50)	GS20-50	Suitable for YDS-15 / YDS-20 / YDS-30 / YDS-35 / YDS-20B / YDS-30B / YDS-35B
	Lockable Cap	SG-50	Suitable for container with 50mm neck opening
YDS-20	Liquid Nitrogen Container	YDS-20-6YS	Includes 6 canisters (height 276mm), lockable cap and protective jacket
	Liquid Nitrogen Container	YDS-20YS	Includes 6 canisters (height 120mm), lockable cap and protective jacket
	Liquid Nitrogen Container	YDS-20	Includes protective jacket only
	Canister (TT38)	TT30-50	Φ38 single tier canister, without goblets, suitable for YDS-20 / YDS-30
	Canister (TTS38)	TTS30-50	Φ38 double-tier canister, 2 goblets included, suitable for YDS-20 / YDS-30
	Cork (50)	GS20-50	Suitable for YDS-1 / YDS-20 / YDS-30 / YDS-35 / YDS-20B / YDS-30B / YDS-35B
	Lockable Cap	SG-50	Suitable for container with 50mm neck opening
YDS-30	Liquid Nitrogen Container	YDS-30-6YS	Includes 6 canisters (height 276mm), lockable cap and protective jacket, roller base is optional
	Liquid Nitrogen Container	YDS-30YS	Includes 6 canisters (height 120mm), lockable cap and protective jacket, roller base is optional
	Liquid Nitrogen Container	YDS-30	Includes protective jacket only, roller base is optional
	Canister (TT38)	TT30-50	Φ38 single tier canister, without goblets, suitable for YDS-20 / YDS-30
	Canister (TTS38)	TTS30-50	Φ38 double-tier canister, 2 goblets included, suitable for YDS-20/YDS-30
	Roller Base	YSC-S (2019)	Suitable for all 30L / 35L / 50L aluminium tank, equipped with 5 universal wheels
	SmartCap	LT-50-370	Used to monitor level and temperature for containers with 50mm neck opening, data can be transmitted to cloud platform, suitable for YDS-13/YDS-20/YDS-30
	Cork (50)	GS20-50	Suitable for YDS-15 / YDS-20 / YDS-30 / YDS-35 / YDS-20B / YDS-35B
	Lockable Cap	SG-50	Suitable for container with 50mm neck opening
YDS-30-80	Liquid Nitrogen Container	YDS-30-80-6YS	Includes 6 canisters (height 276mm), lockable cap and protective jacket, roller base is optional
	Liquid Nitrogen Container	YDS-30-80YS	Includes 6 canisters (height 120mm), lockable cap and protective jacket, roller base is optional
	Liquid Nitrogen Container	YDS-30-80	Includes protective jacket only, roller base is optional
	Canister (TT63)	TT30-80	Φ63 single tier canister, without goblets, suitable for YDS-30-80
	Canister (TTS63)	TTS30-80	Φ63 double-tier canister, 2 goblets included. Suitable for YDS-30-80
	Roller Base	YSC-S (2019)	Suitable for all 30L / 35L / 50L aluminium tank, equipped with 5 universal wheels
	SmartCap	LT-80-370	Used to monitor level and temperature for containers with 80mm neck opening, data can be transmitted to cloud platform, suitable for YDS-20-80/YDS-30-80
	Cork (80)	GS20-80	Suitable for YDS-30-80 / YDS-35-80 / YDS-35B-80
	Lockable Cap	SG-80	Suitable for container with 80mm neck opening

Product List

Model	Product	Model	Description and Accessories
YDS-35	Liquid Nitrogen Container	YDS-35-6YS	Includes 6 canisters (height 276mm), lockable cap and protective jacket, roller base is optional
	Liquid Nitrogen Container	YDS-35YS	Includes 6 canisters (height 120mm), lockable cap and protective jacket, roller base is optional
	Liquid Nitrogen Container	YDS-35	Includes protective jacket only, roller base is optional
	Canister (TT38)	TT35-50	Φ38 single tier canister, without goblets, suitable for YDS-35
	Canister (TTS38)	TTS35-50	Φ38 double tier canister, 2 goblets included, suitable for YDS-35
	Roller Base	YSC-S (2019)	Suitable for all 30L / 35L / 50L aluminium tank, equipped with 5 universal wheels
	SmartCap	LT-50-400	Used to monitor level and temperature for containers with 50mm neck opening, data can be transmitted to cloud platform, suitable for YDS-35
	Cork (50)	GS20-50	Suitable for YDS-15 / YDS-20 / YDS-30 / YDS-35 / YDS-20B / YDS-30B / YDS-35B
	Lockable Cap	SG-50	Suitable for container with 50mm neck opening
YDS-35-80	Liquid Nitrogen Container	YDS-35-80-6YS	Includes 6 canisters (height 276mm), lockable cap and protective jacket, roller base is optional
	Liquid Nitrogen Container	YDS-35-80	Includes protective jacket only, roller base is optional
	Canister (TT63)	TT35-80	Φ63 single tier canister, without goblets, suitable for YDS-35-80
	Canister (TTS63)	TTS35-80	Φ63 double-tier canister, 2 goblets included, suitable for YDS-35-80
	Roller Base	YSC-S (2019)	Suitable for all 30L/35L/50L aluminium tank, equipped with 5 universal wheels
	SmartCap	LT-80-400	Used to monitor level and temperature for containers with 80mm neck opening, data can be transmitted to cloud platform, suitable for YDS-35-80
	Cork (80)	GS20-80	Suitable for YDS-30-80 / YDS-35-80 / YDS-35B-80
	Lockable Cap	SG-80	Suitable for container with 80mm neck opening
YDS-20B	Liquid Nitrogen Container	YDS-20B	Includes protective jacket only.
	Canister (TT38)	TT30-50	Φ38 single tier canister, without goblets, suitable for YDS-20 / YDS-30
	Canister (TTS38)	TTS30-50	Φ38 double-tier canister, 2 goblets included, suitable for YDS-20/YDS-30
	Cork (50)	GS20-50	Suitable for YDS-15 / YDS-20 / YDS-30 / YDS-35 / YDS-20B / YDS-30B / YDS-35B
	Lockable Cap	SG-50	Suitable for container with 50mm neck opening
YDS-30B	Liquid Nitrogen Container	YDS-30B	Includes protective jacket only, roller base is optional
	Canister (TT38)	TT30-50	Φ38 single tier canister, without goblets, suitable for YDS-20 / YDS-30
	Canister (TTS38)	TTS30-50	Φ38 double-tier canister, 2 goblets included, suitable for YDS-20/YDS-30
	Roller Base	YSC-S (2019)	Suitable for all 30L / 35L / 50L aluminium tank, equipped with 5 universal wheels
	Cork (50)	GS20-50	Suitable for YDS-15 / YDS-20 / YDS-30 / YDS-35 / YDS-20B / YDS-30B / YDS-35B
	Lockable Cap	SG-50	Suitable for container with 50mm neck opening
YDS-35B	Liquid Nitrogen Container	YDS-35B	Includes protective jacket only, roller base is optional
	Canister (TT38)	TT35-50	Φ38 single tier canister, without goblets, suitable for YDS-35
	Canister (TTS38)	TTS35-50	Φ38 double-tier canister, 2 goblets included, suitable for YDS-35
	Roller Base	YSC-S (2019)	Suitable for all 30L / 35L / 50L aluminium tank, equipped with 5 universal wheels
	Cork (50)	GS20-50	Suitable for YDS-15 / YDS-20 / YDS-30 / YDS-35 / YDS-20B / YDS-30B / YDS-35B
	Lockable Cap	SG-50	Suitable for container with 50mm neck opening

Product List

Model	Product	Model	Description and Accessories
YDS-35B-80	Liquid Nitrogen Container	YDS-35B-80	Includes protective jacket only, roller base is optional
	Canister (TT63)	TT35-80	Φ63 single tier canister, without goblets, suitable for YDS-35-80
	Canister (TTS63)	TTS35-80	Φ63 double-tier canister, 2 goblets included, suitable for YDS-35-80
	Roller Base	YSC-S (2019)	Suitable for all 30L / 35L / 50L aluminium tank, equipped with 5 universal wheels
	Cork (80)	GS20-80	Suitable for YDS-30-80 / YDS-35-80 / YDS-35B-80
	Lockable Cap	SG-80	Suitable for container with 80mm neck opening
YDS-35B-125	Liquid Nitrogen Container	YDS-35B-125	Includes protective jacket only.
	Canister (TT97)	TT35-125	Φ97 single tier canister, without goblets, suitable for YDS-35-125
	Canister (TTS97)	TTS35-125	Φ97 double-tier canister, 2 goblets included, suitable for YDS-35-125
	Rack	FTT-25-5	Used to store 2ml cryo boxes (5*5), 5 layers in total, 5*5 cryo boxes included, suitable for YDS-35-125
	Roller Base	YSC-S (2019)	Suitable for all 30L / 35L / 50L aluminium tank, equipped with 5 universal wheels
	Cork (125)	GS20-125	Suitable for YDS-30-125 / YDS-35-125 / YDS-47-127 / YDS-35B-125
	Lockable Cap	SG-125	Suitable for container with 125mm neck opening
YDS-50B	Liquid Nitrogen Container	YDS-50B	Includes protective jacket only, roller base is optional
	Canister (TT38)	TT50-50	Φ38 single tier canister, without goblets, suitable for YDS-50
	Canister (TTS38)	TTS50-50	Φ38 double-tier canister, 2 goblets included, suitable for YDS-50
	Roller Base	YSC-S (2019)	Suitable for all 30L / 35L / 50L aluminium tank, equipped with 5 universal wheels
	SmartCap	LT-50-500	Used to monitor level and temperature for containers with 50mm neck opening, data can be transmitted to cloud platform, suitable for YDS-50
	Cork (50)	GS10-50	Suitable for YDS-3 / YDH-3 / YDS-6 / YDS-10 / YDS-13 / YDS-25 / YDS-50B
	Lockable Cap	SG-50	Suitable for container with 50mm neck opening
Other Racks	Rack (vertical type)	FDCJ-25-4	Used to store 2ml cryo boxes (5*5), 4 layers in total, suitable for YDS-10\20\30-125 (plastic cryoboxes included)
	Rack (vertical type)	FDCJ-25-5	Used to store 2ml cryo boxes (5*5), 5 layers in total, suitable for YDS-25\35-125; YDS-47-127 (plastic cryoboxes included)
	Rack (vertical type)	FDCJ-25-6	Used to store 2ml cryo boxes (5*5), 6 layers in total, suitable for YDS-50B-125 (plastic cryoboxes included)

Haier Biomedical Liquid Nitrogen Storage Solutions

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 Year Vacuum Warranty
- • Cryo Absorbant
- • Vapour Phase Storage
- • Secure
- • No LN_2 Spillage

Key Features

- • Straw and cryovial storage options
- • Rugged and durable aluminium construction
- • Designed to ensure no LN_2 spillage
- • Vapour phase cryogenic storage
- • Faster LN_2 fill times
- • Lockable lids
- • 3 year 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

| Plastic Cryo Box | Canister+Rack | Rack(vertical type) |

Haier Biomedical Liquid Nitrogen Storage Solutions
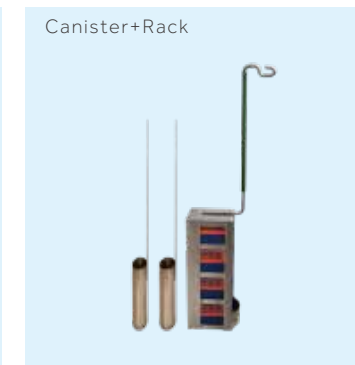
Technical Parameters

Model	YDH-3	YDH-6-80	YDH-10 -125-F	YDH-15 -216-F	YDH-25 -216-F
Maximum Storage Capacity					
No. of Canister	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)	—	—	4	3	5
Performance					
Volume of LN_2 (L)	3	6	10	15	25
Absorbable Volume of LN_2 (L)	1.3	2.9	3.4	6	9
Static Evapouration* (L/Day)	0.16	0.2	0.43	1.5	0.89
Liquid Phase Static Holding Time**(Day)	20	37	23	10	29
Vapour Phase Static Holding Time***(Day)	8	14	8	4	10
Dimensions					
Opening Diameter (mm)	50	80	125	216	216
Height (mm)	435	487	625	540	716
Outside Diameter (mm)	223	300	300	394	394
Canister Outside Diameter (mm)	38	63	97	—	—
Outside Height (mm)	120	120	120	—	—
Empty Weight (kg)	3.2	4.9	6.7	8.5	15
Full Weight (kg)	4.7	7.5	11	25	30
Shipping Weight (kg)	5.5	7.7	9.7	15.2	20.5

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

** 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.

*** 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.

Product List

Model	Product	Model	Description and Accessories
YDH-3	Dry Shipper	YDH-3	Includes 1 canister (height 120mm), lockable cap and protective jacket
	Canister (TT38)	TT3H-50	Φ38 single tier canister, no goblet, suitable for YDH-3
	Cork (50)	GS10-50	Suitable for YDS-3 / YDH-3 / YDS-6 / YDS-10 / YDS-13 / YDS-25 / YDS-50B
	Lockable Cap	SG-50	Suitable for container with 50mm neck opening
YDH-6-80	Dry Shipper	YDH-6-80	Includes 1 canister (height 120mm), lockable cap and protective jacket
	Canister (TT63)	TT6H-80	Φ63 single tier canister, no goblet, suitable for YDH-6-80
	Cork (80)	GS10-80	Suitable for YDH-6-80 / YDS-10-80
	Lockable Cap	SG-80	Suitable for container with 80mm neck opening
YDH-10-125	Dry Shipper	YDH-10-125-F	Includes 1 rack (4 layers), 5*5 cryoboxes, lockable cap and protective jacket
	Dry Shipper	YDH-10-125	Includes lockable cap and protective jacket, no rack
	Rack	FTT-25-4	Used to store 2ml cryo boxes (5*5), 4 layers in total, 5*5 cryo boxes included, suitable for YDS-30-125 / YDS-10-125 (Plastic cryo boxes included)
	Canister (TT97)	TT10H-125	Φ97 single tier canister, no goblet, suitable for YDH-10-125
	Cork (125)	GS10-125	Suitable for YDS-10-125 / YDH-10-125 / YDS-50B-125
	Lockable Cap	SG-125	Suitable for container with 125mm neck opening
	Protective Case X	Protective Case X	Suitable for YDH-10-125
YDH-15-216	Dry Shipper	YDH-15-216-F	Includes 1 rack (3 layers), 9*9 cryoboxes and lockable cap, no protective jacket
	Rack (vertical type)	FDCJ-25-3	Used to store 2ml cryo boxes (5*5), 3 layers in total, suitable for YDS-15-125 (plastic cryoboxes included)
	Cork (216-2)	GS15-216	Suitable for YDS-15-216 / YDH-15-216
	Lockable Cap	SG-216	Suitable for container with 216mm neck opening
YDH-25-216	Dry Shipper	YDH-25-216-F	Includes 1 rack (5 layers), 9*9 cryoboxes and lockable cap, no protective jacket
	Rack	FTT-81-5	Used to store 2ml cryo boxes (9*9), 5 layers in total, 9*9 cryo boxes included, suitable for YDS-95-216 / YDH-25-216 (Plastic cryo boxes included)
	Cork (216)	GS175-216	Suitable for all aluminium tank with neck opening 216mm
	Lockable Cap	SG-216	Suitable for container with 216mm neck opening
Other Racks	Rack (vertical type)	FDCJ-81-5	Used to store 2ml cryo boxes (9*9), 5 layers in total, suitable for YDH-25-216 / YDS-95-216 (plastic cryoboxes included)

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

Transfer Hose

Float-type Liquidometer

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

Standard series	K series

New Functions of K Series

Digital Display Level Gauge	Large diameter vent valve	Pressure stabilizing valve
DLZ-300 Digital display of fluid level Remote data transmission function	Rapid relief of over pressure Protection of safety valve	Stabilize fluid pressure during auto filling

Technical Parameters

Model	YDZ-5	YDZ-15	YDZ-30	YDZ-50	YDZ-100 YDZ-100K
Performance					
Volume of LN$_2$ (L)	5	15	30	50	100
Static Evapouration (L/Day)	0.15	0.38	0.75	1	1.3
LN$_2$ Output (L/Min)	2	2	3	3	4
Dimensions					
Height (mm)	510	750	879	991	1185
Outside Diameter (mm)	329	404	454	506	606
Empty Weight (kg)	15	23	32	54	75
Full Weight (kg)	19.1	35.3	56.6	95.0	157.0
Shipping Weight (kg)	28	34	47	63	98
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					
LN$_2$ Capacity (L)	150	200	240	300	500
Static Evapouration (L/Day)	1.95	2.4	2.9	3.3	5.5
LN$_2$ Output (L/Min)	6	8	8	8	10
Dimensions					
Height (mm)	1188	1265	1350	1459	1576
Outside Diameter (mm)	706	758	758	857	1008
Empty Weight (kg)	102	130	148	202	255
Full Weight (kg)	225	296	350	448	665
Shipping Weight (kg)	132	164	177	232	324
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, 6. Rupture disc burst pressure 0.47.				

* 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	Model	Description and Accessories
YDZ	Self-pressurized Filling Tank	YDZ-5	Includes transfer hoses (ZG-DN10/1.5)
	Self-pressurized Filling Tank	YDZ-15	
	Self-pressurized Filling Tank	YDZ-30	Includes transfer hoses (ZG-DN10/1.5), float-type liquidometer is optional;
	Self-pressurized Filling Tank	YDZ-50	
	Self-pressurized Filling Tank	YDZ-100	Includes transfer hoses (ZG-DN10/1.5) and float-type liquidometer
	Self-pressurized Filling Tank	YDZ-150	
	Self-pressurized Filling Tank	YDZ-200	
	Self-pressurized Filling Tank	YDZ-300	
	Self-pressurized Filling Tank	YDZ-500	
	Self-pressurized Filling Tank	YDZ-100K	Includes transfer hoses (ZG-DN10/1.5), Digital display level gauge (DLZ-300) and pressure stabilizer. Having the function of remote transmission of liquid level data, can be used for automatic filling
	Self-pressurized Filling Tank	YDZ-200K	
	Self-pressurized Filling Tank	YDZ-240K	
	Self-pressurized Filling Tank	YDZ-300K	
	Self-pressurized Filling Tank	YDZ-320K	
	Self-pressurized Filling Tank	YDZ-500K	
Accessories	Digital Display Level Gauge	DLZ-300 (YDZ-100K)	Digital display real time liquid nitrogen percentage of self pressurized tank, low power consumption, wireless transmission; (YDZ-100K)
	Digital Display Level Gauge	DLZ-300 (YDZ-200K)	Digital display real time liquid nitrogen percentage of self pressurized tank, low power consumption, wireless transmission; (YDZ-200K)
	Digital Display Level Gauge	DLZ-300 (YDZ-240K)	Digital display real time liquid nitrogen percentage of self pressurized tank, low power consumption, wireless transmission; (YDZ-240K)
	Digital Display Level Gauge	DLZ-300 (YDZ-300K)	Digital display real time liquid nitrogen percentage of self pressurized tank, low power consumption, wireless transmission; (YDZ-300K)
	Digital Display Level Gauge	DLZ-300 (YDZ-320K)	Digital display real time liquid nitrogen percentage of self pressurized tank, low power consumption, wireless transmission; (YDZ-320K)
	Digital Display Level Gauge	DLZ-300 (YDZ-500K)	Digital display real time liquid nitrogen percentage of self pressurized tank, low power consumption, wireless transmission; (YDZ-500K)
	Float-type Liquidometer	FZ-100	Suitable for YDZ-100
	Float-type Liquidometer	FZ-150	Suitable for YDZ-150
	Float-type Liquidometer	FZ-200	Suitable for YDZ-200
	Float-type Liquidometer	FZ-300	Suitable for YDZ-300
	Float-type Liquidometer	FZ-500	Suitable for YDZ-500
	Single-layer Transfusion Hose	ZG-DN10/1.5	Diameter 10mm, length 1.5m, suitable for YDZ series
	Data Transfer Module-WIFI	SW-100	Data transmitted through wifi, first choice for international users.

Liquid Nitrogen Storage Solution

Haier Biomedical Liquid Nitrogen Storage Solutions

Model	Product	Model	Description and Accessories
Cryobox	Vial Cane	(3-type)	Used to hold 3 vials (2ml)
	Vial Cane	(6-type)	Used to hold 6 vials (2ml)
	Plastic Cryo Box	5×5(2.0)	Used to store 1.8ml / 2ml vial (25 holes)
	Plastic Cryo Box	9×9(2.0)	Used to store 1.8ml / 2ml vial (81 holes)
	Plastic Cryo Box	9×9 (5.0)	Used to store 4.5 /4.7/5ml vial (81 holes)
	Plastic Cryo Box	10×10 (2.0)	Used to store 1.8ml/2ml vial (interally threaded,100 holes)
	Plastic Cryo Box	Y-37	Suitable for round rack to store 1.8ml/2ml vial (37 holes)
	Plastic Goblets	SNT-97	Suitable for diameter 97mm canisters
	Blood Bag Cryo Box	25ml (791 OS/U)	One bag per box,rocker arm type
	Blood Bag Cryo Box	50ml (4R9951)	One bag per box,drawer type
	Blood Bag Cryo Box	250ml (4R9953)	One bag per box, rocker arm type
	Plastic Sleeve for Vial Cane	5016-0002 (6-type)	Suitable for vial cane that can hold 6 vials
	Aluminium Cryobox	8×1 (2.0)	Used to store 1.8ml/2ml vials (8 holes)
	Stainless Steel Cryo Box	5×5 (5.0)	Used to store 4.5ml/4.7ml/5ml vials (25 holes)
Other Accessories	Valve Adaptor	CGA295	Used to connect the valve of YDZ self-pressurized tank with transfer hose
	Cryogenic Solenoid Valve	DN7.0 (ASCO 24V)	Suitable for piping pressure≤0.5MPa
	Cryogenic Solenoid Valve	DN7.0 (JASA 24V)	Suitable for piping pressure≤0.5MPa
	Vacuum Insulated Hose	GRG-DN10/1.0	Diameter10mm, length 1m, special use for liquid nitrogen transferring, connection type for both side and length can be customized, charged by meter
	Vacuum Insulated Hose	GRG-DN10/2.0	Diameter10mm, length 2m, special use for liquid nitrogen transferring, connection type for both side and length can be customized, charged by meter
	Transfer Hose	ZG-DN10/1.5	Diameter10mm, length 1.5m, suitable for YDZ series
	Transfer Hose	BG-DN10/1.0	Diameter10mm, length 1.0m, suitable for liquid nitrogen pump YDB series
	Transfer Hose	RG-DN10	Diameter 10mm, used for liquid nitrogen transfering, fitting and length can be customized, charged in meters.
	Transfer Hose	RG-DN6	Diameter 6mm, used for liquid nitrogen transfering, fitting and length can be customized, charged in meters.
	Hose Heat Insulation Cotton	BMT-DN10	Suitable for DN10 single layer metal hose, 1 meter
	Cryogenic Gloves	ST-32	Overall length 320mm
	Cryogenic Gloves	ST-45	Overall length 450mm
	Cryogenic Gloves	ST-72	Overall length 720mm
	Level Measuring Scale	YWC-100	Measuring length1000mm

Installed End User Examples

University of Cambridge

Ministry of Agriculture of Ethiopia

University of Liverpool

Kings College London
School of Biomedical Engineering & Imaging Sciences

Customer in Manchester

Liquid Nitrogen Storage Solution

Installed End User Examples

Installed End User Examples

Biological Technology Co., Ltd

Stem Cell Bank

Biopharmaceuticals

Animal Health Company

A Hospital in Shanghai

A Hospital in Shenzhen

Biotechnology Co., Ltd

A Hospital in Ningbo

A Hospital in Nanchang

Institute of Zoology

International Cell Valley

Medical Technology Co., Ltd.

Science and Technology Innovation Base

Fisheries Research Institute

Liquid Nitrogen Storage Solution